

For detail information and description of any of these catalog devices visit the AKO link below.

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SUMMARY of CHANGE

TSS-Enterprise TADSS Index and Catalog
Index and Description of Army Training Devices

This Catalog originated on 15 Jun 2017:

- Replaces DA Pam 350-9, issued 12 May 2010.
- Adds descriptions of Army training devices fielded since the last revision of the pamphlet. The following were added or updated:

01-211/C; 01-257/A; 01-308; 01-309; 01-317; 01-318; 05-22/A; 05-22/A/1; 05-22/A/2; 05-22/B; 05-125; 06-124 plus Variants; 06-126; 06-126/1; 06-126/2; 06-126/3; 06-126/4; 06-126/5; 07-188; 07-188/1; 07-188/2; 07-188/3; 07-188/4; 07-188/5; 08-67/A; 08-71/A; 08-76; 08-76/A; 08-77 (MSTC); 08-77/A (TSC); 08-78 (MSTC); 08-78/A (TSC); 08-79; 08-80; 08-81; 08-81/A; 09-155; 09-156 plus Variants; 11-128; 11-129; 17-291/A/1; 17-291/B/1; 17-291/C/1; 17-291/D/1; 17-291/E/1; 17-291/F/1; 17-292/A/1; 17-292/B/1; 17-292/C/1; 17-292/D/1; 20-91/1; 20-101; 20-101/A; 20-101/B; 20-101/C; 20-101/D; 20-101/E; 20-101/F; 20-102; 20-103; 20-103/A; 23-118; 23-118/1; 23-118/2; 23-118/3; 23-118/4; 23-118/5; 23-118/6; 30-26/D; 30-26/E; 30-37; 30-37/A; 30-38; 30-39; 30-40; 44-93/A/1; 44-106/1; 44-106/2; 44-109; 44-110; 44-111; 44-113; 55-72; 55-72/A; 55-72/B; 55-72/C; 55-72/D

- Expands on, or corrects descriptions published in the last revision.
- Removes descriptions of obsolete Army training devices. The following devices were deleted:

01-46/B; 05-120; 06-107; 06-111/A; 06-118 plus Variants; 08-74; 17-291; 17-295; 23-113; 23-118 plus Variants 1-6; 30-26/1; 30-26/2; 30-26A; 30-26B; 30-26E; 44-106; 44-106/1; 44-106/2; 55-51/F; 55-73; 71-01; 71-07; 71-08; 71-11; 71-13; 71-18; 71-19; 71-25; 71-26; 71-27; 71-27/1; 71-30; 71-31; 71-32; 71-35; 71-37; 71-37/1; 71-37/2

*This catalog supersedes/replaces DA Pamphlet 350-9, dated 12 May 2010.

LIST OF EFFECTIVE PAGES

Date of issue for this original and change pages are:

Latest Catalog Update: 15 July 2020

THE TOTAL NUMBER OF PAGES IN THIS CATALOG 653 CONSISTING OF THE FOLLOWING:

Page No.	*Change No.	Page No	*Change No.
Cover	0	Appendix A 1 Page	0
SUMMARY OF CHANGE	0	Appendix B 1 Page.....	0
i and iv	0	Glossary 14 Pages	0
2 Pages of Section I Introduction	0		
13 Pages of Index Devices Nomenclatures	0		
01 Series 143 Pages.....	0		
03 Series 7 Pages.....	0		
05 Series 42 Pages.....	0		
06 Series 23 Pages.....	0		
07 Series 62 Pages.....	0		
08 Series 52 Pages	0		
09 Series 26 Pages.....	0		
11 Series 5 Pages.....	0		
17 Series 47 Pages.....	0		
20 Series 16 Pages.....	0		
23 Series 105 Pages.....	0		
30 Series 19 Pages.....	0		
44 Series 23 Pages.....	0		
55 Series 54 Pages.....	0		

*Zero in this column indicates an original page.

TSS Enterprise

Training

Index and Description of Army Training Devices Catalog

History. This catalog media publishes as a revision and replacement of the DA Pamphlet 350-9 publication dated 12 May 2010. Effective 1 August 2015, DA Pamphlet 350-9 was officially transferred to Secretary of the Army (Acquisition, Logistics and Technology) (ASA (ALT)).

Summary. This catalog presents guidance on the identification and description of the devices that have been acquired and fielded by the U.S. Army Materiel Developers that are presently being used by the Active Army and Reserve components. It is a compilation of fact sheets that describe Army training devices which are updated on a Quarterly basis.

Applicability. This catalog applies to the Active Army, the Army National Guard of the United States (ARNGUS), and the U.S. Army Reserve (USAR).

Suggested improvements. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to Commander, PEO STRI, ATTN: SFAE-STRI-G4, 12350 Science Dr. Orlando, FL 32826-3276, or electronically to usarmy.orlando.peo-stri.list.TSS ENTERPRISE-2028@mail.mil.

Distribution. This catalog is available in electronic media only via AKO Collaboration link with CAC access, and is intended for command level A of the Active Army, the Army National Guard of the United States, and the U.S. Army Reserve.

Army Management Control Process. This TSS-Enterprise TADSS Index and Catalog would be updated annually IAW AR 350-38, to support the Proponents and TCM requirements to review their fielded TADSS requirements.

Supporting data below:

2-11. Commanding General, U.S. Army Training and Doctrine Command in coordination with proponent and user commands and agencies, annually assess the Armywide requirements for TADSS listed in this TSS-Enterprise TADSS Index and Catalog

6-7. Obsolete training aids, devices, simulators, and simulations status. The TADSS proponents will annually review requirements for fielding TADSS and notify the ATSC (TSAID) of TADSS that have become obsolete. The fielded TADSS manager will coordinate the action with the appropriate TSS program leads and affected commands and agencies. Based upon a TSS enterprise decision to dispose of the item, the ATSC (TSAID) will provide disposal guidance to all accountable commands and agencies.

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SECTION I INTRODUCTION

1-1 Purpose

a. This catalog is published as an aid in the identification and description of training devices that were acquired and fielded by the U.S. Army Training Support System (TSS) – Enterprise and the Program Executive Office Simulation Training and Instrumentation (PEO STRI) and are presently being used by the Active Army and Reserve components. It is not to be used as authorization for requisitioning, stockage, or issue of this equipment. Many of the training devices depicted herein have been produced in limited quantities to meet specific training requirements and have not been generally distributed. For information concerning availability, supply, and maintenance support, contact the local Training Support Center (TSC).

b. For each training device, there is an illustration and description, together with other pertinent data, which may be utilized in determining if the device can be used to support a training requirement. Actual weights and dimensions may vary somewhat from the average or representative values shown. For information on small-arms targets and target materials see TM 9-6920-210-14.

c. Information on Army commodity managed, type classified devices is contained in SB 700-20.

d. Information concerning Army films, videotapes, and filmstrips is contained in DOD Catalog 5040.2-C-1; information concerning graphic training aids (GTA), for example, charts, cards, games, slides (2 by 2 inch), and transparencies (8 by 10 inch) is contained in DA Pamphlet 25-37.

e. A number of training devices were fabricated at various TSC's and distributed Army-wide but do not appear in this pamphlet. Information concerning availability of these types of devices, as well as locally fabricated Department of the Army Training Aids (DATA) type devices, can be obtained from the local TSC. Refer to their copy of TRADOC Pamphlet 350-9, "TRADOC Training Devices For Armywide Use." If the TSC does not have a copy, one can be obtained from the local installation publications office or by completing DA Form 17 (Requisition for Publications and Blank Forms) and sending it to the Director, ATSC (ATIC), 2114 Pershing Avenue, Fort Eustis, VA 23604 or electronically to atsc-ops@atsc.army.mil.

f. Training device requirements for Grant Aid or Military Assistance Programs should be submitted through normal U.S. Army Security Assistance Center channels.

g. New training device requirements should be submitted by potential users in accordance with the provisions of AR 71-9.

1-2 Arrangement of catalog

This document is arranged in two major sections. They are: Section I, Introduction; and Section II, Index of Training devices.

a. *Index.* The Index is a list of Army training devices by device (DVC) number. This number is assigned by PEO STRI during the acquisition cycle. The first two digits indicate the basic series of military equipment to which the training device relates and is consistent with those listed in AR 25-30. The remaining digits are assigned in chronological order. For example, 01-91 identifies an aviation (01) device and is the 91st device number assigned under that series.

Similar training devices having a common application or training mission are assigned a letter designator (for example, 01-91A). A higher letter indicates the most current configuration. Devices that have a series of related components are identified with a diagonal and a numerical designator (for example, 01-91/2). Device numbers are to be used for reference purposes only when a National Stock Number (NSN) has not been assigned and the item is the responsibility of TSS Enterprise or PEO STRI. Following is the list of basic series numbers that are used in this catalog.

<i>Basic Series No.</i>	<i>Type of Equipment</i>
01	Aviation
03	Chemical
05	Engineer
06	Field Artillery
07	Infantry
08	Medical
09	Ordnance
11	Signal
17	Armor
20	General
23	Weapons
30	Military Intelligence
44	Air Defense Artillery
55	Transportation

b. *Training equipment summary sheets.* These are arranged in numerical order by DVC number and contain information and illustrations that describe each training device. Some sheets list other identifying numbers in addition to the DVC numbers. Such numbers may be a corresponding Navy number, a model number, or a mainframe number. The device nomenclature may also include a model or type number assigned to or most generally associated with the training device. Most of the information on the sheets is self-explanatory. Some topics require further explanation as described below.

(1) *Training category/level utilized.* The training category is normally the same as the title for the applicable basic series number. Other designations such as "combat arms, basic weapons, and general," are used when such terms are more appropriate. The level utilized is normally one of the following three categories:

(a) *Level 1.* Applicable to post, installation, or service schools. These devices are installed as permanent fixtures such as the Bradley Fighting Vehicle Unit Conduct of Fire Trainer (Sheltered). They are generally located only at a branch service school or installation. Unit personnel may be moved to these device locations for training.

(b) *Level 2.* These devices are used in structured training, as at NCO academies, leadership courses, or division schools. These devices may be located at other than Level 1 for support for structured training.

(c) *Level 3.* These devices may generally be available at the local TSC for troop unit training. This is a broad category and may apply to various sizes of organizations from division to platoon.

(2) *Logistic Responsible Command, Service, or Agency.* This is the designated managing activity for the device.

TSS Enterprise

(a) U.S. Army Program Executive Office Simulation Training and Instrumentation (PEO STRI), Orlando, FL 32826-3276

(b) US Army Armament and Chemical Acquisition and Logistics Activity (ACALA), Rock Island, IL 61299-6000.

(c) US Army Communications-Electronics Command (CECOM), Fort Monmouth, NJ 07703-5006.

(d) Aviation and Missile Command (AMCOM), Redstone Arsenal, AL 35809

(e) US Army Tank-Automotive Command (TACOM), Warren, MI 48090.

(f) Defense Personnel Support Center (DPSC), Directorate of Medical Material, Philadelphia, PA 19100.

(g) US Army Medical Materiel Agency (USAMMA), Frederick, MD 21702-5001.

(h) US Army Training Support (ATSC) Fort Eustis, VA 23606.

(3) *Applicable publications.* These publications pertain to operation and maintenance of the training device. They may be DA Technical Manuals (TM), PEO STRI Technical Documents (TD), Navy NAVSO, NAVEXOS, or NAVTRADEV “P” publications, or manufacturer’s handbooks, depending on the managing activity and density of the training device in the field.

(4) *Reference publications.* These publications pertain to operation and maintenance of the tactical equipment to which the training device is related. They may be DA Technical Manuals (TM), Field Manuals (FM), Training Circulars, or others as applicable.

(5) *Training requirements supported.* This information is included to assist those responsible for training to relate the training device to the specific Military Occupational Speciality Code (MOSC) task training requirements that it supports. The tasks are identified with the applicable Army Training Evaluation Program (ARTEP), Army Training Manual (ATM), Soldier’s Manual (SM), or Field Manual (FM) Activities managing training devices in their respective commodity areas are as follows.

SECTION II

INDEX OF TRAINING DEVICES

AVIATION (01-SERIES)

<i>DVC No.</i>	<i>Nomenclature</i>
01-107	UH-60 Black Hawk Maintenance Trainer (BHMT)
01-107/A	UH-60 Black Hawk Electrical Trainer (BHET-L)
01-107/B	UH-60 Black Hawk Electrical Trainer-M (BHET-M)
01-111/A	CH-47D Flight Simulator
01-117/1	Black Hawk Electrical Systems Trainer (Individual)
01-120	UH-60 Black Hawk Automatic Flight Control System (AFCS) Trainer (Classroom)
01-121/A	UH-60 Black Hawk Automatic Flight Control System (AFCS) Trainer (Individual)
01-139	UH-60 Black Hawk Composite Trainer
01-141	UH-60 Black Hawk Landing Gear Trainer (LGT)
01-143/A	UH-60 Black Hawk Command Instrument System Trainer (CIST)
01-143/1	UH-60 Black Hawk Command Instrument System Trainer (CIST) (Student Station)
01-144/D	UH-60 A/L Black Hawk Flight Simulator Upgrade (ABHFS)
01-146	Aviation Combined Arms Tactical Trainer (AVCATT)
01-153	UH-60 Cockpit Emergency Procedures Trainer (CEPT)
01-160	Special Operations Aviation Combat Mission Simulator (SOACMS) MH-60K and MH-47E
01-160/A	(SOACMS) MH-60L
01-160/B	(SOACMS) MH-47G
01-161	TH-67 Cockpit Procedures Trainer
01-168	Aviator's Night Vision Instrument System/Head's Up Display (ANVIS HUD)
01-169	AN/APR-39A(V)1 Radar Detecting Set Mock-Up
01-173	AN/AVR-2(V) Laser Detecting Set Mock-Up
01-178	Communication Tower
01-180	Single Channel Ground and Airborne Radio System (SINCGARS) Mark 5
01-186/1	Tactical Engagement Simulation System (TESS) (B) Kit
01-186/3	(TESS) Ground Systems MCC I/O Unit
01-186/4	(TESS) Ground Systems MCC I/O Accessory Box
01-186/5	(TESS) Ground Kit GL Kit
01-186/6	(TESS) Ground TIB Assembly
01-186/7	(TESS) Ground Kit Repeater Assembly
01-186/8	(TESS) Ground Systems HHI
01-194	CH-47F Transportable Flight Proficiency Simulator (TFPS)
01-195	AH-64D Longbow Crew Trainer (LCT)
01-197	UH-60 Black Hawk Medical Suite Trainer (MST)
01-199	UH-60L Black Hawk Avionics Wiring System Trainer (UH-60L BAWST)
01-200	Landing Gear Active Vibration Trainer (LGAVT)
01-202	UH-60 Transportable Black Hawk Operations Simulator (TBOS)
01-203	Enhanced Tower Simulator (ETOS)
01-204	Army Aviation Radar Training System (AARTS)
01-211	AH-64D Flight Control Part Tasks Trainer-L8 (FCPTT-L8)
01-211/B	AH-64D Flight Control Part Task Trainer (FCPTT) with Integrated Virtual Immersion Environment (VIE) Technology
01-211/C	AH-64E Flight Control Part Task Trainer-L8 (FCPTT-L8)
01-212	AH-64D Tail Rotor System and Tail Landing Gear Part Tasks Trainer-L9 (TRSTLGPTT-L9)
01-213	AH-64D Longbow Controls and Displays Selected Task Trainer-L10 (LCDSTT-L10)
01-213/A	AH-64E Guardian Controls and Displays Selected Task Trainer
01-214	AH-64D Environmental Control System Part Task Trainer-L11 (ECSPTT-L11)
01-216	AH-64D Longbow Mast Mounted Assembly Part Task Trainer (MMAPTT)
01-217/A	AH-64D Gun Part Task Trainer - L17 (GPTT-L17)
01-218	AH-64D Multiplex Part Task Trainer – L16 (MPTT-L16)

<i>DVC No.</i>	<i>Nomenclature</i>
<u>01-222</u>	AH-64D Airframe, Engine, and Drive Train Systems Trainer-L6 (AEDST-L6)
<u>01-222/A</u>	AH-64E Airframe Engine Drive Train Systems Trainer - L6 (AEDST-L6)
<u>01-223</u>	AH-64D Multiplex, Avionics, Visionics, Weapons, and Electrical Systems Trainer-L7 (MAVWEST-L L7)
<u>01-225</u>	Chinook Avionics Trainer (CAT)
<u>01-226</u>	Common Missile Warning System (CMWS) Maintenance Trainer (CMT)
<u>01-226/A</u>	(CMWS) Maintenance Trainer - Apache (CMT-A)
<u>01-227</u>	Black Hawk-M Avionics Maintenance Trainer (BHAT-M)
<u>01-230</u>	UH-72A Flight Training Device (FTD)
<u>01-231</u>	UH-60M Black Hawk Stabilator and Tail Rotor Part Task Trainer (BST-M)
<u>01-232</u>	UH-60M Black Hawk Rotor Brake Trainer (RBT)
<u>01-233</u>	UH-60M Black Hawk Aviation Basic Electronics Trainer (ABET)
<u>01-234</u>	Shadow Crew Trainer (SCT)
<u>01-239</u>	CH-47F Cockpit Procedural Trainer (CPT)
<u>01-240/9</u>	Controller Device, Simulator Subsystem, Firing, Laser
<u>01-240/10</u>	Simulator System, Firing, Laser: for CH-47D Chinook Helicopter AGES II
<u>01-240/11</u>	Simulator System, Firing, Laser: for UH-60A Black Hawk Helicopter AGES II
<u>01-241</u>	AH-64D Modernized-Target Acquisition/Designation Sight (TADS) Selected Task Trainer-L13 (M-TSTT-L13)
<u>01-242</u>	AH-64D Wing Part Task Trainer-L14 (WPTT-L14)
<u>01-243/A</u>	AH-64D Integrated Pressurized Air System (IPAS) Part Task Trainer with Integrated Virtual Immerse Environment (VIE) Technology L15 (IPASPTT-L15)
<u>01-249</u>	CH-47 Chinook Helicopter Maintenance Trainer-10 Level (CHMT-10)
<u>01-249/A</u>	CH-47 Chinook Helicopter Maintenance Trainer-30 Level (CHMT-30)
<u>01-250</u>	CH-47 Chinook Cockpit Part Task Trainer (CCPTT)
<u>01-251</u>	Light Assault/Attack Reconfigurable (LASAR)
<u>01-252</u>	MH-47G Combat Mission Simulator (CMS)
<u>01-253</u>	MH-60M Combat Mission Simulator (CMS)
<u>01-254</u>	CH-47 Chinook Landing Gear part Task Trainer (CLPTT)
<u>01-255</u>	Simulation System Tactical Engagement Simulation System (TESS)Kit
<u>01-255/1</u>	Observer Controller (OC), (UH-72A), Tactical Engagement Simulation System (TESS)Kit, CONUS
<u>01-255/2</u>	Opposing Forces (OPFOR), (UH-72A), Tactical Engagement Simulation System (TESS)Kit, OCONUS
<u>01-255/3</u>	Observer Controller (OC), (UH-72A), Tactical Engagement Simulation System (TESS)Kit, OCONUS
<u>01-255/4</u>	Opposing Forces (OPFOR), (UH-72A), (TESS)Kit, CONUS
<u>01-255/5</u>	UH-72A Shootback, CONUS
<u>01-256</u>	Man-Portable Aircraft Survivability Trainer (MAST)
<u>01-256/1</u>	Weapons Effect Signature Simulator (WESS)
<u>01-256/A</u>	Multiple Laser Engagement System (MILES) Laser
<u>01-256/B</u>	Man-Portable Aircraft Survivability Trainer II (MAST-II)
<u>01-257</u>	Reconfigurable RC-12X/Enhanced Medium-Altitude Reconnaissance and Surveillance System (EMARSS) Cockpit Procedural Trainer (CPT)
<u>01-257/A</u>	RC-12X/MC-12S Cockpit Procedural Trainer (CPT)
<u>01-258</u>	ASN-128D Part Task Trainer
<u>01-259/A</u>	Non-rated Crew Member Manned Module/A (NCM3-A)
<u>01-259/B</u>	Non-rated Crew Member Manned Module/B (NCM3-B)
<u>01-260</u>	CH-47 Chinook Rotor Head Part task trainer (CRPTT)
<u>01-262/A</u>	CH-47 Chinook Helicopter Aviation Ground Power Unit (AGPU)
<u>01-264/A</u>	Airborne Radar Transponder (APX) - 123 Part Task Trainer (APX - 123 PTT)
<u>01-265</u>	Black Hawk – M Maintenance Trainer (BHMT)
<u>01-266</u>	Modeled T700-701C/D Power Turbine Engine
<u>01-267</u>	Modeled AH-64D, AH-64E Auxiliary Power Unit (APU)
<u>01-268</u>	Virtual Interactive Environment Device (VIE)

TSS ENTERPRISE

<i>DVC No.</i>	<i>Nomenclature</i>
<u>01-271</u>	Modeled AH-64D, AH-64E Modernized Target Acquisition and Designation Sighting System (M-TADS)
<u>01-272</u>	AH-64D/E Main Landing Gear Training Device
<u>01-273</u>	CH-47 Chinook Helicopter Maintenance Trainer - Electric Virtual Immerse Environment (CHMT-EV)
<u>01-274</u>	UH-60 BLACK HAWK Medical Support Equipment Suites (MSES)
<u>01-274/1</u>	UH-60 BLACK HAWK (MSES) Troop Seat Configuration
<u>01-274/2</u>	UH-60 BLACK HAWK (MSES) Interim MEDEVAC Mission Support System (IMMSS) Configuration
<u>01-274/3</u>	UH-60 BLACK HAWK (MSES) Carousel Configuration
<u>01-275</u>	AH-64E (TADS) Electronic Display and Control (TEDAC) Grips
<u>01-276</u>	AN/ARC-231 Multi-mode Airborne Radio Suite (MARS) Virtual Interactive Environment (VIE) Trainer
<u>01-278</u>	CH-47 and UH-60 Universal Tactical Engagement Simulation System (TESS) B-Kit
<u>01-278/1</u>	UH-60A/L Tactical Engagement Simulation System (TESS) B-Kit
<u>01-278/2</u>	UH-60M Supplemental Kit to Universal Tactical Engagement Simulation System (TESS) B-Kit
<u>01-278/3</u>	CH-47D/F Tactical Engagement Simulation System (TESS) B-Kit
<u>01-279</u>	UH-60M Cockpit Emergency Procedural Trainer (CEPT-M)
<u>01-280</u>	CH-47 Virtual Interactive Environment (VIE)
<u>01-281</u>	CH-47 Multi Power Support Unit (MPSU)
<u>01-282</u>	UH-60M Cockpit Academic Procedural Tool (CAPT)
<u>01-288</u>	Aviation Ground Power Unit (AGPU) Remove & Install (R&I) Trainer
<u>01-289</u>	AN/PSQ-T-RQT Universal Mission Simulator (UMS), 2 Seat Shadow
<u>01-290</u>	AN/PSQ-T-MQ1A Universal Mission Simulator (UMS), 2 Seat Gray Eagle
<u>01-291</u>	AN/PSQ-T-MQ1B Universal Mission Simulator (UMS), 3 Seat Gray Eagle
<u>01-292</u>	Modeled AH-64E AN ALQ 136 Flight Line Test Set (FLTS)
<u>01-293</u>	Modeled AH-64E Radar Simulator Test Set (RSTS)
<u>01-294</u>	Modeled AH-64E Countermeasure Dispenser Test Set (CDTS)
<u>01-295</u>	Modeled AH-64E Test Set Guided Missile System - Army/Navy-Aviation World Maintenance (TSGMS-AN/AWM)-101A Hellfire Test Set (101A-HTS)
<u>01-296</u>	AH-64E Transponder Test Set (TTS)
<u>01-297</u>	AH-64E Laser Pointer Emulator Test Set (LPETS)
<u>01-298</u>	AH-64E Avionics Visionics Survivability Weapons (AVSW) Electrical Mechanical Systems Trainer (EMST) L7AY
<u>01-299</u>	AH-64E L7 Mobile Power Supply Unit (L7-MPSU)
<u>01-300</u>	Small Unmanned Aviation System Institutional Training System (SUAS-ITS), RQ-11B Raven and RQ-20A Puma SUAS
<u>01-301</u>	AH-64E Tactical Mast Mounted Assembly Part Task Trainer (TMMAPTT)
<u>01-302</u>	UH-60M Black Hawk Aircrew Trainer (BAT)
<u>01-303</u>	Reconfigurable UH-60 Communications and Navigations Trainer (RCNT)
<u>01-304</u>	Modeled AH-64E Target Acquisition and Designation Sighting System (TADS) Continuity Test Set
<u>01-305</u>	Homestation Instrumentation Training System (HITS) Aviation Integration Subsystem (AIS)
<u>01-308</u>	Modeled ROVER 5 Test Set
<u>01-309</u>	Modeled Simple Key Loader
<u>01-312</u>	Composite Maintenance System Trainer (CMST)
<u>01-312/A</u>	MQ-1C Gray Eagle (UAS) Airframe, Armament, and Electrical (AEE) Part Task Trainer
<u>01-312/B</u>	MQ-1C Gray Eagle Virtual Training System (VTS)
<u>01-312/C</u>	MQ-1C Gray Eagle (UAS) Engine Maintenance Trainer
<u>01-312/D</u>	MQ-1C Gray Eagle Unmanned Aircraft Systems (UAS) Aircraft Part Task Trainer
<u>01-313</u>	Mobile Power Supply Unit (MPSU) Model Device
<u>01-317</u>	Cockpit Academics Procedural Tool - Enhanced (CAPT-E)
<u>01-318</u>	Cockpit Academics Procedural Tool - Enhanced - Visual & Control System (CAPT-E-VCS)

CHEMICAL (03-SERIES)

<i>DVC No.</i>	<i>Nomenclature</i>
<u>03-12</u>	M93A1 Nuclear, Biological, Chemical Reconnaissance System (NBCRS) FOX Simulator
<u>03-16</u>	Chemical Agent Monitor Simulator (CAMSIM), XM32
<u>03-23</u>	Nuclear, Biological, Chemical Reconnaissance Vehicle (NBCRV) Virtual Crew Trainer (XM95)

ENGINEER (05-SERIES)

<i>DVC No.</i>	<i>Nomenclature</i>
<u>05-20</u>	Modular Pack Mine System (MOPMS) Training Dispenser
<u>05-22</u>	M-7 Dispensing Set, Munition, Network Command (Spider) Trainer
<u>05-22/A</u>	M-7 Dispensing Set, Munition, Network Command (Spider) Trainer, Control Unit, Munition: MCUT Kit (M332 Emulator)
<u>05-22/A/1</u> *	M-7 Dispensing Set, Munition, Network Command (Spider) Trainer, Control Unit, Munition: MCUT Kit (M332 Emulator) *(Ft. Meade and Ft. Polk)
<u>05-22/A/2</u>	M-7 and M7A1 Dispensing Set, Munition, Network Command (Spider) Trainer, Control Unit, Munition: MCUT Kit (XM10 Emulator)
<u>05-22/B</u>	M-7 Dispensing Set, Munition, Network Command (Spider) Trainer, Launcher and Grenade, Network Command Munition: MGTS Kit (12 grenades)
<u>05-100</u>	Wide Area Munition (WAM) (HORNET) Collective Trainer XM97
<u>05-101</u>	Wide Area Munition (WAM) (HORNET) Individual Trainer XM98
<u>05-104/1</u>	Training Kit, Selectable Lightweight Attack Munition (SLAM) Army M320E1(Upgrade)
<u>05-105</u>	AN/PSS-14 Training Set Includes: Sweep Monitoring System (SMS) Training Target Set (TTS)
<u>05-105/1</u>	AN/PSS-14 Training Target Set
<u>05-105/1/A</u>	TT-30-AT (Training Target-30cm – Antitank, Low Metal)
<u>05-105/1/B</u>	TT-25-AT (Training Target-25cm – Antitank, Low Metal)
<u>05-105/1/C</u>	TT-20-AT (Training Target-20cm – Antitank, Low Metal)
<u>05-105/1/D</u>	TT-12-AP (Training Target-12cm – Antipersonnel, Low Metal)
<u>05-105/1/E</u>	TT-09-AP (Training Target-09cm – Antipersonnel, Low Metal)
<u>05-105/1/F</u>	TT-06-AP (Training Target-06cm – Antipersonnel, Low Metal)
<u>05-105/1/G</u>	TT-M-AT (Training Target-High Metal, Antitank)
<u>05-105/1/H</u>	TT-M-AP (Training Target-High Metal, Antipersonnel)
<u>05-112</u>	Construction Equipment Virtual Trainer (CEVT) – Hydraulic Excavator (HYEX) Level 1
<u>05-112/A</u>	Construction Equipment Virtual Trainer Wheel Loader (CEVT-WL) Level 1
<u>05-113</u>	Improvised Explosive Device Effects Simulator, Increment 1, (IEDES 1) MILES Emitter Unit (MEU)
<u>05-113/1</u>	(IEDES 1) Pressure Device (PD)
<u>05-113/2</u>	(IEDES 1) Push Pull Booby Trap
<u>05-113/3</u>	(IEDES 1) Man Worn Suicide Vest (SV)
<u>05-114</u>	(IEDES 1) Training System, 433Mhz
<u>05-114/1</u>	(IEDES 1) Training System, 315Mhz
<u>05-115</u>	(IEDES 1), Electronic Common Interface Device (ECID), 433Mhz
<u>05-115/1</u>	(IEDES 1), Electronic Common Interface Device (ECID), 315Mhz
<u>05-116</u>	(IEDES 1), Module Control Unit (MCU), 433 Mhz
<u>05-116/1</u>	(IEDES 1), Module Control Unit (MCU), 315 Mhz
<u>05-117</u>	(IEDES 1), Non-Pyrotechnic Controller (NPC)
<u>05-118</u>	(IEDES 1), Pyrotechnic Scalable Signature Device (PSSD)
<u>05-118/1</u>	(IEDES 1), Non-Pyrotechnic Scalable Signature Device (NPSSD)
<u>05-119</u>	Virtual Clearance Training Suite (VCTS)
<u>05-120/A</u>	Desktop Trainer (DT) for the Anti-Personnel Mine Clearing System, Remote Control: M160 Upgrade
<u>05-122/1</u>	Common Driver Trainer, Tank Engineering Variant (CDT/TEV)
<u>05-125</u>	Dispenser and Mine, Ground Training: SAVO

ARTILLERY (06-SERIES)

TSS ENTERPRISE

<i>DVC No.</i>	<i>Nomenclature</i>
<u>06-68/G</u>	Fire Support Combined Arms Tactical Trainer (FSCATT) A6
<u>06-104</u>	Firefinder Organizational Maintenance Trainer AN/TPQ-36(V)8
<u>06-108</u>	Command and Control Tactical Trainer (C2TT)
<u>06-112/A</u>	High Mobility Artillery Rocket System (HIMARS) Organizational Maintenance Trainer (OMT)
<u>06-116</u>	M1130 105MM Inert Training Projectile
<u>06-120</u>	M1064, 105MM Illumination Cartridge
<u>06-121</u>	M1066, 155MM Infrared Illumination Projectile
<u>06-122</u>	Dummy Projectile, 155MM: Inert for M1122
<u>06-124</u>	Call For Fire Trainer Increment III (CFFT)
<u>06-124/1</u>	(CFFT III) 1:4 Configuration
<u>06-124/2</u>	(CFFT III) 1:12 Configuration
<u>06-124/3</u>	(CFFT III) 1:30 Configuration
<u>06-124/3/1</u>	(CFFT III) 1:30 Enhanced (6 Stations)
<u>06-124/4</u>	(CFFT III) Joint Closed Air Support (JCAS)
<u>06-124/5</u>	(CFFT III) Extended Display(ED)
<u>06-124/6</u>	(CFFT III) Mobile Team Trainer (MTT)
<u>06-124/8</u>	(CFFT III) 1:4 Adaptive Full Spectrum Module (AFSM) Immersive
<u>06-124/9</u>	(CFFT III) 1:4 Close Air Support Module (CASM) Immersive
<u>06-124/10</u>	(CFFT III) 1:4 Urban Terrain Module (UTM)
<u>06-125</u>	Fuze & Cover Assembly, Unsettable Trainer
<u>06-126</u>	Field Artillery M777A2/M119A3/M109A7 Computer Based Training System
<u>06-126/1</u>	Field Artillery M777A2/M119A3/M109A7 HT Fixed Instructor Operator (IOS) Station
<u>06-126/2</u>	Field Artillery M777A2/M119A3/M109A7 HT Fixed Student Station (SS)
<u>06-126/3</u>	Field Artillery M777A2/M119A3 Howitzer Mobile Kit Computer Based Trainer (CBT)
<u>06-126/4</u>	Field Artillery M777A2/M119A3/M109A7 HT Mobile Kit Light Weight Desktop Trainer (LWDT)
<u>06-126/5</u>	Field Artillery M777A2/M119A3 Howitzer Classroom Equipment Kit
<u>06-127</u>	M1130 Inert Training Aid, Cartridge, 105MM, High Explosive (HE), Pre-Formed Fragmentation (PFF), Base Bleed (BB)

INFANTRY (07-SERIES)

<i>DVC No.</i>	<i>Nomenclature</i>
<u>07-26</u>	M15 Sighting Device
<u>07-28/B</u>	Target Holding Mechanism, Trainfire
<u>07-55</u>	5.56MM Conversion Kit (RIMFIRE)
<u>07-59</u>	Blank Ammunition Firing Attachment: M2 Machine Gun
<u>07-62</u>	M2 Practice Bolt for Short Range Ammunition
<u>07-63</u>	M3 Recoil Amplifier for Short Range Ammunition
<u>07-68</u>	M287 Tracer Bullet Trainer (TBT) for the M137 AT4 Anti-Tank Weapon
<u>07-73</u>	Remote Target System (RETS) Infantry Target Mechanism (ITM)
<u>07-74</u>	Remote Target System (RETS) Infantry Moving Target Carrier (IMTC)
<u>07-78/B</u>	TOW ITAS Basic Skills Trainer (BST)
<u>07-125</u>	Fire Arms Training System (FATS)
<u>07-126</u>	Javelin Basic Skills Trainer
<u>07-126/A</u>	Javelin Trainer (Block 1) Basic Skills Trainer, (BST) Upgrade
<u>07-127</u>	Javelin Field Tactical Trainer (FTT) (Student Station)
<u>07-128</u>	Javelin Field Tactical Trainer (FTT) (Instructor Station)
<u>07-129</u>	Engagement Skills Trainer II (EST II)
<u>07-129/4</u>	Simulated, M2 Machine Gun, .50Cal
<u>07-129/5</u>	Simulated, M4 w/Rails Rifle, 5.56MM
<u>07-129/6</u>	Simulated, M4/203 Rifle w/Grenade Launcher, 5.56/40MM

TSS ENTERPRISE

<i>DVC No.</i>	<i>Nomenclature</i>
07-129/7	Simulated, M4/320 Grenade Launcher, 5.56/40MM
07-129/8	Simulated, M9 Pistol, 9MM
07-129/9	Simulated, M16A2 Rifle, 5.56MM
07-129/10	Simulated, M16A4, 5.56MM
07-129/11	Simulated, M16A4/203 Rifle w/Grenade Launcher 5.56/40MM
07-129/12	Simulated, M136/AT4 Rocket Launcher
07-129/13	Simulated, Bunker Defeat Munition (BDM) M141
07-129/14	Simulated, M240B Machine Gun, 7.62MM
07-129/15	Simulated, M1200 Shotgun, 12 Gauge
07-129/16	Simulated, MK19 Machine Gun Grenade Launcher, 40MM
07-129/17	Simulated, M249 SAW Machine Gun, 5.56MM
07-129/18	Simulated, M320 GL, 40MM
07-131	Laser Marksmanship Training System (LMTS), Initial Entry Training (IET) Battalion Set
07-131/1	(LMTS), Initial Entry Training (IET) Summer Surge Kits
07-132	(LMTS) Large Suite
07-132/A	(LMTS) Large Suite
07-132/B	(LMTS) ROTC
07-133	(LMTS) Small Suite
07-158	Tow Improved Target Acquisition System – Tactical Engagement Simulation System (ITAS-TESS) Field Training System (FTS)
07-158/1	(ITAS-TESS) Field Training System (FTS) Lot 7
07-158/1/1	Ruggedized Improved Hand Initializer (RIHHI)
07-159	Firearms Training System (FATS) IV
07-161	(LMTS), Sniper Training System (STS)
07-162	Close Combat Mission Capabilities Kit (CCMCK) for M9 Semi-automatic Pistol
07-163	(CCMCK) for M11 Compact Pistol
07-164	(CCMCK) for M16/M4 Rifle/Carbine
07-165	(CCMCK) for M249 Squad Automatic Weapon (SAW)
07-168	Tank Weapon Gunnery Simulation System/Precision Gunnery System (TWGSS/PGS)
07-168/3	Precision Gunnery System (PGS): PGS for M2/M3 M2A1/M3A1 and M2A2/M3A2 BFV
07-168/5	(PGS): PGS for Light Armored Vehicle (LAV)
07-168/6	(PGS): Retro-reflectors
07-168/7	(PGS): Controller Gun
07-168/9	(PGS): PGS for M2A3/M3A3, Bradley Fighting Vehicle
07-168/10	(PGS): PGS for M16, Bradley Fighting Vehicle Linebacker
07-168/11	Through-Sight Video (TSV) for M2/M3 Bradley Fighting Vehicle, (PGS)
07-172	STRYKER Anti-Tank Guided Missile Basic Skills Trainer (ATGM BST)
07-177	M2A2/M3A2 Bradley Fighting Vehicle (BFV) Institutional - Conduct of Fire Trainer (I-COFT) Operation Desert Storm (ODS) Enhancements
07-177/A	M2A2/M3A2 Operation Desert Storm (ODS) Bradley Fighting Vehicle Mobile Conduct of Fire Trainer (M-COFT) Operation Desert Storm (ODS) Enhancements
07-177/B	M2A2/M3A2 (ODS) Bradley Fighting Vehicle Re-locatable Conduct of Fire Trainer (R-COFT) Operation Desert Storm (ODS) Enhancements
07-179	Bradley Conduct of Fire Trainer (COFT) - Institutional
07-179/A	Bradley (COFT) - Mobile
07-179/B	Bradley (COFT) - Table Top Trainer (TTT)
07-180	Bradley Advanced Training System-Urban Operations (BATS-UO)
07-180/1	(BATS-UO) Permanent (Institutional), (Unsheltered)
07-180/2	(BATS-UO) Relocatable (Sheltered), (Single Shelter)
07-181	Laser Marksmanship Training System (LMTS) Basic Rifle/Pistol Marksmanship System (BRPMS)
07-181/1	(LMTS) Basic Rifle/Pistol Marksmanship System (BRPMS) Light
07-181/2	(LMTS) Small Unit Training Set (SUTS)
07-181/3	(LMTS) Warrior Kit 130-E

TSS ENTERPRISE

<i>DVC No.</i>	<i>Nomenclature</i>
<u>07-182</u>	Launcher, Practice, Subcaliber Ammunition: Bunker Defeat Munition (BDM) Training Device, 21 Millimeter, XM 808
<u>07-183</u>	Inert Trainer, Launcher: M141 Bunker Defeat Munition, Field Handling Trainer (BDM FHT)
<u>07-184</u>	Inert Trainer, Launcher: M136A1 AT4 Confined Space and Reduced Sensitivity, Field Handling Trainer (AT4CS-RS FHT)
<u>07-188</u>	Soldier Monitoring System (SMS)
<u>07-188/1</u>	Soldier Monitoring System (SMS), Monitoring Station
<u>07-188/2</u>	Soldier Monitoring System (SMS), Mobile Monitoring Device (MMD)
<u>07-188/3</u>	Soldier Monitoring System (SMS), Soldier Worn Device (SWD)
<u>07-188/4</u>	Soldier Monitoring System (SMS), Antenna Assembly
<u>07-188/5</u>	Soldier Monitoring System (SMS), Mobile Tower

MEDICAL (08-SERIES)

<i>DVC No.</i>	<i>Nomenclature</i>
<u>08-01/A</u>	Manikin, Nursing Doll
<u>08-02</u>	Anatomical Model: Torso and Head
<u>08-03</u>	Adult Human Male Skeleton
<u>08-04</u>	War-Wound Moulage Set
<u>08-05/B</u>	Deluxe Intravenous (IV) Training Arm (120) Task Trainer
<u>08-05/C</u>	Virtual Patient System (VPS) Intravenous IV Arm Simulator
<u>08-10</u>	Colostomy Moulage Kit
<u>08-14</u>	Casualty Simulation Kit
<u>08-15</u>	Resuscitation Training Manikin
<u>08-16</u>	Manikin, Head and Torso, CPR Training
<u>08-18</u>	Simulated Injury Moulage Set
<u>08-19</u>	Manikin, Thoracic Cross-Section
<u>08-20</u>	Infant Resuscitation Training Manikin
<u>08-21</u>	Arrhythmia Simulator
<u>08-36</u>	Training Kit, Nerve Agent (ATNAA Training Simulator)
<u>08-37</u>	Convulsant Antidote for Nerve Agent Training Device (CANATD)
<u>08-50</u>	Emergency Care Simulator (ECS-100) Task Trainer
<u>08-51</u> <u>MSTC</u>	Rescue Randy Task Trainer
<u>08-51/A</u> <u>TSC</u>	Rescue Randy Task Trainer
<u>08-52</u>	Critical Airway Management Trainer
<u>08-54</u>	Multiple Amputation Trauma Trainer (MATT) Lower Body
<u>08-57</u>	Field Expedient Bleeding Simulation System (FEBSS)
<u>08-59</u>	Birthing Simulator
<u>08-61</u>	FAST-1 Sternal Intraosseous Infusion System
<u>08-63</u>	High Fidelity Thetherless Mannequin (HFTM) Virtual Patient System (VPS)
<u>08-64</u>	SimMan 3-G Mystic Manikin
<u>08-65</u>	HAL Advance Airway Trainer
<u>08-67</u>	Packable Hemostatic Wound Trainer (HEMO) KGS-TFX-HEMO-1
<u>08-67/A</u>	Packable Hemostatic Wound Trainer (HEMO) KGS-TFX-HEMO-1
<u>08-68</u>	Multiple Amputation Trauma Trainer Abdominal Casualty Expectant(MATT ACE) KGS-TFX-ACE-1
<u>08-69</u>	Multiple Amputation Trauma Trainer Series 1500 Trauma Trainer (MATT Lower) KGS-TFX-LO-1
<u>08-70</u>	AirwayPlus Lifecast - Intubation/Packable (APL-IP) (KGS-TFX-APL-IP-1)
<u>08-71</u>	AirwayPlus Lifecast - Pulses/Breathing (APL-PB) (KGS-TFX-APL-PB-1)
<u>08-71/A</u>	AirwayPlus Lifecast - Pulses/Breathing (APL-PB) (KGS-TFX-APL-PB-1)
<u>08-73</u>	Medical Simulation Training Center (MSTC)
<u>08-75</u>	6-in-1 Tactical Combat Casualty Care (TCCC) Trainer
<u>08-76</u> <u>MSTC</u>	The TraumaFX AirwayPlus Lifecast – Pulses/Breathing Amputation Arm
<u>08-76/A</u> <u>TSC</u>	The TraumaFX AirwayPlus Lifecast – Pulses/Breathing Amputation Arm
<u>08-77</u> <u>MSTC</u>	Packable Hemostatic (HEMO) Trauma Trainer KGS-TFX-HEMO-R-1

TSS ENTERPRISE

<i>DVC No.</i>	<i>Nomenclature</i>
<u>08-77/A TSC</u>	Packable Hemostatic (HEMO) Trauma Trainer KGS-TFX-HEMO-R-1
<u>08-78 MSTC</u>	AirwayPlus Lifecast - Pulses/Breathing w/ 90° Bend (KGS-TFX-APL-PB-1)
<u>08-78/A TSC</u>	AirwayPlus Lifecast - Pulses/Breathing w/ 90° Bend (KGS-TFX-APL-PB-1)
<u>08-79</u>	SimMan 3G Trauma Light
<u>08-80</u>	SimMan 3G Trauma Dark
<u>08-81 MSTC</u>	Mannequin, Rescue Adult (Rescue Randy Adult Weight Trainer)
<u>08-81/A TSC</u>	Mannequin, Rescue Adult (Rescue Randy Adult Weight Trainer)

ORDNANCE (09-SERIES)

<i>DVC No.</i>	<i>Nomenclature</i>
<u>09-23</u>	M35A2C Troubleshooting Using STE/ICE Trainer
<u>09-24</u>	Remoted Target System (RETS)
<u>09-25</u>	Aerial Weapons Scoring System (AWSS) (Analog Configuration)
<u>09-25/A</u>	(AWSS) (Digital Configuration)
<u>09-28</u>	Hellfire Missile Dummy Ground Crew Trainer
<u>09-29</u>	Hellfire Missile Launch Simulator
<u>09-131/A</u>	M2/M3A2 Operation Desert Storm Hands-On-Trainer (HOT) Upgrade
<u>09-131/B</u>	M2/M3A3 Bradley Fighting Vehicle Diagnostic and Troubleshooting Trainer (DTT) Classroom
<u>09-134/A</u>	Basic Electronics Maintenance Trainer (BEMT) Upgrade (with Configurations 1 and 2)
<u>09-134/A/1</u>	(BEMT) Upgrade, Instructor Station
<u>09-134/A/2</u>	(BEMT) Upgrade, Student Station
<u>09-134/A/3</u>	(BEMT) Upgrade, Server Station
<u>09-135</u>	Backhoe Loader (BHL) Wet Brakes Training Device
<u>09-136</u>	Air Conditioning Maintenance Trainer
<u>09-137/E</u>	M1A1 Abrams Integrated Management/Enhanced Diagnostics (M1A1 AIM/ED) Hands-On-Trainer (HOT)
<u>09-143</u>	STRYKER Maintenance Training System (MTS)
<u>09-143/A</u>	Hull Hands-On-Trainer (HOT) Infantry Carrier Vehicle (ICV) Hull Hybrid
<u>09-143/1/A</u>	Striker Training Management System (TMS-A) Version A
<u>09-143/2/A</u>	Stryker Diagnostic Troubleshooting (DT) Classroom Trainer Version A
<u>09-143/3</u>	Part Task Trainer (PTT), Powerpack w/AC
<u>09-143/4</u>	(PTT), Powerpack w/o AC
<u>09-143/5</u>	(PTT) Brake
<u>09-143/8</u>	Hands-On Trainer (HOT) Remote Weapons System (RWS)
<u>09-143/9</u>	Stryker Software Support Environment (SSE)
<u>09-143/9/A</u>	(SSE-A) Version A
<u>09-146</u>	High Mobility Artillery Rocket System (HIMARS) Diagnostic and Troubleshooting Trainer (D/T)
<u>09-147</u>	(HIMARS) Mockup Trainer
<u>09-147/A</u>	(HIMARS) Hydraulic Power Cart
<u>09-149/A</u>	M1A2 System Enhancement Program (SEP), Version 2, HOT (Hands-on-Trainer)
<u>09-149/B</u>	M1A1 Situational Awareness (SA) Hands on Trainer (HOT)
<u>09-149/C</u>	M1A1 SA/M1A2 System Enhancement Program, Variant 2 (SEpv2) Abrams Diagnostic Troubleshooting Trainer (DTT)
<u>09-149/C/1</u>	Abrams Diagnostic Troubleshooting Trainer (DTT)
<u>09-150</u>	Mine Resistant Ambush Protected (MRAP) Maintenance Trainer System (MTS)
<u>09-150/1</u>	(MRAP), (MTS), Independent Suspension System (ISS)
<u>09-150/2</u>	(MRAP), (MTS), Automatic Fire Suppression System (AFSS)
<u>09-150/2/A</u>	(MRAP), (MTS), Automatic Fire Suppression System (AFSS) with Scoring
<u>09-151</u>	Paladin Maintenance Trainer (PMT)
<u>09-151A</u>	M109A6/M109A7 Paladin Maintenance Trainer (PMT)
<u>09-152</u>	M270A1 Multiple Launch Rocket System (MLRS) Advanced Maintenance Training Environment (AMTE) Mockup Trainer
<u>09-154</u>	Abrams Gun Tube Instructional Visual Aid (IVA)

DVC No.

Nomenclature

<u>09-155</u>	Abrams M1A2 SEPV2 Engine Diagnostic/Troubleshooting Trainer (ED/TT)
<u>09-156</u>	Basic Electronics Maintenance Trainer (BEMT) II
<u>09-156/1</u>	Basic Electronics Maintenance Trainer (BEMT), Instructor Station
<u>09-156/2</u>	Basic Electronics Maintenance Trainer (BEMT), Student Station
<u>09-156/3</u>	Basic Electronics Maintenance Trainer (BEMT), Server Station

SIGNAL (11-SERIES)

DVC No.

Nomenclature

<u>11-99</u>	Secure Mobile Anti-Jam Reliable Tactical Terminal Training System (SMART-T TS)
<u>11-111</u>	MILSTAR Satellite Simulator
<u>11-128</u>	Mobile Access Node (MAN), National Training Center (NTC)
<u>11-129</u>	Mobile Access Node (MAN), Joint Readiness Training Center (JRTC)

ARMOR (17-SERIES)

DVC No.

Nomenclature

<u>17-176</u>	Advanced Gunnery Training System (AGTS) for the M1A2 (SEP) (Permanent) (PAGTS)
<u>17-176/A</u>	(AGTS) for the M1A2 System Enhanced Program (SEP) (Permanent)
<u>17-176(P)</u>	(AGTS) for the M1A2 (Permanent) (PAGTS) Pre-Brief After Action Review (PAAR)
<u>17-177</u>	Advanced Gunnery Training System (AGTS) for the M1A2 CSEP) (Relocatable) (RAGTS)
<u>17-177/A</u>	(AGTS) for the M1A2 System Enhanced Program (SEP) (Relocatable)
<u>17-177(P)</u>	(AGTS) for the M1A2 (Relocatable) (RAGTS) Pre-Brief (PAAR)
<u>17-178</u>	(AGTS) for the M1A2 (SEP) (Mobile) (MAGTS)
<u>17-178/A</u>	(AGTS) for the M1A2 System Enhanced Program (SEP) (Mobile)
<u>17-178(P)</u>	(AGTS) for the M1A2 (Mobile) (MAGTS) Pre-Brief (PAAR)
<u>17-224</u>	M1A1 Conduct Of Fire Trainer – Advanced Gunnery Training System (M1A1 COFT-AGTS)
<u>17-224/A</u>	Conduct Of Fire Trainer - Advanced Gunnery Training System (C-AGTS) for M1A1 SA/TUSK
<u>17-224/B</u>	(C-AGTS) for M1A1 SA/TUSK/SCWS
<u>17-224(P)</u>	(M1A1 COFT-AGTS) Pre-Brief (PAAR)
<u>17-243/4</u>	STRYKER Mobile Gun System - Tactical Engagement Simulation System (MGS-TESS)
<u>17-243/4/1</u>	STRYKER (MGS-TESS) AIMTEST-SA
<u>17-243/4/2</u>	STRYKER (MGS-TESS) (AAR) Playback System)
<u>17-243/4/3</u>	Sub-Caliber Inbore 105MM Semi-Automatic, STRYKER (IDS)
<u>17-243/4/3/1</u>	Barrel Stand Test Unit (BSTU), for the (MGS-TESS) Sub Caliber In-Bore 155mm SA STRYKER
<u>17-260</u>	Common Driver Trainer, Common Equipment (CDT/CE)
<u>17-260/1</u>	(CDT), Stryker Variant (CDT/SV)
<u>17-260/1/1</u>	Common Driver Trainer, Stryker Variant - 1 (CDT/SV-1)
<u>17-260/2</u>	(CDT), Tank Variant (CDT/TV)
<u>17-260/3</u>	(CDT), Mine Resistance Ambush Protected Variant (CDT/MV)
<u>17-260/5</u>	(CDT), Autoflug Trainer Variant (CDT/AV)
<u>17-261</u>	STRYKER Mobile Gun System (MGS) Advanced Gunnery Training System (AGTS)
<u>17-261/1(T)</u>	STRYKER (MGS) Tabletop (TAGTS)
<u>17-261(P)</u>	STRYKER (MGS) (AGTS) Pre-Brief (PAAR)
<u>17-271</u>	Battlefield Effects Simulator (BES) Omega 60/B2
<u>17-277</u>	Subcaliber Inbore Training Device
<u>17-282</u>	Bradley A3 Multi Media Recorder (MMR) Thru Site Video (TSV)
<u>17-287</u>	Thru Site Video Recorder Common (TSVRC) Thru Site Video (TSV)
<u>17-291/A/1</u>	Close Combat Tactical Trainer (CCTT) M1A1-SA, Module Fixed Site (FS)
<u>17-291/B/1</u>	Close Combat Tactical Trainer (CCTT) M1A2-SEPV2, Module Fixed Site (FS)
<u>17-291/C/1</u>	Close Combat Tactical Trainer (CCTT) M2/M3A2-ODSSA, Module Fixed Site (FS)
<u>17-291/D/1</u>	Close Combat Tactical Trainer (CCTT) M2/M3A3, Module Fixed Site (FS)
<u>17-291/E/1</u>	Close Combat Tactical Trainer (CCTT) M2A3-BFIST, Module Fixed Site (FS)
<u>17-291/F/1</u>	Close Combat Tactical Trainer (CCTT) HMMWV, Module Fixed Site (FS)
<u>17-292</u>	Close Combat Tactical Trainer (CCTT) Mobile Series

TSS ENTERPRISE

DVC No.	Nomenclature
17-292/A/1	Close Combat Tactical Trainer (CCTT) M1A1-SA, Mobile Trailer (MOB)
17-292/B/1	Close Combat Tactical Trainer (CCTT) M1A1 SEPv2, Mobile Trailer (MOB)
17-292/C/1	Close Combat Tactical Trainer (CCTT) M2/M3A2-ODS-SA, Mobile Trailer (MOB)
17-292/D/1	Close Combat Tactical Trainer (CCTT) M2/M3 A3, Mobile Trailer (MOB)
17-292/3/1	(CCTT) Mobile M1A1 SA Variant Kit
17-292/3/2	(CCTT) Mobile M1A2 (SEPV2) Variant Kit
17-292/4/1	(CCTT) Mobile M1A1 SA Hardwire
17-292/4/2	(CCTT) Mobile M1A1 FEP Hardwire
17-292/5/1	(CCTT) Mobile M2 (M3)/A3 CM/ED Variant Kit
17-292/5/2	(CCTT) Mobile M2A2 ODS SA Variant Kit
17-292/5/3	(CCTT) Mobile M2 (M3)/A3 (CM/ED) (BFIST) Variant Kit
17-292/6	(CCTT) Mobile Trailer, Portable Power System; 350kW
17-292/7	(CCTT) Mobile Trailer, Portable Power System; 350kW; Spread Axle
17-292/8	(CCTT) Mobile Operations Center, Trailer System/48 foot
17-292/9	(CCTT) Mobile Operations Center, Trailer System/53 foot
17-292/10	(CCTT) Mobile Theater After Action Review (MTAAR)
17-292/11	(CCTT) Mobile Theater After Action Review/AVCATT
17-292/12	(CCTT) Mobile Reconfigurable Vehicle Simulator (with weapons)
17-292/12/1	(CCTT) Mobile RVS M978/M977 WAGO Kit
17-292/12/2	(CCTT) Mobile RVS M978/M1036 PIE Kit
17-292/13	(CCTT) Mobile Reconfigurable Vehicle Support Semitrailer
17-293	Common Thru-Sight Video-Crew Module Unit Recorder (CTSV-CMUR) Kit
17-293/1	After Action Review (AAR) Laptop Accessory Kit

GENERAL (20-SERIES)

DVC No.	Nomenclature
20-91	Games For Training (GFT)
20-91/1	Games For Training - Stryker Virtual Collective Trainer (GFT-SVCT)
20-92	Remoted Target System (RETS) Target Holding Mechanism Tank Gunnery (THMTG)
20-94	M21 Blank Firing Attachment for M240 Machine Gun
20-95	Artillery, Mine, and Demolition Noise Simulator
20-96/D	Small Arms Flash-Noise Gunfire Simulator
20-100	Live Virtual Constructive - Integrated Architecture (LVC-IA) System
20-101	Joint Land Component Constructive Training Capability - Brigade Lower Enclave (JLCCTC - Bde LE)
20-101/A	Joint Land Component Constructive Training Capability (JLCCTC) Middle Enclave
20-101/B	Joint Land Component Constructive Training Capability (JLCCTC) Upper Enclave
20-101/C	Joint Land Component Constructive Training Capability (JLCCTC) Stand-Alone System
20-101/D	Joint Land Component Constructive Training Capability - Division Lower Enclave (JLCCTC - DIV LE)
20-101/E	Joint Land Component Constructive Training Capability (JLCCTC) – Virtual Tech Control Forward (VTCF)
20-101/F	Joint Land Component Constructive Training Capability (JLCCTC) – Joint Deployment Logistics Model (JDLM) Virtualized Suite (JVS)
20-102	Multi Resolution Federation - Brigade (MRF BDE) Mobile Suite
20-103	Common Hardware Platform (CHP)
20-103/A	Common Hardware Platform Mobile Variant

WEAPONS (23-SERIES)

DVC No.	Nomenclature
23-03	Motorized Sectionalized Gun .50 Caliber, M2 Machine Gun
23-06	Simulated Area Weapons Effects (SAWE) Multiple Integrated Laser Engagement System (MILES) II for the M1A1 Tank
23-07	(SAWE) (MILES) II for the M2/M3 Bradley Fighting Vehicle (BFV)
23-07/A	M2/M3 Bradley (SAWE)/(MILES) II (TOW XMRT w/MAIS Laser)

TSS ENTERPRISE

<i>DVC No.</i>	<i>Nomenclature</i>
<u>23-11</u>	(SAWE) (MILES) II for the M113 Armored Personnel Carrier (APC)
<u>23-12</u>	(SAWE) (MILES) II for the T72/T80 Tank
<u>23-13</u>	(SAWE) (MILES) II for the BMP (M551) Tank
<u>23-13/A</u>	(SAWE) (MILES) II for the BMP (M551) Tank (Upgrade kit)
<u>23-14</u>	(SAWE) (MILES) II for the Mobile Independent Target System (MITS)
<u>23-20</u>	M2K Multiple Integrated Laser Engagement System 2000 (MILES 2000) M16A1/M16A2 Rifle Kit
<u>23-22</u>	M2K (MILES 2000) M249 Squad Automatic Weapon Kit
<u>23-23</u>	M2K (MILES 2000) M24/M40 Sniper Weapon System Kit
<u>23-24</u>	M2K (MILES 2000) M60 Machine Gun Kit
<u>23-25</u>	M2K (MILES 2000) M240 Machine Gun Kit
<u>23-26</u>	M2K (MILES 2000) M2 Machine Gun Kit
<u>23-27</u>	M2K (MILES 2000) AT-04 Kit
<u>23-28</u>	M2K (MILES 2000) TOW Ground Mount/Day Tracker Kit
<u>23-29</u>	M2K (MILES 2000) M113 Armored Personnel Carrier (APC) Vehicle System Kit
<u>23-50</u>	M2K (MILES 2000) M1/M1A1/M1A2 Kit
<u>23-51</u>	M2K (MILES 2000) M2/M3 Family of Fighting Vehicles Kit
<u>23-51/A</u>	M2K (MILES 2000) (VIS COM)
<u>23-52</u>	M2K (MILES 2000) Independent Target System (ITS) Kit
<u>23-53</u>	M2K (MILES 2000) Controller Device/Training Data Transfer Device (CD/TDTD)
<u>23-56</u>	M2K (MILES 2000) M4/M16A1/M16A2
<u>23-58</u>	Multiple Integrated Laser Engagement System 2000 (MILES 2000) ASAAF Kit
<u>23-58/A</u>	(MILES 2000) ASAAF Kit
<u>23-66</u>	Multiple Integrated Laser Engagement System Individual Weapons System (MILES IWS) M2 Machine Gun Kit, Instrumentable
<u>23-67</u>	(MILES IWS) M16/M4 Rifle Kit, Instrumentable
<u>23-68</u>	(MILES IWS) M24 Sniper Weapon System Kit, Instrumentable
<u>23-69</u>	M107 (MILES IWS) Sniper Weapon System Kit, Instrumentable
<u>23-70</u>	(MILES IWS) M240 Machine Gun Kit, Instrumentable
<u>23-71</u>	(MILES IWS) M249 Squad Automatic Weapon Kit, Instrumentable
<u>23-76</u>	M110 MILES Individual Weapons System (IWS), Sniper Weapon Set, Instrumentable
<u>23-77</u>	Mirror Alignment Jig Kit (MAJiK)
<u>23-77/1</u>	Mirror Alignment Jig Kit (MAJiK) Variant
<u>23-79</u>	(MILES IWS) Sniper Kit
<u>23-80/11</u>	Simulator System, Firing, Laser: M73 for M901 Improved TOW Vehicles
<u>23-80/13</u>	Simulator System, Firing, Laser: M89 for M16/M16A2 Rifle
<u>23-80/14</u>	Simulator System, Firing, Laser: M90 for Squad Automatic Weapon (SAW)
<u>23-80/15</u>	Simulator System, Laser Indicator, M40: for Independent Mobile Target System (IMTS)
<u>23-91</u>	Indicator, Simulator System, Laser Target Interface Device (LTID)
<u>23-92</u>	Main Gun Signature Simulator (MGSS) (MILES 2000)
<u>23-94</u>	MILES XXI (STRYKER) Common Kit
<u>23-95</u>	M2/M3A2/A3 Bradley Fighting Vehicle, (MILES XXI)
<u>23-96</u>	M1A1/A2/System Enhanced Package (SEP) Tank, (MILES XXI)
<u>23-97</u>	Unitech/Icon Independent Target System (ITS), (MILES)
<u>23-97/A</u>	Wireless Independent Target System (WITS), Basic Kit (915 MHz)
<u>23-97/B</u>	(WITS), M113 Kit (915 MHz)
<u>23-97/C</u>	(WITS), Basic Kit (2.4 Ghz)
<u>23-97/D</u>	(WITS), M113 Kit (2.4 GHz)
<u>23-98</u>	MILES MK-19 Simulation Player Unit (SPU)
<u>23-98/1</u>	Smart Controller Gun (SCG)
<u>23-98/A</u>	Geo-Bearing Mark-19 Simulation Player Unit (GBMK-19 SPU)
<u>23-99</u>	STRYKER Delta Kit for the ICV, CV, FSV, RV
<u>23-99/1</u>	STRYKER Delta Kit for the Mortar Carrier Vehicle (MCV) and Medical Evacuation Vehicle (MEV) (MILES XXI)
<u>23-99/2</u>	STRYKER Delta Kit for the Engineer Squad Vehicle (ESV) (MILES XXI)
<u>23-99/3</u>	STRYKER Delta Kit for the Anti-Tank Guided Missile (ATGM) (MILES XXI)

TSS ENTERPRISE

<i>DVC No.</i>	<i>Nomenclature</i>
<u>23-99/5</u>	STRYKER Delta Kit for NBCRV System (MILES XXI)
<u>23-101</u>	Unitech/Multiple Integrated Laser Engagement System (MILES), Universal Controller Device (UCD) Indicator Simulator System, Laser
<u>23-101/A</u>	Unitech/(MILES), Micro Controller Device (MCD) Indicator Simulator System, Laser
<u>23-102</u>	Multiple Integrated Laser Engagement System (MILES), Shoulder Launcher Munitions (SLM)
<u>23-102/A</u>	(MILES), (SLM), AT4 VISMODO
<u>23-102/B</u>	(MILES), (SLM), RPG7 VISMODO
<u>23-102/C</u>	(MILES), (SLM), Engine Assembly
<u>23-102/D</u>	Instrumentable Multiple Integrated Laser Engagement System (I-MILES), Shoulder Launched Munitions (SLM), Bunker Defeat Munitions (BDM)
<u>23-103</u>	STRYKER TOW Simulator (STS) for ATGM Delta Kit
<u>23-104</u>	(MILES-IWS) Training Data Transfer Device (TDTD)
<u>23-105</u>	STRYKER Vehicle Instrumentation Interface Package (VIIP)
<u>23-106</u>	Instrumentable (I-MILES) Tactical Vehicle System (TVS)
<u>23-106/1</u>	I-MILES TVS, M2 SAT (Small Arms Laser Transmitter)
<u>23-106/2</u>	I-MILES TVS, M240 SAT
<u>23-106/3</u>	I-MILES TVS, Detector Module
<u>23-108/1</u>	Combat Vehicle Tactical Engagement Simulation System (CVTESS) Abrams
<u>23-108/1/A</u>	Alignment Device Abrams
<u>23-108/2</u>	(CVTESS) Bradley
<u>23-108/2/A</u>	Alignment Device Bradley
<u>23-108/3</u>	(CVTESS) Opposing Forces Surrogate Vehicle (OSV)
<u>23-108/4</u>	(CVTESS) Opposing Forces Surrogate Tracked Vehicle (OSTV)
<u>23-109</u>	Home Station Instrumentation Training System (HITS)
<u>23-109/1</u>	HITS Battalion Exercise Control (BN EXCON)
<u>23-109/2</u>	HITS Company Exercise Control (CO EXCON)
<u>23-109/3</u>	HITS Communications Network (CN)
<u>23-109/4</u>	HITS Dismount Instrumentation (DI)
<u>23-109/5</u>	HITS Vehicle Instrumentation (VI)
<u>23-109/6</u>	HITS Radio Receiver Transmitter (RRT)
<u>23-109/7</u>	HITS Exercise Control (EXCON)
<u>23-110</u>	(MILES IWS) (V) 2, Code 24 Weapon System Kit, Instrumentable
<u>23-111</u>	(MILES IWS) (V) 2, Code 27 Weapon System Kit, Instrumentable
<u>23-112</u>	Joint Multinational Readiness Center (JMRC), Mobile Instrumentation System (MIS)

MILITARY INTELLIGENCE (30-SERIES)

<i>DVC No.</i>	<i>Nomenclature</i>
<u>30-26</u>	Intelligence and Electronic Warfare Tactical Proficiency Trainer (IEWTPT) Technical Control Cell (TCC)
<u>30-26/A</u>	(IEWTPT), Upper Enclave (UE)
<u>30-26/B</u>	(IEWTPT), Lower Enclave (LE)
<u>30-26/C</u>	(IEWTPT), (TCC), Lower Enclave (LE), V2
<u>30-26/D</u>	(IEWTPT), (TCC), Upper Enclave (UE), V2
<u>30-26/E</u>	(IEWTPT), (TCC), Enclave Bridge(EB)
<u>30-30</u>	Counter Radio (Controlled Improvised Explosive Device) Electronic Warfare, Increment 2 Training Device) (CREW 2)
<u>30-30/1</u>	Counter Radio (Controlled Improvised Explosive Device) Electronic Warfare, Increment 2 Training Device) (CREW 2, 433 MHz)
<u>30-32</u>	Countermeasure Indicator Unit (CIU)
<u>30-32/1</u>	Countermeasure Indicator Unit (CIU), 433 MHz
<u>30-34</u>	Crew Vehicle Receiver/Jammer (CVRJ), 315 MHz Training Device
<u>30-35</u>	THOR III – Trainer (THOR III-T), 315 MHz
<u>30-35/1</u>	THOR III – Trainer (THOR III-T), 433 MHz
<u>30-36</u>	THOR III – Trainer (2) (THOR III T-2), 315 MHz, Kit

TSS ENTERPRISE

<i>DVC No.</i>	<i>Nomenclature</i>
<u>30-37</u>	Distributive Common Ground System-Army (DCGS-A) Trainer Suites
<u>30-37A</u>	Distributive Common Ground System-Army (DCGS-A) Intelligence Analyste (35F) Trainer Suites
<u>30-38</u>	Operator Procedural Trainer (OPT)
<u>30-39</u>	Tactical Ground Station (TGS) Geospatial Intelligence (GEOINT) (TGT) Trainer
<u>30-40</u>	(TGS) Maintenance Trainer (TMT)

AIR DEFENSE ARTILLERY (44-SERIES)

<i>DVC No.</i>	<i>Nomenclature</i>
<u>44-27/D</u>	Improved Moving Target Simulator (IMTS) 2010 Upgrade
<u>44-52</u>	Stinger Troop Proficiency Trainer (STPT)
<u>44-52/A</u>	Stinger Troop Proficiency Trainer (STPT) (Improved)
<u>44-55</u>	Avenger Captive Flight Trainer (CFT)
<u>44-56</u>	Stinger Field Handling Trainer (FHT)
<u>44-57</u>	Stinger Tracking Head Trainer Set (THT)
<u>44-64</u>	Patriot Missile Round Trainer (MRT) PAC-2 - Weighted
<u>44-65</u>	Patriot Organizational Maintenance Trainer (POMT)
<u>44-66</u>	Radar Set March Order and Emplacement (RSMO&E) Trainer
<u>44-72/A</u>	AVENGER Institutional Conduct Of Fire Trainer (I-COFT)
<u>44-93</u>	AVENGER Slew To Cue Table Top Trainer (AT3)
<u>44-93/A</u>	AVENGER Table Top Trainer (AT3), (Student Station)
<u>44-93/A/1</u>	AVENGER Table Top Trainer (AT3), (Student Station - Upgrade)
<u>44-93/B</u>	AVENGER Table Top Trainer (AT3), (Instructor Station)
<u>44-97</u>	Reconfigurable Table Top Trainer (RT3)
<u>44-97/A</u>	Reconfigurable Table Top Trainer (RT3) Version 1.5
<u>44-107</u>	Engagement Control Station (ECS) PATRIOT Maintenance Trainer (EPMT)
<u>44-108</u>	Launcher PATRIOT Maintenance Trainer (LPMT)
<u>44-109</u>	Counter Rocket Artillery and Mortar (C-RAM) Land-Based PHALANX Weapon System (LPWS)
	Stand Alone Gun Assembly (SAGA) Trainer
<u>44-110</u>	Counter Rocket Artillery and Mortar (C-RAM) Land Based Phalanx Weapon System (LPWS)
	Operator/Maintainer Trainer (OMT) Classroom Configuration
<u>44-111</u>	Counter Rocket Artillery and Mortar (C-RAM) Land Based Phalanx Weapon System (LPWS)
	Operator/Maintainer Trainer (OMT) Unit Configuration
<u>44-113</u>	Radar PATRIOT Maintenance Trainer (RPMT)

TRANSPORTATION (55-SERIES)

<i>DVC No.</i>	<i>Nomenclature</i>
<u>55-10/A</u>	Collision Avoidance Radar Navigation System (CARNS)
<u>55-10/B</u>	High Speed Craft Collision Avoidance Radar Navigation System (HSC-CARNS)
<u>55-11</u>	Application of Meters to Direct Current (DC) Circuits
<u>55-14</u>	Tactical Vehicle Wiring and Lighting Troubleshooting Trainer
<u>55-20</u>	Refrigeration and Air Conditioning Trainer
<u>55-21</u>	Electrical Trainer
<u>55-22</u>	Hydraulic Trainer
<u>55-28</u>	Crane Operator Training System
<u>55-28/1</u>	Crane Simulator (Portable)
<u>55-50</u>	Global Maritime Distress Signaling System (GMDSS)
<u>55-51/A</u>	VS300 Full Mission Vessel Bridge Simulator, Fixed Base, (No Motion)
<u>55-51/B</u>	VS200 Small Craft Vessel Bridge Simulator, Fixed Base, (No Motion)
<u>55-51/C</u>	Theater Support Vessel (TSV), Full Mission Vessel Bridge Simulator, Fixed Base, (No Motion)
<u>55-51/D</u>	Barge Derrick (BD) Crane Simulator
<u>55-52</u>	Electric Switchboard Simulator
<u>55-54</u>	US Army Operator Driving Simulator (USA-ODS)
<u>55-56</u>	RT 240 Rough Terrain Container Handler (RTCH) Simulator, Fixed Base, Generic, (No Seat Motion)

TSS ENTERPRISE

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Nomenclature

<u>55-56/A</u>	RT 240 (RTCH) Simulator, Fixed Base, Generic, (Containerized, 20 ft)
<u>55-56/B</u>	RT 240 (RTCH) Simulator, Fixed Base, Generic, (Containerized, 40 ft)
<u>55-57</u>	Locomotive Engineer Training Simulator (LETS)
<u>55-62</u>	High Mobility Multipurpose Wheeled Vehicle (HMMWV) Egress Assistance Trainer (HEAT)
<u>55-64</u>	Engine Room Simulator (ERS), Fixed Base, (No Motion)
<u>55-64/A</u>	Joint High Speed Vessel (JHSV) Engine Room Simulator (ERS)
<u>55-64/B</u>	(JHSV) Full Mission Vessel Bridge Simulator, Fixed Base, (no motion)
<u>55-66</u>	Cradle and Spinner, Egress Trainer (MET)
<u>55-66/1</u>	MaxxPro Cab Variant, Egress Trainer (MET)
<u>55-66/2</u>	All Terrain Vehicle (MATV) Cabin Module, Mine Resistant Ambush Protected (MRAP), (MET)
<u>55-66/7</u>	RG-33L Cab Variant, (MET)
<u>55-66/8</u>	RG-33 SOCOM Cab Variant, (MET)
<u>55-67</u>	All Terrain Lifter Army System (ATLAS) Simulator, with Motion Base, (2 DOF Motion)
<u>55-67/A</u>	(ATLAS) Simulator, with Motion Base, (2 DOF Motion), (Containerized, 20ft)
<u>55-68</u>	Vessel Defense Simulator (VDS)
<u>55-70</u>	Common Driver Trainer, Tactical Wheeled Variant (CDT-TWV)
<u>55-71</u>	Fixed Site Reconfigurable Vehicle Tactical Trainer (FS/RVTT)
<u>55-72</u>	CCTT Reconfigurable Vehicle Tactical Trainer, Mobile (RVTT/MOB)
<u>55-72/A</u>	CCTT Mobile Reconfigurable Vehicle Simulator (M/RVS) Semitrailer
<u>55-72/B</u>	CCTT Maintenance, Office, Storage (MOS) Semitrailer, 53ft., 380VAC, 50Hz (MOS/MOB)
<u>55-72/C</u>	CCTT Maintenance, Office, Storage (MOS) Semitrailer, 48ft. 480VAC, 60Hz (MOS/MOB)
<u>55-72/D</u>	CCTT RVTT Mobile Operations Center Semitrailer, 53ft. 380VAC, 50Hz (MOC/MOB)
<u>55-74</u>	Support Semitrailer; Mobile Reconfigurable Vehicle Tactical Trailer (M/RVTT)

TSS-ENTERPRISE TADSS INDEX AND CATALOG

**BASIC SERIES 01
AVIATION**



UH-60 BLACK HAWK MAINTENANCE TRAINER (BHMT)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The Black Hawk Maintenance Trainer (BHMT) is used by instructor personnel to provide both individual and group training in maintaining the UH-60A/L model helicopters. The BHMT is designed to teach maintenance personnel troubleshooting techniques, provide hands-on training in the removal and replacement of components/equipment, and preflight and operational checks.

Functional Description:

Device 01-107 is installed in a single-room training facility with sufficient room to complete all training tasks.

The trainee station includes a full-size replica of a UH-60A or UH-60L Black Hawk helicopter. The BHMT components are located in the same relationship as in the UH-60A/L helicopter. Cockpit controls operate realistically to provide simulated performance of aircraft systems.

All equipment functions, operations, responses, and interfaces are identical to those of the baseline UH-60A/L counterparts during normal maintenance operations, including the interaction between them. The avionics system has Inter-Cabin Communication capability only.

The trainer is designed to provide an accurate representation of the performance characteristics of the UH-60 helicopter during normal operating, emergency, and malfunctioning conditions by providing the widest range of

task simulation, performance requirements, and realistic cues required for detection of malfunctions.

The automatic computer controlled mode of operation is capable of demonstrating the appropriate sights, sounds, and sequencing results during normal start-up and operating procedures.

The instructor operator station (IOS) is the trainer control center. The IOS provides the capability to select and initiate the training mode. Basic operating modes include training, demonstration, and maintenance.

Physical Information:

Trainee station including maintenance platform:

16' 10" H x 16' 5" W x 61' 9" L

Power Cart: 63" H x 60" W x 105" L

Instructor Operator Station: 44.47" H x 52.12" W x 27.5" D

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Minimum installation area required: 1000 square feet

Temperature range: 28 C

Relative humidity: 0-90%

Power Requirements:

120/208vac, 60 Hz, 3-phase

Applicable Publications:

OUM 1-6930-706-10

TD 1-6930-706-20 SMM to include RPSTL

Reference Publications:

TM 1-1520-237 Series

Training Requirements Supported:

MOSC 15T10; 15T30; 15N10; 151A

UH-60 BLACK HAWK ELECTRICAL TRAINER (BHET-L)



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Not generally available for issue (limited production)

Purpose of Trainer:

The Black Hawk Electrical Trainer (BHET) is used by instructor personnel to provide both individual and group training in maintaining the UH-60L model helicopters. The BHET is designed to teach maintenance personnel troubleshooting techniques, provide hands-on training in the removal and replacement of components/equipment, and preflight and operational checks.

Functional Description:

Device 01-107/A is installed in a single-room training facility with sufficient room to complete all training tasks.

The trainee station includes a full-size replica of a UH-60L Black Hawk helicopter. The BHET components are located in the same relationship as in the UH-60L helicopter. Cockpit controls operate realistically to provide simulated performance of aircraft systems.

All equipment functions, operations, responses, and interfaces are identical to those of the baseline UH-60L counterparts during normal maintenance operations, including the interaction between them.

The avionics system has Inter-Cabin Communication capability only.

The trainer is designed to provide an accurate representation of the performance characteristics of the UH-60 helicopter during normal operating, emergency, and malfunctioning conditions by providing the widest range of

task simulation, performance requirements, and realistic cues required for detection of malfunctions.

The automatic computer controlled mode of operation is capable of demonstrating the appropriate sights, sounds, and sequencing results during normal start-up and operating procedures.

The instructor operator station (IOS) is the trainer control center. The IOS provides the capability to select and initiate the training mode. Basic operating modes include training, demonstration, and maintenance.

Physical Information:

Trainee station including maintenance platform:

16' 10" H x 16' 5" W x 61' 9" L

Power Cart: 63" H x 60" W x 105" L

Instructor Operator Station: 44.47" H x 52.12" W x 27.5" D

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Minimum installation area required: 1000 square feet

Temperature range: 28 C

Relative humidity: 0-90 percent

Power Requirements:

120/208vac, 60 Hz, 3-phase

Applicable Publications:

OUM 1-6930-706-10

TD 1-6930-706-20 SMM to include RPSTL.

Reference Publications:

TM 1-1520-237 Series

Training Requirements Supported:

MOSC 15F10; 15F30; 15N10; 151A

UH-60 BLACK HAWK ELECTRICAL TRAINER-M (BHET-M)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

The UH-60M BLACK HAWK Electrical Trainer-M (BHET-M) will provide training which prepares the UH-60M BLACK HAWK electrician maintenance personnel, MOS 15F10, to maintain the aircraft.

Functional Description:

The trainer consists of a Student Station, Power Cart, Instructor Operator Station (IOS) and Maintenance Platform designed to support the training of maintenance tasks in the UH-60M helicopter. The device shall be configurable and upgradeable as components are added and/or enhanced in the actual aircraft. The BHET-M replicates the UH-60M aircraft component functional characteristics to enable the training of MOS 15F and selected 15N critical maintenance tasks.

Physical Information:

The trainer environment consists of a CAT-B airframe which houses the Student Station and the Maintenance Platform, an Instructor Operator Station, and a Power Cart. The Student Station provides a platform to house and troubleshoot electrical systems; contains the trainer host, input/output, and graphics computer systems displaying all cockpit data; and includes an audio system for radio and intercommunication, caution and advisory tones and aural cues. The IOS provides both the training and maintenance modes of operation, enabling the instructor to monitor and control the trainer and check system status. The Power Cart provides electrical and hydraulic power to the student station and replicates a standard auxiliary ground power unit.

Equipment Required, Not Supplied:

Aircraft Test Sets are to be supplied by the USAALS schoolhouse during training.

Special Installation Requirements:

The device will operate in temperatures up to 117°F in the training facility. The equipment will operate at temperatures up to 95°F.

Power Requirements:

The trainer will interface to 120/208 VAC, 60Hz, 3 phase, 35 Amps/phase building power. Building power will interface to a trainer Uninterruptible Power Supply (UPS) system which provides limited battery power in the event of facility outages.

Applicable Publications:

TM 1-BLACKHAWK, Interactive Electronic Technical Manual for Army Models UH-60A, UH-60L, EH-60A, UH-60Q and HH-60L Helicopters.

TM 1-BLACKHAWK, IETM for Army Models UH-60M Helicopters.

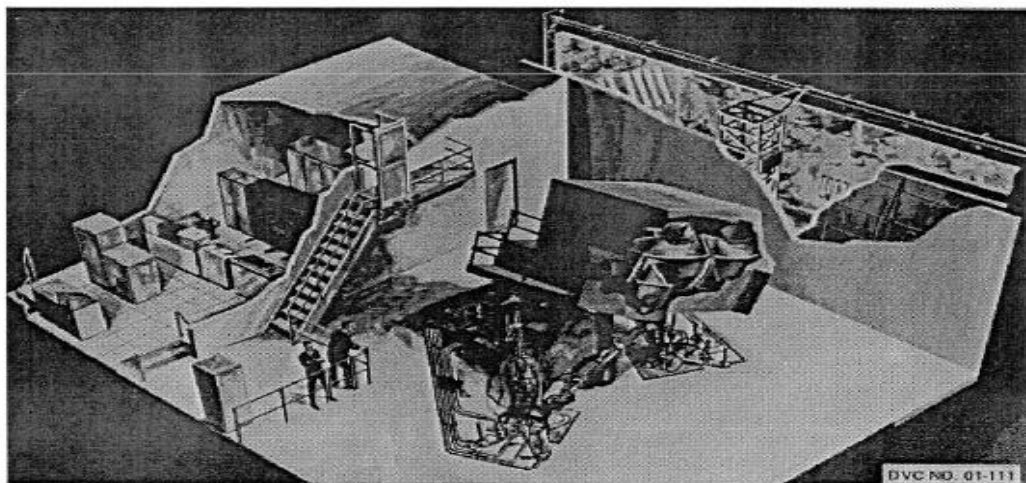
Reference Publications:

TM 1-1520-280-23

Training Requirements Supported:

MOSC 15F and selected MOSC 15N critical tasks, operational checks per technical manuals and Fault List Audit malfunctions.

CH-47D FLIGHT SIMULATOR


Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

To provide training in the techniques of visual and instrument flight in the CH-47 Helicopter and to aid in maintaining proficiency in these techniques after completion of formal training. The trainer is used for initial and refresher training of aviators in cockpit procedures, visual flying techniques, instrument flying techniques, and radio navigation for the CH-47D Helicopter. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer consists of one simulated CH-47D Helicopter cockpit mounted on a 6-degree freedom of motion system. The system is controlled by a Harris Nighthawk computer. A Digital Image Generator system provides identical high resolution displays out the front and side windows for the pilot and copilot trainee stations. A computer generated checkerboard display is presented through the chin windows to provide height above ground and relative motion information. As instructor station is located in the cockpit behind the trainer stations.

Physical Information:

Cockpit area: 192" x 192" x 216"
 Computer room: 360" x 240" x 120"
 Hydraulic area: 144" x 120" x 126"

Visual: 960" x 480" x 372"

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Climatically controlled building that maintains an ambient room temperature at 70 F, and a relative humidity of 50 percent is desirable.

Power Requirements:

Cockpit and Visual: 120/280vac, 3-phase, 4 wires, 60 Hz
 Hydraulic: 277/480vac, 3-phase, 4 wires, 60 Hz

Applicable Publications:

TM 55-6930-212 Series

Reference Publications:

DVC 01-111/A to become obsolete in near future, and superseded by DVC 01-194.

Training Requirements Supported:

ARTEP 55-167 Tasks
 C-5/D-4/D-7/D-11/D-1/D-6/D-8

MOSC 15-1G and 100C

ATM TC 1-216 Tasks

1000	1025	1075	1098	2076	2091
1001	1026	1076	1099	2078	2901
1002	1027	1077	2004	2079	2903
1007	1028	1078	2005	2080	2905
1015	1029	1079	2008	2081	2922
1016	1053	1080	2009	2084	2934
1017	1060	1081	2016	2086	2936
1018	1061	1082	2039	2087	2967
1022	1068	1083	2072	2090	2970

BLACK HAWK ELECTRICAL SYSTEMS TRAINER (INDIVIDUAL)



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Not generally available for issue (limited production)

Purpose of Trainer:
This trainer is used for individual training, to demonstrate the functions of the Electrical System of the UH-60 Helicopter. It provides the means for training in the maintenance, inspection, troubleshooting, and safety of the UH-60 Electrical System. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The electrical trainer displays the operation of the ac and dc electrical and electronic systems including both the normal and malfunctioning conditions. Aircraft controls are active in order for both instructor and student to simulate operation of the system. Students are capable of "hands-on" operation of the trainer. Fault insertion capabilities have been provided, and all necessary test equipment for troubleshooting faults are incorporated on the panel. Student guidance and feedback based on interaction with the trainer is provided to assist in

individual and self-paced capabilities. Components are displayed or located so that their relation to the approximate location on the helicopter is clearly visible.

Malfunctions include, but are not limited to, open circuits in ac and dc systems, over voltage relay inoperative, inverter failure, loss of main generator, emergency bus relay inoperative, improper voltage output for ac and dc systems, and APU inoperative.

Physical Information:
1 Instructor Console and 12 Student Stations.

Equipment Required, Not Supplied:
(Information not available)

Special Installation Requirements:
(Information not available)

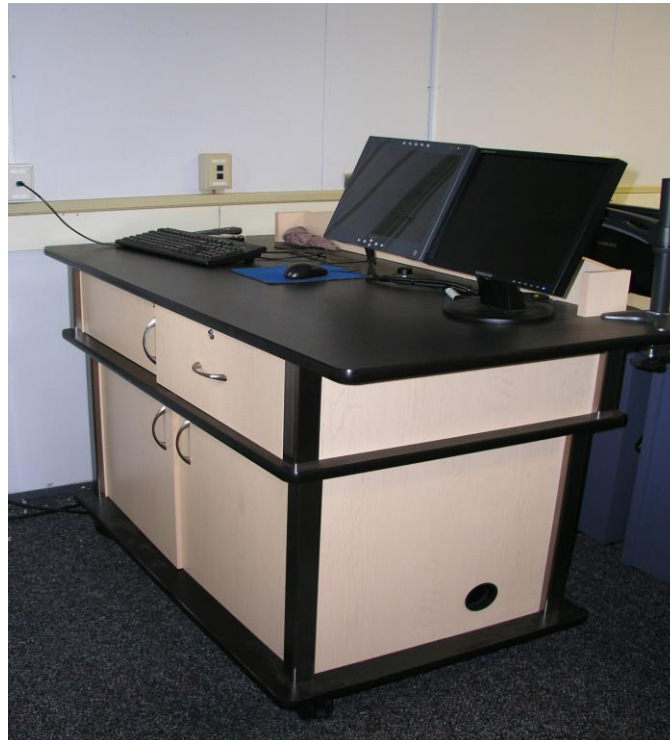
Power Requirements:
110vac

Applicable Publications:
TD 55-6910-715-14&P

Reference Publications:
TM 1-1520-237

Training Requirements Supported:
MOSC 15F10

UH-60 BLACK HAWK AUTOMATIC FLIGHT CONTROL SYSTEM (AFCS) TRAINER (CLASSROOM)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

This trainer is used for classroom training to demonstrate the functions of the automatic flight control system on the UH-60 Helicopter.

Functional Description:

The training device is required to provide realistic hands-on training environment for avionics mechanic students. The avionics mechanic must be trained to perform operational checks, and to adjust and troubleshoot the avionics components in the Stability Augmentation System. The training device will enable the student to get classroom experience in performing GO/NO-GO checks, and diagnosing and replacing malfunctioning major components in the system.

Physical Information:

The AFCS classroom console consists of a computer, console with sound amplification, a Smart technologies monitor and Syncroeyes software that allows instructor to monitor and or interact with each student station individually or as a class.

Equipment Required, Not Supplied:

3.5"/1.44MB formatted diskette (minimum 12 per Student Station).

Special Installation Requirements:

(Information not available)

Power Requirements:

110vac

Applicable Publications:

TD 55-6910-719-14&P

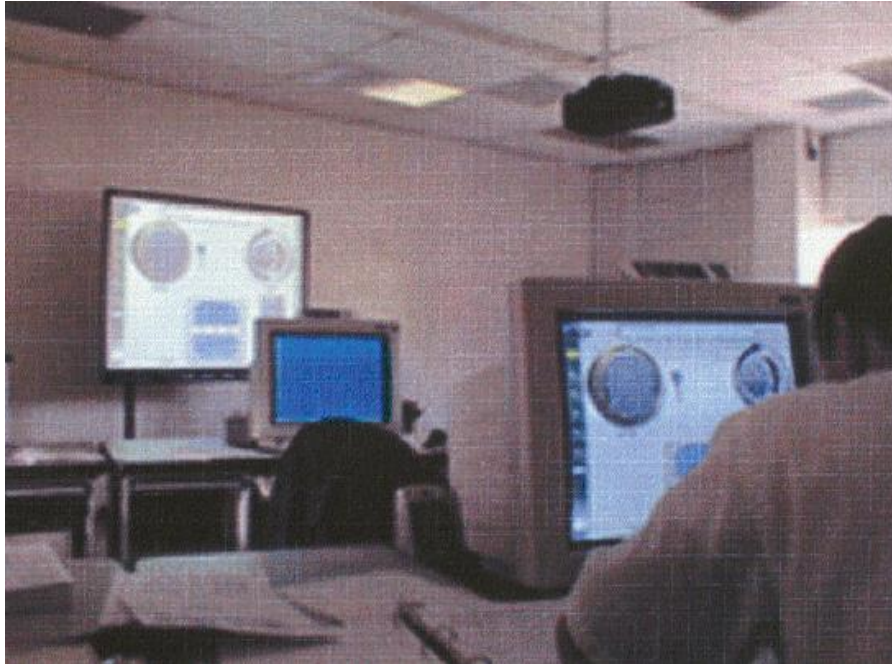
Reference Publications:

TM 1-1520-237

Training Requirements Supported:

MOSC 15N

UH-60 BLACK HAWK AUTOMATIC FLIGHT CONTROL SYSTEM (AFCS) TRAINER (INDIVIDUAL)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

This trainer is used for classroom training to demonstrate the functions of the automatic flight control system on the UH-60 Helicopter.

Functional Description:

The training device is required to provide a realistic hands-on training environment for avionics mechanic students. The avionics mechanic must be trained to perform operational checks and to adjust and trouble shoot the avionics components in the Stability Augmentation System. The training device will enable the student to get classroom experience in performing GO/NO-GO checks, and diagnosing and replacing malfunctioning major components in the system.

Physical Information:

The AFCS Trainer consists of an open architecture design using a Personal Computer platform networked to form a cluster of 12 Student Stations supported by one Instructor Operator Station.

Equipment Required, Not Supplied:

None required

Special Installation Requirements:

(Information not available)

Power Requirements:

110vac

Applicable Publications:

TD 55-6910-718-10

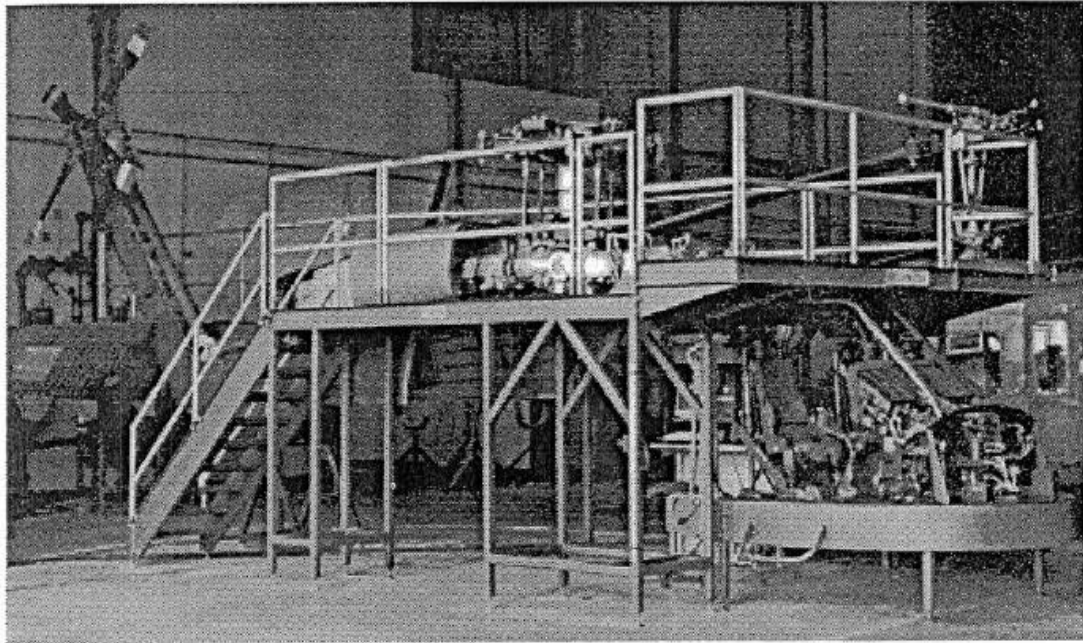
Reference Publications:

TM 1-1520-237

Training Requirements Supported:

MOSC 15N

UH-60 BLACK HAWK COMPOSITE TRAINER

**Training Category/Level Utilized:**

Aviation

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

This trainer provides a realistic environment for an instructor to demonstrate installation, location and operation of electrical, hydraulic, engine, and flight control systems and components on the UH-60 Black Hawk aircraft.

Functional Description:

Under Instructor control, the instructor can select any of three modes of operation: cockpit, aircraft, and joint modes. In the cockpit mode, the student sees all the indicators that would be seen in an operational aircraft. The aircraft mode incorporates the hydraulic and flight control systems. The joint mode allows operation in the cockpit mode and aircraft mode. System operation is controlled by a microprocessor.

Physical Information:

This trainer is constructed of welded tubular steel and steel channel frames for support, utilizing actual aircraft components. It contains a cutaway main and tail rotor transmission, main rotor hub, stubbed blades, shortened power train, and flight controls with a self contained hydraulic system. A provision for the installation of hydraulic test equipment has been incorporated, as well as a provision for fault insertion by the instructor.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

(Information not available)

Power Requirements:

220vac

Applicable Publications:

(Information not available)

Reference Publications:

(Information not available)

Training Requirements Supported:

MOSC 15T10; 15T30

UH-60 BLACK HAWK LANDING GEAR TRAINER (LGT)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

Provides a realistic classroom environment for training and evaluating utility helicopter personnel in the servicing, troubleshooting and repair of actual UH-60 helicopter landing gear and braking system.

Functional Description:

DVC 01-141 consists of five major assemblies which, when combined, provide the student with a realistic maintenance trainer capable of rapid fault insertion and real time troubleshooting. These assemblies and a description of their functions follows:

(a). *Instructor Panel Assembly.* This panel contains various switches, which allow the instructor to apply power to the trainer and insert specific faults. Using the panel, the instructor can apply or remove power using the Master Power On/Off switch, and can remove power using the Emergency Power Off Switch. The instructor panel allows the instructor to insert the following malfunctions:

- (1) Tail Wheel Light
- (2) Parking Brake Light
- (3) Left Drag Beam

- (4) Right Drag Beam
- (5) Right Brake Pedal Bottoms Out
- (6) Left Brake Pedal Does Not Hold
- (7) Tail Wheel Continuity.

(b). *Simulated Cockpit Assembly.* This assembly partially simulates the cockpit of an actual UH-60 helicopter. The cockpit consists of the following assemblies and their respective functional components:

- (1) Lower Console
 - Functional Miscellaneous Switch Panel
- (2) Overhead Panel
 - Functional Caution/Advisory Panel Circuit Breaker
 - Functional Tail Wheel Lock Circuit Breaker
 - Functional Battery Switch
 - Functional External Power Switch
 - Functional Hydraulic Leak Test Switch
 - Functional Back-Up Hydraulic Pump Switch
- (3) Instrument Panel (Co-Pilots Side)
 - Partially Functional Caution/Advisory Panel
 - Partially Functional Master Warning Panel
- (4) Co-Pilot's Seat
- (5) Directional Pedals (Stationary with perational toe brakes).
- (6) Parking Brake Handle

These assemblies are full size and dimensionally correct in their mounting on the trainer cockpit structure. Functional components perform the same as in an actual UH-60 helicopter. Nonfunctional components are dynamark representations with the exception of the 3-D Engine Control Quadrant mock-up in the Overhead Panel.

(c). *Landing Gear System.* This system consists of the main landing gear (left and right) and the tail landing gear. It functions the same as in an actual UH-60 helicopter. A trainer unique cable and receptacle have been added to the left and right landing gear Drag Beam Switches and connected to the Instructor Panel to enable fault insertion. The tail wheel landing gear contains no trainer unique components. Cabling for the tail wheel landing gear is connected to the trainer harness to allow for fault insertion from the Instructor Panel.

(d). *Brake System.* This system consists of functional components with the exception of the brake lines, hydraulic fluid reservoir, and two trainer unique valves in the brake lines. These valves are connected to the Instructor Panel to allow fault insertion and simulation. The following are functional components of the brake system:

- (1) Co-Pilot Master Cylinders (2)
- (2) Slave Mixer Valve
- (3) Parking Valve
- (4) Brake Assemblies (2)
- (5) Co-Pilot Toe Brakes (2)
- (6) Parking Brake Handle

Physical Information:

84" H x 133" L x 84" W; 680 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

(Information not available)

Power Requirements:

120vac, converted to 28vdc by a 28vdc power supply

Applicable Publications:

TD 1-6930-704, Instructor Utilization Handbook

Reference Publications:

TM 55-1520-237-23

TM 55-1520-237-T

DA PAM 738-751

DVC 01-141 - MCN: 6930-01-C04-9141

Training Requirements Supported:

MOSC 15T10; 15T30

UH-60 BLACK HAWK COMMAND INSTRUMENT SYSTEM TRAINER (CIST)

NSN Not Assigned

[DVC 01-143/1](#) UH-60 Black Hawk (CIST), (Student Station)**DVC 01-143/A Instructor Station****DVC 01-143/1 Student Station****Server Station****Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The Trainer is used to train aviation maintenance personnel in the performance of operational checks, troubleshooting techniques, and fault isolation procedures

Functional Description:

The trainer is designed to allow the instructor to select a training task, which provides the student with a visual simulation of the UH-60 Command Instrument System (CIS) and affected instruments during the performance of a task. Each student has the ability to individually perform troubleshooting and fault isolation procedures by advancing through the ICW and determining the correct path to take.

Physical Information:

(Information not available)

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Classroom

Power Requirements:

120vac, 60 Hz

Applicable Publications:

TD 01-6910-716 Series

Reference Publications:

TM 55-1520-237 Series

TM 11-1520-237-23

[DVC 01-143/A - MCN: 6910-01-C13-8696](#)[DVC 01-143/1 - MCN: 6910-01-C13-8694](#)**Training Requirements Supported:**MOSC 15N

UH-60 A/L BLACK HAWK FLIGHT SIMULATOR UPGRADE (ABHFS)



(ABHFS) Mounted Platform



(ABHFS) Cockpit Simulator

Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

To provide realistic individual and crew qualification training, and sustainment of day/night visual and instrument flying skills, combat skills, and flight emergency procedures for both the pilot and copilot.

Functional Description:

The Black Hawk Flight Simulator is a cockpit mounted on a six degree of motion platform. The cockpit is provided with visual imagery derived from a computer generated imagery system. The cockpit is an authentic replica of the actual aircraft from the pilot and copilot station forward, with an on board instructor station to control training and evaluate student performance.

Physical Information:

Simulator area: 480" x 516" x 324" H

Computer area: 480" x 360" x 120" H

Hydraulic area: 144" x 192" x 120" H

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Climatically controlled building that maintains an ambient temperature at 75 degrees F, and a relative humidity of 50 percent is desirable.

Power Requirements:

Simulator/Computer: 120/208vac, 3-phase, 60 Hz, 98kva.

Hydraulic pump: 277/480vac, 3-phase, 4 wires, 60 Hz, 05.9kva.

Applicable Publications:

TM 55-6930-215 Series

Reference Publications:

TM 55-1520-237 Series

TM 55-2840-248 Series

DVC 01-144/D to be phased out in near future, and superseded by DVC 01-202 & 01-302.

Training Requirements Supported:

ARTEP 1-252 Tasks

5-4-4	5-8-4	5-12-3	5-12-4
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ARTEP 14-205 Tasks

1-15-2	1-15-4	3-8-2	3-8-3
1-15-3	2-1-4		

ARTEP 55-89 Tasks

5-1-2	5-1-3	5-1-4
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ARTEP 57-55 Tasks

5-1-E	5-9-F	7-6-F	7-12-H
5-5-D	5-9-H	7-8-D	7-12-L
5-9-C	7-4-E	7-12-E	7-14-B

MOSC 15-1N and 100

ATM TC 1-212 Tasks

1000	1029	1079	2005	2091
1001	1032	1080	2008	2096
1002	1051	1081	2009	2099
1007	1052	1082	2016	2214
1014	1053	1083	2044	2401
1015	1060	1084	2072	2402
1016	1062	1095	2078	2435
1017	1063	1135	2079	2436
1018	1068	1136	2081	2451
1023	107	1137	2083	2452
1025	1076	1146	2086	2469
1026	1077	1150	2087	
1028	1078	2001	2090	

AVIATION COMBINED ARMS TACTICAL TRAINER (AVCATT)



(AVCATT) Mobile Trailers



(AVCATT) (BMC) Configuration

Training Category/Level Utilized:

Combined Arms/Stand alone, with another AVCATT, CCTT and/or Live, Virtual, Constructive devices

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through PEOSTRI or local TSC

Purpose of Trainer:

AVCATT is a dynamic, reconfigurable system used for combined arms collective training and mission rehearsal, through networked simulation in a simulated battlefield environment. It supports institutional, organizational, and sustainment training for Active Component (AC) and Reserve Component (RC) aviation units world wide.

Functional Description:

AVCATT is a mobile training system that is comprised of qty 2, standard over the road semi-trailers. Located in the trailers are the Battle Master Control (BMC), After Action Review (AAR) and qty 6, reconfigurable aircraft cockpits. The system requires shore power. It can operate in a stand-alone mode or networked to various live, virtual and constructive devices.

Physical Information:

AVCATT in the operating configuration has a footprint of 22' x 53'. A typical hardstand measures 35' x 70'. Refer to the TFR for specific measurements.

Equipment Required, Not Supplied:

AVCATT is a mobile training device. It requires a semi-tractor to move each trailer. The tractor can be either commercial or military.

AVCATT is a stand-alone system that does not require any special equipment not specified in the Trainer Facilities Report (TFR). Each trailer is equipped with an environmental control unit (ECU). Due to sensitive electronic components, the internal temperature shall not go below 0°F. When fielded in extreme environments, it is recommended AVCATT be housed in a shelter to provide additional protection from extreme weather, environmental conditions. If power is lost when temperatures are at or below 0°F, a backup power source should be employed.

Special Installation Requirements:

Detailed installation requirements are listed in the TFR. The system requires shore power, water, hardstand with tie down anchor points. The slope of the hardstand shall not exceed 1% in either the length or width axes of the trailers.

Power Requirements:

AVCATT can operate off of commercial shore power, CCTT portable power supply or generator power. Power requirements are 480 Volt, 3 phase, 60 Hz or 380 Volt, 3 phase 50 Hz.

Applicable Publications:

TD 01-6910-706-05, (COTS) Manuals
OUM 01-6910-706-10-1, Battlemaster Controller Manual
OUM 01-6910-706-10-2, Semi-Automated Forces Guide
OUM 01-6910-706-10-3, After Action Review Manual
OUM 01-6910-706-10-4, Role Player Guide
TD 01-6910-706-10-5, Unit Leader Exercise Planning Guide
TD 01-6910-706-10-6, Observer Controller Exercise Conduct and After Action Review Guide
OUM 01-6910-706-10-7, Manned Module Guide
SMM 01-6910-706-20,

Reference Publications:

Trainer Facilities Report for the Aviation Combined Arms Tactical Trainer – Aviation Reconfigurable Manned Simulator (AVCATT)

Training Requirements Supported:

Commissioned officer aviators who maintain a pilot status code (PSC) of 1 and hold a basic branch code (BC) 15 (Aviation) or area of concentration (AOC) of 67J (Medical Service Corps).

Warrant officer and commissioned warrant officer aviators who maintain a PSC of 1 and primary military occupational specialty (PMOS) 152B through 156A.

Command post training for the aviation enlisted 93 series MOS.

AVCATT supports the Aviation Combined Arms Training Strategy re-iterated in:

ARTEP 1-111-MTP (10/27/2005) MISSION TRAINING PLAN FOR THE AVIATION BRIGADES

ARTEP 1-113-MTP (12/29/2005) MISSION TRAINING PLAN FOR THE ASSAULT HELICOPTER BATTALION

ARTEP 1-118-MTP (1/17/2006) GENERAL SUPPORT AVIATION BATTALION

ARTEP 1-126-MTP (3/8/2006) MISSION TRAINING PLAN FOR THE ATTACK RECONNAISSANCE HELICOPTER BATTALION/SQUADRON

TC 1-210 (6/20/2006) AIRCREW TRAINING PROGRAM COMMANDER'S GUIDE TO INDIVIDUAL, CREW, AND COLLECTIVE TRAINING

TC 1-210-1 (3/11/2003) UNITED STATES ARMY SPECIAL OPERATIONS AVIATION AIRCREW TRAINING PROGRAM COMMANDER'S GUIDE TO INDIVIDUAL AND CREW STANDARDIZATION

TC 1-237 (10/12/2007) AIRCREW TRAINING MANUAL, UTILITY HELICOPTER, H-60 SERIES

TC 1-238 (9/23/2005) AIRCREW TRAINING MANUAL, ATTACK HELICOPTER, AH-64A

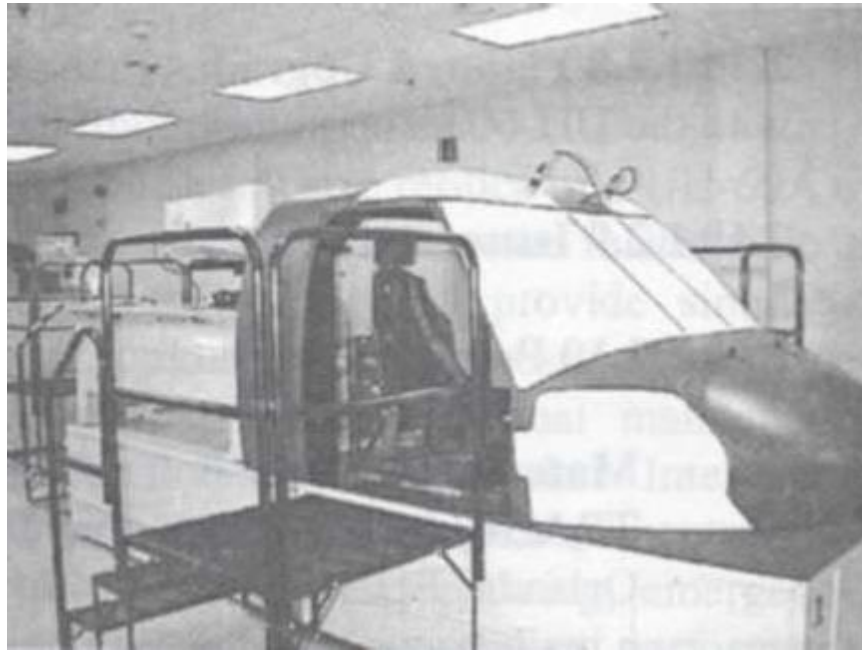
TC 1-240 (10/24/2007) AIRCREW TRAINING MANUAL, CARGO HELICOPTER, CH-47D/F

TC 1-248 (4/12/2007) AIRCREW TRAINING MANUAL, OH-58D, KIOWA WARRIOR

TC 1-251 (9/14/2005) AIRCREW TRAINING MANUAL ATTACK HELICOPTER AH-64D (INCL CHG 1) PDF

TC 1-251, CHG 1 (5/28/2007) CHANGE 1 TO TC 1-251

UH-60 COCKPIT EMERGENCY PROCEDURES TRAINER (CEPT)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

To provide training for Aircraft Qualification Course (AQC) in the normal and emergency operations encountered during start, run-up, and shutdown of a UH-60A/L helicopter.

Functional Description:

The CEPT is a full scale replication of a UH-60 Cockpit. It is reconfigurable from an "A" series UH-60 to an "L" series by changing instruments and selecting the appropriate software load. The trainer consists of the pilot and copilot stations, and instructor console with computer and peripherals.

Physical Information:

(Information not available)

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

115vac, 3-phase, 60 Hz, 30 Amps

Applicable Publications:

TD 1-6930-707 Series

Reference Publications:

TM 55-1520-237 Series

Training Requirements Supported:

MOSC Various

SPECIAL OPERATIONS AVIATION COMBAT MISSION SIMULATOR (SOACMS) MH-60K AND MH-47E

NSN Not Assigned

NSN Not Assigned

[DVC 01-160/A](#) (SOACMS) MH-60K[DVC 01-160/B](#) (SOACMS) MH-47E

DVC 01-160/A



DVC 01-160/B

Training Category/Level Utilized:

Aviation/Level 3

Equipment Required, Not Supplied:

None

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Special Installation Requirements:

(Information not available)

Source and Method of Obtaining:

Not generally available for issue (limited production)

Power Requirements:

Simulator: 120/208 Volts, 3 Phase, 60 Hz

Hydraulic system: 277 /480 Volts, 3 Phase, 60 Hz

Purpose of Trainer:

The Special Operations Aircraft Combat Mission Simulator (SOACMS) devices are high fidelity flight simulators that provide initial qualification, sustainment, and mission rehearsal training to Special Operations aircrews. Control loading systems provide realistic tactical and force cueing in the control system and a hydraulic seat shaker provides the simulation of high frequency rotor blade effects.

Applicable Publications:

TD 55-6930-212-23, TD 55-6930-212-23-S1,

TD 55-6930-215-23, TD 55-6930-215-23-S1

Reference Publications:

(COTS) Manuals

[DVC 01-160 - MCN: 6930-01-D12-0259](#)[DVC 01-160/A - MCN: 6930-01-D12-1730](#)[DVC 01-160/B - MCN: 6930-01-D12-1729](#)**Functional Description:**

The SOACMS contains simulated aircraft systems to include: Integrated Avionics System "Glass Cockpit"; Automatic Flight Control System; Multi-Mode Radar (provides Terrain Following/terrain Avoidance); FLIR (AAQ-16); and complete Aircraft Survivability suite and NAV/COMM systems and subsystems.

Training Requirements Supported:

MOSC 15P

TH-67 COCKPIT PROCEDURES TRAINER

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue

Purpose of Trainer:

For classroom use to familiarize trainees with the TH-67 Helicopter controls, and to give the trainees realistic practice in performing; Before starting engine, Starting engine, Engine run-up, Engine shutdown, Start malfunctions, and In-flight emergency procedures.

Functional Description:

The trainer consists of a student station, which is a full-scale reproduction of the TH-67 cockpit, instructor's platform, and instructor's console with monitor, keyboard, and chair. All controls, indicators, etc., pertinent to the practice of the required procedures are either actual aircraft components or operable facsimiles of the helicopter equipment. The illusion of realism is imparted through control feel and sound systems. Controlled by the computer, which provides the physical and aural cues associated with engine operation and flight conditions. Malfunctions, may be introduced by the instructor, through his controls, or by the student's failure to follow correct operational procedures.

Physical Information:

Cockpit Assembly: 78" x 54" x 76", 635 lbs.

Instructor Platform: 91" x 37" x 44", 148 lbs.

Control Console: 28" x 26" x 44", 65 lbs.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

A climatically controlled classroom that maintains ambient room temperature at 70F and a relative humidity of 60 percent or less is desirable.

Power Requirements:

115vac, 60 Hz outlet

Applicable Publications:

TH-67 Maintenance Manual for CPT, Doc 109896-1

Reference Publications:

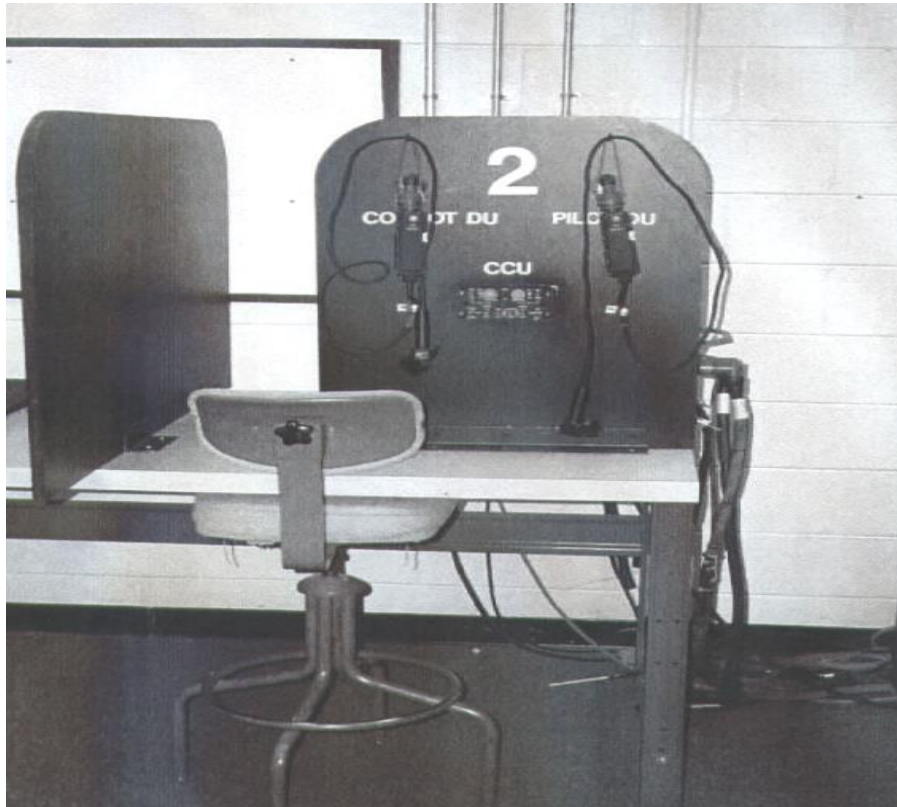
TH-67 Operators Supplement

Training Requirements Supported:

MOSC 15-150 Series.

Start, Run-up, Shutdown, Start malfunctions, and Emergency Procedures IAW Primary flight training guide.

AVIATOR'S NIGHT VISION INSTRUMENT SYSTEM/HEAD'S UP DISPLAY (ANVIS HUD)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The Aviator Night Vision Image System/ Heads-Up-Display (ANVIS/HUD) system provides a significant increase in situational awareness and safety by allowing the pilot to fly "head out of the cockpit" during night operations and projecting critical flight information into the night vision goggles' view.

Functional Description:

The Aviator Night Vision Image System/ Heads-Up-Display (ANVIS/HUD) system collects and displays critical flight information from aircraft sensors and converts it into visual imagery. The system allows continuous "heads-up" flight without the need to continuously look down at the instrument panel.

Physical Information:

22 1/2 "x 37" x 35"

Equipment Required, Not Supplied:

N/A

Special Installation Requirements:

(Information not available)

Power Requirements:

120 volt AC

Applicable Publications:

OUM 11-5855-263-10
SMM 11-5855-300-23 & P

Reference Publications:

OUM 11-5855-263-10
SMM 11-5855-300-23 & P

Training Requirements Supported:

MOSC 15N

AN/APR-39A(V)1 RADAR DETECTING SET MOCK-UP

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The AN/APR-39A(V)1 Radar Detecting Set Mock-up is a media designed to provide a realistic environment for demonstrating the operation and maintenance of the system. The use of operational equipment provides a comprehensive means of instructing installation, removal of components, and troubleshooting procedures.

Functional Description:

Major components of the Mock-up are the Control Unit, Indicator, Digital Processor, Forward Receiver, AFT Receiver and Antenna Detectors.

Physical Information:

23" L x 20" W x 9" H

Equipment Required, Not Supplied:

None

Special Installation Requirements:

(Information not available)

Power Requirements:

28vdc

Applicable Publications:

None

Reference Publications:

TM 1-5841-294-12

Training Requirements Supported:MOSC 15N

AN/AVR-2(V) LASER DETECTING SET MOCK-UP

**Training Category/Level Utilized:**

Aviation/Level 1

Physical Information:

33" L x 27" W x 27.5" H

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Equipment Required, Not Supplied:

None

Source and Method of Obtaining:

Not generally available for issue (limited production)

Special Installation Requirements:

(Information not available)

Purpose of Trainer:

The Laser Detecting Set Mock-up provides a real-time environment for demonstrating the operation and maintenance procedures for the AN/AVR-2(V). The use of operational equipment provides a comprehensive means of instructing installation, removal and troubleshooting procedures.

Power Requirements:

28vdc

Applicable Publications:

None

Reference Publications:

TM 1-5841-304-12

Functional Description:

The AN/AVR-2(V) Mock-up Components consist of a comparator and four (4) sensors.

Training Requirements Supported:MOSC 15N

COMMUNICATION TOWER

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The Communication Tower is a training platform used in conjunction with the Standard Lightweight Avionics Equipment (SLAE) Communication Mock-Up training device. The Communication tower will be used to train proper radio etiquette in communications.

Functional Description:

The Communication Tower consists of Intercom System (ICS) control boxes, Ultra High Frequency (UHF), Very High Frequency (VHF), and Frequency Modulation (FM) radios.

Physical Information:

97" x 73" x 10'

Equipment Required, Not Supplied:

N/A

Special Installation Requirements:

(Information not available)

Power Requirements:

120 Volts AC 60Hz and 28 Volts DC

Applicable Publications:

TM 11-5895-1174-23

Reference Publications:

TM 11-5895-1174-23

Training Requirements Supported:

MOSC 15N

SINGGARS MARK 5

**Training Category/Level Utilized:**

Aviation/Level 1

Physical Information:

14 ½" x 12 ½" x 13 ½"

Logistic Responsible Command, Service or Agency:

PEO-STRI, Orlando FL

Equipment Required, Not Supplied:

N/A

Source and Method of Obtaining:

Not generally available for issue (limited production)

Special Installation Requirements:

(Information not available)

Purpose of Trainer:

The Single Channel Ground and Airborne Radio System (SINGGARS) MARK 5 radio system is a modular component set. The individual components are totally interchangeable from one radio set to the next. SINGGARS radio set configurations provide identical, or in most cases, improved capabilities when compared to the AN/VRC-12 series radio sets they replace. Additionally, modular design lessens the burden on the logistics system to provide repair parts.

Power Requirements:

28 Volts DC

Applicable Publications:

TM 11-5821-333-12

Reference Publications:

TM 11-5821-333-12

Training Requirements Supported:

MOSC 15N

Functional Description:

The primary component of SINGGARS is the receiver/transmitter (RT). There are three avionic versions (RT-1476/1477/1478). All avionic models require external COMSEC devices. The airborne and ground versions are interoperable.

They appear physically different to the ground models and to each other. The only change in the airborne models is the face plate that is attached to the different configurations. The RT is identical in all three models, but the add-on modules change the capabilities of the base RT.

The RT-1476/ARC-201 is the basic version of the three. All three versions operate in both the single-channel and Frequency Hopping (FH) modes.

TACTICAL ENGAGEMENT SIMULATION SYSTEM (TESS) (B) KIT

NSN 6910-01-585-8861

NSN 6910-01-585-8906

NSN 6910-01-585-8940

NSN 6910-01-585-8972

NSN 6910-01-585-8960

NSN 6910-01-585-8977

[DVC 01-186/3](#) (TESS) Ground Systems MCC I/O Unit[DVC 01-186/4](#) (TESS) Ground Systems MCC I/O Accessory Box[DVC 01-186/5](#) (TESS) Ground Kit GL Kit[DVC 01-186/6](#) (TESS) Ground TIB Assembly[DVC 01-186/7](#) (TESS) Ground Kit Repeater Assembly[DVC 01-186/8](#) (TESS) Ground Systems HHI

TESS B Kit



TESS Training Missile



Counterweight



ESLRF/D



30MM Transmitter



FlashWESS



SMODIM



Automatic Internal Boresight (AIBS)



Training Laser Control Unit (TLCU)



Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL, PM Field OPS

Source and Method of Obtaining:

Available at all posts where Longbow Apache is assigned.

Purpose of Trainer:

TESS is a training and simulation system comprised of an aircraft system and a ground instrumentation system that supports individual, crew, gunnery, and collective live force-on-force training.

Functional Description:

TESS is comprised of embedded aircraft functions (A kit) and external functions (B kit) capable of simulating all AH-64D Apache weapon systems (line-of-sight and non-

line-of-sight) tactical engagements. The "A" kit adds weapons emulation plus TESS subsystem controls and displays to the AH-64D Apache. The "A" kit consists of software installed in the aircraft to support the integration of "B" kit components. The "B" kit consists of: Smart Onboard Data Interface Module (SMODIM), TESS Training Missile (TTM) FlashWESS and Aircraft Kill Indicator, MILES Lasers for the 30mm gun and Eye Safe Laser Rangefinder/Designator (ESLRF/D), and training laser Control Unit (TLCU). The system provides real time casualty assessment for force-on-force and force-on-target collective training. The system is MILES/AGES II compatible, and provides real time data recordings for After Action Reviews (AARs).

TESS uses onboard Longbow Apache systems and displays to fulfill the requirement of being transparent to the user. LBA TESS is compatible with all MILES systems and the CTCs. The Mobile Command Center (MCC) (1 suite per kit) allows commanders the capacity to monitor Longbow training engagements in near real-time,

**MCC****Repeater****Target Instrumentation Kit****Hand-Held Initializer****Ground Instrumentation Kit**

conduct AARs and briefings, and replay engagement data. Stored flight data on the aircraft recorder card in the SMODIM can also be merged for playback and analysis.

Repeaters (4 in each set) extend the range of the operational area. Target Instrumentation System (20 per kit) are stationary instrumented "Tanks in a Bag" (TIB) with MILES sensors and Vehicle Kill Indicator.

Ground Instrumentation Kits (10 per system) are MILES sensors, Vehicle Kill Indicator, and a shoot back laser that can be installed on any vehicle. The Hand-Held Initializer (1 per kit) sets-up the system with player I.D., weapons load, etc.

Physical Information:

(Information not available)

Equipment Required, Not Supplied:

None

Special Installation Requirements:

(Information not available)

Power Requirements:

(Information not available)

Applicable Publications:

(Information not available)

Reference Publications:

TM 55-1520-238 Series

Training Requirements Supported:

MOSC 152H; 152F

CH-47F TRANSPORTABLE FLIGHT PROFICIENCY SIMULATOR (TFPS)



(TFPS) Transportable Container



(TFPS) Cockpit Cabin Simulator

Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

PM Cargo/NAVAIR Acquisition.

Purpose of Trainer:

The purpose of the CH-47F Transportable Flight Proficiency Simulator (TFPS) is to provide a means for initial and proficiency training of pilots, instructor pilots, and maintenance test pilots on CH-47F. CH-47F systems and aerodynamics are modeled to provide a realistic flight environment for CH-47F pilots. The "out the window" scene will be simulated for Visual Meteorological Conditions (VMC), Instrument Meteorological Conditions (IMC), and for Night Vision Goggles (NVG) training. CH-47F TFPS will be High Level Architecture (HLA) compliant. The threat environment is simulated using Computer Generated Forces (CGF). The CH-47F TFPS supports training on Army XXI tasks.

The CH-47F TFPS can be operated by a minimum of one pilot at either of the crew stations, and by a maximum of two pilots in the crew stations and one Instructor/Operator.

Functional Description:

The CH-47F TFPS, Device TBD, is a transportable, training system capable of simulating ground, takeoff, flight, operational, and landing characteristics of the CH-47F under a wide range of realistic environmental conditions. On board aircraft, systems are simulated/stimulated for both normal and emergency operating procedures.

Physical Information:

The CH-47F TFPS is contained in two 14' x 28' containers, that when complexed together, occupy a 28' x 28' footprint. The device is designed to withstand a 164 knot wind when tied down to a concrete slab. The device requires a two 200 Amps, 60 Hertz supplies to power the device and provided Environmental Control Units. The ECUs will support operation between - 40C and 54C. The enclosure is light tight to support Night Vision Goggle (NVG) operation.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

A 70 ton crane, 15 ton, and a 1.5 ton fork lift are required to complex and decomplex the device on a concrete pad. The concrete pad should be 70' x 70'. The heaviest enclosure half weighs approximately 37,000 lb.

Power Requirements:

Two 200 Amps supplies of 120/208, 3-phase Y w/ground power is required for the device.

Applicable Publications:

TM01-6930-719-10 CH-47F TFPS Operators Manual
TM01-6930-719-23&P CH-47F TFPS System Interface Manual
TD01-6930-719-10 CH-47F TFPS (COTS) Manuals

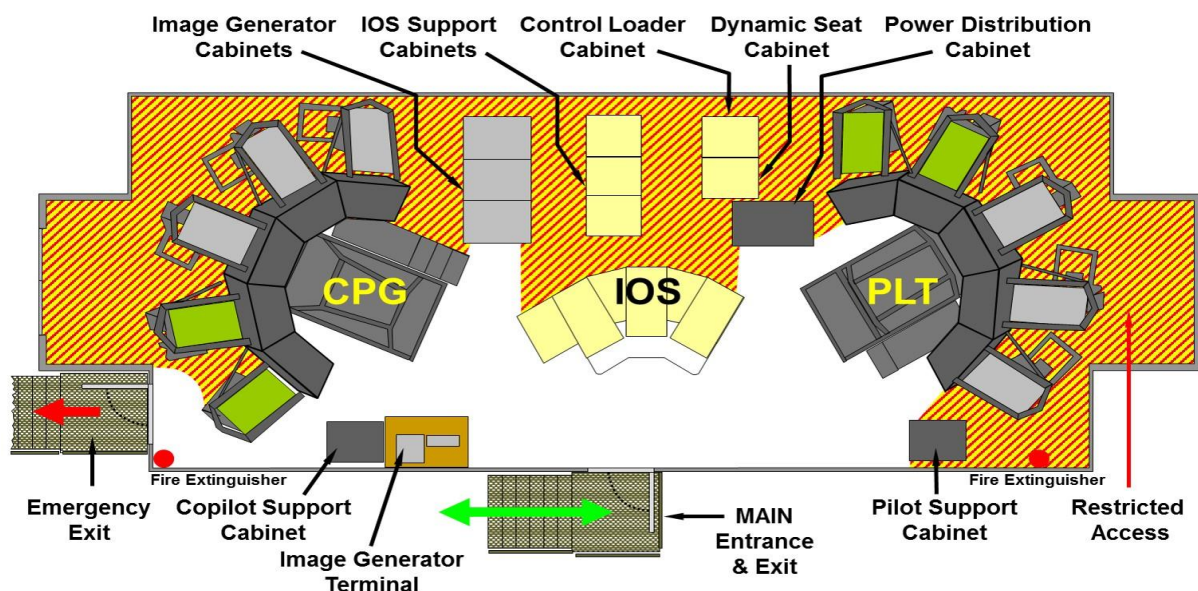
Reference Publications:

TM 01-6910-719-10

Training Requirements Supported:

CH-47F Operational Requirements Document (ORD)
CH-47F System Training Plan (STRAP)
TC 1-271 The Aircrew Training Manual for Cargo Helicopter CH-47F Draft.

AH-64D LONGBOW CREW TRAINER (LCT)



Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PM-AAH

Source and Method of Obtaining:

PEO AVN/APACHE PMO

Purpose of Trainer:

Institutional and unit/installation use to support AH-64D Longbow and AH-64E Guardian qualification and sustainment training of all aircraft flight, instrument, emergency, and tactical/combat tasks with aircraft, weapons, and sensors systems, to maintain attack helicopter aircrew proficiency.

Functional Description:

The AH-64D and AH-64E Longbow Crew Trainer (LCT) is designed to provide a transportable/deployable high fidelity flight simulator supporting qualification and sustainment training for all flight, instrument, emergency sensor systems and weapons delivery tactical/combat operating tasks concurrent in the operational design basic helicopter. These systems include the concurrent representation of the Fire Control Radar (FCR), Modernized Pilot Night Vision Sensor (MPNYS) and the Modernized Target Acquisition and Designation Sight (MTADS) system, precision and non-precision weapons and integrated Aircraft Survivability Equipment (ASE), Manned-Unmanned Teaming (MUM-T), and aircraft specific Operational Flight Programs (OFP) and hardware

enhancements.

The simulator consists of a self-contained trailerized system, including the pilot and copilot/gunner cockpits, Instructor/Operator Station, motion seat, visual, MUMT, flight control loader, power distribution, cooling, and host computer subsystems. The pilot and copilot/gunner cockpits are high fidelity replicas of the actual aircraft cockpits incorporating a 4 axis motion seat system for proprioceptive cuing.

The visual system provides gee-specific virtual environments with a state-of-the-art Image Generator rendering the Out-The-Window (OTW) scene and sensor imagery to each crew member's video displays. Simulated imagery includes forward-looking infrared (FLIR) and day television (DTV) with volumetric clouds, fog, haze, rain, blowing sand, and tactical battlefield effects. Training functions are controlled from the instructor operator station located in each device trailer or remotely when networked with another LCT.

Physical Information:

Device Trailer (59,000 LB) W x H x L
 Transport Mode 8'6" x 13'6" x 53'
 Deployed Mode 18'3" x 13'6" x 53'
 Service Trailer (38,000 LB) 8'6" x 13'3" x 53'
 Total Deployed Surface Footprint 66' x 95'

Equipment Required, Not Supplied:

Approximately 4.5 Gallons of potable water daily for ECS. Fuel for the primary generator (multi-fuel) when not on SHORE power. Plan for 14 Gal/hr (140 Gal/day.)

Special Installation Requirements:

Installation must provide adequate location to field the LCT and facilities for the Life Cycle Contactor Support team. Hard surface parking pad and overhead protection are optional to the installation. LCT is not fielded with Instructor/Operator.

Power Requirements:

None if using the integral Genset to power the LCT. Installation must provide the SHORE power harness, and connectors to the LCT, and ECU if the installation elects not to power the LCT with the integral Genset. Cam-Lock Part Numbers from Crouse-Hinds: E1016-8378, E1016-8389, E1016-8393, E1016-8392, and E1016-8391. Recommended harness cable is 4/0 gauge.

Applicable Publications:

TBP

Reference Publications:

TM 01-1520-251 Series

Training Requirements Supported:

1000	1004	1006	1008
1009	1010	1022	1024
1026	1032	1034	1036
1038	1040	1044	1046
1048	1052	1054	1058
1062	1064	1070	1072
1074	1082	1084	1110
1114	1116	1118	1122
1133	1134	1138	1140
1142	1143	1144	1145
1148	1151	1153	1155
1160	1170	1172	1174
1176	1178	1180	1182
1184	1188	1194	1196
1262	1416	1458	1462
1464	1469	1548	1835
2002	2004	2006	2010
2066	2130	2160	2162
2164	2180	2620	2630
2640	2650	2670	2675
2680			

UH-60 BLACK HAWK MEDICAL SUITE TRAINER (MST)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO Aviation

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The Medical Suite Training Device is used to provide realistic hands-on training of operational and functional tasks for student flight medics for the MEDEVAC BLACK HAWK. This training device will permit training of the specific tasks for student medics attending the Flight Medic course (300-F6) to MEDEVAC combatants and non-combatants across the full spectrum of conflict in a BLACK HAWK. The training conditions include normal/daylight and night vision goggle conditions.

Functional Description:

The UH-60 MST replicates the floor space, cabin area, and functionality of the medical suite found in the MEDEVAC BLACK HAWK. The Medical Suite includes functional litter lifts, external rescue hoist, electrical

systems, and seating (ambulatory patient and medical attendant), plus systems to replicate the operation of the On Board Oxygen Generating System (OBOGS) and the medical suction system for training purposes. The system was designed to allow the instructors to observe, record, interact with the students, and control the operation of the system from a central location (the Instructor Station) for the purpose of testing them against the course objectives and evaluating their performance. The UH-60 MST from a student's perspective accurately replicates the look, feel and function of a MEDEVAC BLACK HAWK aircraft.

Physical Information:

Cabin: 18'10" L x 21' W x 8'7" H

IOS: 9'9" L x 4'4" W x 7'5" H

Equipment Required, Not Supplied:

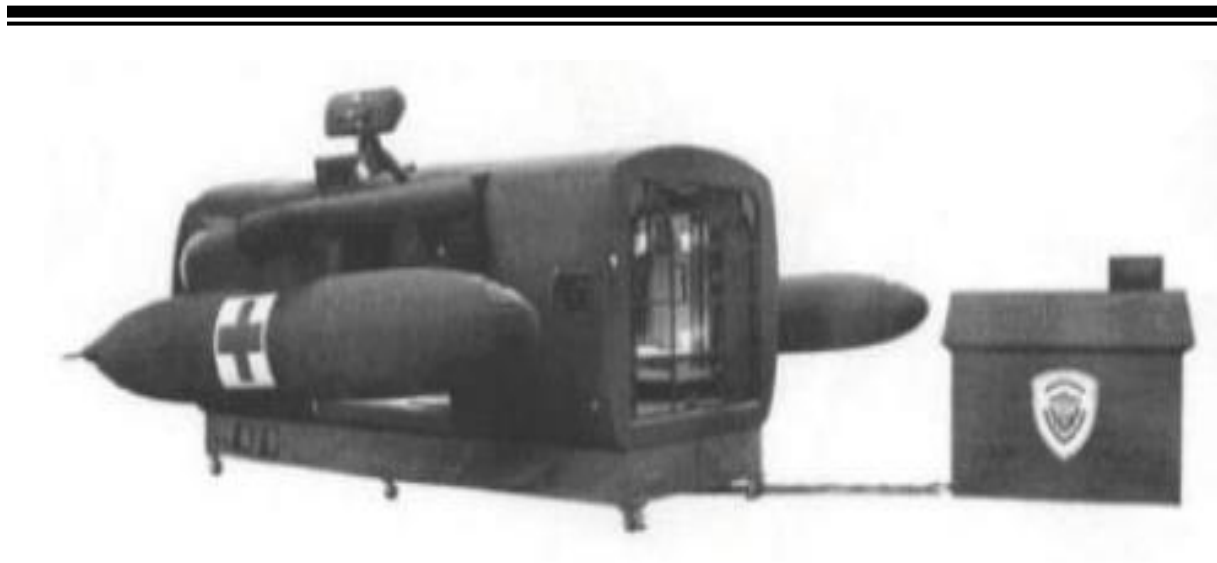
(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

120vac, 3-phase, 5 wires, 60 Hz @100 Amps



(MST)

Applicable Publications:

TD 1-6910-719 Series

Reference Publications:

TM 55-1520-237 Series

Training Requirements Supported:

MOSC 91W

UH-60L BLACK HAWK AVIONICS WIRING SYSTEM TRAINER (UH-60L BAWST)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The purpose of the UH-60L Black Hawk Avionics Wiring Systems Trainer (BAWST) is to train avionics technicians on basic wire maintenance and troubleshooting procedures for the UH-60L helicopter. Students will be able to trace wires, fault isolate and identify open wire faults using TM 1-1520-237-23 series manuals. The BAWST device is a non-operational mockup of the cockpit and nose sections of the UH-60L helicopter. Students will gain a working knowledge of the basic wire maintenance and troubleshooting procedures as applied to the UH-60L communications and navigation systems.

Functional Description:

The BAWST device consists of full size simulated cockpit structure, lower console, instrument panel, upper console including pilot and copilot circuit breakers panels, nose and fire wall section, pilot and copilot seat wells, avionics harnesses and cables, a fault insertion panel and 3D representations of all avionics line replaceable units (LRUs) required to perform training tasks on the helicopter communication and navigation systems. All LRUs have aircraft connectors that allow them to interface with the trainer in a manner identical to that in the helicopter.

Printing a high-resolution graphic image on the reverse side of Lexan that represents the controls and indicators of each panel produces realistic faceplates for each LRU. The fault insertion panel allows the instructor to insert up to 60 open/shorted wiring faults allowing students to trace wires, fault isolate, and identify the open/shorted wire faults. An access platform may be placed between two trainers allowing for easier troubleshooting of the rear of the circuit breaker panels and the avionics LRUs located in the back of the trainer. The access platform has stairs on both sides and a nonskid surface for safety.

Physical Information:

90" wide, 90" height, 102" length

Equipment Required, not Supplied:

No power required.

Special Installation Requirements:

(Information not available)

Power Requirements:

(Information not available)

Applicable Publications:

TM 01-6910-720-10

Reference Publications:

(Information not available)

DVC 01-199 - MCN: 6910-01-C16-2697**Training Requirements Supported:**MOSC 15N

LANDING GEAR ACTIVE VIBRATION TRAINER (LGAVT)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The trainer provides an environment for training and evaluating utility helicopter maintenance personnel in servicing and troubleshooting procedures for the landing gear system and active vibration system for the UH-60M BLACK HAWK helicopter.

Functional Description:

The LGAVT is a standalone, full-size mockup of the UH-60M landing gear and active vibration system. There are five major assemblies that provide students with a realistic environment for rapid fault insertion and real-time troubleshooting and repair capability.

The Instructor Panel allows the instructor to apply power and to insert malfunctions. The Simulated Cockpit Assembly partially simulates the cockpit of the UH-60M helicopter with full size and dimensionally correct assemblies for the Lower Console, Co-pilot's seat and side instrument panel and Parking Brake Handle. The Landing

Gear System consists of the main left and right landing gears and the tail landing gear. The Brake System consists of functional components with the exception of the brake lines and hydraulic fluid reservoir. Two trainer unique valves that connect to the Instructor Panel allow fault insertion and simulation.

Physical Information:

Trainer dimensions are 10' wide x 8' high x 25' long.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

120/208vac, 60 Hz, 3 phase.

Applicable Publications:

(Information not available)

Reference Publications:

TM 1-1520-237 Series.

Training Requirements Supported:

MOSC 15T10 and 15T30 task related skills and knowledge.

UH-60 TRANSPORTABLE BLACK HAWK OPERATIONS SIMULATOR (TBOS)



(TBOS) ISO Containers



(TBOS) Cockpit Simulator

Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The T-BOS is a high-fidelity operator simulator for the UH-60L and UH-60M helicopters. The T-BOS will train and sustain specified individual and crew skills proficiency in normal, degraded, and emergency modes of operation. The T-BOS simulation design basis will be the UH-60L and UH-60M aircraft including the UH-60L, 60M, and 60M Upgrade Troop Assault configurations. The T-BOS will be a transportable training device with a modular design of hardware and software components to support training in the UH-60L and UH-60M configurations; a subsystem component design to allow assembly/disassembly for deployment within transportable containers; power and environmental air-conditioning support equipment for operations at remote locations; hardware and software necessary to serve as the medium for the training of aircrews and maintenance test pilots for the UH-60L and UH-60M; the capability to perform qualification and sustainment training under simulated Visual Meteorological Conditions (VMC), Air Warrior

(AW), Nuclear, Biological, and Chemical (NBC) flight operations, as well as Instrument Meteorological Conditions (IMC), day and night, to include the following UH-60L and UH-60M task categories:

- *****Basic and tactical flight maneuvers
- *****Visual and electronic navigation
- *****Voice and digital data communications
- *****Emergency procedures
- *****Operator and maintenance test flight procedures
- *****Mission rehearsal
- *****Crew station coordination.

Functional Description:

The T-BOS system shall operate in garrison conditions and field environments. The T-BOS system shall be transportable (capable of being moved to any location). It shall be transportable by ship, rail, road, and air (both military and commercial). The T-BOS system shall be deployable (capable of being set up and operated in designated locations/conditions). It shall be deployable for operations and training in the tactical environments of a Combat Aviation Brigade Corps staging area and Brigade and Battalion-level Assembly Areas. The T-BOS shall "survive" (operate normally without need of field or depot repair) all transportation and storage modes described within this document. It shall be operated by the customer unit's organic Instructor Pilots. Setup, teardown, reconfiguration, and maintenance shall be provided by

Contractor Logistics Support (CLS). The T-BOS system shall be compatible with Division transportation assets such as the M1074 Palletized Loading System (PLS) and the M925 and M1080/M280 prime mover/trailer. T-BOS shall have two states, Operating and Non-Operating (Storage).

Physical Information:

The T-BOS System is comprised of two (2) expandable ISO containers with the capability to be powered with two (2) GOTS 60KW generators and from 2 to 4 Field Deployable Environment Control Units (FDECUs). Each container weighs less than 15,000 pounds allowing for C-130 transport. The 20' X 8' X 8' containers consist of a 2:1 expandable container housing the systems computational subsystem, storage and workspace areas and a 3:1 container that houses the crew station container, DC power subsystem, Visual Subsystem, and Input/Output (I/O) subsystems.

Equipment Required, not Supplied:

AC power required

Special Installation Requirements:

(Information not available)

Power Requirements:

(Information not available)

Applicable Publications:

(Information not available)

Reference Publications:

(Information not available)

Training Requirements Supported:

MOSC 15T

ENHANCED TOWER SIMULATOR (ETOS)



Student Stations



Load Controller Station



Ground Controller and Data Controller



Instructor Station

Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The Enhanced Tower Simulator (ETOS) is a media to provide training in the tower phase of ATC training and the MOS 15Q Air Traffic Control.

Functional Description:

The Enhanced Tower Simulator (ETOS) includes six (6) 100" "out the window" (OTW) displays depicting 210 degrees of representation of the airfield and environment as viewed from a control tower. It simulates, visually and acoustically, a comprehensive aircraft database of U.S. Military and commercial aircraft. The ETOS is capable of simulating all military aircraft maneuvers, profiles and speeds. It also provides the controller with voice recognition, weather displays, aircraft, and weather sound effects.

The ETOS is capable of processing and displaying tower radar information airport and weather information, monitoring and controlling radio navigation aids and airfield lighting systems and provides a variety of display options for flexibility in integrating the device into existing

tower configurations and available space. The Enhanced Tower Simulator provides three control positions, Load Controller, Ground Controller and Data Controller. Each position is capable of either independent operation and/or interoperable operation with other positions.

Physical Information:

Six visual units assembled 191.626" x 321.135"

Student Station: 122" x 38"

Instructor Station: 46" x 38"

Printer: 24" x 27"

Image Generator Cabinet: 24.5" x 33.5" x 83"

Computer Cabinet: 20" x 24" x 58"

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

115 volts AC, 60 Hz

Applicable Publications:

(COTS) Manuals

Reference Publications:

(Information not available)

Training Requirements Supported:

MOSC 15Q

ARMY AVIATION RADAR TRAINING SYSTEM (AARTS)



AARTS Instructor Station



AARTS Student Station

Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The AARTS Simulation system is a media used to provide training for U.S. Army Air Traffic Control (ATC) tasks in radar control operations.

Functional Description:

The Army Aviation Radar Training system is a modern, voice-activated, PC-based replacement for the first generation ATC Radar Training Simulator. System provides training for U.S. Army Air Traffic Control (ATC) tasks in radar control operations. The AARTS displays aircraft radar control scenario information in real-time display accuracy. Aircraft respond to controllers' commands. Capabilities include weather and seasonal environmental changes. The ability to accurately depict aircraft and aircraft characteristics include unique airborne military profiles. The system emulates radar informational data and the tower communication array. Nine systems are fielded at US Army Aviation Center where they are utilized for advanced individual training. Standard training scenarios are installed on the simulator and the user has scenario generation capability.

Physical Information:

Student Station: 4 ft x 7 ft

Instructor Station: 3 ft x 5 ft

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

115volts AC, 60Hz

Applicable Publications:

(Information not available)

Reference Publications:

(Information not available)

Training Requirements Supported:

MOSC 15Q

AH-64D FLIGHT CONTROL PART TASKS TRAINER-L8 (FCPTT-L8)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service or Agency:

PEO-AVN

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The FCPTT is a replication of the AH64D with functional subsystems. The purpose of the FCPTT is to support the training of the Apache Airframe Repairer (MOS 15R). Its functional subsystems include airframe hydraulics, flight controls, and drive train.

Functional Description:

The FCPTT replicates Longbow production aircraft operational systems/subsystems. These systems/subsystems will provide realistic training for ground maintenance operations and procedures. The FCPTT will serve as the selected training media used by instructors to strengthen maintenance personnel repair and servicing techniques.

Physical Information:

Instructor/Operator Station: N/A

Hardware Training Device: 44' L x 15' W x 15' H

Mobile Power Supply Unit: 35" L x 16" W x 36" H

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

Instructor/Operator Station: N/A

Device: 208vac, 3-phase, 60Hz, 40 Amps

Mobile Power Supply Unit: 208vac, single-phase, 60Hz, 20 Amps.

Applicable Publications:

APTK 2002

(COTS) Manuals

Reference Publications:

TM 1-1520-238 Series TM 9-1425-475 Series

TM 1-1270-476 Series TM 9-1427-475 Series

TM 1-5855-265 Series TM 9-4925-233 Series

TM 9-1090-208 Series TM 9-4935-476 Series

TM 9-1230-221 Series TM 11-1520-238 Series

TM 9-1230-476 Series TM 55-2480-248 Series

Training Requirements Supported:

MOSC 15R

AH-64D FLIGHT CONTROL PART TASK TRAINER (FCPTT) WITH INTEGRATED VIRTUAL IMMERSE ENVIRONMENT (VIE) TECHNOLOGY

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The FCPTT is a replication of the AH64D flight controls and drive train with the integrated Virtual Immersive Environment and all required functional subsystems. The purpose of the FCPTT is to support the training of the Apache Airframe Repairer (MOS 15R). Its functional subsystems include airframe hydraulics, flight controls, and drive train.

Functional Description:

The FCPTT replicates Longbow production aircraft operational systems/subsystems. These systems/subsystems will provide realistic training for ground maintenance operations and procedures. The FCPTT will serve as the selected training media used by instructors to strengthen maintenance personnel repair and servicing techniques.

Physical Information:

Instructor/Operator Station: N/A

Hardware Training Device: 44' L x 15' W x 15' H

Mobile Power Supply Unit: 35" L x 16" W x 36" H

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

Instructor/Operator Station: N/A

Device: 208vac, 3-phase, 60Hz, 40 Amps

Mobile Power Supply Unit: 208vac, single-phase,
60Hz, 20 Amps.**Applicable Publications:**

APTK 2002

(COTS) Manuals

Reference Publications:

Longbow IETM

TM 1-1520-238 Series

TM 1-1270-476 Series

TM 1-5855-265 Series

TM 9-1090-208 Series

TM 9-1230-221 Series

TM 9-1230-476 Series

TM 9-1425-475 Series

TM 9-1427-475 Series

TM 9-4925-233 Series

TM 9-4935-476 Series

TM 11-1520-238 Series

TM 55-2480-248 Series

Training Requirements Supported:MOSC: 15R

AH-64E FLIGHT CONTROL PART TASK TRAINER-L8 (FCPTT-L8)

**Training Category/Level Utilized:**

Aviation/Level 1

Equipment Required, Not Supplied:

(Information not available)

Logistic Responsible Command, Service or Agency:

PEO-STRI

Special Installation Requirements:

(Information not available)

Source and Method of Obtaining:

Not generally available for issue (limited production).

Power Requirements:

Instructor/Operator Station: N/A

Device: 208vac, 3-phase, 60Hz, 40 Amps

Mobile Power Supply Unit: 208vac, single-phase, 60Hz, 20 Amps.

Purpose of Trainer:

The FCPTT is a replication of the AH64E flight controls and drive train with associated Virtual Maintenance Trainer and all required functional subsystems. The purpose of the FCPTT is to support the training of the Apache Airframe Repairer (MOS 15R). Its functional subsystems include airframe hydraulics, flight controls, and drive train.

Applicable Publications:

Commercial Documentation

Functional Description:

The FCPTT replicates Longbow production aircraft operational systems/subsystems. These systems/subsystems will provide realistic training for ground maintenance operations and procedures. The FCPTT will serve as the selected training media used by instructors to strengthen maintenance personnel repair and servicing techniques.

Reference Publications:

Longbow IETM

TM 1-1520-238 Series TM 9-1425-475 Series

TM 1-1270-476 Series TM 9-1427-475 Series

TM 1-5855-265 Series TM 9-4925-233 Series

TM 9-1090-208 Series TM 9-4935-476 Series

TM 9-1230-221 Series TM 11-1520-238 Series

TM 9-1230-476 Series TM 55-2480-248 Series

Physical Information:

Instructor/Operator Station: N/A

Hardware Training Device: 44' L x 15' W x 15' H

Mobile Power Supply Unit: 35" L x 16" W x 36" H

Training Requirements Supported:

MOSC 15R

AH-64D TAIL ROTOR SYSTEM AND TAIL LANDING GEAR PART TASKS TRAINER-L9 (TRSTLGPTT-L9)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service or Agency:

PEO-AVN

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The TRSTLGPTT is a full-size replication of the last 10 feet of an AH-64D aircraft with removable components. Its purpose is to support the training of critical Longbow Apache airframe repairer (MOS 15R) remove-and-install tasks and skills. The TRSTLGPTT is hardware trainer with functional modularity, which permits task training of airframe, landing gear, and drive train/flight control systems. It will also support task training associated with troubleshooting as well as removal/replacement of system components.

Functional Description:

The TRSTLGPTT provides a training platform for development of maintenance skills for Apache Longbow maintainers. The TRSTLGPTT will be used to train system familiarization, component identification, Remove/Install (R/I) and servicing tasks in support of U.S. Longbow AH-64D AVIM/AVUM (Aviation Intermediate Maintenance/Aviation Unit Maintenance). The TRSTLGPTT shall consist of one primary training element, the Hardware Training Device (HTD).

Physical Information:

Instructor/Operator Station: N/A

Hardware Training Device: 16' L x 12' W x 11' H

Mobile Power Supply Unit: N/A

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

Instructor/Operator Station: N/A

Device: N/A

Mobile Power Supply Unit: N/A

Applicable Publications:

APTK 2002

(COTS) Manuals

Reference Publications:

TM 1-1520-238 Series TM 9-1425-475 Series

TM 1-1270-476 Series TM 9-1427-475 Series

TM 1-5855-265 Series TM 9-4925-233 Series

TM 9-1090-208 Series TM 9-4935-476 Series

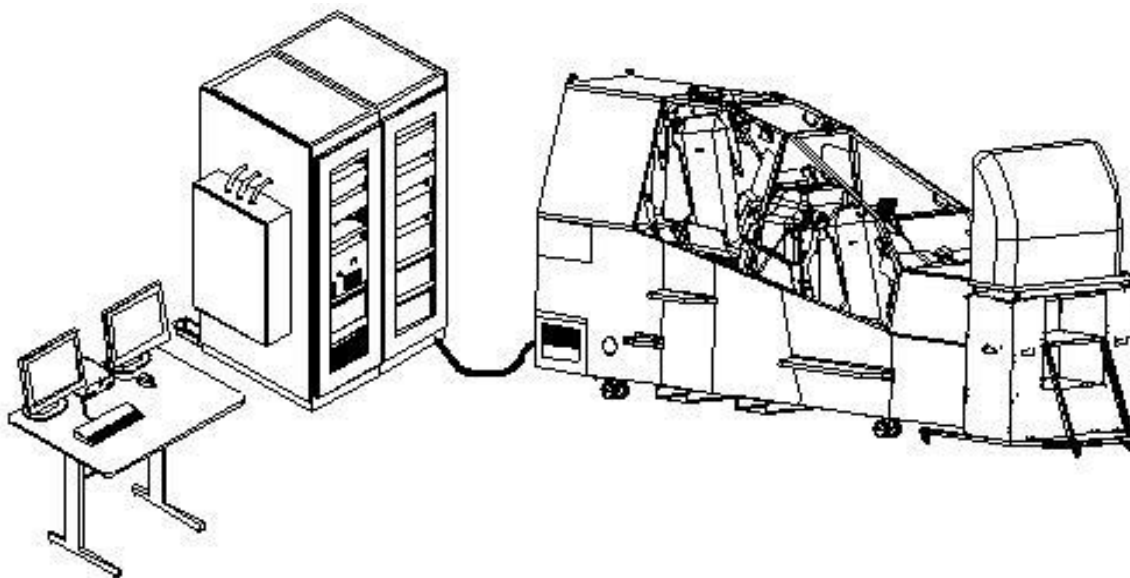
TM 9-1230-221 Series TM 11-1520-238 Series

TM 9-1230-476 Series TM 55-2480-248 Series

Training Requirements Supported:

MOSC 15R

AH-64D LONGBOW CONTROLS AND DISPLAYS SELECTED TASK TRAINER-L10 (LCDSTT-L10)



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service or Agency:
PEO-AVN

Source and Method of Obtaining:
Not generally available for issue (limited production)

Purpose of Trainer:

The LCDSTT is to provide front and back seat maintenance training of the location and functions of instruments and controls in the AH-64D as well as start-up, shut-down, weapons employment, and maintenance operational checks.

Functional Description:

Using a mock up of actual AH-64D cockpit the LCDSTT provides a dual seat training cockpit and an instructor/operator station (IOS), which enables the instructor to program the trainer to replicate desired training situations. The LCDSTT simulates the following "Sub-Systems":

Engine	Environmental Control	Drive Train
Electrical	Caution Warning Systems	Instrument
Rotor	Fuel	APU
Hydraulics	Flight Control/DASE	
MUX – FD/LS	Pneumatics	Fire Detection

LCDSTT also simulates the following "Mission Avionics" systems:

IHADDS	External Stores/Aerial Rockets
AWS	TADS/PNVIS

PTWS Avionics (ADS, Radio)

Physical Information:

Instructor/Operator Station: 4' L x 3' W x 3' H
Hardware Training Device: 14' L x 4' W x 7'3" H
Computer Cabinet Unit: 6' L x 3' W x 5' H

Equipment Required, Not Supplied:
(Information not available)

Special Installation Requirements:
(Information not available)

Power Requirements:

Instructor/Operator Station: Two 115/208vac, 3-phase, 60Hz, 60 Amps services, and two 100vac.
Hardware Training Device: Powered by IOS
Mobile Power Supply Unit: N/A

Applicable Publications:
APTK 2002
(COTS) Manuals

Reference Publications:

TM 1-1520-238 Series	TM 9-1230-476 Series
TM 1-1270-476 Series	TM 9-1230-221 Series
TM 9-1090-208 Series	TM 9-1425-475 Series
TM 9-1427-475 Series	TM 9-4925-233 Series
TM 9-4935-476 Series	TM 11-1520-238 Series
TM 1-5855-265 Series	TM 55-2480-248 Series

Training Requirements Supported:
MOSC 15R; 15Y

AH-64E GUARDIAN CONTROLS AND DISPLAYS SELECTED TASK TRAINER

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

The GCDSTT is to provide front and back seat maintenance training of the location and functions of instruments and controls in the AH-64E as well as start-up, shut-down, weapons employment, and maintenance operational checks. The GCDSTT has the Virtual Immersive Environment (VIE) training component integrated allowing for virtual training of remove and reinstall tasks, Maintenance Operational Checks, Fault Insertion, Fault Isolation Procedures, utilization and training of all associated PGSE, special tools and test equipment for the selected task training.

Functional Description:

Using a mockup of actual AH-64E cockpit the GCDSTT provides a dual seat training cockpit and an instructor/operator station (IOS), which enables the

instructor to program the trainer to replicate desired training situations. The LCDSTT simulates the following "Sub-Systems":

Engine	Environmental Control	Drive Train
Electrical	Caution Warning Systems	Instrument
Rotor	Fuel	APU
Hydraulics	Flight Control/FMC functionality	
MUX – IBIT, PBIT, CBIT		
Pneumatics, Navigation,		
Fire Detection		

GCDSTT also simulates the following "Mission Avionics" systems:

IHADDs, External Stores/Aerial Rockets, AWS, M-TADS/M-PNVS, PTWS, Avionics, ASE/Comsec, TSD, FCR

Physical Information:

Instructor/Operator Station: 4' L x 3' W x 3' H
Hardware Training Device: 14' L x 4' W x 7'3" H
Computer Cabinet Unit: 6' L x 3' W x 5' H

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

Instructor/Operator Station: Two 115/208vac,
3-phase, 60Hz, 60 Amps services, and two 100vac.
Hardware Training Device: Powered by IOS
Mobile Power Supply Unit: N/A

Applicable Publications:

APTK 2002
(COTS) Manuals

Reference Publications:

Longbow IETM	
TM 1-1520-238 Series	TM 9-1230-476 Series
TM 1-1270-476 Series	TM 9-1230-221 Series
TM 9-1090-208 Series	TM 9-1425-475 Series
TM 9-1427-475 Series	TM 9-4925-233 Series
TM 9-4935-476 Series	TM 11-1520-238 Series
TM 1-5855-265 Series	TM 55-2480-248 Series

Training Requirements Supported:

MOSC 15R; 15Y

AH-64D ENVIRONMENTAL CONTROL SYSTEM PART TASK TRAINER-L11 (ECSPTT-L11)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service or Agency:

PEO-AVN

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The Environmental Control System Part Task Trainer (ECSPTT) will be a limited-operational device, which provides a training platform for development of 15R maintenance skills for Apache Longbow maintainers. The ECSPTT will represent an operational vapor cycle air conditioning system using R-134 as the refrigerant. Servicing and operational functional checks will be accomplished using the same equipment required by the Longbow aircraft system.

Functional Description:

The ECSPTT provides a training platform for development of maintenance skills for Apache Longbow maintainers. The ECSPTT will be used to train system familiarization, component identification, Remove/Install (R/I) and servicing tasks in support of U.S. Longbow AH-64D AVIM/AVUM (Aviation Intermediate Maintenance/Aviation Unit Maintenance). The ECSPTT shall consist of two primary training elements, the Hardware Training Device (HTD) and Instructor Operator Station (IOS) as necessary.

Physical Information:

Instructor/Operator Station: TBD

Hardware Training Device: TBD

Mobile Power Supply Unit: TBD

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

Instructor/Operator Station: TBD

Device: TBD

Mobile Power Supply Unit: TBD

Applicable Publications:

APTK 2002

(COTS) Manuals

Reference Publications:

TM 1-1520-238 Series TM 9-1425-475 Series

TM 1-1270-476 Series TM 9-1427-475 Series

TM 1-5855-265 Series TM 9-4925-233 Series

TM 9-1090-208 Series TM 9-4935-476 Series

TM 9-1230-221 Series TM 11-1520-238 Series

TM 9-1230-476 Series TM 55-2480-248 Series

Training Requirements Supported:

MOSC 15R

AH-64D LONGBOW MAST MOUNTED ASSEMBLY PART TASK TRAINER (MMAPTT)

**Training Category/Level Utilized:**

Aviation/Level 1

Equipment Required, Not Supplied:

(Information not available)

Logistic Responsible Command, Service or Agency:

PEO-AVN

Special Installation Requirements:

(Information not available)

Source and Method of Obtaining:

Not generally available for issue (limited production)

Power Requirements:

Instructor/Operator Station: N/A

Device: N/A

Mobile Power Supply Unit: N/A

Purpose of Trainer:

The Mast Mounted Assembly Part Task Trainer (MMAPTT) will be a limited-operational device, which provides a training platform for development of 15R/15Y maintenance skills for Apache Longbow maintainers. The MMAPTT will be a simulated full mock-up MMA that will be used train removal and installation tasks.

Applicable Publications:

APTK 2002

(COTS) Manuals

Functional Description:

The MMAPTT replicates Longbow production aircraft operational systems/subsystems. These systems/subsystems will provide realistic training for ground maintenance operations and procedures. The MMAPTT will serve as the selected training media used by instructors to strengthen maintenance personnel repair and servicing techniques.

Reference Publications:

TM 1-1520-238 Series TM 9-1425-475 Series

TM 1-1270-476 Series TM 9-1427-475 Series

TM 1-5855-265 Series TM 9-4925-233 Series

TM 9-1090-208 Series TM 9-4935-476 Series

TM 9-1230-221 Series TM 11-1520-238 Series

TM 9-1230-476 Series TM 55-2480-248 Series

Training Requirements Supported:

MOSC 15R; 15Y

Physical Information:

Instructor/Operator Station: N/A

Hardware Training Device: 5' L x 5' W x 5' H

Mobile Power Supply Unit: N/A

AH-64D GUN PART TASK TRAINER - L17 (GPTT-L17)



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Not generally available for issue (limited production)

Purpose of Trainer:
The Gun Part Task Trainer (GPTT) is a full-size replication of an AH-64D aircraft gun system in skeletonized form, which provides a training platform for development of maintenance skills for Apache Longbow Maintainers (15Y). The GPTT is used to train system familiarization, component location, Maintenance Operational Checks (MOCs) and Fault Isolation Procedures (FIPs) in support of U.S. Army Longbow AH-64D Aviation Unit Maintenance and Aviation Intermediate Maintenance (AVUM/AVIM) tasks. The GPTT design incorporates a hardware training device consisting of a fully functional/high fidelity 30mm gun, turret assembly, ammunition feed system and associated subcomponents, Instructor/Operator Station and Operational Software required to meet the training requirements specified.

Functional Description:
The GPTT represents a fully functional AH-64D 30MM weapons system to include all associated mechanical subcomponents. This includes gun and ammunition handling system and ammunition magazine. Virtual crew station controls and functions associated with the 30MM armament system function per the basic aircraft design. The armament system is a mix of real, modeled or simulated components with the fidelity required to simulate normal operations. The GPTT consists of three primary

training elements, the Hardware Training Device (HTD), the Virtual Immersive Environment (VIE) component and Instructor/Operator Station (IOS) with Operational Software to meet the required training requirements.

Physical Information:
Instructor/Operator Station: 6'L x 4'W x 7'H
Hardware Training Device: 34'L x 8'W x 9'H
Mobile Power Supply Unit: N/A

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

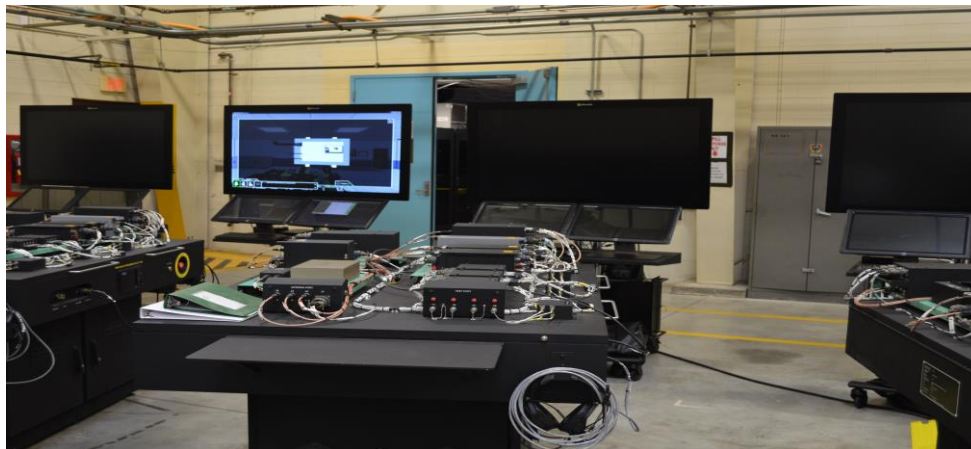
Power Requirements:
Instructor/Operator Station: Powered by HTD
Device: 120/208 VAC/3-phase, 60 Amp, 50-60 Hz
Mobile Power Supply Unit: N/A

Applicable Publications:
APTK 2002
(COTS) Manuals

Reference Publications:
Longbow IETM
TM 1-1520-238 Series TM 9-1230-476 Series
TM 1-1270-476 Series TM 9-1230-221 Series
TM 9-1090-208 Series TM 9-1425-475 Series
TM 9-1427-475 Series TM 9-4925-233 Series
TM 9-4935-476 Series TM 11-1520-238 Series
TM 1-5855-265 Series TM 55-2480-248 Series

Training Requirements Supported:
MOSC 15R; 15Y

AH-64D MULTIPLEX PART TASK TRAINER – L16 (MPTT-L16)



Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The Multiplex Part Task Trainer (MPTT) is an operational device, which provides a training platform for development of maintenance skills for Apache Longbow Maintainers. The MPTT shall be used to train system familiarization and Maintenance Operational Checks (MOCs) in support of U.S. Army Longbow AH-64D Aviation Unit Maintenance and Aviation Intermediate Maintenance (AVUM/AVIM) tasks. The MPTT design shall incorporate a hardware-training device consisting of a Hardware Trainer Display, Instructor/Operator Station and Operational Software required to meet the training requirements.

Functional Description:

The MPTT shall represent a functional AH-64D Multiplex system to include all associated subcomponents. The device shall be capable of displaying simple two-channel data bus operation with the minimum of one bus controller and two bus clients (receiver/transmitter) and the interconnecting data bus with a back up bus and bus controller. The instructor shall be able to enter into the multiplex operation at any point and demonstrate how the bus controller functions and interacts with the clients via message traffic generated that “flows” in English language on the appropriate bus channel. The message will include all required data elements, including but not limited to RT address, status and message. The instructor shall be able to show operation of a “healthy” multiplex system (device default) to include how information on the bus is used by

some clients but ignored by others and then demonstrate degraded operations including but not limited to incorrect device address, invalid status responses, primary bus failure, controller failure and client failures. The Multiplex system can be real, modeled or simulated with the fidelity required to simulate normal operations.

Physical Information:

Instructor/Operator Station and Hardware
Training Device: 6'L x 8'W x 7'H
Mobile Power Supply Unit: N/A

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

Instructor/Operator Station: 120 VAC/
Single phase, 30 Amp, 50-60 Hz
Device: Powered by IOS
Mobile Power Supply Unit: N/A

Applicable Publications:

APTK 2002
(COTS) Manuals

Reference Publications:

TM 1-1520-238 Series	TM 9-1230-476 Series
TM 1-1270-476 Series	TM 9-1230-221 Series
TM 9-1090-208 Series	TM 9-1425-475 Series
TM 9-1427-475 Series	TM 9-4925-233 Series
TM 9-4935-476 Series	TM 11-1520-238 Series
TM 1-5855-265 Series	TM 55-2480-248 Series

Training Requirements Supported:

MOSC 15R; 15Y

AH-64D AIRFRAME, ENGINE, AND DRIVE TRAIN SYSTEMS TRAINER-L6 (AEDST-L6)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service or Agency:

PEO-AVN

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The AEDST-L6 is a full-size replication of the AH-64D with removable components. Its purpose is to support the training of critical Longbow Apache Airframe Repairer (MOS 15R) remove-and-install tasks and skills. The AEDST-L6 is hardware trainer with functional modularity, which permits simultaneous task training of airframe, engine, drive, brakes, landing gear, utility, fuel, environmental control, and drivetrain/flight control systems. It will also support task training associated with troubleshooting as well as removal/replacement of system components.

Functional Description:

The AEDST-L6 will be a limited-operational device, which provides a training platform for development of maintenance skills for Apache Longbow maintainers. The AEDST-L6 will be used to train system familiarization, component identification, Remove/Install (R/I) and servicing tasks in support of U.S. Longbow AH-64D AVIM/AVUM (Aviation Intermediate Maintenance/Aviation Unit Maintenance). The AEDST-L6 shall consist of one primary training element, the Hardware Training Device (HTD).

Physical Information:

Instructor/Operator Station: N/A

Hardware Training Device: 44' L x 15' W x 15' H

Mobile Power Supply Unit: 35" L x 16" W x 36" H

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

Instructor/Operator Station: N/A

Device: 208vac, 3-phase, 60Hz, 40 Amps

Mobile Power Supply Unit: 208vac, single-phase, 60 Hz, 20 Amps.

Applicable Publications:

APTK 2002

(COTS) Manuals

Reference Publications:

TM 1-1520-238 Series TM 9-1425-475 Series

TM 1-1270-476 Series TM 9-1427-475 Series

TM 1-5855-265 Series TM 9-4925-233 Series

TM 9-1090-208 Series TM 9-4935-476 Series

TM 9-1230-221 Series TM 11-1520-238 Series

TM 9-1230-476 Series TM 55-2480-248 Series

Training Requirements Supported:

MOSC 15R; 15Y

AH-64 AIRFRAME, ENGINE, AND DRIVE TRAIN SYSTEMS TRAINER – L6 (AEDST-L6)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The AEDST-L6 is a full-size replication of the AH-64E aircraft with removable components. Its purpose is to support the training of critical Apache Airframe Repairer (MOS 15R10) remove-and-install tasks and skills for initial qualification training. The 64E AEDST-L6 is hardware trainer with functional modularity, which permits simultaneous task training of airframe, engine, drive, brakes, landing gear, utility, fuel, environmental control, and drivetrain/flight control systems. It will also support task training associated with limited troubleshooting as well as removal/replacement of system components.

Functional Description:

The 64E AEDST-L6 will be a limited-operational device, which provides a training platform for development of maintenance skills for Apache 15R maintainers. The 64E AEDST-L6 will be used to train system familiarization, component identification, Remove/Install (R/I) and servicing tasks in support of U.S. AH-64E AVIM/AVUM (Aviation Intermediate Maintenance/Aviation Unit Maintenance). The AEDST-L6 shall consist of one primary training element, the Hardware Training Device (HTD).

NSN 6930-01-586-2621

Physical Information:

Instructor/Operator Station: N/A

Hardware Training Device: 44' L x 15' W x 15' H

Mobile Power Supply Unit: 35" L x 16" W x 36" H

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

Instructor/Operator Station: N/A

Device: 208vac, 3-phase, 60Hz, 40 Amps

Mobile Power Supply Unit: 208vac, single-phase, 60 Hz, 20 Amps.

Applicable Publications:

(COTS) Manuals

Reference Publications:

64E Apache IETM

TM 1-1520-238 Series

TM 1-1270-476 Series

TM 1-5855-265 Series

TM 9-1090-208 Series

TM 9-1230-221 Series

TM 9-1230-476 Series

TM 9-1425-475 Series

TM 9-1427-475 Series

TM 9-4925-233 Series

TM 9-4935-476 Series

TM 11-1520-238 Series

TM 55-2480-248 Series

Training Requirements Supported:

MOSC 15R; 15Y

TSS-ENTERPRISE TADSS INDEX AND CATALOG

[DVC 01-223](#)

AH-64D MULTIPLEX, AVIONICS, VISIONICS, WEAPONS, AND ELECTRICAL SYSTEMS TRAINER-L7 (MAVWEST-L7)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service or Agency:

PEO-AVN

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The MAVWEST-L7 consists of a full-size replication of the AH64D with functional subsystems and a separate Instructor/Operator Station (I/OS). The purpose of the MAVWEST is to support the training of the Apache Armament/ Electrical/ Avionics repairers (MOS15Y). Its functional subsystems include the Fire Control Radar (FCR), TADS, Pilot Night Vision Sensor (PNVS), IHADSS, Area Weapon System (AWS), Point Target Weapons System (PTWS), and 2.75" Folding Fin Aerial Rocket (FFAR) delivery system. Using the "fault-insertion" capability of the I/OS, the MAVWEST L7 enables the instructor to further develop students' skills and knowledge in weapons and electrical systems troubleshooting as well as fault isolation techniques. The MAVWEST-L7 consists of:

- a. Hardware Training Device (HTD)
- b. Instructor/Operator Station (IOS)
- c. Trainer System Software (TSS)
- d. IOS Software (IOSS)
- e. Mobile Power Supply Unit (MPSU)

Functional Description:

The MAVWEST-L7 replicates Longbow production aircraft operational systems/subsystems. These systems/subsystems will provide realistic training for ground maintenance operations and procedures. The NSN 6930-01-583-4104 TSS-ENTERPRISE TADSS INDEX AND CATALOG

MAVWEST-L7 will serve as the selected training media used by instructors to strengthen maintenance personnel repair and servicing techniques.

Physical Information:

Instructor/Operator Station: 8' L x 3' W x 5' H
Hardware Training Device: 44' L x 15' W x 15' H
M1obile Power Supply Unit: 35" L x 16" W x 36" H

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

Instructor/Operator Station: two 208vac, 3-phase, 60 Hz, 60 Amps services.
Device: 480vac, 3-phase, 60 Hz, 40 Amps.
Mobile Power Supply Unit: 480vac, 3-phase, 60 Hz, 40 Amps.

Applicable Publications:

APTK 2002
(COTS) Manuals

Reference Publications:

TM 1-1270-476 Series	TM 9-1425-475 Series
TM 1-1520-238 Series	TM 9-1427-475 Series
TM 1-5855-265 Series	TM 9-4925-233 Series
TM 9-1090-208 Series	TM 9-4935-476 Series
TM 9-1230-221 Series	TM 11-1520-238 Series
TM 9-1230-476 Series	TM 55-2480-248 Series

Training Requirements Supported:

MOSC 15R; 15Y

[DVC 01-225](#)

CHINOOK AVIONICS TRAINER (CAT)



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Not generally available for use (limited production)

Purpose of Trainer:

The CAT device system is the training platform for the development of avionics maintenance skills for CH-47F Chinook helicopter maintenance personnel. The CAT consists of a Hardware Training Device (HTD), Instructor Operator Station (IOS), Trainer System Software, IOS Software (IOSS), and a Low-Condensation Air Conditioner to support the HTD. The operational CAT device provides a training platform for development of Military Occupational Specialty (MOS) 15N, for CH-47F avionics maintainers. The CAT is used to train avionics system familiarization, component identification, servicing tasks and inspections, Maintenance Operational Checks (MOCs), Fault Isolation Procedures (FIPs) and Remove/Install (R/I) tasks in support of MOS 15N critical tasks. The CAT system is a combination of air vehicle, modeled, and trainer unique components. Troubleshooting and operational checks are accomplished using the same test equipment

required by the CH-47F Cargo Helicopter. The suite of test equipment will be comprised of modeled and actual test equipment to provide full functionality and testing capability of the avionics systems installed.

Functional Description:

All of the CAT operational systems provide realistic training for ground maintenance operations and procedures. The CAT serves as the primary training media used by an instructor to strengthen CH-47F maintenance personnel's skills and knowledge in the following areas:

- a. Advanced skills development in aircraft component location, inspections, maintenance practices and procedures
- b. Use of Test, Measurement and Diagnostic Equipment (TMDE)
- c. Isolation of task environments for system familiarization to support Military Occupational Specialty (MOS) training
- d. Maintenance Operation Checks (MOCs) to validate and verify component operation associated with actual aircraft system(s) operation

-
-
- e. Fault Isolation Procedures (FIP) to provide the student with actual/simulated aircraft conditions/indications
 - f. Remove/Install (R/I) operations in support of US CH-47F AVUM (unit level maintenance), which requires the ability to disconnect, unfasten, remove, install, and align/adjust any component of a system or subsystem or related item necessary to perform the step-by-step procedure outlined by the Instructor

Physical Information:

The CAT fuselage is an enhanced CH-47, Government Furnished Equipment (GFE) airframe. Compared to an actual CH-47 airframe, the CAT fuselage has a shorter length due to the removal of a total of 230 frames (frames number 400 through 630.5 have been removed). Also removed from the original CH-47 airframe are the Forward Landing Gear Supports. Supporting the CAT instead is a support structure designed with lockable casters, which facilitates moving the CAT about the hangar. The CAT fuselage incorporates air vehicle fuselage subassemblies and maintains critical alignment position relationships in accordance with air vehicle specifications in those areas required for training tasks. A set of stairs are provided to access the rear and the right side of the CAT. Also, a maintenance stand is provided to access the top of the trainer. The air conditioning unit located on the front end of the support structure provides environment control for the Right Side Equipment Cabinet.

Equipment Required, Not Supplied:

CAT is designed to operate as built. All required equipment for its operation is included.

Special Installation Requirements:

2 - 8000 lb. load capacity forklifts are required to off load the trainers from the trucks. One of these forklifts can be used to install the FWD and AFT pylons on top the trainer once inside the building.

1 - 10000 lb. minimum lifting capacity crane can be used in place of the two forklifts for off loading the trainers from the trucks.

Power Requirements:

The electrical supply and, therefore the requirements for the trainer, are characterized by the Uninterruptible Power Supply (UPS) through which all trainer computer equipment is powered. Power drops must be installed prior to installation. Trainer UPS requires a line voltage/Tolerance of 208 VAC/5% , current on each phase is 60 Amp Max, Frequencies/Tolerance 60HZ +/- 3HZ, phase 3, KVA load 21.8 KW, power factor ~.9.

Applicable Publications:

TM 01-6930-714-10 Instructor Utilization Handbook, CH-47F Chinook Avionics Trainer (CAT) Device 01-225, dated 15 Jan 2010

SMM 01-6930-714-20, CH-47F Chinook Avionics Trainer (CAT) Device 01-225, dated 15 Jan 2010

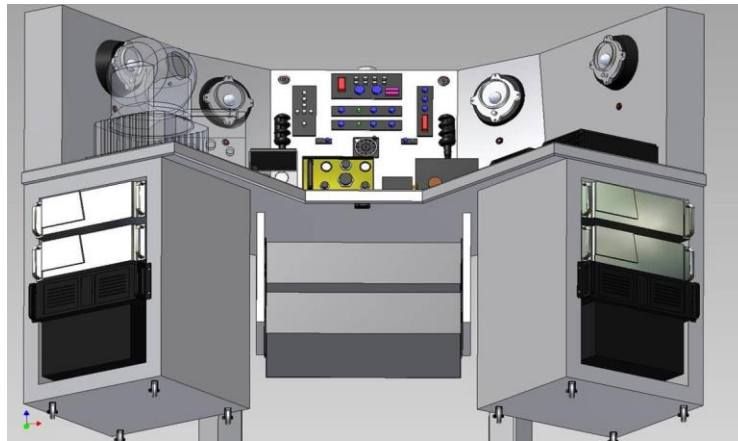
Reference Publications:

None

Training Requirements Supported:

The operational CAT device provides a training platform for development of MOSC 15N, for CH-47F avionics maintainers.

CMWS (COMMON MISSILE WARNING SYSTEM) MAINTENANCE TRAINER (CMT)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service or Agency:

PD ASE

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The CMT has been identified as a training platform for the development of maintenance skills for AN/AAR-57 maintainers. The CMT will be used to train system familiarization, component identification, servicing tasks and inspections, Maintenance Operational Checks (MOCs), Fault Isolation Procedures (FIPs) and Remove/Install (R/I) tasks in support of selected 15N Aviation Unit Maintenance (AVUM) tasks. The CMT device system shall consist of a Hardware Training Device (HTD) with an Instructor Operator Station (IOS).

Functional Description:

The CMT will be a limited-operational device, which provides a training platform for development of 15N maintenance skills for CMWS maintainers. The CMT will represent an operational AN/AAR-57 (CMWS) system. Troubleshooting and operational functional checks will be accomplished using the same equipment required by the Common Missile Warning System.

Physical Information:

(Information not available)

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

Instructor/Operator Station: N/A

Student Stations: 6 foot cable to connect to a 28 VDC and 400 Hz AC 3 Phase wall outlet.

Mobile Power Supply Unit: N/A

Applicable Publications:

01-6920-706-10: Common Missile Warning System (CMWS) Maintenance Trainer Instructor Utilization Handbook (IUH).

(SSM) 01-6920-706-20: Common Missile Warning System (CMWS) Maintenance Trainer System Manual (CSM)

(SMM) 01-6920-706-20-1: Common Missile Warning System (CMWS) Maintenance Trainer Maintenance Allocation Chart (MAC)

(SMM) 01-6920-706-20-2: Common Missile Warning System (CMWS) Maintenance Trainer Maintenance Log Book

TD 01-6920-706-20-3: Common Missile Warning System (CMWS) Maintenance Trainer (COTS) Manuals, (SMM)

Reference Publications:

BAE Manual: Technical Manual, AVUM Warning Receiver System, Countermeasure, AN/AAR-57(V)5, CMWS/ICMD(CH-47D Application).

BAE Manual: Schematic and Wiring Diagrams Set, Warning Receiver System, Countermeasure, AN/AAR-57(V)5, CMWS/ICMD(CH-47D Application).

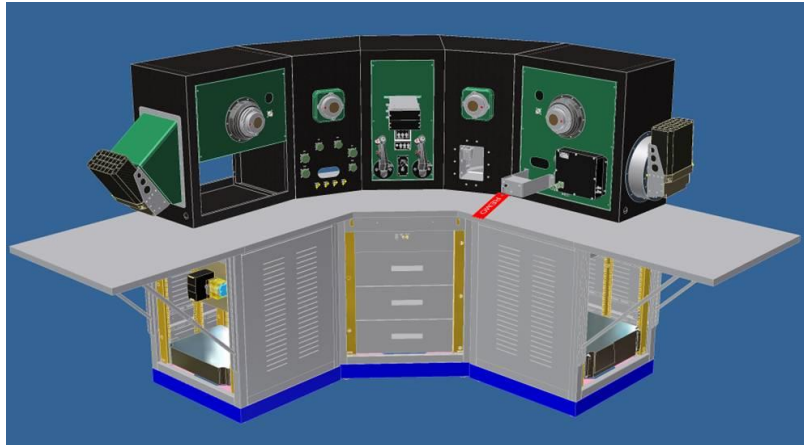
Training Requirements Supported:

MOSC 15N Course, USAALS

TACOPS Course, USAAWC

PDAT Course, EAATS

COMMON MISSILE WARNING SYSTEM (CMWS) MAINTENANCE TRAINER - APACHE (CMT-A)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service or Agency:

PD ASE

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The CMT-A has been identified as a training platform for the development of maintenance skills for AN/AAR-57 maintainers on the AH-64 Platform. The CMT-A will be used to train system familiarization, component identification, servicing tasks and inspections, Maintenance Operational Checks (MOCs), Fault Isolation Procedures (FIPs) and Remove/Install (R/I) tasks in support of selected 15Y Aviation Unit Maintenance (AVUM) tasks. The CMT-A device system shall consist of a Hardware Training Device (HTD) with an Instructor Operator Station (IOS).

Functional Description:

The CMT-A will be a limited-operational device, which provides a training platform for development of 15Y CMWS maintenance skills. The CMT-A will represent an operational AN/AAR-57 (CMWS) system. Troubleshooting and operational functional checks will be accomplished using the same equipment required by the Common Missile Warning System.

Physical Information:

(Information not available)

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

Instructor/Operator Station: N/A

Student Stations: 6 foot cable to connect to a 28 VDC and 400 Hz AC 3 Phase wall outlet.

Mobile Power Supply Unit: N/A

Applicable Publications:

TBD: Common Missile Warning System (CMWS) Maintenance Trainer-Apache Instructor Utilization Handbook (IUH).

TBD: (SMM) Common Missile Warning System (CMWS) Maintenance Trainer-Apache System Manual (CSM)

TBD: (SMM) Common Missile Warning System (CMWS) Maintenance Trainer-Apache Maintenance Allocation Chart (MAC)

TBD: (SMM) Common Missile Warning System (CMWS) Maintenance Trainer-Apache Maintenance Log Book

TBD: (SMM) Common Missile Warning System (CMWS) Maintenance Trainer-Apache Commercial Off-the-Shelf (COTS) Manuals

Reference Publications:

BAE Manual: Technical Manual, AVUM Warning Receiver System, Countermeasure, AN/AAR-57(V)7, CMWS/ICMD(AH-64 Application).

Training Requirements Supported:

MOSC 15Y Course, USAALS

TACOPS Course, USAAWC

MTP Course, WAATS

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The BHAT-M is designed to support training of avionics maintenance personnel, MOS 15N10, in the operation, troubleshooting and repair and maintenance of UH-60M avionics systems.

Functional Description:

The BHAT-M consists of an Instructor Operator Station (IOS) and a Student Station designed to support training in the operation, troubleshooting and repair of avionics systems in a UH-60M helicopter. All equipment functions, operations, responses, and interfaces are identical to those of the baseline UH-60M helicopter counterparts during normal maintenance operations, including interaction among them. The avionics systems have inter-cabin communication (ICC) capability only. The automatic computer controlled mode of operation is capable of demonstrating the appropriate sights, sounds and sequencing results during normal start-up and operating

procedures. The IOS, as the trainer control center, provides the capability to select and initiate the training mode. Basic operating modes include training, demonstration and maintenance.

Physical Information:

(Information not available)

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

Instructor Operator Station: 120V AC, 60 Hz

Student Station: 208V AC, 60 Hz Phase 30 Amp/Phase

Applicable Publications:

TM 01-6930-715-10, Instructor Utilization Handbook

SMM 01-6930-715-20

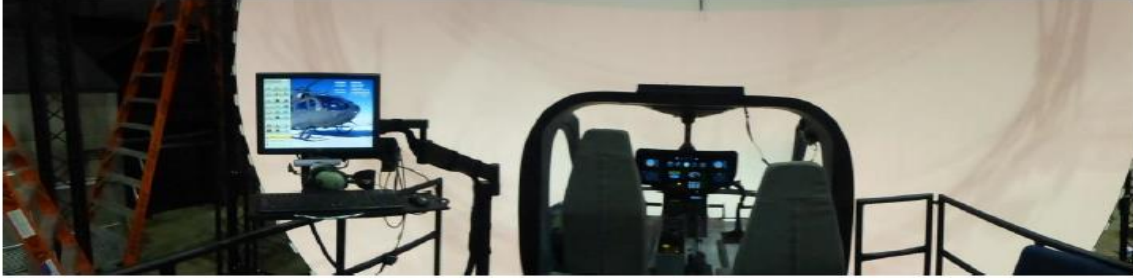
TD-01-6930-715-20-2, (COTS) Manuals

Reference Publications:

N/A

Training Requirements Supported:

MOSC 15N10



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Not available for issue (limited production)

Purpose of Trainer:
A crew trainer for procedural, familiarization and transition training for UH-72A pilots. The UH-72A FTD is designed to maintain pilot skill proficiency under day, night, night vision goggles, and Virtual Flight Rules and Instrument Flight Rules conditions.

Functional Description:
The UH-72A FTD systems are non-motion training devices. The trainee station consists of a cockpit display system with high fidelity instrument panels, a digital control loading system and pilot and co-pilot light controls. Visual environments are incorporated in the out window.

Physical Information:
With space for access around the training device, the recommended minimum room size for the device is 32 feet wide by 35 feet six inches long by 20 feet high.
NSN 6930-01-612-0735

Equipment Required, Not Supplied:
None

Special Installation Requirements:
The UH-72A devices are designed for installation in a permanent facility which provides electrical power, air conditioning, protection from the elements, and a light-tight environment.

Power Requirements:
A 120 VAC, 60Hz, 3 phase, 100 amp power drop for trainer
A separate 120 VAC, single phase, 30 amp power drop is required for the shared Common Database server. Typically one CDB server is deployed per training site.

Applicable Publications:
UH-72A SFTS Instructor Operator Handbook, BA0205-IOH-001
UH-72A SFTS Operation and (SMM) BA0205-O&M-001

Reference Publications:
N/A.

Training Requirements Supported:
Pilot skills associated with the UH-72A

TSS-ENTERPRISE TADSS INDEX AND CATALOG

[DVC 01-231](#)

UH-60M BLACK HAWK STABILATOR AND TAIL ROTOR PART TASK TRAINER (BST-M)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The BST-M devices shall be used to train 15T10 and 15T30 aviation unit level system maintenance procedures in support of the UH-60M stabilator, tail pylon drive train and gearboxes, and the section III tail rotor drive shaft of the tail cone. Each device shall consist of a Student Station, Maintenance Platform and Facility Interface Equipment.

Functional Description:

The BST-M will be used to provide a realistic environment for training ground maintenance operations and procedures to support Military Occupational Specialty (MOS) 15T10 and 15T30 task related skills and knowledge. The device shall simulate UH-60M production aircraft operational systems only to the extent required to accomplish the service, inspection and maintenance tasks for the specified stabilator, tail pylon drive train and gearboxes, and section III tail rotor drive shaft of the tail cone systems.

The Student Station (SS) and Maintenance platform, the major configuration items, create a complete trainer environment. The SS consists of multiple inter-connected

systems to provide the student with a coherent training device similar to the actual aircraft that permits free access for troubleshooting and normal servicing.

The SS is representative of the tail cone and tail pylon of the UH-60M from station 485 (access to drive shaft 4 forward bearing hanger) to station 820 (max tail rotor blade length with a tail rotor pair horizontal to the floor). The trainer is the width of the stabilator unfolded and has shortened tail rotor blades. All components are either replicas of UH-60M aircraft components or actual components with some modifications allowing tasks to be trained independently. The maintenance stand allows for efficient folding of the stabilator.

Physical Information:

Trainer height is 15.5 feet. The device can be moved with a facility on casters by fewer than 5 persons and locks in place when students are performing maintenance tasks.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

Student Station: 208V AC, 60Hz Phase 30 Amp/Phase

Applicable Publications:

Instructor Utilization Handbook, Operation and (SMM) Manuals, and (COTS) Manuals

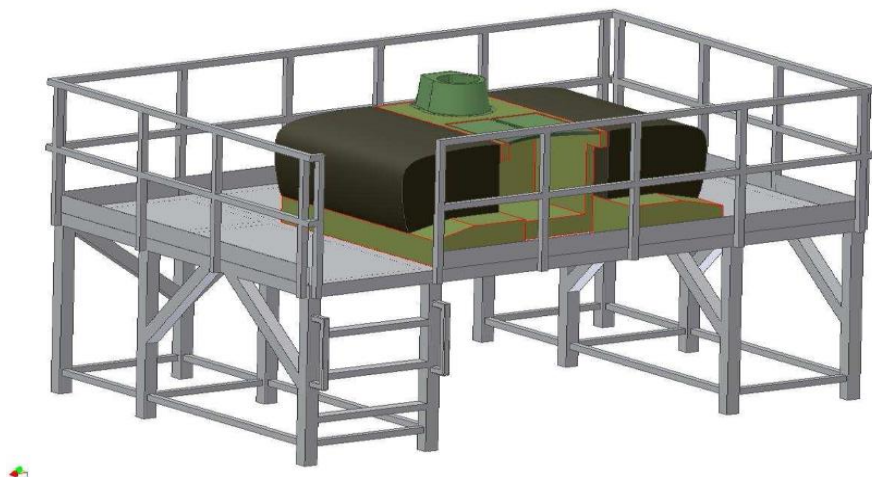
Reference Publications:

N/A

Training Requirements Supported:

MOSC 15T10; 15T30

UH-60M BLACK HAWK ROTOR BRAKE TRAINER (RBT)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-AVN

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The RBT has been identified as the UH-60M Utility Helicopter training platform for the development of maintenance skills for the UH-60M Rotor Brake system.. The RBT device system shall consist of a Student Station (SS), Instructor Operator Station (IOS), and Maintenance Platform.

Functional Description:

The UH-60M Black Hawk Rotor Brake Trainer (RBT) will be used to provide a realistic environment for training fundamentals and procedures associated with operation, troubleshooting and repair of the Rotor Brake system on UH-60M helicopters to support Military Occupational Specialty (MOS) 15T10 and 15T30 task related skills and knowledge.

The Student Station (SS) and Maintenance Platform create a complete trainer environment. The SS consists of multiple inter-connected systems to provide the student with a coherent training device similar to the actual aircraft and permits free access for troubleshooting and normal servicing. The SS contains the Master Cylinder with Bleeder valve, and the Reservoir and Hydraulic Refill Hand Pump to enable removing and replacing the master cylinder and bleeding the system. The Refill Hand Pump is

simulated but the crank is high fidelity to allow fluid to pass through the system. The operator seat for accessing the Master Cylinder simulates the relationship of the right pilot's seat to the Master Cylinder. There is no host or visual system, and no databases associated with RBT. It is not interoperable, nor transportable.

Physical Information:

(Information not available)

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

Instructor/Operator Station: 120V AC, 60Hz
Student Station: 208V AC, 60Hz Phase
30 Amp/Phase
Air Conditioner: 120V AC, 15 Amps, 1800W

Applicable Publications:

Instructor Utilization Handbook, (COTS) Manuals,
CAT Maintenance Manual: Schematic and Wiring
Diagrams Set

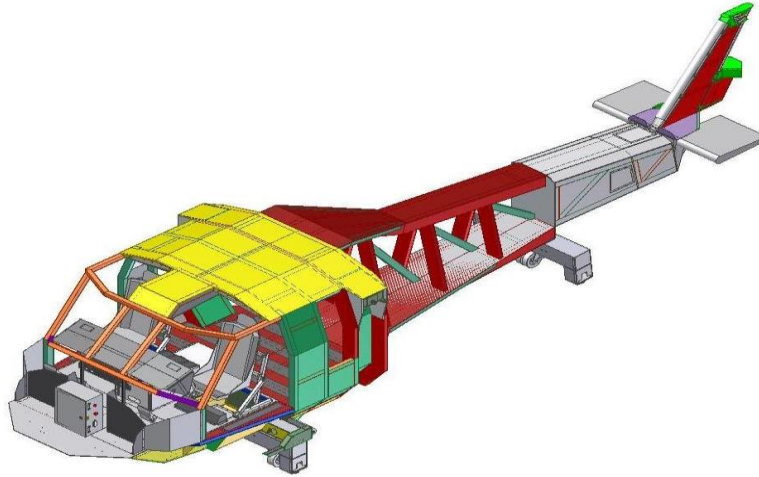
Reference Publications:

N/A

Training Requirements Supported:

MOSC 15T10; 15T30

UH-60M BLACK HAWK AVIATION BASIC ELECTRONICS TRAINER (ABET)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-AVN

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The ABET has been identified as the UH-60M Utility Helicopter training platform for the development of maintenance skills for Electronics maintainers. The ABET device system shall consist of a Hardware Training Device (HTD), Instructor Operator Station (IOS), and a Low-Condensation Air Conditioner to support each Hardware Training Device (HTD).

Functional Description:

The UH-60M Black Hawk Aviation Basic Electronics Trainer (ABET) will be used to provide a realistic environment for training fundamentals and procedures associated with electrical/electronic troubleshooting, fault isolation and repair of UH-60A/L/M helicopters to support Military Occupational Specialty (MOS) 15F10 task related skills and knowledge.

The Student Station (SS) and Instructor/Operator Station (IOS) are designed to provide a hands-on, realistic environment to present techniques for familiarization with theory, operations, adjustment and troubleshooting of UH-60A/L/M helicopter electrical systems. There is no host or

visual system, and no databases associated with ABET. It is not interoperable, nor transportable.

Physical Information:

(Information not available)

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

Instructor/Operator Station: 120V AC, 60Hz

Student Station: 208V AC, 60Hz Phase

30 Amp/Phase

Air Conditioner: 120V AC, 15 Amps, 1800W

Applicable Publications:

Instructor Utilization Handbook, (COTS) Manuals,
CAT Maintenance Manual: Schematic and Wiring
Diagrams Set

Reference Publications:

TM 11-1520-271 Series

TM 1-1520-271 Series

Training Requirements Supported:

MOSC 15F10

SHADOW CREW TRAINER (SCT)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (Limited production)

Purpose of Trainer:

The SCT is a mission simulator for the Shadow Tactical Unmanned Aerial System. The SCT provides platoon level sustainment training for the lightweight, rapidly deployable, short range, airborne reconnaissance system designed to give the battlefield commander a day/night, multi-sensor intelligence collection system. The SCT provides training positions for the Air Vehicle Operator, Payload Operator, Launch and Recovery Crew, Staff/Leader Station and Instructor Operator Station. Also included is the Web-hosted Interactive Multi-Media Instruction (IMI).

Functional Description:

The SCT will provide classroom/desktop training for the entire Shadow platoon participating in real world missions. Interoperability with other Army systems will be provided conducting training using complex mission scenarios.

Physical Information:

The SCT footprint requires approximately 380 square feet of floor space with an operating room ambient temperature (+20° Celsius \pm 10° Celsius) and relative humidity below

60%. The facility will also require an entrance 8 feet wide by 12 feet high to install the preassembled systems. The floor of the facility should be able to support 1500 pounds of equipment in an 8-foot by 8-foot space.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

The device will require a single three-phase 208V 30 Amp power connection via a NEMA L21-30R receptacle. If the role player station is desired to be in an adjacent room, then an additional NEMA 5-15R outlet will be required.

Applicable Publications:

Instructor Utilization Handbook, Semi-Automated Forces User's Manual, Troubleshooting and Repair Guide, Role Player Manual, Image Generator User's Manual, NET training materials, Interactive Media Instruction (IMI) training materials.

Reference Publications:

Applicable (COTS) manuals.

Training Requirements Supported:

MOSCs: 15W UAS Operator, 15JY1 UAS Maintainer, and 150U UAS WO Tech.

CH-47F COCKPIT PROCEDURAL TRAINER (CPT)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not available for issue (limited production)

Purpose of Trainer:

For classroom use to familiarize trainees with the CH-47F Helicopter controls, and to give the trainees realistic practice in performing; Before starting engine, Starting engine, Engine run-up, Engine shutdown, Start malfunctions, and emergency procedures.

Functional Description:

The trainer consists of a student station, which is a full scale reproduction of the CH-47F cockpit, instructor's platform, and instructors console with monitor, keyboard, and chair.

All controls, indicators, etc., pertinent to the practice of the required procedures are either actual aircraft components or operable facsimiles of the helicopter equipment. The illusion of realism is imparted through control feel and sound systems. Controlled by the computer, which provides the physical and aural cues associated with engine operation and flight conditions.

Malfunctions may be introduced by the instructor, through his controls, or by the student's failure to follow correct operational procedures.

Physical Information:

Cockpit Assembly: 72L x 102W x 100H; 2400 lb

Instructor Platform: 72L x 102W x 113H; 3000lb

Control Console: 46L x 40W x 53H; 100 lb

Overall (including maintenance platform and stairs): 187L x 113H x 170W; 5600 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

A climatically controlled classroom that maintains ambient room temperature at 70F, and a relative humidity of 60 percent or less is desirable.

Power Requirements:

115 vac. 60 Hz outlet

Applicable Publications:

CH-47F (SMM) for CPT

Reference Publications:

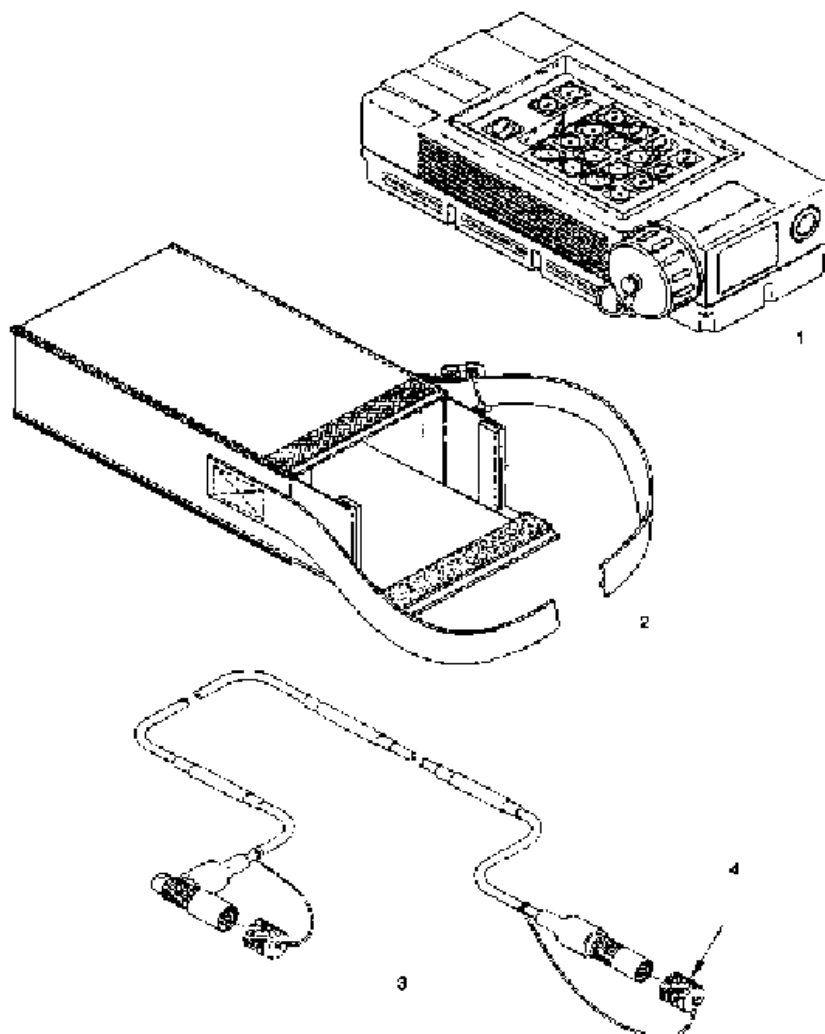
CH-47F CPT Instructor Utilization Handbook.

Training Requirements Supported:

MOSC 15-154F series.

Start, Run-up, Shutdown, Start malfunctions, and Emergency Procedures IAW Primary flight training guide.

CONTROLLER DEVICE, SIMULATOR SUBSYSTEM, FIRING, LASER



Training Category/Level Utilized:
Aviation/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC.

Purpose of Trainer:

The AGES II/CTS-IS is the Army's Multiple Integrated Laser Engagement (MILES) training system for helicopters, putting aviation in the force-on-force fight. The AGES II/CTS-IS system consists of four Tactical Engagement Simulators (TES). Three of these TES's are currently installed on the AH-64 Apache (DVC 01-240/13), CH-47D Chinook (DVC 01-240/10) and the UH-60A Black Hawk (DVC 01-240/11). The fourth system is the

Hellfire Ground Support Simulator (DVC 01-240/8). The AGES II/CTS-IS permits realistic combat training, using eye safe laser Transmitters that "fire" laser beams instead of live ammunition.

These beams are encoded signals which simulate a Variety of weapon systems. Capabilities include range, accuracy and destructive capability. AGES II simulates weapons systems including the Area Weapon System (AWS), Laser Range Finder/ Designator (LRF/D) and the Point Target Weapon System (PTWS). Laser detection systems are mounted to sense opposing fire and determine whether a near-miss, hit but not killed or kill message has been received. The systems activates audio and visual cues indicating the presence and effect of opposing fire.

Functional Description:

The Controller Device (CD) is part of the AGES II Simulator System and provides the Observer Controller monitoring capability during training exercises using MILES AGES II equipment. The CD has the capability to set ammunition loads, "kill" or "resurrect" MILES equipped aircraft, and download exercise data from the aircraft console. It operates on a standard 9vdc battery and is sized and configured to permit it to be physically carried for extended periods of time. It can also transmit optically to a range of about five meters.

Physical Information:

8.84" L x 4.1" W x 2.25" D; 2 lbs 9 oz.

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

9vdc (BA3090/U), Life 100 hrs (constant use)

Applicable Publications:

TM 9-1270-230-10
TM 9-1270-230-10-HR
SMM 9-1270-230-24&P
SMM 9-1270-232-34&P

Reference Publications:

TM 1-1520-238-10
DVC 01-240/9 previously assigned as DVC 07-65/9.

Training Requirements Supported:

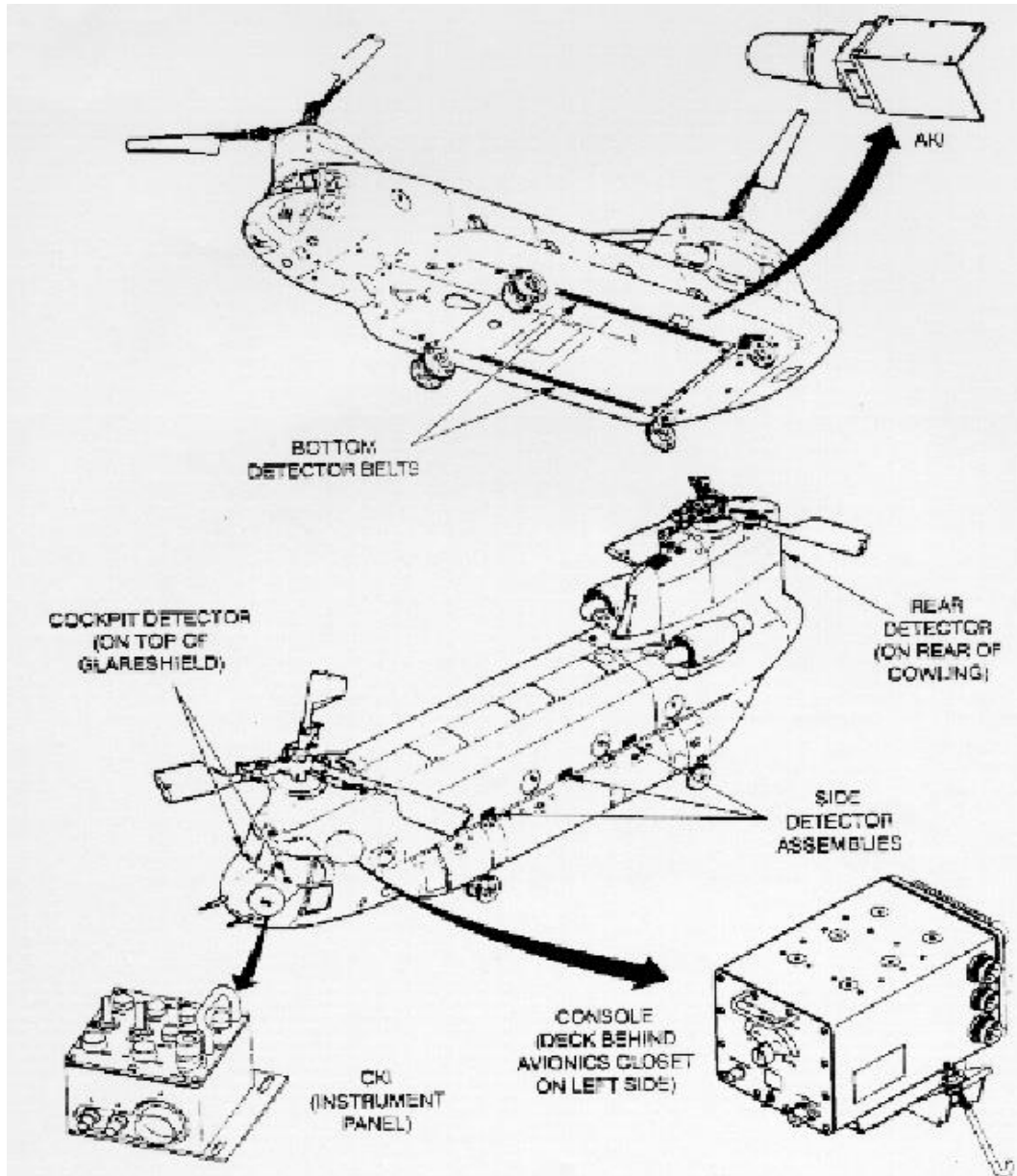
ARTEP's Supported
7-15 17-55 71-2

MOSC 11B; 19D; 19E; 19Z

SM tasks

All tactical tasks for skill levels 1 through 5.

SIMULATOR SYSTEM, FIRING, LASER: FOR CH-47D CHINOOK HELICOPTER AGES II

**Training Category/Level Utilized:**

Aviation/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The AGES II/CTS-IS is the Army's Multiple Integrated Laser Engagement (MILES) training system for helicopters, putting aviation in the force-on-force fight. The AGES II/CTS-IS system consists of four Tactical Engagement Simulators (TES). Three of these TES's are currently installed on the AH-64 Apache (DVC 01-240/13), CH-47D Chinook (DVC 01-240/10) and the UH-60A Black

Hawk (DVC 01-240/11). The fourth system is the Hellfire Ground Support Simulator (DVC 01-240/8).

The AGES II/CTC-IS permits realistic combat training, using eye safe laser Transmitters that "fire" laser beams instead of live ammunition. These beams are encoded signals which simulate a Variety of weapon systems. Capabilities include range, accuracy and destructive capability. AGES II simulates weapons systems including the Area Weapon System (AWS), Laser Range Finder/ Designator (LRF/D) and the Point Target Weapon System (PTWS).

Laser detection systems are mounted to sense opposing fire and determine whether a near-miss, hit but not killed or kill message has been received. The systems activates audio and visual cues indicating the presence and effect of opposing fire.

Functional Description:

DVC 01-240/10 is a passive receptor MILES system for the CH-47D Chinook which allows the aircraft to be "killed". It is configured using common system components with the exception of minor changes required to outfit the system on the helicopter.

Physical Information:

47.5" L x 40.5" W x 15.88" H; 90.2 lbs.

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

28vdc @ less than 5 A

Applicable Publications:

TM 9-1270-228-10
TM 9-1270-228-10-HR
SMM 9-1270-228-24&P

Reference Publications:

TM 1-1520-238-10
DVC 01-240/10 was previously DVC 07-65/10.

Training Requirements Supported:

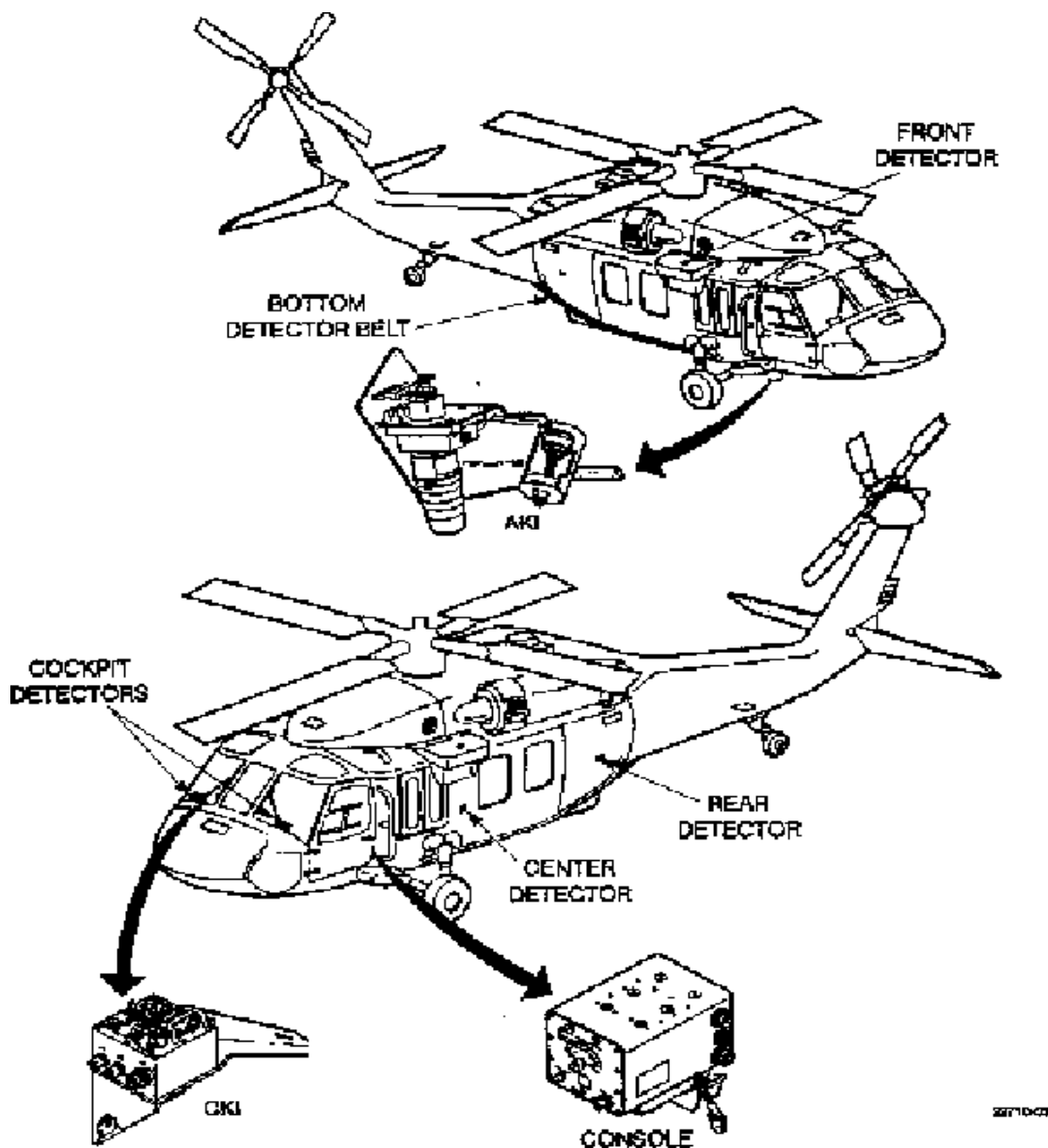
ARTEP's Supported
7-15 17-55 71-2

MOSC 11B; 19D; 19E; 19Z

SM tasks

All tactical tasks for skill levels 1 through 5

SIMULATOR SYSTEM, FIRING, LASER: FOR UH-60A BLACK HAWK HELICOPTER AGES II



Training Category/Level Utilized:
Aviation/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The AGES II/CTS-IS is the Army's Multiple Integrated Laser Engagement (MILES) training system for helicopters, putting aviation in the force-on-force fight. The AGES II/CTS-IS system consists of four Tactical Engagement Simulators (TES). Three of these TES's are currently installed on the AH-64 Apache (DVC 01-240/13), CH-47D Chinook (DVC 01-240/10) and the UH-60A Black

Hawk (DVC 01-240/11). The fourth system is the Hellfire Ground Support Simulator (DVC 01-240/8). The AGES II/CTC-IS permits realistic combat training, using eye safe laser Transmitters that "fire" laser beams instead of live ammunition. These beams are encoded signals which simulate a Variety of weapon systems. Capabilities include range, accuracy and destructive capability.

AGES II simulates weapons systems including the Area Weapon System (AWS), Laser Range Finder/Designator (LRF/D) and the Point Target Weapon System (PTWS). Laser detection systems are mounted to sense opposing fire and determine whether a near-miss, hit but not killed or kill message has been received. The systems activates audio and visual cues indicating the presence and effect of opposing fire.

Functional Description:

DVC 01-240/11 is a passive receptor MILES system for the UH-60A Black Hawk which allows the aircraft to be "killed". It is configured using common system components with the exception of minor changes required to outfit the system on the helicopter.

Physical Information:

47.5" L x 40.5" W x 15.88" H; 90.2 lbs

Equipment Required, Not Supplied:
(Information not available)

Special Installation Requirements:
None

Power Requirements:
28vdc @ less than 5 A

Applicable Publications:
TM 9-1270-227-10
TM 9-1270-227-10-HR
SMM 9-1270-227-24&P

Reference Publications:
TM 1-1520-238-10
DVC 01-240/11 was previously DVC 07-65/11.

Training Requirements Supported:
ARTEP's Supported
7-15 17-55 71-2

MOSC 11B; 19D; 19E; 19Z

SM tasks
All tactical tasks for skill levels 1 through 5

AH-64D MODERNIZED-TARGET ACQUISITION/DESIGNATION SIGHT (TADS) SELECTED TASK TRAINER – L13 (M-TSTT-L13)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

A single seat trainer that provides Modernized - Target Acquisition Designation Sight system training for the AH-64D Co-Pilot/Gunner (CPG). It provides the AH-64D student with initial switchology and sequential weapons engagement procedures training in the initial phases of the AH-64D maintenance training. The TSTT provides training for the following critical individual tasks:

- M-TADS internal and out-front boresight procedures
- MPD and EUFD
- Target Acquisition and Designation Sight (TADS) Electronic Display and Control (TEDAC) Switchology
- Weapon's deployment
- Training switchology and scenarios

Additionally this device proved to be invaluable for the 15Y Armament technician providing him a more in depth working knowledge of the total integration of the Armament and Fire Control System.

Functional Description:

This is a computer based trainer using mock up of actual Co-Pilot Gunner's cock pit with host computer for simulation allowing students to interact with the MTADS systems, TEDAC and Gunnery. The M-TSTT will be used to train Switchology and system familiarization tasks in

support of U.S. Longbow AH-64D Aviation Unit Maintenance, and Aviation Intermediate Maintenance (AVUM/AVIM). The M-TSTT shall consist of two primary training elements, the Hardware Training Device (HTD) and Instructor Operator Station (IOS).

Physical Information:

Instructor/Operator Station and HTD; 10'L x 5'W x 7'H

Hardware Training Device:

Part of IOS in overall dimensions

Mobile Power Supply Unit: N/A

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

Instructor/Operator Station: Powered by HTD

Device: 120/208 VAC/3-phase, 60 Amp, 50-60 Hz

Mobile Power Supply Unit: N/A

Applicable Publications:

APTK 2002

(COTS) Manuals

Reference Publications:

TM 1-1520-238 Series	TM 9-1230-476 Series
TM 1-1270-476 Series	TM 9-1230-221 Series
TM 9-1090-208 Series	TM 9-1425-475 Series
TM 9-1427-475 Series	TM 9-4925-233 Series
TM 9-4935-476 Series	TM 11-1520-238 Series
TM 1-5855-265 Series	TM 55-2480-248 Series

Training Requirements Supported:

MOSC 15R; 15Y

AH-64D WING PART TASK TRAINER – L14 (WPTT-L14)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The Wing Part Task Trainer (WPTT) is an operational device, which provides a training platform for development of maintenance skills for Apache Longbow Maintainers. The WPTT shall be used to train system familiarization and Maintenance Operational Checks (MOCs) in support of U.S. Army Longbow AH-64D Aviation Unit Maintenance and Aviation Intermediate Maintenance (AVUM/AVIM) tasks. The WPTT design shall incorporate a hardware training device consisting of a Hardware Trainer Display, Instructor/Operator Station and Operational Software as required to meet the training requirements.

Functional Description:

The WPTT shall represent a functional AH-64D wing armament system to include all associated subcomponents. The device shall replicate the functionality of the pylons, rocket pods, and hellfire missiles to include simulated pylon functionality. Crew station controls and functions associated with the WPTT system shall function per the basic aircraft design. The WPTT system can be real, modeled or simulated with the fidelity required to simulate normal operations. The WPTT shall consist of two primary training elements, the Hardware Training Device (HTD)

and Instructor Operator Station (IOS)/Operational Software as required meeting the training requirements.

Physical Information:

Instructor/Operator Station: N/A

Hardware Training Device: 17'L x 18'W x 7'H

Mobile Power Supply Unit: N/A

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

Instructor/Operator Station: N/A

Device: N/A

Mobile Power Supply Unit: N/A

Applicable Publications:

APTK 2002

(COTS) Manuals

Reference Publications:

TM 1-1520-238 Series	TM 9-1230-476 Series
TM 1-1270-476 Series	TM 9-1230-221 Series
TM 9-1090-208 Series	TM 9-1425-475 Series
TM 9-1427-475 Series	TM 9-4925-233 Series
TM 9-4935-476 Series	TM 11-1520-238 Series
TM 1-5855-265 Series	TM 55-2480-248 Series

Training Requirements Supported:MOSC 15R; 15Y

AH-64D INTEGRATED PRESSURIZED AIR SYSTEM (IPAS) PART TASK TRAINER WITH INTEGRATED VIRTUAL IMMERSE ENVIRONMENT TECHNOLOGY L15 (IPASPTT-L15)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The AH-64D Integrated Pressurized Air Part Task Trainer (IPASPTT) with integrated Virtual Immersive Environment technology is utilized for training the 15R, 15Y and 151 MOSs. It is utilized for component location, systems familiarization, Maintenance Operational Checks (MOCs), Fault Isolation Procedures (FIPs) and component removal and reinstallation training.

Functional Description:

The IPASPTT is a high physical and functional fidelity device as built for the selected critical tasks on the IPAS. It supports R and I tasks in physical hardware as well as the virtual environment.

Physical Information:

25"L x 18"W x 10"H

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

208 VAC/3 phase, 60 Amp, 50-60 Hz.

Applicable Publications:

Longbow IETM
(COTS) Manuals

Reference Publications:

(Information not available)

Training Requirements Supported:

MOSC 15R; 15Y; 151 series

CH-47 CHINOOK HELICOPTER MAINTENANCE TRAINER-10 LEVEL (CHMT-10)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The CHMT-10 has been identified as the CH-47 Cargo Helicopter training platform for the development of maintenance skills for Avionics maintainers. The CHMT device system shall consist of a Hardware Training Device (HTD), Instructor Operator Station (IOS), Trainer System Software, and IOS Software (IOSS).

Functional Description:

The CHMT-10 will be an operational device, which provides a training platform for development of 15U10 maintenance skills for CH-47 Helicopter Repairmen. The CHMT-10 will be used to train system familiarization, component identification, servicing tasks and inspections, Maintenance Operational Checks (MOCs), Fault Isolation Procedures (FIPs) and Remove/Install (R/I) tasks in support of CH-47 MOS 15U10 Critical Tasks. The CHMT-10 systems will be a combination of air vehicle, modeled and trainer unique components. Troubleshooting and

operational checks will be accomplished using the same test equipment required by the CH-47 Cargo Helicopter.

Physical Information:

Fuselage: 52.8' L x 15.75' W x 18.3' H

Equipment Required, Not Supplied:

Mobile Power Supply Unit (MPSU)

Special Installation Requirements:

None

Power Requirements:

Instructor/Operator Station: 120VAC, 60Hz
Hardware Training Device: 208VAC, 3-phase, 400Hz which will convert to 28VDC
Facility: 208VAC, 60 Hz, 3-Phase, 200A

Applicable Publications:

Instructor Utilization Handbook, (COTS) Manuals, CHMT (SMM)

Reference Publications:

TM 1-1520-271- Series
TM 1-1520-241- Series

Training Requirements Supported:

MOSC 15U

CH-47 CHINOOK HELICOPTER MAINTENANCE TRAINER-30 LEVEL (CHMT-30)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The CHMT-30 has been identified as the CH-47 Cargo Helicopter training platform for the development of maintenance skills for Chinook helicopter repairmen. The CHMT device system shall consist of a Hardware Training Device (HTD), Instructor Operator Station (IOS), Trainer System Software, and IOS Software (IOSS). This device is also capable of satisfying all 15U10 training requirements provided by DVC 01-249.

Functional Description:

The CHMT-30 will be an operational device, which provides a training platform for development of 15U30 maintenance skills for CH-47 Helicopter Repairmen. The CHMT-30 will be used to train system familiarization, component identification, servicing tasks and inspections, Maintenance Operational Checks (MOCs), Fault Isolation Procedures (FIPs) and Remove/Install (R/I) tasks in support of CH-47 MOS 15U30 Critical Tasks. The CHMT-30 systems will be a combination of air vehicle, modeled and trainer unique components. Troubleshooting and

operational checks will be accomplished using the same test equipment required by the CH-47 Cargo Helicopter.

Physical Information:

Fuselage: 52.8' L x 15.75' W x 18.3' H

Equipment Required, Not Supplied:

Mobile Power Supply Unit (MPSU)

Special Installation Requirements:

None

Power Requirements:

Instructor/Operator Station: 120VAC, 60Hz
Hardware Training Device: 208VAC, 3-phase, 400Hz which will convert to 28VDC
Facility: 208VAC, 60 Hz, 3-Phase, 200A

Applicable Publications:

Instructor Utilization Handbook, (COTS) Manuals, CHMT30 (SMM)

Reference Publications:

TM 1-1520-271- Series
TM 1-1520-241- Series

Training Requirements Supported:

MOSC 15U30; 15U10

CH-47 CHINOOK COCKPIT PART TASK TRAINER (CCPTT)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The trainer provides a training platform for development of maintenance skill and knowledge for CH-47 15U10 maintainers. The trainer is used to train system familiarization, component identification, maintenance procedures, and removal and installation procedures. The trainer simulates production aircraft operational systems to the extent required to accomplish the service and maintenance critical tasks for the selected systems. These systems are used to provide realistic training for ground maintenance operation and procedures.

Functional Description:

The trainer was manufactured from cockpit sections of the CH-47 airframe. It is representative of an aircraft flight control systems configuration of the CH-47. The aircraft cockpit consists of both primary and secondary airframe structures. The CCPTT was built on a platform or stand

that allows for movement of the training device within the hosting facility and does not interfere with the fidelity of the training tasks that are to be performed.

Physical Information:

Fuselage: 16' 9" L x 9' 6"W x 12' 4" H

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

Instructor Utilization Handbook, (COTS) Manuals, CHMT (SMM).

Reference Publications:

TM 1-1520-271- Series
TM 1-1520-241- Series

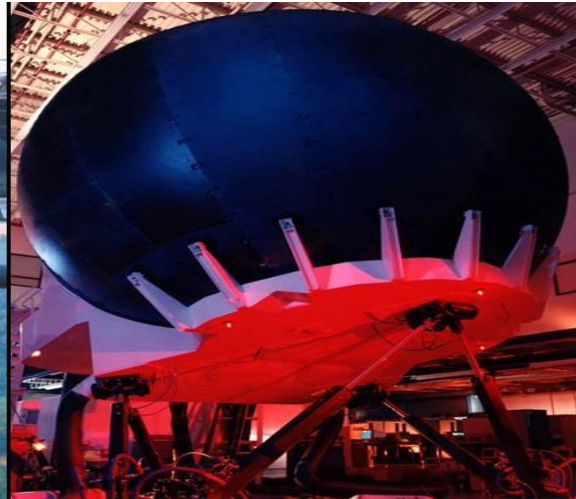
Training Requirements Supported:

MOSC 15U

LIGHT ASSAULT/ATTACK RECONFIGURABLE (LASAR)



(LASAR)



(CMS)

Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The LASAR Combat Mission Simulator (CMS) will provide air crews a real-world mission rehearsal capability to practice, validate, and verify tactics, techniques, and procedures to execute direct missions. It will also provide a mission rehearsal capability, interoperable with other United States Special Operations Command (USSOCOM) mission rehearsal systems.

Functional Description:

The LASAR is a full-fidelity, motion-based, aircraft specific, cockpit replica. All systems and controls required for aircrew training and mission execution will be functional. This includes the capability for all system functionality and operation (including weapons), with the ability to simulate all systems emergencies, malfunctions, and degraded system operations. The LASAR CMS provides the commander with a system to plan and rehearse a special operations mission that incorporates tactics, situational awareness (real-world combat environment), decision-making, and crew coordination. The mission of LASAR is to give the pilot the capability to train for, and rehearse missions which involve multi-aircraft tactics such as shipboard operations, formation flight, multi-aircraft insertion/extraction, aerial gunnery (including team tactics),

visual (laser/strobe/pyrotechnics etc.), and secure communication between other air and ground parties. Identical to the actual aircraft capability, the Simulators will accept automated transfer of all applicable mission data from SOF mission planning systems.

Physical Information:

The LASAR CMS device is a side-by-side cockpit configuration. Only the cockpit is located within the dome. The Instructor Operator Station (IOS) is located outside of the dome area. Within the simulator compartment, there is one observer (role-player) station.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

N/A

Power Requirements:

N/A

Applicable Publications:

207-MMAN-001 LASAR (SMM)
207-IUH-001 LASAR Training Support Utilization Handbook

Reference Publications:

MH-6 Army Special Operations Aviation (ARSOA)
Series Aircrew Training Manual (ATM)
[DVC 01-251 - MCN: 6930-01-D12-0263](#)

Training Requirements Supported:

MOSC - Most of the aircraft -10 is supported.

MH-47G COMBAT MISSION SIMULATOR (CMS)



MH-47G



MH-47G (CMS)

Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The MH-47G Combat Mission Simulator (CMS) will provide air crews a real-world mission rehearsal capability to practice, validate, and verify tactics, techniques, and procedures to execute direct missions. It will also provide a mission rehearsal capability, interoperable with other United States Special Operations Command (USSOCOM) mission rehearsal systems.

Functional Description:

The MH-47G is a full-fidelity, motion-based, aircraft specific, cockpit replica. All systems and controls required for aircrew training and mission execution will be functional. This includes the capability for all system functionality and operation (including weapons), with the ability to simulate all systems emergencies, malfunctions, and degraded system operations. The MH-47G CMS provides the commander with a system to plan and rehearse a special operations mission that incorporates tactics, situational awareness (real-world combat environment), decision-making, and crew coordination. The mission of MH-47G is to give the pilot the capability to train for, and rehearse missions which involve multi-aircraft tactics such as shipboard operations, formation flight, multi-aircraft insertion/extraction, aerial gunnery (including team tactics), visual (laser/strobe/pyrotechnics etc.), and secure

communication between other air and ground parties. Identical to the actual aircraft capability, the Simulators will accept automated transfer of all applicable mission data from SOF mission planning systems.

Physical Information:

The MH-47G CMS device is a side-by-side cockpit configuration. The Instructor Operator Station (IOS) is a single-seat, three-monitor configuration, and is on-board the simulator device. Within the simulator compartment, there are also two observer (role-player) seats that can be positioned in a total of three separate locations. The seats utilize quick-release pins for easy removal, installation, and re-configuration.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

N/A

Power Requirements:

N/A

Applicable Publications:

TM 9-6920-3689-10 MH-47G Operations and (SMM) Manuals

TSUH 9-6920-3689 MH-47G Training System Utilization Handbook

Reference Publications:

MH-47 Army Special Operations Aviation (ARSOA) Series Aircrew Training Manual (ATM)
DVC 01-252 - MCN: 6930-01-D12-1729

Training Requirements Supported:

MOSC - Most of the aircraft -10 is supported.

MH-60M COMBAT MISSION SIMULATOR (CMS)



MH-60M



MH-60M (CMS)

Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The MH-60M Combat Mission Simulator (CMS) will provide air crews a real-world mission rehearsal capability to practice, validate, and verify tactics, techniques, and procedures to execute direct missions. It will also provide a mission rehearsal capability, interoperable with other United States Special Operations Command (USSOCOM) mission rehearsal systems.

Functional Description:

MH-60M is a full-fidelity, motion-based, aircraft specific, cockpit replica. All systems and controls required for aircrew training and mission execution will be functional. This includes the capability for all system functionality and operation (including weapons), with the ability to simulate all systems emergencies, malfunctions, and degraded system operations. The MH-60M CMS provides the commander with a system to plan and rehearse a special operations mission that incorporates tactics, situational awareness (real-world combat environment), decision-making, and crew coordination. The mission of MH-60M is to give the pilot the capability to train for, and rehearse missions which involve multi-aircraft tactics such as shipboard operations, formation flight, multi-aircraft insertion/extraction, aerial gunnery (including team tactics), visual (laser/strobe/pyrotechnics etc.), and secure communication between other air and ground parties.

Identical to the actual aircraft capability, the Simulators will accept automated transfer of all applicable mission data from SOF mission planning systems.

Physical Information:

The MH-60M CMS device is a side-by-side cockpit configuration. The Instructor Operator Station (IOS) is a single-seat, three-monitor configuration, and is on-board the simulator device. Within the simulator compartment, there are also two observer (role-player) seats that can be positioned in a total of three separate locations. The seats utilize quick-release pins for easy removal, installation, and re-configuration.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

N/A

Power Requirements:

N/A

Applicable Publications:

TM 9-6920-3691-10 MH-60M Operations and (SMM) Manuals
TSUH 9-6920-3690 MH-60M Training System Utilization Handbook

Reference Publications:

MH-60 Army Special Operations Aviation (ARSOA) Series Aircrew Training Manual (ATM)
TM 1-1520-282-10

Training Requirements Supported:

MOSC - Most of the aircraft -10 is supported.

CH-47 CHINOOK LANDING GEAR PART TASK TRAINER (CLPTT)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The CH-47 Chinook Landing Gear Part Task Trainer is identified as a training platform for the development of maintenance skills for CH-47 maintainers. The CLPTT Trainer will be used to train system familiarization, component identification, servicing tasks and inspections, and Remove/Install (R/I) tasks in support of the U.S. CH-47.

Functional Description:

The Landing Gear Part Task Trainer consists of a Hardware Training Device (HTD) which shall be representative of the aircraft landing gear configuration of the CH-47.

The CLPTT shall simulate a production aircraft operational landing gear sub-system. This sub-system will be used to provide realistic training for ground maintenance

operations and procedures. The CLPTT shall serve as the primary selected training media used by instructors to strengthen maintenance personnel's skills and knowledge

Physical Information:

Fuselage: 37'L x 12.5'W x 12'H

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

Facility: 115Vac, 60 Hz, single phase, 30A max

Applicable Publications:

Instructor Utilization Handbook, (COTS) Manuals, CLPTT (SMM).

Reference Publications:

TM 1-1520-271- Series
TM 1-1520-240- Series

Training Requirements Supported:

MOSC 15U

SIMULATION SYSTEM TACTICAL ENGAGEMENT SIMULATION SYSTEM (TESS) KIT

NSN 6910-01-595-5703	DVC 01-255/1	Observer Controller (OC), (UH-72A), (TESS) Kit, CONUS, 902-928 Mhz
NSN 6910-01-595-5711	DVC 01-255/2	Opposing Forces (OPFOR), (UH-72A), (TESS) Kit, OCONUS, 225-400 Mhz
NSN 6910-01-595-5719	DVC 01-255/3	Observer Controller (OC), (UH-72A), (TESS) Kit, OCONUS, 225-400 Mhz
NSN 6910-01-585-0475	DVC 01-255/4	Opposing Forces (OPFOR), (UH-72A), (TESS) Kit, CONUS, 902-928 Mhz
NSN 6920-01-643-9645	DVC 01-255/5	Utility Helicopter (UH-72A) Shootback, CONUS



Training Category/Level Utilized:
Combined Arms/Level 1/3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The UH-72A replaces OH-58/UH-1 Helicopter Instrumentation that currently support the Maneuver Combat Training Center (MCTC) Program with Observer Controller (O/C) and Opposing Force (OPFOR) operations which will be retired and replaced with the UH-72A. With the fielding of the UH-72A, the requirement is to install and integrate an instrumentation Kit onto the OPFOR and O/C aircraft.

Functional Description:

The aircraft will be tracked by the MCTC system in near real-time using the on-board telemetry radio approved unclassified training frequencies at Continental United States (CONUS) and Outside Continental United States (OCONUS) MCTCs.

UH Requirements/Capabilities include: Each kit is upward and downward compatible with Multiple Integrated

Laser Engagement System (MILES) and the Common Air Infrastructure at each of the MCTCs. Each kit provides the capability for the MCTC Instrumentation System to track the aircraft.

Physical Information:

DVC 71-34/1: Part number 19591-003

P N: 19577-001, Case Assy. P N: 5601 Anten. GPS White. P N: 19553-001, Tray Assy. P N: 4985-001 AV437 Antenna. P N: 19581-001, Elec. Data Mngr. P N: 19873 Cable Shielded. P N: 19627, DC/DC Pwr. Converter.

DVC 71-34/2: Part number 19591-002

P N: 19577-001, Case Assy. P N: 5601 Anten. White GPS. P N: 19553-002, Tray Assy. P N: 4030-001 Telem. Anten. P N: 19567-001, Discr. Lzr Assy. P N: 19583-001 Kill-Ind. P N: 19581-001 Elec. Data Mngr. P N: 19627, DC Pwr Conv P N: 19873, Cable Shielded.

DVC 71-34/3: Part number 19591-004

P N: 19577-001, Case Assy. P N: 5601 Anten. GPS, White. P N: 19553-002, Tray Assy. P N: 4030-001 Telem. Antenna. P N: 19581-001 Electronic Data Manager Modified. P N: 19873 Cable-Shielded. P N: 19627 DC/DC Power Converter, Reg. 28/14V.

DVC 71-34/4: Part number 19591-001

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

UH-72A Certified A&P Mechanics only

Power Requirements:

Supplied 28V from the aircraft

Applicable Publications:

OUM 01-6920-702-10,
SMM 01-6920-702-24&P

Reference Publications:

Applicable Commercial-Off-The-Shelf (COTS) Manuals
Device 01-255 was previously assigned as DVC 71-34.
Device 01-255/1 was previously assigned as DVC 71-34/1.
Device 01-255/2 was previously assigned as DVC 71-34/2.
Device 01-255/3 was previously assigned as DVC 71-34/3.
Device 01-255/4 was previously assigned as DVC 71-34/4.

Training Requirements Supported:

MOSC 15 series

MAN-PORTABLE AIRCRAFT SURVIVABILITY TRAINER (MAST)



Training Category/Level Utilized:
Aviation/Level

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The MAST is a Man-portable Air Defense System (MANPADS) live training device that will be used to train aircrews to react to Surface to Air Missile (SAM) threats during live training exercises. The MAST will interoperate with the AN/AAR-47 (V) 2/A (V) Missile Warning System and the AN/AAR-57 Common Missile Warning System (CMWS) currently mounted in Army and Joint aircraft resulting in a threat declaration to the aircrew. The MAST will simulate a SAM engagement sequence to include seeker lock as well as the capability to break lock due to environmental and situational conditions. A Weapons Effect Signature Simulator (WESS) simulates the visual launch signature of a MANPADS to signify that the MAST has been fired. Additionally, the MAST has the capability to record SAM day and night engagements during the live training exercises by using a built-in thermal camera. The recorded engagements are used to debriefing aircrews and support the preparation of After Action Reviews (AARs). The system also has the capability to interoperate with aircraft MILES/Long Bow Apache Tactical Engagement Simulation Systems (TESS) instrumentation during force-on-force and force-on-target training at the Maneuver

Combat Training Centers (MCTCs) and at Aviation unit home stations.

Functional Description:

The MAST stimulates the aircraft Missile Warning System (MWS)

Physical Information:

62.3 in L x 12.4 in W x 16.1 in H
33.2 lbs

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

12 vdc from onboard Rechargeable Battery
AC Adapter- 100 to 240 vac, 50 to 60 Hz
DC Adapters- 12 vdc automotive connector and 24 vdc NATO slave (HMMWV) connector

Applicable Publications:

OUM 01-6920-711-10
TD 01-6920-711-20 – (COTS) Manuals
SMM 01-6920-711-24

Reference Publications:

None

Training Requirements Supported:

All Military Aircrews

WEAPONS EFFECT SIGNATURE SIMULATOR (WESS)

**2 Shot Magazine****WESS Top View****WESS Frame**

Training Category/Level Utilized:
Ordnance/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The purpose of this training device is to provide visual and audio signature effects that realistically replicate combat situations to obtain feedback on the effects of the Man-Portable Aircraft Survivability Trainer, MAST, engagements on personnel, independent targets, and combat helicopters in support of training objectives.

Functional Description:

The WESS is capable of providing signature effects when the MAST is fired. The WESS is connected with the MAST using 20 meters RS-485 cable to communicate with the MAST. The WESS has a removable 2 shot magazine. The pyrotechnic simulator, XM176, will be used to create visual effects. They are in the Army inventory and will not be provided as part of the kit. The WESS provides a 30 second delay accompanied by a visual and audio warning signal to allow the operator to clear the area prior to the WESS arming.

Physical Information:

Dimensions: 12"(W) x 16"(L) x 24"(H) Weight: 35lbs

Equipment Required, Not Supplied:

XM176 pyrotechnic simulator, NSN: 1370-01-603-0690
Man-Portable Aircraft Survivability Trainer,
NSN: 6920-01-599-5538

Special Installation Requirements:

None

Power Requirements:

Rechargeable 12 Volt 7.5 Amp SLA Battery

Applicable Publications:

TM 9-6910-741-10: Operator's Manual for Weapons
Effect Signature Simulator (WESS)

Reference Publications:

TM 9-1370-207-10: Operator Manual Pyrotechnic
Simulators

OUM 01-6920-711-10: for Man-Portable Aircraft
Survivability Trainer

Training Requirements Supported:

MOSC - Various

MULTIPLE LASER ENGAGEMENT SYSTEM (MILES) LASER

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

MILES Laser transmits miss/hit commands to target aircraft enabling the Man-Portable Aircraft Survivability Trainer (MAST) to interface with aircraft MILES/Long Bow Apache Tactical Engagement Simulation Systems (TESS) instrumentation during force-on-force and force-on-target training at the Maneuver Combat Training Centers (MCTCs) and at Aviation unit home stations. The Probably of hit (Ph)/kill (Pk) computations are performed by the Computer and are determined by the type of weapon loaded.

Functional Description:

The MILES Laser is connected to the MAST and is capable of stimulating the target aircraft's MILES receiver at 4 KM. The Class 3B MILES Laser operates in near Infra-red region at 904.5 ± 25 nanometers. The MILES Laser is mounted on a Picatinny rail on the centerline of the MAST near the front bottom. A cable connects the Compact MILES Laser to controlling electronics within the MAST Assembly via a bulkhead connector on the right front of the MAST near the handgrip.

Physical Information:

Dimensions: 15.50" (L) X, 1.00" (W) X 1.0" (H)
Weight: .5 lbs

Equipment Required, Not Supplied:

Man-Portable Aircraft Survivability Trainer (MAST),
NSN: 6920-01-599-5538

Special Installation Requirements:

Under certain conditions the MILES laser may radiate a burst of near-IR laser light for up to 15 seconds. Ensure that the MAST Assembly with the MILES Laser is not pointed at nearby personnel at any time while powered-up and that personnel are aware that they should not walk in front of the MAST Assembly while in operation. Failure to comply could result in eye injury to anyone looking at the MILES Laser while it is radiating.

Power Requirements:

The MILES Laser draws vdc power required from the MAST Assembly.

Applicable Publications:

OUM 01-6920-711-10: for Man-Portable Aircraft Survivability Trainer (MAST)
SMM 01-6920-711-24&P: for MAST

Reference Publications:

None

Training Requirements Supported:

MOSC - All Military Aircrews

MAN-PORTABLE AIRCRAFT SURVIVABILITY TRAINER II (MAST-II)



Training Category/Level Utilized:
Aviation/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The MAST is a Man-Portable Air Defense System (MANPADS) live training device primarily used to train aircrews to react to Surface-to-Air Missile (SAM) threats during live training exercises.

Functional Description:

The MAST stimulates the Common Missile Warning System (CMWS) resulting in a threat declaration in the aircraft cockpit. Also it simulates the SAM engagement sequence, including seeker lock, as well as the capability to break lock due to environmental and situational conditions. Additionally, the MAST has the capability to record SAM engagements during the live training exercises. Although it can operate autonomously, the MAST includes the capability to interface with a WESS and MILES instrumentation (if optional MILES Laser installed). The WESS is used only to provide a visual indication to the target aircraft that a missile has been fired. A MILES Laser assembly can be attached to the front of

the simulated MANPADS launch tube to provide MILES-coded miss and kill messages to target aircraft.

Physical Information:

62.3 in L x 12.4 in W x 16.1 in H
(158.2 cm L x 31.5 cm W x 40.9 cm H)
34 lbs (15.4 kg)

Equipment Required, Not Supplied:
N/A

Special Installation Requirements:
N/A

Power Requirements:

Battery operated:
- Two 12-volt Lithium-Ion (Li+) rechargeable batteries provided with system
- One battery required for operation

Applicable Publications:

OUM 01-6920-711-10 (Rev. B)
SMM 01-6920-711-24&P (Rev. B)

Reference Publications:

Publication R39578-00011

Training Requirements Supported:

Aircrews

RECONFIGURABLE 12X/MC-12S COCKPIT PROCEDURAL TRAINER (CPT)



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Not generally available for issue (limited production)

Purpose of Trainer:
The RC-12X CPT provides training on the avionics package provided by Universal Avionics (UA), including the UA E890R Electronic Flight Instrumentation System (EFIS), UNS-1Fw Flight Management System (FMS), and the Radio Control Unit. The RC-12X CPT integrates hardware and software components in a modular architecture to allow for assembly, disassembly, and relocation in Government furnished facilities. The RC-12X CPT includes pilot and copilot stations with controls, displays, and instruments with necessary and sufficient fidelity for training.

Functional Description:
The RC-12X CPT/MC-12S is an open cockpit design, with dual controls and two seats. The primary instrument display, throttle quadrant, flight controls, and rudder pedals are situated on top of one platform that elevates the cockpit

floor several inches off the training room floor. Crew seats are placed on a second platform, with the two platforms securing together in a "quick-connect" locking arrangement.

Physical Information:
Dimensions: 6' W, 6' D, 8' H

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
No special power or electrical connections.

Applicable Publications:
EMARSS RC-12X CPT (OUM)
EMARSS RC-12X CPT (SMM)
RC-12X CPT (COTS) Manuals

Reference Publications:
(COTS) Manuals

Training Requirements Supported:
MOSC: Warrant Officers -155E; Officers -15A, & 15C.

RC-12X/MC-12S COCKPIT PROCEDURAL TRAINER (CPT)



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Not available for issue (limited production)

Purpose of Trainer:

This device allows reconfiguration between an RC-12X aircraft containing Universal Avionics equipment and an MC-12S aircraft containing Pro Line 21 equipment. The RC-12X/MC-12S CPT is a stationary avionics training device that provides both RC-12X and MC-12S training. The device uses simulated scenarios that include normal, malfunction and emergency situations.

Functional Description:

The RC-12X CPT/MC-12S is an open cockpit design, with dual controls and two seats. The primary instrument display, throttle quadrant, flight controls, and rudder pedals

are situated on top of one platform that elevates the cockpit floor several inches off the training room floor.

Physical Information:
Dimensions: 6' W, 6' D, 8' H

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
No special power or electrical connections.

Applicable Publications:
RC-12X/MC-12S Operator User's Manual
RC-12X/MC-12S System Maintenance Manual

Reference Publications:
Commercial manuals (COTS)

Training Requirements Supported:
MOSC: Warrant Officers -155E; Officers -15A, & 15C.

ASN-128D PART TASK TRAINER

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

LRU Components available through normal supply channels

Case, internal wiring, and BoB- Missouri AVCRAD is the repair activity

Purpose of Trainer:

This trainer provides initial training on the maintenance and troubleshooting of the ASN-128D Doppler/GPS Navigation System

Functional Description:

This device creates a working ASN-128D DGNS system with the ability to perform Maintenance Operational Check and provides instructor capability to induce faults for troubleshooting.

Physical Information:

The system consists of 3 items an ASN-128D DGNS system, a break out box (BoB), and the case. The case contains the wiring harnesses, Central Display Unit, Heading Situation Indicator, and Data Transfer Unit.

Equipment Required, Not Supplied:

Software Loader Verifier Program
Serial Cable
GPS Antenna
GPS Antenna Coax

Special Installation Requirements:

None

Power Requirements:

115 vac 60Hz

Applicable Publications:

TM 11-5841-305-23&P

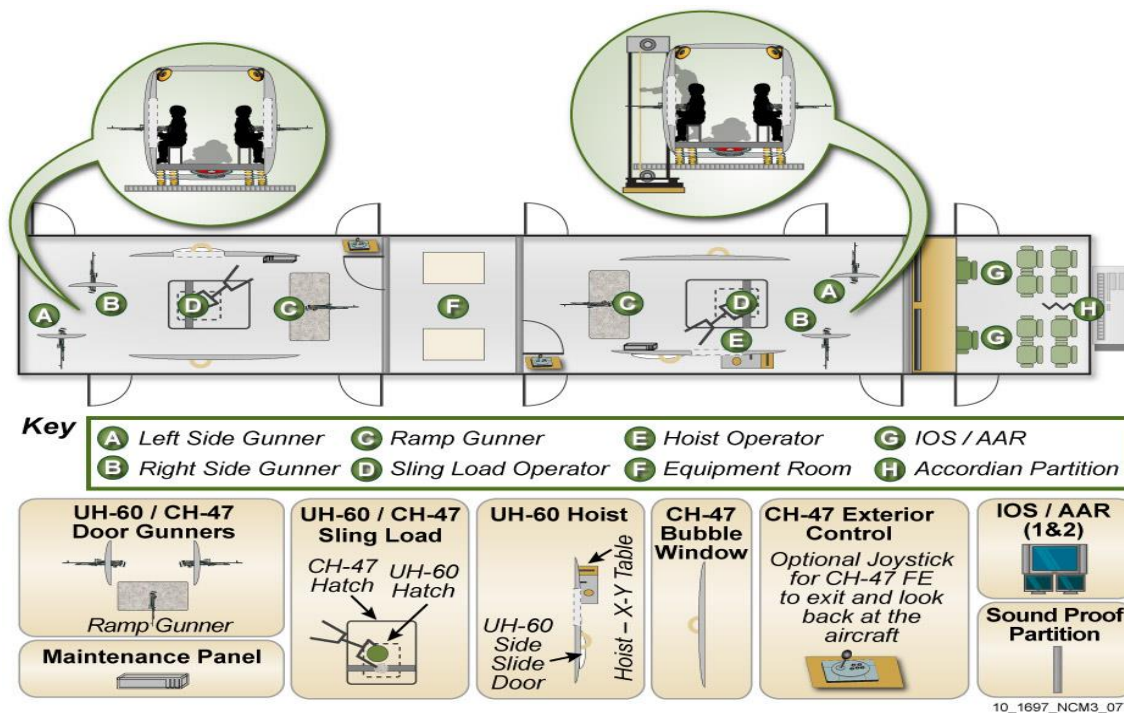
Reference Publications:

TM 11-1520-237-23

Training Requirements Supported:

MOSC 15N

NON-RATED CREW MEMBER MANNED MODULE/A (NCM3-A)



Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The Aviation Combined Arms Tactical Trainer (AVCATT) Non-Rated Crew Member Manned Module/A (NCM3/A) Trainer is designed to expand capabilities of non-rated crew member (NCM) training. The NCM3/A enables the integration of a functional crew station position for the current (UH-60 and CH-47) and future inventory of Army lift helicopters. The trainer is integrated with the AVCATT system and manned modules for training crew and collective tasks, as well as with high fidelity simulators for utility and cargo aircraft. The NCM3/A trainer is a mobile virtual simulation training system with the capability to conduct realistic, high intensity, task-loaded collective and combined arms training exercises and mission rehearsals to provide effective training for individual, crew, and collective tasks.

The integrated training mode shall provide the means to integrate the NCM3/A with co-located AVCATT Manned Modules (MM), resulting in the two trainers operating as a

single aircraft, allowing for full crew coordination and training.

The independent training mode of operation shall incorporate the use of the NCM3/A and the IOS to train non-rated crew members and will encompass the sole resources used for training non-rated crew members.

Functional Description:

The NCM3/A is transportable, modular; self contained and, reconfigurable with the ability to operate separate from rated crew member modules composed of non-rated crew member modules. The NCM3/A shall be employed primarily at military unit home station locations and TRADOC institutions. The primary value of the NCM3/A is to assist with individual and collective training of non-rated aviation Soldiers for operations in the Contemporary Operating Environment (COE) and allowing these individuals, crews, and units to train to sustainment, operating in the full spectrum of simulated conflict; from a low threat (permissive) environment to a simulated combat environment, thus reducing the impact of restrictions imposed by weapons effects, terrain, environmental concerns, and time.

Physical Information:

Trailer (34,550 LB) W 8'6" x H 13'6" x L 53' (without A/C unit).

Deployed footprint (service pad) 60'8" x 24'5"

Equipment Required, Not Supplied:

Environmental Control Unit provides for required humidification. Needs approximately 4.5 Gallons of water daily, ECS has a 5 Gal water tank.

Special Installation Requirements:

A full support pad is recommended capable of supporting the entire weight of the 53,000 lb trailer, plus the weight of the Class 8 highway tractor.

Power Requirements:

Two electrical power sources are required for operation of the onboard systems. 480 60Hz/380 50Hz Volt A.C., 3 Phase, 100 KVA, one line fused at 60 Amps, the other fused at 100 Amps

Applicable Publications:

OUM 01-6930-723-10
SMM 01-6930-723-24
TD 01-6930-723-20-1 (COTS) Manuals (1-thru as needed)

Reference Publications:

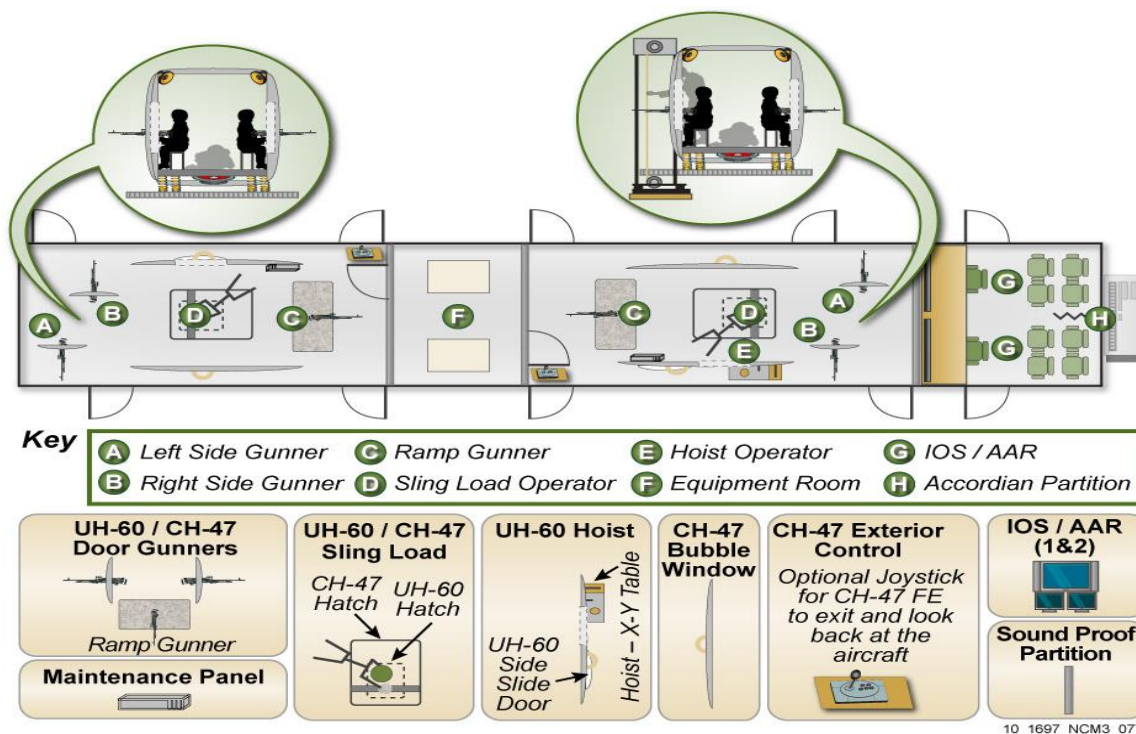
DA Pam 350-38 (Standards In Weapons Training)
FM 1-113 (Utility and Cargo Helicopter Operations)
FM 1-140 (Helicopter Gunnery)
NCM3 After Action Review User's Guide
DVC 01-259/A was previously assigned as DVC 71-33

Training Requirements Supported:

TC 1-240 Aircrew Training Manual
Cargo Helicopter, CH-47D
1026, 1032, 1034, 1038, 1040, 1052, 1058, 1063, 1064,
1070, 1405, 1262, 1406, 1408, 1411, 1413, 1474, 2010,
2052, 2112

TC 1-237 Aircrew Training Manual
Utility Helicopter, UH-60
1026, 1032, 1034, 1038, 1040, 1052, 1058, 1063, 1064,
1070, 1114, 1155, 1262, 2010, 2022, 2024, 2026, 2034,
2036, 2042, 2048, 2052, 2060, 2090, 2092

NON-RATED CREW MEMBER MANNED MODULE/A (NCM3-B)



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The Aviation Combined Arms Tactical Trainer (AVCATT) Non-Rated Crew Member Manned Module/B (NCM3/B) Enhanced Trainer is an improved device intended to expand capabilities of non-rated crew member (NCM) training through improved weapon systems and an Electronic Recoil Assembly for gun recoil and state-of-the-art image generation. The NCM3/B enables the integration of a functional crew station position for the current (UH-60 and CH-47) and future inventory of Army lift helicopters. The trainer is integrated with the AVCATT system and the manned modules for training crew and collective tasks, as well as with high fidelity simulators for utility and cargo aircraft. The NCM3/B trainer is a mobile virtual simulation training system with the capability to conduct realistic, high intensity, task-loaded collective and combined arms training exercises and mission rehearsals to provide effective training for individual, crew, and collective tasks.

The integrated training mode shall provide the means to integrate the NCM/B with co-located AVCATT Manned Modules (MM), resulting in the two trainers operating as a single aircraft, allowing for full crew coordination and training.

The independent training mode of operation shall incorporate the use of the NCM3/B and the IOS to train non-rated crew members and will encompass the sole resources used for training non-rated crew members.

Functional Description:

The NCM3/B is transportable, modular; self contained and, reconfigurable with the ability to operate separate from rated crew member manned modules composed of non-rated crew member modules. The NCM3/B shall be employed primarily at military unit home station locations and TRADOC institutions. The primary value of the NCM3/B is to assist with individual and collective training of non-rated aviation Soldiers for operations in the Contemporary Operating Environment (COE) and allowing these individuals, crews, and units to train to sustainment, operating in the full spectrum of simulated conflict; from a low threat (permissive) environment to a simulated combat environment, thus reducing the impact of restrictions imposed by weapons effects, terrain, environmental concerns, and time.

Physical Information:

Trailer (34,550 LB) W 8'6" x H 13'6" x L 53' (without A/C unit).

Deployed footprint (service pad) 60'8" x 24'5"

Equipment Required, Not Supplied:

Environmental Control Unit provides for required humidification. Needs approximately 4.5 Gallons of water daily, ECS has a 5 Gal water tank.

Special Installation Requirements:

A full support pad is recommended capable of supporting the entire weight of the 53,000 lb trailer, plus the weight of the Class 8 highway tractor.

Power Requirements:

Two electrical power sources are required for operation of the onboard systems. 480 60Hz/380 50Hz Volt A.C., 3 Phase, 100 KVA, one line fused at 60 Amps, the other fused at 100 Amps

Applicable Publications:

OUM 01-6930-724-10

SMM 01-6930-724-24

TD 01-6930-724-20-1 (COTS) Manuals (1-thru as needed)

Reference Publications:

DA Pam 350-38 (Standards In Weapons Training)

FM 1-113 (Utility and Cargo Helicopter Operations)

FM 1-140 (Helicopter Gunnery)

NCM3 After Action Review User's Guide

Training Requirements Supported:

TC 1-240 Aircrew Training Manual

Cargo Helicopter, CH-47D

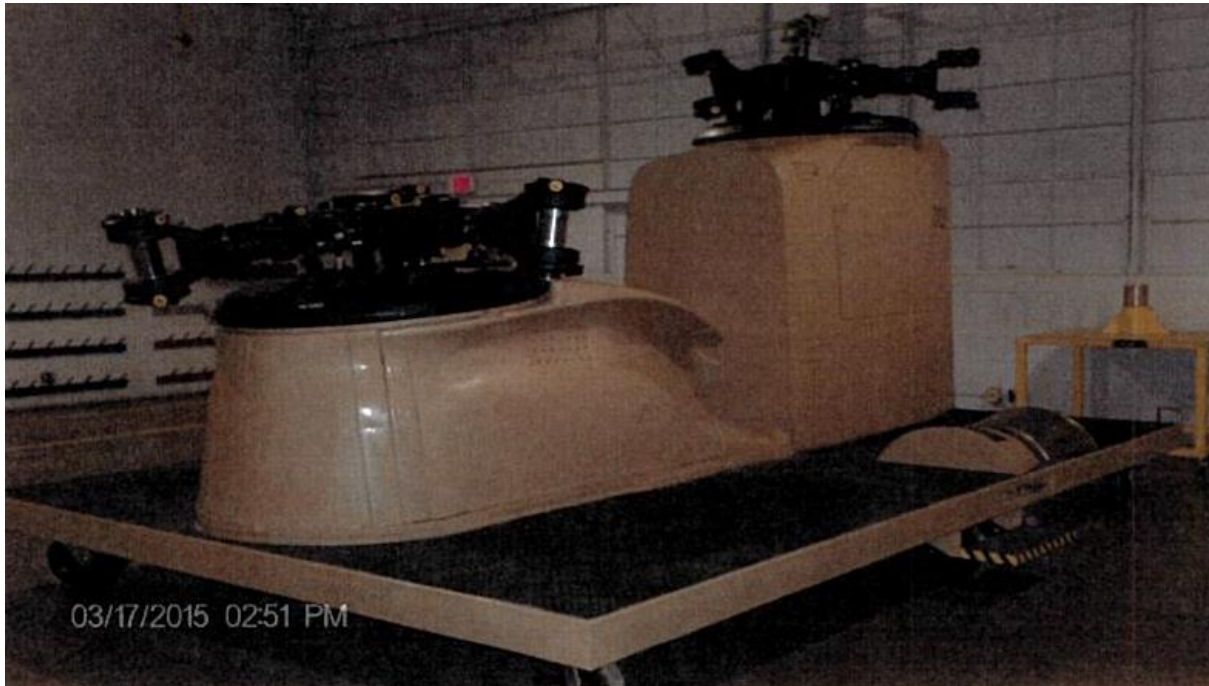
1026, 1032, 1034, 1038, 1040, 1052, 1058, 1063, 1064, 1070, 1405, 1262, 1406, 1408, 1411, 1413, 1474, 2010, 2052, 2112

TC 1-237 Aircrew Training Manual

Utility Helicopter, UH-60

1026, 1032, 1034, 1038, 1040, 1052, 1058, 1063, 1064, 1070, 1114, 1155, 1262, 2010, 2022, 2024, 2026, 2034, 2036, 2042, 2048, 2052, 2060, 2090, 2092

CH-47 CHINOOK ROTOR HEAD PART TASK TRAINER (CRPTT)



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Not generally available for issue (limited production)

Purpose of Trainer:
The CH47 Chinook Rotor Head Part Task Trainer is identified as a training platform for the development of maintenance skills for CH-47 maintainers. The CRPTT Trainer will be used to train system familiarization, component identification, servicing tasks and inspections, and Remove/Install (R/I) tasks in support of the U.S. CH-47.

Functional Description:
The Rotor Head Part Task Trainer consists of a Hardware Training Device (HTD) which shall be representative of the aircraft forward and aft rotor head configuration of the CH-47.

The CRPTT shall simulate a production aircraft operational rotor head sub-system. This sub-system will be used to provide realistic training for ground maintenance

operations and procedures. The CRPTT shall serve as the primary selected training media used by instructors to strengthen maintenance personnel's skills and knowledge.

Physical Information:
Platform: 183"L x 120"W x 134" H
FWD Platform: 103"L x 120"W x 78"H
AFT Platform: 80"L x 120"W x 134"H

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
(Information not available).

Applicable Publications:
Instructor Utilization Handbook, (COTS) Manuals, CRPTT Maintenance Manual.

Reference Publications:
TM 1-1520-271- Series
TM 1-1520-240- Series

Training Requirements Supported:
MOSC 15U

CH-47 CHINOOK HELICOPTER AVIATION GROUND POWER UNIT (AGPU)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available (limited production)

Purpose of Trainer:

The AGPU is an operational device that furnishes primary operating power and hydraulic pressure for the CHMT trainers. AGPU is used to train system familiarization by providing both hydraulic and electrical interfaces to the Chinook Helicopter Maintenance Trainer Aircraft. The AGPU emulates the functionality of an Aviation Ground Power Unit, or AGPU.

The AGPU provides maintenance training under the following categories:

- Overall System Familiarization
- Functioning Controls and Indicators
- Realistic training for ground maintenance and operations/procedures

Functional Description:

The AGPU is a simulated device which provides electrical and hydraulic power sources to designated CH-47 training devices.

Physical Information:

AGPU: 60.5" L x 43.75" W x 65.5" H 5600 lbs. Weight

Equipment Required, Not Supplied:

None

Special Installation Requirements:

The facility power connection cable is 35' long and placement should be considered when selecting the location of the supported Hardware Training Device (HTD).

Power Requirements:

AGPU: Facility power receptacle of 240 VAC, 60 Hz

Applicable Publications:

(COTS) AGPU Manuals:
Operation and Maintenance Manuals
Instructor Utilization Handbook

Reference Publications:

None

Training Requirements Supported:MOSC 15H; 15U; 15F

AIRBORNE RADAR TRANSPONDER (APX) – 123 PART TASK TRAINER (APX – 123 PTT)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

LRU Components available through normal supply channels

Case and internal wiring,- Missouri AVCRAD is the repair activity

Purpose of Trainer:

This trainer provides initial training on the maintenance and troubleshooting of the APX-123 Common Transponder (CXP)

Functional Description:

This device creates a working APX-123 CXP system with the ability to perform Maintenance Operational Check and provides instructor capability to induce faults for troubleshooting.

Physical Information:

The system consists of 3 items a Receiver-Transmitter RT-1912, Control, Transmitter Radar C-12720, antenna, and the case. The case contains the wiring harnesses.

Equipment Required, Not Supplied:

MK-2957 Test Set, APM-424 (V)3 Test Set, TS-4530 Test Set, TS-4530A
Multimeter

Special Installation Requirements:

None

Power Requirements:

115 vac 60Hz

Applicable Publications:

TM 11-5895-1841-13&P

Reference Publications:

TM 11-1520-237-23

Training Requirements Supported:

MOSC 15N

BLACK HAWK – M MAINTENANCE TRAINER (BHMT-M)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The BHMT-M is designed to provide training system familiarization, component identification, servicing, Maintenance Operational Checks (MOCs), Fault Isolation Procedures (FIPs), Remove/Install (R/I) and repair of UH-60M helicopter systems in support of MOS 15T10 and 15T30 maintenance personnel.

Functional Description:

The BHMT-M consists of an Instructor Operator Station, IOS) and a Student Station (SS) that support training in the operation, troubleshooting and repair of systems in a UH-60M helicopter. All equipment functions, operations, responses and interfaces will replicate those of the actual baseline UH-60M helicopter counterparts during normal maintenance operations, including interaction among them. The major configuration items; Computer Systems, Software Systems, IOS, SS, Aircraft Test Sets, Power Supply and Maintenance Platform create the complete training environment.

Physical Information:

Approximate footprint including IOS and Student Station platform will be 70 feet in length, 35 feet wide and 17feet high.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

Instructor Operator Station: 120V AC, 60Hz
Student Station: 208V AC, 60 HZ Phase 30 AMP/Phase

Applicable Publications:

(Information not available)

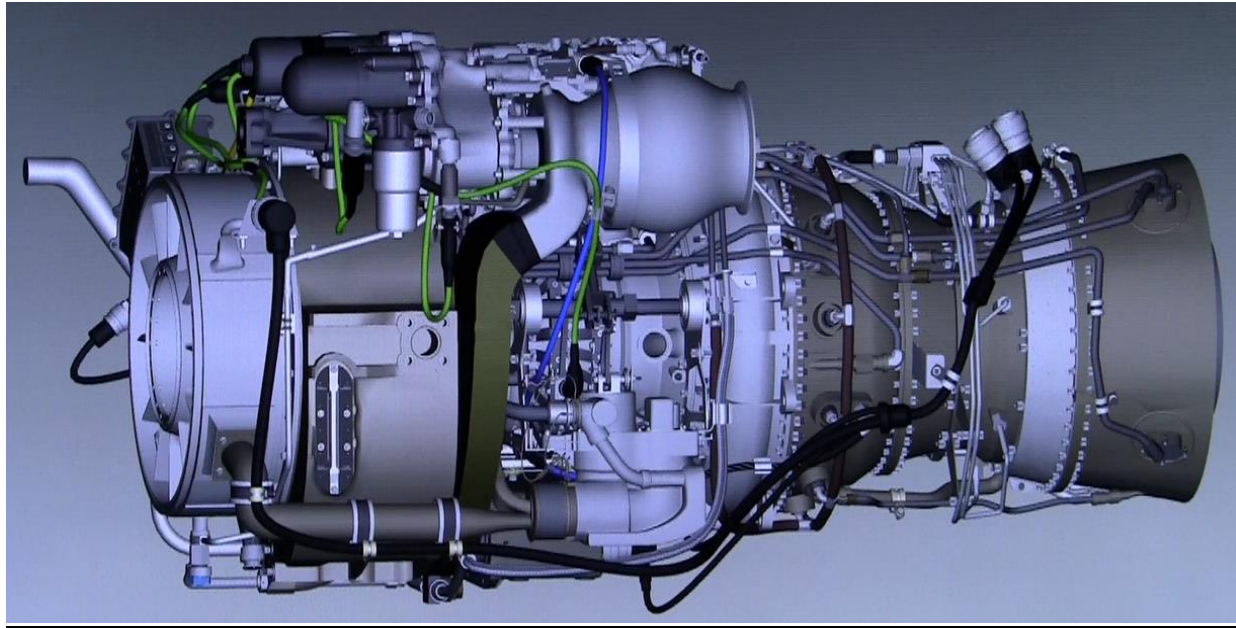
Reference Publications:

OUM 1-1520-280-10, for Army UH-60M Helicopter
SMM 1-1520-280-23, Aviation Unit and Intermediate Maintenance for Helicopters
TM-1-1520-280-CL, Operator and Crew Member's Checklist

Training Requirements Supported:

MOSC 15T10; 15T30

MODELED T700 - 701C/D POWER TURBINE ENGINE



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-AVN

Source and Method of Obtaining:
Not generally available (limited production)

Purpose of Trainer:

The T700-701C/D Power Turbine Engine model supports the critical training tasks of the 15B and 15R MOS. Device supports bore-scoping, the S-39 test set and a series of remove and install tasks, as well as engine Quick Change Assembly build up for installation on a part task trainer or training device. Device also supports electrical fault insertion for 15B training in fault isolation and corrective action as well as all special tools associated with the critical tasks.

Functional Description:

The T700-701C/D Power Turbine Engine model is a high physical and functional fidelity bench training device designed to teach the 15B and 15R series in base remove and install tasks. Fidelity supports the critical tasks to the

level specified to successfully train in the classroom/hangar floor environment.

Physical Information:
28" H x 28" W x 50" L 450 Lbs

Equipment Required, Not Supplied:
(Information not available)

Special Installation Requirements:
(Information not available)

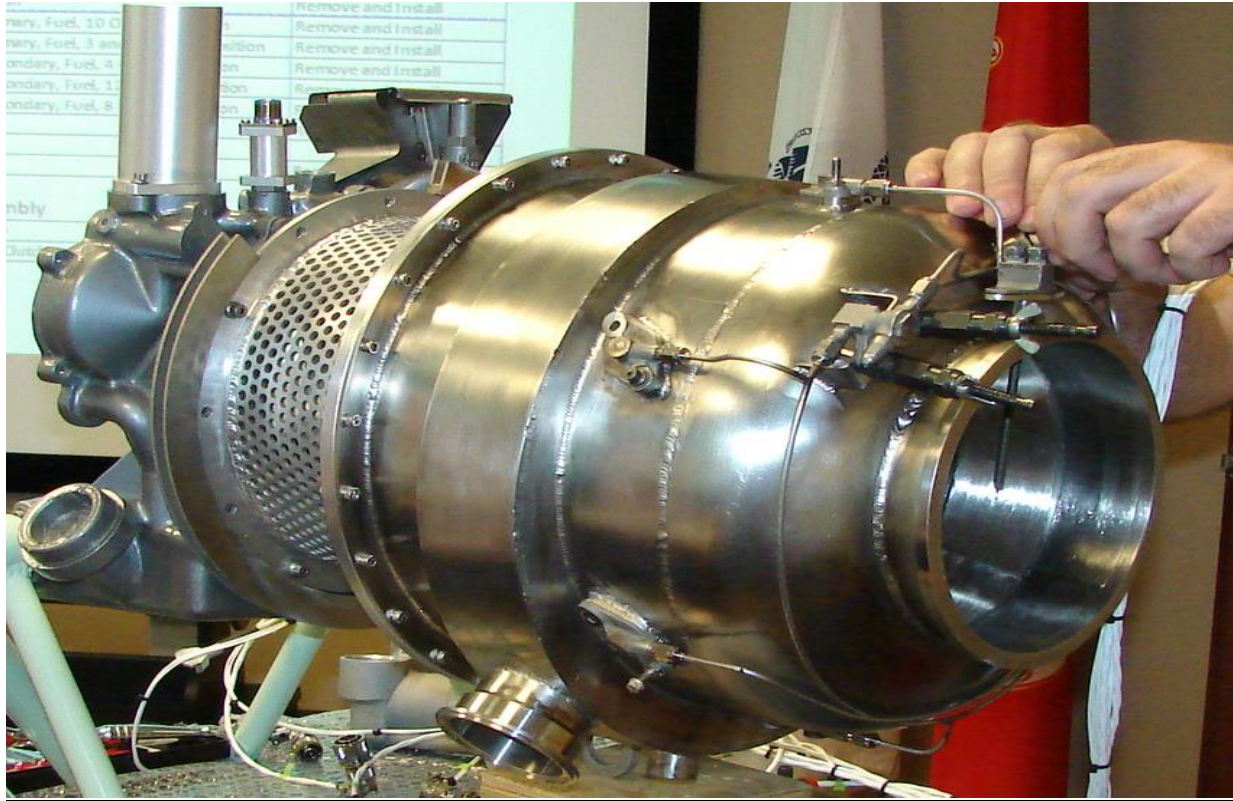
Power Requirements:
(Information not available)

Applicable Publications:
Longbow IETM
T700-701C/D IETM
(COTS) Manuals

Reference Publications:
TBD

Training Requirements Supported:
MOSC 15B; 15R

MODELED AH-64D, AH-64E AUXILIARY POWER UNIT (APU)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-AVN

Source and Method of Obtaining:

Not generally available (limited production)

Purpose of Trainer:

The Modeled AH-64D, AH-64E Auxiliary Power Unit (APU) supports the critical remove and Install tasks as a bench training asset. Additionally supports the theory of operation for the 15R series MOS. Model can also be used in part task trainers and training devices as a sub system.

Functional Description:

The Modeled AH-64D, AH-64E APU is a high physical fidelity bench trainer in cutaway form allowing the student to perform remove and install tasks as well as view internal components supporting the POI.

Physical Information:

22" H x 22" W x 40" L 130 Lbs

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

(Information not available)

Applicable Publications:

Longbow IETM
(COTS) Manuals

Reference Publications:

(Information not available)

Training Requirements Supported:MOSC 15R

VIRTUAL INTERACTIVE ENVIRONMENT DEVICE (VIE)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-AVN

Source and Method of Obtaining:

Not generally available (limited production)

Purpose of Trainer:

The Virtual Interactive Environment (VIE) device is a standalone computer system and large touch screen monitor mounted on a stand with casters. It can be used in the classroom or hangar training environment. Device supports the required AH-64, CH-47, UH-60 systems and subsystems critical remove and install tasks, Fault Isolation Procedures (FIPs), Maintenance Operational Checks (MOCs), special tools and test equipment as designed in based on the customer's requirements. Device can be integrated with part task Trainers or training devices to enhance the training experience.

Functional Description:

VIE device is a baseline computer system and large touch screen monitor with associated Instructor Operator interfaces. Software system is common, based on level of fidelity (Torque 3D for medium and SAP 3d Studio Max for high) and the training material content is tailor-able

based on the customer's requirements at the time of procurement. Future builds will support additional subsystems but is configurable, based on training content, to support any weapon system in the inventory.

Physical Information:

36" H x 48" W x 72" L 250 Lbs

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

(Information not available)

Applicable Publications:

AH-64 IETM
CH-47 IETM
UH-60 IETM
T700-701C/D ETM
(COTS) Manuals

Reference Publications:

(Information not available)

Training Requirements Supported:

MOSCs 15B; 15D; 15F; 15G; 15H; 15N; 15R; 15T; 15U

MODELED AH64D, AH64E MODERNIZED TARGET ACQUISITION AND DESIGNATION SIGHTING SYSTEM (M-TADS)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-AVN

Source and Method of Obtaining:

Not generally available (limited production)

Purpose of Trainer:

The AH-64D, E Modeled Modernized Target Acquisition and Designation Sighting System (M-TADS) trainer is utilized for 15Y sights and sensors component location, systems familiarization and removal and reinstallation training. It can be utilized as a standalone device or installed on AH-64D/E part task trainers and integrated into the device simulation.

Functional Description:

The Modeled M-TADS system is a high physical fidelity R and I device that is used to train the AH-64D/E 15Y Soldier on 10 level R and I tasks.

Physical Information:

4' 0" H x 5' 0" W x 4' 0" H

Equipment Required, Not Supplied:

Device supports utilization of the Target Acquisition and Designation Sight continuity test set and the 15Y common tool set.

Special Installation Requirements:

Device is designed to be utilized for training installed in the shipping fixture or can be installed on designated AH-64D/E Part Task Training devices and integrated for additional training tasks.

Power Requirements:

N/A

Applicable Publications:

Longbow IETM
(COTS) Manuals

Reference Publications:

N/A

Training Requirements Supported:

MOSC 15Y

AH-64D/E MAIN LANDING GEAR TRAINING DEVICE

**Training Category/Level Utilized:**

Aviation/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

Trainer supports the initial skill set training requirements for 15R10 Soldiers in Main Landing Gear tasks associated with the AH-64D/E Attack Helicopter.

Functional Description:

Device supports the jacking and removal/installation critical tasks associated with the main landing gear and wheel assemblies.

Physical Information:

Device is 9 feet high, 8 feet wide and 35 feet long. Weight is reconfigurable from 6000lbs to 10,500 lbs.

Equipment Required, Not Supplied:

General mechanics tool box, PGSE

Special Installation Requirements:

None

Power Requirements:

Device is unpowered

Applicable Publications:

Longbow Apache IETM

Reference Publications:

OEM IUH and O&M

Training Requirements Supported:

MOSC 15R10 initial skill set training on the critical tasks.

CH-47 CHINOOK HELICOPTER MAINTENANCE TRAINER – ELECTRICAL VIRTUAL IMMERSIVE ENVIRONMENT (CHMT-EV)



CH-47 Cargo Helicopter Fuselage Simulator



(CHMT-EV) Plotting Board

Training Category/Level Utilized:

Aviation/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The CHMT-EV has been identified as the CH-47 Cargo Helicopter training platform for the development of maintenance skills for helicopter electricians. The CHMTEV device system shall consist of a Hardware Training Device (HTD), a Mobil Power Supply Unit (MPSU), Instructor Operator Station (IOS), Trainer System Software, and IOS Software (IOSS), and multiple Virtual Immersive Environment (VIE) touch screen stations. Each touch screen station is capable of operating in a detached mode for selected troubleshooting faults. Any one of these VIE stations may be integrated with the HTD for a combined tactile and virtual training experience. This device is also capable of satisfying all 15U training requirements provided for by DVC 01-249.

Functional Description:

The CHMT-EV is an operational device, which provides a training platform for development of 15U and 15F maintenance skills for CH-47 Helicopter Re. The CHMT can be used to train system familiarization, component identification, servicing tasks and inspections, Maintenance Operational Checks (MOCs), Fault Isolation Procedures (FIPs) and Remove/Install (R/I) tasks in support of CH-47 MOS 15 F and 15U Critical Tasks. The CHMT-EV systems

will be a combination of air vehicle, modeled and trainer unique components. Troubleshooting and operational checks will be accomplished using the same test equipment required by the CH-47 Cargo Helicopter.

Physical Information:

Fuselage: 52.8' L x 15.75' W x 18.3' H

Equipment Required, Not Supplied:

Virtual Interactive Environment (VIE)

Special Installation Requirements:

None

Power Requirements:

Instructor/Operator Station: 120VAC, 60Hz
Hardware Training Device: 208VAC, 3-phase, 400Hz which will convert to 28VDC
Facility: 208VAC, 60 Hz, 3-Phase, 200A
VIE Station: 120 VAC, 60 Hz

Applicable Publications:

Instructor Utilization Handbook, (COTS) Manuals, CHMT (SMM)

Reference Publications:

TM 1-1520-271- Series
TM 1-1520-241- Series

Training Requirements Supported:

MOSC 15F; 15U

UH-60 BLACK HAWK MEDICAL SUPPORT EQUIPMENT SUITES (MSES)

NSN 6930-01-629-7162

DVC 01-274/1

UH-60 BLACK HAWK (MSES) Troop Seat Configuration

NSN 6930-01-629-7146

DVC 01-274/2

UH-60 BLACK HAWK (MSES) Interim MEDEVAC

Mission Support System (IMMSS) Configuration

NSN 6930-01-629-7142

DVC 01-274/3

UH-60 BLACK HAWK (MSES) Carousel Configuration

**MSES Devices****Carousel Variant****IMMSS Variant****Slick****Training Category/Level Utilized:**

Aviation/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The MSES devices are used to provide flight medics with the required utilization proficiency of actual UH-60 MEDEVAC aircraft equipment and will improve instructor proficiency for the UH-60 specific tasks for flight medics attending Flight Medic courses at U.S. Army School of Medicine (USASAM), Ft. Rucker, AL.

Functional Description:

Each device is a replication of the UH-60 aircraft cabin section aft of the pilot/copilot seats (cabin area) with associated medical support equipment for three support equipment configurations: Basic Troop Seat Configuration with right and left gunner's seats, an aft facing center troop seat and four forward facing aft troop seats; Interim MEDEVAC Mission Support System (IMMSS) Configuration; and Carousel Configuration with 3 aft facing troop seats mounted in the front of the cabin. MSES is used for system familiarization of the different medical configurations used in the UH-60 helicopter for patient loading, unloading and treatment while being transported. The MSES provides realistic, high fidelity, safe equipment familiarization for the Flight Medic course.

Physical Information:

18'10"L x 21'W x 8'7"H

Equipment Required, Not Supplied:

None

Applicable Publications:

TD 1-6910-719 Series

Special Installation Requirements:

Information not available

Reference Publications:

TM 55-1520-237 Series

Power Requirements:

120vac, 3 phase, 5 wires, 60 Hz@100 Amps

Training Requirements Supported:MOSC 91W

AH-64E TADS ELECTRONIC DISPLAY AND CONTROL (TEDAC) GRIPS

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available (limited production)

Purpose of Trainer:

The modeled AH-64E TEDAC Grip Assembly is designed to be used as a skill development/qualification/sustainment tool for the AH-64 Co-Pilot Gunner.

Functional Description:

The Modeled TEDAC Grip Assembly is a high physical and functional fidelity training tool that faithfully replicates the TEDAC assembly of the AH-64E front seat. This trainer is used for training Apache aviators 15 and 152 series officers and warrant officers. This trainer can be used to train procedures for the Apache Unmanned Aircraft System (UAS), Targeting and Designation System (TADS), TADS Electronic Display and Control (TEDAC). The trainer can also be used for basic weapons procedures for 30 mm cannon, rockets, and hellfire missile. This trainer cooperated with the AH-64D and E Longbow Procedures Trainer (LPT) for an integrated cockpit training approach. The combination of TEDAC Grips and LPT have been accredited by the Directorate of Simulation for two UAS

tasks and are currently in use by the Apache New Equipment Training Team and multiple Apache flight training courses at Fort Rucker.

Physical Information:

0' 8" H x 0' 10" W x 0' 6" L

Equipment Required, Not Supplied:

PC based computer with the Longbow Procedural Training software is required for interfacing with this training aid.

Special Installation Requirements:

Training aid is designed to be utilized for training when used with a Personal Computer (PC) and the LPT training SW package.

Power Requirements:

N/A

Applicable Publications:

Longbow IETM
AH-64E (OUM)
AH-64E Aircrew Training Manual

Reference Publications:

N/A

Training Requirements Supported:

MOSCs 15; 152

AN/ARC-231 MULTI-MODE AIRBORNE RADIO SUITE (MARS) VIRTUAL INTERACTIVE ENVIRONMENT (VIE) TRAINER

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

LRU Components available through both commercial and military supply channels
Case and internal wiring, - Missouri AVCRAD is the repair activity

Purpose of Trainer:

This trainer provides initial training on the maintenance and troubleshooting of the AN/ARC-231 MARS

Functional Description:

This device creates a working AN/ARC-231 MARS system with the ability to perform Maintenance Operational Check and provides instructor capability to induce faults for troubleshooting. Also allows removal and reinstallation of components in a virtual environment.

Physical Information:

The system consists of 4 items a case containing the Control Indicator, ICS Box and processing hardware, two touch screen monitors and a headset.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

115 vac 60Hz

Applicable Publications:

AN/ARC-231 MARS VIE (OUM)

Reference Publications:

TM 11-5821-364-10

Training Requirements Supported:

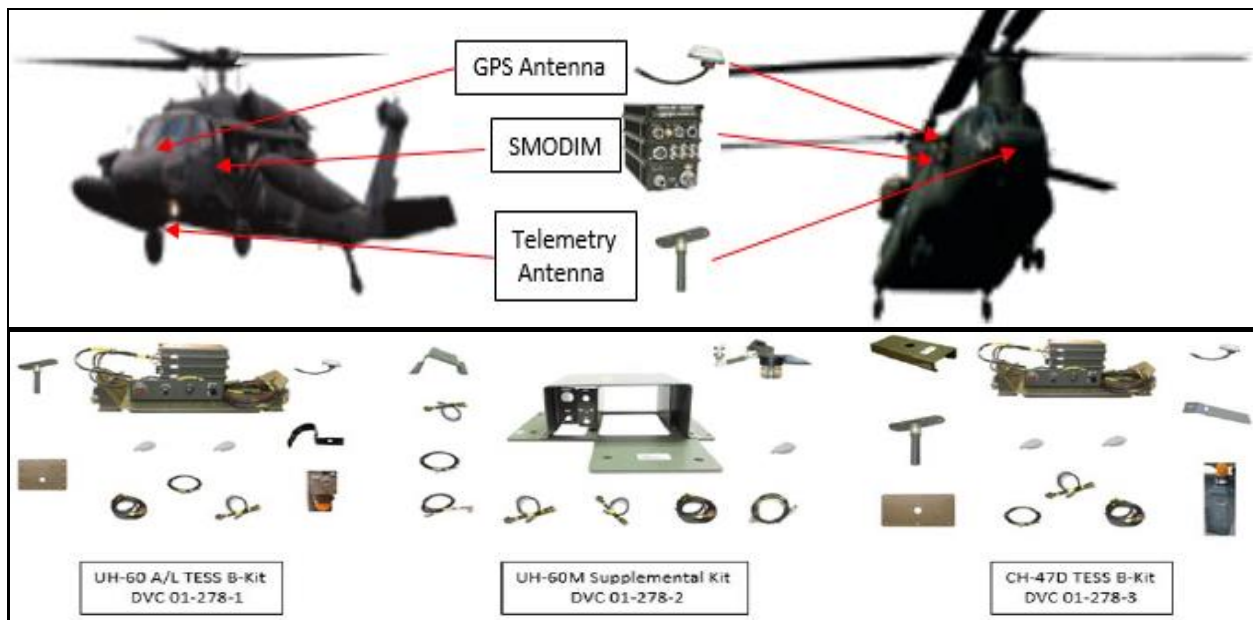
MOSC 15N

CH-47 AND UH-60 UNIVERSAL TACTICAL ENGAGEMENT SIMULATION SYSTEM (TESS) B - KIT

NSN Not Assigned
NSN 6910-01-628-6976
NSN Not Assigned

DVC 01-278-1
DVC 01-278-2
DVC 01-278-3

UH-60A/L TESS B-Kit
UH-60M Supplemental Kit to Universal TESS B-Kit
CH-47D/F TESS B-Kit



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through TSC at JRTC / NTC

Purpose of Trainer:
TESS is a training and simulation system which allows aircrews to train alongside ground forces at the CTC level and allow them to participate in collective live training and force-on-force training.

Functional Description:
The Universal TESS B-Kit (UTK) consists of a SMODIM, Telemetry Antenna, and GPS antenna. The UTK was designed to contain the common core components required for multiple aviation platforms to be instrumented for force-on-force (FoF) training at the CTCs: UH-60 A/L, UH-60M, or CH-47D/F. The UTK components are issued along with one of the lower level kits; which are compatible with all CONUS MILES and CTC instrumentation. Components use onboard systems and displays to fulfill the requirement of being transparent to the user. The data captured enable commanders to

monitor/replay training engagements and position location in near real-time, conduct after action reviews (AARs) and briefings.

Physical Information:
Not available

Equipment Required, Not Supplied:
Either 01-278-1, -2, or -3 depending on the make and model of the aircraft needing instrumentation

Special Installation Requirements:
IAW and identified in applicable publications.

Power Requirements:
Aircraft Power 24VDC

Applicable Publications:
TM 19459; SMM 25226

Reference Publications:
TM 1-1520-240 Series
TM 1-1520-237 Series

Training Requirements Supported:
MOSC 15A; 153D; 153M; 154C

UH-60M COCKPIT EMERGENCY PROCEDURAL TRAINER (CEPT-M)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

To provide training for Aircraft Qualification Course (AQC) in the normal and emergency operations encountered during start, run-up and shutdown of a UH-60M Helicopter.

Functional Description:

The CEPT-M is a full scale replication of a UH-60M Cockpit. The trainer consists of the pilot and co-pilot stations, and instructor console with computer and peripherals.

Physical Information:

(Information not available)

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

115vac, 3-phase, 60 Hz, 30 Amps

Applicable Publications:

(Information not available)

Reference Publications:

TM1-1520-280 Series

Training Requirements Supported:

MOSC 15A; 153D

CH-47 CHINOOK HELICOPTER VIRTUAL INTERACTIVE ENVIRONMENT (VIE)



VIE Touch Screen Station



VIE Crew Station Display

Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The CH47 Chinook VIE is the CH-47 Cargo Helicopter training platform for the development of maintenance skills for helicopter repairmen. The VIE device system consists of multiple Virtual Immersive Environment (VIE) touch screen stations. Each touch screen station is capable of operating in a detached mode for selected troubleshooting faults.

Functional Description:

The VIE is an operational device, which provides a training platform for development of 15U and 15H maintenance skills for CH-47 Helicopter Requirements. The 55" touch screen panel is provided to create the virtual world where the student can perform Fault Isolation Procedure (FIP) requirements. The two smaller 22" touch screen panels are available for the student to view the required FIP's in the Interactive Electronic Technical Manual (IETM). The opposite touch screen displays the

crew station displays and provide the student the ability to navigate through IETM pages and perform IBIT's.

Physical Information:

VIE: 54" L x 36" W x 80" H 250 lbs. Weight

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

VIE Station: 120 VAC, 60 Hz

Applicable Publications:

(COTS) VIE Manuals:
Operation and (SMM)
Instructor Utilization Handbook
Software Load Manual

Reference Publications:

SMM 1-1520-271-23&P
SMM 1-2840-265-23&P

Training Requirements Supported:

MOSC 15H; 15U

CH-47 CHINOOK HELICOPTER MULTI POWER SUPPORT UNIT (MPSU)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

The CH47 Chinook MPSU is a CH-47 Cargo Helicopter training platform that provides a stand-alone electrical and hydraulic power source to the Hardware Training Device (HTD). The MPSU is a replication of a standard Auxiliary Ground Power Unit (AGPU), which uses facility electrical power rather than an internal turbine engine.

Functional Description:

The MPSU is a simulated device which provides electrical and hydraulic power sources to designated CH-47 training devices.

Physical Information:

MPSU: 60.5" L x 43.75" W x 65.5" H 5600 lbs. Weight

Equipment Required, Not Supplied:

None

Special Installation Requirements:

The facility power connection cable is 35' long and placement should be considered when selecting the location of the supported Hardware Training Device (HTD).

Power Requirements:

MPSU: Facility power receptacle of 240 VAC, 60 Hz

Applicable Publications:

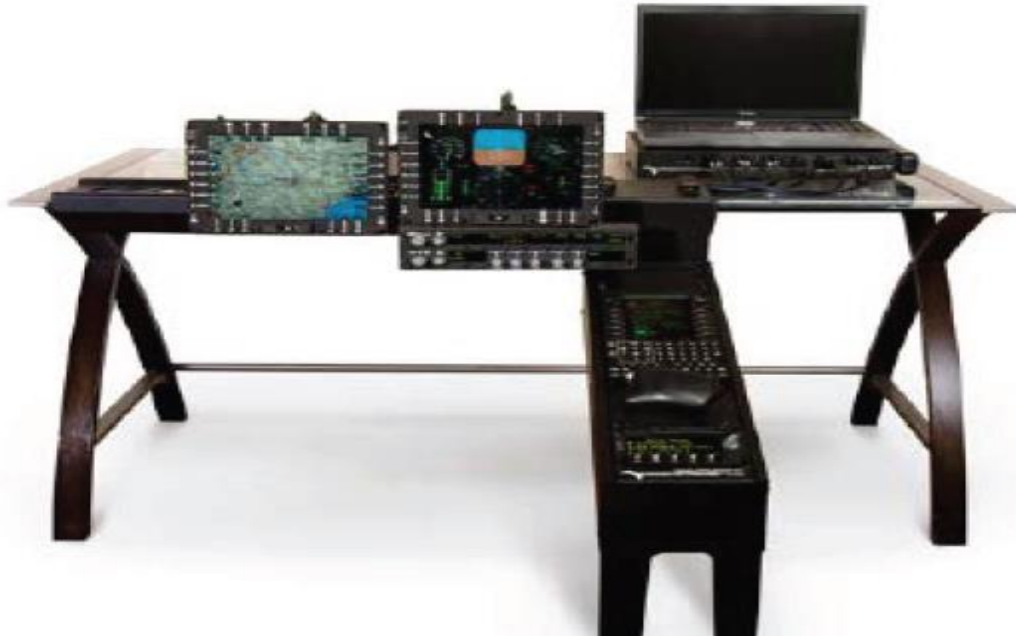
(COTS) VIE Manuals:
Operation and (SMM)
Instructor Utilization Handbook
DTB 1-1550-1689-10

Reference Publications:

TC 3-04.11

Training Requirements Supported:MOSC 15H

UH-60M COCKPIT ACADEMIC PROCEDURAL TOOL (CAPT)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The CAPT is a portable demonstration device that supports numerous page and pilot vehicle interface tasks during pilot qualification, refresher and sustainment training along with aiding maintenance instruction.

Functional Description:

The CAPT replicates the primary subsystems on either the pilot or copilot of a UH-60M Cockpit.

Physical Information:

Stowed (in its case): 17in. by 27in. by 46in.
Setup (to include space for user): 36in. by 70 in.

Equipment Required, Not Supplied:

A standalone tabletop surface (minimum depth of 24 inches and minimum width of 36 inches) that the device can be attached to and an extension cord.

Special Installation Requirements:

None

Power Requirements:

This device uses a single standard electrical outlet (120V AC).

Applicable Publications:

None

Reference Publications:

TM1-1520-280 Series
MCN: 6910-01-T00-2095

Training Requirements Supported:

MOSC 153M; 15F; 15N

AVIATION GROUND POWER UNIT (AGPU) REMOVE & INSTALL (R&I) TRAINER



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:
MEP360E Aviation Ground Power Unit (AGPU) device supports AGPU Operator and Maintenance training for the Aircraft Pnuedraulics Repairer's course.

Functional Description:
The AGPU is a non-powered, wheel-mounted, dry sump trainer. The device supports operator user level component removal, inspection, replacement, and installation tasks.

Physical Information:
90"X58"X60", 3800lbs

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
None

Applicable Publications:
TM 55-1730-229-12
TM-1-1730-229-13
TM 55-1730-229-34
TM-1-1730-229-40
TM-1-1730-229-24P

Reference Publications:
IRTC00169
IRTC00170
IRTC00171

Training Requirements Supported:
MOSC 15H

AN/PSQ-T-RQT UNIVERSAL MISSION SIMULATOR (UMS), 2 SEAT SHADOW

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

System TADSS fielded by PM UAS to authorized Shadow (RQ-7) equipped installations.

Purpose of Trainer:

Flight simulator capable of replicating normal flight mission profiles, and emergency procedures associated with RQ-7 Shadow UAS operational missions.

Functional Description:

The UMS contains the RQ-7 Shadow simulation software associated with the system embedded trainer, coupled with a stimulation server which drives the simulation. Two (2) training stations replicate tasks for the air vehicle operator and payload operator. System software is common to the UGCS and the MQ-1 Gray Eagle, but the hardware replicates the RQ-7 Shadow.

Physical Information:

Simulator - Length: 4' 7", Width: 7' 6", Height: 6' 1/2" (6' 6" w/top section), Weight: 1346 lbs.

Instructor Operator Station - Length: 4' 11", Width: 2'
Server Racks (2) - Length: 2' 8", Height: 3' 5", Width: 2' 1", Weight: 441 lbs.

Equipment Required, Not Supplied:

Climate controlled environment between 10-35°C (50-95°F) at 10-80% relative humidity.

Special Installation Requirements:

None

Power Requirements:

The device requires a minimum of two (2) – 20 Amp, 110-240 Volt 50/60Hz electrical circuits.

Applicable Publications:

TM DTM 1-1550-697-10-1

Reference Publications:

TC 3-04.63
TC 3-04.61 (RQ-7 Shadow Aircrew Training Manual)

Training Requirements Supported:

MOSC 15W task training.

AN/PSQ-T-MQ1A UNIVERSAL MISSION SIMULATOR (UMS), 2 SEAT GRAY EAGLE



AN/PSQ-T-MQ1A (UMS) Instructor Station

Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

System TADSS fielded by PM UAS to authorized Gray Eagle (MQ-1) equipped installations.

Purpose of Trainer:

Flight simulator capable of replicating normal flight mission profiles, weapons engagement, and emergency procedures associated with MQ-1 Gray Eagle UAS operational missions.

Functional Description:

The UMS contains the MQ-1 Gray Eagle simulation software associated with the system embedded trainer, coupled with a stimulation server which drives the simulation. Two (2) training stations replicate tasks for the

air vehicle operator and payload operator. System software is common to the UGCS and the RQ-7 Shadow, but the hardware replicates the MQ-1 Gray Eagle.

Physical Information:

Simulator - Length: 4' 7", Width: 7' 6", Height: 6' 1/2" (6' 6" w/top section), Weight: 1346 lbs.

Instructor Operator Station - Length: 4' 11", Width: 2'

Server Racks (2) - Length: 2' 8", Height: 3' 5", Width: 2' 1", Weight: 495 lbs.

Equipment Required, Not Supplied:

Climate controlled environment between 10-35°C (50-95°F) at 10-80% relative humidity.

Special Installation Requirements:

None

Power Requirements:

The device requires a minimum of two (2) – 20 Amp, 110-240 Volt 50/60Hz electrical circuits.



AN/PSQ-T-MQ1A (UMS) Operator and Payload Operator

Applicable Publications:

TM DTM 1-1550-697-10-1

Reference Publications:

TC 3-04.11

TC 3-04.11 (RQ-7 Shadow Aircrew Training Manual)

Training Requirements Supported:

MOSC 15W task training.

AN/PSQ-T-MQ1B UNIVERSAL MISSION SIMULATOR (UMS), 3 SEAT GRAY EAGLE

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

System TADSS fielded by PM UAS to authorized Gray Eagle (MQ-1) equipped installations.

Purpose of Trainer:

Flight simulator capable of replicating normal flight mission profiles, weapons engagement, and emergency procedures associated with MQ-1 Gray Eagle UAS operational missions.

Functional Description:

The UMS contains the MQ-1 Gray Eagle simulation software associated with the system embedded trainer, coupled with a stimulation server which drives the simulation. Three (3) training stations replicate tasks for the air vehicle operator, payload operator, and an imagery analyst for synthetic aperture radar operations. System software is common to the UGCS and the RQ-7 Shadow, but the hardware replicates the MQ-1 Gray Eagle.

Physical Information:

Simulator - Length: 10', Width: 7' 6", Height: 6' 1/2" (6' 6" w/top section), Weight: 2245 lbs.

Instructor Operator Station - Length: 4' 11", Width: 2'

Server Racks (2) - Length: 2' 8", Height: 3' 5", Width: 2' 1", Weight: 495 lbs.

Equipment Required, Not Supplied:

Climate controlled environment between 10-35°C (50-95°F) at 10-80% relative humidity.

Special Installation Requirements:

None

Power Requirements:

The device requires a minimum of two (2) – 20 Amp, 110-240 Volt 50/60Hz electrical circuits.

Applicable Publications:

TM DTM 1-1550-697-10-1

Reference Publications:

TC 3-04.11

TC 3-04.11 (RQ-7 Shadow Aircrew Training Manual)

TM UASMST-V102-C1

Training Requirements Supported:

MOSC 15W task training.

MODELED AH-64E AN/ALQ 136 FLIGHT LINE TEST SET

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available (limited production)

Purpose of Trainer:

The Modeled AH-64E AN/ALQ 136 Flight Line Test Set is utilized for 15Y Aircraft Survivability Equipment confidence testing and troubleshooting on the AH-64E L7AY Maintenance Training Device.

Functional Description:

The Modeled AN/ALQ 136 FLTS is a high physical and functional fidelity device that is used to train the AH-64E 15Y Soldier on 10 level Maintenance Operational Checks (MOCs) and Fault Isolation Procedures (FIPs)/tasks.

Physical Information:

1' 6" H x 1' 6" W x 1' 0" L

Equipment Required, Not Supplied:

This device is designed to be used solely on the AH-64E L7AY Maintenance Training Device.

Special Installation Requirements:

N/A

Power Requirements:

N/A

Applicable Publications:

Longbow IETM
(COTS) Manuals

Reference Publications:

N/A

Training Requirements Supported:MOSC 15Y

MODELED AH-64E RADAR SIMULATOR TEST SET (RSTS)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STR1, Orlando FL

Source and Method of Obtaining:

Not generally available (limited production)

Purpose of Trainer:

The AH-64E modeled Radar Simulator Test Set is a high physical and functional fidelity piece of test equipment designed to be utilized by MOS 15Y10 training on the AH-64E L7AY Maintenance Training Device. Test Set is used for Maintenance Operational Checks (MOCs) and Fault Isolation Procedures (FIPs) training.

Functional Description:

The modeled Radar Simulator Test Set simulated threat radar signatures in a test environment for training and troubleshooting tasks associated with the AH-64E aircraft.

Physical Information:

1' 0" H x 2' 0" W x 1' 6" L

Equipment Required, Not Supplied:

AH-64E L7AY Maintenance Training Device

Special Installation Requirements:

N/A

Power Requirements:

N/A

Applicable Publications:

Longbow IETM
(COTS) Manuals

Reference Publications:

N/A

Training Requirements Supported:

MOSC 15Y

MODELED AH-64E COUNTERMEASURE DISPENSER TEST SET (CDTS)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available (limited production)

Purpose of Trainer:

The AH-64E Countermeasures Dispensers Test Set (CDTS) is utilized for 15Y Aircraft Survivability systems testing and repair. It is designed to be solely utilized on the AH-64E L7AY Maintenance Training Device for 15Y Maintenance Operational Check (MOC)/Fault Isolation Procedure (FIP) training.

Functional Description:

The Modeled CDTS is a high physical and functional fidelity device that is used to train the AH-64E 15Y Soldier on 10 level tasks associated with the Common Missile Warning System Smart Dispensers.

Physical Information:

2' 0" H x 2' 0" W x 2' 0" L

Equipment Required, Not Supplied:

AH-64E L7AY Maintenance Training Device supports utilization of the CDTS and the 15Y common tool set.

Special Installation Requirements:

N/A

Power Requirements:

N/A

Applicable Publications:

Longbow IETM
(COTS) Manuals

Reference Publications:

N/A

Training Requirements Supported:MOSC 15Y

**MODELED AH-64E TEST SET GUIDED MISSILE SYSTEM –
ARMY/NAVY-AVIATION WORLD MAINTENANCE (TSGMS-AN/AWM) –
101A HELLFIRE TEST SET (101A-HTS)**

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available (limited production)

Purpose of Trainer:

The AH-64E Test Set Guided Missile System is utilized for 15Y10 Hellfire Missile System testing, Maintenance Operational Check (MOC) and Fault Isolation Procedures (FIP) training

Functional Description:

The Modeled test set system is a high physical and functional fidelity piece of test equipment that is used to train the AH-64E 15Y Soldier on 10 level troubleshooting and testing tasks. This test set is designed to work solely with the AH-64E L7AY Maintenance Training Device.

Physical Information:

2' 0" H x 2' 0" W x 2' 0" L

Equipment Required, Not Supplied:

AH-64E L7AY Maintenance Training Device.

Special Installation Requirements:

N/A

Power Requirements:

N/A

Applicable Publications:

Longbow IETM
(COTS) Manuals

Reference Publications:

N/A

Training Requirements Supported:

MOSC 15Y

AH-64E TRANSPONDER TEST SET (TTS)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available (limited production)

Purpose of Trainer:

The modeled AH-64E Transponder Test Set is designed to assist the MOS 15Y10 level Soldier in the testing and repair of the onboard systems of the AH-64E L7AY Maintenance Training Device.

Functional Description:

The Modeled AH-64E Transponder Test Set is a high physical and functional fidelity piece of test equipment. It replicates all test functions required for the selected task training when used with the AH-64E L7AY Maintenance Training Device.

Physical Information:

1' 6" H x 1' 6" W x 1' 6" L

Equipment Required, Not Supplied:

AH-64E L7AY Maintenance Training Device

Special Installation Requirements:

N/A

Power Requirements:

N/A

Applicable Publications:Longbow IETM
(COTS) Manuals**Reference Publications:**

N/A

Training Requirements Supported:MOSC 15Y

AH-64E LASER POINTER EMULATOR TEST SET (LPETS)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available (limited production)

Purpose of Trainer:

The AH-64E Laser Pointer Emulator is a high physical and functional fidelity modeled test set designed to be utilized by the MOS 15Y while training on the AH-64E L7AY Maintenance Training Device.

Functional Description:

The modeled Laser Pointer Emulator is used for maintenance Operational Checks (MOCs) and during Fault Isolation Procedures (FIPs) during the conduct of 15Y10 level training.

Physical Information:

0' 2.5" H x 0' 3" W x 0' 6" L

Equipment Required, Not Supplied:

AH-64E L7AY Maintenance Training Device

Special Installation Requirements:

N/A

Power Requirements:

N/A

Applicable Publications:

Longbow IETM
(COTS) Manuals

Reference Publications:

N/A

Training Requirements Supported:MOSC 15Y

AH-64E AVIONICS VISIONICS SURVIVABILITY WEAPONS (AVSW) ELECTRICAL MECHANICAL SYSTEMS TRAINER (EMST) L7AY

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The L7AY consists of a full-size replication of the AH64E aircraft with functional subsystems and a separate Instructor/Operator Station (I/OS). The purpose of the L7AY is to support the initial skills qualification training of the Apache Armament/ Electrical/ Avionics repairers (MOS15Y10). Its functional subsystems include the Fire Control Radar (FCR), Tactical mast Mounted Assembly (TMMA), Modernized Targeting acquisition and Designation Sight (M-TADS), Modernized Pilot Night Vision Sensor (M-PNVS), IHADSS, Area Weapon System (AWS), Point Target Weapons System (PTWS), and 2.75"

Folding Fin Aerial Rocket (FFAR) delivery system. Using the "fault-insertion" capability of the I/OS, the L7AY enables the instructor to further develop students' skills and knowledge in weapons and electrical systems troubleshooting as well as fault isolation techniques. The L7AY consists of:

- a. Hardware Training Device (HTD)
- b. Instructor/Operator Station (IOS)
- c. Trainer System Software (TSS)
- d. IOS Software (IOSS)
- e. Mobile Power Supply Unit (MPSU)

Functional Description:

The L7AY replicates AH-64E production aircraft operational systems/subsystems. These systems/subsystems will provide realistic training for ground maintenance operations and procedures. The L7AY will serve as the selected training media used by instructors to strengthen maintenance personnel repair and servicing techniques.

Physical Information:

Instructor/Operator Station: 8' L x 3' W x 5' H
Hardware Training Device: 44' L x 15' W x 15' H
Mobile Power Supply Unit: 35" L x 16" W x 36" H

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

Instructor/Operator Station: two 208vac, 3-phase, 60 Hz,
60 Amps services.
Device: 480vac, 3-phase, 60 Hz, 40 Amps.
Mobile Power Supply Unit: 480vac, 3-phase, 60 Hz,
40 Amps.

Applicable Publications:

APTK 2002
(COTS) Manuals

Reference Publications:

Apache IETM
TM 1-1270-476 Series TM 9-1425-475 Series
TM 1-1520-238 Series TM 9-1427-475 Series
TM 1-5855-265 Series TM 9-4925-233 Series
TM 9-1090-208 Series TM 9-4935-476 Series
TM 9-1230-221 Series TM 11-1520-238 Series
TM 9-1230-476 Series TM 55-2480-248 Series

Training Requirements Supported:

MOSC 15R; 15Y

AH-64E L7 MOBILE POWER SUPPLY UNIT (L7-MPSU)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available (limited production)

Purpose of Trainer:

The AH-64E L7AY Ground Maintenance Training Mobile Power Supply Unit (MPSU) supplies electrical and hydraulic power to the AH-64E L7AY device for the running of associated aircraft electrical and hydraulic sub systems. Supports training of 15R and 15Y initial skill qualification training tasks.

Functional Description:

The Mobile Power Supply Unit replicates the MEP 360E Air Ground Power Unit (AGPU) used in the field to supply electrical and hydraulic power to the AH-64E L7AY training device for troubleshooting and repair of the L7AY maintenance training device associated subsystems.

Physical Information:

7' 10" H x 4' 11" W x 5' 9" L

Equipment Required, Not Supplied:

N/A

Special Installation Requirements:

N/A

Power Requirements:

480 VAC, 3 phase, 160 Amp, 60 Hz

Applicable Publications:

(COTS) Manuals

Reference Publications:

Apache IETM
TM 1730-229-13
TM 1730-229-24
TM 1730-229-40

Training Requirements Supported:

MOSC 15R; 15Y

SMALL UNMANNED AVIATION SYSTEM INSTITUTIONAL TRAINING SYSTEM (SUAS-ITS), RQ-11B RAVEN AND RQ-20A PUMA SUAS

**Training Category/Level Utilized:**

Aviation/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

System TADSS fielded by PM UAS to authorized Raven (RQ-11) and Puma (RQ-20) equipped installations.

Purpose of Trainer:

Small Unmanned Aviation System (SUAS) mission trainer capable of replicating normal flight mission profiles, and emergency procedures associated with the RQ-11 and RQ-20 small unmanned aircraft for up to 10, 2-soldier teams.

Functional Description:

V-ITS utilizes the small UAS system software and 10 hand controllers, with 10 laptop computers, networked into a central processor for operation by a Master Trainer (MT). This system allows the MT to design, deploy, track and score mission training scenarios and goals in a controlled and reproducible environment to better support the unit's SUAS Air Crew Training Program.

Physical Information:

Equipment packed for transport is on two pallets: one 48" X 40" X 54", and the second 78" X 20" X 63", total weight 1131 lbs.

Equipment Required, Not Supplied:

The system is designed to be operated in a climate controlled classroom setting with sufficient space for 10 air vehicle operators, 10 payload operators, and a master trainer.

Special Installation Requirements:

Hand controllers and laptop computers are connected to the central processor via data cables. Classroom configuration must be close enough to permit controllers to be hard wired into the processor.

Power Requirements:

The system is powered by a central, mini-tower computer processor and 10 "Toughbook" laptops, which require 31 Amps, 100-220 VAC, 50/60 Hz power.

Applicable Publications:

TC 3-04.62, Small UAS Aircrew Training Manual

Reference Publications:

TM 1-1550-1695-13&P, RQ-11B Operator and Field (SMM) under Development

Training Requirements Supported:

MOSC non-specific SUAS operator training, primarily in support of the 11B and 19D career fields.

AH-64E TACTICAL MAST MOUNTED ASSEMBLY PART TASK TRAINER (TMMAPTT)



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Not generally available for issue (limited production)

Purpose of Trainer:

The Tactical Mast Mounted Assembly Part Task Trainer (TMMA PTT) will be a limited-operational device, which provides a training platform for development of 15R/15Y maintenance skills for Apache maintainers. The TMMA PTT will be a simulated full mock-up TMMA that will be used to train removal and installation tasks.

Functional Description:

The TMMA PTT replicates Apache production aircraft operational systems/subsystems. These systems/subsystems will provide realistic training for ground maintenance operations and procedures. The TMMA PTT will serve as the selected training media used by instructors to strengthen maintenance personnel repair and servicing techniques.

Physical Information:

Instructor/Operator Station: N/A
Hardware Training Device: 5' L x 5' W x 5' H

Mobile Power Supply Unit: N/A

Equipment Required, Not Supplied:
(Information not available)

Special Installation Requirements:
(Information not available)

Power Requirements:

Instructor/Operator Station: N/A
Device: N/A
Mobile Power Supply Unit: N/A

Applicable Publications:

APTK 2002
(COTS) Manuals

Reference Publications:

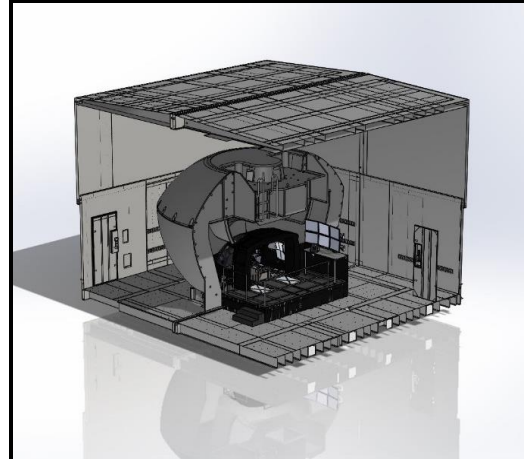
Apache IETM	
TM 1-1520-238 Series	TM 9-1425-475 Series
TM 1-1270-476 Series	TM 9-1427-475 Series
TM 1-5855-265 Series	TM 9-4925-233 Series
TM 9-1090-208 Series	TM 9-4935-476 Series
TM 9-1230-221 Series	TM 11-1520-238 Series
TM 9-1230-476 Series	TM 55-2480-248 Series

Training Requirements Supported:
MOSC 15R; 15Y

UH-60M BLACK HAWK AIRCREW TRAINER (BAT)



UH-60M (BAT)



UH-60M (FTD)

Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

BAT is a highly immersive home-station UH-60M flight training device (FTD), comprised of a state-of-the-art collimated visual system (main display: 200 degree horizontal x 45 degree vertical, with seven 2MP projectors), a complete UH-60M cockpit, an Instructor Operator Station (IOS) & a vertically expandable container.

Functional Description:

The BAT replicates the primary subsystems on the pilot and copilot of a UH-60M Cockpit.

Physical Information:

Shipping Dimensions: 336 inches (28 feet) L by 168 inches (14 feet) W by 147 inches (12 feet, 4 inches) H
Deployed Dimensions: 336 inches (28 feet) L by 336 inches (28 feet) W by 222 inches (18 feet, 6 inches) H
Weight: 64,000 pounds

Equipment Required, Not Supplied:

Emplacement requires a concrete surface with a grade of between 0.5% and 1%. The recommended site (pad) dimensions are 50'x50'. Tie downs points are required.

Special Installation Requirements:

Tie downs required to withstand the 164 MPH wind rating. Pad thickness is local soil condition dependent. Utilize shim PSI rating and location as data for concrete pads design.

Power Requirements:

The shelter requires two electrical services, each 120/208Y three-phase, 4-wire plus ground, rated at 200 Amps.

Applicable Publications:

None

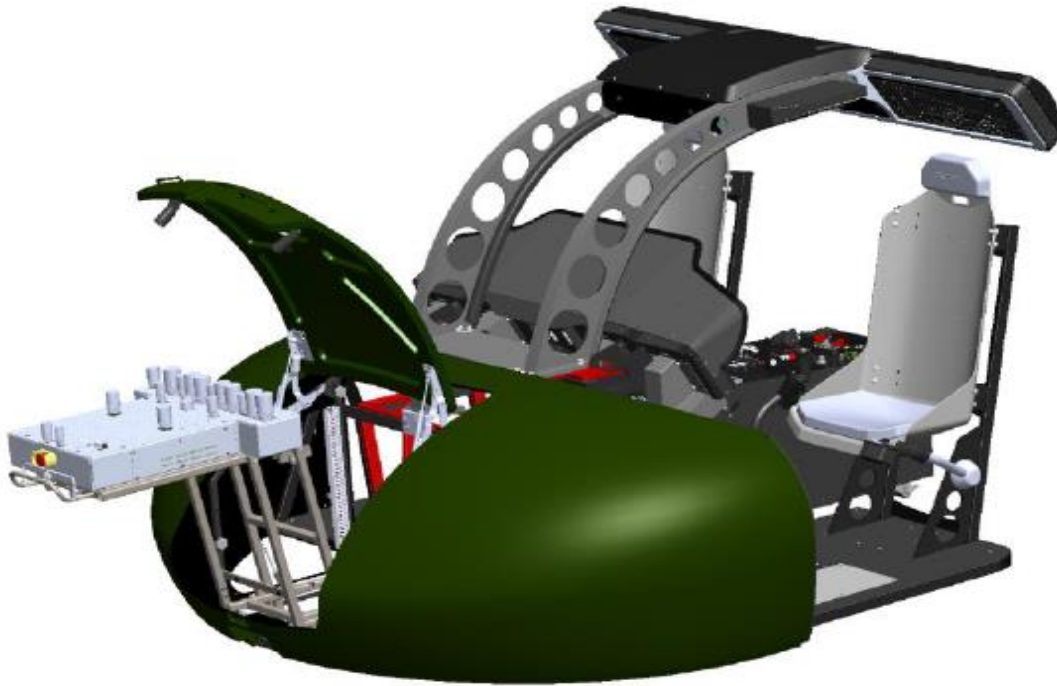
Reference Publications:

TM 1-1520-280 Series

Training Requirements Supported:

MOSC 153M; 15F; 15N

RECONFIGURABLE UH-60 COMMUNICATIONS AND NAVIGATIONS TRAINER (RCNT)



Training Category/Level Utilized:
Aviation/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The CAPT-T devices will train the students on operational checks and limited fault isolation for navigation and communications procedures through the required control heads, cannon plug panel and/or paging of the UH-60M Multi-Function Displays and Flight Management System. The students will learn about the different systems' proper operations and limited malfunctions that are associated with the communications and navigation equipment of the UH-60L or M aircraft.

Functional Description:

The CAPT-T devices feature a partially-functional UH-60L and M model-transformable cockpit, and a retractable cannon plug connector test panel that resides within the nose structure. On the plug test panel, students will test certain connectors for required voltage and continuity with the AN/PSM-45 multimeter. Transformation between the

L and M model will be accomplished through swapping out the plug test panel, grips, main instrument panel (MIP), auxiliary circuit breaker panel and lower console, and rotating the dual-sided (L/M transformable versions) overhead panel and wing circuit breaker panels to select the desired variant. Wired headsets are provided for each seat within the trainer. Classroom setup will consist of four (4) trainers connected to one (1) instructor operator station (IOS), which includes computer/monitors and the audio system. The IOS will allow for the insertion of simulated faults, audio connection, system emergency stop (e-stop), as well as the ability to control and update the computers onboard each device. The IOS features both a wireless and wired instructor headset for communications with the students at the trainers.

Physical Information:

Trainer:

Length: With/Without Plug Test Panel Extended:
121.5" (Plug test panel extended) / 98.5" (plug test panel retracted with nose closed)

Width: 94"

Height: 61.5"

IOS:

Depth: 36"

Width: 38"

Height: 37.25' (tabletop) / 57" (top of monitors)

Equipment Required, Not Supplied:

Test set: AN/PSM-45 Multimeter
IETM Laptop Computers

Special Installation Requirements:

Any special instructions other than those already explained? The CAPT-T system was designed to be initially installed by the manufacturer. Its modular construction allows for components to fit through a 32 inch doorway. Once installed, transformation of the system between variants will be easily accomplished without the use of tools and requiring no specialized training. Storage cases will be provided for safely storing the extra MIPs,

lower consoles, cannon plug test panels and other assorted grips/panels.

Power Requirements:

120V AC (15 Amp)

Applicable Publications:

The device Instructor/OUM, Device (SMM), and schoolhouse training curriculum.

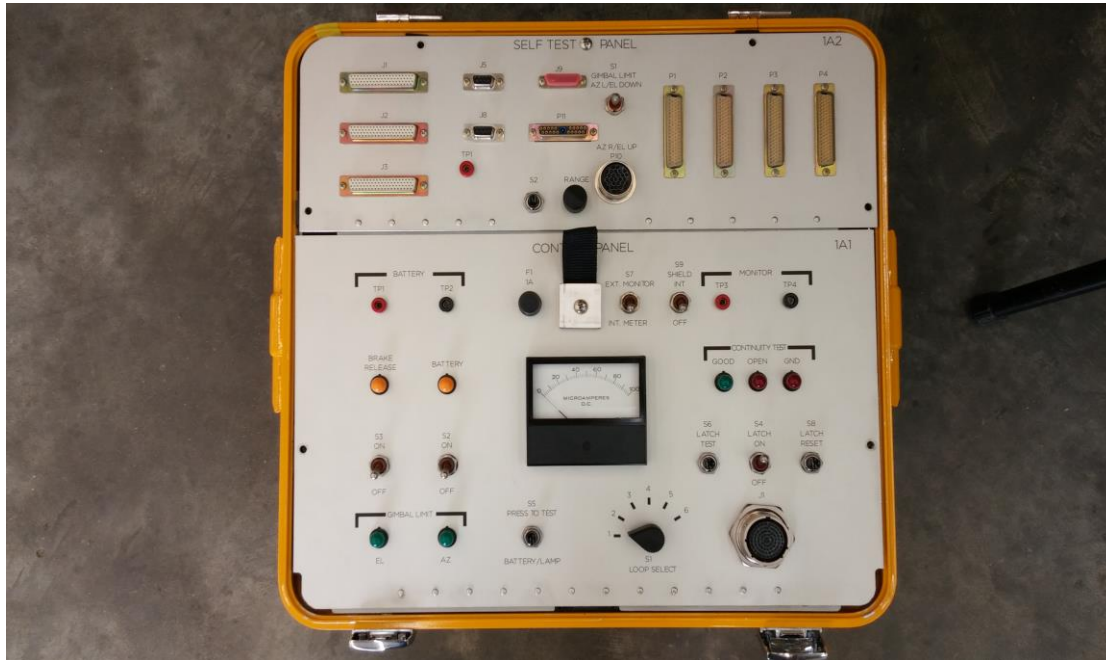
Reference Publications:

N/A

Training Requirements Supported:

MOSC 15N

MODELED AH-64E TARGET ACQUISITION AND DESIGNATION SIGHTING SYSTEM (TADSS) CONTINUITY TEST SET

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available (limited production)

Purpose of Trainer:

The AH-64E Modeled Modernized Target Acquisition and Designation Sighting System (M-TADS) test set is utilized for 15Y10 sights and sensors Maintenance Operational Checks (MOCs) and Fault Isolation Procedures (FIPs) and repair supporting initial skills qualification training. It can be utilized on a standalone modeled M-TADS assembly device or installed on AH-64E L7AY Maintenance Training Device with M-TADS installed.

Functional Description:

The Modeled M-TADS Continuity Test Set system is a high physical and functional fidelity test set that is used to train the AH-64D/E 15Y Soldier on 10 level tasks associated with the M-TADS system.

Physical Information:

1' 6" H x 2' 0" W x 2' 0" L

Equipment Required, Not Supplied:

AH-64E L7AY Maintenance Training Device

Special Installation Requirements:

Device is designed to be utilized for training on an M-TADS assembly installed in the shipping fixture or can be installed on designated AH-64E L7AY Maintenance Training Devices equipped with the modeled M-TADS Assv.

Power Requirements:

N/A

Applicable Publications:

Longbow IETM
(COTS) Manuals

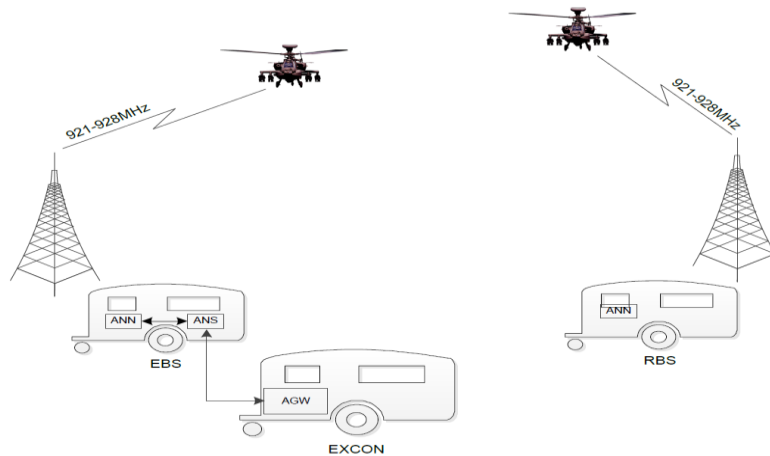
Reference Publications:

N/A

Training Requirements Supported:

MOSC 15Y

HOMESTATION INSTRUMENTATION TRAINING SYSTEM (HITS) AVIATION INTEGRATION SUBSYSTEM (AIS)



Training Category/Level Utilized:
Aviation/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:
The HITS AIS integrates the Tactical Engagement Simulation System (TESS) data from aviation players into the HITS.



Aviation Network Node (ANN)



Aviation Network Switch (ANS)



HITS RBS Trailer with RTKI Antenna Kit:
GPS/Telemetry Antenna Installed

**EBS System with (ANS) Installed****HITS EBS and EXCON Trailers****HITS RTKI System Inside RBS Trailers****Functional Description:**

The HITS AIS installs the remote tower kit installation (RTKI) at the Remote Base Station (RBS) and Exercise Control (EXCON) Base Station (EBS) to add TESS Telemetry (TM) Radio Frequency (RF) coverage to the HITS. An Aviation Network Switch (ANS) is installed in the EBS only to supply additional Ethernet connections to the HITS. The AIS also adds an Aviation Gateway (AGW) software application that is installed on a HITS network connected computer in the EXCON trailer for the processing of the TESS Telemetry data.

Physical Information:

I. The RTKI installed at the RBS/EBS includes an:

- Aviation Antenna Kit – supplied in a storage bag, the kit weighs 50 lbs.
- Aviation Network Node (ANN) – contains the 900 MHz NCU, diplexer, Ethernet serial server, two AC/DC converters, two fuses, bus bar, and two terminal blocks installed inside a ruggedized transit case and weighs 23 lbs.

II. The ANS assembly contains an eight port Ethernet switch and a 120 VAC to 24 VDC AC/DC power supply installed inside a ruggedized transit case and weighs 13.5 lbs.

Equipment Required, Not Supplied:

AH64D Longbow Apache aircraft

Special Installation Requirements:

(Information not available)

Power Requirements:

120 VAC Electrical power outlet

Applicable Publications:

SMM 01-6920-726-24&P
SUM 01-6920-726-20
OUM 23-6920-711-10

Reference Publications:

(Information not available)

Training Requirements Supported:

MOSCs in Aviation Branch

MODELED ROVER 5 TEST SET

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available (limited production)

Purpose of Trainer:

The Modeled AH-64E ROVER 5 test set is utilized for 15Y task training associated with the Tactical Mast Mounted Assembly (TMMA) on the AH-64E L7AY Maintenance Training Device.

Functional Description:

The Modeled ROVER 5 Test Set is a high physical and limited functional fidelity device that is used to train the AH-64E 15Y Soldier on 10 level Maintenance Tasks associated with the TMMA on an AH-64E aircraft.

Physical Information:

2 IN H; 5 IN W; 9 IN L

Equipment Required, Not Supplied:

AH-64E L7 device

Special Installation Requirements:

N/A

Power Requirements:

N/A

Applicable Publications:

Longbow IETM
Commercial Off-the-Shelf (COTS) manuals

Reference Publications:

Ref: L7 device supporting documents

Training Requirements Supported:MOSC 15Y

MODELED SIMPLE KEY LOADER

**Training Category/Level Utilized:**

Aviation/Level 1

Physical Information:

2 IN H; 4 IN W; 6 IN L

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Equipment Required, Not Supplied:

AH-64E L7 Maintenance Training Device

Source and Method of Obtaining:

Not generally available (limited production)

Special Installation Requirements:N/A**Purpose of Trainer:**

The Modeled AH-64E Simple Key Loader is utilized for 15R/15Y task training on the AH-64E L7AY Maintenance Training Device.

Power Requirements:

N/A

Applicable Publications:

Longbow IETM
Commercial Off-the-Shelf (COTS) manuals

Functional Description:

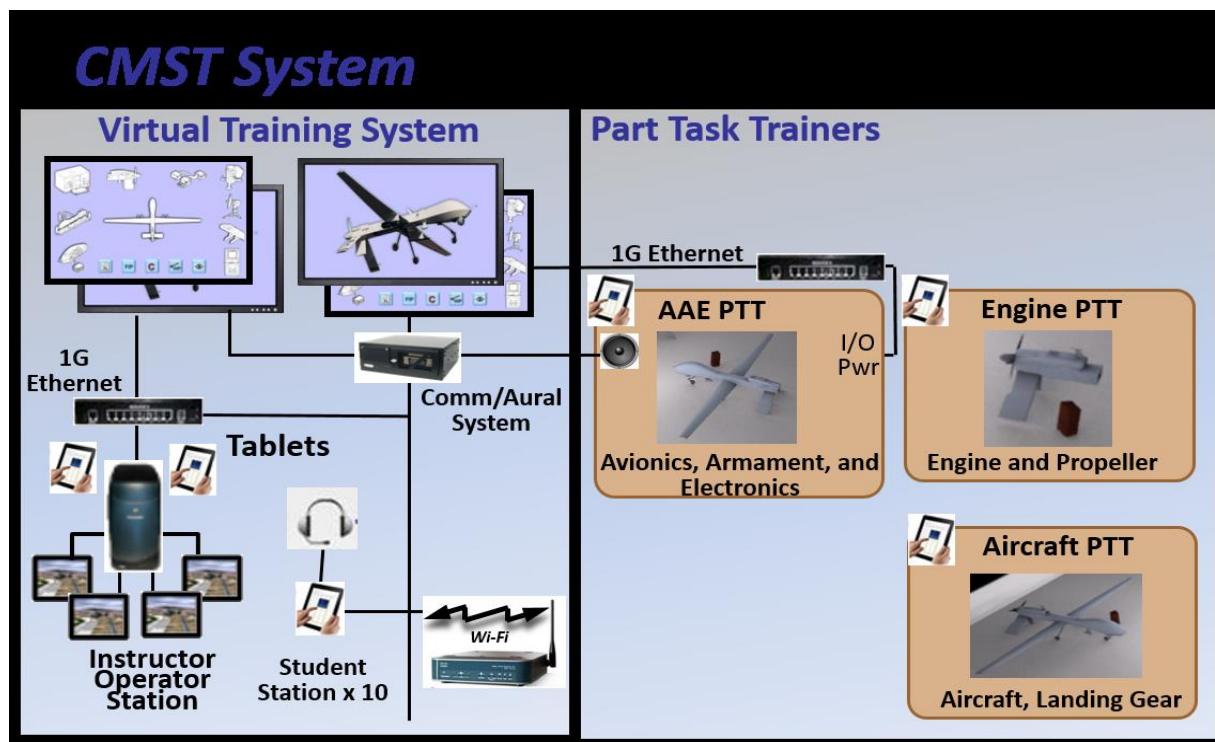
The Modeled SKL is a high physical and limited functional fidelity device that is used to train the AH-64E 15R/15Y Soldier on 10 level Maintenance Tasks associated with loading of crypto keys on the AH-64E aircraft.

Reference Publications:

Ref: L7 device supporting documents

Training Requirements Supported:MOSC 15R/15Y

COMPOSITE MAINTENANCE SYSTEM TRAINER (CMST)



Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PM UAS, Redstone Arsenal, AL

Source and Method of Obtaining:

System TADSS fielded by PM UAS to the 15E maintenance training program

Purpose of Trainer:

The Gray Eagle CMST is used to train U.S. Army MOS 15E maintenance students in maintenance procedures, checks and services to develop skills required to maintain the MQ-1C Gray Eagle UAS.

Functional Description:

The CMST provides students with a fully immersive training environment that precisely emulates the appearance, location, and functional operations of the aircraft and its ground-based systems, its subassemblies and Line Replaceable Units (LRUs) in both a virtual and real physical environment. Sub components of the CMST include the Aircraft, Engine, and Avionics, Armament, and Electronic Part Task Trainers, and the Virtual Training System.

Physical Information:

Simulator - Length: 12', Width: 12', Height: 10', Weight: 2000 lbs.

Equipment Required, Not Supplied:

Climate controlled environment between 40-110°F at 20-90% relative humidity (non-condensing).

Special Installation Requirements:

None

Power Requirements:

Each of the four system PDUs and the UPS will operate on 120 Volts (V), 60 Hertz (Hz), single phase, three-wire, grounded-neutral power. Power required totals 750 Watts with a dedicated 30 amp circuit.

Applicable Publications:

General Atomics (SMM)
GECMST-PROG-MAN-001, and (OUM)
GECMST-PROG-MAN-002

Reference Publications:

TC 3-04.63, 1-1550-696-23&P

Training Requirements Supported:

Supports MOSC 15E task training

MQ-1C GRAY EAGLE UNMANNED AIRCRAFT SYSTEMS (UAS) AIRFRAME, ARMAMENT, AND ELECTRICAL (AAE) PART TASK TRAINER

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PM UAS, Redstone Arsenal, AL

Source and Method of Obtaining:

System TADSS fielded by PM UAS to the 15E maintenance training program.

Purpose of Trainer:

A full-scale, ruggedized replica of the aircraft and supports aircraft flight and weapon systems maintenance.

Functional Description:

A full size, ruggedized replica of the aircraft that supports aircraft flight, avionics, electronics, and weapon systems maintenance tasks. The AAE PTT contains embedded processors and software controlled switches that replicate system faults in response to instructor inputs.

Physical Information:

Simulator - Length: 28', Width: 56', Height: 10', Weight: 3600 lbs.

Equipment Required, Not Supplied:

Climate controlled environment between 40-110° F at 20-90% relative humidity (non-condensing) for powered on operations, and 0-140° F for storage.

Special Installation Requirements:

None

Power Requirements:

The pedestal requires input power of 120 Volts (V), 60 Hertz (Hz), single phase, three-wire, grounded-neutral power. Power supplied to the aircraft components is 28 VDC. Total power required is 750 Watts.

Applicable Publications:

General Atomics (SMM)
GECMST-PROG-MAN-001, and (OUM)
GECMST-PROG-MAN-002

Reference Publications:

TC 3-04.63, 1-1550-696-23&P

Training Requirements Supported:

Supports MOSC 15E task training

MQ-1C GRAY EAGLE VIRTUAL TRAINING SYSTEM (VTS)



Students Work Stations

Training Category/Level Utilized:

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PM UAS, Redstone Arsenal, AL

Source and Method of Obtaining:

System TADSS fielded by PM UAS to the 15E maintenance training program.

Purpose of Trainer:

A virtual maintenance training device designed to train 10 students, simultaneously, under the control of 2 instructors.

Functional Description:

The VTS is an interactive training media which simulates aircraft maintenance activities for 10 students under the control of 2 instructors. In the classroom, instructors and students conduct maintenance training entirely on simulation shown on computer displays. In the hanger, the VTS provides interface with the AAE PTT to assist with maintenance procedures and troubleshooting tasks. The VTS is designed to be operated in a network configuration with the AAE PTT, and IOS, supported by the CMST infrastructure.



Instructor Work Station

Physical Information:

Simulator - Length: 28', Width: 56', Height: 10',
Weight: 3600 lbs.

Equipment Required, Not Supplied:

Climate controlled environment between 40-110°F at 20-90% relative humidity (non-condensing) for powered on operations, and 0-160°F at 20-90% relative humidity when powered off.

Special Installation Requirements:

None

Power Requirements:

All of the PDUs and the UPS will operate on 120 Volts (V), 60 Hertz (Hz), single phase, three-wire, grounded-neutral power. Power required totals 750 Watts.

Applicable Publications:

General Atomics (SMM)
GECMST-PROG-MAN-001, and (OUM)
GECMST-PROG-MAN-002

Reference Publications:

TC 3-04.63, 1-1550-696-23&P

Training Requirements Supported:

Supports MOSC 15E task training

MQ-1C GRAY EAGLE UNMANNED AIRCRAFT SYSTEMS (UAS) ENGINE MAINTENANCE TRAINER

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PM UAS, Redstone Arsenal, AL

Source and Method of Obtaining:

System TADSS fielded by PM UAS to the 15E maintenance training program.

Purpose of Trainer:

Engine component part training device providing Gray Eagle maintenance personnel hands on training with the system's engine and related component parts associated with MQ-1 Gray Eagle UAS.

Functional Description:

The MQ-1 Gray Eagle Engine Trainer contains a non-flightworthy engine housed in a representation of the aft portion of the aircraft fuselage. This purpose built training device authentically replicates all of the hardware and electronic components maintenance personnel will encounter while performing maintenance on the actual system.

Physical Information:

Simulator - Length: 12', Width: 12', Height: 10',
Weight: 2000 lbs.

Equipment Required, Not Supplied:

Climate controlled environment between 40-110°F at 20-90% relative humidity (non-condensing).

Special Installation Requirements:

None

Power Requirements:

N/A

Applicable Publications:

General Atomics (SMM)
GECMST-PROG-MAN-001, and (OUM)
GECMST-PROG-MAN-002

Reference Publications:

TC 3-04.63, 1-1550-696-23&P

Training Requirements Supported:

Supports MOSC 15E task training

MQ-1C GRAY EAGLE UNMANNED AIRCRAFT SYSTEMS (UAS) AIRCRAFT PART TASK TRAINER (AIRCRAFT PTT)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PM UAS, Redstone Arsenal, AL

Source and Method of Obtaining:

System TADSS fielded by PM UAS to the 15E maintenance training program.

Purpose of Trainer:

A complete, non-operational MQ-1 Gray Eagle aircraft capable of supporting remove and replace tasks associated with soldier maintenance tasks.

Functional Description:

The Aircraft PTT is a full-scale, ruggedized aircraft replica that supports training of aircraft preparation and receipt for shipment and landing gear maintenance. Electrical interface is limited to raising and lowering the landing gear which is the only active subassembly.

Physical Information:

Simulator - Length: 28', Width: 56', Height: 10', Weight: 3600 lbs.

Equipment Required, Not Supplied:

Climate controlled environment between 40-110°F at 20-90% relative humidity (non-condensing) for powered on operations, and 0-160°F at 20-90% relative humidity when powered off.

Special Installation Requirements:

None

Power Requirements:

All of the PDUs and the UPS will operate on 120 Volts (V), 60 Hertz (Hz), single phase, three-wire, grounded-neutral power. Power required totals 750 Watts.

Applicable Publications:

General Atomics (SMM)
GECMST-PROG-MAN-001, and (OUM)
GECMST-PROG-MAN-002

Reference Publications:

TC 3-04.63, 1-1550-696-23&P

Training Requirements Supported:

Supports MOSC 15E task training

MOBILE POWER SUPPLY UNIT (MPSU) MODEL DEVICE

**Training Category/Level Utilized:**

Aviation/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The Mobile Power Supply Unit (MPSU) supports aviation maintenance training devices with electrical and hydraulic service.

Functional Description:

The MPSU is a high physical and functional fidelity training device which provides both electrical and hydraulic interfaces to operate aviation Maintenance Training Device's (MTD) and emulates the functionality of a Multi-Output Aviation Power Unit MEP-360E, referred to as an Aviation Ground Power Unit, or AGPU.

Physical Information:

106X58X67, Weight-4140lbs

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

480 VAC, 60 Hz, 3-Phase power source

Applicable Publications:

MPSU Instructor Utilization Handbook, PIFDOC02520
MPSU System Maintenance Manual (SMM),
PIFDOC02521
MPSU Parts Information Manual (PIM), PIFDOC02522

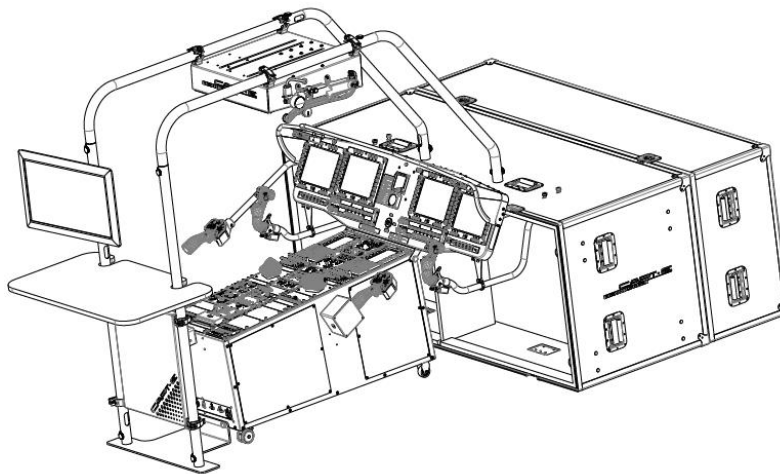
Reference Publications:

None

Training Requirements Supported:

MOSCs 15F, 15H, 15N, 15R, 15T, 15U, and 15Y

COCKPIT ACADEMICS PROCEDURAL TOOL – ENHANCED (CAPT-E)

**Training Category/Level Utilized:**

Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

PM Utility Helicopter

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The CAPT-E is a low cost/high fidelity tactical emulation of the UH-60M helicopter cockpit. It is used for startup, shutdown, as well as ground and flight emergency procedures, in support of initial qualification, refresher, and sustainment training.

Functional Description:

The CAPT-E features a partially functional UH-60M cockpit, with non-moving (fixed) cyclic and collective grips for both pilot and copilot crew positions. The majority of the Main Instrument Panel, Lower Console, and Upper Console components are fully functional, with non-functional components represented by 3D tactile panels. Behind the pilot stations is an Instructor Operator Station (IOS) with a touchscreen monitor for lesson parameter and emergency procedure insertion.

Physical Information:

Dimensions when assembled:

L: 122.40"; W: 75.15"; H: 63.18"

Equipment Required, Not Supplied:

Chairs.

Special Installation Requirements:

The CAPT-E system was designed to fit through a 32" doorway. Setup and breakdown was designed to be easily accomplished without the use of tools and requiring no special training. Transportation cases permit the system to be deployable.

Power Requirements:

120V AC (15 Amp)

Applicable Publications:

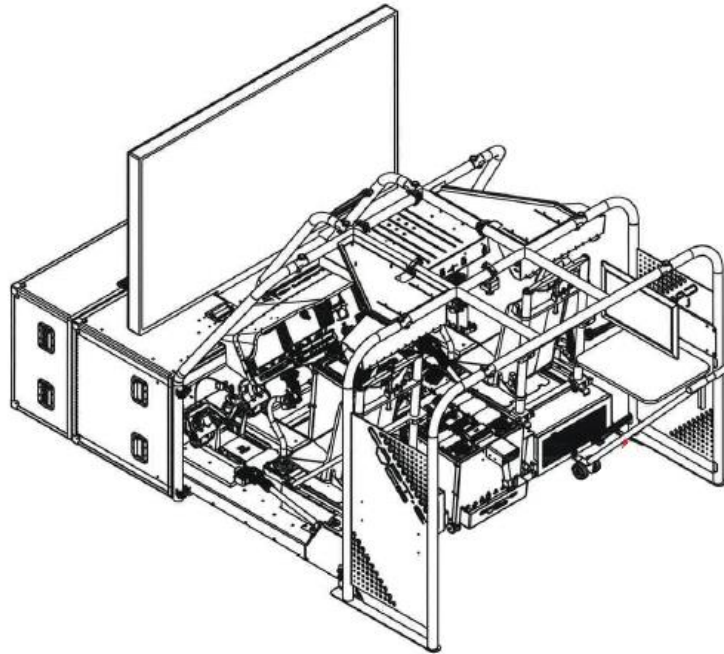
None

Reference Publications:

TM 1-1520-280 Series

Training Requirements Supported:MOSC 153M

COCKPIT ACADEMICS PROCEDURAL TOOL – ENHANCED – VISUAL & CONTROL SYSTEM (CAPT-E-VCS)



Training Category/Level Utilized:
Aviation/Level 1

Logistic Responsible Command, Service, or Agency:
PM Utility Helicopter

Source and Method of Obtaining:
Not generally available for issue (limited production)

Purpose of Trainer:
The CAPT-EVCS is a low cost/high fidelity tactical emulation of the UH-60M helicopter cockpit. It is used for startup, shutdown, as well as ground and flight emergency procedures, in support of initial qualification, refresher, and sustainment training.

Functional Description:
The CAPT-EVCS features a partially functional UH-60M cockpit that includes an out the window (OTW) system and fully functional flight control system for pilot and copilot stations. Each flight/control seat station is electronically linked and includes high force motors for active cyclic, collective, and foot pedal controls. The majority of the Main Instrument Panel, Lower Console, and Upper Console components are fully functional, with non-functional components represented by 3D tactile panels. Behind the pilot stations is an Instructor Operator Station

(IOS) with a touchscreen monitor for lesson parameter and emergency procedure insertion.

Physical Information:
Dimensions when assembled:
L: 120.65"; W: 83.49"; H: 61.73"

Equipment Required, Not Supplied:
IOS position chair.

Special Installation Requirements:
The CAPT-EVCS system was designed to fit through a 32" doorway. Setup and breakdown was designed to be easily accomplished without the use of tools and requiring no special training. Transportation cases permit the system to be deployable.

Power Requirements:
120V AC (20 Amp)

Applicable Publications:
N/A

Reference Publications:
TM 1-1520-280 Series

Training Requirements Supported:
MOSC 153M

BASIC SERIES 03
CHEMICAL



M93A1 NUCLEAR, BIOLOGICAL, CHEMICAL RECONNAISSANCE SYSTEM (NBCRS) FOX SIMULATOR

**Training Category/Level Utilized:**

Chemical/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

To provide classroom instruction to resident NBC Course students on NBC reconnaissance techniques and the operation of the M93A1 FOX Nuclear, Biological, and Chemical Reconnaissance System (NBCRS) during realistic NBC reconnaissance missions while avoiding wear and tear on actual vehicles and spreading chemical simulants on the ground.

Functional Description:

This device is a complete mock-up of the M93A1 FOX NBCRS. It consists of a driving simulator, a mechanical device (located in the classroom floor), an ASG1 for quantitative gamma radiation detection, and an instructor's

control center. The mechanical device supplies the chemically contaminated surfaces necessary for simulating air/surface monitoring (surface monitoring with the double wheel sampling unit and directly with the air/surface sampler), and a sample collection and retention system.

Device 03-12 is used with the Vehicle Navigation Training Simulator (DVC 03-13) and the MM1 Mobile Mass Spectrometer (DVC 03-14). Used together, these devices can be used to train students in all aspects of NBC reconnaissance including the determination of contamination boundaries on roads, determination of chemical agents in the air, mapping areas of contamination by unknown chemical agents, detection of nuclear explosions, sample collection via the work port, and vehicle navigation.

Physical Information:

Vehicle Hull Dimensions: 287" L x 94.8" H x 117.3" W

Equipment Required, Not Supplied:

Ventilated hood, sink, storage area, and heating oven (used to make simulants).

Special Installation Requirements:

The NBCRS FOX simulator system must be located in an area large enough to support the system. It requires a built-up area sufficient to support a viewing section where other personnel can watch, learn, and critique the training crews.

The room must have a ventilation system capable of exhausting the simulant vapors during the hot air blower decontamination of the steel roller. The room must also be capable of accommodating the installation of the steel roller in a well directly behind the vehicle hull.

Additionally, an area (not necessarily in the same room) is required to make the simulants. This area must be equipped with a ventilated hood, sink, storage area, and

heating oven. The heating oven is used to decontaminate the silicone wheels for re-use.

Power Requirements:

110/220vac

Applicable Publications:

(Information not available)

Reference Publications:

FM 3-101-2

Training Requirements Supported:

MOSC 54B L5

CHEMICAL AGENT MONITOR SIMULATOR (CAMSIM), XM32

**Training Category/Level Utilized:**

Chemical/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

Provides realistic training for the CAM. Replicates system employment as closely as technology will permit.

Functional Description:

The Chemical Agent Monitor Simulator (CAMSIM) is housed within a standard CAM case marked as a simulator. The CAMSIM provides for simulation of point source and area based contamination of both G and H. The device does not use any chemicals as a simulant. The simulator is powered with a standard CAM battery or battery pack. The CAMSIM is compatible with the CAM Buzzer and all CAM accessories. The simulator stores and provides operator error messages to the instructor showing such errors as bumping the nozzle against a contaminated source, incorrect mode change, etc. The device sequences through the standard power up sequence of the CAM when powered up. The CAMSIM comes with a confidence tester, which exactly duplicates the function of the CAM confidence tester.

Physical Information:

The CAMSIM system is comprised of the following:

- 1 System carry case

1 CAMSIM simulator with nozzle protective cap, environmental cap and battery cap assembly.

5 Simulation H Air/Vehicle sources with D cell

5 Simulation G Air/Vehicle sources with D cell

8 Simulation point sources

1 Set of 6 simulation nozzle filters with case

1 Instructor remote with battery

1 Set of 2 error cards with CAMSIM key on chain

1 Spare CAMSIM key

1 Simulation confidence tester

1 Tape for simulation nozzle filter case

1 CAMSIM personal computer interface cable

1 CAMSIM Operational Instructions

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

None

Power Requirements:

110vac

Applicable Publications:

(Information not available)

Reference Publications:

Operation Instructions for CAMSIM001 - US (NSN 6665-99-001-9985)

Training Requirements Supported:

MOSC- Various

NUCLEAR, BIOLOGICAL, CHEMICAL RECONNAISSANCE VEHICLE (NBCRV) VIRTUAL CREW TRAINER (XM95)



Training Category/Level Utilized:
Chemical/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:

Through Active and Reserve Component Installations Training Support Centers (TSC). The virtual crew trainer is limited to those Soldiers assigned to units authorized the NBCRV, through direct fielding from the Joint Program Manager (JPM) Reconnaissance Platform and Integration Office.

Purpose of Trainer:

The NBCRV trainer uses Chemical, Biological, Radiological and Nuclear (CBRN) Reconnaissance based scenarios to present the individual and crews with CBRN hazards that cannot be duplicated at the unit location due to various regulatory restrictions of using simulants. It can be configured to include 2 vehicles simultaneously. The NBCRV Master Instructor Workstation (MIW) provides the capability for exercise generation and After Action Review (AAR) that permits performance and evaluation of individual and collective tasks identified using the Combined Arms Training Strategy (CATS) for CBRN Reconnaissance Platoons. All scenarios are written and conform to current doctrine IAW FM 3-11.19 (Multiservice Tactics, Techniques, and Procedures for Nuclear Biological and Chemical Reconnaissance), and FM 3-11.86 (Multiservice Tactics, Techniques and Procedures for Biological Surveillance). The trainer provides the

instructor/leader the ability to manipulate the environment using the MIW by changing weather data, type of agent, type of release, and detection component – specific parameters (e.g., Joint Biological Point Detection System (JBPDS) provides a presumptive identification of a known bio agent; Chemical Biological Mass Spectrometer (CBMS) Block II can detect known and unknown chemical hazards).

Special Instructions: The primary purpose of the virtual crew trainer is to support unit sustainment of individual and collective training. The trainer is designed to be used by Soldiers possessing the Military Occupational Specialty (MOS) 74D/74A, with the Additional Skill Identifier (ASI) L6.

Bases of Issue Plan (BOIP): To achieve a sustained, more predictable posture to generate trained and ready modular forces, the Army Force Generation (ARFORGEN) model was used to determine the BOIP. The ARFORGEN is the structured progression of increased unit readiness over time resulting in recurring periods of availability of the NBCRV Virtual Crew Trainer to support trained, ready and cohesive crews/units. The following metric will insure a Virtual Crew Trainer is available at the installation Training Support Center (TSC) to support the ARFORGEN Cycle (Reset/Train, Ready and Available) –

- 1ea Virtual Crew Trainer per Stryker Brigade Combat Team (SBCT)
- 1ea Virtual Crew Trainer per Heavy Brigade Combat Team (HBCT)
- 2ea Virtual Crew Trainers per Separate Chemical Company (Combat Support)

Functional Description:

The Nuclear Biological Chemical Reconnaissance Vehicle Crew Virtual Trainer is a computer based training system that supports the NBCRV platform. The trainer uses the Americas Army (AA) graphics engine while providing two methods of training. The first method: classroom training provides – software and limited mockups for training institutional, unit sustainment, and New Equipment Training (NET) of CBRN sensor equipment. The second method: class room individual and crew-drill training, provides – networked hardware & software to simulate NBCRV vehicle and sensor instruction. Each trainer suite consists of:

1. Instructor Station: The instructor station controls the exercise selection, location, and scenario. Station components allow the instructor to monitor and evaluate the performance of the trainees working on the other three stations.

a.) Instructor AA laptop computer, running Windows XP. Used to run the AA program and AA server.

b.) Instructor FBCB2 - A ruggedized laptop, running Linux. Used to run the FBCB2 program.

2. Driver Station: The driver views the selected exercise on the Driver AA laptop and drives the vehicle using the driver controls - Driver Wheel/Gear Box. The Driver has several visual views to select from in the AA program, which simulates those visual views available in the Stryker vehicle.

a.) Driver AA Laptop - A laptop computer, running Windows XP. Used to run the AA program.

b.) Driver Wheel/Gear Box - Controls vehicle direction and gear during AA simulation. Gear number and speed is displayed on Driver AA laptop screen during AA simulation.

c.) Driver Pedals – Controls vehicle speed during AA simulation. Right pedal accelerates and left pedal brakes.

3. Commander Station: The Commander views the selected exercises on the on the Commander AA laptop. The view shown on the AA laptop can be toggled through Remote Weapon Station (RWS), left, center, and right periscope views. The commander also has tactical Nuclear, Biological and Chemical Detection Analysis Communication System (NBCDACS) and Force XXI Battle Command, Brigade and Below (FBCB2) software on two ruggedized laptops. This software is integrated with the simulation to display NBC analysis and navigational information that is appropriate for the simulated environment.

a.) Commander NBCDACS – A ruggedized laptop running Windows XP. Used to run the NBCDACS program.

b.) Commander AA Laptop – A laptop computer running Windows XP. Used to run the AA program.

c.) Commander FBCB2 – A ruggedized laptop, running Linux. Used to run the FBCB2 program.

4. Surveyor Station: The Surveyor observes detection status on software simulations and mock-up devices of NBCRV sensors, reacts to agent alarms, deploys agent markers, and simulates other NBCRV surveyor functions.

a.) Surveyor NBCDACS – A ruggedized laptop, running Windows XP, Used to run the NBCDACS program.

b.) Surveyor AA laptop – A laptop computer, running Windows XP. Used to run the AA program and the message router.

c.) Surveyor Joint Service Lightweight Standoff Chemical Agent Detector (JSLSCAD) Virtual Trainer – A ruggedized laptop, running Windows XP, Runs the software that simulates JSLSCAD functions. The JSLSCAD Operator Display Unit (ODU) Mock-up is also part of the Surveyor JSLSCAD Virtual trainer.

d.) Surveyor Chemical Biological Mass Spectrometer (CBMS) Virtual Trainer – A ruggedized laptop, running Windows XP, Runs the software that simulates CBMS functions. The CBMS Soldier Display Unit (SDU) mock-up and Double Wheel Sampling System (DWSS) Control Box Mock-up are also part of the Surveyor CBMS Virtual trainer.

e.) Surveyor Ruggedized Laptop – Provides a Virtual Chemical Vapor Sampling System (CVSS); Virtual Joint Biological Point Detection System (JBPDs); and Virtual METSMEN (Meteorological Data).

f.) DWSS Control Box Mock-up – A physical mock-up of the control-box, used with the CBMS.

g.) CBMS Soldier Display Unit (SDU) Mock-up and stand – A physical mock-up of the CBMS SDU and stand.

5. Instructor Station: Controls the exercise selection, location, and scenario. The station components allow the instructor to monitor and evaluate the performance of the crew/individuals working on the other three stations.

a.) Instructor AA laptop computer, running Windows XP. Used to run the AA program and AA server.

b.) Instructor FBCB2 - A ruggedized laptop, running Linux. Used to run the FCBC2 program.

Physical Information:

Instructor AA Laptop
Driver controls – Wheels and Gearbox Unit
Commander AA laptop
Surveyor JSLSCAD Virtual Trainer
Surveyor CBMS II Virtual Trainer
Surveyor CBMS II Display Mock-up
Surveyor DWSS Control Box Mock-up

Instructor FBCB2
Driver controls – pedals
Commander NBCDACS
Surveyor NBCDACS
Surveyor AA Laptop
Virtual CVSS
Virtual METSMAN
Virtual JBPDS

Driver AA Laptop
Steering wheel/pedals
Commander FBCB2
Network Hub
Projector
Cabeling
RWS Grip
Transit Cases

Equipment Required, Not Supplied:

Clean dry indoor location; Large Table/s (tables side by side) capable of holding all the equipment.

Special Installation Requirements:

Follow setup procedures within the Technical Manual (TM).

Power Requirements:

The trainer requires a standard 120 V power source. At least two power strips should be used with the trainer, plugged into two wall outlets.

Applicable Publications:

MIL-STD-498; Virtual Crew Trainer TM 3-6665-406-10; complete list of all sensor and NBCRV TM's: NBCRV Operator TM 9-2355-311-10-10-1, 2 & 3 (volume 1, 2 &

3), Stryker Common TM 9-2355-311-10-1-1 & 2 (Volume 1 & 2), NBCSPG TM 3-6665-391-13&P, CBMS TM 3-6665-392-10, JSLSCAD TM3-6665-353-12&P, CVSS TM3-6665-393-13&P, JBPDS TM 3-6665-352-12&P.

Reference Publications:

None

Training Requirements Supported:

NBCRV Stryker Brigade Combat Team (SBCT) Course and the awarding of the Additional Skill Identifier (ASI) L6 at the U.S. Army CBRN School (USACBRNS); Unit Sustainment Training for SBCT, Heavy Brigade Combat Team (HBCT) and Separate Chemical Companies (Combat Support CS).

**BASIC SERIES 05
ENGINEER**



MODULAR PACK MINE SYSTEM (MOPMS) TRAINING DISPENSER

**Training Category/Level Utilized:**

Combat/Level 3

Logistic Responsible Command, Service, or Agency:

ACALA

Source and Method of Obtaining:

Available as directed by MOPMS distribution plan.

Purpose of Trainer:

The M136 MOPMS Training Dispenser is the trainer for the M131 MOPMS Ground Dispenser and Mine. It is used to demonstrate operation and maintenance procedures for the MOPMS.

Functional Description:

Constructed of high-density polyethylene the trainer is a self-contained shipping, storage and deployment unit. It is equipped with two handling straps and four foldout carrying handles. It is similar to the M131 (tactical) dispenser; however, it is completely inert and does not contain mines. The battery powered indicator control contains the electronics package, which receives, interprets and acts upon the signal received from the M71, Remote Control Land Mine System. An externally mounted lamp indicates receipt of a deploy command.

Physical Information:

Length: 32"; Width: 23"; Height: 14"; Cube: 5.7 cu ft;
Weight: 155 lb.

Equipment Required, Not Supplied:

Control, Remote, Land Mine: M71

Special Installation Requirements:

None

Power Requirements:

Lithium Cell Battery: BA 5598/U

Applicable Publications:

OUM 9-1345-209-10
SMM 9-1290 208-23 & P
SMM 9-1345-209-24 & P

Reference Publications:

OUM 9-1345-209-10
SMM 9-1290-208-23 & P
SMM 9-1345-209-24 & P

Training Requirements Supported:

Operators of training device: MOSC 11B; 11C; 11H;
11M; 12B; 13B; 13E; 16R; 19E; 19D; 19K66

M-7 DISPENSING SET, MUNITION, NETWORK COMMAND (SPIDER) TRAINER



SPIDER OPERATING SYSTEM

Training Category/Level Utilized:
Engineer/Level-1

Logistic Responsible Command, Service, or Agency:
PEO-STRI

Source and Method of Obtaining:

The M7 Spider achieved full materiel release and TC Standard in 2013. M7 TADSS are supported by PM CCS ICS pending transition to PEO STRI.

Purpose of Trainer:

The Spider Trainer, Dispensing Set, Munition, Network Command, NSN: 6920-01-568-7847, enables system training without live fire. It is comprised of two Spider Miniature Grenade Training Simulator (MGTS), NSN: 6920-01-560-7248 and two Munition Control Unit Trainer (MCUT) Kits (6920-01-565-5599).

Functional Description:

The MCUT is a training device with the same size, weight, and functionality of the Munition Control unit (MCU). The differences are the blue color, the munition port keying to prevent the insertion of Munition Adaptor Modules

(MAMs) and Miniature Grenade Launcher (MGLs) and the immediate reusability of the unit after sterilization.

The MGTS allows for safe training with tactical hardware by replacing the lethal grenades with training simulators. The MGTS simulates all the launch and firing events to the Munition Control Unit (MCU) of an actual Miniature Grenade Launcher (MGL). The MGTS contains a magnetic reed switch that transitions a visual indicator ball from black (unfired) to white (fired). The MGTS is intended for use with the MCUT.

Physical Information:

The MGTS containers are 18.60 wide x 8.40 deep x 14.60 inches high, weigh approximately 28.19 pounds each when loaded and have a cube of 1.32 ft3.



The MCUT container is green with a wide blue band around the bottom 1/3 of the can. The containers are 11.25 deep x 18.50 inches high, weigh approximately 36.2 pounds each when loaded and have a cube of 1.06 ft³.



The MCUT Kit container includes: 2 MCUTs, 2 antennas, 6 MCUT stakes, 6 sand bags, and 6 hardwire trip line spools.

**Equipment Required, Not Supplied:**

Dispensing Set, Munition, Network Command: M7, Spider, LIN: M92387, NSN: 1230-01-536-0128.

Special Installation Requirements:

(Information not available)

Power Requirements:

The MCUT is powered by 4 LSH 20 batteries (6135-01-463-7077). Batteries should last up to 30 days.

The Spider system power requirements are shown in the technical manuals listed below.

Applicable Publications:

TM 9-1230-781-13&P M7 Technical Manual
Operator and Field Maintenance Manual, Including Repair Parts and Special Tools List For Operator's and Field Maintenance Manual (Including Repair Parts and Special Tools List) (NSN: 1230-01-536-0128) (EIC: 4XA), (NSN: 6920-01-568-7847)

Reference Publications:

FM 3-34.210 (Formerly FM 20-32) Explosive Hazards Operations. This Engineer School field manual provides Training and Doctrine information for networked munitions systems.

Training Requirements Supported:

MOSC 12B

M-7 DISPENSING SET, MUNITION, NETWORK COMMAND (SPIDER) TRAINER, CONTROL UNIT, MUNITION: MCUT KIT (M332 emulator)



SPIDER M7 OPERATING SYSTEM

Training Category/Level Utilized:
Engineer/Level-1

Logistic Responsible Command, Service, or Agency:
PEO STRI

Source and Method of Obtaining:
The M7 Spider achieved full materiel release and TC Standard in 2013. M7 TADSS are supported by PM CCS ICS pending transition to PEO STRI.

Purpose of Trainer:
The Spider Munition Control Unit Trainer Kit, NSN: 6920-01-609-7722, enables system training without live fire. Each Kit contains 1 MCUT.

Functional Description:
The Munition Control Unit Trainer (MCUT) is a training device with the same size, weight, and functionality of the Munition Control unit (MCU). The differences are the blue color, the munition port keying to prevent the insertion of Munition Adaptor Modules (MAMs) and

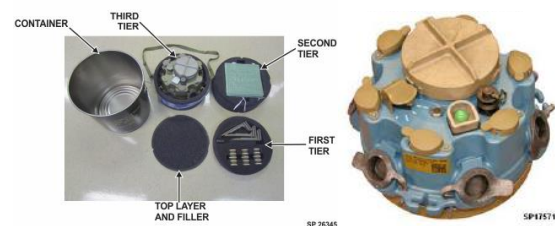
Miniature Grenade Launcher (MGLs) and the immediate reusability of the unit after sterilization.

Physical Information:

The MCUT container is green with a wide blue band around the bottom 1/3 of the can. The containers dimensions are 11.25 deep x 11.125 inches high, weigh 18 pounds each when loaded and have a cube of 0.53 ft³.

The triplines are the same as *DVC#LFC-141-car*.

The MCUT Kit container includes: 1 MCUTs, 1 antenna, 3 MCUT stakes, 3 sand bags, and 3 hardwire trip line spools.



Equipment Required, Not Supplied:

Dispensing Set, Munition, Network Command: M7, Spider,
LIN: M92387, NSN: 1230-01-536-0128.

Special Installation Requirements:

(Information not available)

Power Requirements:

The MCUT is powered by 4 LSH 20 batteries (6135-01-463-7077). Batteries should last up to 30 days depending on correct usage of the MCUT.

The Spider system power requirements are shown in the TM 9-1230-781-13&P (M7)

Applicable Publications:

TM 9-1230-781-13&P Technical Manual
Operator and Field Maintenance Manual, Including Repair Parts and Special Tools List For Operator's and Field Maintenance Manual (Including Repair Parts and Special Tools List) (NSN: 1230-01-536-0128)

Reference Publications:

FM 3-34.210 (Formerly FM 20-32) Explosive Hazards Operations. This Engineer School field manual provides Training and Doctrine information for networked munitions systems.

Training Requirements Supported:

MOSC 12B

M7 DISPENSING SET, MUNITION, NETWORK COMMAND (SPIDER) TRAINER, CONTROL UNIT, MUNITION: MCUT KIT (M332 emulator)



SPIDER M7 OPERATING SYSTEM

Training Category/Level Utilized:
Engineer/Level-1

Logistic Responsible Command, Service, or Agency:
PEO STRI

Source and Method of Obtaining:
The M7 Spider achieved full materiel release and TC Standard in 2013. M7 TADSS are supported by PM CCS ICS pending transition to PEO STRI.

Purpose of Trainer:
The Spider Munition Control Unit Trainer Kit, NSN: 6920-01-609-7722, enables system training without live fire. Each Kit contains 1 MCUT.

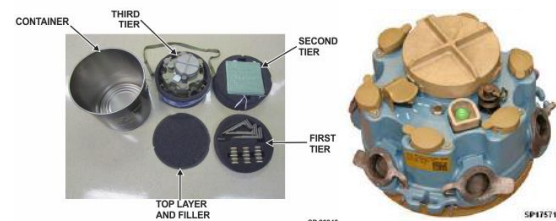
Functional Description:
The Munition Control Unit Trainer (MCUT) is a training device with the same size, weight, and functionality of the Munition Control unit (MCU). The differences are the blue color, the munition port keying to prevent the insertion of Munition Adaptor Modules (MAMs) and Miniature Grenade Launcher (MGLs) and the immediate reusability of the unit after sterilization.

Physical Information:

The MCUT container is green with a wide blue band around the bottom 1/3 of the can. The containers dimensions are 11.25 deep x 11.125 inches high, weigh 18 pounds each when loaded and have a cube of 0.53 ft³.

The triplines are the same as *DVC#LFC-141-car*.

The MCUT Kit container includes: 1 MCUTs, 1 antenna, 3 MCUT stakes, 3 sand bags, and 3 hardwire trip line pools.



Equipment Required, Not Supplied:

Dispensing Set, Munition, Network Command: M7, Spider,
LIN: M92387, NSN: 1230-01-536-0128.

Special Installation Requirements:

(Information not available)

Power Requirements:

The MCUT is powered by 4 LSH 20 batteries (6135-01-463-7077). Batteries should last up to 30 days depending on correct usage of the MCUT.

The Spider system power requirements are shown in the
TM 9-1230-781-13&P (M7)

Applicable Publications:

TM 9-1230-781-13&P Technical Manual
Operator and Field Maintenance Manual, Including Repair
Parts and Special Tools List For Operator's and Field
Maintenance Manual (Including Repair Parts and Special
Tools List) (NSN: 1230-01-536-0128)

Reference Publications:

FM 3-34.210 (Formerly FM 20-32) Explosive Hazards
Operations. This Engineer School field manual provides
Training and Doctrine information for networked munitions
systems.

Training Requirements Supported:

MOSC 12B

M7 DISPENSING SET, MUNITION, NETWORK COMMAND (SPIDER) MUNITION CONTROL UNIT TRAINER KIT (XM10 emulator)



SPIDER OPERATING SYSTEM

Training Category/Level Utilized:
Engineer/Level-1

Logistic Responsible Command, Service, or Agency:
PEO-STRI

Source and Method of Obtaining:
The M7 Spider achieved full materiel release and TC Standard in 2013. M7 TADSS are supported by PM CCS ICS pending transition to PEO STRI.

Purpose of Trainer:
The Spider Munition Control Unit Trainer Kit, NSN: **6920-01-570-0648** enables system training without live fire. Each Kit contains 2 MCUTs.

Functional Description:
The Munition Control Unit Trainer (MCUT) is a training device with the same size, weight, and functionality of the Munition Control unit (MCU). The differences are the blue color, the munition port keying to prevent the insertion of Munition Adaptor Modules (MAMs) and Miniature

Grenade Launcher (MGLs) and the immediate reusability of the unit after sterilization.

Physical Information:
The MCUT container is green with a wide blue band around the bottom 1/3 of the can. The containers dimensions are 11.25 deep x 11.125 inches high, weigh 18 pounds each when loaded and have a cube of 0.82 ft³.

The MCUT Kit container includes 2 MCUTs, 2 antennas, 6 MCUT stakes, 6 sand bags, and 6 hardwire trip line spools.



Equipment Required, Not Supplied:

Dispensing Set, Munition, Network Command: M7, Spider,
LIN: M92387, NSN: 1230-01-536-0128.

Special Installation Requirements:

(Information not applicable)

Power Requirements:

The MCUT is powered by 4 LSH 20 batteries (6135-01-463-7077). Batteries should last up to 30 days depending on proper usage of the MCUT.

The Spider system power requirements are shown in the TM 9-1230-781-13&P.

Applicable Publications:

TM 9-1230-781-13&P Technical Manual (M7)
Operator and Field Maintenance Manual, Including Repair Parts and Special Tools List For Operator's and Field Maintenance Manual (Including Repair Parts and Special Tools List) (NSN: 1230-01-536-0128)

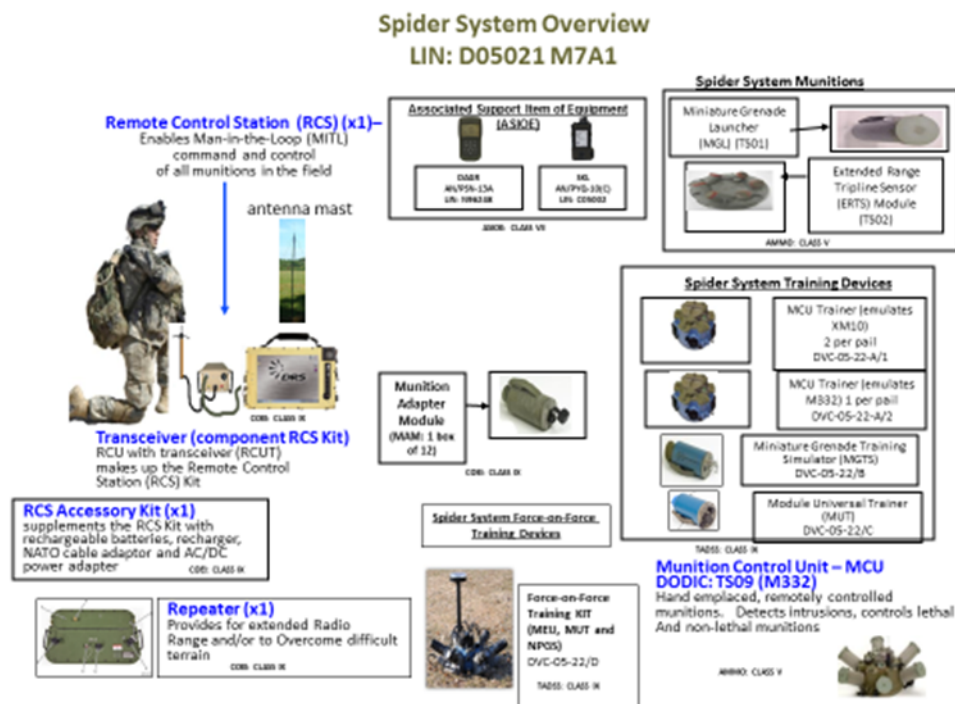
Reference Publications:

FM 3-34.210 (Formerly FM 20-32) Explosive Hazards Operations. This Engineer School field manual provides Training and Doctrine information for networked munitions systems.

Training Requirements Supported:

MOSC 12B

M-7 DISPENSING SET, MUNITION, NETWORK COMMAND (SPIDER) TRAINER, LAUNCHER AND GRENADE, NETWORK COMMAND MUNITION: MGTS KIT (12 grenades)



SPIDER OPERATING SYSTEM

Training Category/Level Utilized:
Engineer/Level-1

Logistic Responsible Command, Service, or Agency:
PM CCS CLS, transition to Warfighter Focus WCLS

Source and Method of Obtaining:
PM CCS has LRIP contract for the Spider system and CLS for system support for one year. Spider is scheduled for full materiel release in June 2013.

Purpose of Trainer:

The Spider Miniature Grenade Training Simulator (MGTS), NSN: 6920-01-560-7248, enables system training without live fire. Each Kit contains 12 MGTS. Individual MGTS NSN: 6920-01-567-0234

Functional Description:

The MGTS allows for safe training with tactical hardware by replacing the lethal grenades with training simulators. The MGTS simulates all the launch and firing events to the Munition Control Unit (MCU) of an actual Miniature Grenade Launcher (MGL). The MGTS contains a magnetic

reed switch that transitions a visual indicator ball from black (unfired) to white (fired). The MGTS is intended for use with the MCU.

Physical Information:

The MGTS containers are 18.60 wide x 8.40 deep x 14.60 inches high, weigh approximately 28.19 pounds each when loaded and have a cube of 1.32 ft³.



MGTS

Equipment Required, Not Supplied:

Dispensing Set, Munition, Network Command: M7, Spider,
LIN: M92387, NSN: 1230-01-536-0128.
Dispensing Set, Munition, Network Command: M7A1,
Spider, LIN: D05021, NSN: 1230-01-652-5169.

Special Installation Requirements:

(Information not available)

Power Requirements:

The MCUT is powered by 4 LSH 20 batteries (6135-01-463-7077). Batteries should last up to 30 days depending on usage of the MCUT.

The Spider system power requirements are shown in the TM 9-1230-781-13&P (M7) or TM 9-1230-788-13&P (M7A1).

Applicable Publications:

TM 9-1230-781-13&P Technical Manual Operator and Field Maintenance Manual, Including Repair Parts and Special Tools List For Operator's and Field Maintenance Manual (Including Repair Parts and Special Tools List) (NSN: 1230-01-536-0128)

TM 9-1230-788-13&P Technical Manual Operator and Field Maintenance Manual, Including Repair Parts and Special Tools List For Operator's and Field Maintenance Manual (Including Repair Parts and Special Tools List) (NSN: 1230-01-652-5169)

Reference Publications:

FM 3-34.210 (Formerly FM 20-32) Explosive Hazards Operations. This Engineer School field manual provides Training and Doctrine information for networked munitions systems.

Training Requirements Supported:

MOSC 12B

WIDE AREA MUNITION (WAM) (HORNET) COLLECTIVE TRAINER XM97



Wide Area Munition (Hornet) XM98 Individual Trainer with Legs down and dummy sensors deployed and XM97 Collective trainer with Safe and Handling Band installed. Both trainers are inert.

Training Category/Level Utilized:

Engineer/Level-1

Logistic Responsible Command, Service or Agency:

TACOM Rock Island (formerly ACALA).

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

The trainers were designed to provide the Combat Engineer with a classroom training aid as well as a field trainer for use in a collective environment such as the training centers. Though they do not directly interact with the training centers computer simulations, they provide the employing soldier with realism through this hand on item.

Functional Descriptions:

The Wide Area Munition (WAM) or Hornet, as the Combat Engineers call it, has two devices to support training. They are the Individual Trainer (XM98) and the Collective Trainer (XM97). Both are inert training aids with the same physical dimensions and weight as the tactical Hornet Hand Emplaced (HE) XM93 munition. Both trainers weigh 35 pounds and are packaged in a PA160 shipping and storage container. They are marked with a blue stripe to distinguish them from live-loaded munition. Many tactical parts, such as the safe and handling band, are the same as used on the tactical munition.

The Hornet Collective Trainer, XM97:

The Hornet collective trainer is a totally inert training device used to train personnel in a collective environment. It is designed rugged to be used in a field environment to practice emplacement at an emplacement sites. It is not powered and give no illuminated indication, but has all the controls and they can be set. The XM97 does not deploy legs or microphone probes since these features are not required for arming or deployment. The XM97 will provide the operator with a nonfunctional mechanical interface with the M71 RCU and an antenna simulator.

Physical Information:

Height:	16.75 in. (42.5 cm) w/S&H band assembly
	12.5 in. (31.7 cm) w/o S&H band assembly
Width:	7.93 in. (20.1 cm) (across flats)
Diameter:	8.4 in. (21.3 cm) (with cover)
	8.0 in. (20.3 cm) (without cover)
Weight:	35 lb. (15.9 kg)

Shipping and storage container (PA 160):

Height	22 in. (55.8 cm)
Width	11 in. (27.9 cm) (flat to flat of rim)
Length	11 in. (27.9 cm) (flat to flat of rim)
Body tube	10 in. (25.4 cm) (inside diameter)
Container weight	20.6 lb. (9.3 kg) (empty)
Internal packing	1.4 lb. (0.6 kg)
Container weight	57 lb. (25.9 kg) (loaded)

Equipment Required, Not Supplied:

M71 Remote Control Unit (RCU) - TM 9-1290-208-23&P Unit and Direct Support Maintenance Manual (Including Repair Parts and Special Tools List) For Control, Remote, Land Mine System: M71 (NSN 1290-01-161-3662). Organic to using units.

Power Requirements:

No external power required. Internally the XM98 uses one lithium BA 5112/U battery. This battery is available through the standard Army supply system. The Training Support Center (TSC) or maintenance personnel will install the battery.

Applicable Publication:

TM 9-1395-200-10 - Operator's Manual for Munition, Wide Area: XM93, Hand Emplaced (Hornet) (NSN 1377-01-425-7579 and Control, Remote, Land Mine System: M71 (NSN 1290-01-161-3662, Munition, Wide Area: Training Device XM98 (NSN 6920-01-432-9357), Collective Trainer, XM97) (NSN 6920-01-458-4335.

TM 9-1395-200-23&P - Unit and Direct Support Maintenance Manual (Including Repair Parts and Special Tools List) for Munition, Wide Area: XM93, Hand Emplaced (Hornet) (NSN 1377-01-425-7579 and Munition, Wide Area: Training Device XM98 (NSN 6920-01-432-9357), Collective Trainer, XM97) (NSN 6920-01-458-4335.

Reference Publication:

FM 20-32 Mine/Countermining Operations. This USA Engineer School field manual provides the Training and Doctrine information for the XM93 WAM (Hornet).

Training Resident Courses at US Engineer School, Fort Leonard Wood:

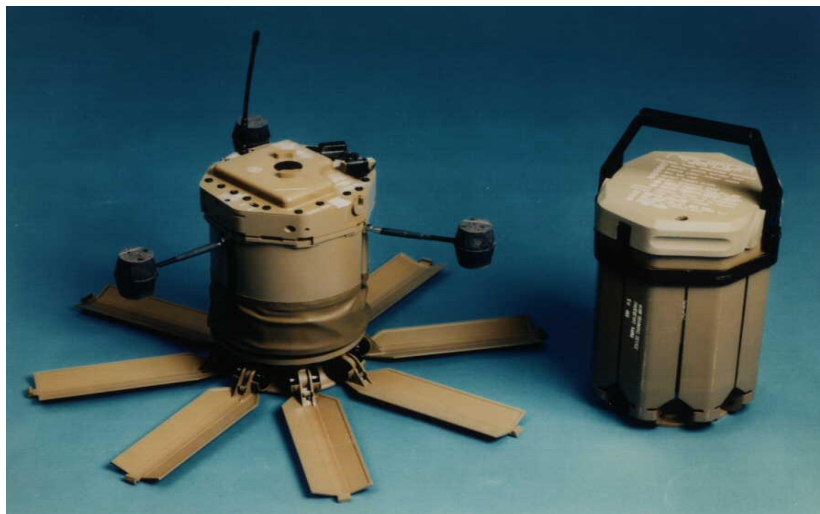
12B OSUT, 12B BNCOC, 12B ANCOC, 12B OBC, and OAC.

Training Requirements Supported:

The WAM munitions have been incorporated in tasks: 5-3-0112; Emplace a Tactical Minefield and 5-3-0115; Emplace a Hasty Protective Minefield. The MTPs those tasks are attached to are:

5-027-35	EN CO, EN BN (ABN)
5-027-10	EN PLT, EN CO, EN BN (ABN)
5-427-35	EN CO, EN BN, CORPS (WHL)
5-427-10	EN PLT, EN CO, EN BN, CORPS (WHL)
5-157-35	EN CO, EN BN, INF DIV (LT)
5-157-10	EN PLT, EN CO, EN BN, INF DIV (LT)
5-447-35	EN CO, EN BN, CORPS (ABN)
5-447-37	EN CO, EN BN, CORPS (LT)
5-447-10	EN PLT, EN BN, CORPS (ABN)
5-447-11	EN PLT, EN BN, CORPS (LT)
5-217-35	EN CO, EN BN (AA)
5-217-10	EN PLT, EN CO, EN BN (AA)
5-063-35	EN CO, BRIGADE COMBAT TEAM
5-063-10	EN MOB PLT, EN CO, BCT
5-063-11	EN MOB SPT PLT, EN CO BCT

WIDE AREA MUNITION (WAM) (HORNET) INDIVIDUAL TRAINER XM98



Wide Area Mmunition (Hornet) XM98 Individual Trainer with Legs down and dummy sensors deployed and XM97 Collective trainer with Safe and Handling Band installed. Both trainers are inert.

Training Category/Level Utilized:
Engineer/Level-1

Logistic Responsible Command, Service or Agency:
TACOM Rock Island (formerly ACALA).

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

The trainers were designed to provide the Combat Engineer with a classroom training aid as well as a field trainer for use in a collective environment such as the training centers. Though they do not directly interact with the training centers computer simulations, they provide the employing soldier with realism through this hands-on item.

Functional Descriptions:

The Wide Area Mmunition (WAM) or Hornet, as the Combat Engineers call it, has two devices to support training. They are the Individual Trainer (XM98) and the Collective Trainer (XM97). Both are inert training aids with the same physical dimensions and weight as the tactical Hornet Hand Emplaced (HE) XM93 munition. Both trainers weigh 35 pounds and are packaged in a PA160 shipping and storage container. They are marked with a blue stripe to distinguish them from live-loaded munition. Many tactical parts, such as the safe and handling band, are the same as used on the tactical munition.

The Hornet Individual Trainer, XM98:

The XM98 is used in a classroom-type environment to replicate the tactical XM93 Hornet munition. It is capable of receiving radio signals from the M71 RCU, just like the tactical munition. The RCU is an Associated Support Item of Equipment (ASIDE) for Hornet and is on the unit's Table of Organization and Equipment (TOE) item, not part of the Hornet system. The Hornet Individual Trainer control panel is identical to the XM93 munition. A simulator battery pack is used in the individual trainer in place of the tactical Hornet's active battery pack. Switches and knobs are functional and most parts are similar to the tactical Hornet. The legs are individually deployable and the trainer has an instructor feedback panel that provides feedback to the instructor to aid evaluation that the operator actions were completed correctly.

Physical Information:

Height:	16.75 in. (42.5 cm) w/S&H band assembly 12.5 in. (31.7 cm) w/o S&H band assembly
Width:	7.93 in. (20.1 cm) (across flats)
Diameter:	8.4 in. (21.3 cm) (with cover) 8.0 in. (20.3 cm) (without cover)
Weight:	35 lb. (15.9 kg)

Shipping and storage container (PA 160):

Height:	22 in. (55.8 cm)
Width:	11 in. (27.9 cm) (flat to flat of rim)
Length:	11 in. (27.9 cm) (flat to flat of rim)
Body tube:	10 in. (25.4 cm) (inside diameter)
Container weight:	20.6 lb. (9.3 kg) (empty)
Internal packing:	1.4 lb. (0.6 kg)
Container weight:	57 lb. (25.9 kg) (loaded)

Equipment Required, Not Supplied:

M71 Remote Control Unit (RCU) - TM 9-1290-208-23&P Unit and Direct Support Maintenance Manual (Including Repair Parts and Special Tools List) For Control, Remote, Land Mine System: M71 (NSN 1290-01-161-3662). Organic to using units.

Power Requirements:

No external power required. Internally the XM98 uses one lithium BA 5112/U battery. This battery is available through the standard Army supply system. The Training Support Center (TSC) or maintenance personnel will install the battery.

Applicable Publication:

TM 9-1395-200-10 - Operator's Manual for Munition, Wide Area: XM93, Hand Emplaced (Hornet) (NSN 1377-01-425-7579) and Control, Remote, Land Mine System: M71 (NSN 1290-01-161-3662), Munition, Wide Area: Training Device XM98 (NSN 6920-01-432-9357), Collective Trainer, XM97 (NSN 6920-01-458-4335).

TM 9-1395-200-23&P - Unit and Direct Support Maintenance Manual (Including Repair Parts and Special Tools List) for Munition, Wide Area: XM93, Hand Emplaced (Hornet) (NSN 1377-01-425-7579) and Munition, Wide Area: Training Device XM98 (NSN 6920-01-432-9357), Collective Trainer, XM97 (NSN 6920-01-458-4335).

Reference Publication:

FM 20-32 Mine/Countermining Operations. This USA Engineer School field manual provides the Training and Doctrine information for the XM93 WAM (Hornet).

Training Resident Courses at US Engineer School, Fort Leonard Wood:

12B OSUT, 12B BNCOC, 12B ANCOC, 12B OBC, and OAC.

Training Requirements Supported:

The WAM munitions have been incorporated in tasks: 5-3-0112; Emplace a Tactical Minefield and 5-3-0115; Emplace a Hasty Protective Minefield. The MTPs those tasks are attached to are:

5-027-35	EN CO, EN BN (ABN)
5-027-10	EN PLT, EN CO, EN BN (ABN)
5-427-35	EN CO, EN BN, CORPS (WHL)
5-427-10	EN PLT, EN CO, EN BN, CORPS (WHL)
5-157-35	EN CO, EN BN, INF DIV (LT)
5-157-10	EN PLT, EN CO, EN BN, INF DIV (LT)
5-447-35	EN CO, EN BN, CORPS (ABN)
5-447-37	EN CO, EN BN, CORPS (LT)
5-447-10	EN PLT, EN BN, CORPS (ABN)
5-447-11	EN PLT, EN BN, CORPS (LT)
5-217-35	EN CO, EN BN (AA)
5-217-10	EN PLT, EN CO, EN BN (AA)
5-063-35	EN CO, BRIGADE COMBAT TEAM
5-063-10	EN MOB PLT, EN CO, BCT
5-063-11	EN MOB SPT PLT, EN CO BCT

TRAINING KIT, SELECTABLE LIGHTWEIGHT ATTACK MUNITION (SLAM) ARMY M320E1 (UPGRADE)

**Training Category/Level Utilized:**

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PM-CCS, Enterprise & Systems Integration Center U.S. Army, ARDEC

Source and Method of Obtaining:

Available through local Training Support Center (TSC).

Purpose of Trainer:

The purpose of this training device is to train all Soldiers prior to live fire of the M4E1. The United States Engineer School, Ft. Leonard Wood, MO has determined that the audio and visual feedback provided by the M320E1 SLAM trainer is adequate, realistic training for Soldiers. This feedback will allow Leaders and operators to train in a safer environment and even reduce the amount of live fires per year that will be needed to fill the STRAC requirement. The current STRAC requirement is 1 live M4E1 SLAM per year per light Engineer Squad to 1 per Engineer Company since the trainer is so advanced/realistic.

Functional Description:

The M320E1 SLAM Improved Functional Trainer (SIFT) is composed of all the safety features, controls, interfaces and algorithms of a fully functional tactical M4E1 SLAM. The M320E1 SIFT does not have warhead explosives and explosive train, the Safe and Arming (S&A) device and the Lithium Reserve battery. The SIFT uses a similar housing and external operator interfaces as the M4E1 SLAM munition. It is as rugged as the M4E1 and is designed for classroom training. The SIFT contains outputs which can be used to power and control a Multiple Integrated Laser Engagement System (MILES) or Simulated Area Weapons Effects (SAWE) module. It incorporates a 9-volt commercial battery to power itself and both visible and audible indicators used as feed back when an error in setting the trainer is made as well as when it fires. These indicators can be turned off during the training session and turned on afterward to report if an error was made during the training session as well as the type of error. A provision is made to allow re-insertion of the SMEP and safety pin allowing multiple uses.

Physical Information:

The SLAM consists of the following parts packed in a PA 60 container. The Reusable Environmental Protective Pack (REPP), a Mounting Wire which is 16 feet of steel wire that can be used for tying SLAM to objects during emplacement. The mounting wire is wound in a flat spool and stored in the REPP. Carrying Strap is an adjustable nylon strap containing two snap hooks for attaching it to a REPP. The carrying strap may be used for mounting the SLAM to trees, poles, or other objects. Attached to the strap are two mounting nails and support wire, M1A5 priming adapter. A Leg Strap is provided for securing the REPP to the leg, or waist during carrying. The strap can be removed from the REPP and used to assist in mounting the SLAM. The instruction sheet found in the REPP is intended to be a memory toll for recalling procedures. The laser sight attaches to the SLAM omega sight, it allows for more accurate aiming for the side attack mode. The M320E1 SLAM training device is identical to M4E1 SLAM in size. Gold "INERT" decals are affixed to the M320E1 to designate it as a training device and help distinguish it from the tactical M4E1. The M320E1 is black with black markings and a black "warhead" where the indicator lights and battery are housed. Dimensions are 5.6 in x 3.9 in x 5.6 in 14.2 cm x 9.9 cm x 14.2 cm. The weight is 2.6 lb (1.2 kg). The M320E1 is a class VII level of supply.

Equipment Required, Not Supplied:

SLAM M320E1 Training Kit PA 60 Container Contents consists of 4 trainers per training kit, to include:

Leg Straps 8, Cross Tip Screwdriver 1, Laser Sights 4, Carrying Straps 8, REPPs Containing M320E1 SIFTS 4, Long Foam Padding Piece 4, Short Foam Padding Piece 2.

4 SIFT Spares Packs:

Spares Pack No. 1; Activation Lever Assembly 45, Activation Lever Assembly 15, Sensor Mode Enable Pin 60.

Spares Pack No. 2; Label, LED 5, Label INERT 20, Reset Tool (Hex L-Key) 10.

Spares Pack No. 3; Mounting Wire 16, Safety Pin 80, Activation Lever Shear Pin 200, Blasting Cap Well Plug 20.

Spares Pack No. 4; PIR Cover 20, Laser Sight 2, Laser Sight Lithium Battery 1/3N 6.

Special Installation Requirements:

(Information not available)

Power Requirements:

(Information not available)

Applicable Publications:

TM 9-1375-233-12 – Operator's and Unit Maintenance Manual – Draft 27 Feb 2008

TM 9-1375-213-34 – Direct Support and General Support Maintenance Manual for Demolition Materials.

Reference Publications:

AR 385-64: U.S. Army Explosives Safety Program
DA PAM 385-64: Ammunition and Explosives Safety Standards.

TM 60 Series – Explosive Ordinance Demolition Technical Manual.

FM 3-34.214 – Explosive and Demolitions.

Training Requirements Supported:

MOSC 11 Series

SWEEP MONITORING SYSTEM (SMS) FOR THE AN/PSS-14 HANDHELD STANDOFF MINE DETECTION SYSTEM (HSTAMIDS)



Sweep Monitoring System showing optical tracking target mounted on tracking head of mine detector

Training Category/Level Utilized:

Engineer/Level 1

Logistic Responsible Command, Service or Agency:

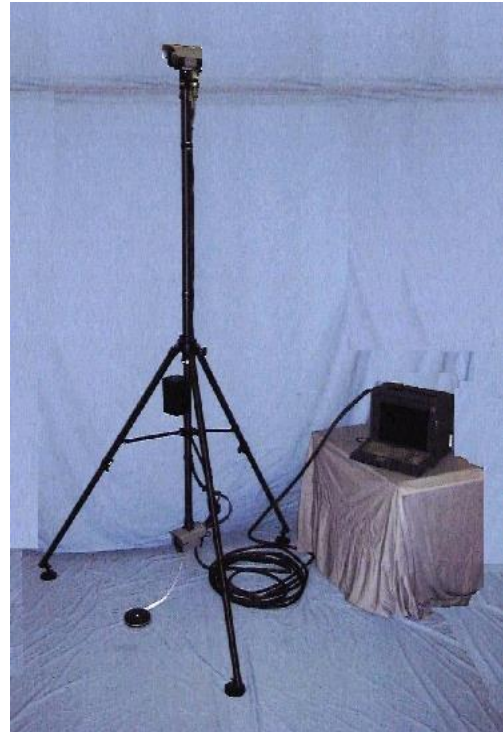
PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The Sweep Monitoring System (SMS) is a training device for training any Military Occupational Specialty (MOS) that is currently required to operate the AN/PSS-12 including, but not limited to, Combat Engineers, Infantry, Armor/Cavalry, Special Operations Forces and appropriate members of other services with a mine detection mission. The trainer is used in the conduct of initial entry training, institutional training, and unit sustainment training. The SMS though developed as the training device for the Handheld Standoff Mine Detection System (HSTAMIDS) is also suitable for use in training of all hand held mine detector wands such as the AN/PSS-12 and Mine Lab F1A4.



Tripod with tracking cameras mounted top and bottom, cabled to operator station computer

Functional Description:

The SMS tracks the movement of hand held detector wands, using an advanced video tracker, to provide operator training and proficiency measurement independent of detector operation. The optical target is an ultra lightweight, brightly colored sphere mounted atop the detector. The SMS is programmed to provide instantaneous and continuous tracking of this sphere's movement through the 4 dimensions consisting of the X-Y-Z coordinates of the volume swept and the time relationships of this 3 dimensional volume. The SMS is configured to provide for training within of a designated mine lane that is 2 meter wide, 25 meters in length up the operational heights of all known tactical mine detectors.

Sphere location is computed 30 times per second with operator performance captured and depicted graphically on the SMS computer's display. The computer depicts correct movement of hand held detector wands over the course of the mine lane, as well as depicting operation too fast, slow, high and low. The SMS emulates the mine detector's capability by accurately simulating the detection of metallic and nonmetallic, anti-tank (AT), anti-personnel (AP) mines, and unexploded ordnance (UXO). The SMS emulates the same detection signal to the operator as would be signaled by the mine detector, for that specific mine.

Physical Information:

Target Sphere:

Weight <1oz

Camera:

Weight 7 lb (3.2 kg)

Length 14.2 in. (36 cm)

Width 4.7 in. (13.5 cm)

Height 5.3 in. (12 cm)

Tripod (stowed configuration):

Weight 28.6 lb (13 kg)

Length 35.7 in. (90.7 cm)

Width 12.5 in. (31.8 cm)

Height 12.5 in. (31.8 cm)

Operator Station (w/transport case):

Weight 145 lb (65.8 kg)

Length 31.5 in. (80.1 cm)

Width 27.0 in. (68.6 cm)

Height 28.5 in. (72.4 cm)

Equipment Required, Not Supplied:

Tactical mine detector with ancillary equipment.

Power Requirements:

24/120/220vac external power source.

Applicable Publications:

TM X-XXXX-XXX-10 - Operator's Manual for the Handheld Standoff Mine Detection System (HSTAMIDS)

TM X-XXXX-XXX-10 - Operator's Manual for the AN/PSS-12 and TM X-XXXX-XXX-10 - Operator's Manual for the Mine Lab F1A

Reference Publications:

FM 20-32 Mine/Countermining Operations. This Engineer School field manual provides Training and Doctrine information for handheld mine detection systems.

Training Resident Courses at:**US Engineer School, Fort Leonard Wood:**

CMF 11, CMF 12, CMF 11 BNCOC, CMF 12 BNCOC, ANCOC, Engineer Officer Basic Course (OBC), and Engineer Officer Advanced Course (AC).

US Infantry School, Fort Benning:

Infantry Officer Basic Course (OBC), and Infantry Officer Advanced Course (AC).

Training Requirements Supported:MOSC- Various

AN/PSS-14 TRAINING TARGET SET

NSN 6920-01-554-6002	DVC 05-105/1/A	TT-30-AT (Training Target-30cm -Antitank, Low Metal)
NSN 6920-01-554-6012	DVC 05-105/1/B	TT-25-AT (Training Target-25cm-Antitank, Low Metal)
NSN 6920-01-554-6017	DVC 05-105/1/C	TT -20-AT (Training Target -20cm -Antitank, Low Metal)
NSN 6920-01-554-6028	DVC 05-105/1/D	TT-12-AP (Training Target-12cm-Antipersonnel, Low Metal)
NSN 6920-01-554-6034	DVC 05-105/1/E	TT-09-AP (Training Target-09cm-Antipersonnel, Low Metal)
NSN 6920-01-554-6038	DVC 05-105/1/F	TT-06-AP (Training Target-06cm-Antipersonnel, Low Metal)
NSN 6920-01-554-6046	DVC 05-105/1/G	TT-M-AT (Training Target-High Metal, Antitank)
NSN 6920-01-554-6054	DVC 05-105/1/H	TT-M-AP (Training Target-High Metal, Antipersonnel)

**DVC 05-104: Training Target Set****Training Category/Level Utilized:**

Engineer/Level 1

Logistic Responsible Command, Service or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available from TSS ENTERPRISE (ATTN: OPS-L),
12350 Research Parkway, Orlando, FL 32826.

Purpose of Trainer:

The AN/PSS-14 Training Targets are for use as training devices for training any Military Occupational Specialty (MOS) that is currently required to operate the AN/PSS-14 or similar mine detector, including, but not limited to, Combat Engineers, Infantry, Armor/Cavalry, Special Operations Forces and appropriate members of other services with a mine detection mission. The training targets are used in the conduct of new equipment training, institutional training, and unit sustainment training. Though developed as the training device for the Handheld Standoff Mine Detection System (HSTAMIDS), the training targets are also suitable for use in training of all hand held mine detector wands such as the AN/PSS-12.

Functional Description:

The training targets are selected and arrayed in a manner replicating the combat mission scenario selected for the countermine training.

Physical Information:**Training Target Overall Dimensions**

<u>Training</u>	<u>Diameter</u>	<u>Length</u>	<u>Quantity</u>
<u>Target Type</u>	<u>(cm)</u>	<u>(cm)</u>	
TT-30-AT	30	10	12
TT-25-AT	25	8.33	14
TT-20-AT	20	6.67	12
TT-12-AP	12	4	12
TT-09-AP	9	3.15	14
TT-06-AP	6	3.15	12
TT-M-AT	30	10	14
TT-M-AP	9	3.15	14

Applicable Publications:

TM 5-XXXX-XXX-XX&P Operator's Manual for the
AN/PSS-14 Mine Detecting Set;
TM 5-6665-298-10 Operator's Manual for the AN/PSS-12.



DVC 05-105/1A TT-30-AT



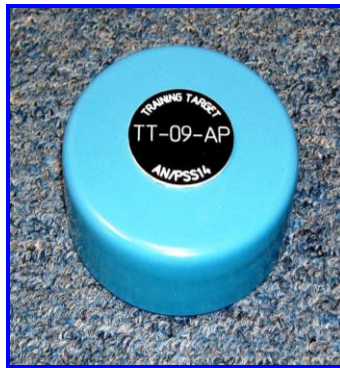
DVC 05-105/1B TT-25-AT



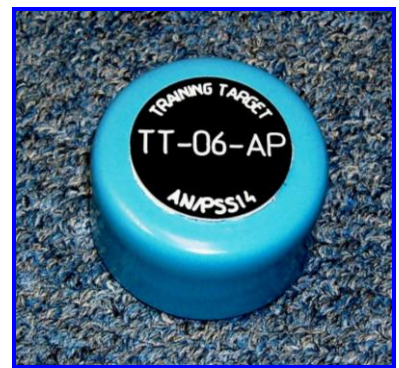
DVC 05-105/1C TT-20-AT

Low Metal Anti-Tank Training Targets

DVC 05-105/1D TT-12-AP



DVC 05-105/1E TT-09-AT



DVC 05-105/1F TT-06-AT

Low Metal Anti-Personnel Training Targets

DVC 05-105/1G TT-M-AT



DVC 05-105/1H TT-M-AP

High Metal Anti-Personnel and Anti-Tank Training Targets**Equipment Required, Not Supplied:**

Tactical mine detector with ancillary equipment.
SMS with Ancillary Equipment.

Power Requirements:

None

Reference Publications:

FM 20-32 Mine/Countermine Operations. This Engineer School field manual provides Training and Doctrine information for handheld mine detection systems.

Training Resident Courses at:**US Engineer School, Fort Leonard Wood:**

CMF 11, CMF 12, CMF 11 BNCOC, CMF 12 BNCOC,
ANCOC, Engineer Officer Basic Course (OBC), and
Engineer Officer Advanced Course (AC)

US Infantry School, Fort Benning:

Infantry Officer Basic Course (OBC), and Infantry Officer
Advanced Course (AC)

Training Requirements Supported:

MOSC – 11; 19 Series

CONSTRUCTION EQUIPMENT VIRTUAL TRAINER (CEVT) - HYDRAULIC EXCAVATOR (HYEX) LEVEL 1



Hydraulic Excavator Level I Simulator

Training Category/Level Utilized:

Combat Engineer, Construction Equipment/ Level 1-8 (operators/supervisors)

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

The CEVT-Hydraulic Excavator (HYEX) Level I Simulator provides interactive instruction in basic excavator operation and skills through numerous lessons which progress from control orientation through complex application tasks. This virtual hands-on training is focused on two key areas – operator efficient performance and safety.

Functional Description:

The CEVT-(HYEX) Level I Simulator is a low scale virtual simulator, which replicate the form, fit, functions, and actions of the Army's Hydraulic Excavator Model 230LCR. The HYEX simulator train students on the basic principles of operating the equipment, to include locations, functions of controls and the proper tactics/advanced operation of the controls prior to getting in the actual equipment. The simulator provides a realistic interface for controlling, operating, and maneuvering the excavator, emphasizing efficient performance and safety. The simulator incorporates ten interactive training. These lessons will allow the student to become familiar with the controls and perform the basic operating techniques associated with the equipment. It also includes a fully narrated interactive operator training on daily service checks, startup and operation, safety, and emergency response drills.



Hydraulic Excavator (stealth view)

Physical Information:

The thirty (30) CEVT-HYEX Level I Simulators will be networked together to an Instructor Computer. The simulators will include a chair, a computer system, a simulator stand with the controls, display, display stand, audio headset, and an Uninterruptible Power Supply (UPS). The Instructor Computer will include a computer system and a printer.

Foot Print: 6 ft x 3.5 ft each (with the display about 30 inches from the student's head).

Computer w/ graphics card: Dell XPS M1330 with 2 GB RAM and 128MB NVIDIA GeForce 8400M GS video card or equivalent and Operating System Windows XP Professional.

Display: 46 inch LCD display and Stand w/adjustable shelf.

Audio: Creative Labs Sound Blaster Pro or better 2-Channel audio

Equipment Required, Not Supplied:

There are no special equipment requirements.

Special Installation Requirements:

There are no special installation requirements.

Power Requirement:

Each Level I simulator will have two (2) 120 V 20 amps receptacles for the computer and for the LCD display.

Applicable Publication:

(COTS) Manuals

Reference Publication:

(COTS) Manuals

Training Requirements Supported:

MOSC: 21E series

CONSTRUCTION EQUIPMENT VIRTUAL TRAINER WHEEL LOADER (CEVT-WL) LEVEL I



CEVT-WL GRAPHICS



CEVT-WL Simulation Base and Hardware

Training Category/Level Utilized:

Combat Engineer, Construction Equipment/ Level 1-8
(operators/supervisors)

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

The CEVT-WL Level I Simulator provides interactive instruction in basic Caterpillar 924H Wheel Loader operation and skills through numerous lessons which progress from control orientation through complex application tasks. This virtual hands-on training is focused on two key areas – operator efficient performance and safety.

Functional Description:

The CEVT-WL Level I Simulator is a low scale virtual simulator, which replicate the form, fit, functions, and actions of the Army's Wheel Loader Model 924H. The CEVT-WL simulator train students on the basic principles of operating the equipment, to include locations, functions of controls and the proper tactics/advanced operation of the controls prior to getting in the actual equipment. The simulator provides a realistic interface for controlling, operating, and maneuvering the wheel loader, emphasizing efficient performance and safety. The simulator

incorporates ten interactive training lessons. These lessons will allow the student to become familiar with the controls and perform the basic operating techniques associated with the equipment. It also includes a fully narrated interactive operator training on daily service checks, startup and operation, safety, and emergency response drills.

Physical Information:

The thirty (30) CEVT-WL Level I Simulators will be networked together to an Instructor Computer. The simulators will include a computer system, simulator base and hardware with the controls, video display, display stand, audio headset, and an Uninterruptible Power Supply (UPS). The Instructor Computer will include a computer system, monitor, and a printer.

Foot Print: 8 ft x 4 ft each (with the display about 48 inches from the student's head).

Simulation Computer w/ graphics card: Custom Simulation PC Intel Core 2 Duo E8600 Wolfdale 3.33GHz, 2 GB RAM, ATI Radeon X2 2GB video card, Windows Vista 64-bit Business.

Display: 42 inch LCD display and Stand w/adjustable shelf.

Audio: Creative HQ-1400 Headphones.

IOS Computer System: Dell Vostro 220 Intel Core 2 Duo E7300, 2GB SDRAM, 256MB ATI Radeon HD 3450, Dell 19in LCD Display, Dell 1320C Color Laser Printer

UPS: APC RS 1300VA LCD 120V

Equipment Required, Not Supplied:

There are no special equipment requirements.

Special Installation Requirements:

There are no special installation requirements.

Power Requirements:

Each Level I simulator requires one dedicated 15 Amp receptacle or dual shared 20 Amp receptacles (Max of 2 receptacles sharing the single 20 Amp breaker). Input voltage is 120V.

Applicable Publications:

(COTS) Manuals

OUM/Instructor Manual: TBD

Reference Publications:

(COTS) Manuals

Training Requirements Supported:

MOSC: 21E series

IMPROVISED EXPLOSIVE DEVICE EFFECTS SIMULATOR, INCREMENT 1, (IEDES 1) MILES EMITTER UNIT (MEU)



(IEDES 1) (MEU), Power Indicator



(MEU), Front Ports

Training Category/Level Utilized:
Engineer/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

This MEU is a component of the IEDES 1 Training Device System. When the Electronic Common Interface Device (ECID) receives the trigger sequence from the Module Control Unit (MCU) to detonate a non-pyrotechnic or pyrotechnic device the MILES Emitter Unit (MEU) will emit multiple MILES codes in a 360° radius

Functional Description:

The MEU will use a 9 volt alkaline non-rechargeable battery and will have an operation life of 100 hours. The MEU will connect to a non-pyrotechnic Controller utilizing the color coded 485 connection. When the MCU sends a trigger event to an ECID to detonate 1 or more detonation devices the MEU will emit multiple MILES codes in a 360° radius. The maximum effective range is 35 meters. The MEU, Miles codes conform to the MILES Communication Code (MCC) and the PMT-90-S002J specification

Physical Information:

Primary Unit Dimensions: 3.75" diameter X 2.9" high
Weight: 1-lb

Equipment Required, Not Supplied:
N/A

Special Installation Requirements:
N/A

Power Requirements:
9 volt battery alkaline

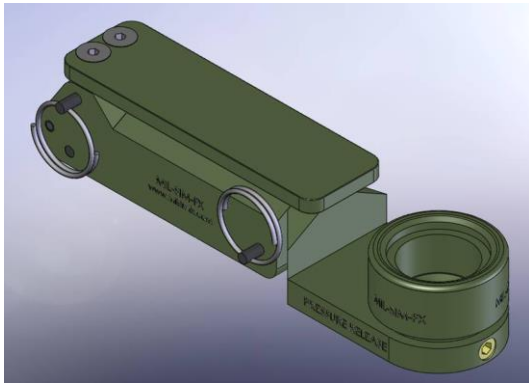
Applicable Publications:
OUM 05-6920-703-10
SMM 05-6920-703-24 and P

Reference Publications:
None

Training Requirements Supported:

Individual Training: Any MOS with a mission requirement to operate in an environment where the Improvised Explosive Device threat is likely. Operators may also include military civilians and contractors.

IMPROVISED EXPLOSIVE DEVICE EFFECTS SIMULATOR, INCREMENT 1, (IEDES 1) PRESSURE DEVICE (PD)



(IEDES 1) (PD), Closed Position

Training Category/Level Utilized:

Engineer/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The device will be initiated by pressure-pull/pneumatics. This device can be capable of being concealable by burying, mounting to structures (e.g. car doors). Burying or mounting will not degrade the operation of this device.

Functional Description:

Operational devices will be initiated by pressure-pull/pneumatic, trip wire or motion sensor. The device will be concealable by burying without causing degradation to the device operations.

Physical Information:

Primary Unit Dimensions: 8.3" x 1.5" x 1.7" weight 1.3-lbs



(IEDES 1) (PD), Armed Position

Equipment Required, Not Supplied:

N/A

Special Installation Requirements:

N/A

Power Requirements:

N/A

Applicable Publications:

Operators Manual: 05-6920-703-10
System Maintenance Manual: 05-6920-703-24 and P

Reference Publications:

None

Training Requirements Supported:

Individual Training: Any MOSC with a mission requirement to operate in an environment where the Improvised Explosive Device threat is likely. Operators may also include military civilians and contractors.

IMPROVISED EXPLOSIVE DEVICE EFFECTS SIMULATOR, INCREMENT 1, (IEDES 1) PUSH PULL BOOBY TRAP (PPBT)



(IEDES 1) (PPBT), Armed



(IEDES 1) (PPBT), Unarmed

Training Category/Level Utilized:

Engineer/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

This device will be initiated by pressure-pull/pneumatic, trip wire or motion sensor. Activation hardware will be supplied both devices. The Booby-Trap device can be capable of being concealable by burying, mounting to structure (e.g. car doors)

Functional Description:

Operator/user will initiate detonation sequence by pressure-pull/pneumatic, trip wire or motion sensor to detonate device or devices. Booby-Trap will be capable of being concealable by burying, mounting to structures (e.g. car doors) or covering with clothing without degrading the operation of the devices.

Physical Information:

Primary Unit Dimensions: 1.9' diameter X 11.5' LG
Weight: 2.4-lbs

Equipment Required, Not Supplied:

N/A

Special Installation Requirements:

N/A

Power Requirements:

N/A

Applicable Publications:

OUM 05-6920-703-10
SMM 05-6920-703-24 and P

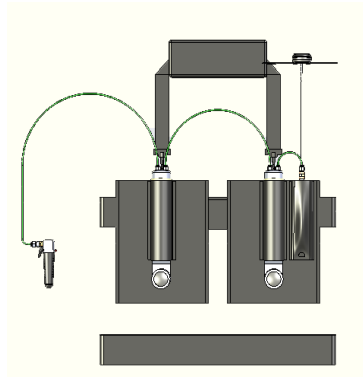
Reference Publications:

None

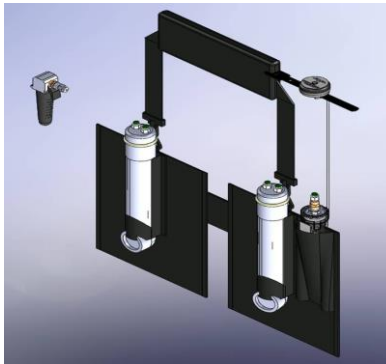
Training Requirements Supported:

Individual Training: Any MOSC with a mission requirement to operate in an environment where the Improvised Explosive Device threat is likely. Operators may also include military civilians and contractors.

IMPROVISED EXPLOSIVE DEVICE EFFECTS SIMULATOR, INCREMENT 1, (IEDES 1) MAN WORN SUICIDE VEST (SV)



(IEDES 1), Front View



(IEDES 1), Side View



(IEDES 1), (SV)

Training Category/Level Utilized:
Engineer/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:
The Suicide Vest will provide non-pyrotechnic signature. The signature will simulate kill effects. This device will be initiated by pressure-pull/pneumatics. The Suicide Vest will be worn by personnel; covering with clothing will not degrade the operation of this device.

Functional Description:
The Suicide Vest is man worn and manually triggered providing a non-pyrotechnic effect. Attaching the Shoulder Mounted MILES Emitter Unit (SMMEU) to the attackers shoulder, the SMMEU will connect electrically to a 9 volt battery providing simulated kill effects once triggered. Manually initiated by the user, this SMMEU will transmit MILES kill codes 90° to the front and 90° to the rear on the Suicide attacker. The maximum effect range is 35 meters.

Physical Information:
Primary Unit Dimensions: 13" x 16.5" Weight: 2-lbs

Equipment Required, Not Supplied:
N/A

Special Installation Requirements:
N/A

Power Requirements:
9 volt battery alkaline

Applicable Publications:
OUM 05-6920-703-10
SMM 05-6920-703-24 and P

Reference Publications:
None

Training Requirements Supported:
Individual Training: Any MOSC with a mission requirement to operate in an environment where the Improvised Explosive Device threat is likely. Operators may also include military civilians and contractors.

IMPROVISED EXPLOSIVE DEVICE EFFECTS SIMULATOR, INCREMENT 1 (IEDES 1), TRAINING SYSTEM, 433 MHZ

NO DEVICE PICTURE AVAILABLE

Training Category/Level Utilized:

Ordnance/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The IED Effects Simulator Increment 1 (IEDES 1) Training System is a Training Aids, Devices, Simulators, and Simulations (TADSS) kit that will assist the Army in training the joint and individual service on operational support tasks, conditions, and standards needed to achieve U.S. Military Improvised Explosive Device (IED) objectives. The IEDES 1 is designed to train key tasks of Explosive Hazards (EHs) defeat in support of full spectrum operations and conflicts including Homeland Security. EH defeat consists of the ability to predict, prevent, detect, classify, neutralize, mark, report, and record EH; and to protect personnel, equipment, and facilities from EH effects. The mission area also includes the requirement of acquisition of EH devices, for the purpose of exploiting emerging threat technologies, developing countermeasures, render safe procedures, techniques, and tactics, to mitigate emerging EH threats. The IEDES 1 is configured to simulate a Small, Medium, Large, and Extra Large explosive signature; however, it is not configured to pinpoint a specific IED.

The IEDES 1 provides the tools for trainers to create simulated battlefield cues and effects for a training audience. The forces must be trained and prepared to break-through or circumvent anti-access and area denial strategies. The Army requires the capabilities to predict, prevent, detect, and neutralize EHs, as well as protect personnel, equipment, and facilities from the effects of EHs. The IEDES 1 will enable joint force commanders to effectively train in the key tasks of IED threats. These capabilities are required throughout the full range of military operations, and throughout military, physical, and cultural environments.

This device will be further developed, and future capability improvements will occur in increments, as technical advances will allow.

Functional Description:

The major components of IEDES 1 (433 MHz) are:

- a. DVC 05-113 (MEU)
- b. DVC 05-113/1 (PD)
- c. DVC 05-113/2 (PPBT)
- d. DVC 05-113/3 (SV)
- e. DVC 05-115 (ECID 433 Mhz)
- f. DVC 05-116 (MCU 433 Mhz)
- g. DVC 05-117 (NPC)
- h. DVC 05-118 (PSSD)
- i. DVC 05-118/1 (NPSSD)

IEDES 1 training system utilizes an ECID and MCU that can be used with both pyrotechnic and non-pyrotechnic signature devices. The non-pyrotechnic devices can be used for indoor and outdoor training exercises. The NPSSD is scalable to replicate small to large IED signatures. The PSSD is used for outdoor, dismounted and mounted training exercises, and is scalable to replicate small to extra large IED signatures. Sufficient flash/bang/heat signature or other visual signature effects realistically replicate combat situations. When incorporated, an MEU device emits the appropriate MILES kill code to affect training personnel and equipment when IEDES 1 Pyrotechnic or Non-Pyrotechnic devices are triggered. Other operational features include the following:

- a. The IEDES 1 provides visual and aural force-on-force and force-on-target engagement simulations to obtain feedback on the effects of IED engagement simulations on personnel, independent targets, and combat vehicles in support of Explosives Hazards Defeat (EHD) training objectives.
- b. The IEDES 1 training system utilizes multiple safety features to prevent unintentional detonation of signature devices.

- c. Only government type classified munitions M30, M31A1 are used with the PSSD.
- d. Wireless communication is within a Government approved radio frequency range in accordance with the Army spectrum management frequency authority for the geographical location, and in compliance with DoD spectrum management policies and procedures for CONUS and OCONUS locations.
- e. Emits MILES codes IAW PMT 90-S002J to replicate kill effects and target pairing.
- f. IEDES 1 operating in wireless mode can be disabled by CREW training devices.
- g. IEDES 1 is capable of being used during periods of reduced visibility and darkness within the capabilities of the signature device being used.

Physical Information:

NOTE: Dimensions and weights of major components (see Functional Description) are identified under their respective Device Numbers.

The IEDES 1 training system is packaged in a total of (7) seven transit cases identified as follows: (weights identified include transit case and IEDES 1 components)

Transit Case	Case Contents
1. A-1	Non-Pyrotechnic
2. A-2	Non-Pyrotechnic
3. A-3	Non-Pyrotechnic
4. A-4	Non-Pyrotechnic
5. A-5	Non-Pyrotechnic
6. B-1	Pyrotechnic
7. Consumables Kit	Non-Pyro Consumables

Case Dimensions

1. 49"x 25"x 24"
2. 49"x25"x24"
3. 49"x25"x24"
4. 49"x25"x24"
5. 49"x25"x24"
6. 49"x25"x24"
7. 25.5"x 25.5" x 13.25"

Total Case Weight

- Weight: 188.5 lbs.
Weight: 188.5 lbs.
Weight: 191.3 lbs.
Weight: 136 lbs.
Weight: 185.5 lbs.
Weight: 127.5 lbs.
Weight: 73 lbs.

Equipment Required, Not Supplied:

M30 and M31A1 pyrotechnic cartridges for PSSD

Special Installation Requirements:

None

Power Requirements:

NOTE: The power requirements of major components (see Functional Description) are identified under their respective Device Numbers.

Applicable Publications:

OUM 05-6920-703-10
SMM 05-6920-703-24& P

Reference Publications:

None

Training Requirements Supported:

Individual Training: Any MOSC with a mission requirement to operate in an environment where the Improvised Explosive Device threat is likely. Operators may also include military civilians and contractors.

IMPROVISED EXPLOSIVE DEVICE EFFECTS SIMULATOR, INCREMENT 1 (IEDES 1), TRAINING SYSTEM, 315 MHZ

NO DEVICE PICTURE AVAILABLE

Training Category/Level Utilized:

Ordnance/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The IED Effects Simulator Increment 1 (IEDES 1) Training System is a Training Aids, Devices, Simulators, and Simulations (TADSS) kit that will assist the Army in training the joint and individual service on operational support tasks, conditions, and standards needed to achieve U.S. Military Improvised Explosive Device (IED) objectives. The IEDES 1 is designed to train key tasks of Explosive Hazards (EHs) defeat in support of full spectrum operations and conflicts including Homeland Security. EH defeat consists of the ability to predict, prevent, detect, classify, neutralize, mark, report, and record EH; and to protect personnel, equipment, and facilities from EH effects. The mission area also includes the requirement of acquisition of EH devices, for the purpose of exploiting emerging threat technologies, developing countermeasures, render safe procedures, techniques, and tactics, to mitigate emerging EH threats. The IEDES 1 is configured to simulate a Small, Medium, Large, and Extra Large explosive signature; however, it is not configured to pinpoint a specific IED.

The IEDES 1 provides the tools for trainers to create simulated battlefield cues and effects for a training audience. The forces must be trained and prepared to break-through or circumvent anti-access and area denial strategies. The Army requires the capabilities to predict, prevent, detect, and neutralize EHs, as well as protect personnel, equipment, and facilities from the effects of EHs. The IEDES 1 will enable joint force commanders to effectively train in the key tasks of IED threats. These capabilities are required throughout the full range of military operations, and throughout military, physical, and cultural environments.

This device will be further developed, and future capability improvements will occur in increments, as technical advances will allow.

Functional Description:

The major components of IEDES 1 (315 MHz) are:

- a. DVC 05-113 (MEU)
- b. DVC 05-113/1 (PD)
- c. DVC 05-113/2 (PPBT)
- d. DVC 05-113/3 (SV)
- e. DVC 05-115/1 (ECID 315 Mhz)
- f. DVC 05-116/1 (MCU 315 Mhz)
- g. DVC 05-117 (NPC)
- h. DVC 05-118 (PSSD)
- i. DVC 05-118/1 (NPSSD)

IEDES 1 training system utilizes an ECID and MCU that can be used with both pyrotechnic and non-pyrotechnic signature devices. The non-pyrotechnic devices can be used for indoor and outdoor training exercises. The NPSSD is scalable to replicate small to large IED signatures. The PSSD is used for outdoor, dismounted and mounted training exercises, and is scalable to replicate small to extra large IED signatures. Sufficient flash/bang/heat signature or other visual signature effects realistically replicate combat situations. When incorporated, an MEU device emits the appropriate MILES kill code to affect training personnel and equipment when IEDES 1 Pyrotechnic or Non-Pyrotechnic devices are triggered. Other operational features include the following:

- a. The IEDES 1 provides visual and aural force-on-force and force-on-target engagement simulations to obtain feedback on the effects of IED engagement simulations on personnel, independent targets, and combat vehicles in support of Explosives Hazards Defeat (EHD) training objectives.
- b. The IEDES 1 training system utilizes multiple safety features to prevent unintentional detonation of signature devices.

- c. Only government type classified munitions M30, M31A1 are used with the PSSD.
- d. Wireless communication is within a Government approved radio frequency range in accordance with the Army spectrum management frequency authority for the geographical location, and in compliance with DoD spectrum management policies and procedures for CONUS and OCONUS locations.
- e. Emits MILES codes IAW PMT 90-S002J to replicate kill effects and target pairing.
- f. IEDES 1 operating in wireless mode can be disabled by CREW training devices.
- g. IEDES 1 is capable of being used during periods of reduced visibility and darkness within the capabilities of the signature device being used.

Physical Information:

NOTE: Dimensions and weights of major components (see Functional Description) are identified under their respective Device Numbers.

The IEDES 1 training system is packaged in a total of (7) seven transit cases identified as follows: (weights identified include transit case and IEDES 1 components)

Transit Case	Case Contents
1. A-1	Non-Pyrotechnic
2. A-2	Non-Pyrotechnic
3. A-3	Non-Pyrotechnic
4. A-4	Non-Pyrotechnic
5. A-5	Non-Pyrotechnic
6. B-1	Pyrotechnic
7. Consumables Kit	Non-Pyro Consumables

Case Dimensions

1. 49"x 25"x 24"
2. 49"x25"x24"
3. 49"x25"x24"
4. 49"x25"x24"
5. 49"x25"x24"
6. 49"x25"x24"
7. 25.5"x 25.5" x 13.25"

Total Case Weight

- Weight: 188.5 lbs.
Weight: 188.5 lbs.
Weight: 191.3 lbs.
Weight: 136 lbs.
Weight: 185.5 lbs.
Weight: 127.5 lbs.
Weight: 73 lbs.

Equipment Required, Not Supplied:

M30 and M31A1 pyrotechnic cartridges for PSSD

Special Installation Requirements:

None

Power Requirements:

NOTE: The power requirements of major components (see Functional Description) are identified under their respective Device Numbers.

Applicable Publications:

OUM 05-6920-703-10
SMM 05-6920-703-24& P

Reference Publications:

None

Training Requirements Supported:

Individual Training: Any MOSC with a mission requirement to operate in an environment where the Improvised Explosive Device threat is likely. Operators may also include military civilians and contractors.

IMPROVISED EXPLOSIVE DEVICE EFFECTS SIMULATOR, INCREMENT 1 (IEDES 1), ELECTRONIC COMMON INTERFACE DEVICE (ECID), 433 MHZ



ECID (electrical connection ports)



ECID (signature device connectors)

Training Category/Level Utilized:
Ordnance/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The Electronic Common Interface Device (ECID) is a major component of the IEDES 1 training system. The ECID is capable of initiating both pyrotechnic and non-pyrotechnic signature devices. The ECID can connect to a minimum of four signature devices utilizing a lead wire of 15 meters in length to each signature device. It is capable of initiating signature devices simultaneously or independently. ECID's communicate with the IEDES Module Control Unit (MCU) at a hardwired range of 500 meters, as well as wirelessly at a range of 1000 meters Line of Sight (LOS) on Government approved radio frequency bands of 433.0 - 433.375 MHz. Each ECID possesses a unique code to identify itself to the MCU and distinguish itself from other ECID's. The ECID is capable of accepting direct input from a variety of manual triggering devices, including, but not limited to pressure plates, trip wires or motion sensors.

Functional Description:

The ECID is capable of providing range, GPS location and detonation feedback to the MCU, in addition to battery life status and Built-In-Test (BIT) data. It stores event data including date/time stamp, GPS location of ECID, number of detonations, number of trigger events, and jamming

status. The ECID provides an interface for data retrieval. The ECID is capable of providing status data and event data to the MCU, and storing 500 events. Each ECID possesses a unique code to identify itself to the MCU and distinguish itself from other ECID's.

Physical Information:

ECID Dimensions: 13" x 11" x 5.5" Weight: 12 lbs.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

Rechargeable lead-acid battery: 12 volts, 5.4 AMPH

Applicable Publications:

OUM 05-6920-703-10
SMM 05-6920-703-24& P

Reference Publications:

None

Training Requirements Supported:

Individual Training: Any MOSC with a mission requirement to operate in an environment where the Improvised Explosive Device threat is likely. Operators may also include military civilians and contractors.

IMPROVISED EXPLOSIVE DEVICE EFFECTS SIMULATOR, INCREMENT 1 (IEDES 1), ELECTRONIC COMMON INTERFACE DEVICE (ECID), 315 MHZ



ECID (electrical connection ports)



ECID (signature device connectors)

Training Category/Level Utilized:
Engineer/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The Electronic Common Interface Device (ECID) is a major component of the IEDES 1 training system. The ECID is capable of initiating both pyrotechnic and non-pyrotechnic signature devices. The ECID can connect to a minimum of four signature devices utilizing a lead wire of 15 meters in length to each signature device. It is capable of initiating signature devices simultaneously or independently. ECID's communicate with the IEDES Module Control Unit (MCU) at a hardwired range of 500 meters, as well as wirelessly at a range of 1000 meters Line of Sight (LOS) on Government approved radio frequency bands of 315.0- 315.375 MHz. Each ECID possesses a unique code to identify itself to the MCU and distinguish itself from other ECID's. The ECID is capable of accepting direct input from a variety of manual triggering devices, including, but not limited to pressure plates, trip wires or motion sensors.

Functional Description:

The ECID is capable of providing range, GPS location and detonation feedback to the MCU, in addition to battery life status and Built-In-Test (BIT) data. It stores event data including date/time stamp, GPS location of ECID, number of detonations, number of trigger events, and jamming

status. The ECID provides an interface for data retrieval. The ECID is capable of providing status data and event data to the MCU, and storing 500 events. Each ECID possesses a unique code to identify itself to the MCU and distinguish itself from other ECID's.

Physical Information:

ECID Dimensions: 13" x 11" x 5.5" Weight: 12 lbs.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

Rechargeable lead-acid battery: 12 volts, 5.4 AMPH

Applicable Publications:

OUM 05-6920-703-10
SSM 05-6920-703-24& P

Reference Publications:

None

Training Requirements Supported:

Individual Training: Any MOSC with a mission requirement to operate in an environment where the Improvised Explosive Device threat is likely. Operators may also include military civilians and contractors.

**IMPROVISED EXPLOSIVE DEVICE EFFECTS SIMULATOR,
INCREMENT 1 (IEDES 1), MODULE CONTROL UNIT (MCU) 433 MHZ**

**IEDES Module Control Unit (MCU)****Training Category/Level Utilized:**

Ordnance/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The Module Control Unit (MCU) is a major component of the IEDES 1 training system. The MCU functions as a remote triggering unit capable of wirelessly controlling a minimum of four IEDES Electronic Common Interface Devices (ECID's) simultaneously or independently on four approved frequencies within 433.0 – 433.375 MHz, or controlling one ECID in a hard-wired configuration. The MCU controls both ECID's and pneumatic devices at a Radio Frequency (RF) range of 1,000m Line of Sight (LOS) and a hardwired range of 500 m. The MCU recognizes unique identifiers transmitted by its associated ECID's and communicates with those ECID's exclusively. The MCU transmits arming/disarming commands to ECID's, and provides dual initiation activation of detonation commands. The MCU is capable of initiating a Built-In-Test (BIT) for fault detection and connectivity

status of ECID's and provides status notification to the operator. The MCU provides a low-battery life indicator. It is capable of storing and displaying trigger type(s), signature device type, location data, number of denotation commands given to each ECID, and each ECID's detonation/jamming status. It is capable of retrieving event data from its associated ECID's for After Action Review (AAR) purposes.

Functional Description:

The MCU is a hand held Personal Data Assistant (PDA) and functions as a remote triggering unit wirelessly controlling a minimum of four ECID's simultaneously or independently on each given frequency, or controlling one ECID at a hardwired range of 500 meters. The MCU communicates wirelessly to the ECID on Government approved radio frequencies. The MCU utilizes "plug and play" components to satisfy radio frequency requirements, and has a maximum effective range of 1,000 meters LOS.

Physical Information:

MCU Dimensions: 9" x 4" x 1.5" Weight: 3 lb.

Equipment Required, Not Supplied:None

Special Installation Requirements:

None

Power Requirements:

Rechargeable battery: 3.8 mAh

Applicable Publications:

OUM 05-6920-703-10

SMM 05-6920-703-24& P

Reference Publications:

None

Training Requirements Supported:

Individual Training: Any MOSC with a mission requirement to operate in an environment where the Improvised Explosive Device threat is likely. Operators may also include military civilians and contractors.

IMPROVISED EXPLOSIVE DEVICE EFFECTS SIMULATOR, INCREMENT 1 (IEDES 1), MODULE CONTROL UNIT (MCU) 315 MHZ



IEDES Module Control Unit (MCU)

Training Category/Level Utilized:

Ordnance/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The Module Control Unit (MCU) is a major component of the IEDES 1 training system. The MCU functions as a remote triggering unit capable of wirelessly controlling a minimum of four IEDES Electronic Common Interface Devices (ECID's) simultaneously or independently on four approved frequencies within 315.0 – 315.375 MHz, or controlling one ECID in a hard-wired configuration. The MCU controls both ECID's and pneumatic devices at a Radio Frequency (RF) range of 1,000m Line of Sight (LOS) and a hardwired range of 500 m. The MCU recognizes unique identifiers transmitted by its associated ECID's and communicates with those ECID's exclusively. The MCU transmits arming/disarming commands to ECID's, and provides dual initiation activation of detonation commands. The MCU is capable of initiating a Built-In-Test (BIT) for fault detection and connectivity

status of ECID's and provides status notification to the operator. The MCU provides a low-battery life indicator. It is capable of storing and displaying trigger type(s), signature device type, location data, number of denotation commands given to each ECID, and each ECID's detonation/jamming status. It is capable of retrieving event data from its associated ECID's for After Action Review (AAR) purposes.

Functional Description:

The MCU is a hand held Personal Data Assistant (PDA) and functions as a remote triggering unit wirelessly controlling a minimum of four ECID's simultaneously or independently on each given frequency, or controlling one ECID at a hardwired range of 500 meters. The MCU communicates wirelessly to the ECID on Government approved radio frequencies. The MCU utilizes "plug and play" components to satisfy radio frequency requirements, and has a maximum effective range of 1,000 meters LOS.

Physical Information:

MCU Dimensions: 9" x 4" x 1.5" Weight: 3 lb.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

Rechargeable battery: 3.8 mAh

Applicable Publications:

OUM 05-6920-703-10

SMM 05-6920-703-24& P

Reference Publications:

None

Training Requirements Supported:

Individual Training: Any MOS with a mission requirement to operate in an environment where the Improvised Explosive Device threat is likely. Operators may also include military civilians and contractors.

IMPROVISED EXPLOSIVE DEVICE EFFECTS SIMULATOR, INCREMENT 1 (IEDES 1), NON-PYROTECHNIC CONTROLLER (NPC)



NPC (front view)



NPC (rear view)

Training Category/Level Utilized:

Ordnance/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The Non-Pyrotechnic Controller (NPC) is a major component of the IEDES 1 training system. The NPC electrically connects to the Electronic Common Interface device (ECID), and Non-Pyrotechnic Scalable Signature Devices (NPSSD). It has RS-485 IN, and RS-485 OUT connector's to allow daisy chaining of attached devices.

Functional Description:

The NPC is used with the NPSSD which is capable of providing small through large Improvised Explosive Device (IED) signature effects, and firing multiple cartridges simultaneously (small - large). The NPSSD is initiated by the IEDES 1 Module Control Unit (MCU) and Electronic Common Interface Device (ECID). The NPSSD can be wirelessly initiated when connected to an IEDES ECID, and can be manually initiated when connected by hardwire to an MCU. The NPSSD is controlled by the (NPC). The NPC keeps track of the tubes that have been fired on the NPSSD, and sends status back to the ECID. When the NPC is powered off, and the tubes of the NPSSD

are reloaded, the NPC will assume that all tubes have been reloaded when it is powered on again.

Physical Information:

NPC Dimensions: 7.5" x 9" x 4" Weight: 6 lbs.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

12V, 5.0 AMPH Rechargeable SLA

Applicable Publications:

OUM 05-6920-703-10

SMM 05-6920-703-24& P

Reference Publications:

None

Training Requirements Supported:

Individual Training: Any MOSC with a mission requirement to operate in an environment where the Improvised Explosive Device threat is likely. Operators may also include military civilians and contractors.

IMPROVISED EXPLOSIVE DEVICE EFFECTS SIMULATOR, INCREMENT 1 (IEDES 1), PYROTECHNIC SCALABLE SIGNATURE DEVICE (PSSD)



PSSD (side view)



PSSD (bottom view)



PSSD (top view)

Training Category/Level Utilized:
Ordnance/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The Pyrotechnic Scalable Signature Device (PSSD)) is a major component of the IEDES 1 training system. The PSSD is designed to train key tasks of Explosive Hazards (EHs) defeat in support of full spectrum operations and conflicts including Homeland Security. EH defeat consists of the ability to predict, prevent, detect, classify, neutralize, mark, report, and record EH; and to protect personnel, equipment, and facilities from EH effects.

Functional Description:

The PSSD is capable of providing small through extra large signature effects, and firing multiple cartridges simultaneously (small - extra large). The PSSD is wirelessly initiated by the IEDES Module Control Unit (MCU) and Electronic Common Interface Device (ECID). It is capable of firing multiple iterations before requiring reloading. The PSSD has two removable/interchangeable 16 shot magazines. The pyrotechnic signature device will use type classified/material released pyrotechnic simulators; M30, M31A1. These pyrotechnic simulators provide a visual and aural signature. They are in the Army inventory and will not be provided as part of the kit. PSSD

provides a 30 second delay accompanied by a visual and audio warning signal to allow the operator to clear the area prior to PSSD arming.

Physical Information:

PSSD Dimensions: 16" x 10.5" x 11" Weight: 18 lbs.

Equipment Required, Not Supplied:

M30 and M31A1 pyrotechnic cartridges

Special Installation Requirements:

None

Power Requirements:

Rechargeable lead-acid battery: 12 volts, 7.5 AMPH

Applicable Publications:

OUM 05-6920-703-10
SMM 05-6920-703-24& P

Reference Publications:

None

Training Requirements Supported:

Individual Training: Any MOSC with a mission requirement to operate in an environment where the Improvised Explosive Device threat is likely. Operators may also include military civilians and contractors.

IMPROVISED EXPLOSIVE DEVICE EFFECTS SIMULATOR, INCREMENT 1 (IEDES 1), NON-PYROTECHNIC SCALABLE SIGNATURE DEVICE (NPSSD)



NPSSD (side view)



NPSSD (discharge port view)

Training Category/Level Utilized:
Engineer/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The Non-Pyrotechnic Scalable Signature Device (NPSSD)) is a major component of the IEDES 1 training system. The NPSSD is designed to train key tasks of Explosive Hazards (EHs) defeat in support of full spectrum operations and conflicts including Homeland Security. EH defeat consists of the ability to predict, prevent, detect, classify, neutralize, mark, report, and record EH; and to protect personnel, equipment, and facilities from EH effects

Functional Description:

The NPSSD is capable of providing small through large Improvised Explosive Device (IED) signature effects, and firing multiple cartridges simultaneously (small - large). The NPSSD is initiated by the IEDES 1 Module Control Unit (MCU) and Electronic Common Interface Device (ECID). The NPSSD can be wirelessly initiated when connected to an IEDES ECID, and can be manually initiated when connected by hardwire to an MCU. The NPSSD is controlled by the IEDES Non-Pyrotechnic Controller (NPC). CO₂ gas is used to propel a special powder that provides a visual smoke signature, and a strobe light provides flash concurrently. Commercial plastic cups

are used to provide an aural signature. The NPSSD CO₂ tanks are refilled using the provided Fill Station tanks.

Physical Information:
NPSSD Dimensions: 27" x 11" x 4.5" Weight: 31.6 lbs.

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
None

Applicable Publications:
OUM 05-6920-703-10
SMM 05-6920-703-24& P

Reference Publications:
None

Training Requirements Supported:
Individual Training: Any MOSC with a mission requirement to operate in an environment where the Improvised Explosive Device threat is likely. Operators may also include military civilians and contractors.

VIRTUAL CLEARANCE TRAINING SUITE (VCTS)

**Training Category/Level Utilized:**

Engineer/Level 1/2/3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The purpose of the VCTS is to provide individual and collective training for Counter- Improvised Explosive Device (C-IED) missions to Route Clearance Units in a virtual environment.

The individual/crew training curriculum consists of 40 hours of basic and advanced route clearance training scenarios. With a wide variety of environmental conditions (day, night, rain, snow, fog, sand storms) and virtually any type terrain imaginable, the VCTS system will provide Route Clearance Company Soldiers with experience in any situation they are likely to encounter.

The modular design of VCTS provides a highly flexible training environment for the Army. Instructor Operators can select individual vehicles or a mission typical mix of vehicles for training scenarios. Vehicle dynamics and

interchangeable dash panels enable rapid upgrades of the system to meet changing theater requirements.

Functional Description:

The VCTS is a self-contained, mobile system mounted in 53' trailers. The suite consists of an After Action Review/Instructor Operator trailer, and four trailers of individual/crew training stations for the following Route Clearance systems:

- Mine Protected Clearance Vehicles (MPCV) Buffalo
- Vehicle Mounted Mine Detector (VMMD) Husky
- Medium Mine Protected Vehicle (MMPV) Type II RG-31MK5E
- Man Transportable Robotic System (MTRS) Talon IIIB
- Vehicle Optic Sensor System (VOSS)

In addition to realistic vehicle dynamics, the simulators include a physics-based interrogator arm simulation for the Buffalo, operations with or without the mine detonation trailers for the Husky and gunner stations for the RG-31MK5E or Panther. The interchangeable dash panels enable rapid reconfiguration between Buffalo, RG-31MK5E's.

Physical Information:**Trailer 1 After Action Review (AAR) /IO Stations**

Four distinct IOS / AAR areas with 5, 10, and 24-seat student capacities.

Height: 13'6"

Width: 8'6"

Length: 56'

Weight: 33,382 Lbs

Power: Shore Power or Mounted Diesel Generator

Trailer 2 Buffalo/RG-31

MPCV: Four dual-occupant student training stations (STS) with Buffalo instrumentation and controls and 4-channel visual display unit (VDU).

Height: 13'6"

Width: 8'6"

Length: 56'

Weight: 33,382 Lbs

Power: Shore Power or Mounted Diesel Generator

Trailer 3 and Trailer 4 (Duplicate) MMPV RG-31/Husky

MMPV/VMMD/MTRS: Two trailers are of this configuration, each containing two 4-channel MMPV dual-occupant cabs with interchangeable RG-31 and Panther dash sets, an M2 gunnery station associated with each MMPV STS, a 3-channel VMMD (Husky), and a MTRS (Talon IIb) STS.

Height: 13'6"

Width: 8'6"

Length: 56'

Weight: 33,382 Lbs

Power: Shore Power or Mounted Diesel Generator

Trailer 5 Husku/Vehicle Optic Sensor System (VOSS)

Husky/VOSS: Containing two 3-channel VMMD (Husky) cabs, and two VOSS stations

Height: 13'6"

Width: 8'6"

Length: 56'

Weight: 33,382 Lbs

Power: Shore Power or Mounted Diesel Generator

Equipment Required, Not Supplied:

None if connected to shore power. If running on generator power, diesel fuel is required to power the four trailers.

Special Installation Requirements:

Stable area with gravel or concrete pad large enough to stage four 53 foot trailers. Grounding protection is required at every training site for all four trailers. Stairs and other minor operating devices require simple installation.

Power Requirements:

Each trailer requires Single-Phase 208/240/120 VAC, four wire service. If shore power is not available, the VCTS can run on generator power from the on-board generators.

Applicable Publications:

TM pending release

Reference Publications:

VCTS (OUM)

Training Requirements Supported:

This training device will support all MOSCs with a need to improve IED-D, C-IED skills, Route Clearance Mission rehearsals and Convoy training.

DESKTOP TRAINER (DT) FOR THE ANTI-PERSONNEL MINE CLEARING SYSTEM, REMOTE CONTROL: M160 UPGRADE



Panasonic Tough Book Lap Top Computer, Upgrade

Training Category/Level Utilized:

Engineer/Level 3

Logistic Responsible Command, Service, or Agency:

PDM ALUGS

Source and Method of Obtaining:

Limited production. Not Available.

Purpose of Trainer:

The purpose of the M160 DT is to provide operators of the M160 training on critical tasks that can be repetitively trained in simulated environments ranging from Korea, Bosnia, Iraq and Afghanistan that are time consuming, resource constrained, or too dangerous to be trained on actual equipment.

Functional Description:

M160 DT major components will include: Panasonic Tough Book lap Top computer, SKB Rugged Transit Case, M160 DT Game Controller (Logitech Model F310), Senn HD205-II Closed DJ Headphones and Basic Optical Mouse. The product specifications for each product are listed above along with a picture of each component. The Operator will negotiate the flail through a series of scenarios that are on the tough book. Utilizing the game

controller which has the same functions of the actual OCU for the M160, the operator will have to program, operate and maneuver the M160

Physical Information:

The M160 DTT major components:

Panasonic Tough Book Lap Top Computer - Above



[Click to enlarge](#)
SKB Rugged Transit Case



Game Controller (Logitech Model F310)



Senn HD205-II Closed DJ Headphone



Basic Optical Mouse

Equipment Required, Not Supplied:
N/A

Special Installation Requirements:
N/A

Power Requirements:
The DT can be powered from 110V (AC) or powered of the laptop battery (AC)

Applicable Publications:
(COTS) Manuals

Reference Publications:
OUM 9-2350-392-10

Training Requirements Supported:
The DT will address the Individual and Collective tasks associated with flail operation. The tasks trained on the DT will reflect the numerous and varied skills that comprise the tasks of flailing The DT will support NET, Doctrine and Tactics Training, and unit sustainment training. The MOSC that the DT will support is 12B.

COMMON DRIVER TRAINING, TANK ENGINEERING VARIANT (CDT/TEV)

**Training Category/Level Utilized:**

Engineer/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The CDT provides initial and sustainment vehicle driver training simulation for Soldiers at both the operational institution and training installation levels. The CDT vehicle cab variants are interchangeable and reconfigurable allowing multiple variant training on one common training platform.

Functional Description:

The CDT software recognizes the current vehicle variant installed on the system and simulates that vehicle's operational, performance and handling characteristics. Use of the common equipment platform allows the proponent combat developer and materiel developer to focus on the unique, system-specific driver training requirements for their specific vehicle.

Device 05-122/1: CDT Tank Engineering Variant (CDT/TEV) simulates the Joint Assault Bridge (JAB) and Assault Breacher Vehicle (ABV). Both configurations have a driver cab and a commander's station that provides individual and collective training.

Physical Information:

The CDT includes a modular cab affixed to a six degree-of-freedom (6-DOF) motion platform and surrounded by three visual display units. There is also an Instructor Station, Commander Station and an After Action Review Station. The total footprint is L36' x W25' x H12½'.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

Motion Platform: Two (2) dedicated 30-amp@120VAC circuit, each with 2 plugs per circuit and six (6) dedicated 20-amp@120VAC circuit, each with 2 plugs per circuit.

Applicable Publications:

OUM 17-6920-913-10
SMM 17-6920-913-24&P

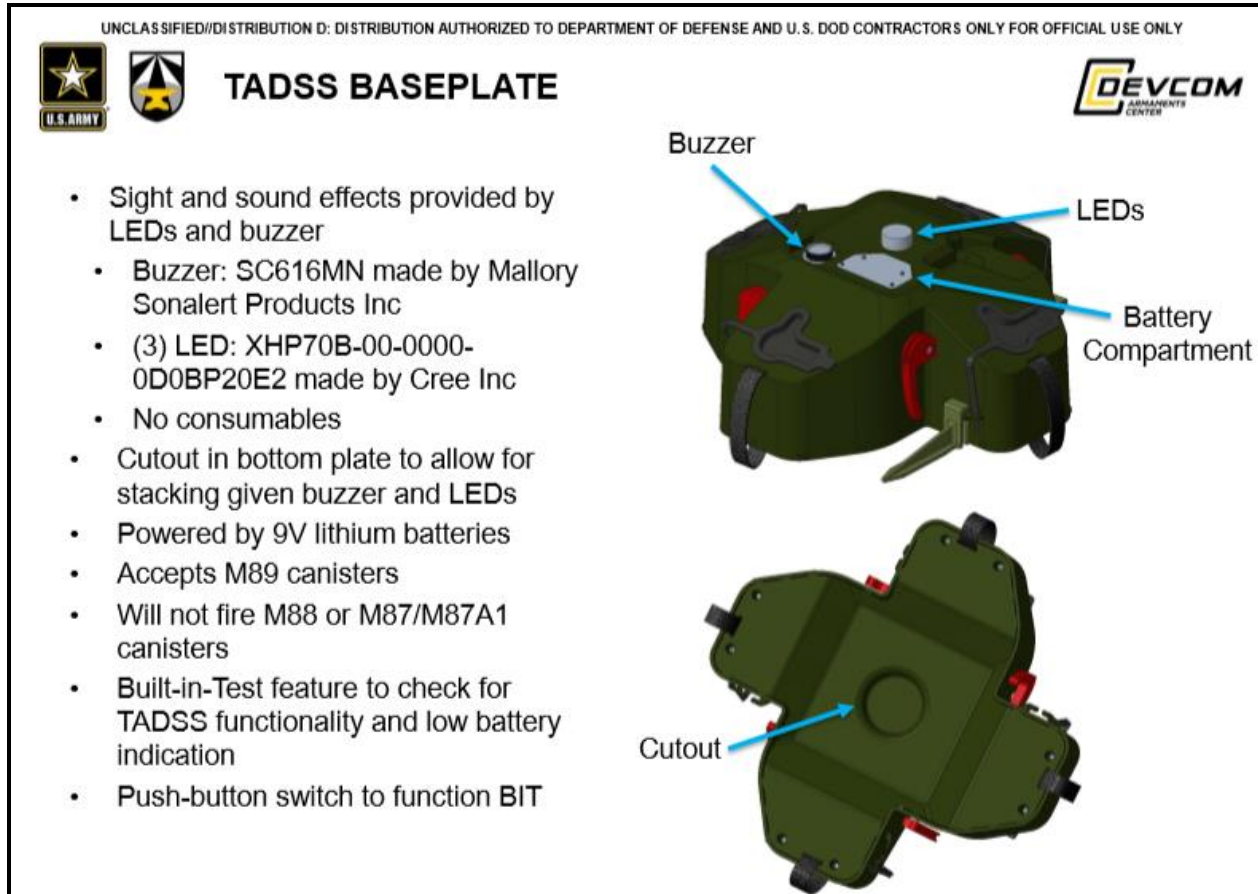
Reference Publications:

None
DVC 05-122/1 was previously assigned as DVC 17-260/4.

Training Requirements Supported:

Individual Training: MOSC 12B, ASI B6, and any MOSC with a mission requirement to operate a vehicle in any environment.

DISPENSER AND MINE, GROUND TRAINING: SAVO

**SAVO Base Plate TADSS Device****Training Category/Level Utilized:**

Engineer/Level-1

Logistic Responsible Command, Service, or Agency:

PEO-STRI

Source and Method of Obtaining:

The Standoff Activated Volcano Obstacle (SAVO) will achieve an Urgent materiel release in 2023. DISPENSER AND MINE, GROUND TRAINING: SAVO are supported by PM CCS ICS pending transition to PEO STRI.

Purpose of Trainer:

The DISPENSER AND MINE, GROUND TRAINING: SAVO, NSN: 6920-01-689-6907, (PN: 13095308) enables system training without live fire. It is comprised of one baseplate, x spools of wire (NSN TBD), canister handles, and stakes.

Functional Description:

The DISPENSER AND MINE, GROUND TRAINING: SAVO is a training device with the same size, weight, and functionality of the SAVO Tactical Baseplate. The differences are the blue color, etc

Physical Information:

The DISPENSER AND MINE, GROUND TRAINING: SAVO container dimensions are TBD wide x TBD deep x TBD inches high, weigh approximately TBD pounds and have a cube of TBD ft³.

The DISPENSER AND MINE, GROUND TRAINING:
SAVO container includes:

- 1x container (PoPcertified)
- 4x canister carry handles/straps
- 1x wire spool (plastic, note: prefer round over oblong spool)
- 4x stakes (similar to Spider but longer?)
- 4x sandbags

Equipment Required, Not Supplied:

Dispensing Set, Munition, Network Command: M7,
Spider, LIN: M92387, NSN: 1230-01-536-0128.
RAM
Blaster

Special Installation Requirements:

(Information not available)

Power Requirements:

The DISPENSER AND MINE, GROUND TRAINING:
SAVO is powered by 1 TBD batteries (NSN TBD).
Batteries should last up to xx days.

Applicable Publications:

TM 9-1230-xxx-10 SAVO Technical Manual
(NSN: TBD) DISPENSER AND MINE, GROUND
TRAINING: SAVO (NSN: 6920-01-689-6907)

Reference Publications:

FM 3-34.210 (Formerly FM 20-32) Explosive Hazards
Operations. This Engineer School field manual provides
Training and Doctrine information for networked munitions
systems.

Training Requirements Supported:

MOSC 12B

**BASIC SERIES 06
FIELD ARTILLERY**



FIRE SUPPORT COMBINED ARMS TACTICAL TRAINER (FSCATT) A6

**Training Category/Level Utilized:**

Field Artillery/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

Train the gunnery team (gunnery crew 13B, Fire Direction 13D).

Functional Description:

Functions just like the real M109 SP Howitzer. Device 06-68G has a digital on-board Fire Control System for conducting fire missions. Traverses 1600 mils left and right, elevates and cants. Uses dummy rounds, fuzzes, and charges. Has sensors that read the round, charge, fuze and fuze setting. Has AAR printout.

Physical Information:

The turret is taken off of an actual howitzer and installed in an aluminum box making the inside of the cab appear and operated the same as the actual howitzer.

Equipment Required, Not Supplied:

The M109A5/A6 Howitzer crews must (as applicable) provide some or all of the following equipment when using the Howitzer Crew Trainer (HCT) (depending on what tasks are to be trained during that period):

- | | |
|---------------------------------|-----------------------------|
| -Test Target Board with Havgars | -Chamber Swab |
| -Gunner's Quadrant | -Staff Cleaning, 4 Foot |
| -Gun Display Unit OD-144(V)1/ | -Screw Driver, Flat Tip SP |
| GYK-29(V) (Mount Required) | -Hammer, Hand |
| -Sight, Breech Bore | -Wrench, Spanner Obturator |
| -M140 Alignment Device | -Wrench, Spanner Fixed |
| (Mount Required) | -Oiler, Hand |
| -M1A1 Collimator | -Cleaning Tool, Vent |
| -M1A2 Aiming Post | -Spacers, M864 |
| -M2 Aiming Circle | -Spacers, M825A1 |
| -M14 Light, Aiming Post | -Twine, Fibrous (Boresight) |
| -M27, M34, and M35 Fuze Setters | -Thermometer (Powder) |
| -M118 Direct Fire Telescope | -Fire Extinguisher |
| -M18 Fuze Wrench | -TA 312's/PRC 127's |
| -M118A2 Elbow Telescope | (if desired) |
| -Belt Primer | -WF-16 Field Wire |
| -Utility Pale | -Holder, Chamber |
| | Swabbing Sponge |

Special Installation Requirements:

Access to building must be a minimum of 12 ft x 12 ft.
Footprint is 35 ft x 35 ft for the A5 and 35 ft x 38 ft for the
A6. Floor must be capable of supporting 14 tons.

Power Requirements:

208/120 vac, 3 pahse, 60 Hz, 100 Amps service.

Applicable Publications:

TD 6-6920-704-10 (A6 HCT)

Reference Publications:

TM 9-2350-314-Series (M109A6 SP Howitzer)

Training Requirements Supported:

MOSC 13B10; 13B30; 13D30; 13F10; 13F30

FIREFINDER ORGANIZATIONAL MAINTENANCE TRAINER AN/TPQ-36(V)8

**Operator Console****Training Category/Level Utilized:**

Field artillery/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

The trainer provides Computer-Aided Instruction on AN/TPQ-36 (V) 8, simulating specific physical characteristics and performance of the radar system. This trainer is designed to supplement training of students currently being trained or previously trained in Firefinder Radar Maintenance, to include training on critical maintenance tasks.

Functional Description:

The trainer accurately simulates the Maintenance Technician's man-machine interface of the AN/TPQ-36 (V) 8 Radar System. The trainer consists of five AN/TPQ-36 (V) 8 Maintenance Trainers, each connected to an actual ANTPQ-36 Antenna/Transceiver Group. The trainer is designed to simulate accurately all functions of the AN/TPQ-36 (V) 8 Radar System, allowing the maintenance technician the opportunity to become proficient in skills required to maintain the AN/TPQ-36 (V) 8 radar.

**Firefinder Radar AN/TPQ-36
Antenna/Transceiver Group****Physical Information:**

Operator Console: 65" x 101" x 83"

Equipment Required, Not Supplied:

None

Special Installation Requirements:

360 square feet of floor space minimum per station.

Power Requirements:

110/208vac, 400 Hz, 3-phase, 10kva

Applicable Publications:

N/A

Reference Publications:

TM 11-5840-380-23-1

TM 11-5840-380 23-2

Training Requirements Supported:US Army MOSC 94M and 131A

COMMAND AND CONTROL TACTICAL TRAINER (C2TT)



Monitor and Keyboard

Training Category/Level Utilized:

Field Artillery/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

(Information not available)

Purpose of Trainer:

Provides simulation of the tactical movement and conduct of fire missions of a MLRS Battalions that consisted of Battalion and Battery Fire Direction Systems, MLRS Launchers, rocket/missile flyouts, submunition dispense and detonation.

Functional Description:

The Command and Control Tactical Trainer (C2TT), a simulation-based training package, is comprised of software components that represent the control features of the MLRS System of Systems. C2TT is comprised of the Scenario Generator, the Launcher Simulation, the Ammunition-fuel Supply Simulation, the Radio Interface Simulation, and the Control Center. In addition to the C2TT software components, C2TT will be fielded with a unique modem, known as Fire Direction (FD) Modem II, appropriate cables, speaker, modem power supply, and documentation.

C2TT has the capability to be used as a collective or individual trainer in classroom, motor pool, or tactical environments. C2TT is used to simulate and train MLRS Command and Control (C2) operator at Battery and Battalion with accurate and consistent digital messages from higher echelons and from MRLS launchers. The Scenario Generator is used to develop digital messages and

message scripts and subsequently deliver them to (C2) echelons operating Field Artillery Tactical Data System (FATDS) Package 11 Fire Detection System (FDS).

The Launcher Simulation Represents from 1 to 9 launchers on a Battery net and responds to all digital messages from a FATDS Package 11 Battery FDS with accurate and doctrinally correct messages, according to a validated time line. The FD Modem II is a self-contained Frequency Shift Keying (FSK) modem that provides the interface to a SINCGARS transceiver or a Tactical Communications Interface Modem (TCIM).

Physical Information:

PC.Laptop with external modem; Scenario driver (AFATDS-Pkg 11 message formats); Launcher emulator

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

(Information not available)

Applicable Publications:

(Information not available)

Reference Publications:

(Information not available)

Training Requirements Supported:

MOSC 13 Series

**ORGANIZATIONAL MAINTENANCE TRAINER (OMT)
FOR
HIGH MOBILITY ARTILLERY ROCKET SYSTEM (HIMARS)
HIMARS RE-SUPPLY VEHICLE (RSV)
MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)**



OMT FOR HIMARS, HIMARS RSV, AND MLRS

Training Category/Level Utilized:

Field Artillery/Level 1

Logistic Responsible Command, Service, or Agency:

U.S. Army Fires Center of Excellence (FCoE)

Source and Method of Obtaining:

For information concerning availability, supply and maintenance support, contact local Training Support Center (TSC).

Purpose of Trainer:

The OMT Simulates vehicle components and operations, providing controlled malfunctions that simulate various equipment faults to familiarize mechanics in the procedures required for organizational maintenance of the HIMARS, HIMARS RSV, and MLRS.

Functional Description:

The OMT runs preprogrammed exercise lessons. The Instructor controls the assignment of tasks and monitors the operation of the simulators using the Instructor Operator Station. The students troubleshoot the faults using the trainer controls and indicators at the student station and troubleshooting procedures located in the Interactive Electronic Technical Manual.

Physical Information:

DVC 06-112/A consists of an Instructor/Operator Station, twelve Student Stations, and Video Distribution System.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

115 VAC, $\pm 5\%$, 60Hz ± 2 Hz, Single Phase

Applicable Publications:

OUM 06-6920-707-10 – OMT HIMARS, HIMARS RSV and MLRS

SMM 06-6920-707-24 - OMT HIMARS, HIMARS RSV and MLRS

TD 06-6920-707-20 (COTS) Manuals - OMT HIMARS, HIMARS RSV and MLRS

Reference Publications:

N/A

DVC was previously assigned as DVC 09-146/A.

Training Requirements Supported:

MOSC 13M

M1130 105MM INERT TRAINING PROJECTILE

**Training Category/Level Utilized:**

Field Artillery/Level 2/3

Logistic Responsible Command, Service, or Agency:

PM CAS, Picatinny Arsenal, NJ

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

Provides realistic training on identification and handling of an M1130 105mm Projectile. Cannot be ballistically fired.

Functional Description:

The device is unpackaged. It has a threaded ogive that can be used to install inert fuzes appropriate for the projectile.

Physical Information:

Weight – 33.94 lbs (nominal) w/o fuze
Length – 17.96” (max) w/o fuze or hex shipping plug

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

TM 9-1015-252-10, TM 43-0001-28, TM 9-1300-251-20&P, TM 9-1300-251-34&P (Note: These last two TMs will be replaced by TM 9-1300-251-23&P in Sept, 2012)

Reference Publications:

None

Training Requirements Supported:

MOSC 13 Series - Institutional and Operational Domain Ammunition training. Supports MOS 13B tasks 061-266-1501; 061-266-1508; 061-266-4019. 061-266-3501; 061-357-1019; MTP 6-037-30, other MOSC 89B, 89D

M1064, 105MM ILLUMINATION CARTRIDGE

**Training Category/Level Utilized:**

Field Artillery/Levels 2 and 3

Logistic Responsible Command, Service, or Agency:

PM CAS, Picatinny Arsenal, NJ

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

Provides realistic training on identification, packaging/un-packaging and handling of Cannon Artillery Ammunition.

Functional Description:

The device is packaged in a fiberboard container similar to the actual projectile. It contains an inert propellant charge and primer in the cartridge casing. It has a threaded ogive that can be used to install inert fuzes appropriate for the projectile.

Physical Information:

Weight – 34.06 lbs (15.45 kg)
Length – 21.63” (549.5 mm w/fuze)

Equipment Required, Not Supplied:

The PIAFS-1 Inert MOFA training fuze is used to complete the assembly of the final cartridge

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

TM 9-1300-251-20&P; TM 9-1015-252-10; TM 43-0001-28

Reference Publications:

None

Training Requirements Supported:

MOSC 13 Series - Institutional and Operational Domain Ammunition training.
Supports MOSC 13B tasks 061-281-1543; 061-266-1508; 061-281-2006; 061-266-2236; 061-266-2237; 061-266-4019. MTP 6-037-30

M1066, 155MM INFRARED ILLUMINATION PROJECTILE

**Training Category/Level Utilized:**

Field Artillery/Levels 2 and 3

Logistic Responsible Command, Service, or Agency:

PM CAS, Picatinny Arsenal, NJ

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

Provides realistic training on identification, packaging/un-packaging and handling of Cannon Artillery Ammunition.

Functional Description:

The device is unpackaged similar to the actual projectile. It has a threaded ogive that can be used to install inert fuzes appropriate for the projectile.

Physical Information:

Weight – 92 lbs (nominal) w/o fuze
Length – 23.79” (max) w/o fuze or lifting plug

Equipment Required, Not Supplied:

The PIAFS-1 Inert MOFA training fuze is used to complete the assembly of the final cartridge

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

TM 9-1300-251-20&P; TM 9-1025-215-10; TM 9-2350-314-10; TM 43-0001-28

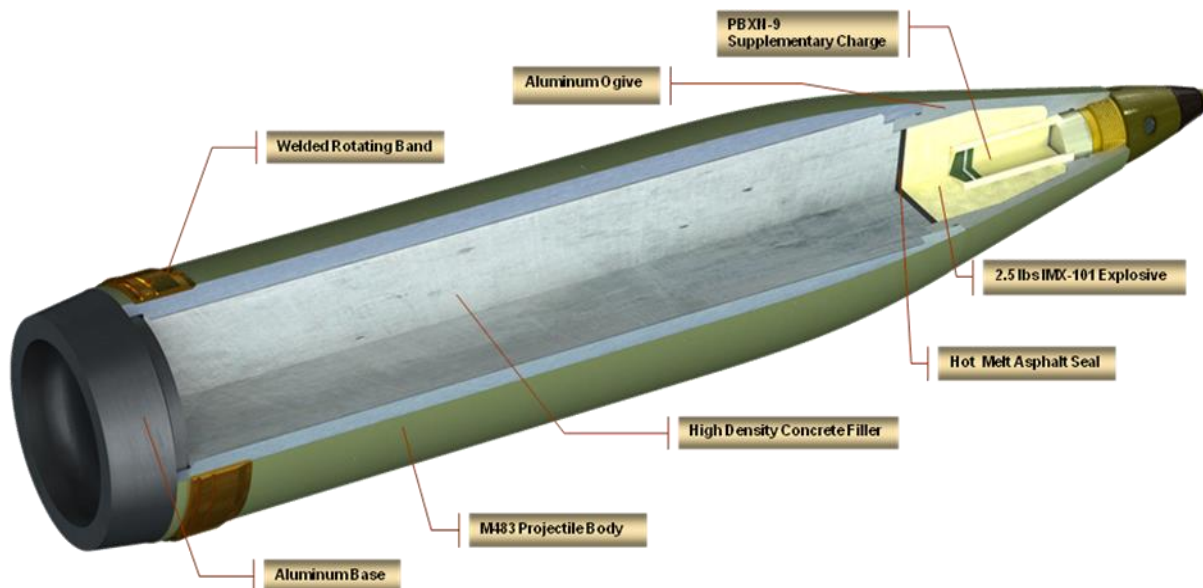
Reference Publications:

None

Training Requirements Supported:

MOSC - 13 Series - Institutional and Operational
Domain Ammunition training.
Supports MOSC 13B tasks 061-266-1501; 061-266-1508;
061-266-4019. 061-266-3501; 061-357-1019; MTP 6-037-
30

DUMMY PROJECTILE, 155MM: INERT FOR M1122



Training Category/Level Utilized:
Artillery/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:
This training device will be used by TSC units to practice before using the M1122 155mm HE training projectile in live fire training exercises. The tactical trainer is used to train for the M795 155mm HE projectile.

Functional Description:
The M1122 HE projectile is a modified M483A1 DPICM projectile. The aluminum base, steel body, and aluminum ogive are re-used after download and demil of the M483A1 DPICM grenades.

Physical Information:
Weight – 103 lbs
Length – 31.613 from nose of projectile to base

Diameter – (bourelet) is 6.095"

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
The ammo has 2.5lbs of IMX-101 explosive and a PBXN-9 Supplemental Charge which provide Insensitive Munitions (IM) Enhancements

Applicable Publications:
Operator's Manual: TM 9-1025-211-10, TM 9-2350-314-10, TM 9-1025-214-10, and TM 43-0001-28

Reference Publications:
Maintenance Manual: TM 9-1300-251-20&P, TM 9-1300-251-34&P

Training Requirements Supported:
MOSC are as follows: 13B (Canon Crew Member, 89B (Ammo Specialist), and 89D (EOD Specialist).

CALL FOR FIRE TRAINER INCREMENT III (CFFT)

NSN 6910-01-624-5021	DVC 06-124/1	(CFFT III) 1:4 Configuration
NSN 6910-01-624-5024	DVC 06-124/2	(CFFT III) 1:12 Configuration
NSN 6910-01-624-1285	DVC 06-124/3	(CFFT III) 1:30 Configuration
NSN 6910-01-624-1283	DVC 06-124/3/1	(CFFT III) 1:30 Enhanced (6 Stations)
NSN 6910-01-624-5001	DVC 06-124/4	(CFFT III) Joint Closed Air Support (JCAS)
NSN 6910-01-624-5025	DVC 06-124/5	(CFFT III) Extended Display(ED)
NSN 6910-01-624-5026	DVC 06-124/6	(CFFT III) Mobile Team Trainer (MTT)
NSN 6910-01-624-5020	DVC 06-124/8	(CFFT III) 1:4 Adaptive Full Spectrum Module (AFSM) Immersive
NSN 6910-01-624-5019	DVC 06-124/9	(CFFT III) 1:4 Close Air Support Module (CASM) Immersive
NSN 6910-01-624-5016	DVC 06-124/10	(CFFT III) 1:4 Urban Terrain Module (UTM)


Training Category/Level Utilized:

Field Artillery/Level 2/3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

Train personnel in how to perform calls for indirect fire, close air support and naval gunfire.

Functional Description:

The CFFT III is a lightweight, rapidly deployable, observed fire training system that provides simulated battlefield training for Fire Support Specialists, Joint Fires Observers (JFOs), and Soldiers at the institutional and unit

level. This system is an improvement over the CFFT II by the complete redesign of the system architecture to be Joint Fires Product Line compliant, vesting improving the flexibility of the system, providing the capability to easily add additional types of simulated military equipment (SME) software providing the ability to link with other simulations, C2 systems or operational platforms. Another added capability is the provision to operate using classified material. The CFFT III provides simulated battlefield training to Forward Observers in three standard configurations: 1:4, 1:12, 1:30, and four variants: 1:30 Enhanced (1:30E), Extended Display (ED), Joint Close Air Support (JCAS) and Mobile Team Trainer (MTT) configuration. Each CFFT III includes, as simulated military equipment (SME), a Lightweight Laser Designator Rangefinder (LLDR) as part of an enhanced student station.

Physical Information:

The system which comes in five shipping containers consists of an instructor station (with three or four computers depending on configuration); four, twelve, or thirty student stations (again depending on configuration); and a projector and screen (2 projectors and wide screen for 1:30, 1:30E, and ED configurations). Student stations are arrayed in rows to facilitate specially calibrated binoculars so that all students on a given row will be able to focus on the screen projection. An enhanced student station is included in each system providing training via virtual equipment.

Equipment Required, Not Supplied:

The 1:4 configuration requires tables/chairs for the instructor station and four student stations in a room no smaller than 27' L x 15' W x 8' H. The 1:12 configuration requires tables/chairs for the instructor station and twelve student stations in a room no smaller than 37' L x 15' W x 8' H.

Special Installation Requirements:

Prior to fielding, 1:30 facility requirement includes room dimensions of 47' L x 30' W x 8' H. To facilitate large audience view of screens, room must also have tiered floor to support the four rows of eight student stations each.

Power Requirements:

110/220 VAC, 50-60 Hz

Applicable Publications:

Operator Manual
TSUH
Maintenance Manual

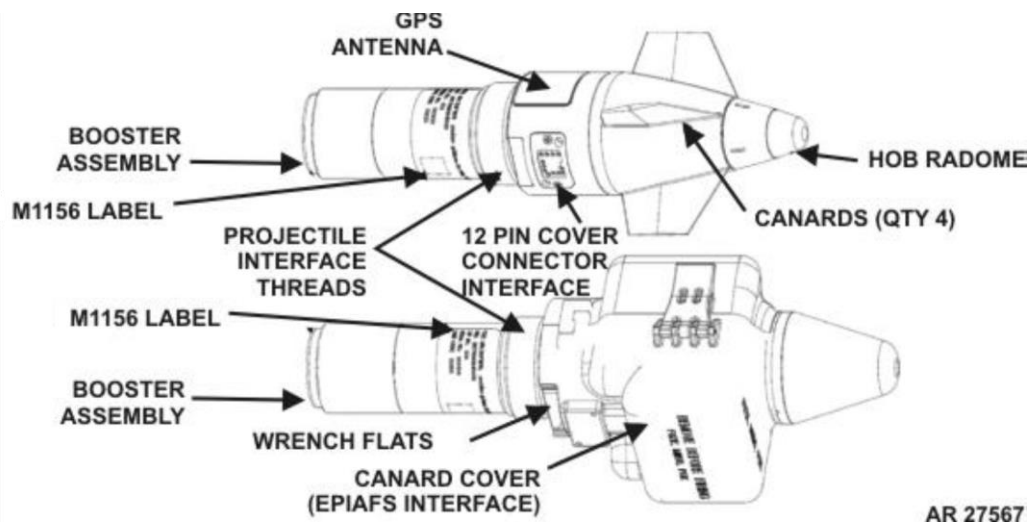
Reference Publications:

N/A

Training Requirements Supported:

MOSC 13F and soldiers how to perform calls for fire.

FUZE & COVER ASSEMBLY, UNSETTABLE TRAINER



PGK, M1156 Full Up Training Device

Training Category/Level Utilized:

Artillery/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

Provide the user familiarity with how the PGK will look, feel, and operate in its intended environment.

Functional Description:

PGK is a precision fuze that can be used with either the M549A1 High Explosive (HE) Rocket Assisted or M795 HE 155mm projectiles to improve accuracy of these conventional artillery rounds. The PGK is screwed on manually and then tightened using the approved fuze wrench. It is then set and interrogated by the Enhanced Portable Indirect Artillery Fuze Setter (EPIAFS) with the canard cover on. The canard cover is then removed prior to firing the projectile. Target data consisting of the Global Positioning System (GPS) key, fuze function mode, and reference data for the trajectory between the gun and the target is computed by the digital fire control system/Advanced Field Artillery and Tactical Data Systems and subsequently transferred inductively thru EPIAFS to PGK. The round is then fired.

Physical Information:

Weight: 4.6 lbs

Height: 11.93 inches (with canard cover)

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

The tactical PGK is initially powered by EPIAFS and stored in the on-board super capacitor. Pre-flight power is stored for 7 minutes. An on-board alternator provides power during the flight.

Applicable Publications:

TM 9-2350-314-10, TM 9-1025-215-10, (TM-10407A-10/1 Marines Corp), TM 9-1300-251-20&P, TM 9-1300-251-34&P, TM 43-0001-28, Technical Bulletin 9-1390-226-13

Reference Publications:

FM 3-6-50, FM 3-09.8

Training Requirements Supported:

MOSC - Quality Assurance Specialist (Ammunition Surveillance) (QASAS)
Ammunition Specialist - 89B
EOD Specialist - 89D
Unit level, Cannon Crew/operator - 13B,
FA Tactical Data Systems Specialist - MOS 13D
Fire Support Specialist - MOS 13F
Ammunition Warrant Officers - MOS 890A

Field Artillery M777A2/M119A3/M109A7 Computer Based Training System

NSN 6910-01-667-8568 DVC 06-126/1
 NSN 6910-01-667-8595 DVC 06-126/2
 NSN 6910-01-667-8583 DVC 06-126/3
 NSN 6910-01-667-8509 DVC 06-126/4
 NSN 6910-01-667-8558 DVC 06-126/5

FA M777A2/M119A3/M109A7 HT Fixed Instructor Operator (IOS) Station
 FA M777A2/M119A3/M109A7 HT Fixed Student Station (SS)
 FA M777A2/M119A3 HT Mobile Kit Computer Based Trainer (CBT)
 FA M777A2/M119A3/M109A7 HT Mobile Kit Light Weight Desktop Trainer (LWDT)
 FA M777A2 M119A3/M109A7 Howitzer Classroom Equipment Kit



DVC 06-126/1



DVC 06-126/2



DVC 06-126/3



DVC 06-126/4



DVC 06-126/5

Training Category/Level Utilized:
 Field Artillery/Level 3

Logistic Responsible Command, Service, or Agency:
 PM Towed Artillery Systems (TAS), PM Self Propelled
 Howitzer System (SPHA), U.S. Army PEO- STRI,
 Orlando FL, Armament Research, Development and
 Engineering Center (ARDEC)

Source and Method of Obtaining:

For information concerning availability, supply and
 maintenance support, contact the local Training
 Support Center (TSC)

Purpose of Trainer:

The Field Artillery M777A2/M119A3/M109A7
 Howitzer Trainer shall provide a virtual interactive
 workspace designed to train artillery cannon crew
 personnel to task standards on critical field artillery tasks.

Functional Description:

The Field Artillery M777A2/M119A3/M109A7
 Howitzer Fixed Instructor Operator Station (IOS)
 incorporates an instructor training management system
 able to assign student modules to Fixed Student Stations
 (SS), retrieve, review, delete, archive, and print selected
 individual performance data.

The Field Artillery M777A2/M119A3/M109A7
 Howitzer Fixed Student Station (SS) allows a student to
 occupy four howitzer positions in an Interactive
 Multimedia Instruction (IMI) environment: Gunner,
 Assistant Gunner, number one Man and Sections Chief.
 Each artillery student position can access artillery critical
 tasks allowing the user to work cooperative or
 independently on the system.

The Field Artillery M777A2/M119A3 Howitzer Trainer
 Mobile Kit Computer Based Trainer (CBT) is a system of

4 mobile computers and network switch packed into a
 pelican

case. M777A2/M119A3 Howitzer Trainer Mobile Kit
 CBT
 training kit allows student to occupy four howitzer
 positions in an Interactive Multimedia Instruction (IMI)
 environment in the CBT mode with the students logging in
 as: Gunner, Assistant Gunner, number one Man and
 Sections Chief. Each artillery student position can access
 artillery critical tasks allowing the user to work
 independently or cooperatively with up to three other
 soldiers on the system.

The Field Artillery M777A2/M119A3/M109A7
 Howitzer Trainer Mobile Kit Light Weight Desktop
 Trainer (LWDT) is a system of 4 mobile computers and
 network switch packed into a pelican case.
 M777A2/M119A3/M109A7 Howitzer Trainer Mobile
 Kit LWDT training kit allows an Instructors to manage
 student instruction. Students can occupy four howitzer
 positions in an Interactive Multimedia Instruction (IMI)
 environment in the LWDT mode with the students
 logging in as: Gunner, Assistant Gunner, number one
 Man and Sections Chief. Student position can be
 assigned artillery critical tasks allowing the user to work
 independently or cooperatively with up to three other
 soldiers on the system. Instructors can assign student
 modules. Retrieve, review, delete, archive, and print
 selected individual performance data. Each computer
 contains both the instructor and student software giving
 the user the flexibility to use the full set of computers for
 instruction.

Field Artillery M777A2 / M119A3/M109A7
 Howitzer Classroom Equipment Kit incorporates a
 projector, printer, and network switch to enable fielding
 of classroom components.

Physical Information:

The Field Artillery M777A2/M119A3/M109A7 Howitzer Trainer Fixed Instructor Operator (IOS). The Fixed Instructor Operator system is fielded with a desk, ergonomic LCD monitor arm, CPU rack, chair, computer, and 2 monitors.

M777A2/M119A3/M109A7 Howitzer Trainer Fixed Student station (SS). The Fixed Instructor Operator system is fielded with a desk, ergonomic LCD monitor arm, CPU rack, chair, computer, and monitor.

Field Artillery M777A2 M119A3/M109A7 Howitzer Mobile Kit CBT. The Mobile Kit Computer CBT is field with 4 laptop computers, 1 pelican case, 1 network switch, Ethernet cables, and a surge power strip.

Field Artillery M777A2 / M119A3/M109A7 Howitzer Mobile Kit Computer Based Trainer LWDT. The Mobile Kit Computer LWDT is field with 4 laptop computers, 1 pelican case, 1 network switch, Ethernet cables, and a surge power strip.

Field Artillery M777A2 / M119A3/M109A7 Howitzer Classroom Equipment Kit. The Classroom Kit is fielded with: Projector, printer, network switch

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Classroom site survey require before classroom installation.

Power Requirements:

120vac, 60Hz, 15A, single-phase

Applicable Publications:

OUM/SMM TBD

Reference Publications:

None

Training Requirements Supported:

MOSC 13B

M1130 INERT TRAINING AID, CARTRIDGE, 105MM, HIGH EXPLOSIVE (HE), PRE-FORMED FRAGMENTATION (PFF), BASE BLEED (BB)



Training Category/Level Utilized:
Artillery/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:
Provides realistic training on identification and handling of the M1130 cartridge. The device cannot be fired from a weapon.

Functional Description:
The device is packaged in a PA112 fiber container (including C washer, fiberboard spacer, and protector tube assembly) and the fiber container is packaged in a PA117 metal container. This is the same packaging as the tactical

M1130 cartridge. The device contains an inert M1130 projectile, M14 cartridge case with an inert M28A2 percussion primer and inert M67 propelling charge. It has a threaded ogive with a hex plug that can be removed to install inert fuzes appropriate to the projectile. The projectile is painted bronze with black markings.

Physical Information:

M1130 inert training aid, cartridge:
Weight – 43 lb (20 kg) w/o hex plug and C washer
Length – 30.7 in. (78.0 cm) max w/ hex plug
PA112 fiber container (inner packaging):
Weight – 6.7 lb (3.0 kg)
Length – 37.69 in (95.73 cm) max

PA117 metal container (outer packaging):
Weight – 19.0 lb (8.62 kg)
Length – 44.48 in (113.0 cm) max

Equipment Required, Not Supplied:

Inert Artillery Fuze that is compatible with the M1130 inert training aid.

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

TM 9-1015-252-10, TM 9-1015-260-10, TM 43-0001-28, TM 9-1300-251-20&P, TM 9-1300-251-34&P (Note:

These last two TMs will be superseded by TM 9-1300-251-23&P)

Reference Publications:

None

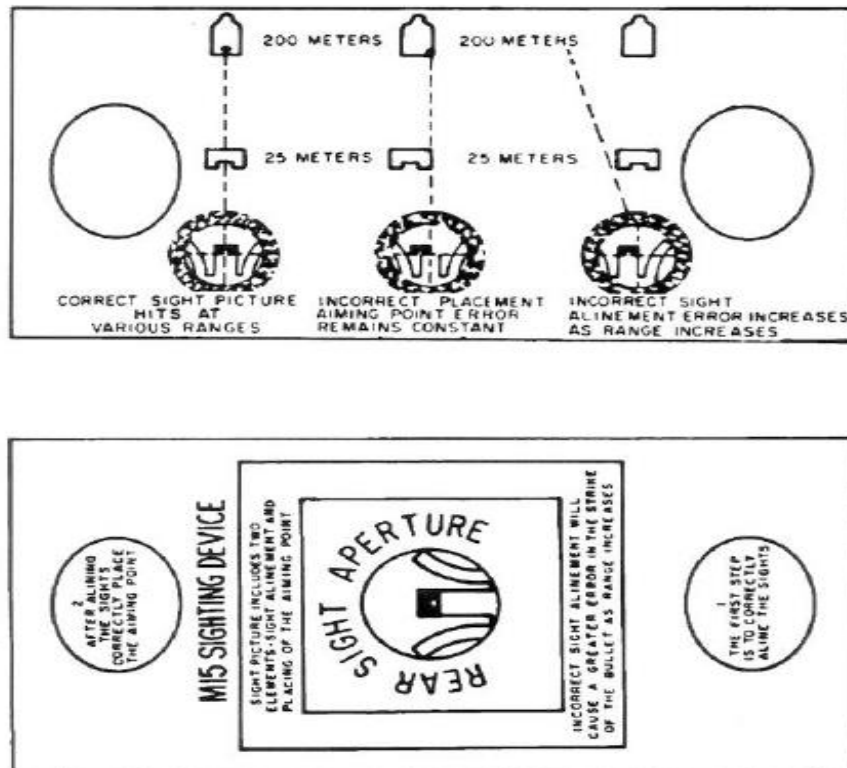
Training Requirements Supported:

MOSC 13 Series – Field Artillery. TC 3-09.8 Field Artillery Cannon Gunnery lists the following tasks that apply to this inert training aid, cartridge. 13B Tasks: 06-4-5007 (load howitzer section ammunition), 061-266-1508 (prepare ammunition for firing, 061-281-1543 (prepare a 105mm cartridge for firing from an M119 howitzer), and 06-4-6027 (transport ammunition).

**BASIC SERIES 07
INFANTRY**



M15 SIGHTING DEVICE



DVC NO. 07-26

Training Category/Level Utilized:

Infantry/Level 3

Equipment Required, Not Supplied:

None

Logistic Responsible Command, Service, or Agency:

ACALA

Special Installation Requirements:

None

Source and Method of Obtaining:

Generally available through the supply system as authorized by AR 310-49.

Power Requirements:

None

Purpose of Trainer:

To support training of riflemen in the firing of the 7.62mm M14 Rifle and the 5.56 mm M16A1 Rifle. The specific training requirements supported are shown following the descriptive data.

Applicable Publications:

N/A

Reference Publications:

TM 9-1005-223 Series
TM 9-1005-249 Series
FM 3-22.09

Functional Description:

The Rifle Sighting Trainer M15 is a cardboard device used to establish correct sight alignment.

Training Requirements Supported:

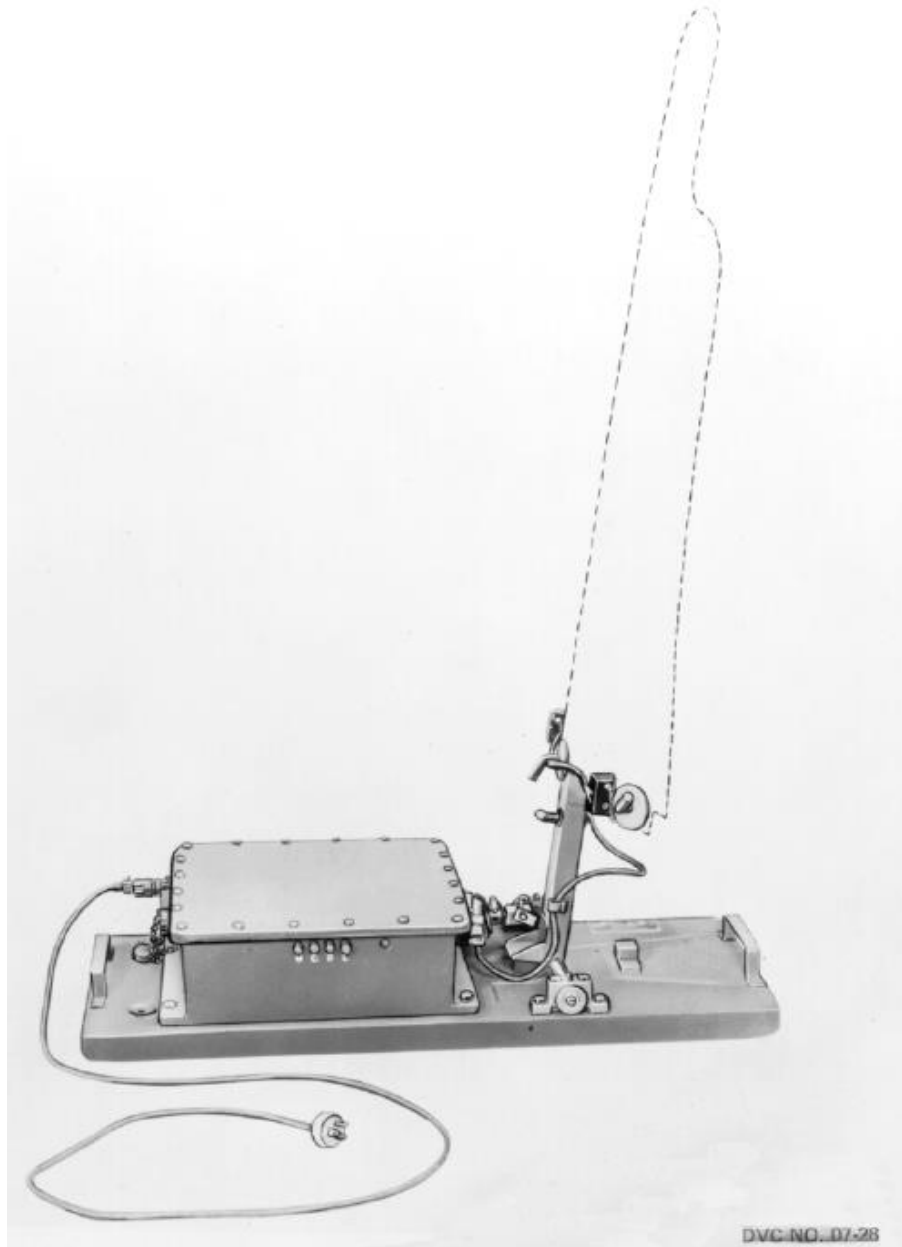
MOSC - This trainer supports individual task training for M16 series weapons and M4 carbine training strategies outlined in FM 3-22.09, Rifle Marksmanship.

Physical Information:

7" x 4"

Individual Tasks (STP 21-1 SMCT)
07-311-2007, 071-100-0003

TARGET HOLDING MECHANISM, TRAINFIRE



Training Category/Level Utilized:
Infantry/Level 2

Logistic Responsible Command, Service, or Agency:
ACALA

Source and Method of Obtaining:
Generally available through the supply system as authorized by AR 310-49.

Purpose of Trainer:
To support training of personnel in individual unit, field and combat small arms firing. The specific training requirements supported are shown following the descriptive data.

Functional Description:
The TRAINFIRE Target Holding Mechanism, M31A1, with power pack, is an electric motor-driven device

designed for use in rifle training and will accommodate one target, either the kneeling E-silhouette or the prone F-silhouette target. It consists of cable assemblies and a mechanism assembly. The Standard A TRAINFIRE Mechanism, M31A1, replaces the Standard B TRAINFIRE Mechanism, M31.

Physical Information:

Mechanism assembly M31A1: 29" x 17" x 10"; 72 lb.

Equipment Required, Not Supplied:

Silhouette targets (See reference publication)

Special Installation Requirements:

None

Power Requirements:

Primary voltage (input): 110vac and 220vac
Secondary operating voltage: 12vdc to 16vdc

Applicable Publications:

TM 9-6920-203-14&P

Reference Publications:

FM 3-22.09

Training Requirements Supported:

MOSC - This trainer supports individual training of small arms marksmanship.

Individual Tasks (STP 21-1 SMCT)

071-311-2007, 071-025-0007, 071-1-010-0006,
071-100-0003, 071-004-0006

5.56MM CONVERSION KIT (RIMFIRE)



Training Category/Level Utilized:
Infantry/Level 3

Logistic Responsible Command, Service, or Agency:
ACALA

Source and Method of Obtaining:
Available through local TSC.

Purpose of Trainer:

The Conversion Kit (CK) provides a method to use .22 caliber LR, rimfire ammunition in the M16 or M16A1 Rifle for individual training purposes. The use of .22 caliber ammunition in place of the standard military 5.56mm ammunition will result in reduced training costs and allow the use of firing ranges that cannot accommodate the higher velocity and longer range cartridges. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The device consists of two major components, a magazine insert (or adapter), for .22 caliber, LR ammunition, and a bolt assembly. The magazine component is a 10-round magazine which fits into a standard 5.56mm 20- or 30-round magazine. The .22 caliber bolt assembly consists of a smoothbore barrel configured externally to the 5.56mm chamber, and internally to accept the .22 caliber LR cartridge and a bolt with a rimfire firing pin. The device is installed in the M16 or M16A1 Rifle in place of the regular bolt carrier group, is blowback operated, is capable of firing in the

semiautomatic mode only, and is limited in accuracy to 50 meters.

Physical Information:

Bolt adapter assembly: 8.75", 1 lb.
Magazine insert 3", 4 oz.

Equipment Required, Not Supplied:
.22 caliber rimfire ammunition

Special Installation Requirements:
None

Power Requirements:
None

Special Requirements:
Familiarization with range procedures, weapon operation and maintenance, and safety practices.

Applicable Publications:
TM 9-6920-363-12&P

Reference Publications:
FM 3-22.9
TM 9-1005-249 Series

Training Requirements Supported:
MOSC - This trainer supports individual task training for M16 series weapons and M4 carbine training strategies outlined in FM 3-22.09, Rifle Marksmanship

Individual Tasks (STP 21-1 SMCT)
071-311-2007, 071-100-0003

BLANK AMMUNITION FIRING ATTACHMENT: M2 MACHINE GUN



Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

ACALA

Source and Method of Obtaining:

Available through local TSC.

Purpose of Trainer:

The device permits firing of linked blank .50 caliber ammunition with the M2 machine gun. It will function as the weapon effect signature simulator for the M2 machine gun in engagement simulation systems such as the Multiple Integrated Laser Engagement System (MILES).

Functional Description:

The firing attachment consists of one muzzle restriction with orifice, three spacer rods, one support, attaching hardware and guide assembly. It allows the weapon to function by restricting the gas flow at the muzzle end of the barrel. The guide assembly is used to act as a spacer to assure proper feeding of a live round of ammunition into the feedway. The attachment is designed to fire the production improved M1A1 blank ammunition.

Physical Information:

Length: 33"; Diameter: 5"

Equipment Required, Not Supplied:

M2 Machine Gun
M1A1 Blank Ammunition

Special Installation Requirements:

(Information not available)

Power Requirements:

None

Applicable Publications:

TM 9-6920-434-12&P

Reference Publications:

Applicable Weapon System Manual

Training Requirements Supported:

MOSC - This device supports live force-on-force training IAW unit CATS.

M2 PRACTICE BOLT FOR SHORT RANGE AMMUNITION

**Training Category/Level Utilized:**

Infantry/Level 3

Logistic Responsible Command, Service, or Agency:

ACALA

Source and Method of Obtaining:

Available through local TSC.

Purpose of Trainer:

The M2 Practice Bolt provides a method to allow use of the M862 Practice Cartridge, while disallowing accidental firing of the standard 5.56mm cartridge. The M862 ammunition has a maximum range of 300 meters. This allows the use of firing ranges that cannot accommodate the higher velocity and long range cartridges. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The M2 Practice Bolt replaces the standard M16 Series Rifle Bolt Carrier Assembly to enable plastic practice ammunition to be fired. When firing the M862 Practice Cartridge, the M16 Series Rifle is converted from gas operation to blow back operation. The training ammunition enables realistic firing training to be carried out at a shorter distance with reduced danger areas.

Physical Information:

Length: 6"

Weight: .5 lb

Caliber: 5.56mm

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

TM 9-6920-746-12&P

Reference Publications:

TM 9-1005-249 Series

TM 9-1005-319 Series

FM 3-22.9

Training Requirements Supported:

MOSC - This trainer supports individual task training for M16 series weapons and M4 carbine training strategies outlined in FM 3-22.09, Rifle Marksmanship.

Individual Tasks (STP 21-1 SMCT)

071-311-2007, 071-100-0003

M3 RECOIL AMPLIFIER FOR SHORT RANGE AMMUNITION

**Training Category/Level Utilized:**

Infantry/Level 3

Logistic Responsible Command, Service, or Agency:

ACALA

Source and Method of Obtaining:

Available through local TSC.

Purpose of Trainer:

The Caliber .50 M3 Recoil Amplifier is used in conjunction with the M2 Machine Gun for firing the M858 ball and M860 tracer cartridges only. The short range training ammunition has a maximum range of 150 meters. This allows the use of firing ranges that cannot accommodate the higher velocity and longer range cartridges. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The M3 Recoil Amplifier screws into the M2 Machine Gun receiver in the same manner as the standard barrel is installed, to enable practice ammunition to be fired and still provide enough back pressure to sustain continuous firing. When firing with cal .50 practice cartridges (M858 Ball) or cal .50 tracer (M860) practice cartridges, gases that have been forced into the cylinder press against the piston ring, which surrounds the barrel, and thus, by the recoil of the barrel, effects an automatic function of the weapon. The recoil amplifier is constructed for the purpose of functional firing with short range cal .50 training ammunition when used with the cal .50 M2 Machine Gun. The short range training ammunition enables realistic training to be carried out at shorter distances with reduced danger areas.

Physical Information:

45" L x 5" W x 5" H; 28.75 lb
Caliber: .50 Cal

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Described in TM 9-1005-203-12&P

Power Requirements:

None

Applicable Publications:

TM 9-1005-203-12&P

Reference Publications:

TM 9-1005-213 Series
FM 3-22.65

Training Requirements Supported:

MOSC - This trainer supports individual task training for M2 .50 caliber Machine Gun training strategies outlines in FM 3-22.65.

Individual Tasks (STP 21-1 SMCT)
071-313-3154

M287 TRACER BULLET TRAINER (TBT) FOR THE M137 AT4 ANTI-TANK WEAPON

**Training Category/Level Utilized:**

Anti-Armor/level 3

Logistic Responsible Command, Service, or Agency:

AMCOM

Source and Method of Obtaining:

Available through local TSC.

Purpose of Trainer:

DVC 07-68 simulates operation and firing of the AT4 Tactical Anti-Tank Weapon. It allows the student to fire a 9mm tracer bullet at stationary and moving armor targets. The bullet has the same trajectory as the 84mm rocket that is fired by the AT4 weapon.

Functional Description:

M287 Practice Launcher is a right-shoulder fired trainer that is similar to the AT4 tactical weapon. It consists of a tube, sling, pop-up M16-type peep/post sight, transport safety, safety cocking lever, firing button, instruction decals, and bolt. A 9mm machine gun barrel is located inside the tube. Firing is accomplished by removing the bolt, placing the 9mm tracer bullet inside the bolt, inserting the bolt, removing the transport safety pin, placing the weapon on the right shoulder, releasing front and rear sights, cocking, depressing the safety, aiming and pressing the firing button. Maximum effective range is 300 meters.

Physical Information:

40" L; 15 lbs

Shipping Configuration: 5 each per wooden box (115 lbs), 4 boxes per pallet (530 lbs)

Equipment Required, Not Supplied:

14 Spare Parts

Small Arms Repairman's Kit

6mm hex wrench; 3mm hex wrench

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

TM 9-6920-886-14&P

Reference Publications:

FM 3-023.25

Training Requirements Supported:

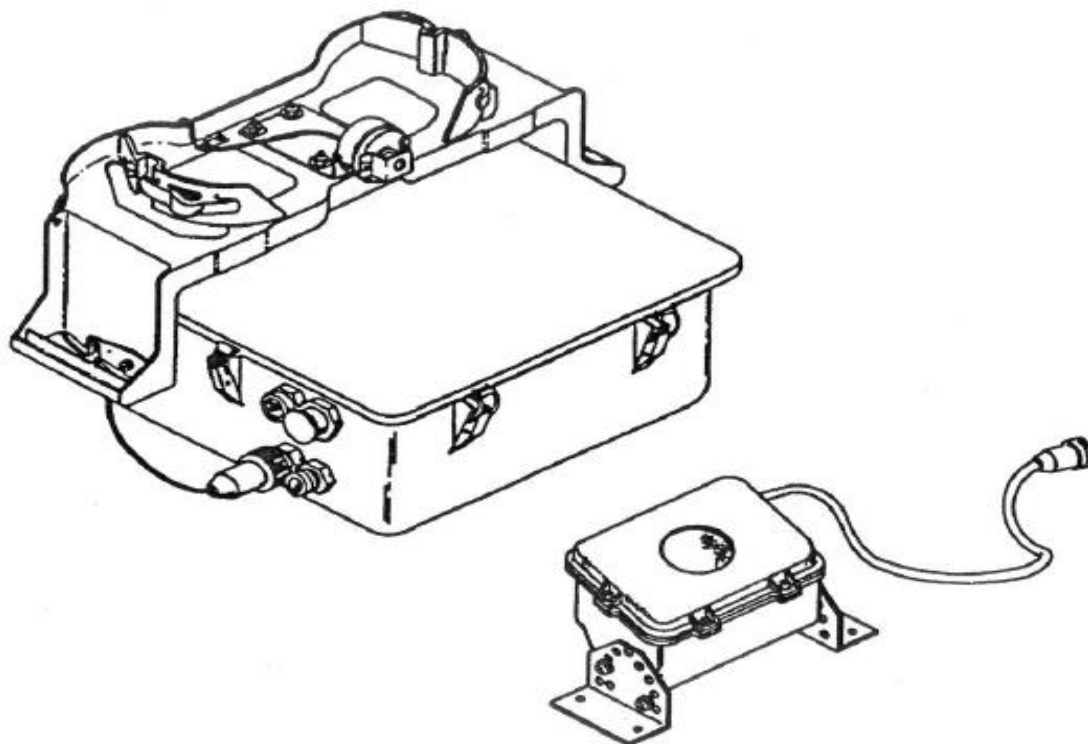
MOSC - This trainer supports individual task training for the AT-4 training strategies IAW FM 3-023.25, Shoulder Launched Munitions.

Individual Tasks (STP 21-1 SMCT)

071-054-0001, 071-054-0002,

071-054-0003, 071-054-0004

REMOTE TARGET SYSTEM (RETS) INFANTRY TARGET MECHANISM (ITM)



Training Category/Level Utilized:
Infantry/Level 1

Training Category/Level Utilized:
Infantry/Level 1

Logistic Responsible Command, Service, or Agency:
ACALA

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

The Infantry Target Mechanism (ITM) is a component of the Remoted Target System (RETS) DVC 09-24. ITM is installed to hold movable and stationary targets. It may be fitted with a small arms muzzle flash simulator, a rifle fire simulator or used alone.

Functional Description:

The target mechanism raises and lowers targets on electronic commands from the Range Control Station (RCS). It contains a hit sensor which detects and transmits hit information to the MFS. The ITM provides visual effects via light emitting diodes. It operates either as a single-shot or automatic at a rate of 600 rounds per minute. It is environmentally sealed for all-weather use.

Physical Information:
14" W x 8" H x 14" D; 20 lb.

Equipment Required, Not Supplied:
RETS Infantry Range (refer to DVC 09-24)

Special Installation Requirements:
RETS Infantry Range (refer to DVC 09-24)

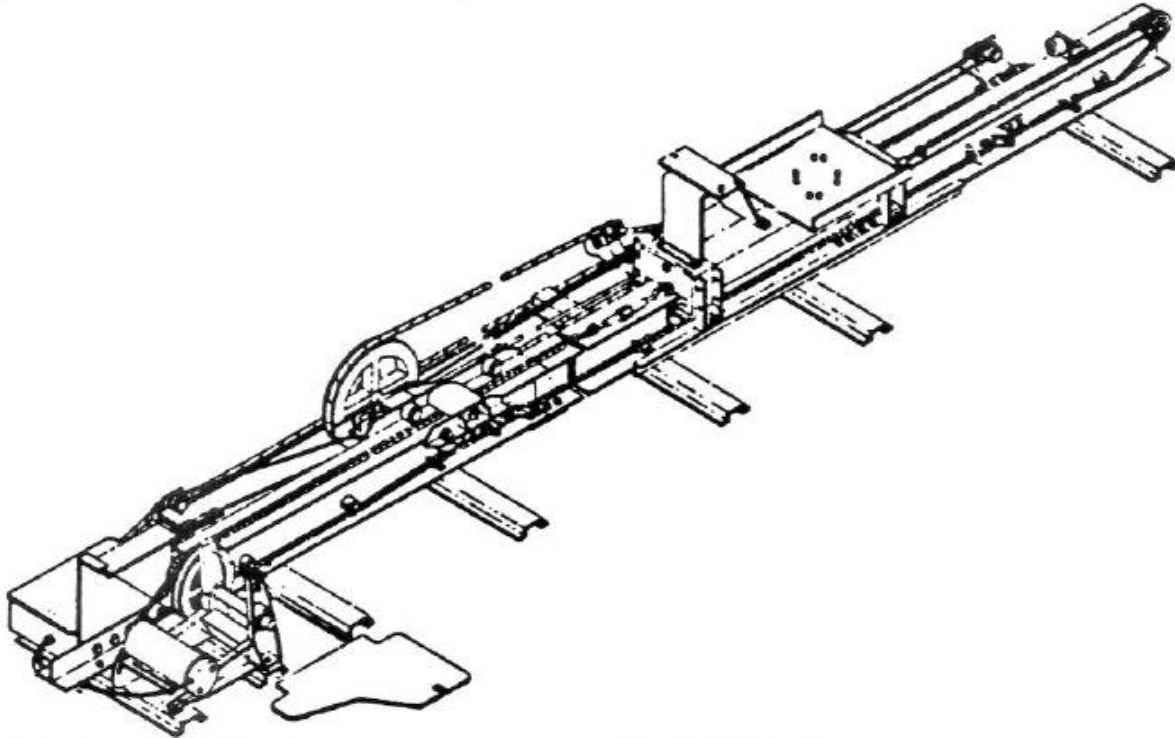
Power Requirements:
 24 ± 1.5 vdc, 10 A, 240 W

Applicable Publications:
TM 9-6920-742-14-2
TM 9-6920-742-14-3
TM 9-6920-742-24P-2
TM 9-6920-742-24P-3

Reference Publications:
TM 9-6920-742-14-1
TM 9-6920-742-24P-1

Training Requirements Supported:
MOSC 11B Infantry

REMOTE TARGET SYSTEM (RETS) INFANTRY MOVING TARGET CARRIER (IMTC)

**Training Category/Level Utilized:**

Infantry/Level 1

Logistic Responsible Command, Service, or Agency:

ACALA

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

The Infantry Moving Target Carrier (IMTC) is a component of the Remoted Target System (RETS) DVC 09-24. IMTC simulates a man running from one concealed position to another. It carries an Infantry Target Mechanism (ITM) DVC 07-73.

Functional Description:

DVC 07-74 is electronically controlled from the RETS Range Control Station (RCS) DVC 11-51. The device moves forward or backward in either up or down position at one of three speeds: $1.8 \pm .2$ meters per second, $2.7 \pm .2$ meters per second, or $3.7 \pm .2$ meters per second. Speed is preset at the device, not remotely controlled.

Physical Information:

32" W x 46" H x 6" P

Weights:

Motor/Belt Drive Assembly 30lb

Electronics Assembly 20lb

Carriage Assembly 20lb per section

Equipment Required, Not Supplied:

RETS Infantry range (refer to DVC 09-24)

Special Installation Requirements:

RETS Infantry range (refer to DVC 09-24)

Power Requirements:

24 ± 3.6 vdc, 30 A, 720 W

Applicable Publications:

TM 9-6920-742-14-3

TM 9-6920-742-24P-3

Reference Publications:

TM 9-6920-742-14-1

TM 9-6920-742-24P-1

Training Requirements Supported:

MOSCs Infantry series

TOW ITAS BASIC SKILLS TRAINER (BST)



Training Category/Level Utilized:
CAT 1/Company level

Logistic Responsible Command, Service, or Agency:
Fieldings and Net - Close Combat Missile Systems
Field Support - PEO-STRI

Source and Method of Obtaining:
PEO-STRI, Orlando FL
CCMS Project Office

Purpose of Trainer:
The TOW ITAS Basic Skills Trainer (BST) is a PC-based indoor training device used to conduct initial entry basic skills training, perform basic and advanced gunnery sustainment training in the unit, and formally qualified gunners to meet soldier requirements for the TOW ITAS anti-tank weapon system.

Functional Description:
The BST consists of a PC-based Instructor Station and a Student Station. The Student Station consist of a Simulated Target Acquisition Subsystem (STAS) and a Simulated Fire Control Subsystem (SFCS) used with the ITAS tactical

tripod, traversing unit, and a simulated round. The Instructor Station is a PC computer loaded with the BST software and a library of exercises designed for ITAS training. During Training, the instructor chooses exercises from the library and briefs the student about exercise objectives. When ready, the gunner, at the Student Station, looks through tactical sights, views the 3D exercises piped from the BST software on the Instructor Station, and conducts exercise engagements using the BST controls, switches and menus as he would the tactical system. Terrain imagery shown during BST exercises is derived from actual daylight and 2nd generation FLIR digital photographs of representative terrain. Targets are 3D wire-frame models overlaid with photo-realistic daylight and IR textures that move across preset waypoint paths on the terrain. The student scans his sector of fire, classifies and identifies targets and engages them where appropriate. The Instructor Station stores the student data to a floppy diskette, replays exercises for review, and scores the student's performance based on objective, numeric criteria (i.e. manual engagement flight control, Aided Target Tracker operation, and critical gunner errors).

**Transit Case****Physical Information:**Instructor Station PC

Length	17.25 in	(43.8 cm)
Width	9.75 in	(24.8 cm)
Height	13.25 in	(33.7 cm)
Weight	40.00 lbs	(18.2 kg)

Student Station STAS

Length	29.00 in	(73.7 cm)
Width	13.75 in	(34.9 cm)
Height	12.50 in	(31.8 cm)
Weight	24.00 lbs	(10.9 kg)

Student Station SFCS

Length	5.00 in	(12.7 cm)
Width	5.00 in	(12.7 cm)
Height	4.00 in	(10.2 cm)
Weight	0.50 lbs	(0.23 kg)

Transit Case

Length	43.75 in	(111.1 cm)
Width	24.00 in	(61.0 cm)
Height	17.75 in	(45.0 cm)
Weight	50.00 lbs	(22.7 kg)

Equipment Required, Not Supplied:

The ITAS BST requires the tactical ITAS system Traversing Unit, Tripod, and Launch Tube. The BST also requires an ITAS MSR, ITAS FTT Battery Tube or a spent round to use for the simulated missile round.

Special Installation Requirements:

N/A

**TOW ITAS****Power Requirements:**

120vac, 60 Hz, 9A (US)
220vac, 50 Hz, 4.5A (European)

Applicable Publications:

TOW ITAS Basic Skills Trainer Instructor Guide
TOW ITAS Basic Skills Trainer Operator Maintenance Manual.

Reference Publications:

TOW ITAS Gunner New Equipment Training, Student Guide.
Technical Manual, Operator and Organizational Maintenance Manual for TOW Improved Target Acquisition Subsystem (ITAS) M41, TM 9-1425-923-12

Training Requirements Supported:

MOSC - ITAS Basic Skills Training
ITAS Sustainment Training
ITAS Qualification Training

FIRE ARMS TRAINING SYSTEM (FATS)

**Training Category/Level Utilized:**

Infantry/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando, FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

- US Army approved courseware (marksmanship lanes)
- Judgmental situational training (digital video courseware)
- Combined arms full-spectrum virtual combat training (CGI)
- Close Air Support
- Built-in marksmanship lanes and scenario authoring
- Student database
- Night vision training
- NBC training
- Thermal training
- Mortar crew training

Functional Description:

The system is inclusive of all hardware, software and courseware that provides the latest in enhanced training capability. Hardware includes a Projector, Hit Camera, PSC, ICS, Monitor, Keyboard, Mouse and Cables.

Physical Information:

The system rack measures 31"(H) X 23"(W) X 31" (D). One four-lane training system requires a training area of at least 10' (W) X 20' (L).

Equipment Required, Not Supplied:

Any FATS® weapon simulators as follow: M9, M16A2, M16A4, M4, M16/M203, M240, M249, M2, AT4, MK19, M1200, 81MM Mortar.

Special Installation Requirements:

Must be installed by trained personnel.

Power Requirements:

110/120 AC

Applicable Publications:

FATS® 5 Operation and Maintenance Manual

Reference Publications:

STP 21-1-SMCT Soldier's Manual of Common Tasks,
Warrior Skills Level I, June 2009
FM 3-22-9 Rifle Marksmanship M16A1, M16A2/3 and
M4 Carbine, September 2006
FM 3-22.27 MK19 40mm Grenade Machine Gun,
November 2003
FM 3-22.65 Browning Machine Gun Caliber .50 HB,
M2, March 2005
FM 3-21.8 Infantry Rifle Platoon and Squad, March
2007
FM 3-22.68 Crew Served Weapons, July 2006
FM 3-22.90 Mortars, December 2007
FM 3-23.35 Combat Training with Pistols, M9 and M11,
June 2003

FM 3-21.75 The Warrior Ethos and Soldier Combat
Skills, January 2008

TC 7-9 Infantry Live Fire Training, September 1993

TC 3-21.10 Infantry Rifle Company Collective Task
Publication, June 2012

AR 350-1 Army Training and Leader Development,
December 2009

AR 350-19 The Army Sustainable Range Program,
August 2005

Training Requirements Supported:

Is not an MOSC Specific trainer
Preliminary Marksmanship Instructions
Basic Rifle Marksmanship
Night Fire
NBC Fire

JAVELIN BASIC SKILLS TRAINER

**Training Category/Level Utilized:**

Infantry/Level 3

Logistic Responsible Command, Service, or Agency:

Close Combat Missile Systems Project Office, Redstone Arsenal, Al. 35898 is currently developing, fielding, and maintaining the system.

Source and Method of Obtaining:

Initial fielding is being accomplished by the Close Combat Missile Systems Project Office, Redstone Arsenal, Al 35898. Requests for replacement/repair can be made by Telephone 910-860-3554, or FAX 910-860-2701.

Purpose of Trainer:

The BST is a three-dimensional training device used to train students and qualify gunners on the Javelin weapon system. The BST is a self-contained, computer-based, indoor training computer (PC) that is equipped with special hardware and software. The major components of the BST are the Student Station and the Instructor Station.

Functional Description:

The Student Station consists of a Missile Simulation Round (MSR) which provides a three-dimensional simulation of the Javelin.

The Instructor Station centers around a desktop PC that provides means to install or upgrade software, create and save gunner training records, and monitor gunner performance during an exercise. The Instructor Station

provides all power, video, and sound signals to the Student Station from a single point of connection. It also is equipped with a surge suppressor for protection from power fluctuations.

Physical Information:

The Student Station in container is 51.5 in. long, 25 in. high, 19.7 in. wide, and weighs 129 pounds. The Instructor Station in the container is 51.5 in. long, 25 in. high, 19.7 in. wide, and weighs 120 pounds.

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

US 110vac, 60 Hz, 9A

European 220vac, 50 Hz, 9A

Applicable Publications:

TM 9-6920-666-10

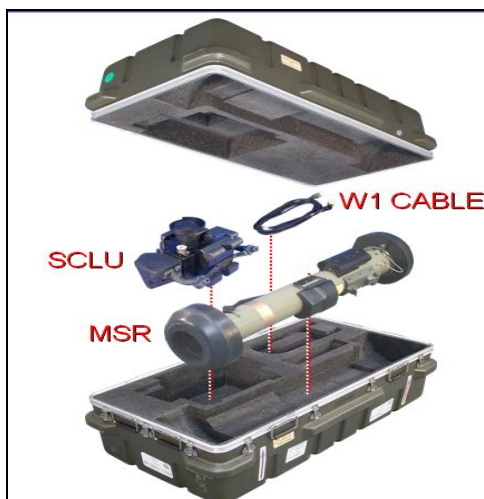
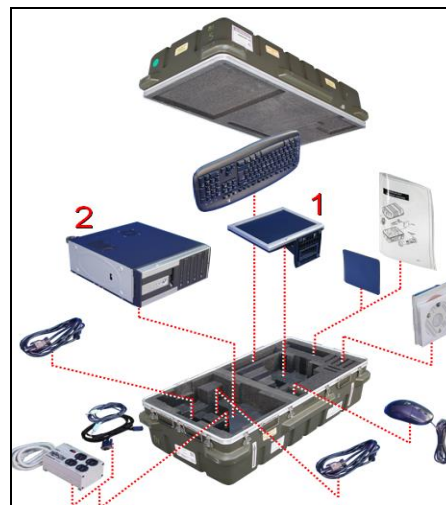
Reference Publications:

N/A

Training Requirements Supported:

MOSC 11-Series, Javelin Gunner

JAVELIN TRAINER (BLOCK 1) BASIC SKILLS TRAINER (BST), UPGRADE

**Student station****Instructor Station****Training Category/Level Utilized:**

Infantry/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The Javelin BST is a three-dimensional training device used to train students and qualify gunners on the Javelin weapon system. The Javelin BST is a self-contained, computer-based, indoor training computer (PC) that is equipped with special hardware and software.

Functional Description:

The major components of the Javelin BST are the Student Station and the Instructor Station. The student station consists of a simulated CLU (SCLU) and a Missile Simulation Round (MSR) which provides a three-dimensional simulation of the Javelin. A cable links the Student Station with the Instructor Station for transfer of Student Station power, video motion, and switch signals between the two components. The Instructor Station centers on a desktop PC that provides means to install or upgrade software, create and save gunner training records, and monitor gunner performance during an exercise. The Instructor Station provides all power, video, and sound signals to the Student Station from a single point of connection. It also is equipped with a surge suppressor for protection from power fluctuations. The Instructor Station generates exercises that provide a wide range of training situations to which the gunner must react using the Student Station. Training exercises for the Javelin BST are created

using real terrain from actual visible and infrared imagery, and matching 3-dimensional target models for natural target movement. Exercises developed using these processes are played back on the instructor station monitor during gunner training. The gunner views these exercises through the SCLU and reacts to the situations presented in each exercise.

Physical Information:

Student Station Dimensions:

"51.50" x 27.25" x 25.00 in" Weight: 129 lbs.

Instructor Station Dimensions:

"51.50" x 27.25" x 25.00 in" Weight: 120 lbs

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

US commercial: 110 VAC, 60Hz, 9A

European commercial: 220 VAC, 50Hz, 9A

Applicable Publications:

OUM 9-6920-666-10

SMM: None

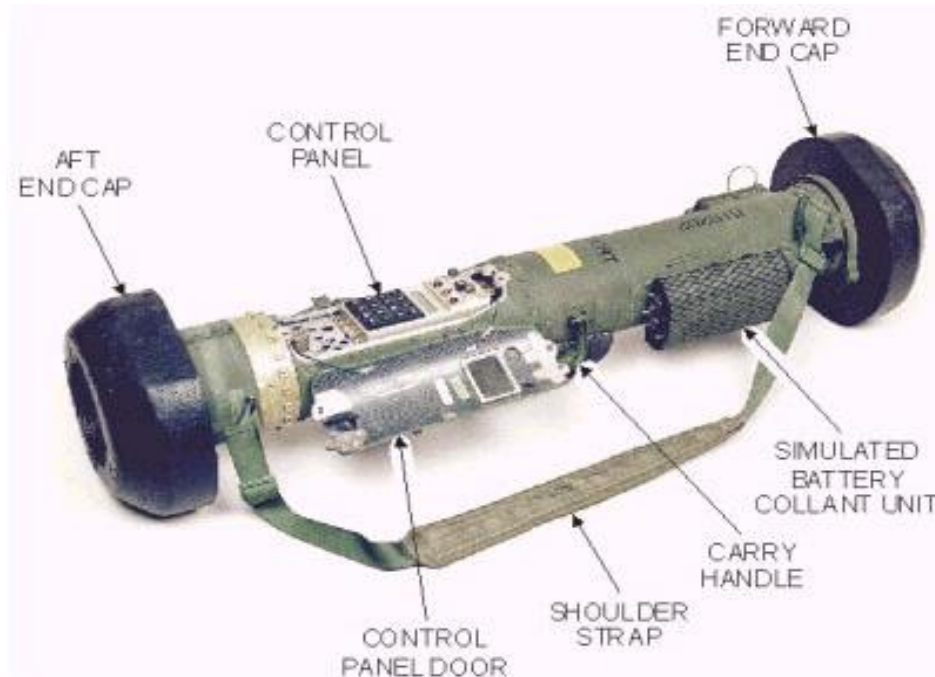
Reference Publications:

TM 9-6920-666-10

Training Requirements Supported:

MOSC 11-Series, Javelin New Equipment Training
Javelin Sustainment Training
Javelin Qualification

JAVELIN FIELD TACTICAL TRAINER (FTT) (STUDENT STATION)

**Training Category/Level Utilized:**

Infantry/level 3

Logistic Responsible Command, Service, or Agency:

Close Combat Missile Systems Project Office, Redstone Arsenal, AI 35898 is currently developing, fielding, and maintaining the system.

Source and Method of Obtaining:

Initial fielding being accomplished by the Close Combat Missile Systems Project Office, Redstone Arsenal, AI 35898. Requests for replacement/repair can be made by Telephone 910-860-3554, or FAX 910-860-2701.

Purpose of Trainer:

The FTT Student Station (SS) provides visual, aural, and physical cues associated with the Javelin Missile when engaging targets. Visual cues provided by the FTT include Seeker imagery with the appropriate track gates and crosshairs. Aural cues include a simulation of launch signature effects of the Javelin Missile. Weight of the SR, when connected to the CLU, provide the simulation of the Javelin Missile.

Functional Description:

The Student Station is used for situational exercise (STX) or field training exercises. The FTT student station combines the Command Launch Unit (not supplied) with a simulated round and incorporates a Multiple Integrated

Laser Engagement System (MILES) laser transmitter to allow simulated Javelin engagements during training exercises. The student station comes with a battery and charger.

Physical Information:

The Student Station in container is 51.75" long, 24.38" high, 27.75" wide, and weighs 153.19 pounds.

Equipment Required, Not Supplied:

Javelin Command Launch Unit.

Special Installation Requirements:

None

Power Requirements:

Student Station operates on a 12vdc FNC Rechargeable Battery. The battery can be charged with charger contained in the FTT Student Station. Battery charger operates on US 110vac, 60 Hz, 9A or European 220vac, 50 Hz, 9A.

Applicable Publications:

OUM 9-6920-688-10

Reference Publications:

N/A

Training Requirements Supported:

MOSC 11-Series, Javelin Gunner

JAVELIN FIELD TACTICAL TRAINER (FTT) (INSTRUCTOR STATION)

**Training Category/Level Utilized:**

Infantry/level 3

Logistic Responsible Command, Service, or Agency:

Close Combat Missile Systems Project Office, Redstone Arsenal, AI 35898 is currently developing, fielding, and maintaining the system.

Source and Method of Obtaining:

Initial fielding is being accomplished by the Close Combat Missile Systems Project Office, Redstone Arsenal, AI 35898. Requests for replacement/repair can be made by Telephone 910-860-3554, or FAX 910-860-2701.

Purpose of Trainer:

The FTT Instructor station (IS) when used in conjunction with the FTT Student Station can be used to monitor gunner performance. The visual display presented on the CLU display, as well as a simulation of the CLU status symbols, are presented to the instructor on the IS VCR. Displays presented on the IS monitor may be recorded, on videotape by the IS VCR. Playback of the training exercises can be accomplished on the IS monitor or any compatible VCR and monitor.

Functional Description:

The Instructor Station consists of a VCR contained in a hand held unit and is used to monitor, record on 8mm videotape, and play back a training session. The hand held

unit provides environmental protection for the VCR. The Instructor Station also has a backpack for field use.

Physical Information:

The Instructor Station in container is 25.06" long, 15.19" high, 18.38" wide, and weighs 35.56 pounds.

Equipment Required, Not Supplied:

Cassette (type P6-120NTSC recommended). Javelin Command Launch Unit (CLU) and a Field Tactical Trainer-Student Station.

Special Installation Requirements:

None

Power Requirements:

Instructor Station operates on a 12vdc FNC Rechargeable Battery. The battery can be charged with charger contained in the FTT Student Station. Battery charger operates on: US 110vac, 60 Hz, 9A or European 220vac, 50 Hz, 9A.

Applicable Publications:

TM 9-6920-688-10

Reference Publications:

N/A

Training Requirements Supported:

MOSC 11-Series, Javelin Gunner

ENGAGEMENT SKILLS TRAINER II (EST II)

NSN 6920-01-592-2143	DVC 07-129/4	Simulated, M2 Machine Gun, .50 Cal
NSN 6920-01-592-2097	DVC 07-129/5	Simulated, M4 w/Rails Rifle, 5.56MM
NSN 6920-01-592-2237	DVC 07-129/6	Simulated, M4/203 Rifle w/Grenade Launcher, 5.56/40MM
NSN 6920-01-592-2256	DVC 07-129/7	Simulated, M4/320 Grenade Launcher, 5.56/40MM
NSN 6920-01-592-2109	DVC 07-129/8	Simulated, M9 Pistol, 9MM
NSN 6920-01-592-2039	DVC 07-129/9	Simulated, M16A2 Rifle, 5.56MM
NSN 6920-01-592-2090	DVC 07-129/10	Simulated, M16A4, 5.56MM
NSN 6920-01-592-2243	DVC 07-129/11	Simulated, M16A4/M203, 5.56MM
NSN 6920-01-592-2130	DVC 07-129/12	Simulated, M136/AT4 Rocket Launcher
NSN 6910-01-621-9537	DVC 07-129/13	Simulated, Bunker Defeat Munition (BDM) M141
NSN 6920-01-592-2117	DVC 07-129/14	Simulated, M240B Machine Gun, 7.62MM
NSN 6920-01-592-2140	DVC 07-129/15	Simulated, M1200 Shotgun, 12 Gauge
NSN 6920-01-592-2233	DVC 07-129/16	Simulated, MK19 Machine Gun Grenade Launcher, 40MM
NSN 6920-01-592-2113	DVC 07-129/17	Simulated, M249 SAW Machine Gun, 5.56MM
NSN 6920-01-592-2250	DVC 07-129/18	Simulated, M320 GL, 40MM



(EST II) Simulation Station

Training Category/Level Utilized:

Small Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

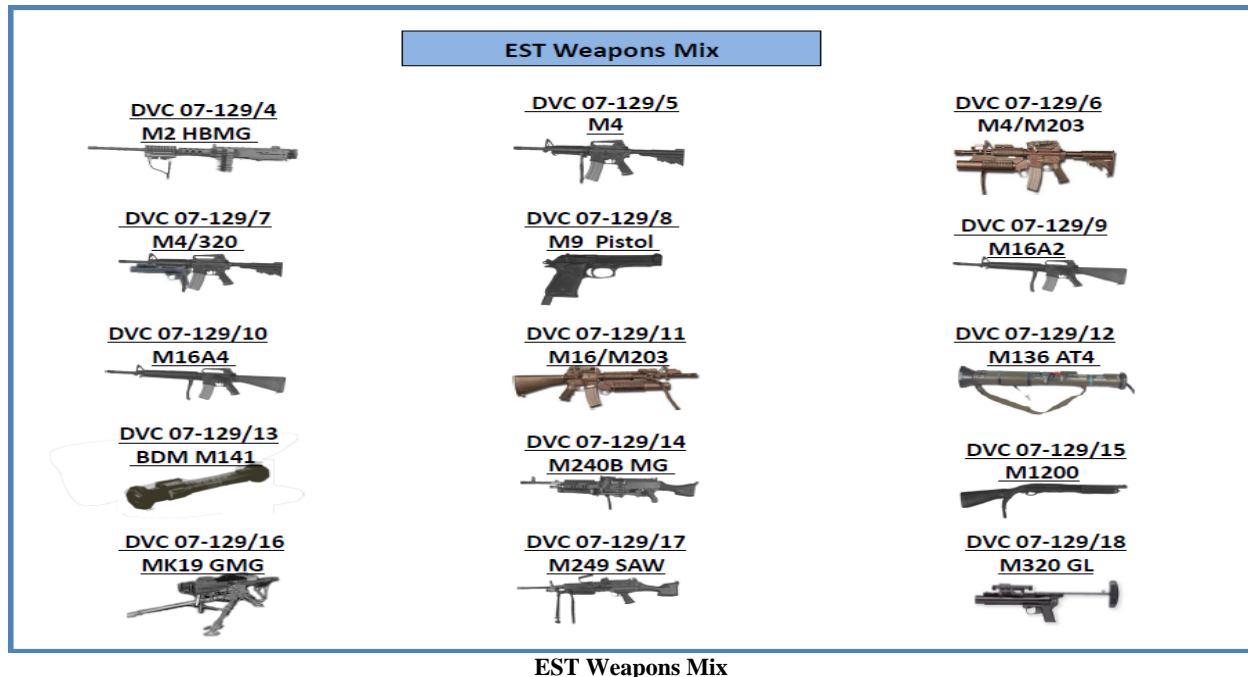
Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The Engagement Skills Trainer II (EST II) is used as a unit and institutional, indoor, multipurpose, multilane, small arms, crew served and individual antitank training simulator. The EST II is an industry proven, commercially

available, computer operated simulator. The EST II provides audio and visual presentations and feedback during training scenario exercises simulating the operation of a variety of small arms weapons. The EST II simulator utilizes visual display systems, audio system(s), aiming detection system(s), pseudo or modified real weapons with weapon power source interfaced by computer to provide Marksmanship, Shoot/Don't Shoot decision training, and Unit Collective Squad Level training scenarios. These trainers safely replicate weapon training events which lead to live fire individual and weapon crew qualification and that contribute to increased weapon, crew, fire team, and squad combat effectiveness training in Army defined scenarios. The EST II is used primarily to:



- a. Train and evaluate individual marksmanship training for initial entry soldiers at the Army Training Centers.
- b. Provide active and Reserve Component unit sustainment training in preparation for individual and crew small arms live fire weapons' qualification.
- c. Provide Active and Reserve Component units a capability to train in Shoot/Don't Shoot situations currently not resourced.
- d. Provide unit collective gunnery and tactical training for static dismounted Infantry, Scout, Engineer, Military Police Squads, and Combat Support/Combat Service Support (CS/CSS) elements.

Functional Description:

The EST II system deploys three configurations: a stand- alone five (5) lane system, when networked, a ten (10) lane system and a fifteen (15) lane system. Dependent upon the lane correlation, the following modes of training are supported:

- a. Collective training for an Infantry Squad of nine soldiers,
- b. Collective training for a Scout Squad of five soldiers,
- c. Collective training for an Engineer Squad of nine soldiers,
- d. Collective training for a Military Police Squad of ten soldiers,

- e. Collective training for a Combat Support/Combat Service Support (CS/CSS) element of up to ten soldiers.

- f. Marksmanship training ten or more soldiers

The hardware for each EST II system consists of an Instructor Operator Station (IOS), modified weapons, floor boxes, high-resolution projector, speakers, camera-detection system, air compressor, screen, and associated cabling and hoses. Weapon modifications include an eye-safe laser; sensors to measure trigger pressure, cant and ammunition magazine/belt status (as well as status of on-off or selector switches); and a compressed air operating system. The Rack Distribution Unit (RDU) located in the IOS serves as the main signal interface between components. Modified rifles, pistols, machineguns, and shotguns are modified to work with the systems and rendered incapable of firing live ammunition. Shoot/Don't Shoot, Collective, and Marksmanship scenarios are pre-loaded onto each I/O station that will be delivered with each subsystem.

Physical Information:

The EST II components are of different sizes and weight. All components are protected during transit by transit cases. Facility size limit for the EST 2000:

<u>5 Lane</u>	<u>10 Lane</u>	<u>15 Lane</u>
35.0' length	35.0' length	35.0' length
17.5' width	35.0' width	52.5' width
8.0' height	8.0' height	8.0' height

Weapons:

M16A2, 5.56mm Rifle.
M16A4, 5.56mm Rifle
M4, 5.56mm Carbine.
M9, 9mm Pistol.
M249, 5.56mm Machine Gun
M60, 7.62mm Machine Gun.
M240B, 7.62mm, Machine Gun.
M2, Heavy Barrel Caliber .50 Machine Gun.
MK19 MOD3, 40mm Grenade Machine Gun.
*M320, 40mm Grenade Launcher.
M136, Launcher and Cartridge, 84mm, HEAT.
M1200, Winchester Shotgun, 12 gauge.
*M320 will replace the M203

Equipment Required, Not Supplied:

CCO Close Combat Optics
MGO Machine Gun Optics
PVS-4 Night Vision Scope
TVS-5 Night Vision Scope
M3 Tripod and pintle with Traverse and
Elevation Mechanism Weapons interface
mounting hardware.

Special Installation Requirements:

Facility AC

Power Requirements:

The EST II, and its separable systems, operate on available power in both Continental United States (CONUS) and Outside CONUS (OCONUS), on either 110/220 volts, alternating current, at 50/60 hertz. Safeguards are incorporated to prevent attachment to mismatched power supply. All trainer equipment incorporates safeguards to prevent damage to equipment or personnel

Power requirements for each EST II 5 lane subsystem:

IOS:

110vac, 60 Hz, 15 Amps circuit or, 220vac, 50 Hz, 7.5 Amps circuit.
Outlet located within 20 ft. (6m) of IOS.

Compressor:

110vac, 60 Hz, 20 Amps circuit or, 220vac, 50 Hz, 10 Amps circuit.
Outlet located within 8 ft. (2.5m).

Applicable Publications:

Engagement Skills Trainer (EST II) Operator's Manual
TM 07-6920-704
Engagement Skills Trainer (EST) System Maintenance
Manual (SMM) - SMM 07-6920-704
Engagement Skills Trainer (EST) COTS Manuals (As
Required) - TD 07-6920-704
What Training Manuals are use in order to operate this
device?

Reference Publications:

None

Training Requirements Supported:

MOSC 11-Series: Initial Entry Training & Unit Training Individual. The EST II is capable of producing and storing training feedback on simulated fire scoring. The system provides for: Boresighting and Zeroing, Weapon Recoil, Ballistic Simulation, Simulated Weapon System Accuracy, Ammunition Basic Loads, Magazines and Ammunition Belts, Simulation of Shooting Positions and Targetry. Unit Training Collective. The EST II supports training of dismounted, squad missions, specifically, squad defense and ambush in support of train up for low intensity conflict, Military Operations in Urban Terrain (MOUT), special operations, anti-terrorism, support and stability operations, and mid to high intensity conflict. The EST II simulates a variety of combat and combat related scenarios to reduce the likelihood of replication of scenarios. Scenarios are life like, true to size, coloration, probable surroundings, compatible with mission areas of responsibility, progressive, and engage the soldier in a realistic response to a perceived realistic situation. The scenarios include appropriate battlefield conditions and terrain depicting snow, desert, MOUT (indoor and outdoor), jungle, forest, day, night (both unaided and aided with binoculars, optical sights, and night vision equipment), smoke, ground fog, and MOPP level 4. The device has the capability to "stop action" and "replay action" at normal, slower than normal, and faster than normal speeds. In the playback mode, the device displays individual soldier shot groups as they respond to specific squad leader communications. Playback is audio and visual (on command) and provides a printout for the squad and teams, as well as, the individual members. The device also has the capability to store and retrieve squad, team, and individual data from one scenario to the next for comparative purposes.

Maximum realism and resolution is provided that enables the following tasks to be performed:

- a. Friend and Threat personnel recognition and identification.
- b. Recognition and identification of fleeting and stationary threat personnel partially obscured by objects.
- c. Recognition and identification of all personnel depicted in the scenario (Friend, Threat, Allied, Civilian Personnel.)
- d. Recognition and identification of Threat or Civilian Personnel that may or may not be armed with concealable weapons such as knives and pistols.
- e. Recognition and identification of personnel in low light and other marginal conditions.
- f. Recognition and identification of facial expressions on selected personnel.
- g. Recognition and identification of a variety of combat and non-combat vehicles.

LASER MARKSMANSHIP TRAINING SYSTEM (LMTS) INITIAL ENTRY TRAINING (IET) BATTALION SET

NSN 6920-01-592-6246

DVC 07-131/1 Laser Marksmanship Training System (LMTS), IET Summer Surge Kits

**Training Category/Level Utilized:**

Basic Weapons/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC.

Purpose of Trainer:

The Laser Marksmanship Training System (LMTS) will simulate weapons training events which lead to live fire qualifications for individual and crew weapons. LMTS will be used primarily as a unit/individual, indoor/outdoor, multi-lane, small arms crew served and individual marksmanship training device. It uses the individual soldier's personal issued weapon and will allow units to conduct individual and sustainment marksmanship training using biological and chemical protective equipment. Since it is light, transportable, uses self sustained power sources and requires no fixed facilities support, it is also ideal for training scenarios in the field.

The LMTS Large Suite will support 6 rifle lanes plus one machine gun lane and is optimized for brigade Basic Rifle Marksmanship training.

Functional Description:

The LMTS is a system that provides quantitative feedback in place of the "Dime/Washer" exercise, focusing on the four fundamentals of marksmanship (steady position, sight alignment and picture, breathe control and trigger squeeze). It provides real time feedback in all seasons on the soldier's assigned weapon, transmitter. The Zero Reflective target is used to zero the weapons and laser transmitter. It also provides training for correct sight picture and alignment. The laser detectors are located in the TR700 and TR900 targets and are optimized for use at 25 meters however these will work accurately from 6 inches out to 50 meters for the TR700 target and from about 6 inches out to about 75 meters for the TR900 target.

The TR700 target registers and counts the number of hits on a numerical counter up to 99. The TR700 uses target silhouette masks in 100, 200, or 300 meter sizes to simulate

the target size and scale. The TR900 target is connected via cable to a scoring device loaded with software, which records the time and placement of shots on the target by the laser transmitter upon being "fired" by the soldier. The target comes with overlays to simulate various distances for the soldier's point of aim. The scoring device displays the time of shot, time between shots, placement of shots, the shot order (1,2,3,...), center of shot group and shot dispersion. Up to ten (10) targets can be connected to a single scoring device.

The Machine Gun Training System target is a replica of the exact 10 meter qualification target used by the US Army. The target registers hits from the laser transmitter mounted on the machine gun and requires only 10 meters for operation. The target comes enclosed in its own carry case, which is portable and can be set up in a variety of locations to meet machine gun training requirements. With either standard blank ammunition or the addition of the SafeShot blank firing replacement barrels for the M-249, M-240, and the M-60, Training Tasks 1-8 and Qualification Tasks 9 and 10 can be met, providing full recoil and instant feedback. The MGTS gives shooters the ability to observe hits and a near miss, adjust fire, and operate with speed, and allows trainers to observe the shots in real time, save the session for later review or printed as a hard copy reference. Up to 10 targets may be linked to one computer. The MGTS includes all cables and software and is stored in its own travel storage case.

Physical Information:

The LMTS IET Battalion Set is comprised of the following components:

Four 460-6 System each consisting of six TR900 targets, six M16 25m/15m overlays and two M9 overlays, six MP400 lasers, six 'AA' batteries, six 5.56 mandrels, two M9 mandrels, four scoring device and cables, control box, BL640 Long cable and BL650 Daisy chain cables, 2 power strips, software manuals.

Four 130-6E Warrior kits each consisting of one TR700 target, military mask set, power supply, one 5.56 mandrel, one 9mm mandrel, one MP400 laser transmitter, four 'AA' battery, 130 Instruction manual.

Four LMTS Accessory Kits each consisting of Laser Alignment Device (LAD) 5.56 with case, two total Laser Alignment device Multi-caliber, seven 25M Zero Reflective targets, and two LTA380 M9 Laser Transmitters 12volt power converter, power strip, one 100ft extension

cord, three 50ft extension cords, and 6 ea 25ft extension cords.

Cases:

65 lbs (20 7/8 x 12 1/2 x 32 15/16)

42 lbs (20 7/8 x 12 1/2 x 32 15/16)

42 lbs (20 7/8 x 12 1/2 x 32 15/16)

35 lbs (20 11/16 x 12 1/2 x 13 7/8)

Total weight: 184 lbs

Cubic feet: 21.97

The LMTS Summer Surge Kit is comprised of the following components: DVC 07-131/1

One 460 System consisting of eight TR900 targets, eight M16 25m/15m overlays and eight M9 overlays, eight MP400 lasers, eight 'AA' batteries, eight 5.56 mandrels, and cables, control box, BL640 Long cable and BL650 Daisy chain cables, 3 power strips, software manuals.

Four 130E Warrior kits consisting of four TR700 target, military mask set, power supply, eight 5.56 mandrel, four 9mm mandrel, one MP400 laser transmitter, four 'AA' battery, 130 Instruction manual.

Equipment Required, Not Supplied:

Soldiers issued weapon (M9, M16/M4, M249)

Special Installation Requirements:

None

Power Requirements:

One "AA" battery for each MP400 laser transmitter; four 'AA' batteries or 110V/50 Hz power supply for TR700 target; 110V/50 Hz for each TR900 target, 110V/50 Hz for the MGTS; 11 OV/50 Hz for the laptop scoring device.

Applicable Publications:

460 System Instructions Manual MGTS Instruction Manual

Reference Publications:

460 System – FM 3-22.9 (FM 23-9); Exercises 1-4; MGTS – Training Tasks 1-8 and Qualification Tasks 9 & 10

Training Requirements Supported:

MOSC - Primary Marksmanship Instruction, Remedial (on-site) marksmanship instruction during fire.

LASER MARKSMANSHIP TRAINING SYSTEM (LMTS) LARGE SUITE

NSN Not Assigned

DVC 07-132/A Laser Marksmanship Training System (LMTS) Large Suite

NSN Not Assigned

DVC 07-132/B Laser Marksmanship Training System (LMTS) ROTC


Training Category/Level Utilized:

Basic Weapons/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC.

Purpose of Trainer:

The Laser Marksmanship Training System (LMTS) will simulate weapons training events which lead to live fire qualifications for individual and crew weapons. LMTS will be used primarily as a unit/individual, indoor/outdoor, multi-lane, small arms crew served and individual marksmanship training device. It uses the individual soldier's personal issued weapon and will allow units to conduct individual and sustainment marksmanship training using biological and chemical protective equipment. Since it is light, transportable, uses self sustained power sources

and requires no fixed facilities support, it is also idea for training scenarios in the field.

The LMTS Large Suite will support 6 rifle lanes plus one machine gun lane and is optimized for brigade Basic Rifle Marksmanship training.

Functional Description:

The LMTS is a system that provides quantitative feedback in place of the "Dime/Washer" exercise, focusing on the four fundamentals of marksmanship (steady position, sight alignment and picture, breathe control and trigger squeeze). It provides real time feedback in all seasons on the soldier's assigned weapon's transmitter. The Zero Reflective target is used to zero the weapons and laser transmitter. It also provides training for correct sight picture and alignment. The laser detectors are located in the TR700 and TR900 targets and are optimized for use at 25 meters however these will work accurately from 6 inches out to 50 meters for the TR700 target and

from about 6 inches out to about 75 meters for the TR900 target. The TR700 target registers and counts the number of hits on a numerical counter up to 99. The TR700 uses target silhouette masks in 100, 200, or 300 meter sizes to simulate the target size and scale. The TR900 target is connected via cable to a scoring device loaded with software, which records the time and placement of shots on the target by the laser transmitter upon being "fired" by the soldier. The target comes with overlays to simulate various distances for the soldier's point of aim. The scoring device displays the time of shot, time between shots, placement of shots, the shot order (1,2,3,...), center of shot group and shot dispersion. Up to ten (10) targets can be connected to a single scoring device.

The Machine Gun Training System target is a replica of the exact 10 meter qualification target used by the US Army. The target registers hits from the laser transmitter mounted on the machine gun and requires only 10 meters for operation. The target comes enclosed in its own carry case, which is portable and can be set up in a variety of locations to meet machine gun training requirements. With either standard blank ammunition or the addition of the SafeShot blank firing replacement barrels for the M-249, M-240, and the M-60, Training Tasks 1-8 and Qualification Tasks 9 and 10 can be met, providing full recoil and instant feedback. The MGTS gives shooters the ability to observe hits and a near miss, adjust fire, and operate with speed, and allows trainers to observe the shots in real time, save the session for later review or printed as a hard copy reference. Up to 10 targets may be linked to one computer. The MGTS includes all cables and software and is stored in its own travel storage case.

Physical Information:

The LMTS Large Suite is comprised of the following components:

One 460 System consists of six TR900 targets, six M16 25m/15m overlays and two M9 overlays, six MP400 lasers, six 'AA' batteries, six 5.56 mandrels, two M9 mandrels, one scoring device and cables, control box, BL640 Long cable and BL650 Daisy chain cables, 2 power strips, software manuals.

Six 130E Warrior kits consisting of one TR700 target, military mask set, power supply, one 5.56 mandrel, one 9mm mandrel, one MP400 laser transmitter, one 'AA' battery, 130 Instruction manual.

One Machine Gun Training System Package (MGTS) comes in one transit case with MP400 Laser with barrel brackets for M249, M240 and M2; 30m main cable, 3m Daisy Chain (linking) cable, power supply, software CD and MGTS Instruction manual.

One LMTS Accessory Kit consists of Laser Alignment Device (LAD) 5.56 with case, Laser Alignment device Multi-caliber, seven 25M Zero Reflective targets, and two LTA380 M9 Laser Transmitters 12volt power converter, power strip, one 100ft extension cord, three 50ft extension cords, and 6 ea 25ft extension cords.

Cases:

65lbs (20 7/8 x 12 1/2 x 32 15 15/16)
42lbs (20 7/8 x 12 1/2 x 32 15/16)
42lbs (20 7/8 x 12 1/2 x 32 15/16)
35lbs (20 11/16 x 12 1/2 x 13 7/8)
68lbs (20 7/8 x 12 1/2 x 32 15/16)
Total weight: 252lbs
Cubic feet: 21.97

The DVC 07-132/B contains the following parts:

5ea 25M Zero, 5ea M16 Non-firing System,
5ea TR-700 Target, 5ea E-type mask set, 1ea CC-700 Carrying Case, 2ea USAR Target Scoring Device,
5ea Advance Alt-C Target System, 1ea 16 Non-gun Case,
1ea 460-5 Target System consisting of: (5 x TR-900 Targets, 5 x Power Supplies, 1 x Control Cable, 4 x Daisy Chain Cables, 1 x USB Control Box, 1 x CB-440 Cable, 1 x Instruction Manual, 1 x Software CD, 5 x Military Overlay pack, 3 x Carrying Cases)

Equipment Required, Not Supplied:

Soldiers issued weapon (M9, M16/M4, M249).

Special Installation Requirements:

None

Power Requirements:

One 'AA' battery for each MP400 laser transmitter; four 'AA' batteries or 110V/50 Hz power supply for TR700 target; 110V/50 Hz for each TR900 target, 110V/50 Hz for the MGTS; 110V/50 Hz for the laptop scoring device.

Applicable Publications:

460 System Instruction Manual
MGTS Instruction Manual

Reference Publications:

460 System - FM 3-22.9 (FM 23-9); Exercises 1-4;
MGTS - Training Tasks 1-8 and Qualification tasks 9 & 10

Training Requirements Supported:

MOSC - Primary Marksmanship Instruction, Remedial (on-site) marksmanship instruction during live fire.

LASER MARKSMANSHIP TRAINING SYSTEM (LMTS) SMALL SUITE

**Training Category/Level Utilized:**

Basic weapons/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC.

Purpose of Trainer:

The Laser Marksmanship Training System (LMTS) will simulate weapons training events which lead to live fire qualifications for individual and crew weapons. LMTS will be used primarily as a unit/individual, indoor/outdoor,

multi-lane, small arms crew served and individual marksmanship training device. It uses the individual soldier's personal issued weapon and will allow units to conduct individual and sustainment marksmanship training using biological and chemical protective equipment. Since it is light, transportable, uses self sustained power sources and requires no fixed facilities support, it is also idea for training scenarios in the field.

The LMTS Small Suite will support 2 rifle lanes plus one machine gun lane and is optimized for battalion Basic Rifle Marksmanship training.

Functional Description:

The LMTS is a system that provides quantitative feedback in place of the “Dime/Washer” exercise, focusing on the four fundamentals of marksmanship (steady position, sight alignment and picture, breathe control and trigger squeeze). It provides real time feedback in all seasons on the soldier’s assigned weapon.

The LMTS uses Class IIIA Laser Transmitters to simulate the fire capability of pistols, rifles, and machine guns. The Laser Transmitters attach to the barrel of the weapon and have adjustments for windage and elevation. Soldiers can dry fire, use standard blanks or SafeShot blanks with Blazer upper receivers to activate the laser transmitter. The Zero Reflective target is used to zero the weapons and laser transmitter. It also provides training for correct sight picture and alignment. The laser detectors are located in the TR700 and TR900 targets and are optimized for use at 25 meters however these will work accurately from 6 inches out to 50 meters for the TR700 target and from about 6 inches out to about 75 meters for the TR900 target. The TR700 target registers and counts the number of hits on a numerical counter up to 99. The TR700 uses target silhouette masks in 100, 200, or 300 meter sizes to simulate the target size and scale. The TR900 target is connected via cable to a scoring device loaded with software, which records the time and placement of shots on the target by the laser transmitter upon being “fired” by the soldier. The target comes with overlays to simulate various distances for the soldier’s point of aim. The scoring device displays the time of shot, time between shots, placement of shots, the shot order (1,2,3,...), center of shot group and shot dispersion. Up to ten (10) targets can be connected to a single scoring device.

The Machine Gun Training System target is a replica of the exact 10 meter qualification target used by the US Army. The target registers hits from the laser transmitter mounted on the machine gun and requires only 10 meters for operation. The target comes enclosed in its own carry case, which is portable and can be set up in a variety of locations to meet machine gun training requirements. With either standard blank ammunition or the addition of the SafeShot blank firing replacement barrels for the M-249, M-240, and the M-60, Training Tasks 1-8 and Qualification Tasks 9 and 10 can be met, providing full recoil and instant feedback. The MGTS gives shooters the ability to observe hits and a near miss, adjust fire, and operate with speed, and allows trainers to observe the shots in real time, save the session for later review or printed as a hard copy reference. Up to 10 targets may be linked to one computer. The MGTS includes all cables and software and is stored in its own travel storage case.

Physical Information:

The LMTS Small Suite is comprised of the following components:

One 460 System consists of two TR900 targets, two M16 25m/15m overlays and two M9 overlays, two MP400 lasers, two ‘AA’ batteries, two 5.56 mandrels, two M9 mandrels, one scoring device and cables, control box, BL640 Long cable and BL650 Daisy chain cables, 2 power strips, software and Instruction manual.

Two 130 (1 target) Systems consisting of one TR700 target, military mask set, power supply, one 5.56 mandrel, one 9mm mandrel, one MP400 laser transmitter, one ‘AA’ battery, 130 Instruction manual.

One Machine Gun Training System Package (MGTS) comes in one transit case with MP400 Laser with barrel brackets for M249, M240 and M2; 30m main cable, 3m Daisy Chain (linking) cable, power supply, software CD and MGTS Instruction manual.

One LMTS Accessory Kit consists of Laser Alignment Device (LAD) 5.56 with case, Laser Alignment device Multi-caliber, two 25M Zero Reflective targets, and two LTA380 M9 Laser Transmitters 12volt power converter, power strip, one 100ft extension cord, three 50ft extension cords, and 6 ea 25ft extension cords.

Equipment Required, Not Supplied:

Soldiers issued weapon (M9, M16/M4, M249).

Special Installation Requirements:

None

Power Requirements:

One ‘AA’ battery for each MP400 laser transmitter; four ‘AA’ batteries or 110V/50 Hz power supply for TR700 target; 110V/50 Hz for each TR900 target, 110V/50 Hz for the MGTS; 110V/50 Hz for the laptop scoring device.

Applicable Publications:

460 System Instruction Manual
130 System Instruction Manual
MGTS Instruction Manual

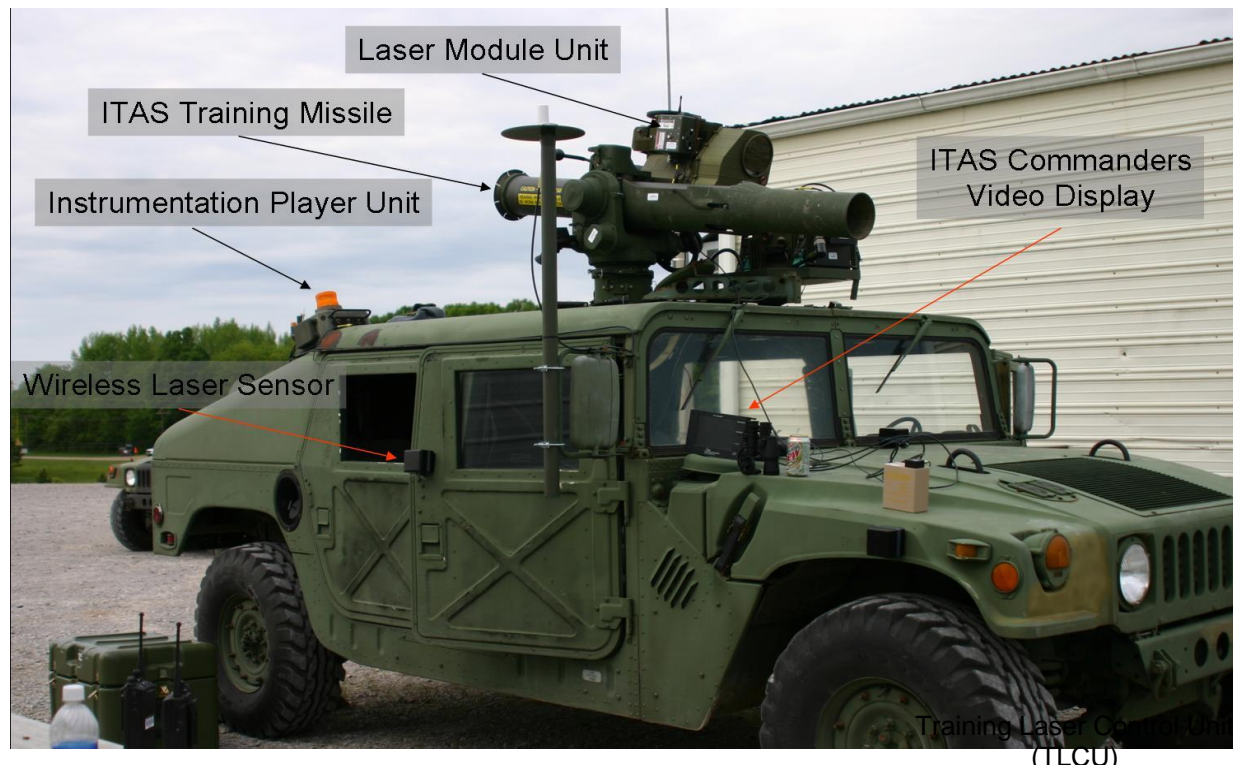
Reference Publications:

460 System - FM 3-22.9 (FM 23-9); Exercises 1-4;
MGTS – Training Tasks 1-8 and Qualification tasks 9 & 10

Training Requirements Supported:

MOSC - Primary Marksmanship Instruction, Remedial (on-site) marksmanship instruction during live fire.

TOW IMPROVED TARGET ACQUISITION SYSTEM-TACTICAL ENGAGEMENT SIMULATION SYSTEM (ITAS-TESS) FIELD TRAINING SYSTEM (FTS)

**Training Category/Level Utilized:**

Infantry/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL, PM Field OPS

Source and Method of Obtaining:

Available at Light Infantry posts.

Purpose of Trainer:

ITAS-TESS is a training and simulation system comprised of a HMMWV or Ground-Mounted system and a ground instrumentation system that supports individual, crew, gunnery, and collective live force-on-force training at Home Station or the Combat Training Centers (CTC).

Functional Description:

ITAS-TESS is a wireless training system capable of simulating all TOW missiles. The system is comprised of a Laser Module Unit (LMU) which incorporates three eye safe lasers: a pointing laser; a boresight laser; and a MILES laser. This unit mounts on the side of the ITAS. The Instrumentation Player Unit (IPU) provides position location, telemetry radios for CONUS and OCONUS use, System Kill Indicator, MILES sensors, and a flash data card for recording and playback for AAR. The Training Missile provides the power link to the system. Six wireless

MILES sensors are included in each kit. The vehicle commander can observe on his video display what the gunner sees. The system is transparent to the Soldier and compatible with all MILES systems and the CTCs.

Physical Information:

The LMU does not disturb the balance of the ITAS.

Equipment Required, Not Supplied:

SINGARS battery for IPU
ATWESS Cartridges

Special Installation Requirements:

Consult OUM

Power Requirements:

Operates off vehicle battery power or separate power supply (provided) when ground-mounted.

Applicable Publications:

(OUM) and (SMM) in each kit.

Reference Publications:

Infantry Manuals

Training Requirements Supported:

MOSC 11B

TOW IMPROVED TARGET ACQUISITION SYSTEM – TACTICAL ENGAGEMENT SIMULATION SYSTEM (ITAS-TESS) FIELD TRAINING SYSTEM (FTS) LOT 7



Mounted (ITAS-TESS)



Dismounted FTS

Training Category/Level Utilized:
Infantry/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC at Light Infantry posts.

Purpose of Trainer:

The Tube-launched Optically-tracked Wire-guided (TOW) Improved Target Acquisition System-Tactical Engagement Simulation System (ITAS-TESS) Field Training System (FTS) Lot 7 provides a realistic training experience to the soldier through accurate replication of the tactical system. During operation of the FTS in a training environment, the soldier performs normal Tactics, Techniques, and Procedures (TTP) to improve user task proficiencies. The FTS is used for crew TOW-ITAS training at the U.S. Army's Combat Training Centers for force on force training using the FTS Multiple Integrated Laser Engagement System (MILES) operation capability, or at a combat unit's home station for operator training. The FTS supports the firing of the Antitank Weapon Effects Signature Simulator (ATWESS) device in the pyrotechnic tube. The FTS provides the same functional performance characteristics as the weapon round without launching a live missile. The FTS can be used dismounted or on a vehicle-mounted TOW-ITAS configuration, and enables an instrumented TOW ITAS to be both a MILES shooter and MILES target.

Functional Description:

The ITAS-TESS FTS Lot 7 contains an Instrumentation Player Unit (IPU) kit, ITAS Training Missile Kit, Antenna Kit and a Ruggedized Improved Hand Held Initializer

(RIHHI) Assembly. The FTS interfaces with the TOW ITAS fire control bus to collect key data elements and wirelessly relay to the FTS IPU:

- Trigger pull,
- Range to target,
- Weapon selection, and
- other data elements which are necessary to simulate the ITAS TOW.

Engagement Range: The FTS is capable of realistically engaging targets and fly out times from 0.2KM to 4.5KM using eye-safe laser transmitters.

Time of Flight: The FTS replicates missile time of flight.

TOW Missile Replication: The FTS can simulate the TOW IIA, TOW IIB, TOW Bunker Buster, and TOW RF missile rounds.

Physical Information:

Dimensions: 15.50" (L) X, 1.00" (W) X 1.0" (H)
Weight: .5 lbs

Equipment Required, Not Supplied:

4-each SINCGARS battery BB-2590/U for IPU, 4-each NSN: 6140-01-490-4316.
ATWESS Cartridges.

Special Installation Requirements:

The Laser Module Unit (LMU) contains lasers. Laser Aperture emits invisible and visible laser radiation and is a danger to eyes from laser beams and reflections. To prevent injury, personnel are required to wear protective eyewear. Avoid direct exposure to beam and do not point laser beam at personnel within 7 meters. Failure to comply could result in eye injury to anyone looking at the MILES Laser while it is radiating.

Power Requirements:

The Auxiliary Power Supply (APS) Assembly (23138-001) has an Output Voltage of 24V @ 0.20A to provide continuous 48 hours of power for the LMU and Fire Control System Data Module (FCSDM) operation. The APS can also be connected to the IPU to supply additional power for extending the IPU operational time.

The APS uses two BB-2590/U with SMBUS batteries and has a built-in battery charging capability using the 110V@60Hz or 220V@50Hz AC power supply supplied with the TM System Assy (ICE10ITAS10542-01) or Instrumentation Player Unit (IPU) Kit (23148-001).

Applicable Publications:

OUM 07-6920-906-10: for Improved Target Acquisition System-Tactical Engagement Simulation System (ITAS-TESS) Field Training System (FTS).

SMM 07-6920-906-20: for ITAS-TESS FTS.

Reference Publications:

None

Training Requirements Supported:

All Military Aircrews

RUGGEDIZED IMPROVED HAND HELD INITIALIZER (RIHHI)

**Training Category/Level Utilized:**

Infantry/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC at Light Infantry posts.

Purpose of Trainer:

The Ruggedized Improved Hand Held Initiator (RIHHI) is ancillary support items of equipment (ASIOE) used to associate TOW Improved Target Acquisition System – Tactical Engagement Simulation System (ITAS-TESS) Field Training System (FTS) Lot 7 components. The RIHHI is a rugged Personal Data Assistant (PDA) modified to include an IRDA interface. It uses the Windows Mobile Operating System (OS). The RIHHI is provided with pre-installed, proprietary ITAS software and interfaces using wireless IRDA communications or RS232 serial cable connection with the FTS instrumentation devices.

Functional Description:

The RIHHI software has been Department Of Defense (DOD) Information Assurance (IA) accredited by the implementation of restricted access to the device software operating system by the use of passwords. The DOD IA

requirements restrict the user to the intended applications. An Application Control Software, or AppCenter for Mobile and Embedded Devices is installed for security and control purposes. The AppCenter prevents unauthorized device utilization and restricts end-user interface and activity to “authorized only” applications, specifically the ITAS IHHI proprietary software. A User password is required to access the ITAS IHHI software basic functions. An Administrative (ADMIN) password is required to access the advanced functions of the ITAS IHHI software. An additional password is required to access the Archer Field PC Windows Mobile OS and default applications.

ITEM	ITEM NAME
1	Assembly, Case, Ruggedized IHHI
2	Cable Assembly, Ruggedized IHHI
3	Rugged, IHHI
4	Computer Disk, Manufacturer Documentation
5	Computer Disk, Microsoft Window Mobile
6	AC Charger, Universal
7	USB Cable
8	Packet, PDA Screen Protectors
9	Quick Start Guide, Manufacture

Physical Information:

Dimensions: 6.5" (L)x 3.5" (W) x 1.7" (D)
Weight: 17 oz (482g) with battery
Magnesium case with scratch resistant powder coat
Easy to grip, impact absorbing overmold

Equipment Required, Not Supplied:

N/A

Special Installation Requirements:

N/A

Power Requirements:

Intelligent 3900mAh Li-Ion battery
Operates for up to 20 hours on one charge
Charges in 4 to 6 hours
Battery easily changed without tools.

Applicable Publications:

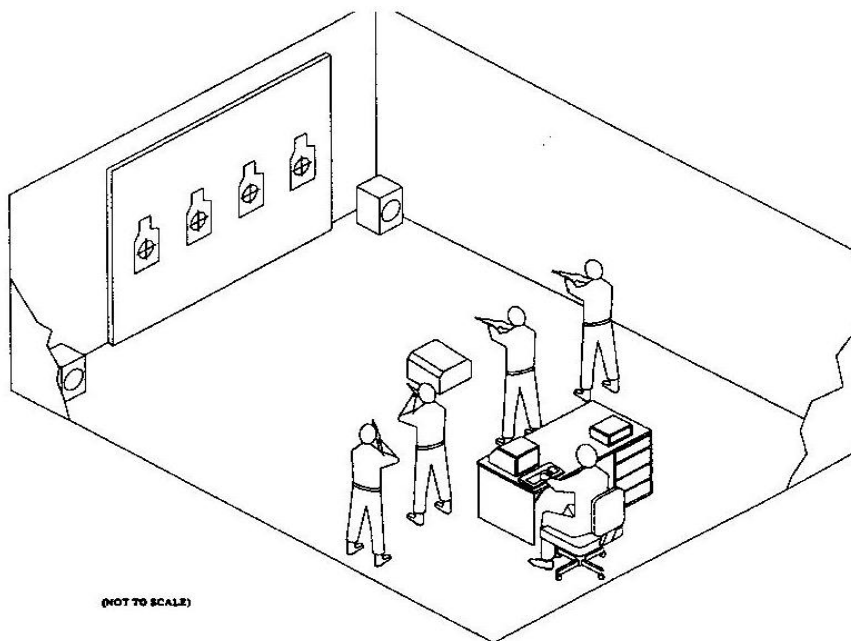
OUM 07-6920-906-10: for Improved Target Acquisition
System-Tactical Engagement Simulation System (ITAS-
TESS) Field Training System (FTS).
SMM 07-6920-906-20: for ITAS-TESS FTS.

Reference Publications:

None

Training Requirements Supported:All Military Aircrews

FIREARMS TRAINING SYSTEM (FATS) IV



(NOT TO SCALE)

FOUR LANE TRAINER

Training Category/Level Utilized:

Infantry/Level 1-4

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (Limited production).

Purpose of Trainer:

The training system is a computer-based system designed to train students in weapon operation and proficiency. The system exposes students to realistic training and combat situations and provides advanced diagnostic tools for the instructor.

Functional Description:

The device is an electronics video presentation system contained in a large console, a control console, a large white screen and various non-live fire semi-automatic weapon simulators. The device presents a target or situation on the screen and requires the trainee to decide if and when to shoot. The device tests decision-making skills and marksmanship and provides a complete replay of results, in real time, slow motion or frame by frame. Evaluation during and after training can be conducted through the replay and printout of results.

An instructor supervises training from the Instructor Control Station (ICS) and controls simulator functions and communications, directing students via the instructor's personal computer. The PC interfaces with, and controls

the Primary Simulation Computer via a router connection. This PSC is designed to accept up to eight simulated, compressed air-powered weapons to be fired at combat scenarios the screen.

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

System can be set up and operated in any room 15' x 30' x 8'. The recommended room size is 25' x 30' x 8' high (7.62m x 9.14m x 2.43m high) or larger. The room also must have provisions to block out all sunlight. If room lights are necessary, they must be fluorescent. The room should be protected from extreme temperature or humidity by a controlled environment.

Power Requirements:

110vac; 60 Hz, single-phase power.

Applicable Publications:

Combat Arms Training System – ARNG (CATS – ARNG) Operation and Maintenance Manual published by Fats, inc. (FATS P/N 1022686) – May 10, 2004

Reference Publications:

N/A

Training Requirements Supported:

MOSC/All Series

LASER MARKSMANSHIP TRAINING SYSTEM (LMTS), SNIPER TRAINING SYSTEM (STS)



LMTS/STS Transport Case

Training Category/Level Utilized:

Basic weapons/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC.

Purpose of Trainer:

The Laser Marksmanship Training System (LMTS) Sniper Trainer System will simulate weapons training events which lead to live fire qualifications for US Army Designated Marksman and Snipers. The STS will be used primarily as an advanced individual marksmanship training device. It uses the individual soldier's personal issued weapon, optics and accessories and allows units to conduct individual marksmanship training using biological and chemical protective equipment. Since it is light, transportable, uses self sustained power sources and requires no fixed facilities support, it is also idea for training scenarios in the field.

The STS will support training the Army 5.56mm, 7.62mm and .50 caliber sniper weapons systems.

Functional Description:

The Sniper Trainer System is a lightweight, low cube, day or night capable long range marksmanship training system. Like the other LMTS training devices, the STS does not require special or stand alone facilities. It can be used outdoors and requires a training distance of 25m (as measured from the of the weapons scope to the face of the



LMTS/STS Accessories

target) since the targets are scaled for this distance. However, these targets can be viewed at distances of greater than 25m during range estimation exercises to provide more variations in range.

Firing is simulated by a weapons mounted, eye safe laser transmitter which attaches to the barrel of the weapon. The sniper/designated marksman and instructor receive instant feedback via the computer on each shot.

Soldiers can dry fire, or use standard blanks to activate the laser transmitter.

The STS incorporates a ballistics program that adjusts the point of impact for each weapon and ammunition combination based on real world variables such as wind, slope, altitude and weather conditions. Instructors enter ballistic variables into the scenarios to challenge the shooter to make the necessary sight adjustments to achieve a target hit. Targets are properly scaled for range estimation at clearly specified training distances (as verified by mil-dot or other reticle, which is not included). Target presentations seen by the sniper or designated marksman correspond to the display on the computer screen in scale, color, and wind references. Additional targets may be used and scaled by the user for mission specific training.

The STS supports in-depth after action reviews using a full feature "trace mode" and selectable mil-dot reticle or minute of angle (MOA) grid overlays for shot placement analysis.

**LMTS/STS Weapon**

The STS Instructor Control Panel provides the following information via pictures and graphs displayed on the Laptop screen:

- a. Weapon/ammunition combination
- b. Temperature control
- c. Humidity Control
- d. Altitude Control
- e. Slant Angle Control
- f. Equivalent target range at training distance
- g. Ballistic offset display panel
- h. Weapon/Ammunition data source input option
- i. Target data barcode input option
- j. Target range adjustment control
- k. Wind speed and Direction Control

Physical Information:

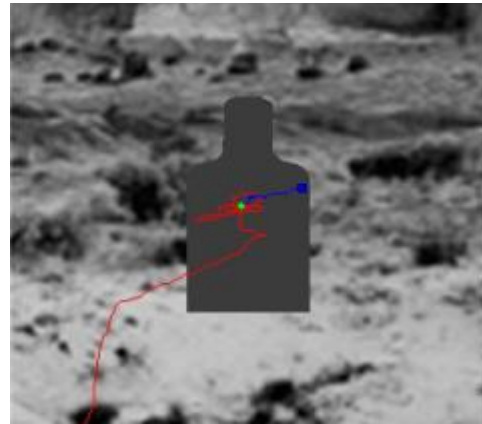
The LMTS Sniper Trainer System is comprised of the following components stored in the case, the case lid and accessory case:

The STS case contains the following components:

- One laptop Control Station with pre-loaded STS system software.
- Hit Detection Device (HDD)
- Accessory case (see list below)
- Remote Unit USB (Box 1)
- Remote Cable, 30m

The STS case lid contains the following components:

- Target area (calibration target)
- Wind Speed Indicator Magnets (Set of 16)
- Wind Vector Indicator magnets (Set of 8)
- Target Scenarios (Set of 12)

**LMTS/STS Target**

The STS Accessory case contains the following components:

- Remote Unit USB, Local (Box 2)
- Power Adapter for USB unit (local)
- USB and parallel cables, white
- MP400 Laser with mounting bracket
- Adaptors for 5.56, 7.62 and .50 cal barrels
- Laser Cable
- Computer power supply
- HDD Filter
- Wind velocity and Direction indicators
- USB Box 1
- 30m remote cable

One Case:

- Dimension: 30 x 20 x 12 in.
- Total weight: 70 lbs (31.7 Kg)
- Cubic inches: 95

Equipment Required, Not supplied:

Soldiers issued weapon and optics.

Special Installation Requirements:

None.

Power Requirements:

One 'AA' battery for each MP400 laser transmitter; 110V/50 Hz for the laptop Control Station; 110V/50 Hz for USB Box 2.

Applicable Publications:

Sniper Trainer System Instruction Manual

Reference: Publications:

Sniper Trainer Manual FM 3-23-10

Training Requirements Supported:

MOSC - Visual feedback on marksmanship fundamentals, Shot grouping analysis; Range estimation and elevation adjustment; Wind estimation and windage adjustment; Ballistics correction for weather conditions; and slant range correction.

CLOSE COMBAT MISSION CAPABILITY KIT (CCMCK) FOR M9 SEMI-AUTOMATIC PISTOL



CCMCK M9 Blue Training Barrel

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC or as AAL to the weapon.

Purpose of Trainer:

The purpose of this training device is to temporarily convert the M9 Semi-automatic Pistol for firing of low-velocity 9mm marking ammunition.

This device is a component of the Close Combat Mission Capability Kit (CCMCK). The CCMCK weapon conversion system and ammunition allows for force-on-force close combat training using ammunition that marks the target yet presents minimal hazard to personnel wearing appropriate safety equipment. Other CCMCK weapon conversion kits include the M16/M4 Rifle/Carbine, M249 Squad Automatic Weapon, and M11 Compact Pistol.

Functional Description:

The CCMCK weapon conversion kit allows for Soldier/Operator conversion and installs in the same manner as the standard service barrel. The converted weapon retains original upper/lower receivers, slides, and frames with mounted accessories (sights, rail systems, optics/electro-optics, aiming lights, etc.), if attached.

CCMCK provides normal weapon employment cues such as aiming, firing, force-on-force training, and interactive live-fire scenario task and mission execution. The CCMCK conversion kit will not allow service ammunition to be fired when a weapon is converted for use with the CCMCK ammunition.



CCMCK Face Mask

CCMCK marking ammunition is loaded into the standard magazine for the weapon, fed into the converted weapon, and operated in accordance with the normal operating procedures for that weapon. Once loaded, it cycles the weapon and functions in the same manner as service ammunition. Converting the weapon to use CCMCK marking ammunition does not cause any undue effects or degradation of the normal service components, overall weapon longevity, or the general function of the weapon.

Physical Information:

The CCMCK conversion kit for the M9 consists of a blue training barrel assembly that directly replaces the standard service barrel. All CCMCK weapon conversion kits have distinctive blue markings to enable identification under normal visibility conditions that the weapon is modified for CCMCK firing. CCMCK M9 barrel dimensions: 5.0"(L) x 0.6"(W) x 1.1"(H), Weight: 0.4 lbs, Caliber: 9mm.

The CCMCK face mask is a single piece nylon mask which wraps around the lower face and neck and attaches in the back with velcro. The brow band adds additional protection between the helmet and goggles.

Equipment Required, Not Supplied:

As a minimum, the required safety equipment for using CCMCK in Force-On-Force training, in addition to the CCMCK face mask, will consist of single hearing protection, standard Combat Helmet or Advanced Combat Helmet, standard gloves, standard Sand, Wind and Dust goggles, groin protection, and two layers of clothing (standard combat shirt and Battle Dress Uniform (BDU) or Army Combat Uniform (ACU) with sleeves rolled down). These are included in the soldier and organizational

equipment (OCIE) CTA 50-900 items. Safety equipment/clothing must be worn in a manner such that there is no exposed skin during training.

Special Installation Requirements:

(Information not available)

Power Requirements:

None

Applicable Publications:

TM 9-6920-3700-10: Operator's Manual for Close Combat Mission Capability Kit (CCMCK).

TM 9-6920-3700-20: Unit Maintenance Manual for Close Combat Mission Capability Kit (CCMCK).

Reference Publications:

TM 43-0001-27: Army Ammunition Data Sheets, Small Caliber Ammunition.

TM 9-1305-201-34: Direct Support and General Support Maintenance Manual. Small Arms to 30MM Inclusive.

TM 9-1305-201-20: Organizational Maintenance Manual for Small Arms Ammunition to 30MM Inclusive.

TM 9-1005-317-10: Operator's Manual Pistol, Semi-automatic, 9mm, M9.

Training Requirements Supported:

MOSC 11 series

CLOSE COMBAT MISSION CAPABILITY KIT (CCMCK) FOR M11 COMPACT PISTOL



CCMCK M11 Feed Ramp and Blue Training Barrel

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC or as AAL to the weapon.

Purpose of Trainer:

The purpose of this training device is to temporarily convert the M11 Compact Pistol for firing of low-velocity 9mm marking ammunition.

This device is a component of the Close Combat Mission Capability Kit (CCMCK). The CCMCK weapon conversion system and ammunition allows for force-on-force close combat training using ammunition that marks the target yet presents minimal hazard to personnel wearing appropriate safety equipment. Other CCMCK weapon conversion kits include the M16/M4 Rifle/Carbine, M249 Squad Automatic Weapon, and M9 Semi-automatic Pistol.

Functional Description:

The CCMCK weapon conversion kit allows for Soldier/Operator conversion and installs in the same manner as the standard service barrel. The converted weapon retains original upper/lower receivers, slides, and frames with mounted accessories (sights, rail systems, optics/electro-optics, aiming lights, etc.), if attached.

CCMCK provides normal weapon employment cues such as aiming, firing, force-on-force training, and interactive live-fire scenario task and mission execution. The CCMCK conversion kit will not allow service ammunition to be fired when a weapon is converted for use with the CCMCK ammunition.



CCMCK Face Mask

CCMCK marking ammunition is loaded into the standard magazine for the weapon, fed into the converted weapon, and operated in accordance with the normal operating procedures for that weapon. Once loaded, it cycles the weapon and functions in the same manner as service ammunition. Converting the weapon to use CCMCK marking ammunition does not cause any undue effects or degradation of the normal service components, overall weapon longevity, or the general function of the weapon.

Physical Information:

The CCMCK conversion kit for the M11 consists of a feed ramp and blue training barrel that directly replaces the standard service barrel. All CCMCK weapon conversion kits have distinctive blue markings to enable identification under normal visibility conditions that the weapon is modified for CCMCK firing. CCMCK M11 barrel dimensions: 3.8"(L) x 0.7"(W) x 1.1"(H), Weight: 0.4 lbs, Caliber: 9mm.

The CCMCK face mask is a single piece nylon mask which wraps around the lower face and neck and attaches in the back with velcro. The brow band adds additional protection between the helmet and goggles.

Equipment Required, Not Supplied:

As a minimum, the required safety equipment for using CCMCK in Force-On-Force training, in addition to the CCMCK face mask, will consist of single hearing protection, standard Combat Helmet or Advanced Combat Helmet, standard gloves, standard Sand, Wind and Dust goggles, groin protection, and two layers of clothing (standard combat shirt and Battle Dress Uniform (BDU) or Army Combat Uniform (ACU) with sleeves rolled down). These are included in the soldier and organizational

equipment (OCIE) CTA 50-900 items. Safety equipment/clothing must be worn in a manner such that there is no exposed skin during training.

Special Installation Requirements:

(Information not available)

Power Requirements:

None

Applicable Publications:

TM 9-6920-3700-10: Operator's Manual for Close Combat Mission Capability Kit (CCMCK).

TM 9-6920-3700-20: Unit Maintenance Manual for Close Combat Mission Capability Kit (CCMCK).

Reference Publications:

TM 43-0001-27: Army Ammunition Data Sheets, Small Caliber Ammunition.

TM 9-1305-201-34: Direct Support and General Support Maintenance Manual. Small Arms to 30MM Inclusive.

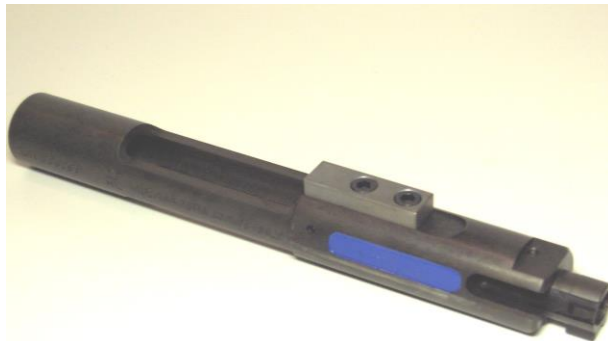
TM 9-1305-201-20: Organizational Maintenance Manual for Small Arms Ammunition to 30MM Inclusive.

TM 9-1005-317-10: Operator's Manual Pistol, Semi-automatic, 9mm, M9.

Training Requirements Supported:

MOSC 11 series

CLOSE COMBAT MISSION CAPABILITY KIT (CCMCK) FOR M16/M4 RIFLE/CARBINE



CCMCK Training Bolt and Carrier Assembly

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC or as AAL to the weapon.

Purpose of Trainer:

The purpose of this training device is to temporarily convert the family of M16 rifles (M16A2, M16A3, M16A4) and M4 carbines (M4, M4A1) for firing of low-velocity 5.56mm marking ammunition.

This device is a component of the Close Combat Mission Capability Kit (CCMCK). The CCMCK weapon conversion system and ammunition allows for force-on-force close combat training using ammunition that marks the target yet presents minimal hazard to personnel wearing appropriate safety equipment. Other CCMCK weapon conversion kits include the M249 Squad Automatic Weapon, M9 Semi-automatic Pistol, and M11 Compact Pistol.

Functional Description:

The CCMCK weapon conversion kit allows for Soldier/Operator conversion and installs in the same manner as the standard service bolt and carrier assembly. The converted weapon retains original upper/lower receivers, slides, and frames with mounted accessories (sights, rail systems, optics/electro-optics, aiming lights, etc.), if attached.

CCMCK provides normal weapon employment cues such as aiming, firing, force-on-force training, and interactive live-fire scenario task and mission execution.



CCMCK Face Mask

The CCMCK conversion kit will not allow service ammunition to be fired when a weapon is converted for use with the CCMCK ammunition.

CCMCK marking ammunition is loaded into the standard magazine for the weapon, fed into the converted weapon, and operated in accordance with the normal operating procedures for that weapon. Once loaded, it cycles the weapon and functions in the same manner as service ammunition. Converting the weapon to use CCMCK marking ammunition does not cause any undue effects or degradation of the normal service components, overall weapon longevity, or the general function of the weapon.

Physical Information:

The CCMCK conversion kit for the M16/M4 consists of a training bolt and carrier assembly that directly replaces the standard service bolt and carrier assembly. All CCMCK weapon conversion kits have distinctive blue markings to enable identification under normal visibility conditions that the weapon is modified for CCMCK firing. CCMCK M16/M4 bolt and carrier assembly dimensions: 7.2"(L) x 1.0"(W) x 1.0"(H), Weight: 0.8 lbs, Caliber: 5.56mm.

The CCMCK face mask is a single piece nylon mask which wraps around the lower face and neck and attaches in the back with velcro. The brow band adds additional protection between the helmet and goggles.

Equipment Required, Not Supplied:

As a minimum, the required safety equipment for using CCMCK in Force-On-Force training, in addition to the CCMCK face mask, will consist of single hearing protection, standard Combat Helmet or Advanced Combat Helmet, standard gloves, standard Sand, Wind and Dust

goggles, groin protection, and two layers of clothing (standard combat shirt and Battle Dress Uniform (BDU) or Army Combat Uniform (ACU) with sleeves rolled down). These are included in the soldier and organizational equipment (OCIE) CTA 50-900 items. Safety equipment/clothing must be worn in a manner such that there is no exposed skin during training.

Special Installation Requirements:

(Information not available)

Power Requirements:

None

Applicable Publications:

TM 9-6920-3700-10: Operator's Manual for Close Combat Mission Capability Kit (CCMCK).

TM 9-6920-3700-20: Unit Maintenance Manual for Close Combat Mission Capability Kit (CCMCK).

Reference Publications:

TM 43-0001-27: Army Ammunition Data Sheets, Small Caliber Ammunition.

TM 9-1305-201-34: Direct Support and General Support Maintenance Manual. Small Arms to 30mm Inclusive.

TM 9-1305-201-20: Organizational Maintenance Manual for Small Arms Ammunition to 30mm Inclusive.

TM 9-1005-319-10: Operator's Manual for Rifle, 5.56mm, M16A2; Rifle, 5.56mm, M16A3; Rifle, 5.56mm, M16A4; Carbine, 5.56mm, M4; Carbine, 5.56mm, M4A1.

Training Requirements Supported:

MOSC 11 series

CLOSE COMBAT MISSION CAPABILITY KIT (CCMCK) FOR M249 SQUAD AUTOMATIC WEAPON (SAW)



CCMCK Training Bolt and Slide Assembly

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC or as AAL to the weapon.

Purpose of Trainer:

The purpose of this training device is to temporarily convert the M249 Squad Automatic Weapon (SAW) for firing of low-velocity 5.56mm marking ammunition.

This device is a component of the Close Combat Mission Capability Kit (CCMCK). The CCMCK weapon conversion system and ammunition allows for force-on-force close combat training using ammunition that marks the target yet presents minimal hazard to personnel wearing appropriate safety equipment. Other CCMCK weapon conversion kits include the M16/M4 Rifle/Carbine, M9 Semi-automatic Pistol, and M11 Compact Pistol.

Functional Description:

The CCMCK weapon conversion kit allows for Soldier/Operator conversion and installs in the same manner as the standard service bolt and slide assembly. The converted weapon retains original upper/lower receivers, slides, and frames with mounted accessories (sights, rail systems, optics/electro-optics, aiming lights, etc.), if attached.

CCMCK provides normal weapon employment cues such as aiming, firing, force-on-force training, and interactive live-fire scenario task and mission execution. The CCMCK conversion kit will not allow service



CCMCK Face Mask

ammunition to be fired when a weapon is converted for use with the CCMCK ammunition.

CCMCK marking ammunition is loaded into the standard magazine for the weapon, fed into the converted weapon, and operated in accordance with the normal operating procedures for that weapon. Once loaded, it cycles the weapon and functions in the same manner as service ammunition. Converting the weapon to use CCMCK marking ammunition does not cause any undue effects or degradation of the normal service components, overall weapon longevity, or the general function of the weapon.

Physical Information:

The CCMCK conversion kit for the M249 consists of a training bolt and slide assembly that directly replaces the standard service bolt and slide assembly, a CCMCK specific ejector blade assembly that replaces the standard service ejector blade, and a blue feed tray adapter. All CCMCK weapon conversion kits have distinctive blue markings to enable identification under normal visibility conditions that the weapon is modified for CCMCK firing. CCMCK M249 conversion kit dimensions: 5.7"(L) x 1.1"(W) x 1.5"(H), Weight: 0.7 lbs, Caliber: 5.56mm.

The CCMCK face mask is a single piece nylon mask which wraps around the lower face and neck and attaches in the back with velcro. The brow band adds additional protection between the helmet and goggles.

Equipment Required, Not Supplied:

As a minimum, the required safety equipment for using CCMCK in Force-On-Force training, in addition to the CCMCK face mask, will consist of single hearing protection, standard Combat Helmet or Advanced Combat Helmet, standard gloves, standard Sand, Wind and Dust

goggles, groin protection, and two layers of clothing (standard combat shirt and Battle Dress Uniform (BDU) or Army Combat Uniform (ACU) with sleeves rolled down). These are included in the soldier and organizational equipment (OCIE) CTA 50-900 items. Safety equipment/clothing must be worn in a manner such that there is no exposed skin during training.

Special Installation Requirements:

(Information not available)

Power Requirements:

None

Applicable Publications:

TM 9-6920-3700-10: Operator's Manual for Close Combat Mission Capability Kit (CCMCK).

TM 9-6920-3700-20: Unit Maintenance Manual for Close Combat Mission Capability Kit (CCMCK).

Reference Publications:

TM 43-0001-27: Army Ammunition Data Sheets, Small Caliber Ammunition.

TM 9-1305-201-34: Direct Support and General Support Maintenance Manual. Small Arms to 30mm Inclusive.

TM 9-1305-201-20: Organizational Maintenance Manual for Small Arms Ammunition to 30mm Inclusive.

TM 9-1005-201-10: Operator's Manual Machine Gun, 5.56mm, M249 with equipment.

Training Requirements Supported:

MOSC 11 series

TANK WEAPON GUNNERY SIMULATION SYSTEM/ PRECISION GUNNERY SYSTEM (TWGSS/PGS)

NSN Not Assigned

NSN Not Assigned

NSN Not Assigned

NSN Not Assigned

NSN Not Assigned

NSN Not Assigned

NSN Not Assigned

DVC 07-168/3 (PGS): PGS for M2/M3, M2A1/M3A1, and M2A2/M3A2 BFV

DVC 07-168/5 (PGS): PGS for Light Armored Vehicle (LAV)

DVC 07-168/6 (PGS): Retro-reflectors

DVC 07-168/7 (PGS): Controller Gun

DVC 07-168/9 (PGS): PGS for M2A3/M3A3 Bradley Fighting Vehicle

DVC 07-168/10 (PGS): PGS for M6 Bradley Fighting Vehicle Linebacker

DVC 07-168/11 (TSV) for M2/M3 (BFV), (PGS)

**Training Category/Level Utilized:**

Infantry/Level 1

maneuver exercises at platoon and company level in 7-8 MTP and FM 3-21.71.

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC.

PGS is used to provide realistic simulations for the preparation of live firing the gunnery tables in day and night conditions. It allows the training of crews in collective tasks for platoon, company, and battalion level force-on-force exercises. With PGS, precision gunnery is integrated with tactical training, to give the crews experience in precision and degraded mode gunnery while under the pressure of opposing force engagements.

Purpose of Trainer:

The Precision Gunnery Simulation System (PGS) for M2, M3, M2A1/M3A1, and M2A2/M3A2 Bradley Fighting Vehicle (PGS) develops, maintains, and evaluates crew and unit proficiency in gunnery skills. PGS trains gunnery tasks as described in M2/M3 manuals (FM 23-1, FM 3-20.21 and FT 25-A1. It also trains those tasks for

For Device 07-168/6, a mini-size retroreflector (DVC 07-168/6) is also available for use on scaled ranges.

Functional Description:

The Precision Gunnery Simulation System (PGS) is a vehicle mounted device. The PGS uses a laser transceiver, retro-flectors, detectors, computer system, tracer burst obscuration, an aural cue effects generator, control panel target interface, and after action review computer. A control gun has been designed for use in force-on-force training. The control gun will allow a referee to intervene and control the training scenario from a range of up to 2000 meters.

Physical Information:

Total system weight configured for transit is 218 lbs. distributed between three transit cases as shown below.

Vehicle Interface Unit: 4 lbs.

Control Panel: 11 lbs.

TBOS Driver unit: 2 lbs.

Target Computer Unit: 3 lbs.

Retro Detector Unit: 3 lbs.

Hull Defilade Detector Unit: 1 lb.

TDRS Memory card: 2 oz.

TBOS Eyepiece Unit: 1 lb.

Shorting Plug: 5 oz.

RSI Unit: 4 lbs.

RSI Unit Antenna Assembly: 4 lbs.

Retro Reflector Unit: 2 lbs.

Equipment Required, Not Supplied:

Battery, 9v, Alkaline

Special Installation Requirements:

None

Power Requirements:

21-29vdc

Applicable Publications:

TM 9-6920-710-12&P-1; TM 9-6920-710-12&P-3

DVC 07-168 was previously DVC 17-172.

DVC 07-168/3 was previously DVC 17-172/3.

DVC 07-168/5 was previously DVC 17-172/5.

DVC 07-168/6 was previously DVC 17-172/6.

DVC 07-168/7 was previously DVC 17-172/7.

DVC 07-168/9 was previously DVC 17-172/9.

DVC 07-168/10 was previously DVC 17-172/10.

DVC 07-168/11 was previously DVC 17-172/11.

Reference Publications:

N/A

Training Requirements Supported:

MOSC 11B; 19D

STRYKER ANTI-TANK GUIDED MISSILE BASIC SKILLS TRAINER (ATGM BST)



(ATGM-BST) Instructor Station



Student Station

Training Category/Level Utilized:

Armor/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

Its purpose is to provide the following gunner skills training: initial-entry ATGM basic gunner skills, basic and advanced individual gunnery, sustainment training in the unit, and formal qualification training.

Functional Description:

The Instructor Station software injects simulated terrains and targets into the ATGM launcher site, and the gunner uses the tactical ATGM launcher controls to engage the simulated targets. Terrain and target images are presented in both daylight and IR views. The exercises are interactive three-dimensional simulations of tactical engagements designed to train gunners in all aspects of target engagement. The gunner sees a variety of targets as he scans his sector of fire, and detects, classifies, identifies, and engages them or not as appropriate for a particular exercise.

Physical Information:

The ATGM Basic Skills Trainer is a PC-based appended training device installed inside the ATGM vehicle. During training, the ATGM Gunner Station components are disconnected from the tactical system and reconnected to the ATGM BST Interface Assembly. The Interface Assembly is then connected to the BST Instructor Station (PC).

Equipment Required, Not Supplied:

Stryker vehicle

Special Installation Requirements:

Refer to ATGM BST Operator's Manual for set-up.

Power Requirements:

A dry, indoor training area with a standard three-wire grounded 120V (US) power outlet.

A power surge protector for the Instructor Station PC.

Applicable Publications:

Operator Manual and Instructor Guide

Reference Publications:

Anti-Tank Guided Missile (ATGM) Weapon System Basic Skills Trainer (BST) Operator Manual.

Anti-Tank Guided Missile Vehicle (ATGM) Technical Manual, Operator's Manual, TM 9-2320-311-10-7, May 2003.

DVC was previously assigned as DVC 17-245.

Training Requirements Supported:

The instructor will have satisfied at least 2 years of anti-armor operations training, received BST NET certification, and completed and passed all training exercises in the ATGM BST Instructor Guide.

The student will have the following experience and training prior to beginning of BST practice session: Instruction on the ATGM physical characteristics and functionality, based on the ATGM Vehicle Technical Manual, Operator's Manual, familiarity with the ATGM BST purpose, physical characteristics, and with functions of the BST components, an understanding of the principles of detecting, classifying, locking onto, and engaging targets with the ATGM system.

**M2A2/M3A2 BRADLEY FIGHTING VEHICLE (BFV)
INSTITUTIONAL - CONDUCT OF FIRE TRAINER (I-COFT)
OPERATION DESERT STORM (ODS) ENHANCEMENTS**

NSN 6920-01-597-1489 DVC 07-177/A M2A2/M3A2 ODS BFV Mobile-COFT (M-COFT) (ODS) Enhancements
NSN 6920-01-597-1500 DVC 07-177/B M2A2/M3A2 ODS BFV Re-locatable-COFT (R-COFT) (ODS) Enhancements

**Training Category/Level Utilized:**

Infantry/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando, FL

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

The ODS enhanced COFT mission is to develop or sustain critical gunnery skills required for qualification of vehicle commanders and gunners. The COFT system provides training over a variety of situations encountered in combat. Exercises range from simple target acquisition and firing on a stationary target to more difficult scenarios involving ammunition selection, night conditions, own vehicle motion, multiple moving targets, variable visibility, and other complex conditions.

Functional Description:

The M2/M3 A2 ODS COFT-E trainer enables BFV crewmembers to conduct critical crew-level direct fire gunnery tasks in a synthetic environment. Each COFT-E consists of a turret module, Image Generator (IG) and IOS. The crew station module simulates the essential form, fit, and function of the BFV operating controls, indicators, and weapon sights. The IG reproduces full color scenes displayed through crew sights as well as at the IOS. The IOS enables the instructor to initiate exercises, monitor, and evaluate the crew's performance and permits interaction with the crew during the training session.

M2/M3 A2 ODS COFT-E simulators may be placed in buildings, in re-locatable shelters, and on a trailer for ease of mobility.

Physical Information:

Special Purpose Computer (SPC): 61" x 30" x 75";
3500 lb.
Instructor Operator Station (IOS): 41" x 51" x 72";
1041 lb.
M2/M3 Crew Station: 65" x 90" x 64"; 2700 lb.
General Purpose Computer (GPC): 47" x 30" x 64";
1200 lb.
GPC EXP Cabinet: 26" x 30" x 64"; 600 lb.
Disk Unit: 21" x 36" x 33"; 370 lb.
Printer: 28" x 34" x 33"; 150 lb.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

The trainer must be installed in an enclosed, air conditioned building having an available vacant floor space of approximately 11 by 36 feet. Lighting and air conditioning control are pre-established building requirements.

Power Requirements:

SPC: 120/208vac, 50 A, 3-phase, 11kva
IOS: 120/208vac, 20 A, 3-phase, 4kva
GPC: 120/208vac, 30 A, 3-phase, 4kva
GPCEXP: 120vac, 30 A, 1-phase, N/A
Disk Unit: 120vac, 11 A, 1-phase, .77kva
Printer: 120vac, 5 A, 1-phase, .34kva
Miscellaneous: .03kva

Applicable Publications:

TM 9-6920-892-10 - Operator's Manual
TM 9-6920-892-23 - Org/Direct Support Maintenance
TM 9-6920-892-23-100 - Organizational/Direct Support
Assembly Drawings and Parts List

Reference Publications:

FM 3-22.1; FM 22.12
Device 07-177 previously assigned as DVC 17-210.
Device 07-177/A previously assigned as DVC 07-170/B.
Device 07-177/B previously assigned as DVC 07-170/A.

Training Requirements Supported:

MOSC 11B; 19D

BRADLEY CONDUCT OF FIRE TRAINER (COFT) - SITUATIONAL

NSN 6920-01-589-8590

NSN 6920-01-589-9635

DVC 07-179/A

DVC 07-179/B

Bradley (COFT) - Mobile
Bradley (COFT) - Table Top Trainer (TTT)

DVC 07-179



DVC 07-179/A



DVC 07-179/B

Training Category/Level Utilized:

Infantry/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

Bradley COFT training builds the foundation of Bradley commander and gunner coordination and trains the crew on engagement techniques for precision gunnery through realistic virtual training scenarios.

Functional Description:

The Bradley COFT replicates the performance of the M2/M3A2 Operation Desert Storm-Situational Awareness (ODS-SA) and A3 Bradley Fighting Vehicle (BFV) enabling the crew to operate a BFV entity in a synthetic environment. The trainer can be operated in either A3 or ODS-SA mode with no hardware reconfiguration. It simulates the use of the fire control systems against stationary and moving threats, single and multiple target arrays, during day, night, and reduced visibility conditions in various different environments. The Bradley COFT allows training without regard to time of day or climatic conditions. The Bradley COFT supports the training of degraded modes of gunnery in offensive and defensive postures in a variety of environments. The Bradley COFT has exercise playback capability to support instructor led After Action Review (AAR) discussions. Each trainer consists of a turret module, image generator, and

Instructor/Operator station. The Bradley COFT has three different configurations:

1. Institutional – unsheltered, designed for classroom environments
2. Mobile – Environmentally controlled shelter fielded on a trailer
3. Table-Top Trainer – portable, hard-sided transit cases

Physical Information:

Mobile Trailer = 34' (L) X 8' (W) X 12.3' (H)

Equipment Required, Not Supplied:

None

Special Installation Requirements:

(Information not available)

Power Requirements:

Institutional - 3 Phase 208v AC $\pm 10\%$, 50/60 Hz $\pm 10\%$
Mobile - 3 Phase 208v AC $\pm 10\%$, 50/60 Hz $\pm 10\%$ and an onboard 30kW generator
Table Top – Dual voltage designed to operate with either 110/120V or 220/240V

Applicable Publications:

IUH 07-6920-732-20
SMM 07-6920-733-24
Transportability Guide – TM 07-6920-736-20

Reference Publications:

TC 3-30.31 Training and Qualification, Crew March 2015

Training Requirements Supported:MOSC 11B; 19D; 13F; 21B

BRADLEY ADVANCED TRAINING SYSTEM – URBAN OPERATIONS (BATS-UO)

NSN 6920-01-508-2488

DVC 07-180/1

(BATS-UO) Permanent (Institutional), (Unsheltered)

NSN 6920-01-590-1467

DVC 07-180/2

(BATS-UO) Relocatable (Sheltered), (Single Shelter)



DVC 07-180/1



DVC 07-180/2

Training Category/Level Utilized:

Infantry/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

BATS-UO training builds the foundation of Bradley commander and gunner coordination and trains the crew on engagement techniques for precision gunnery through realistic virtual training scenarios.

Functional Description:

The BATS-UO trainer replicates the performance of the M2/M3A3 Bradley Fighting Vehicle (BFV) enabling the crew to operate a BFV entity in a synthetic environment. It simulates the use of the fire control systems against stationary and moving threats, single and multiple target arrays, during day, night, and reduced visibility conditions in various environments. The BATS-UO allows training without regard to time of day or climatic conditions. The BATS-UO will support the training of degraded modes of gunnery in offensive and defensive and has playback capability to support instructor led after action review (AAR) discussions. Each trainer consists of a turret module, image generator, and Instructor/Operator station. The BATS-UO has three different configurations:

- 1- Permanent - Institutional/unsheltered, designed for classroom environments
- 2- Relocatable – Sheltered in (1) environmentally controlled shelter
- 3- Relocatable – Sheltered in (2) environmentally controlled shelters

Physical Information:

Turret shelter: 238.5" x 96" x 96"

IOS/RMS shelter: 238.5" x 96" x 96"

Equipment Required, Not Supplied:

None

Special Installation Requirements:

The permanent trainer must be installed in an enclosed, air conditioned building. Available floor space of approximately 1,200 square feet is required. A transit path 10 feet wide and 14 feet high is required from the Power Requirements floor space to load/unload the system for installation and uninstall.

Sheltered:

Low extreme: Minus 46°C (-51°F) with no solar load.
High extreme: Plus 52°C (125°F) plus a solar load of 1120 watts per square meter (W/m²) (355 BTU/ft²hr) of the shelter exterior

Power Requirements:

208vac +/- 10 percent, 3-phase, 60 Hz +/- 1 percent.

Applicable Publications:

TD 9-6930-712-12, Instructor's Utilization Handbook
TD 9-6930-712, BATS-UO System Maintenance (COTS) Manuals

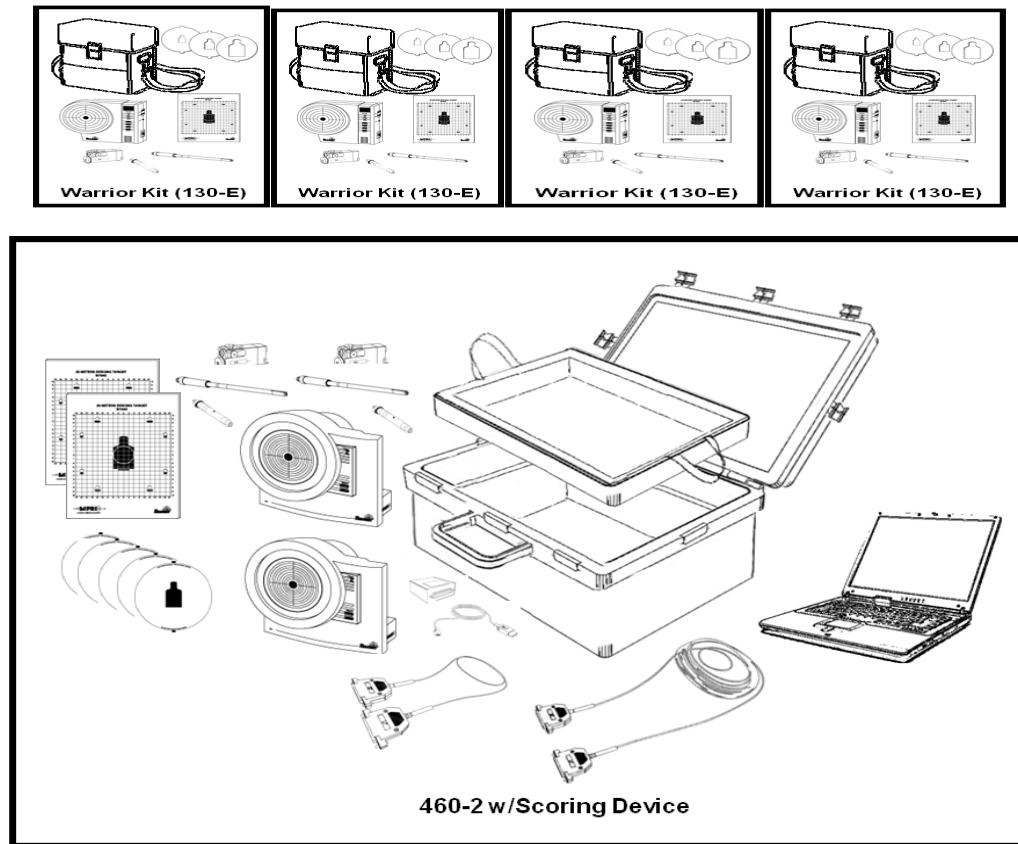
Reference Publications:

FM 3-30.21 HBCT Gunnery, dtd September 2009
Device 07-180 was previously assigned as DVC 07-171.
DVC 07-180/1 was assigned previously as DVC 07-171/2.
DVC 07-180/2 was assigned previously DVC 07-171/2/A.

Training Requirements Supported:

MOSC 11B; 19D; 13F; 21B

LASER MARKSMANSHIP TRAINING SYSTEM (LMTS) BASIC RIFLE/PISTOL MARKSMANSHIP SYSTEM (BRPMS)



Training Category/Level Utilized:
Basic Weapons/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The Laser Marksmanship Training System (LMTS) will simulate weapons training events which lead to live fire qualifications for individual and crew weapons. LMTS will be used primarily as a unit/individual, indoor/outdoor, multi-lane, small arms crew served and individual marksmanship training device. It uses the individual soldier's personal issued weapon and will allow units to conduct individual and sustainment marksmanship training using biological and chemical protective equipment. Since it is light, transportable, uses self sustained power sources and requires no fixed facilities support, it is also ideal for training scenarios in the field.

The LMTS Large Suite will support 6 rifle lanes plus one machine gun lane and is optimized for brigade Basic Rifle Marksmanship training.

Functional Description:

The LMTS is a system that provides quantitative feedback in place of the "Dime/Washer" exercise, focusing on the four fundamentals of marksmanship (steady position, sight alignment and picture, breathe control and trigger squeeze). It provides real time feedback in all seasons on the soldier's assigned weapon, transmitter. The Zero Reflective target is used to zero the weapons and laser transmitter. It also provides training for correct sight picture and alignment. The laser detectors are located in the TR700 and TR900 targets and are optimized for use at 25 meters however these will work accurately from 6 inches out to 50 meters for the TR700 target and from about 6 inches out to about 75 meters for the TR900 target.

The TR700 target registers and counts the number of hits on a numerical counter up to 99. The TR700 uses target silhouette masks in 100, 200, or 300 meter sizes to simulate

Functional Description:

the target size and scale. The TR900 target is connected via cable to a scoring device loaded with software, which records the time and placement of shots on the target by the laser transmitter upon being "fired" by the soldier. The target comes with overlays to simulate various distances for the soldier's point of aim. The scoring device displays the time of shot, time between shots, placement of shots, the shot order (1,2,3,...), center of shot group and shot dispersion. Up to ten (10) targets can be connected to a single scoring device.

The Machine Gun Training System target is a replica of the exact 10 meter qualification target used by the US Army. The target registers hits from the laser transmitter mounted on the machine gun and requires only 10 meters for operation. The target comes enclosed in its own carry case, which is portable and can be set up in a variety of locations to meet machine gun training requirements. With either standard blank ammunition or the addition of the SafeShot blank firing replacement barrels for the M-249, M-240, and the M-60, Training Tasks 1-8 and Qualification Tasks 9 and 10 can be met, providing full recoil and instant feedback. The MGTS gives shooters the ability to observe hits and a near miss, adjust fire, and operate with speed, and allows trainers to observe the shots in real time, save the session for later review or printed as a hard copy reference. Up to 10 targets may be linked to one computer. The MGTS includes all cables and software and is stored in its own travel storage case.

Physical Information:

The LMTS BRPMS System is comprised of the following components:

One 460-2 System consisting of two TR900 targets, two M16 25m/15m overlays and two M9 overlays, two MP400 lasers, two 'AA' batteries, two 5.56 mandrels, two M9 mandrels, one scoring device and cables, control box, BL640 Long cable and BL650 Daisy chain cables, two power strips, software manuals.

One 130-4E Warrior kit consisting of four TR700 target, four military mask sets, four power supplies, four 5.56 mandrels, four 9mm mandrels, four MP400 laser

transmitters, twenty 'AA' batteries, four 130 Instruction Manuals, one carry case and one PL-10 lubricant.

One LMTS Accessory Kit consisting of one Laser Alignment Device (LAD) 5.56 with case, two total Laser Alignment device Multi-caliber, two 25M Zero Reflective targets, and two LTA380 M9 Laser Transmitters 12volt power converter, power strip, one 100ft extension cord, three 50ft extension cords, and six ea 25ft extension cords.

Cases:

65 lbs (20 7/8 x 12 1/2 x 32 15/16)

42 lbs (20 7/8 x 12 1/2 x 32 15/16)

42 lbs (20 7/8 x 12 1/2 x 32 15/16)

35 lbs (20 11/16 x 12 1/2 x 13 7/8)

Total weight: 184 lbs

Cubic feet: 21.97

Equipment Required, Not Supplied:

Soldiers issued weapon (M9, M16/M4, M249)

Special Installation Requirements:

None

Power Requirements:

One "AA" battery for each MP400 laser transmitter; four 'AA' batteries or 110V/50 Hz power supply for TR700 target; 110V/50 Hz for each TR900 target, 110V/50 Hz for the MGTS; 11 OV/50 Hz for the laptop scoring device.

Applicable Publications:

460 System Instructions Manual MGTS Instruction Manual

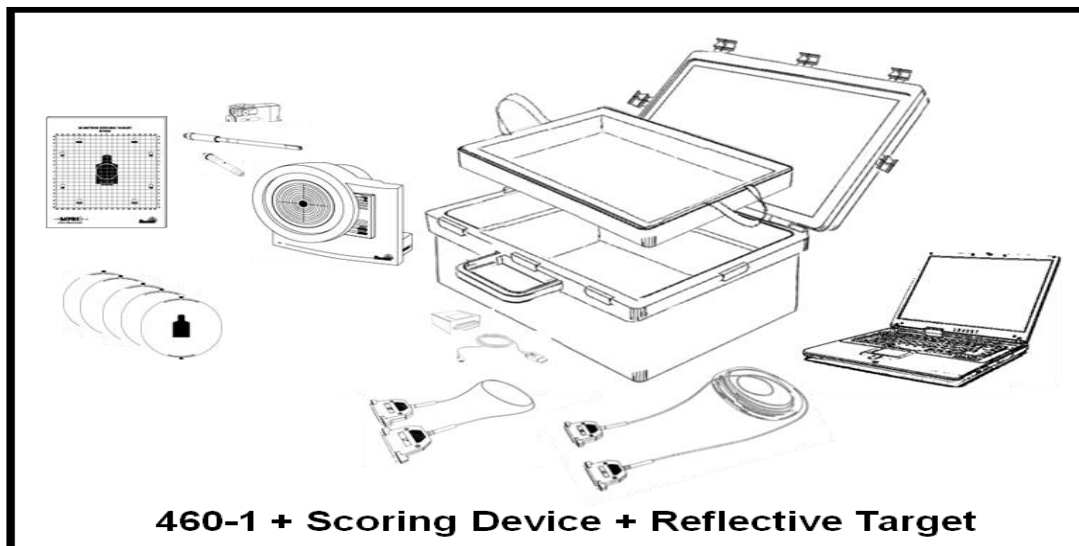
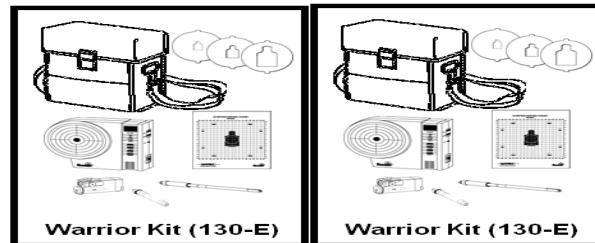
Reference Publications:

460 System – FM 3-22.9 (FM 23-9); Exercises 1-4; MGTS – Training Tasks 1-8 and Qualification Tasks 9 & 10

Training Requirements Supported:

MOSC - Primary Marksmanship Instruction, Remedial (on-site) marksmanship instruction during fire.

LASER MARKSMANSHIP TRAINING SYSTEM (LMTS) BASIC RIFLE/PISTOL MARKSMANSHIP SYSTEM (BRPMS) LIGHT



Training Category/Level Utilized:
Basic Weapons/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The Laser Marksmanship Training System (LMTS) will simulate weapons training events which lead to live fire qualifications for individual and crew weapons. LMTS will be used primarily as a unit/individual, indoor/outdoor, multi-lane, small arms crew served and individual marksmanship training device. It uses the individual soldier's personal issued weapon and will allow units to conduct individual and sustainment marksmanship training using biological and chemical protective equipment. Since it is light, transportable, uses self sustained power sources and requires no fixed facilities support, it is also ideal for training scenarios in the field.

The LMTS Large Suite will support 6 rifle lanes plus one machine gun lane and is optimized for brigade Basic Rifle Marksmanship training.

Functional Description:

The LMTS is a system that provides quantitative feedback in place of the "Dime/Washer" exercise, focusing on the four fundamentals of marksmanship (steady position, sight alignment and picture, breathe control and trigger squeeze). It provides real time feedback in all seasons on the soldier's assigned weapon, transmitter. The Zero Reflective target is used to zero the weapons and laser transmitter. It also provides training for correct sight picture and alignment. The laser detectors are located in the TR700 and TR900 targets and are optimized for use at 25 meters however these will work accurately from 6 inches out to 50 meters for the TR700 target and from about 6 inches out to about 75 meters for the TR900 target.

The TR700 target registers and counts the number of hits on a numerical counter up to 99. The TR700 uses target silhouette masks in 100, 200, or 300 meter sizes to simulate

the target size and scale. The TR900 target is connected via cable to a scoring device loaded with software, which records the time and placement of shots on the target by the laser transmitter upon being "fired" by the soldier. The target comes with overlays to simulate various distances for the soldier's point of aim. The scoring device displays the time of shot, time between shots, placement of shots, the shot order (1,2,3,...), center of shot group and shot dispersion. Up to ten (10) targets can be connected to a single scoring device.

The Machine Gun Training System target is a replica of the exact 10 meter qualification target used by the US Army. The target registers hits from the laser transmitter mounted on the machine gun and requires only 10 meters for operation. The target comes enclosed in its own carry case, which is portable and can be set up in a variety of locations to meet machine gun training requirements. With either standard blank ammunition or the addition of the SafeShot blank firing replacement barrels for the M-249, M-240, and the M-60, Training Tasks 1-8 and Qualification Tasks 9 and 10 can be met, providing full recoil and instant feedback. The MGTS gives shooters the ability to observe hits and a near miss, adjust fire, and operate with speed, and allows trainers to observe the shots in real time, save the session for later review or printed as a hard copy reference. Up to 10 targets may be linked to one computer. The MGTS includes all cables and software and is stored in its own travel storage case.

Physical Information:

The LMTS BRPMS System – Light is comprised of the following components:

One 460-1 System consisting of one TR900 target, one M16 25m/15m overlay and one M9 overlay, one MP400 laser, one 'AA' battery, one 5.56 mandrel, one M9 mandrel, one scoring device and cable, control box, BL640 Long cable and BL650 Daisy chain cables, one power strip, software manual.

One 130-2E Warrior kit consisting of two TR700 target, two military mask sets, two power supplies, two 5.56 mandrels, two 9mm mandrels, two MP400 laser

transmitters, ten 'AA' batteries, two 130 Instruction Manuals, one carry case and one PL-10 lubricant.

One LMTS Accessory Kit consisting of one Laser Alignment Device (LAD) 5.56 with case, two total Laser Alignment device Multi-caliber, two 25M Zero Reflective targets, and two LTA380 M9 Laser Transmitters 12volt power converter, power strip, one 100ft extension cord, three 50ft extension cords, and six ea 25ft extension cords.

Cases:

65 lbs (20 7/8 x 12 1/2 x 32 15/16)

42 lbs (20 7/8 x 12 1/2 x 32 15/16)

42 lbs (20 7/8 x 12 1/2 x 32 15/16)

35 lbs (20 11/16 x 12 1/2 x 13 7/8)

Total weight: 184 lbs

Cubic feet: 21.97

Equipment Required, Not Supplied:

Soldiers issued weapon (M9, M16/M4, M249)

Special Installation Requirements:

None

Power Requirements:

One "AA" battery for each MP400 laser transmitter; four 'AA' batteries or 110V/50 Hz power supply for TR700 target; 110V/50 Hz for each TR900 target, 110V/50 Hz for the MGTS; 11 OV/50 Hz for the laptop scoring device.

Applicable Publications:

460 System Instructions Manual MGTS Instruction Manual

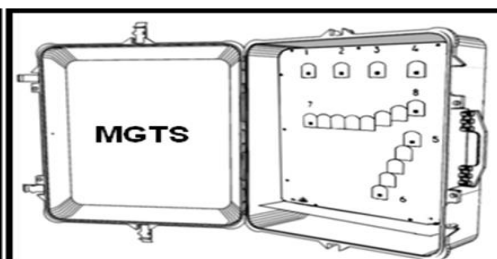
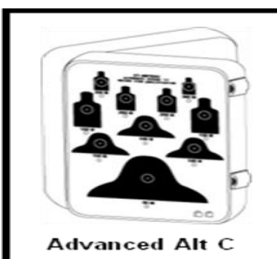
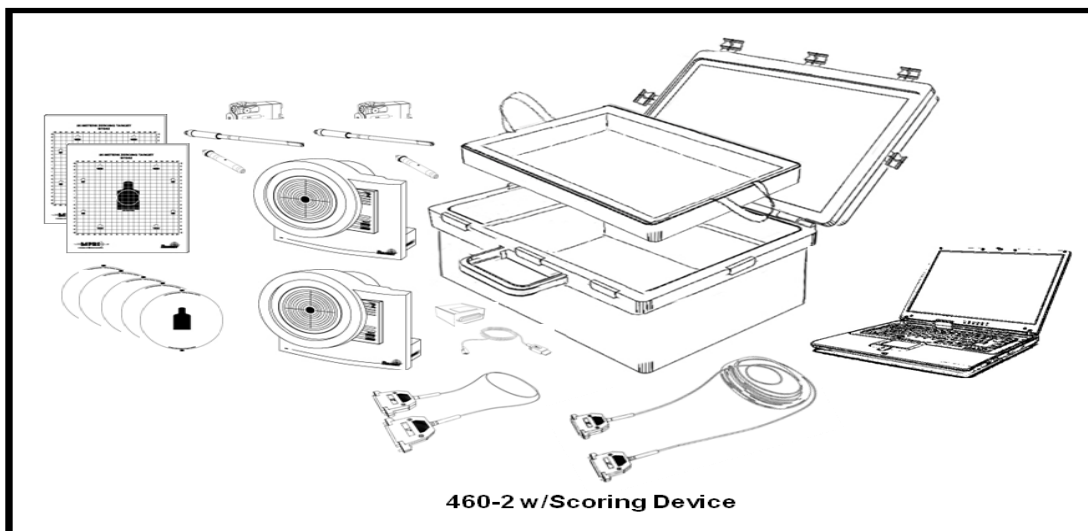
Reference Publications:

460 System – FM 3-22.9 (FM 23-9); Exercises 1-4; MGTS – Training Tasks 1-8 and Qualification Tasks 9 & 10

Training Requirements Supported:

MOSC - Primary Marksmanship Instruction, Remedial (on-site) marksmanship instruction during fire.

LASER MARKSMANSHIP TRAINING SYSTEM (LMTS) SMALL UNIT TRAINING SET (SUTS)



Training Category/Level Utilized:
Basic Weapons/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The Laser Marksmanship Training System (LMTS) will simulate weapons training events which lead to live fire qualifications for individual and crew weapons. LMTS will be used primarily as a unit/individual, indoor/outdoor, multi-lane, small arms crew served and individual marksmanship training device. It uses the individual soldier's personal issued weapon and will allow units to conduct individual and sustainment marksmanship training using biological and chemical protective equipment. Since it is light, transportable, uses self sustained power sources and requires no fixed facilities support, it is also ideal for training scenarios in the field.

The LMTS Large Suite will support 6 rifle lanes plus one machine gun lane and is optimized for brigade Basic Rifle Marksmanship training.

Functional Description:

The LMTS is a system that provides quantitative feedback in place of the "Dime/Washer" exercise, focusing on the four fundamentals of marksmanship (steady position, sight alignment and picture, breathe control and trigger squeeze). It provides real time feedback in all seasons on the soldier's assigned weapon, transmitter. The Zero Reflective target is used to zero the weapons and laser transmitter. It also provides training for correct sight picture and alignment. The laser detectors are located in the TR700 and TR900 targets and are optimized for use at 25 meters however these will work accurately from 6 inches out to 50 meters for the TR700 target and from about 6 inches out to about 75 meters for the TR900 target.

The TR700 target registers and counts the number of hits on a numerical counter up to 99. The TR700 uses target silhouette masks in 100, 200, or 300 meter sizes to simulate

the target size and scale. The TR900 target is connected via cable to a scoring device loaded with software, which records the time and placement of shots on the target by the laser transmitter upon being "fired" by the soldier. The target comes with overlays to simulate various distances for the soldier's point of aim. The scoring device displays the time of shot, time between shots, placement of shots, the shot order (1,2,3....), center of shot group and shot dispersion. Up to ten (10) targets can be connected to a single scoring device.

The Machine Gun Training System target is a replica of the exact 10 meter qualification target used by the US Army. The target registers hits from the laser transmitter mounted on the machine gun and requires only 10 meters for operation. The target comes enclosed in its own carry case, which is portable and can be set up in a variety of locations to meet machine gun training requirements. With either standard blank ammunition or the addition of the SafeShot blank firing replacement barrels for the M-249, M-240, and the M-60, Training Tasks 1-8 and Qualification Tasks 9 and 10 can be met, providing full recoil and instant feedback. The MGTS gives shooters the ability to observe hits and a near miss, adjust fire, and operate with speed, and allows trainers to observe the shots in real time, save the session for later review or printed as a hard copy reference. Up to 10 targets may be linked to one computer. The MGTS includes all cables and software and is stored in its own travel storage case.

Physical Information:

The LMTS SUTS System is comprised of the following components:

One 460-2 System consisting of two TR900 targets, two M16 25m/15m overlays and two M9 overlays, two MP400 lasers, two 'AA' batteries, two 5.56 mandrels, two M9 mandrels, one scoring device and cables, control box, BL640 Long cable and BL650 Daisy chain cables, two power strips, software manuals.

One 130-4E Warrior kit consisting of four TR700 target, four military mask sets, four power supplies, four 5.56 mandrels, four 9mm mandrels, four MP400 laser transmitters, twenty 'AA' batteries, four 130 Instruction Manuals, one carry case and one PL-10 lubricant.

One LMTS Accessory Kit consisting of one Laser Alignment Device (LAD) 5.56 with case, two total Laser Alignment device Multi-caliber, two 25M Zero Reflective targets, and two LTA380 M9 Laser Transmitters 12volt power converter, power strip, one 100ft extension cord, three 50ft extension cords, and six ea 25ft extension cords.

One MUTAR-Alt-C consisting of one MUTAR multi-use target, one power supply, one 25m MUTAR Alt-C overlay, one 15m MUTAR Alt-C overlay, one 30m cable, one 3m cable, one MUTAR Alt-C Instruction Manual, one CD: MUTAR Alt-C system, one MP-400B, one flex mount bracket, one "AA" battery and one LMTS instructional CD.

One MUTAR-MGTS consisting of one MUTAR multi-use target, one 10m MUTAR-MGTS Overlay, one 3m cable, one 30m cable, one MUTAR-MGTS Instruction Manual, one power supply, one CD: MUTAR-MGTS, one vibration screw, one "AA" battery, one MP400 MG, one M249 bracket, one M240 bracket, one LMTS Instruction Manual, one Laser Transmitter Rod, LTA 500C and one Laser Transmitter Rod, LTA 7.62C.

Cases:

65 lbs (20 7/8 x 12 1/2 x 32 15/16)
42 lbs (20 7/8 x 12 1/2 x 32 15/16)
42 lbs (20 7/8 x 12 1/2 x 32 15/16)
35 lbs (20 11/16 x 12 1/2 x 13 7/8)
Total weight: 184 lbs
Cubic feet: 21.97

Equipment Required, Not Supplied:

Soldiers issued weapon (M9, M16/M4, M249)

Special Installation Requirements:

None

Power Requirements:

One "AA" battery for each MP400 laser transmitter; four 'AA' batteries or 110V/50 Hz power supply for TR700 target; 110V/50 Hz for each TR900 target, 110V/50 Hz for the MGTS; 11 OV/50 Hz for the laptop scoring device.

Applicable Publications:

460 System Instructions Manual MGTS Instruction Manual

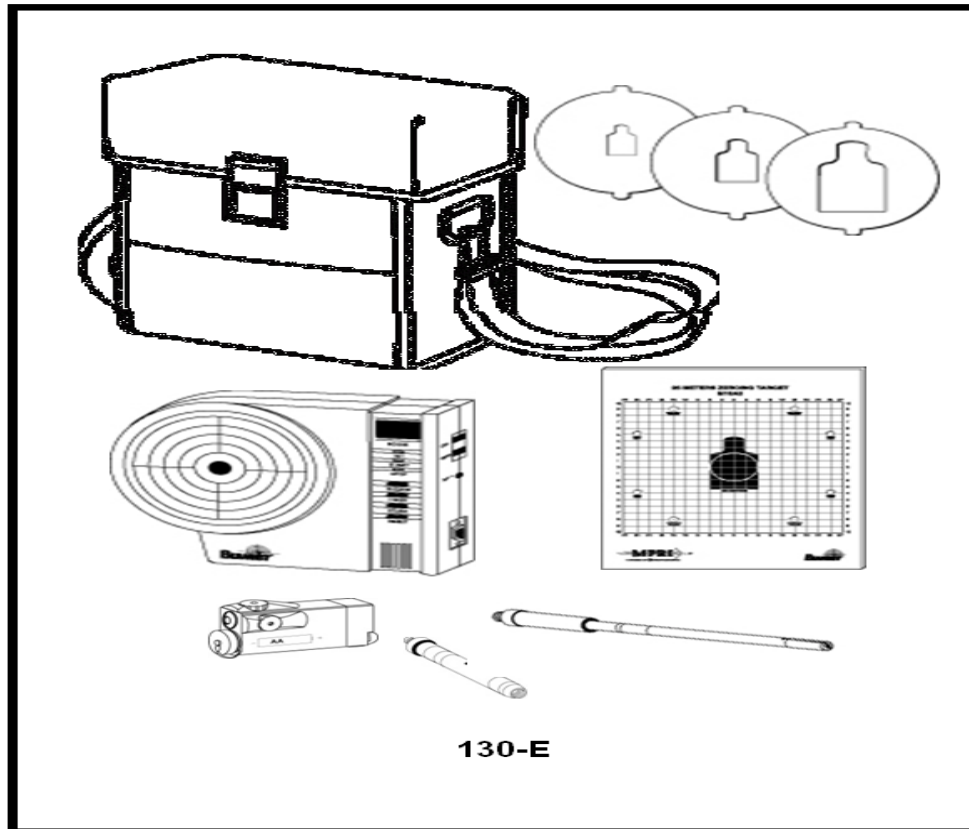
Reference Publications:

460 System – FM 3-22.9 (FM 23-9); Exercises 1-4; MGTS – Training Tasks 1-8 and Qualification Tasks 9 & 10

Training Requirements Supported:

MOSC - Primary Marksmanship Instruction, Remedial (on-site) marksmanship instruction during fire.

LASER MARKSMANSHIP TRAINING SYSTEM (LMTS) WARRIOR KIT 130-E

**Training Category/Level Utilized:**

Basic Weapons/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The Laser Marksmanship Training System (LMTS) will simulate weapons training events which lead to live fire qualifications for individual and crew weapons. LMTS will be used primarily as a unit/individual, indoor/outdoor, multi-lane, small arms crew served and individual marksmanship training device. It uses the individual soldier's personal issued weapon and will allow units to conduct individual and sustainment marksmanship training using biological and chemical protective equipment. Since it is light, transportable, uses self sustained power sources and requires no fixed facilities support, it is also ideal for training scenarios in the field.

The LMTS Large Suite will support 6 rifle lanes plus one machine gun lane and is optimized for brigade Basic Rifle Marksmanship training.

Functional Description:

The LMTS is a system that provides quantitative feedback in place of the "Dime/Washer" exercise, focusing on the four fundamentals of marksmanship (steady position, sight alignment and picture, breathe control and trigger squeeze). It provides real time feedback in all seasons on the soldier's assigned weapon, transmitter. The Zero Reflective target is used to zero the weapons and laser transmitter. It also provides training for correct sight picture and alignment. The laser detectors are located in the TR700 and TR900 targets and are optimized for use at 25 meters however these will work accurately from 6 inches out to 50 meters for the TR700 target and from about 6 inches out to about 75 meters for the TR900 target.

The TR700 target registers and counts the number of hits on a numerical counter up to 99. The TR700 uses target silhouette masks in 100, 200, or 300 meter sizes to simulate

the target size and scale. The TR900 target is connected via cable to a scoring device loaded with software, which records the time and placement of shots on the target by the laser transmitter upon being "fired" by the soldier. The target comes with overlays to simulate various distances for the soldier's point of aim. The scoring device displays the time of shot, time between shots, placement of shots, the shot order (1,2,3....), center of shot group and shot dispersion. Up to ten (10) targets can be connected to a single scoring device.

The Machine Gun Training System target is a replica of the exact 10 meter qualification target used by the US Army. The target registers hits from the laser transmitter mounted on the machine gun and requires only 10 meters for operation. The target comes enclosed in its own carry case, which is portable and can be set up in a variety of locations to meet machine gun training requirements. With either standard blank ammunition or the addition of the SafeShot blank firing replacement barrels for the M-249, M-240, and the M-60, Training Tasks 1-8 and Qualification Tasks 9 and 10 can be met, providing full recoil and instant feedback. The MGTS gives shooters the ability to observe hits and a near miss, adjust fire, and operate with speed, and allows trainers to observe the shots in real time, save the session for later review or printed as a hard copy reference. Up to 10 targets may be linked to one computer. The MGTS includes all cables and software and is stored in its own travel storage case.

Physical Information:

The LMTS Warrior Kit 130-E is comprised of the following components:

One 130-E Warrior kit consists of one TR700 target, one military mask set, one power supply, one 5.56 mandrel,

one 9mm mandrels, one MP400 laser transmitter, five 'AA' batteries, one 130 Instruction Manual, one carry case and one PL-10 lubricant.

Cases:

Carrying Case Warrior (Soft Bag).

Equipment Required, Not Supplied:

Soldiers issued weapon (M9, M16/M4, M249)

Special Installation Requirements:

None

Power Requirements:

One "AA" battery for each MP400 laser transmitter; four 'AA' batteries or 110V/50 Hz power supply for TR700 target; 110V/50 Hz for each TR900 target, 110V/50 Hz for the MGTS; 11 OV/50 Hz for the laptop scoring device.

Applicable Publications:

460 System Instructions Manual MGTS Instruction Manual

Reference Publications:

460 System – FM 3-22.9 (FM 23-9); Exercises 1-4; MGTS – Training Tasks 1-8 and Qualification Tasks 9 & 10

Training Requirements Supported:

MOSC - Primary Marksmanship Instruction, Remedial (on-site) marksmanship instruction during fire.

LAUNCHER, PRACTICE, SUBCALIBER AMMUNITION: BUNKER DEFEAT MUNITION (BDM) TRAINING DEVICE, 21 MILLIMETER, XM808



Launcher Practice Closed and Fully Extended

Training Category/Level Utilized:

Infantry/Level 1- One Station Unit Training

Logistic Responsible Command, Service, or Agency:

PM CCS

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The purpose of this training device is to simulate operation and firing of the tactical M141 Bunker Defeat Munition (BDM). The trainer duplicates the look, feel, and operational procedures of the tactical M141 BDM. The trainer shoots a practice 21mm training rocket that creates nearly the same concussion as and is ballistically similar to the tactical M141 BDM.

Functional Description:

The trainer contains a 21mm subcaliber barrel insert (whereas the tactical M141 BDM shoots an 83mm round). A practice 21mm training rocket is loaded into the receiver. Preparations to fire the trainer are then followed (extend launcher, twist and lock inner tube, open sights, etc...). The trainer is then aimed and fired. The trainer is recocked after each shot by collapsing the launcher, this resets the firing mechanism. Another round can then be inserted and the trainer can be fired again. The effective range of the 21mm training rocket is 350m, the maximum range is 1000m.

Physical Information:

Collapsed length: 32 inches
Extended length: 54.7 inches
Weight: 16.5 pounds

Equipment Required, Not Supplied:

Properly fitted single hearing protection, helmet, body armor, gloves, goggles, and protective shoes unless otherwise directed by local range SOP.
21mm training rockets, DODIC HA21

Special Installation Requirements:

None required

Power Requirements:

None

Applicable Publications:

TM 9-1055-650-13&P: Operator's and Field Manual for LAUNCHER, PRACTICE, SUBCALIBER AMMUNITION: Bunker Defeat Munition (BDM) Training Device, 21mm, XM808

Reference Publications:

TM/FM 3-23.25 Shoulder-Launched Munitions

TM 43-0001-30 Army Ammunition Data Sheets for Rockets, Rocket Systems, Rocket Fuzes, Rocket Motors

TM 9-1340-222-23 Field Maintenance Manual for Rockets, Rocket Ammunition, and Rocket Components

Device 07-182 was previously assigned as DVC 71-40.

Training Requirements Supported:

Training is not MOSC specific.

Army Training and Evaluation Program

Approved Shoulder Launched Munitions TRADOC POI for Home Station Training.

INERT TRAINER, LAUNCHER: M141 BUNKER DEFEAT MUNITION, FIELD HANDLING TRAINER (BDM FHT)



Inert Trainer Launcher Closed and Fully Extended

Training Category/Level Utilized:

Infantry/Level - 3

Logistic Responsible Command, Service, or Agency:

PM CCS

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The purpose of this BDM FHT Field Handling Training device is to simulate operation and firing procedures of the tactical M141 Bunker Defeat Munition. The BDM FHT replicates the weight, length, mechanical action, and external features. It consists of an inert, reusable launcher filled with inert ballast to duplicate rocket weight and center of gravity. The firing mechanism safety button and trigger button are functional to permit gunner practice firings. The firing mechanism is made of clear plastic. The FHT can also be used to simulate the combat load that a soldier will carry.

Functional Description:

The BDM FHT trainer is a fully inert device made for classroom, unit or individual instruction to enhance the war fighters understanding of effective employment of the tactical weapon by rehearsal of Operator Instruction, Troubleshooting Procedures, Operator and Field Maintenance Instructions.

Physical Information:

Collapsed Length: 32 inches
Extended Length: 54.7 inches
Weight: 15.7 pounds

Equipment Required, Not Supplied:

Duty Uniform

Special Installation Requirements:

None required

Power Requirements:

None

Applicable Publications:

Top Level Drawing

Reference Publications:

A Field Handling Trainer is referenced in the BDM M141 Technical Manual TM 9-1340-228-10

Training Requirements Supported:

MOSC - Army Training and Evaluation Program
Approved Shoulder Launched Munitions TRADOC POI
for Home Station Training.

This trainer supports individual task training for the M141 BDM training strategies IAW TM 3-23.25 (15 Sep 10)

M141 BDM

071-054-0021 Prepare an M141 BDM launcher for firing.

071-054-0022 Restore an M141 BDM launcher to carrying configuration.

071-054-0023 Perform misfire procedures on an M141 BDM launcher.

071-054-0024 Engage targets with an M141BDM launcher.

INERT TRAINER, LAUNCHER: M136A1 AT4 CONFINED SPACE AND REDUCED SENSITIVITY, FIELD HANDLING TRAINER (AT4CS-RS FHT)



Inert Trainer Launcher

Training Category/Level Utilized:

Infantry/Level - 3

Equipment Required, Not Supplied:

Duty Uniform

Logistic Responsible Command, Service, or Agency:

PM CCS

Special Installation Requirements:

None required

Source and Method of Obtaining:

Available through local TSC

Power Requirements:

None

Purpose of Trainer:

The purpose of this training device is to simulate the operation and function of the tactical M136A1 AT4CS-RS. The trainer replicates the weight, length, mechanical action, and external features. It consists of an inert, reusable launcher filled with inert ballast to duplicate rocket weight and center of gravity. The mechanical firing mechanism safety button and trigger button are functional to permit gunner practice firings. The firing mechanism is made of clear plastic. The FHT can also be used to simulate the combat load that a soldier will carry.

Applicable Publications:

Top Level Drawing

Reference Publications:

TM 3-23.25 Shoulder-Launched Munitions

Training Requirements Supported:

This trainer supports individual task training for the M136A1 AT4CS-RS training strategies IAW TM 3-23.25 (15 Sep 10)

Functional Description:

The AT4CS-RS FHT trainer is a fully inert device made for classroom, unit or individual instruction to enhance the war fighters understanding of effective employment of the tactical weapon by rehearsal of Operator Instruction, Troubleshooting Procedures, Operator and Field Maintenance Instructions.

M136A1 AT4CS-RS

071-054-0011 Prepare an M136A1 AT4 CS-RS launcher for firing.

071-054-0012 Restore an M136A1 AT4 CS-RS launcher to carrying configuration.

071-054-0013 Perform misfire procedures on an M136A1 AT4 CS-RS launcher.

071-054-0014 Engage targets with an M136A1 AT4 CS-RS launcher.

Physical Information:

Length: 41 inches

Weight: 17 pounds

SOLDIER MONITORING SYSTEM (SMS)

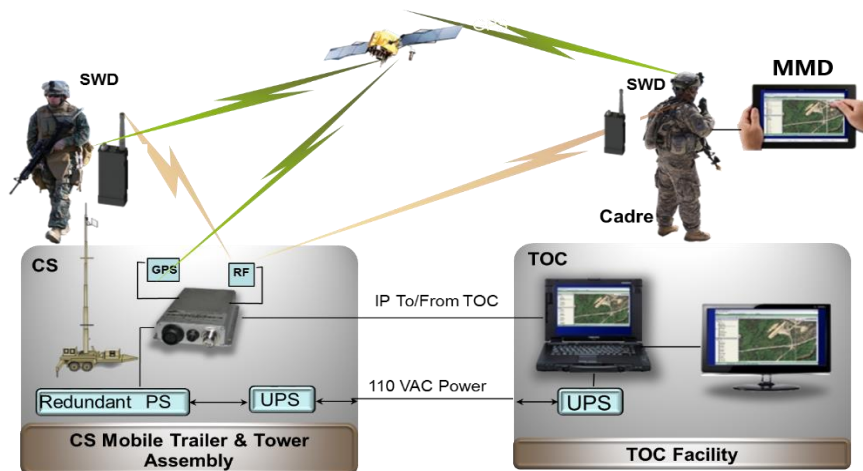
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NSN: 6910-016861519

NSN: 6910-016861797

NSN: 6910-016861791

NSN: 6910-016861796

[DVC 07-188/1](#) Soldier Monitoring System (SMS), Monitoring Station[DVC 07-188/2](#) Soldier Monitoring System (SMS), Mobile Monitoring Device (MMD)[DVC 07-188/3](#) Soldier Monitoring System (SMS), Soldier Worn Device (SWD)[DVC 07-188/4](#) Soldier Monitoring System (SMS), Antenna Assembly[DVC 07-188/5](#) Soldier Monitoring System (SMS), Mobile Tower

Training Category/Level Utilized:

Infantry/Level 1/2/3

Logistic Responsible Command, Service, or Agency:

PEO STRI

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

The Soldier Monitoring System (SMS) is a self-contained and mobile tracking system; that collects data from networked devices, worn by Soldiers, to provide information concerning a training exercise. Information provided by SMS includes real-time geo-locations, 'No Motion' alerts, Soldier initiated emergency/alerts, exercise 'Geo-Fence', and data recordings from each device (routes/movement) to support After Action Reviews (AAR). SMS supports individual training, where Soldiers are separated from other Soldiers and/or cadre (e.g. land navigation), and anytime individual/unique Soldier tracking is required to enhance training realism and/or reduce risk.

Functional Description:

Soldier Monitoring System (SMS) is comprised of a Monitoring Station (laptop, monitor, UPS – setup at operations center), Mobile Monitoring Devices (MMD) (wireless tablet – carried by cadre), Soldier Worn Devices (SWD), Antenna Assembly (device server, UPS and antenna), and a Mobile Antenna Assembly (Antenna

Assembly with trailer/tower and generator). SMS configuration is scalable and adaptable to meet each unit's unique requirements and provide adequate coverage (soldier tracking) regardless of terrain.

Physical Information:

Workbench/table/desk, dry covered monitoring station area, and antenna footprint, as applicable.

Equipment Required, Not Supplied:

(None)

NSLIN – XA1008

Special Installation Requirements:

(None)

Power Requirements:

Standard 110v power source/generator

Applicable Publications:

Contractor provided technical manuals; Commercial-off-the-Shelf (COTS) Manual(s).

Reference Publications:

COTS Manuals

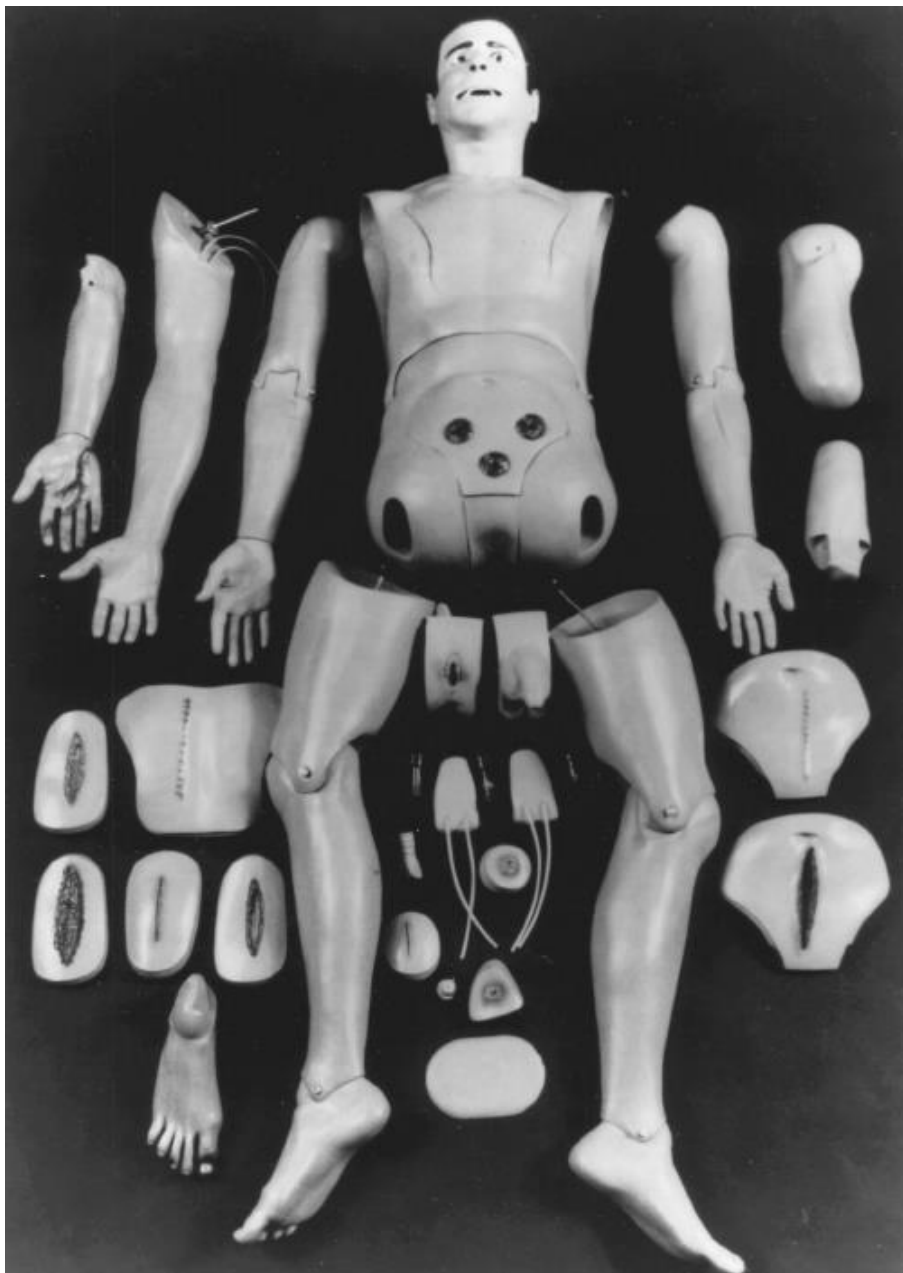
Training Requirements Supported:

None – MOS NonSpecific

**BASIC SERIES 08
MEDICAL**



MANIKIN, NURSING DOLL



Training Category/Level Utilized:
Medical/Level 3

Logistic Responsible Command, Service, or Agency:
USAMMA

Source and Method of Obtaining:
Available through local TSC.

Purpose of Trainer:

The device is intended to be used by military medical personnel at all levels of medical training and evaluation of basic nursing care. It provides trainees realistic practice in nursing care techniques and is used in evaluation of techniques such as catheterization, bladder irrigation, colonic irrigation enemas, nasal and otic douching and hypodermic injection. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The device is adult size, made of plastic material that simulates the appearance, texture and resilience of human skin with interchangeable male and female genitals for complete catheterization. It has a life-size intubation head with simulated skull, a functional mouth with flexible tongue and removable dentures, a trachea, pinchable nose, and simulated lungs that inflate with ventilation for mouth to mouth respiration. The joints of this device simulate ball and socket action for natural movements. It has an esophagus with reservoir for lavage and gavage; rectum with reservoir for enemas and colonic irrigation; a stomach reservoir that can be filled with fluids to simulate gastric regurgitation and surgical belly plate with stomas. It has six injection sites and two interchangeable IV pads. Simulated blood, casualty make-up and provided. interchangeable wounds can be used to simulate different types of casualties. The device is provided with a carrying case.

Physical Information:

Adult Life Size

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

(Information not available)

Reference Publications:

(Information not available)

Training Requirements Supported:

Basic Officer, Medical Corps Warrant Officer and Enlisted Personnel Course, in all MOSC 91 Series

ANATOMICAL MODEL: TORSO AND HEAD



Training Category/Level Utilized:
Medical/Level 2

Logistic Responsible Command, Service, or Agency:
USAMMA

Source and Method of Obtaining:
Available through local TSC.

Purpose of Trainer:

The model provides a representative replica of the human torso to be used in teaching the anatomy of the head, neck, and torso, with particular emphasis on their relationship to each other. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The model is life-size, three-dimensional, and made of a thermosetting resin. All parts of the model are hollow and the basic color of resins extend through their entire thickness. The following training devices are subcomponents of the Torso and Head Anatomical Model: Human Skull, and Teeth and Gums, Brushing Demonstration. On the right side of the model the superficial tissues, such as skin and fat, have been removed exposing the superficial muscles. The buttocks region has been dissected more deeply to show the underlying groups of muscles which are important in the articulation and movement of the upper leg. The spinal column is exposed in its entirety and can be studied in detail.

Deep dissection of the back exposes the spinal nerves and the sympathetic nervous system for purposes of demonstration. To the right of the vertebral column a special dissection has been made to show how the chest cavity is completely taken up by the lungs, which extend all the way back through the chest cavity. Various systems, such as digestive, circulatory, and glandular, are provided with special attachments for removal or placement in the main part of the model. The musculature is presented in

such a way that the student can perceive in which direction the muscles function.

Physical Information:

Life Size, 36" x 16" x 10"; 19 lbs

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

Anatomy/Physiology (COTS) Manuals

Reference Publications:

TBD

Training Requirements Supported:

MOSC Various

ADULT HUMAN MALE SKELETON



Training Category/Level Utilized:
Medical/Level 2

Logistic Responsible Command, Service, or Agency:
USAMMA

Source and Method of Obtaining:
Available through local TSC.

Purpose of Trainer:
The device provides the student with a realistic model of an adult male for use at all levels of medical, paramedical, or first aid/emergency care training. Used in Didactic Training of Medical Personnel usually in schools or Medical Unit Training.

Functional Description:

The skeleton is manufactured of a plastic/polyester material to simulate weight, color, and texture of human bones. The joints articulate and disarticulate for flexion. Comes with stand and hang-up mountings.

Physical Information:

62" H; 26 lbs (approximately)
Supporting stand; 18 lbs

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

Commercial Anatomy Manual

Reference Publications:

TBD

Training Requirements Supported:

MOSC Various

WAR-WOUND MOULAGE SET



Training Category/Level Utilized:
Medical/Level 3

Logistic Responsible Command, Service, or Agency:
USAMMA

Source and Method of Obtaining:
Available through local TSC.

Purpose of Trainer:

DVC 08-04 is an enhancement of DVC 08-14 Casualty Simulation Kit providing the means to train military personnel in first aid treatment of combat-type casualties and permits trainees to practice and develop first aid skills. Use of the device helps remove shock of first sight of a severe wound and develops skill in identifying and treating wounds.

Functional Description:

The device consists of a set of vinyl-plastiol models or moulages, each of which closely simulates an actual wound to the human body. Each moulage is life-sized, with bone structure and flesh shown in relief on the surface. It is finished in colors simulating real human skin, bone, and flesh.

The moulage may be strapped onto a soldier acting as a casualty or as a recipient of treatment during a FTX or lesson in first aid. During training, the subject wearing the moulage can manually operate a pump and reservoir which causes simulated blood to flow through veins and arteries built into the moulage. The flow may be either pulsating or steady.

In addition to the following life size moulages, the set comes with a pump and "blood" reservoir, and five packages of powder for making one gallon each simulated blood formula in a carrying case:

- a. Amputation of leg
- b. Compound fracture of femur
- c. Compound fracture of humerus
- d. Compound fracture of lower leg
- e. Gunshot wound of the hand (palm)
- f. Laceration of the forehead (scalp)
- g. Shrapnel wound of the abdominal wall with protruding intestines.
- h. Shrapnel wound of the lower jaw with partial loss of jaw.
- i. Atomic burn of the back
- j. Atomic burn of the chest
- k. Atomic burn of the face
- l. Atomic burn of the hand (palm, & dorsal area)
- m. Face in shock
- n. Frostbite of foot
- o. Phosphorus burn of the hand
- p. Second and third degree burns of the forearm
- q. Trench foot
- r. Hypodermic needle insertion technique moulage
- s. Sucking wound of the chest.

Physical Information:

Life-size, 29 lb, 2.2 cu ft

Equipment Required, Not Supplied:

N/A

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

AHS/TTP 8-3 Pamphlet "How to Moulage"

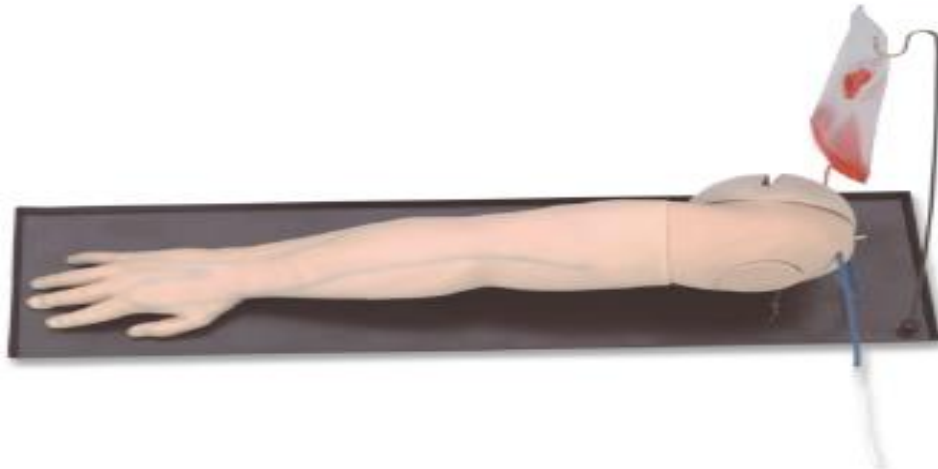
Reference Publications:

FM 21-2

Training Requirements Supported:

All MOSC's Self-Aid/Buddy-Aid Tasks.

DELUXE INTRAVENOUS (IV) TRAINING ARM (120) TASK TRAINER

**Training Category/Level Utilized:**

Medical/Level 3

Logistic Responsible Command, Service, or Agency:

USAMMA

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

To provide lifelike training on injections to major veins.

Functional Description:

The Deluxe IV Training Arm (No. 120) gives unlimited access to the major veins in the arm and hand, and a deltoid IM injection site. The IM site contains a foam pad that was designed to be squeezed out and dried to facilitate multiple uses. It has multiple veins: 4 in the hand, 5 in the forearm and 3 antecubital. Specific veins include antecubital, basilic, cephalic sites and dorsal metacarpal. It allows for insertion of an IV in the arms and hands with an initial flash cue and includes the capability of IV fluids to be infused by an IV catheter. The Deluxe IV Training Arm

allows for multiple punctures with a minimum of ten punctures at each site prior to requiring replacement parts.

Physical Information:

Full-sized, anatomically correct arm that extends from the upper arm to the fingertips.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

None

Reference Publications:

TC8-800

Training Requirements Supported:

Enlisted Personnel Courses in MOSC 91W

VIRTUAL PATIENT SYSTEM (VPS) INTRAVENOUS (IV) ARM SIMULATOR



Training Category/Level Utilized:
Medical/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

This training arm provides complete venous access for IV therapy and phlebotomy, plus sites for intramuscular and intradermal injections. An extensive 8-line vascular system allows students to practice venipuncture at all primary and secondary locations, including starting IVs and introducing Over the Needle IV Catheters.

Functional Description:

The venous system simplifies setup with only one external fluid bag supplying artificial blood to all veins simultaneously. The dorsal surface of the hand includes injectable metacarpal, digital, and thumb veins. The antecubital fossa includes the median cephalic, median basilic, and median cubital veins. Venipuncture can also be performed along the basilic, cephalic, accessory cephalic, and median antebrachial veins. Intramuscular injections may be performed in the deltoid muscle and intradermal injection sites are located in the upper arm. Intramuscular injections into the deltoid muscle are enhanced by the soft, lifelike skin and by the natural bony landmarks in the region. Intradermal injections using distilled water will create characteristic skin welts at designated sites on the upper arm. The realism of the Venipuncture and Injection Arm is an exact replica of the human arm. The soft, flexible fingers are molded separately with extreme attention paid

to every detail – right down to the fingerprints! Flexion of the wrist helps students develop manipulation skills. The replaceable skin rolls as the veins are palpated, and a discernable “pop” is felt when entering the veins. The molding process reproduces the fine details of the skin to make the arm look and feel alive. Valves in the veins can be seen and palpated on the skin surface. Simulated veins and skin are completely replaceable to keep this training arm looking and working like new. Under normal use, hundreds of injections may be performed before the veins or skin need to be replaced. Complete replacement kits are available and easy to use. To extend the life of the veins, an aerosol sealant is available to seal punctures and prevent leakage.

Physical Information:

(Information not available) TDB

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

(COTS) Manuals

Reference Publications:

TC8-800

Training Requirements Supported:

MOSC 68W Enlisted Personnel

COLOSTOMY MOULAGE KIT



Training Category/Level Utilized:
Medical/Level 2

Logistic Responsible Command, Service, or Agency:
USAMMA

Source and Method of Obtaining:
Available through local TSC.

Purpose of Trainer:

The device is to provide demonstrations or practice in colostomy irrigation. It is intended for courses of instruction in nursing techniques. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The kit consists of full-scale moulages of the abdomen, constructed to fit either a human subject or DVC 08-01, Nursing Technique Training Doll. The kit contains one "single barreled" uncomplicated colostomy moulage, one "single barreled" colostomy moulage with necrotic skin edges, and one "doubled-barreled" colostomy moulage. The kit is contained in a plastic carrying case. Each moulage is complete with base, flexible tubing, and

reservoir. A sheet of sponge rubber separates the plastic skin from the base.

Physical Information:

Kit with carrying case 28" x 18" x 8"

Equipment Required, Not Supplied:

Human subject, or DVC 08-01, Nursing Technique Training Doll.

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

(Information not available)

Reference Publications:

TBD

Training Requirements Supported:

MOSC 91C in Resident Training ARTEP 8-123.

CASUALTY SIMULATION KIT



Training Category/Level Utilized:
Medical/Level 3

Logistic Responsible Command, Service, or Agency:
USAMMA

Source and Method of Obtaining:
Available through local TSC.

Purpose of Trainer:

The device provides materials for realistically simulating many types of wounds incurred in battle or disaster. The materials are used in training military and civilian groups in first aid to casualties and to condition these groups not to be shocked at the appearance of the casualties. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The Casualty Simulation Kit consists of 100 stick-on wound moulages and a variety of makeup material to be applied, in accordance with the accompanying instructions,

to selected persons who act as casualties during simulation of a battle or disaster.

After application of the selected wound moulages, makeup is applied to represent different types of bleeding (depending on the type or severity of the wound), frothing at the mouth, loss of stomach content, shock, perspiration, bruises, contusion, and other effects.

The Instructors Guide for the Casualty Simulation Kit provides many full-color illustrations which amplify the text and greatly assist the person applying the moulages and makeup. This Guide lists all makeup and other materials required, along with commercial source of national stock number.

Physical Information:

Kit: 15" x 9" x 14"; 25 lb.

Equipment Required, Not Supplied:

As listed in Applicable Publications.

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:NAVEXOS P-2709, Instructors Guide for Casualty
Simulation Kit, device 11E10.**Reference Publications:**

SMC-Tasks STP 21-24-SMCT

Training Requirements Supported:

STP 21-24-SMCT and ARTEP

MOSC 91 CMF

SM 081-XXX Tasks

1002	1478	2101	2102
1467			

Combat Life Saver Program (All levels)

RESUSCITATION TRAINING MANIKIN



Training Category/Level Utilized:
Medical/Level 3

Logistic Responsible Command, Service, or Agency:
USAMMA

Source and Method of Obtaining:
Available through local TSC.

Purpose of Trainer:

The device provides realistic practice in mouth-to-mouth and/or cardiopulmonary resuscitation, bleeding control, and the application of leg splints or traction. This training device supports training in first aid and medical Soldier's Manual tasks in all MOSC's. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The device is an adult male, noninflatable body with heart-lung resuscitation, visual indicating device, air vent, broken femur, dilated pupil, and penetrating arm wound simulation. This torso is separable at the waist and has a removable head. This training device also comes with plastic face mask pieces, outer garments, and two carrying bags. This manikin will simulate breastbone reaction and carotid pulse pressure of an unconscious person.

Physical Information:

Life size, non-inflatable body with removable head.

Equipment Required, Not Supplied:

Letter "Recommendations for Decontaminating Manikins Used in CPR Training, 1983 Update."
BDU's/Fatigues.

Special Installation Requirements:

None

Power Requirements:

(Information not available)

Applicable Publications:

(COTS) Manual

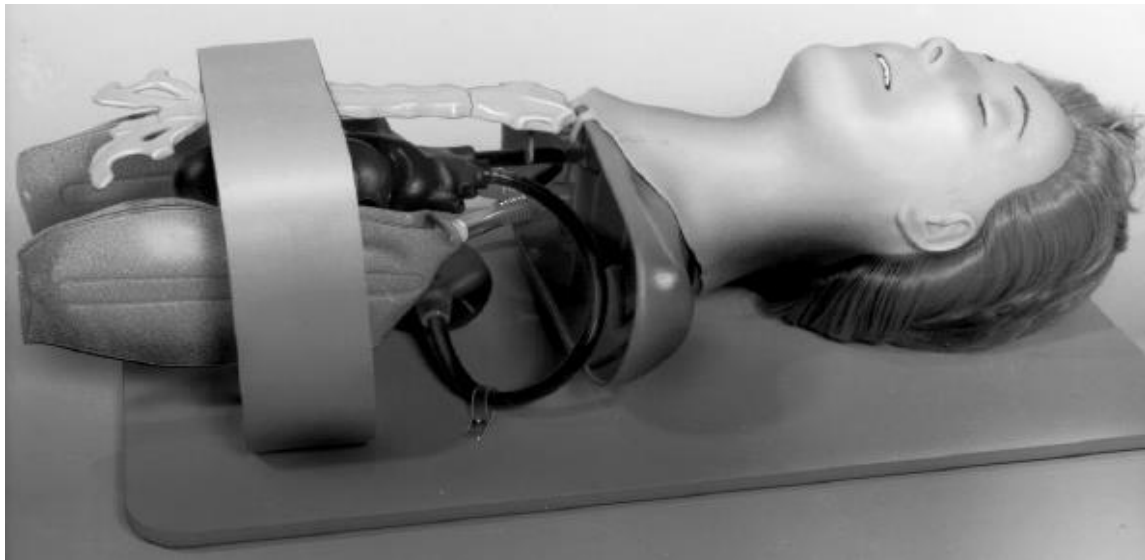
Reference Publications:

SMC-Tasks STP 21-24-SMCT
First Aid

Training Requirements Supported:

MOSC – Individual Warrior Tasks
All 8-Series ARTEP's
Buddy-Aid Life Saving Skills

MANIKIN, HEAD AND TORSO, CPR TRAINING

**Training Category/Level Utilized:**

Medical/Level 3

Logistic Responsible Command, Service, or Agency:

USAMMA

Source and Method of Obtaining:

Available through local TSC.

Purpose of Trainer:

To provide a realistic human blood circulation system to be used to demonstrate and train both artificial ventilation and external cardiac compressions. The device is portable and can be used for indoor as well as out-of-doors demonstrations. It can be used in medical classes, also for basic first aid instructions. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The device is an adult model, natural size Torso Manikin. The head section is made of rubber base material while the blood circulation system is made of a plastic composition. When the device is used in the artificial ventilation (mouth-to-mouth resuscitation) mode, the practicing intermittent positive pressure inflates and deflates the lungs. When used in the external cardiac compression mode, the device shows the heart being compressed between the sternum and the spine and the exchange of blood in its circulation tubes. After basic instructions, the device is self-taught. Accessories furnished in a sterilization kit are: stand for head, tubing with nipple, syringe, sterilizing solution, measuring glass, and funnel.

Physical Information:

Device: 24" x 15" x 8"; 35 lb

Carrying Case: 26" x 17" x 10"

Equipment Required, Not Supplied:

Letter "Recommendations for Decontaminating Manikins Used in CPR Training, 1983 Update."

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

(COTS) Manual

Reference Publications:

FM 8-230

FM 21-11

STP 21-1-SMCT

Training Requirements Supported:

Tasks:

081-831-0048

081-831-0046

081-831-1042

MOSC's All Skill Level 1

Buddy-Aid Life Saving

All 8-Series ARTEP's and other units with medical personnel

SIMULATED INJURY MOULAGE SET



Training Category/Level Utilized:
Medical/Level 3

Logistic Responsible Command, Service, or Agency:
USAMMA

Source and Method of Obtaining:
Available through local TSC.

Purpose of Trainer:

This kit is designed to train both military and civilian groups in the first aid treatment of casualties and the recognition of medical problems and application of learned skills. This kit is also important in conditioning groups of trainees not to be shocked at the appearance of the casualties. The specific training requirements supported are shown following the descriptive data.

Functional Description:

This kit contains assorted, easily applied lifelike form simulated wounds plus makeup materials which can create additional simulated injuries. After application of the selected wound moulages, makeup is applied to represent

different types of bleeding, shock, bruises and contusions. These applications simulate battle or disaster wounds.

Physical Information:

Corrugated tuck-top mailer with vacuum- formed insert tray: 10" x 17" x 3".

Equipment Required, Not Supplied:
(Information not available)

Special Installation Requirements:
None

Power Requirements:
None

Applicable Publications:
(Information not available)

Reference Publications:
TC8-800

Training Requirements Supported:
MOSC All first aid and medical tasks.
SMC-Tasks STP 21-24-SMCT

MANIKIN, THORACIC CROSS-SECTION



Training Category/Level Utilized:
Medical/Level 3

Logistic Responsible Command, Service, or Agency:
USAMMA

Source and Method of Obtaining:
Available through local TSC (Device no longer procurable).

Purpose of Trainer:

To teach the positions and interactions of the thoracic anatomical structures during artificial ventilation and external cardiac massage. This device is intended for use as a demonstrator only. It is not suitable as a practical exercise training device.

Functional Description:

The Thorax Cut-Away is a cross section through the lower half of the sternum. The lower half of the thoracic cage consists of lung area, removable heart with simulated blood, rib cage, sternum and vertebral column. This training aid closely resembles the conditions found in an adult. The heart, lying beneath the sternum, is separated from the spine by the esophagus and great vessels. Only where the correct pressure is exerted and the sternum depressed from 1 1/2 to 2 inches is blood ejected from the

heart. When the pressure is relaxed, the venous blood returns to the heart.

Physical Information:

Manikin, plastic, life-size with carrying case; 7 lb.

Equipment Required, Not Supplied:
(Information not available)

Special Installation Requirements:
None

Power Requirements:
None

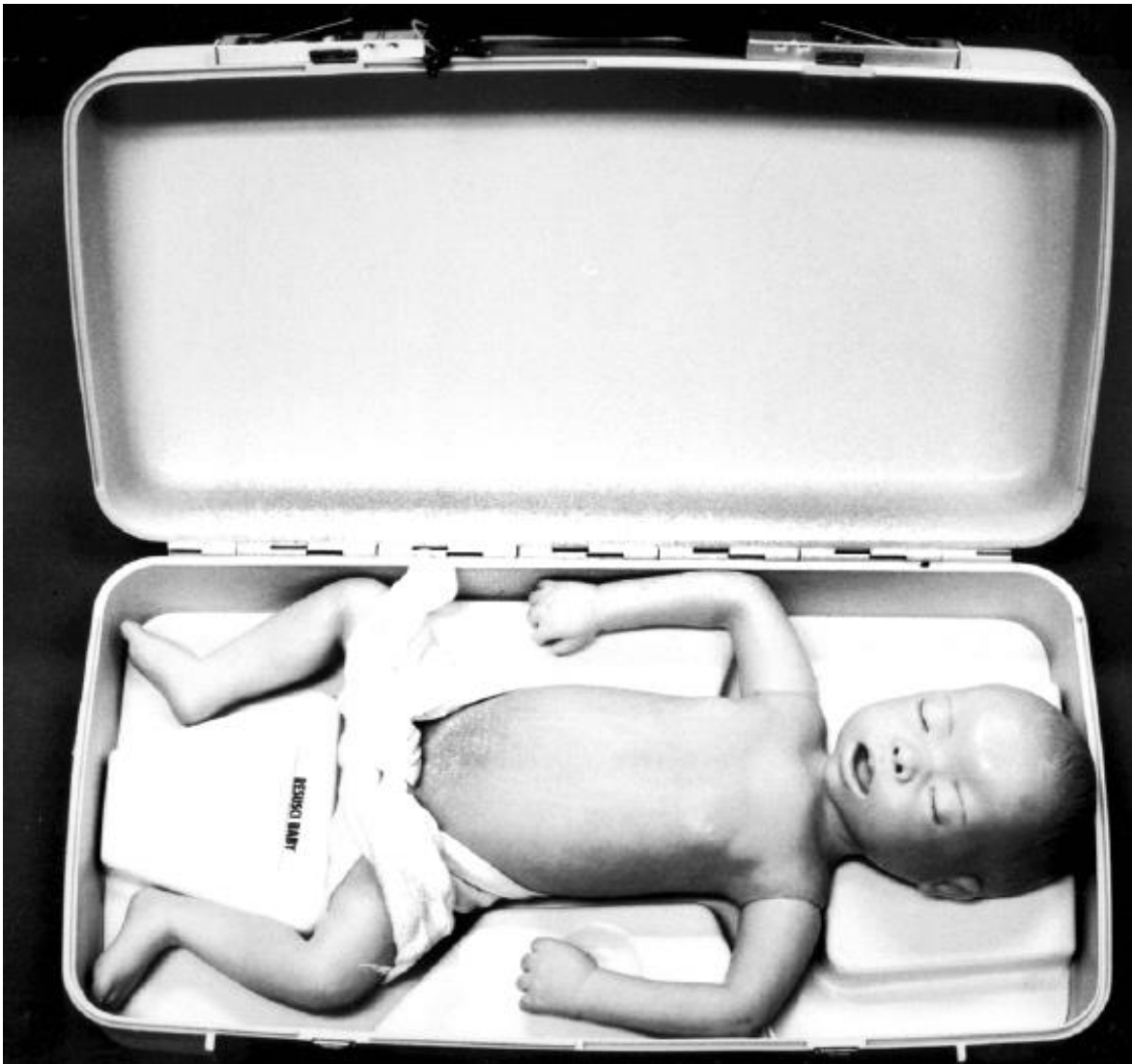
Applicable Publications:
(Information not available)

Reference Publications:
(Information not available)

Training Requirements Supported:

MOSC 68W and all, skill levels 1 and 2; and SM Tasks involving cardiac compression.
SMC-Tasks STP 21-24-SMCT

INFANT RESUSCITATION TRAINING MANIKIN

**Training Category/Level Utilized:**

Medical/Level 1

Logistic Responsible Command, Service, or Agency:

USAMMA

Source and Method of Obtaining:

Available through local TSC.

Purpose of Trainer:

The device provides realistic practice in mouth-to-mouth and/or cardiopulmonary resuscitation on infants. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The device is an infant, plastic, non-inflatable body with movable head, arms and legs. The infant manikin also shows gastric extension should excessive pressure be used for inflation.

Physical Information:

Infant size, noninflatable body with carrying case, 22" x 11" x 6"; 11 lb

Equipment Required, Not Supplied:

Letter "Recommendations for Decontaminating Manikins Used in CPR Training, 1983 Update."

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

(Information not available)

Reference Publications:

“Emergency Care and Transportation of the Sick and Injured” American Academy of Orthopedic Surgeons.

Red Cross CPR Module “Respiratory and Circulation Emergencies”.

American Heart Association Manual for Instructors for Cardiac Life Manual.

Student Manual for Basic Life Support Cardiopulmonary Resuscitation.

Training Requirements Supported:

Required for certification as Emergency Medical Technician by State Department of Health. Must have MOSC 91 Series to receive training.

ARRHYTHMIA SIMULATOR



Training Category/Level Utilized:
Medical/Level 3

Logistic Responsible Command, Service, or Agency:
USAMMA

Source and Method of Obtaining:
Available through local TSC.

Purpose of Trainer:

The device will be used to train field medical care personnel in the recognition of life-threatening cardiac arrhythmias through the use of the Defibrillator/Electrocardiograph/Monitor Recorder NSN: 6515-01-173-2053.

Functional Description:

The simulator is battery powered and completely portable. The device is capable of simulating a normal cardiac rhythm plus 17 irregular rhythms and has a 12-lead connection.

Physical Information:

Has a universal ECG jack (for arrhythmias) 10 banana jacks (for ECG testing).

11/2" x 5 1/2" x 7 1/2"; .75 lb.

Equipment Required, Not Supplied:

9-volt battery

Defibrillator/ECG/Monitor Recorder, NSN 6515-01-173-2053.

Special Installation Requirements:

None

Power Requirements:

9vdc for the device; 110-220vac for the defibrillator.

Applicable Publications:

(Information not available)

Reference Publications:

Operator Manual and Photo of Abnormal Tracings.

Training Requirements Supported:

AMEDD ARTEP tasks with patient care mission.

STP 8-91B25-SMTG

Task: 081-833-3009

MOSC 68W

(This task is normally taught at the Academy and Medical Unit Level)

TRAINING DEVICE, NERVE AGENT (ATNAA TRAINING SIMULATOR)

**Training Category/Level Utilized:**

General/Level 3

Logistic Responsible Command, Service, or Agency:

USAMMA

Source and Method of Obtaining:

Available through local TSC.

Purpose of Trainer:

This nerve agent antidote autoinjector training kit is for training individuals in the proper administration of Antidote for Chemical Nerve Agent poisoning without using real injectors.

Functional Description:

The training device has the same basic appearance as the real autoinjector except for color-coding and description of contents. The training device functions in the same manner as the actual injectors except that the device does not contain drug products or needle. Color coding is light blue with white on black labels. The device functions with an audible click and ejects a 0.25 inch plastic flat prod (needle) when activated with an applied pressure of 1.5 to 9 pounds.

Physical Information:

Each auto-injector incorporates a removable safety cap. The assembled kit comes packaged in a black Styrofoam case. Recocking devices.

Equipment Required, Not Supplied:

Replacement items can be ordered through normal channels:

- (1) Training Device, 2 PAM Chloride Injections, NSN 6910-01-194-2227.
- (2) Training Device, Atropine Injection, NSN 6910-01-194-0378.
- (3) Clip, MARK I, NSN 6530-01141-7458.
- (4) Pouch, MARK I, NSN 6530-01-141-7457.

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

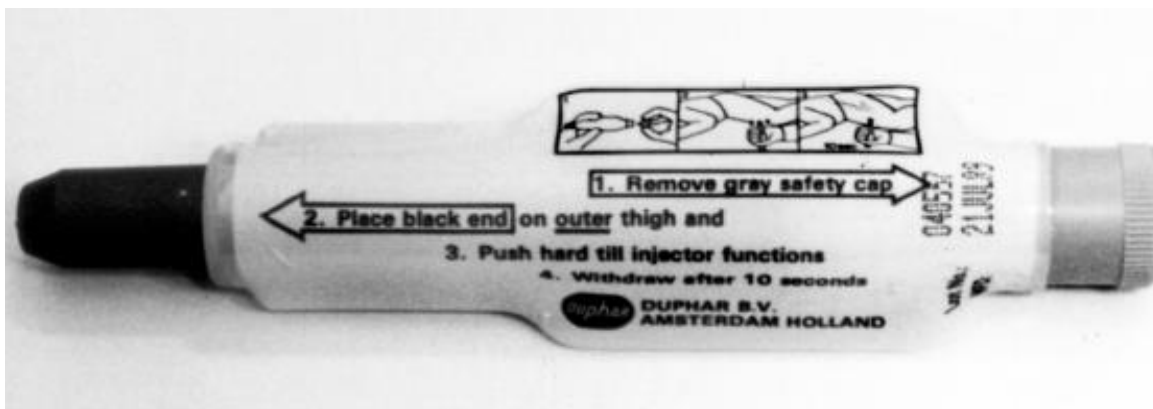
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Reference Publications:

SMC-Tasks STP 21-24-SMCT

Training Requirements Supported:MOSC All, Skill Level 1

CONVULSANT ANTIDOTE FOR NERVE AGENT TRAINING DEVICE (CANATD)



Training Category/Level Utilized:
Medical/Level 3

Logistic Responsible Command, Service, or Agency:
USAMMA

Source and Method of Obtaining:
Available through local TSC.

Purpose of Trainer:
To aid in the training of individuals for the proper administration of Convulsant Antidote for Nerve Agent (CANA) without the use of the actual injectors.

Functional Description:
DVC 08-37 functions in the same manner as the CANA autoinjector. It has the same basic appearance as the actual autoinjector, with flanges on the sides and a safety cap to prevent activation. It has a recocking capability and can be operated by individuals in chemical and environmental protective clothing and under conditions of low visibility. Color coding for the training device is blue with white labels and black lettering. After the safety cap is removed and 2-8 pounds of axial pressure is applied, a 3-4 mm

plastic tip will protrude, demonstrating activation. The training device does not contain the drug product or needle.

Physical Information:
6.3" L x 1" diameter

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
None

Applicable Publications:
(Information not available)

Reference Publications:
SMC-Tasks STP 21-24-SMCT

Training Requirements Supported:
All MOSCs and Skill Levels

EMERGENCY CARE SIMULATOR (ESC-100) TASK TRAINER

**Training Category/Level Utilized:**

Medical/Level 3

Logistic Responsible Command, Service, or Agency:

USAMMA

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

To provide medical training in combat situations from realistic depiction of casualties to optimal mobility over tough terrain realistic practice in performing intravenous injections in the antecubital area and dorsum part of the hand.

Functional Description:

The ECS represents a streamlined system of physiological models, with anatomical believability and real pharmacology that will help emergency professionals-in-training learn to recognize, treat and communicate any conceivable extent of trauma or illness. The ECS physiological models allow the METI ECS (ECS-100) to interact with the student and automatically respond to clinical interventions in a physiologically appropriate way. The ECS physiological models allow the instructor to focus on student learning, rather than merely operating the simulator. Adoption of proficiency-based simulator training by the 91W and BNCOC curricula will benefit medics and their patients, and will increase the skills and confidence of

U.S. military medical personnel. With other patient simulators on the market, the instructor must spend the time manipulating the simulator to react to how he/she determines is the 'appropriate' response to an intervention. The ECS physiological models ensure that the patient response is consistent with human physiology, thus mitigating the opportunities for negative learning.

Physical Information:

Adult size arm and hand

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

None

Reference Publications:

TC8-800

Training Requirements Supported:

Enlisted Personnel Courses in MOSC 68W
and NCO level academy

RESCUE RANDY TASK TRAINER

**Training Category/Level Utilized:**

Medical/Level 3

Logistic Responsible Command, Service, or Agency:

USAMMA

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

To provide lifelike adult or juvenile victim handling, transportation and extrication training.

Functional Description:

The Rescue Randy contains anatomically correct features with articulated joints. The weight distribution of the Rescue Randy is according to the human weight distribution chart. It weighs 165 lbs and is 6ft tall. It is made of durable PVC vinyl that makes it water resistant. The Rescue Randy contains rust resistant joints for the elbow, shoulder, hips and knee.

Physical Information:

Adult size arm and hand

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

None

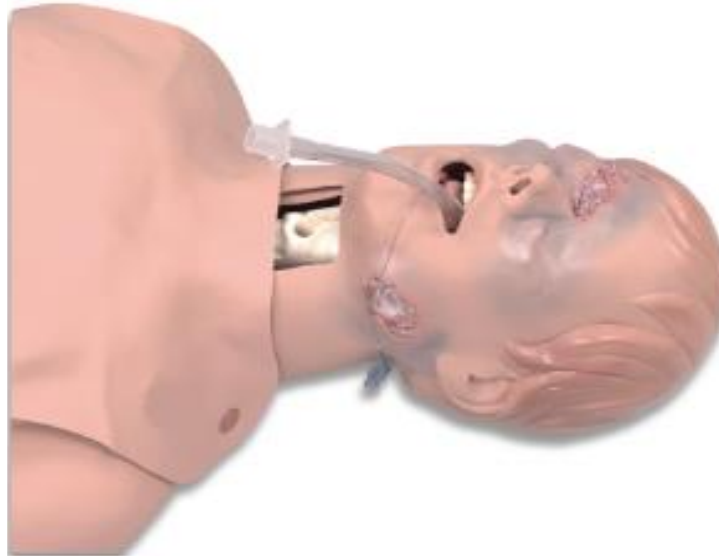
Reference Publications:

TC8-800
SMC-Tasks STP 21-24-SMCT

Training Requirements Supported:

MOSC all MOSs for Soldier's Manual of Common Tasks

CRITICAL AIRWAY MANAGEMENT TRAINER

**Training Category/Level Utilized:**

Medical/Level 3

Logistic Responsible Command, Service, or Agency:

USAMMA

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

To provide lifelike adult or juvenile victim handling, transportation and extrication training.

Functional Description:

The Critical Airway Management Trainer is a device that accurately represents the human airway with visual and tactile cues. It features anatomical landmarks including sternum and rib cage plus substernal notch. The manikin contains tongue, teeth, vocal cords, uvula, glottis, epiglottis, vallecula, oropharynx, nasopharynx, larynx, arytenoids cartilage and trachea. The Critical Airway Management Trainer supports airway adjuncts such as Nasopharyngeal Airway, Oropharyngeal Airway, Combitube, Endotracheal (ET) tube, and Laryngeal Mask Airway (LMA). By using the features of tongue swelling and laryngospasm the instructor creates a critical airway

management problem that requires the student to perform surgical cricothyroidotomy. The Trainer also supports oropharynx suctioning of the patient and provides ventilation cues, such as the chest wall rising and falling, when all types of ventilation are correctly administered.

Physical Information:

Full sized, human-like upper torso and head device

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

None

Reference Publications:

None

Training Requirements Supported:

MOSC 91W Enlisted Personnel Courses

MULTIPLE AMPUTATION TRAUMA TRAINER (MATT) LOWER BODY

**(MATT) Transit Case Accessories****(MATT) Lower Body Case**

Training Category/Level Utilized:
Medical/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:
Device supports realistic training for hemorrhage control and other amputee critical injuries.

Functional Description:
One high fidelity lower body torso can be paired with a matching upper body torso, one 18 volt Makita rechargeable lithium-ion battery, one 7.2-18 volt Makita battery charger, one Transmitter-Futaba 6EX 2.4GHz, one 9.6 rechargeable Sanyo NiCad battery pack, Transmitter-Nicad Battery Quick Charger, Blood - Coagulated (1 Gal), Blood - Liquid (powder mix), and two Transit cases.

Physical Information:
Lower Torso approximately 31/2 feet.

Equipment Required, Not Supplied:
N/A

Special Installation Requirements:
Batteries will need to be charged and inserted in the battery compartments prior to use.

Power Requirements:
The upper and lower torsos each require one 18 volt Makita Lithium-Ion rechargeable battery. The controller requires one 9.6 Sanyo rechargeable battery, and 120 volt AC to power the Makita 7.2-18 volt battery charger unit.

Applicable Publications:
This device is used to support Training Circular TC 8-800

Reference Publications:
KGS (COTS) Manuals, MATT Quick Start Guide Operator/(OUM), Operating Manual-Futaba, Operating Manual-Makita

Training Requirements Supported:
MATT supports MOSC 68W medical hemorrhage control skills sustainment training medical skills validation, and combat lifesaver training (CLS).

FIELD EXPEDIENT BLEEDING SIMULATION SYSTEM (FEBSS)



Training Category/Level Utilized:
Medical/Level-1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:
The Field Expedient Bleeding Simulation System (FEBSS) is a modifiable kit that can be used with a wide range of training mannequins or on live subjects in order to simulate bleeding associated with trauma wounds.

Functional Description:
The FEBSS can simultaneously simulate up to eight (8) different bleeding wounds, all with different degrees of severity. Everything from nicks to arterial bleeds can be simulated by this unit with graphic reality. It has a wireless capability of 30 feet. It also

has an operational capability of 2 to 7 minutes depending on the flow, and has a quick refill process.

Physical Information:
Width 24.6" length 19.72" height 14.4"

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
Two rechargeable batteries and one charger are supplied with this device.

Applicable Publications:
None

Reference Publications:
SMC-Tasks STP 21-24-SMCT
TC8-800

Training Requirements Supported:
MOSC 68W Enlisted personnel

BIRTHING SIMULATOR



Training Category/Level Utilized:
Medical/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The Birthing Simulator provides a platform for the teaching of practical skills required for the successful management of childbirth. The simulator incorporates a number of features which enhance training.

Functional Description:

An anatomically correct bony pelvis in the mother (modelled from CT scan data), silicone pelvic floor musculature and a stretchable perineum. The baby is of newborn size and weight, is fully articulated, and features the correct anatomical landmarks such as fontanelles, clavicles and scapulae. In addition to being an all-round birthing simulator for all levels of training, this product was specifically designed to enable personnel to learn and practice the required actions necessary to manage shoulder dystocia, an unpredictable and largely unpreventable obstetric emergency. Obstetric brachial plexus injury (OBPI) is a serious neonatal complication of shoulder dystocia which may be associated with excessive traction applied during delivery¹. The unique force monitoring baby incorporates a strain gauge linked to a computer for

the measurement and recording of the force applied to the baby by the *accoucheur* during delivery. The PROMPT Birthing Simulator, with its force monitoring capability, has been used for training for obstetric emergencies. In addition to training for deliveries complicated by shoulder dystocia, this high fidelity birthing simulator realistically simulates normal delivery, in semi-recumbent and 'all fours' positions, as well as vaginal breech and instrumental (forceps and ventouse) deliveries.

Physical Information:
Size: 23" x 14" x 7"

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
No power required

Applicable Publications:
(COTS) Manuals

Reference Publications:
None

Training Requirements Supported:
MOSC 68W Enlisted Personnel

FAST-1 STERNAL INTRAOSSEOUS INFUSION SYSTEM



Training Category/Level Utilized:
Medical/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The *FASTI*® What is *FASTI*®?
FASTI® is a sternal intraosseous infusion device that delivers lifesaving fluids and medication to the heart and vascular system in less than one minute. The *FASTI*® Intraosseous Infusion System is specifically designed for safe and effective use of IO in emergency conditions. Features such as speedy vascular access, a protected infusion site, and a depth control mechanism make *FASTI*® ideal for emergency use, and allows IO infusion to be used in adults.

Functional Description:

FASTI® helps emergency care providers—in a hospital or during pre-hospital response—quickly establish vascular

access and administer emergency fluids and medications safely and effectively through the bone marrow of the manubrium.

Physical Information:
H 4", L 4", W 2"

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
None

Applicable Publications:
Instruction Sheet

Reference Publications:
None

Training Requirements Supported:
MOSC 68W

HIGH FIDELITY TETHERLESS MANNEQUIN (HFTM) VIRTUAL PATIENT SYSTEM (VPS)



Training Category/Level Utilized:
Medical/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

Provides the opportunity to train medical personnel without risk to patients. The ability to frequently practice and manage complex medical scenarios, helps to prevent medical errors, while detailed feedback promotes discussion and re-enforces the learning process. Enables medical personnel to deliver quality patient care with integrity, consistency and confidence.

Functional Description:

SimMan 3G's intuitive software interfaced with three flexible operating modes, enables novice and expert instructors to create effective simulations more simply and quickly than ever before. Whether you are new to simulation training or just need a quick set up solution, the Automode feature is revolutionary in facilitating the most automatic way to operate SimMan 3G.

It combines physiological models, pre-programmed patient cases and an innovative method for managing model based simulation. Instructors can now take advantage of pre-programmed pharmacological responses for over 108 drugs, repeatedly run the most complex cases with ease and adapt difficulties to challenge the skills of every student.

Physical Information:
N/A

Equipment Required, Not Supplied:
N/A

Special Installation Requirements:
N/A

Power Requirements:
N/A

Applicable Publications:
(COTS) Manuals

Reference Publications:
081-0871, Combat Life Saver and TC8-800

Training Requirements Supported:
MOSC 68W

SIM-MAN 3-G MYSTIC MANIKIN



SimMan 3G and Monitors



Simulation Scenario

Training Category/Level Utilized:

Medical/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

SimMan 3G is design to improve patient survival rates through quality training and education.

Functional Description:

SimMan 3G is a wireless Manikin provides the capability of programming a scenario, or using a pre-programmed scenario to improve patient survival rates through quality training and education. The SimMan have the following features:

- Seizure/Fasciculation
- Bleeding
 - Simulation of bleeding at multiple sites
 - Arterial and venous
 - Vital signs automatically respond to blood loss & therapy
 - Works with various wound modules
 - & moulage kits
- Urine output (variable)
- Foley catheterization

- Secretions
 - Eyes, Ears, Nose, Mouth
 - Blood, Mucous, CSF, etc.
- Diaphoresis
- Bowel Sounds – four quadrants
- Patient Voice
 - Pre-recorded sounds
 - Custom sounds
 - Instructor can simulate patient's voice wirelessly
- Instructor Communication
 - Multiple instructors communicate
 - using integrated voice over IP

Physical Information:

The SimMan 3G Manikin contains Software & License, Operator's Tablet PC, Simulated Patient Monitor and Software, Simulated Patient Monitoring Cables, Webcam, Drug Recognition Kit, Soft Sided Carry Cases, Specially Designed Clothing.

Equipment Required, Not Supplied:

All equipment for the device functioning is supplied with the product acquisition. SimMan 3-G Mystic Manikin does not require additional support equipment.

Special Installation Requirements:

There are no special instructions other than those already supplied and fielded.

Power Requirements:

Swappable, rechargeable batteries
Approximately 4 hours of continuous operation in wireless mode. Supplemental AC wired connectivity and power is available on site for the device.

Applicable Publications:

SimMan publications are available for download at this web address.

<http://www.laerdal.com/us/doc/85/SimMan-3G/Downloads>

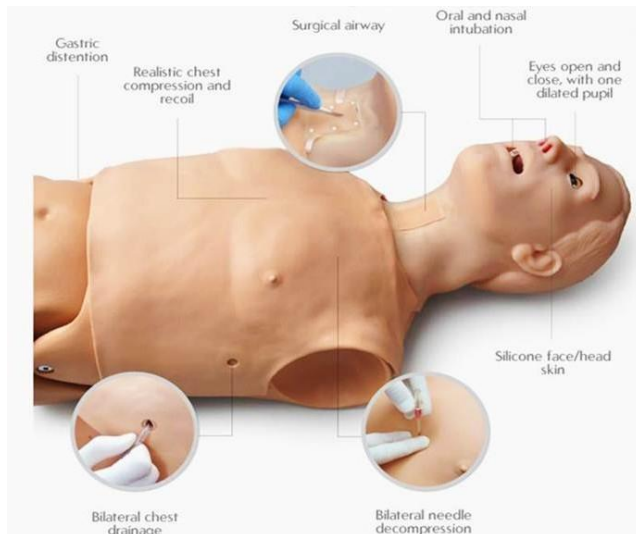
Reference Publications:

SimMan publications

Training Requirements Supported:

MOSC 68W series and Combat Life Saver courses.

HAL ADVANCED AIRWAY TRAINER



Training Category/Level Utilized:
Medical/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The HAL Advanced Airway Trainer features a realistic airway which is manually programmable to include tongue edema, laryngospasm, and pharyngeal swelling to simulate obstructed airway and is designed for training the management of difficult airways.

Functional Description:

Air reservoir is charged using the supplied manual pump or a BVM. Select tongue edema, laryngospasm, pharyngeal swelling, or pneumothorax. All powered pneumatically, allowing the simulator to operate in remote places without electricity.

Physical Information:

The trainers weights I 45 lbs. (Head and Torso). A traveling case is included for storage.

Equipment Required, Not Supplied:

All required equipment is supplied with the device. The unit price includes shipping, 1-year standard commercial warranty, one each transit case, and the 90-day supply of consumables.

Special Installation Requirements:

All special instructions for installation are included in the device publications.

Power Requirements:

All powered pneumatically, allowing the simulator to operate in remote places without electricity.

Applicable Publications:

(COTS)/OUM Manuals, and training is included with the delivery of the device.

Reference Publications:

No other publications are necessary or available for the device.

Training Requirements Supported:

Training focuses mainly on procedures for addressing the two of the three main causes of death on the battlefield (i.e. airway compromise, and tension pneumothorax). The training emphasizes the need to diagnose, stabilize, and evacuate combat casualties. The HAL Advanced Airway Trainer is required for the MOSC 68W and Combat Life Savers (CLS).

PACKABLE HEMOSTATIC WOUND TRAINER (HEMO) KGS-TFX-HEMO-1



Training Category/Level Utilized:
Medical/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC for MSTC Only

Purpose of Trainer:

The Packable Hemostatic (HEMO) Trauma Trainer is a ruggedized lower body unit medical trainer that takes realism to the next level by helping trainees learn how to treat and perform interventions on patients suffering from traumatic lower body injuries.

Functional Description:

The HEMO features a hemostatic wound, that when packed and when pressure is applied with sufficient force for the appropriate amount of time, the bleeding will stop. Tourniquets must be applied with realistic force to control hemorrhaging to the right leg amputation, and trainees can use field techniques such as hand, knee, and elbow pressure on arterial pressure points to occlude bleeding. Rounding out the HEMO's already robust features is the lower left leg crush injury with venous bleeding. The HEMO's unparalleled ruggedness allows it to be carried and dragged through inhospitable field training environments without damage. The HEMO can withstand nearly any weather condition, making it ideally suited for Tactical Combat Casualty Care (TCCC) and Combat Lifesaver training courses.

Physical Information:

The manikin is anatomically similar to the human body.

- Manikin weights: 70 lbs.
- Remote Control Transmitter:
 - Effective Range: Outdoor range is 1600 meters (line of site); indoor range is 100 meters but is subject to building construction materials that may impede signal.
 - Transmit power: 63mW (18dBm)
 - RF Data Rate: 250,000 bps
 - FCC ID: Contains FCC ID: OUR-XBEEPRO** The enclosed device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (i.) this device may not cause harmful interference and (ii.) this device must accept any interference received, including interference that may cause undesired operation.
- FCC Approval: Systems that include XBee/XBee-PRO Modules inherit MaxStream's Certifications. FCC ID: OUR-XBEEPRO
- ISM (Industrial, Scientific & Medical): 2.4 GHz frequency band Manufactured under ISO 9001:2000 registered standards XBee/XBee- PRO RF Modules are optimized for use in US, Canada, Australia, Israel, and Europe (contact MaxStream for complete list of approvals).

Equipment Required, Not Supplied:

Custom Remote Control (Transmitter). The ACE uses two rechargeable 18v Makita Li-Ion batteries to power the unit, and one 18v Makita Li-ion battery to power the custom remote. Blood Fill System with One-Gallon "Blood Paste" bucket with pre-mixed coagulated blood.

Special Installation Requirements:

Blood paste is perishable, organic material with a shelf life dependent upon storage conditions. Store sealed and in a cool, dark place. Blood paste is cellulose based and could attract insects if left exposed. The tubing used in ACE's bleeding system is surgical quality and contains latex. Individuals with latex allergies or sensitivities should use precautions before operating, training, or attempting to repair the unit.

Power Requirements:

The ACE uses two rechargeable 18v Makita Li-Ion batteries to power the unit, and one 18v Makita Li-ion battery to power the custom remote. Charge the Li-Ion batteries using the Makita charger provided. Refer to the ACE User Guide and manufacturer's user manual provided for additional information on charging the batteries.

Applicable Publications:

MSTC Manuals:
OUM 08-6910-701-10
SMM 08-6910-701-24&P

Reference Publications:

(COTS) Manuals, Packable Hemostatic Wound Trainer
(HEMO) KGS-TFX-HEMO-1

Training Requirements Supported:

MOSC 68W

PACKABLE HEMOSTATIC WOUND TRAINER (HEMO) KGS-TFX-HEMO-1



Training Category/Level Utilized:
Medical/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC for MSTC Only

Purpose of Trainer:

The Packable Hemostatic (HEMO) Trauma Trainer is a ruggedized lower body unit medical Tactical Combat Casualty Care Exportation (TC3X) trainer that takes realism to the next level by helping trainees learn how to treat and perform interventions on patients suffering from traumatic lower body injuries.

Functional Description:

The HEMO features a hemostatic wound, that when packed and when pressure is applied with sufficient force for the appropriate amount of time, the bleeding will stop. Tourniquets must be applied with realistic force to control hemorrhaging to the right leg amputation, and trainees can use field techniques such as hand, knee, and elbow pressure on arterial pressure points to occlude bleeding. Rounding out the HEMO's already robust features is the lower left leg crush injury with venous bleeding. The HEMO's unparalleled ruggedness allows it to be carried and dragged through inhospitable field training environments without damage. The HEMO can withstand nearly any weather condition, making it ideally suited for Tactical Combat Casualty Care (TCCC) and Combat Lifesaver training courses.

Physical Information:

The manikin is anatomically similar to the human body.

- Manikin weights: 70 lbs.
- Remote Control Transmitter:
 - Effective Range: Outdoor range is 1600 meters (line of site); indoor range is 100 meters but is subject to building construction materials that may impede signal.
 - Transmit power: 63mW (18dBm)
 - RF Data Rate: 250,000 bps
 - FCC ID: Contains FCC ID: OUR-XBEEPRO** The enclosed device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (i.) this device may not cause harmful interference and (ii.) this device must accept any interference received, including interference that may cause undesired operation.
- FCC Approval: Systems that include XBee/XBee-PRO Modules inherit MaxStream's Certifications. FCC ID: OUR-XBEEPRO
- ISM (Industrial, Scientific & Medical): 2.4 GHz frequency band Manufactured under ISO 9001:2000 registered standards XBee/XBee- PRO RF Modules are optimized for use in US, Canada, Australia, Israel, and Europe (contact MaxStream for complete list of approvals).

Equipment Required, Not Supplied:

Custom Remote Control (Transmitter). The ACE uses two rechargeable 18v Makita Li-Ion batteries to power the unit, and one 18v Makita Li-ion battery to power the custom remote. Blood Fill System with One-Gallon "Blood Paste" bucket with pre-mixed coagulated blood.

Special Installation Requirements:

Blood paste is perishable, organic material with a shelf life dependent upon storage conditions. Store sealed and in a cool, dark place. Blood paste is cellulose based and could attract insects if left exposed. The tubing used in ACE's bleeding system is surgical quality and contains latex. Individuals with latex allergies or sensitivities should use precautions before operating, training, or attempting to repair the unit.

Power Requirements:

The ACE uses two rechargeable 18v Makita Li-Ion batteries to power the unit, and one 18v Makita Li-ion battery to power the custom remote. Charge the Li-Ion batteries using the Makita charger provided. Refer to the ACE User Guide and manufacturer's user manual provided for additional information on charging the batteries.

Applicable Publications:

MSTC Manuals:
OUM 08-6910-701-10
SMM 08-6910-701-24&P

Reference Publications:

(COTS) Manuals, Packable Hemostatic Wound Trainer
(HEMO) KGS-TFX-HEMO-1

Training Requirements Supported:

MOSC 68W

MULTIPLE AMPUTATION TRAUMA TRAINER ABDOMINAL CASUALTY EXPECTANT (MATT ACE) KGS-TFX-ACE-1



Training Category/Level Utilized:
Medical/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC for MSTC Only

Purpose of Trainer:

The Trauma FX ACE is a ruggedized, trauma-training manikin built using special effects technologies. ACE leverages in-depth human requirements analysis of military and civilian training needs to deliver powerfully realistic, yet easy-to-use, training solutions that can be deployed to any location and used in nearly any weather condition. Can function as a stand-alone skills station. Can connect to any TRAUMAFX upper torso or used in conjunction with a live actor.

Functional Description:

Built from the original Multiple Amputation Trauma Trainer MATT, the MATT-ACE delivers unparalleled realism and durability, creating the most authentic simulation of severe abdominal injuries. The ACE features hemostatic wounds, that when packed and when pressure is applied with sufficient force for the appropriate amount of time, the bleeding will stop.

Tourniquets must be applied with realistic force to control hemorrhaging to the right and left leg amputation, and trainees can use field techniques such as hand, knee, and elbow pressure on arterial pressure points to occlude bleeding. Rounding out the ACE's already robust features is the abdominal injury with venous bleeding. The ACE's unparalleled ruggedness allows it to be carried and dragged

through inhospitable field training environments without damage.

Physical Information:

- The manikin is anatomically similar to the human body. Manikin weights: 70 lbs.
- Remote Control Transmitter:
 - Effective Range: Outdoor range is 1600 meters (line of site); indoor range is 100 meters but is subject to building construction materials that may impede signal.
 - Transmit power: 63mW (18dBm)
 - RF Data Rate: 250,000 bps
 - FCC ID: Contains FCC ID: OUR-XBEEPRO** The enclosed device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (i.) this device may not cause harmful interference and (ii.) this device must accept any interference received, including interference that may cause undesired operation.
- FCC Approval: Systems that include XBee/XBee-PRO Modules inherit MaxStream's Certifications. FCC ID: OUR-XBEEPRO
- ISM (Industrial, Scientific & Medical): 2.4 GHz frequency band Manufactured under ISO 9001:2000 registered standards XBee/XBee- PRO RF Modules are optimized for use in US, Canada, Australia, Israel, and Europe (contact MaxStream for complete list of approvals).

Equipment Required, Not Supplied:

Custom Remote Control (Transmitter). The ACE uses two rechargeable 18v Makita Li-Ion batteries to power the unit, and one 18v Makita Li-ion battery to power the custom remote. Blood Fill System with One-Gallon "Blood Paste" bucket with pre-mixed coagulated blood.

Special Installation Requirements:

Blood paste is perishable, organic material with a shelf life dependent upon storage conditions. Store sealed and in a cool, dark place. Blood paste is cellulose based and could attract insects if left exposed. The tubing used in ACE's bleeding system is surgical quality and contains latex. Individuals with latex allergies or sensitivities should use precautions before operating, training, or attempting to repair the unit.

Power Requirements:

The ACE uses two rechargeable 18v Makita Li-Ion batteries to power the unit, and one 18v Makita Li-ion battery to power the custom remote. Charge the Li-Ion batteries using the Makita charger provided. Refer to the ACE User Guide and manufacturer's user manual provided for additional information on charging the batteries.

Applicable Publications:

MSTC Manuals:
OUM 08-6910-701-10
SMM 08-6910-701-24&P

Reference Publications:

(COTS) Manuals, Multiple Amputation Trauma Trainer
Abdominal Casualty Expectant (MATT ACE)
KGS-TFX-ACE-1

Training Requirements Supported:

MOSC 68W.

MULTIPLE AMPUTATION TRAUMA TRAINER SERIES 1500 TRAUMA TRAINER (MATT LOWER) KGS-TFX-LO-1



IED Casualty



(MATT Lower) Kit

Training Category/Level Utilized:
Medical/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC for MSTC Only

Purpose of Trainer:

The TraumaFX® MATT is a ruggedized, tetherless, remote controlled trauma trainer that delivers high-fidelity simulations of lower body blast injuries commonly caused by Improvised Explosive Devices (IEDs) or other explosive events.

Functional Description:

MATT employs state-of-the-art special effects materials and technologies to deliver incredibly realistic visual and tactile stimuli with lifelike response to treatment. Bleeding from the tourniquet trainers can be occluded at any point along the femoral artery from the groin to just above the amputation sites. Instead of only using one sensor in a 'sweet spot', MATT has sensor rails running the entire length of the legs as well as locations around the groin that can be accessed with direct pressure from a hand, knee, or tourniquet device. The MATT's unparalleled ruggedness allows it to be carried and dragged through inhospitable field training environments without damage. The MATT can withstand nearly any weather condition, making it ideally suited for Tactical Combat Casualty Care (TCCC) and Combat Lifesaver training courses.

Key Benefits of TraumaFX MATT are:

- Full-motion animatronics combined with practical special effects technology
- Arterial bleeding from both legs

- Accurately simulates pulse bleeding and the effects of tourniquet application
- Multiple tourniquet points along legs
- Bleeding can be controlled with direct pressure from knee or elbow
- Can be used with human actors
- Specially formulated synthetic tissue with unparalleled realism and durability
- Highly realistic visual and tactile stimuli
- Ruggedized Remote Control with extended range
- Crepitus to cue for crushed pelvic region
- Realistic, resilient, and water resistant
- Durable urethane core
- Solid-state electronics
- Scrotal avulsion
- Easy to clean and maintain after use
- Optional interchangeable priapism to simulate spinal injury

Physical Information:

- The manikin is anatomically similar to the human body. Manikin weights: 70 lbs.
- Remote Control Transmitter:
 - Effective Range: Outdoor range is 1600 meters (line of site); indoor range is 100 meters but is subject to building construction materials that may impede signal.
 - Transmit power: 63mW (18dBm)
 - RF Data Rate: 250,000 bps
 - FCC ID: Contains FCC ID: OUR-XBEEPRO** The enclosed device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (i.) this device may not cause harmful interference and (ii.) this device must accept

Physical Information cont.:

- any interference received, including interference that may cause undesired operation.
- FCC Approval: Systems that include XBee/XBee-PRO Modules inherit MaxStream's Certifications. FCC ID: OUR-XBEEPRO
 - ISM (Industrial, Scientific & Medical): 2.4 GHz frequency band Manufactured under ISO 9001:2000 registered standards XBee/XBee- PRO RF Modules are optimized for use in US, Canada, Australia, Israel, and Europe (contact MaxStream for complete list of approvals).

Equipment Required, Not Supplied:

Custom Remote Control (Transmitter). The ACE uses two rechargeable 18v Makita Li-Ion batteries to power the unit, and one 18v Makita Li-ion battery to power the custom remote. Blood Fill System with One-Gallon "Blood Paste" bucket with pre-mixed coagulated blood.

Special Installation Requirements:

Blood paste is perishable, organic material with a shelf life dependent upon storage conditions. Store sealed and in a cool, dark place. Blood paste is cellulose based and could

attract insects if left exposed. The tubing used in ACE's bleeding system is surgical quality and contains latex. Individuals with latex allergies or sensitivities should use precautions before operating, training, or attempting to repair the unit.

Power Requirements:

The MATT uses two rechargeable 18v Makita Li-Ion batteries to power the unit, and one 18v Makita Li-ion battery to power the custom remote. Charge the Li-Ion batteries using the Makita charger provided. Refer to the MATT User Guide and manufacturer's user manual provided for additional information on charging the batteries.

Applicable Publications:

MSTC Manuals:
OUM 08-6910-701-10
SMM 08-6910-701-24&P

Reference Publications:

(COTS) Manuals, Multiple Amputation Trauma Trainer Series 1500 Trauma Trainer KGS-TFX-LO-1

Training Requirements Supported:

MOSC 68W

AIRWAYPLUS LIFECAST – INTUBATION/PACKABLE (APL-IP) (KGS-TFX-APL-IP-1)



APL-IP Medical Simulators

Training Category/Level Utilized:
Medical/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC for MSTC Only

Purpose of Trainer:

The TraumaFX® APL-IP is a ruggedized medical simulator created specifically for the treatment of traumatic upper body injuries, and provides real-time feedback of the results of the simulation. The APL-IP's packable wound requires learners to use proper hemorrhage control to stop the flow of blood from an axillary wound. The results of the intervention are immediately relayed to the trainer via the easy-to-use Remote Control, indicating the amount of blood lost, the length of time taken, and whether the "patient" survived. The moveable jaw and life-like airway allow for full intubation with any available airway adjunct, and is equipped with a sensor that detects and reports excessive pressure placed upon the teeth.

Functional Description:

The APL-IP is a multi-purpose training tool, which allows students to perform critical lifesaving tasks such as maintaining a patient's airway, needle decompression, cricothyroidotomy, intraosseous infusion, chest tube insertion, IV placement, and hemorrhage control, and can be connected to any TraumaFX lower trainer to increase training capabilities.

Key functions:



APL-IP Kit

- Moveable jaw with internal tracheal landmarks for orotracheal intubation
- Oral airway cavity with teeth and tongue for use with supraglottic airways
- Packable axillary wound with real-time feedback allowing trainees to occlude bleeding by applying pressure
- Simulated cricothyroidotomy with larynx, and single and multi-use skin plugs
- Sensor to detect and communicate pressure on teeth during intubation
- User-selectable airway obstruction at the nose or throat to cue for surgical cric
- Nasal passageways for nasopharyngeal intubation
- Realistic silicone head complete with facial trauma
- Intravenous training site with flash cue at the arm
- Realistic manubrium allows intraosseous (I/O) training with fluid infusion
- Needle decompression training sites (full size 3.25" 14 gauge needle) with replaceable skin plugs
- Reinforced silicone arms provide natural elbow and shoulder movement
- Ruggedized eyes can be manually rotated to simulate a dilated or pinpoint pupil - indicating a Traumatic Brain Injury (TBI), drug overdose, or exposure to nerve agents
- Chest tube insertion training site with multiple-use, replaceable skin plug
- Advanced sensor technology provides trainee and trainer feedback using a proprietary Remote Control (RC) transmitter with extended operating range
- Simulated gunshot entrance and exit wounds

Physical Information:

- Manikin weights: 79 lbs.
- Remote Control Transmitter:
 - Effective Range: Outdoor range is 1600 meters (line of site); indoor range is 100 meters but is subject to building construction materials that may impede signal.
- Transmit power: 63mW (18dBm)
- RF Data Rate: 250,000 bps
- FCC ID: Contains FCC ID: OUR-XBEEPRO** The enclosed device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (i.) this device may not cause harmful interference and (ii.) this device must accept any interference received, including interference that may cause undesired operation.
- FCC Approval: Systems that include XBee/XBee-PRO Modules inherit MaxStream's Certifications. FCC ID: OUR-XBEEPRO
- ISM (Industrial, Scientific & Medical): 2.4 GHz frequency band Manufactured under ISO 9001:2000 registered standards XBee/XBee- PRO RF Modules are optimized for use in US, Canada, Australia, Israel, and Europe (contact MaxStream for complete list of approvals).

Equipment Required, Not Supplied:

Custom Remote Control (Transmitter). The APL-IP uses two rechargeable 18v Makita Li-Ion batteries to power the unit, and one 18v Makita Li-ion battery to power the custom remote. Blood Fill System with One-Gallon "Blood Paste" bucket with pre-mixed coagulated blood.

Special Installation Requirements:

Blood paste is perishable, organic material with a shelf life dependent upon storage conditions. Store sealed and in a cool, dark place. Blood paste is cellulose based and could attract insects if left exposed. The tubing used in APL-IP's bleeding system is surgical quality and contains latex. Individuals with latex allergies or sensitivities should use precautions before operating, training, or attempting to repair the unit.

Power Requirements:

The APL-IP uses two rechargeable 18v Makita Li-Ion batteries to power the unit, and one 18v Makita Li-ion battery to power the custom remote. Charge the Li-Ion batteries using the Makita charger provided. Refer to the APL-IP User Guide and manufacturer's user manual provided for additional information on charging the batteries.

Makita DC18RA Battery Charger

Input: A.C. 120 V 50 – 60 HZ

Output: D.C. 7.2 V – 18 V

Weight: 1.0 kg (2.2 lbs.)

Bleed-out time (with full reservoir and no resistance): 3 minutes

Applicable Publications:

MSTC Manuals:

OUM 08-6910-701-10

SMM 08-6910-701-24&P

Reference Publications:

(COTS) Manuals, AirwayPlus Lifecast - Intubation/Packable (KGS-TFX-APL-IP-1)

Training Requirements Supported:

MOSC 68W

AIRWAYPLUS LIFECAST – PULSES/BREATHING (APL-PB) (KGS-TFX-APL-PB-1)

**APL-PB, Upper Body****APL-PB Kit**

Training Category/Level Utilized:
Medical/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC for MSTC Only

Purpose of Trainer:

The TraumaFX Airway^{Plus} Lifecast - Pulses/Breathing (APL-PB) is a ruggedized upper body unit medical trainer that takes realism to the next level by helping trainees learn how to treat and perform interventions on patients suffering from traumatic upper body injuries. The APL-PB is covered in lifelike synthetic skin and includes a simulated rib cage and sternum.

Functional Description:

The APL-PB helps teach responders to perform life-saving tasks such as maintaining a patient's airway, needle chest decompression, cricothyroidotomy, intraosseous infusion, chest tube insertion, hemostatic wound intervention, and intubation. The TraumaFX APL-PB is unparalleled in ruggedness and durability, and was designed specifically for use in tough outdoor terrains, and features articulating shoulders and realistic, reinforced silicone arms. It can be carried, dragged, and transported in a variety of vehicles and aircraft. The APL-PB can withstand nearly any weather condition, making it ideally suited for real world simulation training for Tactical Combat Casualty Care (TCCC) and Combat Lifesaver training courses. The APL-PB is a multi-purpose training

simulator that can function as a stand-alone skills station or be connected to any TraumaFX lower torso trainer for use in training lanes. The APL-PB has simulated injury and intervention sites allow for multiple uses with cost-effective replacement components. The APL-PB is designed for rugged use in realistic training environments.

Physical Information:

- Manikin weights: 79 lbs.
- Remote Control Transmitter:
 - Effective Range: Outdoor range is 1600 meters (line of site); indoor range is 100 meters but is subject to building construction materials that may impede signal.
 - Transmit power: 63mW (18dBm)
 - RF Data Rate: 250,000 bps
- FCC ID: Contains FCC ID: OUR-XBEEPRO** The enclosed device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (i.) this device may not cause harmful interference and (ii.) this device must accept any interference received, including interference that may cause undesired operation.
- FCC Approval: Systems that include XBee/XBee-PRO Modules inherit MaxStream's Certifications. FCC ID: OUR-XBEEPRO
- ISM (Industrial, Scientific & Medical): 2.4 GHz frequency band Manufactured under ISO 9001:2000 registered standards XBee/XBee- PRO RF Modules are optimized for use in US, Canada, Australia, Israel, and Europe (contact MaxStream for complete list of approvals).

Equipment Required, Not Supplied:

Custom Remote Control (Transmitter). The APL-PB uses two rechargeable 18v Makita Li-Ion batteries to power the unit, and one 18v Makita Li-ion battery to power the custom remote. Blood Fill System with One-Gallon "Blood Paste" bucket with pre-mixed coagulated blood.

Special Installation Requirements:

Blood paste is perishable, organic material with a shelf life dependent upon storage conditions. Store sealed and in a cool, dark place. Blood paste is cellulose based and could attract insects if left exposed. The tubing used in APL-PB's bleeding system is surgical quality and contains latex. Individuals with latex allergies or sensitivities should use precautions before operating, training, or attempting to repair the unit.

Power Requirements:

The APL-PB uses two rechargeable 18v Makita Li-Ion batteries to power the unit, and one 18v Makita Li-ion battery to power the custom remote. Charge the Li-Ion batteries using the Makita charger provided.

Refer to the APL-PB User Guide and manufacturer's user manual provided for additional information on charging the batteries.

Makita DC18RA Battery Charger

Input: A.C. 120 V 50 – 60 HZ

Output: D.C. 7.2 V – 18 V

Weight: 1.0 kg (2.2 lbs.)

Bleed-out time (with full reservoir and no resistance): 3 minutes

Applicable Publications:

MSTC Manuals:

OUM 08-6910-701-10

SMM 08-6910-701-24&P

Reference Publications:

(COTS) Manuals, AirwayPlus Lifecast - Pulses/Breathing (KGS-TFX-APL-PB-1)

Training Requirements Supported:

MOSC 68W

AIRWAYPLUS LIFECAST – PULSES/BREATHING (APL-PB) (KGS-TFX-APL-PB-1)



APL-PB, Upper Body



APL-PB Kit

Training Category/Level Utilized:
Medical/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC for MSTC Only

Purpose of Trainer:

The TraumaFX Airway^{Plus} Lifecast - Pulses/Breathing (APL-PB) is a ruggedized upper body unit Tactical Combat Casualty Care Exportation (TC3X) trainer medical trainer that takes realism to the next level by helping trainees learn how to treat and perform interventions on patients suffering from traumatic upper body injuries. The APL-PB is covered in lifelike synthetic skin and includes a simulated rib cage and sternum.

Functional Description:

The APL-PB helps teach responders to perform life-saving tasks such as maintaining a patient's airway, needle chest decompression, cricothyroidotomy, intraosseous infusion, chest tube insertion, hemostatic wound intervention, and intubation. The TraumaFX APL-PB is unparalleled in ruggedness and durability, and was designed specifically for use in tough outdoor terrains, and features articulating shoulders and realistic, reinforced silicone arms. It can be carried, dragged, and transported in a variety of vehicles and aircraft. The APL-PB can withstand nearly any weather condition, making it ideally suited for real world simulation training for Tactical Combat Casualty Care (TCCC) and Combat Lifesaver training courses. The APL-PB is a multi-purpose training

simulator that can function as a stand-alone skills station or be connected to any TraumaFX lower torso trainer for use in training lanes. The APL-PB has simulated injury and intervention sites allow for multiple uses with cost-effective replacement components. The APL-PB is designed for rugged use in realistic training environments.

Physical Information:

- Manikin weights: 79 lbs.
- Remote Control Transmitter:
 - Effective Range: Outdoor range is 1600 meters (line of site); indoor range is 100 meters but is subject to building construction materials that may impede signal.
 - Transmit power: 63mW (18dBm)
 - RF Data Rate: 250,000 bps
- FCC ID: Contains FCC ID: OUR-XBEEPRO** The enclosed device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (i.) this device may not cause harmful interference and (ii.) this device must accept any interference received, including interference that may cause undesired operation.
- FCC Approval: Systems that include XBee/XBee-PRO Modules inherit MaxStream's Certifications. FCC ID: OUR-XBEEPRO
- ISM (Industrial, Scientific & Medical): 2.4 GHz frequency band Manufactured under ISO 9001:2000 registered standards XBee/XBee- PRO RF Modules are optimized for use in US, Canada, Australia, Israel, and Europe (contact MaxStream for complete list of approvals).

Equipment Required, Not Supplied:

Custom Remote Control (Transmitter). The APL-PB uses two rechargeable 18v Makita Li-Ion batteries to power the unit, and one 18v Makita Li-ion battery to power the custom remote. Blood Fill System with One-Gallon "Blood Paste" bucket with pre-mixed coagulated blood.

Special Installation Requirements:

Blood paste is perishable, organic material with a shelf life dependent upon storage conditions. Store sealed and in a cool, dark place. Blood paste is cellulose based and could attract insects if left exposed. The tubing used in APL-PB's bleeding system is surgical quality and contains latex. Individuals with latex allergies or sensitivities should use precautions before operating, training, or attempting to repair the unit.

Power Requirements:

The APL-PB uses two rechargeable 18v Makita Li-Ion batteries to power the unit, and one 18v Makita Li-ion battery to power the custom remote. Charge the Li-Ion batteries using the Makita charger provided.

Refer to the APL-PB User Guide and manufacturer's user manual provided for additional information on charging the batteries.

Makita DC18RA Battery Charger

Input: A.C. 120 V 50 – 60 HZ

Output: D.C. 7.2 V – 18 V

Weight: 1.0 kg (2.2 lbs.)

Bleed-out time (with full reservoir and no resistance): 3 minutes

Applicable Publications:

MSTC Manuals:

OUM 08-6910-701-10

SMM 08-6910-701-24&P

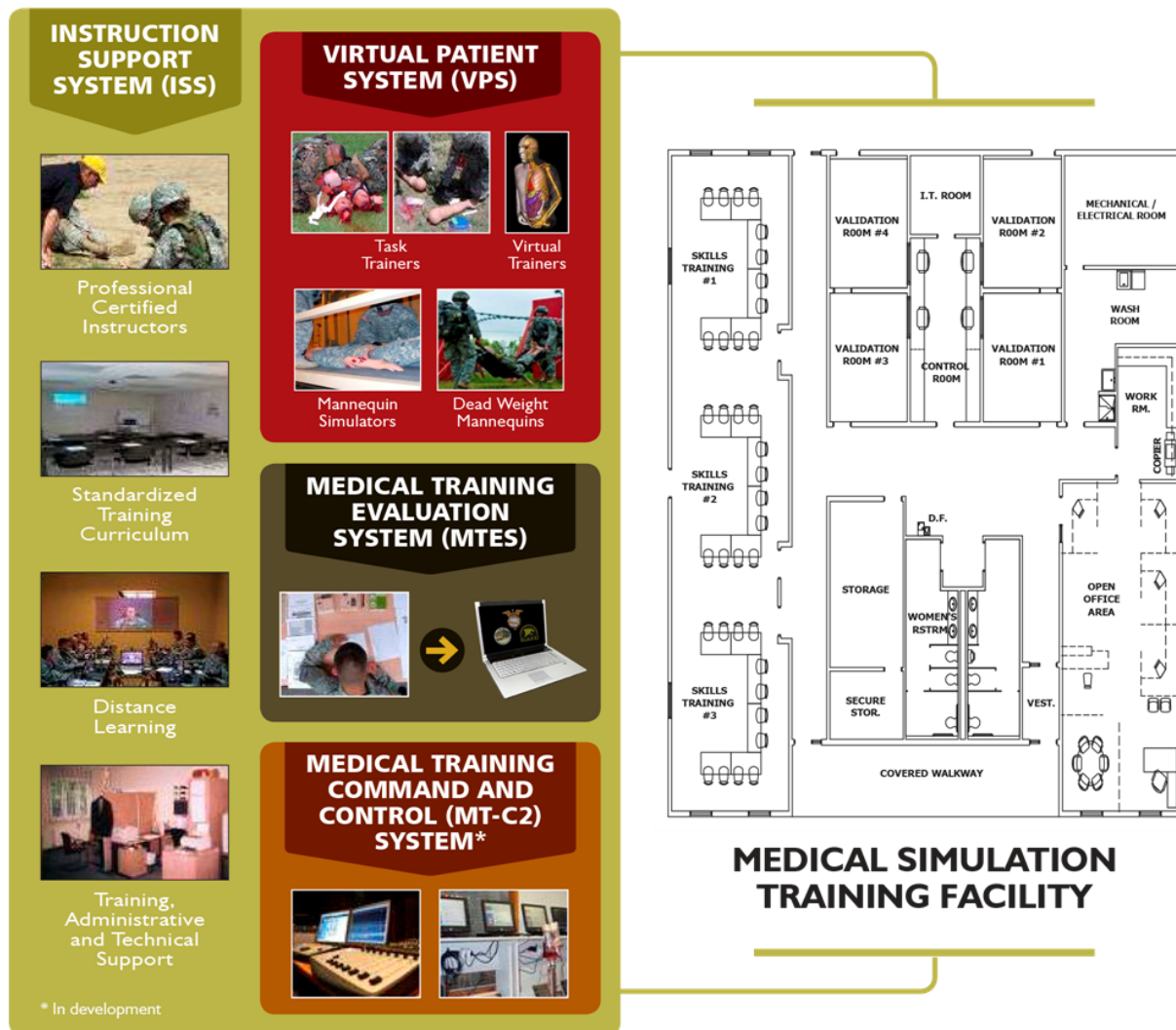
Reference Publications:

(COTS) Manuals, AirwayPlus Lifecast - Pulses/Breathing (KGS-TFX-APL-PB-1)

Training Requirements Supported:

MOSC 68W

MEDICAL SIMULATION TRAINING CENTER (MSTC)



Training Category/Level Utilized:
Medical/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:
Medical Simulation Training Centers instruct medical and non-medical Soldiers on the latest battlefield trauma

and critical care techniques based on US Army Medical Department Center & School (AMEDDC&S) approved performance oriented Training Curriculum. In addition, Validation Exercises simulate the high stress of performing medical interventions in combat. MSTCs are Army-level facilities that offer Commanders a turnkey training approach to maintain Medical Readiness. Each MSTC provides a medical skills training platform where Soldiers obtain sustainment and validation of their medical skills in accordance with Training Circular (TC) No. 8-800, Medical Education and Demonstration of Individual Competence (MEDIC), and the Combat Life Saver (CLS) Programs of Instruction (POI).

Functional Description:

MSTC is a standardized family of supporting component systems that provides a framework fitted with reconfigurable, enabling technology and supporting training devices. Major assemblies for the MSTC are the Virtual Patient System (VPS), Instruction Support System (ISS), Medical Training Command and Control (MT-C2) system, the Medical Training Evaluation System (MTES), and the Medical Mobile MOUT. The MSTC training components under the VPS major assembly includes computerized bleed-breathe mannequins that are weighted and airway equipped partial task trainers and associated equipment. Enabling technology includes audiovisual enhancements, camera surveillance capability, computer labs, control rooms with a remotely managed training platform, outdoor lanes for combat lifesaver training.

Physical Information:

- Facility
 - Guidance is for a 7000 square foot structure
 - Large classrooms for clinical instruction (3-4 depending on student throughput)
 - Validation rooms (3-4 depending on student throughput)
 - Administrative/Office areas
 - Large outdoor area for training tactical evacuation methods
- Instruction and Administrative Support (contracted)
 - 4 Instructors
 - 1 Administrative Assistant (class scheduling, student records, etc.)
 - Military medical personnel routinely augment contracted instructors to increase training capability and student throughput
 - Guidance: The unit will provide a Medical Director (e.g.; MD) who is responsible for the certification of the Soldiers' medical training
- Virtual Patient Systems (VPS)
 - Dead weight mannequins
 - DVC-08-51
 - Trauma bleeding kits
 - DVC 08-66, FEBSS HYDRASIM Single Port (SP)
 - Training Device, Intravenous
 - DVC 08-05C
 - Birthing Simulators
 - DVC 08-59
 - Airway Management Trainers
 - DVC 08-65
 - DVC 08-52
 - High fidelity tetherless mannequins
 - DVC 08-64, SimMan 3G MYSTIC Manikin
 - Traumatic Amputation Tactical Trainers
 - DVC 08-67, Packable Hemostatic Wound Trainer
 - DVC 08-69, Multiple Amputation Trauma Trainer Series 1500 Trauma Trainer
 - DVC 08-71, AirwayPlus Lifecast - Pulses/Breathing

Equipment Supplied:

- Instructor Support System (ISS)
 - Provides the environmental stressors and After Action Review capability (e.g.; sound, fog, strobe, microphones, tilt/pan/zoom cameras)
 - Everything needed to provide turn-key capability from the support aspect
 - Medical Training Evaluation System (MTES)
 - Provides pre-training and post-training evaluations
 - 40 laptops, a main server, and multiple wireless access points
- Outdoor Lanes
 - High & Low Walls
 - Obstacles
 - Medical Mobile MOUT

Special Installation Requirements:

Requires MCOE building construction

Power Requirements:

See Installation Building Code

Applicable Publications:

OUM 08-6910-701-10 Medical Simulation Training Center (MSTC)

SMM 08-6910-701-24&P Medical Simulation Training Center (MSTC)

Reference Publications:

N/A

Training Requirements Supported:

MOSC 68W; Medical Certifications;
MOS Non-Medical

6-in-1 TACTICAL COMBAT CASUALTY CARE (TCCC) TRAINER



(TCCC) Upper Torso



(TCCC) Trainer Accessories

Training Category/Level Utilized:

Medical/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The US Army Medical Department Center and School (AMEDD-CS) identified a critical capability knowledge gap in teaching and sustaining TC3 skills across the force. The REF TC3 Kit The 6-in-1 Tactical Combat Casualty Care (TCCC) Trainer capability was developed within the MSTC Program of Record (PoR) and provides commanders the capability to execute realistic casualty Warrior Skill Level 1-4 training at the individual, leader and collective level where Soldiers train. Rapid Equipping Force (REF) in partnership with TSS ENTERPRISE/JPMO MMS/PdM MedSim acquire 16 TC3 Kits to provide critical casualty management training capabilities into the hands of eight US Army Brigades in CONUS/OCONUS locations. The 6-in-1 TCCC is one of the TADSS components of the Kit.

Functional Description:

The 6-in-1 Tactical Combat Casualty Care (TCCC) Trainer is comprised of a Hyper-Realistic™, anatomically similar male head and upper torso. It is constructed with a skeleton that utilizes user repairable body skin, neck skins, tracheas, and user-replaceable intraosseous training pucks. The procedures available (but not limited to) on this system include the following: Nasopharyngeal Airway (NPA) Adjunct Insertion (with

oropharyngeal visual confirmation of proper measurement and placement), Clearing upper airway of obstructions (i.e. finger-sweep) with Oropharyngeal airway measurement and placement, Surgical airways (Quick-Trach®, Cricothyroidotomy, Cricothyroidcentesis, etc.), Chest Needle Thoracentesis, Sternal Intraosseous Catheter Insertion, and Proximal Humerus Intraosseous Catheter Insertion. The TCCC Trainer supports one (1) trainer training 30 Soldiers per day, and facilitates both round robin skills training and collective casualty treatment, and movement training in the context of simulated combat environments. The manikins helps teach responders to perform life-saving tasks such as maintaining a patient's airway, needle chest decompression, cricothyroidotomy, intraosseous infusion, chest tube insertion, hemostatic wound intervention, and intubation.. The manikins can withstand nearly any weather condition, making it ideally suited for real world simulation training for Tactical Combat Casualty Care (TCCC or TC3), Combat Lifesaver training courses and Warrior Tasks 1-4. The manikins are a multi-purpose training simulator that can function as a stand-alone skills station or be connected to any lower torso trainer for use in training lanes. The manikins has simulated injury and intervention sites allow for multiple uses with cost-effective replacement components.

Physical Information:

- Facility
 - Training Support Center (TSC) Warehouse facilities.
 - Camp Buehring, Kuwait
 - Vilseck, Germany
 - Camp Humphries, Korea
 - Fort Bragg, NC

Physical Information cont.:

- One (1) REF TC3 Kit is comprised of the following components:
 - Two (2) Airway Part Task Trainer Devices/NCD Trainers
 - DVC No: 08-75
 - 6-In-1 TCCC Trainer
 - NSN: TBD
 - Part No: SO-6TRAINER
 - CAGE: 57BL7

Equipment Required, Not Supplied:

None

Dimensions and Specifications Requirements:

- **6-in-1** – White Cases 2 ea.
 - Dimensions (inches): 33 X 25 X 15.75
 - Weight (lbs.): 70

Special Installation Requirements:

- See TSC's personnel for operator training
- Transport Equipment

- The 6-in-1 (TCCC) Trainer will require transport via commercial or military vehicles. All the Kit components will be contained in Transport Cases able to be carried at least by Two (2) ea. personnel.

• Depot and Contractor Supported

- A. Harroll & Associate, LLC.
- Maintenance Level 2, Depot Sustainment: Exercise Product Warranties and Special Warranties stipulations based on OEM/user generated work orders to be executed upon government work order approval.

Power Requirements:

None

Applicable Publications:

OUM: In development

Reference Publications:

N/A

Training Requirements Supported:MOSC: Warrior Task 1-4: MOS Non-Medical

The TraumaFX Airway*Plus* Lifecast - Pulses/Breathing Amputation Arm

**Training Category/Level Utilized:**

Medical/Level 3

Logistic Responsible Command, Service, or Agency:

TSS ENTERPRISE, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The TraumaFX Airway*Plus* Lifecast - Pulses/Breathing Amputation Arm (KGS-TFX-APLPBA-1) is a ruggedized upper body unit medical Tactical Combat Casualty Care Exportable (TC3X) trainer that takes realism to the next level by helping trainees learn how to treat and perform interventions on patients suffering from traumatic upper body injuries. The KGS-TFX-APLPBA-1 is covered in lifelike synthetic skin and includes a simulated rib cage and sternum.

Functional Description:

The KGS-TFX-APLPBA-1 helps teach responders to perform TC3X life-saving tasks such as maintaining a patient's airway, needle chest decompression, cricothyroidotomy, intraosseous infusion, chest tube insertion, hemostatic wound intervention, and intubation. The TraumaFX KGS-TFX-APLPBA-1 is unparalleled in ruggedness and durability, and was designed specifically for use in tough outdoor terrains, and features articulating shoulders and realistic, reinforced silicone arms. It can be carried, dragged, and transported in a variety of vehicles

and aircraft. The KGS-TFX-APLPBA-1 can withstand nearly any weather condition, making it ideally suited for real world simulation training for TC3X training courses. The KGS-TFX-APLPBA-1 is a multi-purpose training simulator that can function as a stand-alone skills station or be connected to any TraumaFX lower torso trainer for use in training lanes. The KGS-TFX-APLPBA-1 has simulated injury and intervention sites allow for multiple uses with cost-effective replacement components. The KGS-TFX-APLPBA-1 is designed for rugged use in realistic training environments.

Physical Information:

- Manikin weights: 79 lbs.
- Remote Control Transmitter:
 - Effective Range: Outdoor range is 1600 meters (line of site); indoor range is 100 meters but is subject to building construction materials that may impede signal.
 - Transmit power: 63mW (18dBm)
 - RF Data Rate: 250,000 bps
- FCC ID: Contains FCC ID: OUR-XBEEPRO** the enclosed device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (i.) this device may not cause harmful interference and (ii.) this device must accept any interference received, including interference that may cause undesired operation.
- FCC Approval: Systems that include XBee/XBee-PRO Modules inherit MaxStream's Certifications. FCC ID: OUR-XBEEPRO

- ISM (Industrial, Scientific & Medical): 2.4 GHz frequency band Manufactured under ISO 9001:2000 registered standards XBee/XBee- PRO RF Modules are optimized for use in US, Canada, Australia, Israel, and Europe (contact MaxStream for complete list of approvals).

Equipment Required, Not Supplied:

Custom Remote Control (Transmitter). The KGS-TFX-APLPBA-1 uses two rechargeable 18v Makita Li-Ion batteries to power the unit, and one 18v Makita Li-ion battery to power the custom remote. Blood Fill System with One-Gallon “Blood Paste” bucket with pre-mixed coagulated blood.

Special Installation Requirements:

Blood paste is perishable, organic material with a shelf life dependent upon storage conditions. Store sealed and in a cool, dark place. Blood paste is cellulose based and could attract insects if left exposed. The tubing used in KGS-TFX-APLPBA-1’s bleeding system is surgical quality and contains latex. Individuals with latex allergies or sensitivities should use precautions before operating, training, or attempting to repair the unit.

Power Requirements:

The KGS-TFX-APLPBA-1 uses two rechargeable 18v Makita Li-Ion batteries to power the unit, and one 18v Makita Li-ion battery to power the custom remote. Charge the

Li-Ion batteries using the Makita charger provided. Refer to the KGS-TFX-APLPBA-1 User Guide and manufacturer’s user manual provided for additional information on charging the batteries.

Makita DC18RA Battery Charger

Input: A.C. 120 V 50 – 60 HZ

Output: D.C. 7.2 V – 18 V

Weight: 1.0 kg (2.2 lbs.)

Bleed-out time (with full reservoir and no resistance): 3 minutes

Applicable Publications:

MSTC Manuals:

OUM 08-6910-701-10

SMM 08-6910-701-24&P

Reference Publications:

COTS Manual: AirwayPlus Lifecast - Pulses/Breathing (KGS-TFX-APLPBA-1 -1)

Training Requirements Supported:

This device supports TC3X Training

Packable Hemostatic (HEMO) Trauma Trainer KGS-TFX-HEMO-R-1



Training Category/Level Utilized:
Medical/Level 1

Logistic Responsible Command, Service, or Agency:
TSS ENTERPRISE, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The Packable Hemostatic (HEMO) Trauma Trainer is a ruggedized lower body unit medical Tactical Combat Casualty Care Exportable (TC3X) trainer that takes realism to the next level by helping trainees learn how to treat and perform interventions on patients suffering from traumatic lower body injuries.

Functional Description:

The HEMO Lower Body is a simulation of a traumatic single amputation with pulsing arterial bleeding requiring the placement of a tourniquet or direct pressure. This simulator also displays a groin injury involving a severed femoral artery that requires wound packing to achieve homeostasis, and has a lower leg crush injury with venous bleeding. The system is equipped with rugged animatronics to mimic the leg movement of a severely injured person. The system is composed of a seamless silicone skin molded over a strong urethane and anodized aluminum core that houses all electrical and electromechanical components. The TC3X HEMO's right amputation leg allows for easy removal of the tibia and fibula amputation fragments in a quick release fashion.

Once the bone fragment is removed, the knee bone becomes stand alone and is exposed so the user can install the Prosthetic Leg Cover directly at the knee joint. When a PLC is installed on a TC3X HEMO, it can better support the training scenarios that do not require a right leg amputation.

The HEMO can be paired with any TraumaFX Upper Body and accommodates the Prosthetic Leg Cover. The HEMO's unparalleled ruggedness allows it to be carried and dragged through inhospitable field training environments without damage. The HEMO can withstand nearly any weather condition, making it ideally suited for Tactical Combat Casualty Care (TCCC) and Combat Lifesaver training courses.

Physical Information:

The manikin is anatomically similar to the human body.

- Manikin weights: 70 lbs.
- Remote Control Transmitter:
 - Effective Range: Outdoor range is 1600 meters (line of site); indoor range is 100 meters but is subject to building construction materials that may impede signal.
 - Transmit power: 63mW (18dBm)
 - RF Data Rate: 250,000 bps
 - FCC ID: Contains FCC ID: OUR-XBEEPRO** The enclosed device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (i.) this device may not cause harmful interference and (ii.) this device must accept any interference received, including interference that may cause undesired operation.

- FCC Approval: Systems that include XBee/XBee-PRO Modules inherit MaxStream's Certifications. FCC ID: OUR-XBEEPRO
- ISM (Industrial, Scientific & Medical): 2.4 GHz frequency band Manufactured under ISO 9001:2000 registered standards XBee/XBee- PRO RF Modules are optimized for use in US, Canada, Australia, Israel, and Europe (contact MaxStream for complete list of approvals).

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Blood paste is perishable, organic material with a shelf life dependent upon storage conditions. Store sealed and in a cool, dark place. Blood paste is cellulose based and could attract insects if left exposed. The tubing used in HEMO's bleeding system is surgical quality and contains latex. Individuals with latex allergies or sensitivities should use precautions before operating, training, or attempting to repair the unit.

AIRWAYPLUS LIFECAST - PULSES/BREATHING W/ 90° BEND (KGS-TFX-APL-PB-1)



Training Category/Level Utilized:
Medical/Level 1

Logistic Responsible Command, Service, or Agency:
TSS ENTERPRISE, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The TraumaFX Airway^{Plus} Lifecast - Pulses/Breathing (APL-PB) is a ruggedized upper body unit medical Tactical Combat Casualty Care Exportable (TC3X) trainer that takes realism to the next level by helping trainees learn how to treat and perform interventions on patients suffering from traumatic upper body injuries.

Functional Description:

The APL-PB helps teach responders to perform life-saving tasks such as maintaining a patient's airway, needle chest decompression, cricothyroidotomy, intraosseous infusion, chest tube insertion, hemostatic wound intervention, and intubation. The TraumaFX APL-PB is unparalleled in ruggedness and durability, and was designed specifically for use in tough outdoor terrains, and features articulating shoulders and realistic, reinforced silicone arms. It can be carried, dragged, and transported in a variety of vehicles and aircraft. The APL-PB can withstand nearly any weather condition, making it ideally suited for real world simulation training for Tactical Combat Casualty Care (TCCC) and Combat Lifesaver training courses. The APL-PB is a multi-purpose training simulator that can function as a stand-alone skills station or be connected to any TraumaFX lower torso trainer for use in training lanes. The APL-PB has

simulated injury and intervention sites allow for multiple uses with cost-effective replacement components.

The APL-PB is designed for rugged use in realistic training environments. The APL-PB Upper Body is a simulation of a severely injured person with a complete, realistic airway for any method of airway intervention, and breathing. The APL-PB trains responders to perform life-saving tasks such as maintaining a patient's airway, needle decompression, chest tube insertion, cricothyroidotomy, IV placement, and intraosseous infusion. The system is composed of a seamless silicone skin molded over a strong urethane and anodized aluminum core that houses all electrical and electromechanical components. The APL-PB can be paired with any TraumaFX Lower Body and accommodates a 90° bend at the waist.

Physical Information:

- Manikin weights: 79 lbs.
 - Remote Control Transmitter:
 - Effective Range: Outdoor range is 1600 meters (line of site); indoor range is 100 meters but is subject to building construction materials that may impede signal.
 - Transmit power: 63mW (18dBm)
 - RF Data Rate: 250,000 bps
- FCC ID: Contains FCC ID: OUR-XBEEPRO** The enclosed device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (i.) this device may not cause harmful interference and (ii.) this device must accept any interference received, including interference that may cause undesired operation.

-
- FCC Approval: Systems that include XBee/XBee-PRO Modules inherit MaxStream's Certifications. FCC ID: OUR-XBEEPRO
 - ISM (Industrial, Scientific & Medical): 2.4 GHz frequency band Manufactured under ISO 9001:2000 registered standards XBee/XBee- PRO RF Modules are optimized for use in US, Canada, Australia, Israel, and Europe (contact MaxStream for complete list of approvals).

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Blood paste is perishable, organic material with a shelf life dependent upon storage conditions. Store sealed and in a cool, dark place. Blood paste is cellulose based and could attract insects if left exposed. The tubing used in APL-PB's bleeding system is surgical quality and contains latex. Individuals with latex allergies or sensitivities should use precautions before operating, training, or attempting to repair the unit.

Power Requirements:

The APL-PB uses two rechargeable 18v Makita Li-Ion batteries to power the unit, and one 18v Makita Li-ion battery to power the custom remote. Charge the Li-Ion batteries using the Makita charger provided. Refer to the APL-PB User Guide and manufacturer's user manual provided for additional information on charging the batteries.

Makita DC18RA Battery Charger

Input: A.C. 120 V 50 – 60 HZ

Output: D.C. 7.2 V – 18 V

Weight: 1.0 kg (2.2 lbs.)

Bleed-out time (with full reservoir and no resistance): 3 minutes

Applicable Publications:

MSTC Manuals:

OUM 08-6910-701-10

SMM 08-6910-701-24&P

Reference Publications:

COTS Manual: AirwayPlus Lifecast - Pulses/Breathing (KGS-TFX-APLPB-90-1)

Training Requirements Supported:

This device supports MOS 68W and Combat Life Saver

SimMan 3G Trauma Light

**Training Category/Level Utilized:**

Medical/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

SimMan 3G is designed to improve patient survival rates through quality training and education. SimMan 3G Trauma has some essential features, such as amputated limbs and sternal IO access to provide optimal training for trauma emergency situations.

Special Installation Requirements: N/A**Power Requirements:**

The SimMan 3G Trauma use swappable, rechargeable batteries. Supplemental AC wired connectivity and power is available on site for the device.

Applicable Publications:

MSTC Manuals: OUM 08-6910-701-10, SMM 08-6910-701-24&P

Reference Publications:

COTS Manual – SimMan publications:
<https://www.laerdal.com/us/downloads>.

Training Requirements Supported:

MOSC 68W series and Combat Life Saver courses.

Physical Information:

The SimMan 3G Manikin contains Software & License, Operator's Tablet PC, Simulated Patient Monitor and Software, Simulated Patient Monitoring Cables, Webcam, Drug Recognition Kit, Soft Sided Carry Cases, Specially Designed Clothing.

Equipment Required, Not Supplied:

What other equipment is required for this device to function?

Special Installation Requirements:

Any special instructions other than those already explained?

Power Requirements:

How it is powered? Batteries? What type, how many? or AC current?

Applicable Publications:

What Training Manuals are use in order to operate this device?

Reference Publications:

Any other publications that can be use other than the TM's for information about this device?

Training Requirements Supported:

What specific MOS series if any does this device supports? ARTEP's?

SimMan 3G Trauma Dark

**Training Category/Level Utilized:**

Medical/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

SimMan 3G is designed to improve patient survival rates through quality training and education. SimMan 3G Trauma has some essential features, such as amputated limbs and sternal IO access to provide optimal training for trauma emergency situations.

Special Installation Requirements: N/A**Power Requirements:**

The SimMan 3G Trauma use swappable, rechargeable batteries. Supplemental AC wired connectivity and power is available on site for the device.

Applicable Publications:

MSTC Manuals: OUM 08-6910-701-10, SMM 08-6910-701-24&P

Reference Publications: COTS Manual – SimMan publications: <https://www.laerdal.com/us/downloads>.

Training Requirements Supported: MOSC 68W series and Combat Life Saver courses.

Physical Information:

The SimMan 3G Manikin contains Software & License, Operator's Tablet PC, Simulated Patient Monitor and Software, Simulated Patient Monitoring Cables, Webcam, Drug Recognition Kit, Soft Sided Carry Cases, Specially Designed Clothing.

Equipment Required, Not Supplied:

All equipment for the device functioning is supplied with the product acquisition. SimMan 3G Trauma Dark does not require additional support equipment.

Mannequin, Rescue Adult (Rescue Randy Adult Weight Trainer) (P/N 149-1345)



RESCUE RANDY

Training Category/Level Utilized:

Medical/Level 3

Logistic Responsible Command, Service, or Agency:

PEO STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

To provide lifelike adult or juvenile victim handling, transportation and extrication training.

Functional Description:

Rescue Randy was developed for lifelike adult or juvenile victim handling, transportation, and extrication training. These 5 ft. 5" manikins can be safely used in situations too hazardous or uncomfortable for human volunteers. Made of durable vinyl with 4,100-lb. test plastic-coated cables. Features include articulated joints, and weight distribution according to human weight distribution chart. Used by the U.S. Military, Fire, and Police Departments, Safety Teams, and Emergency Personnel for rescue and extrication from pole top, confined spaces, collapsed buildings, smoke rooms, and ladder carry-down protocols worldwide.

Physical Information:

- Manikin weights: 165 lbs.
- Size: 50" x 25" x 12"

Equipment Required, Not Supplied: None**Special Installation Requirements:** None**Power Requirements:** None**Applicable Publications:**

None

Reference Publications:

TC8-800

Training Requirements Supported:

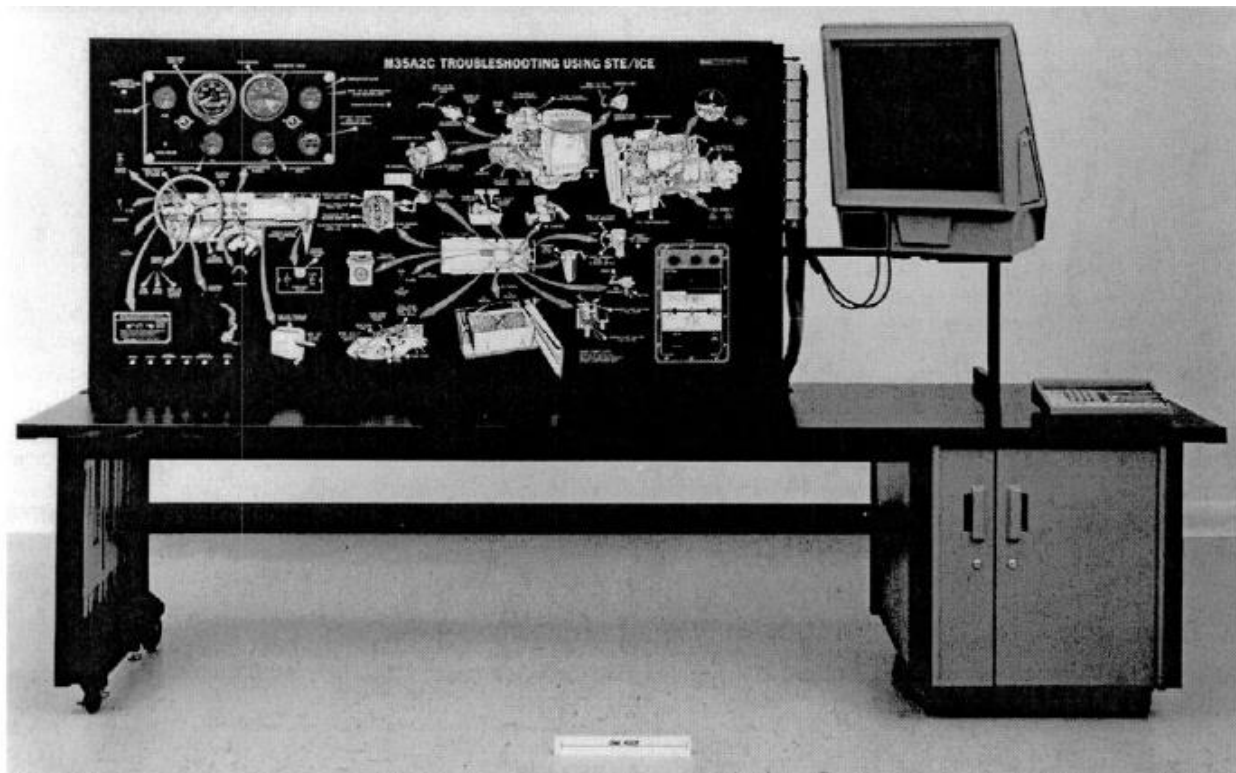
This device supports MOS 68W and Combat Life Saver

TSS-ENTERPRISE TADSS INDEX AND CATALOG

**BASIC SERIES 09
ORDNANCE**



M35A2C TROUBLESHOOTING USING STE/ICE TRAINER

**Training Category/Level Utilized:**

Ordnance/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

For classroom use to provide maintenance training and familiarization for selected systems of an M35A2C vehicle. The trainer provides organizational, direct support (DS), and general support (GS) maintenance personnel with training in operating procedures, symptom analysis, and troubleshooting procedures.

Functional Description:

Device 09-23 is a computer-based training system, providing operating and maintenance characteristics for simulated M35A2C vehicle systems.

The device consists of a display panel of simulated M35A2C system components and vehicle test meter (VTM), an EC 3 computer, video disc player and monitor, control console, two diskette drive units, visuals, two flexible diskettes, trainer power cable, operator's manual,

and maintenance manual. An accessories box containing a simulated VTM current probe, tachometer probe, two pressure transducers and four cable assemblies are also supplied with the trainer.

This student/instructor operated device is designed for demonstration or system maintenance hands-on use and requires minimal familiarization time. No warm-up time, special cooling, or special maintenance personnel are required.

Student motivation is accomplished through 32 unique malfunction simulations and immediate performance feedback as the student operates the system and VTM.

Through the use of the control console, the simulated systems on the display panel respond with normal operation or system malfunctions similar to the actual vehicle systems. Student performance is monitored by indicators contained on the control console to indicate total time to solve the problem and components replaced.

Physical Information:

120" L x 71" H x 29" D; 485 lb

Equipment Required, Not Supplied:

(Information not available)

Power Requirements:

115vac, single-phase, 60 Hz, 15 A

Applicable Publications:

TM 9-6910-252-10 Operator User's Manual
Troubleshooting Using STE/ICE, Device 9-23.

TM 9-6910-252-24&P Organizational, Direct Support,
and General Support Maintenance Manual.

Including Repair Parts and Special Tools List (Including
Depot Maintenance Repair Parts)

Troubleshooting Using STE/ICE, Device 9-23.

Reference Publications:

TM 9-2320-209-20

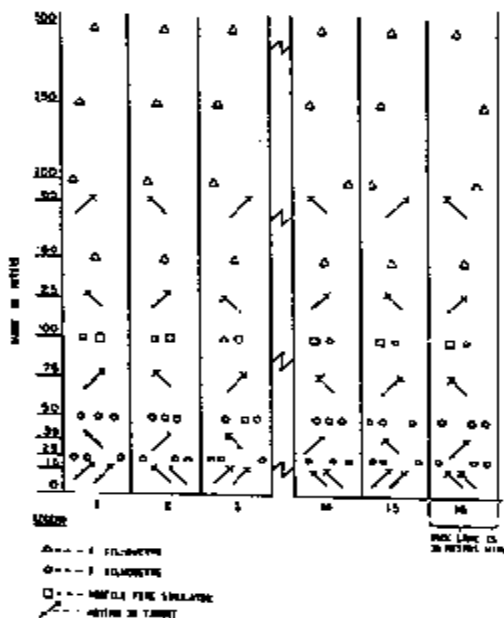
TM 9-2320-209-20-2 Series

Training Requirements Supported:

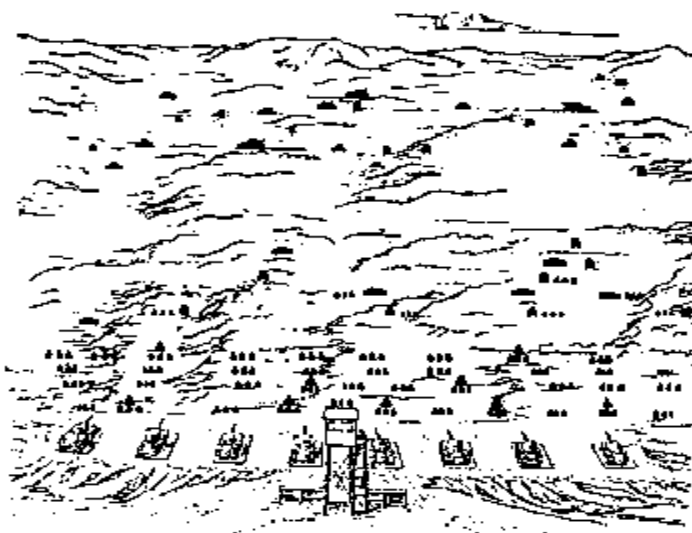
MOSC 91 Series

SL1 091-499 Task 1120; 1122

REMOTED TARGET SYSTEM (RETS)



Infantry Range Layout.



Armor Range Layout.

TYPICAL RETS RANGES

Training Category/Level Utilized:

Infantry/Armor/Aviation/Level 1

Logistic Responsible Command, Service, or Agency:

ACALA

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

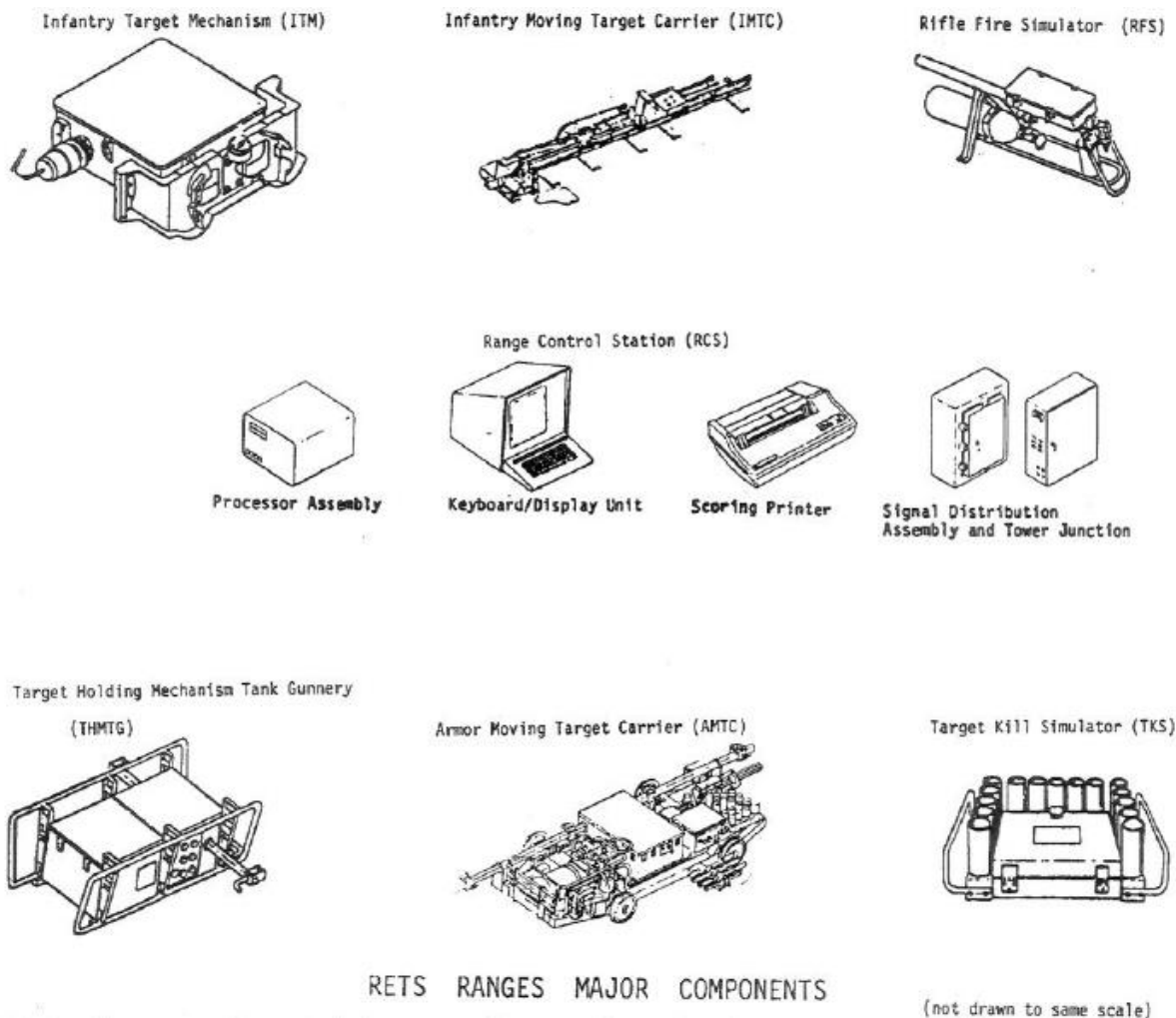
The Remoted Target System (RETS) is targetry equipment which, when installed on standard Army ranges, supports marksmanship, gunnery, and combined arms training. RETS consists of stationary and moving infantry and armor target hardware with related control hardware and software. A range control station provides automatic and manual control of target mechanisms, detects and accumulates target-hit data, and pints a permanent record for evaluation of the firer's or crew's performance.

Simulators adding realism to training scenarios include infantry night muzzle flash, armor target kill, and infantry and armor hostile fire simulators.

Detailed descriptions of the major RETS component simulators and control equipment are located in this publication as follows:

(RETS) Infantry Target Mechanism (ITM)	DVC 07-73
(RETS) Infantry Moving Target Carrier (IMTC)	DVC 07-74
(RETS) Infantry Rifle Fire Simulator (RFS)	DVC 07-75
(RETS) Range Control Station (RCS)	DVC 11-51
(RETS) Target Holding Mechanism Tank Gunnery (THMTG)	DVC 17-63
(RETS) Armor Moving Target Carrier (AMTC)	DVC 17-131
(RETS) Gunfire Simulator (GUFS)	DVC 17-133

Other optional components are used. Range layouts vary according to mission and available range location.



RETS Components

Functional Description:

RETS targets are raised and lowered by electromechanical and hydraulic devices that are actuated and monitored by a computer system located in the Range Control Station. Automatic and manual controls are available. Scoring of individual and/or range performance is also processed. Moving targets are operated on track-mounted carriers. Muzzle and rifle fire simulators using light-emitting diodes (LED), target kill (pyrotechnic) simulators, and gas fired (propane/oxygen) gunfire simulators may be mounted on target holding mechanisms and carriers.

Physical Information:

Refer to descriptions of individual components listed above.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Sufficient space is required to emplace range equipment with electrical power accessibility and range safety considerations taken into account.

Power Requirements:

Varies

Applicable Publications:

TM 9-6920-742-14-1
TM 9-6920-742-24&P-1

Reference Publications:

OUM 9-6920-742-14-2 thru -6
SMM 9-6920-742-24P-2 thru -6

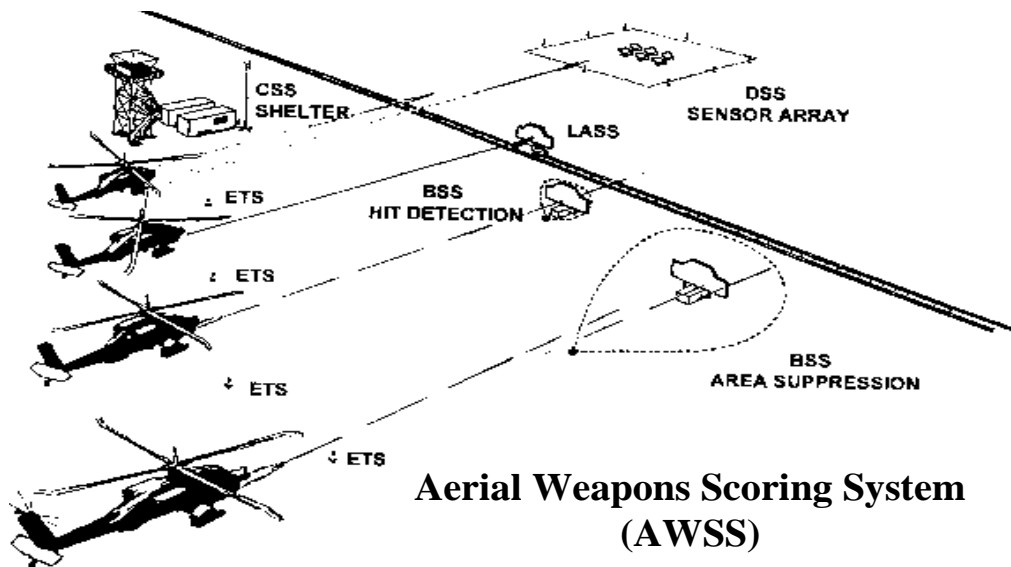
Training Requirements Supported:

MOSCs Infantry; Armor; Aviation

AERIAL WEAPONS SCORING SYSTEM (AWSS) (ANALOG CONFIGURATION)

NSN Not Assigned

DVC 09-25/A Aerial Weapons Scoring System (AWSS) (Digital Configuration)



Training Category/Level Utilized:

Ordnance/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

To provide objective scoring (at individual and crew level) of weapons systems employed from attack, armed reconnaissance, utility, and cargo helicopters. AWSS is contractor operated and transparent to the supported unit.

Functional Description:

The 09-25 is the analog configuration and the 09-25A is the digital configuration. The AWSS is an integrated group of computer controlled sensors used to detect and score 2.75 inch rockets and cannon/machine gun engagements during conduct of live-fire training and qualification tables. The LASS is a sub-component of the AWSS; it detects and "scores" designated laser energy when employed with the Hellfire training missile. The AWSS is an integrated group of computer-controlled sensors used to score crew live fire gunnery exercises at designated ranges. The system has Doppler radar sensors to score .50 caliber, 20mm, and 30mm cannons. It has acoustical sensors to score rocket, and rocket sub-munitions. The system also has an integrated data link subsystem and a computer subsystem to process data and to provide scoring results. There are two mobile systems in CONUS that are contractor maintained and operated. Setup of the system requires two days and one day to take down.

Physical Information:

Operating Frequency – UHF 380-420 MHz
programmable 2400-2483.5 MHz programmable.

Equipment Required, Not Supplied:

N/A

Special Installation Requirements:

Self contained transportable system. Only requirement is that range needs to be surveyed for sensor placement.

Power Requirements:

Power – Scoring Sensors 12vdc, CSS 110vac, 50-60 Hz

Applicable Publications:

AWSS Operational Requirements Document, 29 May 95.

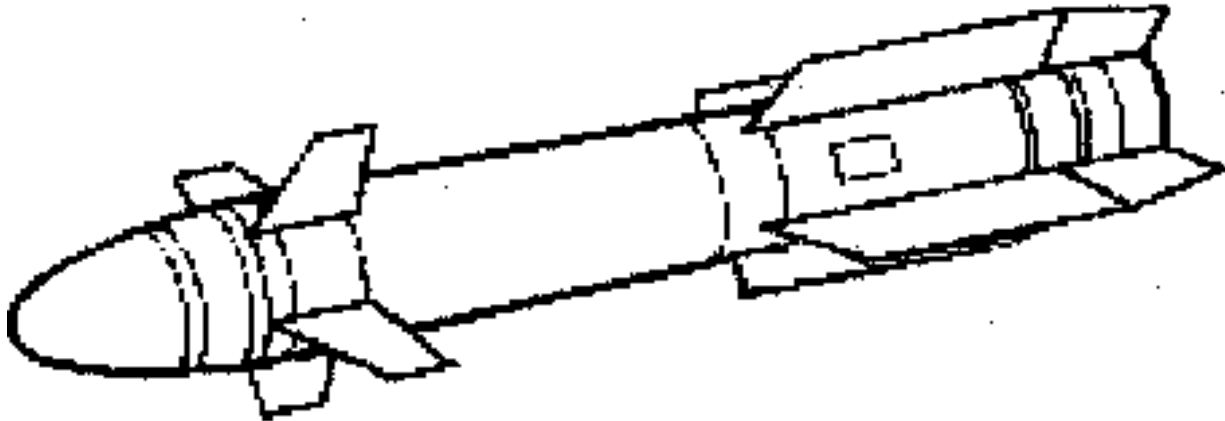
Reference Publications:

FM 1-140, Helicopter Gunnery

Training Requirements Supported:

MOSC - Helicopter Gunnery per FM 1-140, tables VI - VIII

HELLFIRE MISSILE DUMMY GROUND CREW TRAINER

**Training Category/Level Utilized:**

Ordnance/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

Trains Hellfire missile loading procedures and provides the weighted conditions of a loaded missile.

Functional Description:

The HDM is a completely inert replica of a Hellfire missile that has the weight of the actual missile.

Physical Information:

(Information not available)

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

(Information not available)

Applicable Publications:

(Information not available)

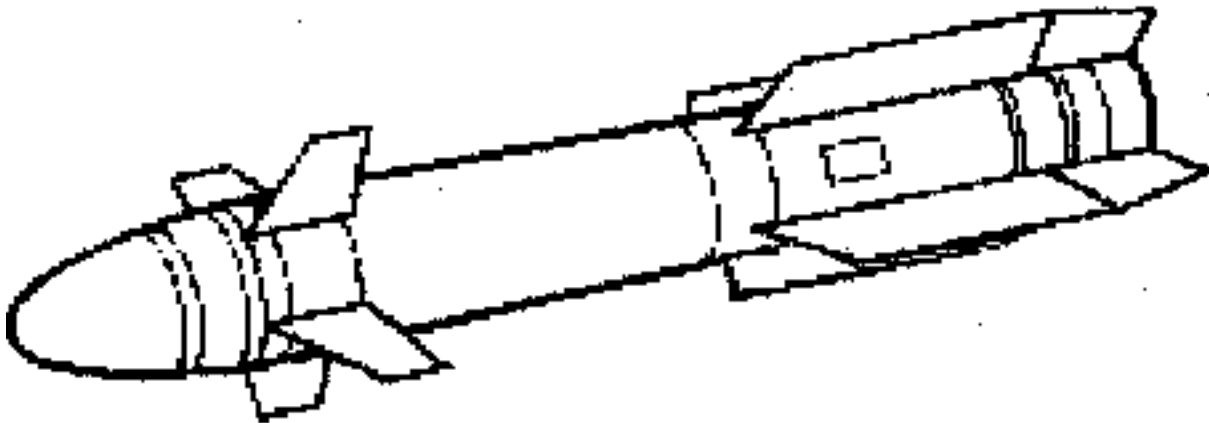
Reference Publications:

(Information not available)

Training Requirements Supported:

MOSC- 91 Series

HELLFIRE MISSILE LAUNCH SIMULATOR

**Training Category/Level Utilized:**

Ordnance/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

To provide on-board procedural training on the employment of Semi-Automatic Laser (SAL) Hellfire missiles during simulated target engagements.

Functional Description:

The SAL Hellfire Missile Launch Simulator is an inert Hellfire missile with a functional SAL seeker head and can be mounted on the launcher rail for training purposes. When activated, it simulates the SAL missile engagement process. The crew must perform the same procedures and meet the same conditions and constraints required in an actual tactical engagement. During the simulated engagement process, the crew receives the same system cues that would be present in an actual engagement.

Physical Information:

(Information not available)

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

(Information not available)

Applicable Publications:

(Information not available)

Reference Publications:

(Information not available)

Training Requirements Supported:

MOSC- 91 Series

M2/M3A2 OPERATION DESERT STORM HANDS-ON-TRAINER (HOT) UPGRADE



Training Category/Level Utilized:
Ordnance/Level 1

Logistic Responsible Command, Service, or Agency:
U.S. Army Maneuver Center of Excellence (MCOE)

Source and Method of Obtaining:
For more information concerning availability, supply and maintenance support, contact the local TSC.

Purpose of Trainer:

The M2/M3A2 simulates normal and malfunction operating conditions associated with the operational M2/M3A2 vehicles. Trains operational, troubleshooting, repair, and alignment skills required for proper maintenance of the vehicle.

Functional Description:

DVC 09-131A is a computer-controlled, three-dimensional, rotating simulation of an M2A2/M3A2 turret. An Instructor Station is mounted on the rotating platform. The turret is supported by a stand that also contains the hull entrance way. Students work inside the trainer while being directed by the instructor and observed from the viewing platform. They are required to recognize and test normal and malfunctioning operating conditions. Students

troubleshoot, adjust, remove, replace, install, and repair system components as applicable.

Physical Information:
109" x 198" x 278"; 13,960 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
Minimum Classroom ceiling height: 14'

Power Requirements:
120vac, 60 Hz, 15 A, single-phase

Applicable Publications:
TM 9-6910-241-10

Reference Publications:
TM 9-2350-252-10-2
TM 9-2350-252-10-2-1
TM 9-2350-252-10-2-2
TM 9-2350-252-10-2-3
TM 9-1240-399-34
TM 9-1425-453-43
TM 9-4910-751-14-1

Training Requirements Supported:
MOSC 91M

M2/M3 A3 BRADLEY FIGHTING VEHICLE DIAGNOSTIC AND TROUBLESHOOTING TRAINER (DTT)



Training Category/Level Utilized:
Ordnance/Level 1

Logistic Responsible Command, Service, or Agency:
U.S. Army Maneuver Center of Excellence (MCOE)

Source and Method of Obtaining:
For information concerning availability, supply and maintenance support, contact the local TSC.

Purpose of Trainer:
The M2/M3 A3 DTT simulates vehicle components and provides controlled malfunctions that simulate various equipment faults to familiarize mechanics in the direct support maintenance procedures required to maintain the tactical vehicle.

Functional Description:
The virtual environment allows the student to navigate within a three dimensional representation of the turret, driver's compartment, and hull. Students participate in lessons that teach the skills necessary to perform maintenance procedures while being monitored by the classroom Instructor.

Physical Information:
The DTT is configured as a complete classroom with desks, chairs, and raised floor, Instructor Operator Station (IOS), Student Station (SS), Link System (LS) and Projector. The classroom can be setup to operate in a closed loop Local Area Network (LAN) or in standalone mode.

The IOS consists of a computer and uninterruptable power supply (UPS) installed in a small 15" rack, two monitors, printer and CAC reader.

The SS consists of one computer, two monitors and a UPS.

The LS consists of a 24 port Ethernet switch and a 15" touch screen/computer.

The projector comes with ceiling mounts and a screen.

The 4" raised floor is installed to allow for cabling of the Link System.

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
120vac, 60Hz, 15A, single-phase

Applicable Publications:
TM 09-6920-3702-10 Trainer Operator's Manual
TM 09-6920-3702-24 Trainer Maintenance Manual

Reference Publications:
OUM 9-2350-294-10 Hull/Turret
TD 9-2350-294-23 Hull/Turret
SMM 9-2350-294-24&P Repair Parts/Tools Hull/Turret

Training Requirements Supported:
MOSC 91M

BASIC ELECTRONICS MAINTENANCE TRAINER (BEMT) UPGRADE, (WITH CONFIGURATIONS 1 AND 2)

NSN 6910-01-619-3736

NSN 6910-01-619-3741

NSN 6910-01-619-3747

DVC 09-134/A/1 (BEMT) Upgrade, Instructor Operator Station

DVC 09-134/A/2 (BEMT) Upgrade, Student Station

DVC 09-134/A/3 (BEMT) Upgrade, Server Station

**Training Category/Level Utilized:**

Signal/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

BEMT is designed to support the training of students in all aspects of basic electronics including theory and hands-on application. The system allows instructors to assign lesson modules to either a class of students or individual students and to track their progress.

Functional Description:

The BEMT is comprised of three components, the instructor operator station (IOS), the student station (SS) and the server system. All three components use a Pentium IV or better Personal Computer (PC) that runs Microsoft operating system. The training environment typically consists of a classroom setup of the required number of student stations, monitored by an instructor operator station and server system.

The instructor operator station (IOS) consists of a computerized aided instructional device (CAI) with the capability for computer-based instruction and hands-on practical exercise training. Through the use of the ViewNet 3000 system, a Multimedia Switching System that provides the ability to connect unlimited groupings of up to 100 VGA monitor workstations to a main video control bus, the instructor is able to monitor and/or grade all activities of the student and provide computer aided remediation if elected.

The student stations (SS) consist of test consoles, various circuit card sets particular to the military occupational skill (MOS) being trained and associated lab text manuals. The test console (130E) is a pre-wired AC/DC power supply system equipped with input-output circuitry, control switches and easy to read display. It accepts a wide range of circuit cards for use in group or self-paced hands-on basic training. The circuit card set consists of hundreds of pre-wired circuitry covering AC, DC, Analog and Digital Instruction, AM, FM, Fiber Optics, Signal Processing, Microprocessors, Microwave Transmission, Rotating Machinery and Automotive. Additional SS hardware may include commercially available test equipment such as oscilloscope, logic control, logic probe, functional-generator and multimeter. Additional hardware requirements will depend on what the school wants to teach for a particular MOS. For example, at some schools the BEMT SS may be equipped with a multimeter only and at other schools it may be fielded with a multimeter, oscilloscope and logic probes. The ratio of SS to IOS will vary depending upon the amount of students taught.

All BEMT sites will have at least one server system, but some sites like Ft. Gordon and Ft. Lee will have more than one server due to the large number of student systems that they have to support.

Physical Information:

The recommended workbench or computer desk dimensions are 60" x 30" for Configuration 1, and 72" x 30" for Configuration 2.

SS Configuration 1: One computer, one monitor, one Nida 130E test console, one digital multimeter and applicable test cards.

SS Configuration 2: One computer, one monitor, one Nida 130E test console, one digital multimeter, an oscilloscope, one function generator, logic probes, and applicable test cards.

Equipment Required, Not Supplied:

The workbench/computer desk and chair are not supplied.

Special Installation Requirements:

The facility is responsible in providing adequate space, ventilation, air conditioning, physical security, utility and power surge protection.

Power Requirements:

Facility power must be 120/208Y vac, 3-phase, 4-wire rated at 100-Amps or higher. Circuit breakers must be rated at 20-Amps.

Recommend install no more than 3 student stations per circuit.

Recommend install a quad receptacle for every student station.

Recommend install a duplex receptacle on a 20-Amps dedicated circuit for the projector.

Applicable Publications:

(COTS) Manuals.

Reference Publications:

(COTS) Manuals

DVC 09-134/A was previously assigned as DVC 11-48/A.

DVC 09-134/A/1 previously assigned as DVC 09-134/1.

DVC 09-134/A/2 previously assigned as DVC 09-134/2.

Training Requirements Supported:

MOSC - The system will train all identified critical basic electronic tasks for MOSC's 15E;F/J/N/X/Y; 88L; 89D; 94A/D/E/F/H/K/L/M/P/R/S/T/Y/Z.

BACKHOE LOADER (BHL) WET BRAKES TRAINING DEVICE



Training Category/Level Utilized:
Ordnance/Level 1

Logistic Responsible Command, Service, or Agency:
U.S. Army Engineer School (USAES), Maneuver Support Center (MANSCEN)

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The purpose of this trainer is to train maintenance personnel on wet brakes technology used in heavy construction equipment. This device will be to train the students on theory of a hydraulic system, troubleshooting and repair of mechanical, electrical, hydraulic and as well as the gear systems.

Functional Description:

The device is made up of several brake related components of a CASE 580 series Backhoe Loader, the major component being the rear axle. The rear axle is mounted on a steel platform and is operated by an electric motor. The device has an operator's station with operator's panel, a seat, brake pedals and a complete hydraulic brake system. For easy maneuverability, the platform is mounted on 4" swivel type wheels.

From the operator's panel the operator will start the device by pressing the "START" button. This will set

the rear axle gear train in motion. As the operator presses the brake pedals the rear axle gear train will stop.

Physical Information:

Overall Dimensions: 72"W x 76"L x 53"H
Weight: 1900 Lbs

Equipment Required, Not Supplied:
None

Special Installation Requirements:

Available power source 220VAC, 20amp; Twist Lock receptacle. Device has an 18ft cord with twist lock plug attached.

Power Requirements:
220VAC, 20amp

Applicable Publications:
None

Reference Publications:
N/A

Training Requirements Supported:

MOSC 91L – Construction Equipment Repairer, and
MOSC 919A – Engineer Equipment Repair Technician.

AIR CONDITIONING MAINTENANCE TRAINER

**Training Category/Level Utilized:**

Ordnance/Level 1

Logistic Responsible Command, Service, or Agency:

USAOMMS

Source and Method of Obtaining:

Not generally available for issue (Limited Production)

Purpose of Trainer:

The air conditioning maintenance trainer supports training in 9 critical tasks. The device supports critical, expedient, theater-driven EPA requirements of Section 608, Chapter 6, of the Clean Air Act of 1990. Without this device, testing cannot meet the standards under Chapter 6 of the Clean Air Act. Clean Air Act requires that Soldiers who operate and maintain U. S. Army refrigeration equipment must be certified 608 Type I and II.

Functional Description:

Compressor Technology: Semi-Hermetic
Condensing Method: Air-Cooled
HP Range: 1/3 to 1/2 HP
Refrigerant Options: R-134a
Applications: High, Medium, and Low temperature

Physical Information:

Mounted on a portable cabinet with wheels and storage space below able to hold a toolbox and be secured
MCN: 691001C128106/NSLIN: XA1008

Equipment Required, Not Supplied:

Students and cadre must wear PPE (goggles and gloves)

Special Installation Requirements:

Condensing unit will have fan guards for safety measures.

Power Requirements:

110/120 VAC 60 Hz

Applicable Publications:

N/A

Reference Publications:

(COTS) Manuals

Training Requirements Supported:

MOSC 91C; and other 91 Series
Marines Basic Refrigeration Technician (ITRO)
Programs of Instruction (POI)

M1A1 ABRAMS INTEGRATED MANAGEMENT/ENHANCED DIAGNOSTICS (AIM/ED) HANDS-ON-TRAINER (HOT)

**Training Category/Level Utilized:**

Armor/Level 1

Logistic Responsible Command, Service, or Agency:

U.S. Army Maneuver Center of Excellence (MCOE)

Source and Method of Obtaining:

For information concerning availability, supply and maintenance support, contact the local TSC.

Purpose of Trainer:

To train in troubleshooting techniques, removal, replacement and repair of the M1A1 AIM/ED Tank turret components.

Functional Description:

The M1A1 AIM/ED HOT provides training for maintenance personnel on turret maintenance procedures.

Physical Information:

22' long x 14' high x 16' wide; 1500 lbs

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Minimum access for installation is 35' L x 25' W x 14' H; 17,000 lb floor bearing load.

Power Requirements:

115vac, 40 A, 60 Hz, single-phase

Applicable Publications:

OUM 9-6910-702-10
SMM 9-6910-702-24&P

Reference Publications:

None

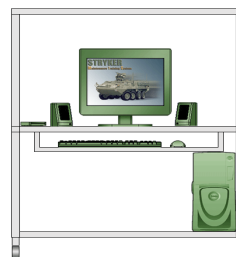
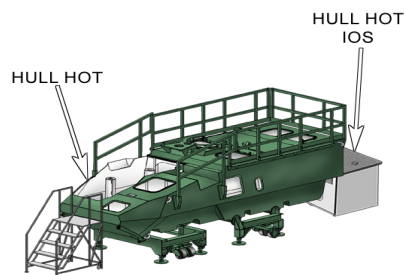
DVC was previously assigned as DVC 17-67/E.

Training Requirements Supported:

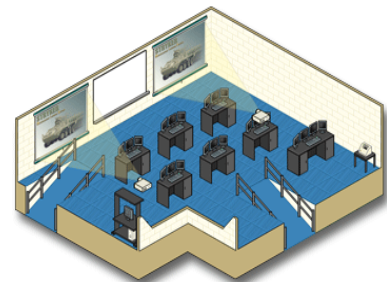
MOSC 91A

STRYKER MAINTENANCE TRAINING SYSTEM (MTS)

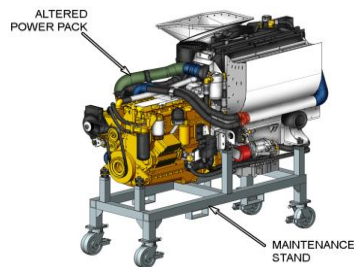
NSN 6920-01-575-3904	09-143/A	Hands-On-Trainer (HOT) Infantry Carrier Vehicle (ICV) Hull Hybrid
NSN 6910-01-648-3784	09-143/1/A	Stryker Training Management System (TMS-A) Version A
NSN 6910-01-648-3795	09-143/2/A	Stryker Diagnostic Troubleshooting (DT) Classroom Trainer Version A
NSN 6920-01-575-4009	09-143/3	Part Task Trainer (PTT) Powerpack w/AC
NSN 6920-01-575-4000	09-143/4	Part Task Trainer (PTT) Powerpack w/o AC
NSN 6920-01-575-3954	09-143/5	Part Task Trainer (PTT) Brake
NSN 6920-01-575-4116	09-143/8	Hands-On Trainer (HOT) Remote Weapons System (RWS)
NSN 6910-01-648-3846	09-143/9	Stryker Software Support Environment (SSE)
NSN 6910-01-648-3849	09-143/9/A	Stryker Software Support Environment (SSE-A) Version A



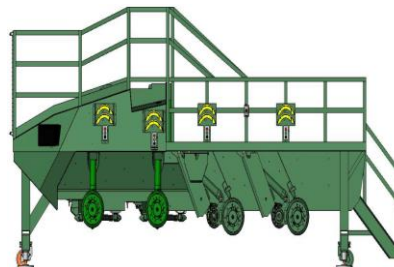
(TMS-A) Ver. A



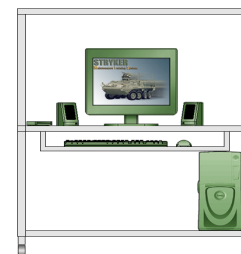
DT - Classroom Trainer Ver. A



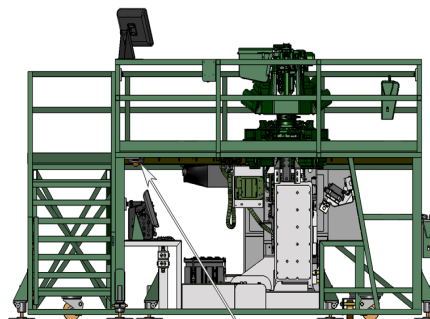
PTT - Power Pack



PTT - Brake



Stryker SSE Ver. A



HOT - Remote Weapons System

Training Category/Level Utilized:

Ordnance/Level 1

Logistic Responsible Command, Service, or Agency:

U.S. Army CASCOT Sustainment Center of Excellence (SCOE), Ordnance School

Source and Method of Obtaining:

For information concerning availability, supply and maintenance support, contact the local TSC.

Purpose of Trainer:

The Stryker Maintenance Training System (MTS) is a family of training devices that accurately simulate the configuration and operation of the Stryker Infantry Carrier Vehicle (ICV) and its Remote Weapons System (RWS).

Functional Description:

There are three classes of training devices used in the Stryker MTS: 1) Diagnostic Troubleshooting Trainers (DTTs), 2) Part Task Trainers (PTTs), and 3) Hands-On Trainers (HOTs). The DTTs provide a computer-based virtual-reality for students to navigate through Stryker ICV troubleshooting and maintenance tasks. The HOT trainers provide physical hardware training, using replicated, instrumented ICV system components. Each PTT replicates a specific subsystem, allowing students to remove and replace (LRUs). All MTS training devices allow instructors to monitor and score student training. The Stryker SSE and Stryker SSE Version A are separate software components that are physically represented by desktop and laptop computer, respectively. Both SSE's are solely intended for future developmental purposes and used only to maintain a baseline of the Stryker MTS software. The SSE and SSE Version A is not intended to be used by students, and therefore do not associated publication numbers.

Physical Information:

The physical information varies among the devices that make-up the Stryker MTS. Please refer to the technical documentation for each device.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

30KVA, 60Hz, 280 VAC with 125A over current protection Device (OCPD) 25KVA 208VAC three-phase isolated power supply with 80A OCPD

Applicable Publications:

DEVICE NAME	DEVICE NO.	TM NUMBER
HOT – ICV Hull	09-143/A	TM 17-6910-719-10 TM 17-6910-719-20 (Vol-1, 2, & 4)
TMS Version A	09-143/1/A	TM 09-6910-721-10 TM 09-6910-721-24&P
DTT Classroom Version A	09-143/2/A	TM 09-6910-720-10 TM 09-6910-720-20 TM 09-6910-720-1
PTT - Power Pack w/AC	09-143/3	TM 17-6910-722-10 TM 17-6910-719-20 (Vol-2, 3, & 4)
PTT - Power Pack wo/AC	09-143/4	TM 17-6910-722-10 TM 17-6910-719-20 (Vol-2, 3, & 4)
PTT - Brake	09-143/5	TM 17-6910-722-10 TM 17-6910-719-20 (Vol-2, 3, & 4)
HOT - RWS	17-256/8	TM 17-6910-726-10 TM 17-6910-726-20 (Vol-1 & 2) TM 17-6910-719-10 (Vol 4)

Devices Training Manuals**Reference Publications:**

DVC 09-143 was previously assigned as DVC 17-256, plus Variants. Devices 09-143/1/A and 09-143/2/A will replace 09-143/1 and 09-143/2 when they are fielded on 15 February 2016.

Training Requirements Supported:

MOSC 91S

DIAGNOSTIC AND TROUBLESHOOTING TRAINER (DTT) FOR HIGH MOBILITY ARTILLERY ROCKET SYSTEM (HIMARS) MULTIPLE LAUNCH ROCKET SYSTEM (MLRS)



DTT for HIMARS and MLRS

Training Category/Level Utilized:

Field Artillery/Level 1

Logistic Responsible Command, Service, or Agency:

U.S. Army Sustainment Center of Excellence (SCOE),
Ordnance School

Source and Method of Obtaining:

For information concerning availability, supply and maintenance support, contact the local TSC.

Purpose of Trainer:

The DTT simulates vehicle components and provides controlled malfunctions that simulate various equipment faults to familiarize mechanics in the direct support maintenance procedures required to maintain the HIMARS and MLRS.

Functional Description:

The HIMARS/MLRS DTT runs preprogrammed exercise lessons. The Instructor controls the assignment of tasks and monitors the operation of the simulators using the Instructor Operator Station. The students troubleshoot the faults using the trainer controls and indicators at the student station and troubleshooting procedures located in the Interactive Electronic Technical Manual.

Physical Information:

DVC 09-146 consists of one Instructor/Operator Station, six Student Stations, and one Video Distribution System.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

115 VAC, $\pm 5\%$, 60Hz ± 2 Hz, Single Phase

Applicable Publications:

OUM 06-6910-711-10 - DTT HIMARS and MLRS
SMM 06-6910-711-20 - DTT HIMARS and MLRS
TD 06-6910-711-20-01 (COTS) Manuals - DTT HIMARS and MLRS

Reference Publications:

None

Device 09-146 was previously assigned as DVC 06-112.

Training Requirements Supported:

MOSC 94P

HIGH MOBILITY ARTILLERY ROCKET SYSTEM (HIMARS), MOCKUP TRAINER

NSN 6920-01-590-2213

DVC 09-147/A

HIMARS, Hydraulic Power Cart (HPC)



HIMARS Launcher Vehicle



HIMARS Mockup and Power Cart

Training Category/Level Utilized:

Ordnance/Level 1

Logistic Responsible Command, Service, or Agency:

U.S. Army Fires Center of Excellence (FCOE)

Source and Method of Obtaining:

For information concerning availability, supply and maintenance support, contact the local TSC.

Purpose of Trainer:

The HIMARS Mockup and Power Cart provide training for direct support maintenance and operator level maintenance.

Functional Description:

These trainers consist of a full scale loader launcher mock-up and power cart used in a maintenance bay environment. Each component is connected to an instructor's station to monitor and collect student performance data.

Physical Information:

(Information not available)

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

(Information not available)

Applicable Publications:

OUM 06-6910-711-10

SMM 06-6910-711-20

TD 06-6910-711-20-01 (COTS) Manuals

Reference Publications:

None

DVC 09-147 was previously assigned as DVC 06-113.DVC 09-147/A was previously assigned as DVC 06-113/A.**Training Requirements Supported:**

MOSC 13M

M1A2 SYSTEM ENHANCEMENT PROGRAM (SEP) VERSION 2 (V2) HANDS ON TRAINER (HOT)

NSN 6920-01-597-1540

DVC 09-149/B

M1A1 Situational Awareness (SA) Hands on Trainer (HOT)



Abrams SEpv2 HOT (DVC 09-149A)



Abrams SA HOT (DVC 09-149B)

Training Category/Level Utilized:

Armor/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

For information concerning availability, supply and maintenance support, contact the local TSC.

Purpose of Trainer:

To train in troubleshooting techniques, removal, replacement and repair of the Abrams tank turret components.

Functional Description:

The HOTs provide a three dimensional environment, supporting adjustments, remove and replace, repair tasks, fault diagnosis and troubleshooting. The HOTs provide flexibility for fault insertion, with no damage to Line Replaceable Unit (LRU), while maximizing instructor visibility and safety control measures.

Physical Information:

22' long x 14' high x 16' wide; 1500 lbs

The fielding locations are: Ft. Benning, GA; Gowen Field, ID; Ft. Lee, VA.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Minimum access for installation is 35' L x 25' W x 14' H; 17,000 lb floor bearing load.

Power Requirements:

115vac, 40 A, 60 Hz, single-phase

Applicable Publications:

SEpv2 OUM 09-6920-3698-10
SEpv2 SMM 09-6920-3698-24
SEpv2 COTS 09-6920-3698-20
SA OUM 09-6920-3699-10
SA SMM 09-6920-3699-24
SA COTS 09-6920-3699-20

Reference Publications:

None

Training Requirements Supported:

MOSC 91A

M1A1 SA/M1A2 SYSTEM ENHANCEMENT PROGRAM, VARIANT 2 (SEPv2) ABRAMS DIAGNOSTIC TROUBLESHOOTING TRAINER (DTT)

NSN 6910-01-648-3986

DVC 09-149/C/1

Abrams Diagnostic and Troubleshooter (D/T) Trainer

**Desktop Classroom Setup****Training Category/Level Utilized:**

Ordnance/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

For information concerning availability, supply and maintenance support, contact the local TSC.

Purpose of Trainer:

The D/T classroom trainer supports instructional skill development in system operation, fault diagnostics and troubleshooting to maximize conceptual training processes for both the M1A1 SA tank and M1A2 SEP v2 tank.

Functional Description:

The virtual environment allows the student to navigate within a three dimensional representation of the turret, driver's compartment, and hull. Students participate in lessons that teach the skills necessary to perform maintenance procedures while being monitored by the classroom Instructor.

Physical Information:

The Abrams D/T Trainer classroom configuration consists of one (1) Instructor Operator Station (IOS), six (6) to 32 each Student Stations (SS) and one (1) Video System (VS) in a closed loop Local Area Network (LAN). The classroom SS quantity varies dependent on fielding location (Ft. Benning, GA; Gowen Field, ID; and Ft. Lee,

VA) and schoolhouse training requirements. Each SS is configured to operate in standalone mode.

The IOS consists of a computer, (UPS), two monitors, printer and a CAC reader.

The SS consists of one computer, two monitors and a UPS.

The VS consists of a 24 port Ethernet switch and a 15" touch screen/computer located at the IOS; which are networked to each SS and the classroom's ceiling mounted projector to display the instructor's display selection.

The High Bay classroom at Ft. Benning does not include the projector and screen. It is the only classroom configuration setup with designated standalone SSs.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

120vac, 60Hz, 15A, single-phase

Applicable Publications:

OUM/SMM 09-6920-3700-10/24
COTS 09-6920-3700-20

Reference Publications:

None

Training Requirements Supported:

MOSC 91A

MINE RESISTANT AMBUSH PROTECTED (MRAP) MAINTENANCE TRAINER SYSTEM (MTS)

NSN 6920-01-599-2999	09-150/1	MRAP, MTS, Independent Suspension System (ISS) Part Task Trainer (PTT)
NSN 6920-01-599-3020	09-150/2	MRAP, MTS, Automatic Fire Suppression System (AFSS), (PTT)
NSN 6920-01-653-4433	09-150/2/A	MRAP, MTS, (AFSS) with Scoring (PTT), (Upgrade)



(ISS) 09-150/1



(AFSS) 09-150/2



(AFSS) 09-150/2/A

Training Category/Level Utilized:
Ordnance/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The MRAP Maintenance Training System (MTS) supports institutional training to provide skills development for systems operation for the Army's 91B (MOS), and the 915A Warrant Officer Maintenance Technician. The intent is to provide training for maintenance personnel in system operation, symptom verification, troubleshooting, fault isolation, adjustment, and servicing of components of the Independent Suspension System (ISS) and Automatic Fire Suppression System (AFSS).

Functional Description:

The MRAP MTS is composed of the Independent Suspension System (ISS) Part Task Trainer (PTT) and the Automatic Fire Suppression System (AFSS) PTT. Both provide familiarization and insight for unit training and skill level development capability for skilled base training. This training includes systems operation, adjustments, and removal and replacement tasks required for one or more (LRUs), or troubleshooting parts to correct the symptoms as dictated by the tasks identified in their Critical Task List. These PTTs provide a three dimensional environment supporting

adjustments, fault diagnosis/ troubleshooting, remove/replace and repair tasks. This provides realistic components in which the soldiers will train.

Physical Information:

ISS overall dimensions (inches): 120x 94x66
AFSS overall dimensions (inches): 96x48x65

Equipment Required, Not Supplied:
N/A

Special Installation Requirements:
N/A

Power Requirements:

Special power requirements are not required. Both trainers power requirement at the plug is a 120 VAC, 20 Amp circuit.

Applicable Publications:

ISS OUM 09-6920-3703-10
ISS, SMM 09-6920-3703-24
AFSS, OUM 09-6920-3704-10
AFSS, SMM 09-6920-3704-24

Reference Publications:
N/A

Training Requirements Supported:
MOSC 91B; 915A

PALADIN MAINTENANCE TRAINER (PMT)



Paladin Maintenance Trainer (PMT)

Training Category/Level Utilized:

Ordnance/Level - 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The Paladin Maintenance Trainer (PMT) will be a sustainable, modular, computer-based training system consisting of a realistic 3D model of the Paladin M109A6 Howitzer placed inside a Virtual Maintenance Facility to support the initial transfer of maintenance tasks to entry level Ordnance Corps Soldiers and to reinforce base knowledge of Ordnance (NCO) and maintenance Warrant Officers (WO) responsible for maintenance actions for the M109A6 Self-Propelled Howitzer (SPH). The PMT provides training in theory and function, troubleshooting and preventative maintenance of automotive, armament and electrical/electronic systems.

Functional Description:

The PMT computer-base training system consist of a realistic motion captured 3D model of the Paladin M109A6 Howitzer placed inside a Virtual Maintenance Facility to support the initial transfer of maintenance tasks to entry level Ordnance Corps Soldiers and to reinforce base knowledge of Ordnance (NCO) and maintenance (WO) responsible for maintenance actions for the M109A6 (SPH). PMT provides training in theory and function, troubleshooting and preventive maintenance of automotive, armament and electrical/electronic system, and replaces the currently obsolete Institutional Maintenance Trainer (IMT) which does not include the significant material changes to the M109A6 Howitzer.

Physical Information:

The PMT is composed of one classroom. Each classroom consist of one instructor station and 14 student stations all interconnected via a high-speed router and a projector system.

Equipment Required, Not Supplied:

PMT requires normal classroom environment to include seating arrangements suitable for current established class size.

Special Installation Requirements:

Not applicable

Power Requirements:

110-volt 60 hertz

Commercial power

Applicable Publications:

None

Reference Publications:

(Information not available)

Training Requirements Supported:

MOSC supports M109A6 (SPH) maintenance (WO) and Ordnance (NCO).

M109A6/M109A7 PALADIN MAINTENANCE TRAINER (PMT)



Paladin Maintenance Trainer (PMT)

Training Category/Level Utilized:

Ordnance/Level – 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The M109A6/M109A7 Paladin Maintenance Trainer (PMT) will be a sustainable, modular, computer-based training system consisting of a realistic 3D model of the Paladin M109A6 & M109A7 Howitzer placed inside a Virtual Maintenance Facility to support the initial transfer of maintenance tasks to entry level Ordnance Corps Soldiers and to reinforce base knowledge of Ordnance Noncommissioned Officers (NCO) and maintenance Warrant Officers (WO) responsible for maintenance actions for the M109A6 & M109A7 Self-Propelled Howitzer (SPH). The PMT provides training in theory and function, troubleshooting and preventative maintenance of automotive, armament and electrical/electronic systems.

Functional Description:

The PMT computer-base training system consists of a realistic motion captured 3D model of the Paladin M109A6 & M109A7 Howitzer placed inside a Virtual Maintenance Facility to support the initial transfer of maintenance tasks to entry level Ordnance Corps Soldiers and to reinforce base knowledge of Ordnance Noncommissioned Officers (NCO) and maintenance Warrant Officers (WO) responsible for maintenance actions for the M109A6 & M109A7 Self-Propelled Howitzer (SPH). PMT provides training in theory and function, troubleshooting and preventive maintenance of automotive, armament and electrical/electronic system. The M109A6 Maintenance Trainer replaced the obsolete Institutional Maintenance Trainer (IMT) which does not include the significant material changes to the M109A6 or M109A7 Howitzer. The M109A7 software builds upon the M109A6 software.

Physical Information:

The PMT is composed of one classroom. Each classroom consist of one instructor station and 14 student stations all interconnected via a high-speed router and a projector system.

Equipment Required, Not Supplied:

PMT requires normal classroom environment to include seating arrangements suitable for current established class size.

Special Installation Requirements:

Not applicable

Power Requirements:

110-volt 60 hertz Commercial power

Applicable Publications:

ATS00002992 PMT Instructor Station User Manual
ATS00002993 PMT Student Station User Manual

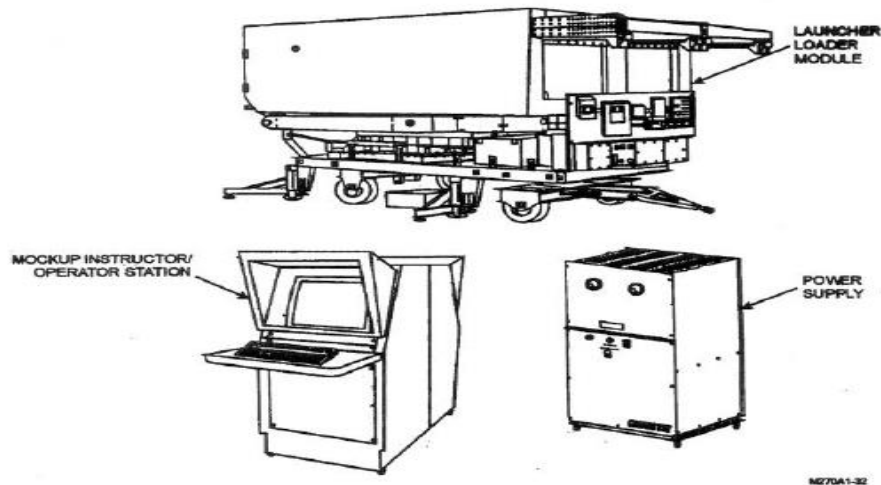
Reference Publications:

(Information not available)

Training Requirements Supported:

The PMT supports M109A6 & M109A7 Self-Propelled Howitzer (SPH) maintenance Warrant Officers (WO) and Ordnance Noncommissioned Officers (NCO).

M270A1 MULTIPLE LAUNCH ROCKET SYSTEM (MLRS) MOCKUP TRAINER



Training Category/Level Utilized:
Ordnance/Level 1

Logistic Responsible Command, Service, or Agency:
U.S. Army Sustainment Center of Excellence (SCOE),
Ordnance School

Source and Method of Obtaining:
For information concerning availability, supply and maintenance support, contact the local TSC.

Purpose of Trainer:
Used to simulate M270A1 Multiple Launch Rocket System (MLRS) components and operations, and provide computer controlled malfunctions that simulate various equipment faults to familiarize mechanics in the procedures required to maintain the M270A1 MLRS.

Functional Description:
The MRLS Mockup provides instruction under the control of the instructor or automatic training management functions. Lessons provide troubleshooting procedure from the M270A1 Interactive Electronic Technical Manual (IETM), using a Soldier's Portable On-System Repair Tool (SPORT), and will interact with the Launcher Loader Module (LLM).

The mockup consists of a LLM, which is composed of simulated Fire Control System (FCS) components and Launcher Drive System (LDS) components.

Physical Information:
LLM: 372" L x 480" W x 264" H 15,000 lbs.

Power Supply (PS): 24" L x 25" W x 45" H 780 lbs
Mockup Instructor/Operator Station (MIOS):
30" L x 30" W x 72" H 300 lbs

Equipment Required, Not Supplied:

<u>Nomenclature</u>	<u>Part No.</u>	<u>Qty</u>
Multimeter		1
Power Distribution Breakout Box	13108250	1
Hoist Control Breakout Box	13103690	1
Boom Control Breakout Box	13103700	1

Special Installation Requirements:

The training environment should be as a minimum 40 feet in length, 40 feet wide and 30 feet high. Instructions for installing the mockup are contained in the SMM 06-6920-706-20.

Power Requirements:

Operating voltage:
28vdc LMM
115vac, single-phase MIOS
480vac, 3-phase LMM, PS, HPU

Applicable Publications:

TM 06-6920-705-10 Instructor/OUM
SMM 06-6920-706-20
(COTS) Manuals

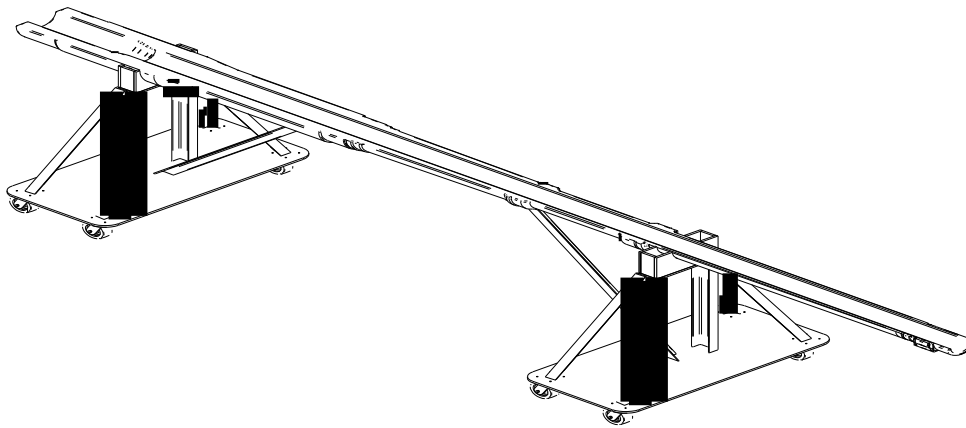
Reference Publications:

(Information not available)
DVC was previously assigned as DCV 06-73.

Training Requirements Supported:

MOSC 94P

ABRAMS GUN TUBE INSTRUCTIONAL VISUAL AID (IVA)

**Training Category/Level Utilized:**

Ordnance/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

For information concerning availability, supply and maintenance support, contact the local TSC.

Purpose of Trainer:

The Abrams Tank System Maintainers will use the IVA to complement lessons associated with the existing Abrams Classroom Trainer (DVC 09-149C) that involve evaluating the safe-service life of the M256 Cannon Tube.

Functional Description:

The Abrams Gun Tube IVA is a static visual display with no operational capability.

Physical Information:

The Gun Tube IVA is a M256 Gun Barrel cut in half horizontally and welded onto two base plates with lockable casters. Approximate weight of the assembly is 2000 lbs. The fielding locations are: Ft. Benning, GA and Gowen Field, ID

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

None

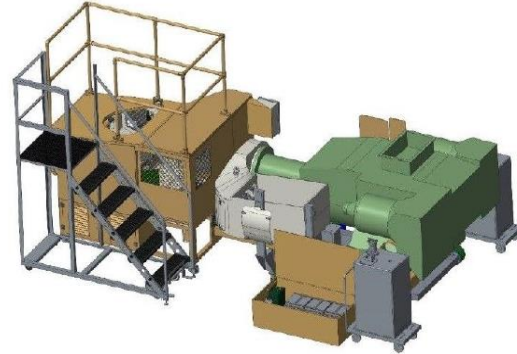
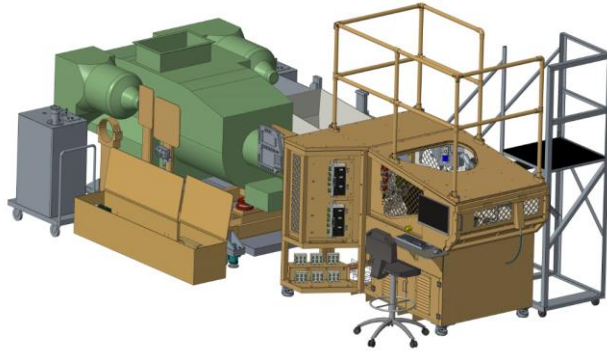
Reference Publications:

None

Training Requirements Supported:

MOSC 91A

ABRAMS M1A2 SEPV2 ENGINE DIAGNOSTIC/TROUBLESHOOTING TRAINER (ED/TT)

**Training Category/Level Utilized:**

Ordnance/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

Provides training in critical field level maintenance tasks required for the M1A2 System Enhancement Package Version 2 (SEPV2) Abrams Tank Engine. The training device is designed to develop and improve Soldiers' proficiency to maintain the Full-Up Power Pack (FUPP), engine transmission, and engine management system. This is accomplished by providing training tasks and lessons in engine operation, fault diagnosis, troubleshooting, adjustments, familiarization, removal/replacement, and repair tasks to simulate tank component faults.

Functional Description:

The training device is equipped with an instructor station, which allows the device to be powered up and permit the initiation of lessons. The instructor station allows the instructor to monitor, record, score, and store the performance of students on all tasks, as well as evaluate the student's knowledge of the appropriate vehicle system's functioning theory. A wireless tablet is available and can be used as a portable instructor station. The training devices are networked to a central server where student records are viewable and managed.

Physical Information:

The training device is comprised of the FUPP (engine and transmission), engine stand, driver's compartment, instructor station, and Central Server Station. The FUPP is a modified M1 series tank engine/transmission that sits on a custom-built engine stand outfitted with caster wheels with swivel locks. The driver's compartment is constructed to replicate the interior of the M1A2 SEP v2 tank. It contains tank LRUs to meet the spatial and training requirements prescribed in the Interactive Electronic Technical Manual (IETM). The driver's compartment hatch is accessible by stairs.

Structural Specifications:

Modified Abrams M1 series FUPP.
Dimensions: 214.3"L x 132"W x 65"H (on engine stand, vertical exhaust assembly not included). The overall weight of the training device assembly is approximately 14,000 pounds (includes Driver's compartment and Instructor Station).

Driver's compartment:

Dimensions: 102"L x 67"W x 107"H (on caster wheels, includes ladder and safety railings); attached to the FUPP.

Instructor Station:

Integrated with the Driver's compartment structure.

Central Server Station:

Standard table-top work area that includes keyboard/mouse, computer, printer, and UPS.
Dimensions: 72"L x 30"D x 30"H (on caster wheels)

Equipment Required, Not Supplied:

None

6910-722-24, and Commercial-Off-The-Shelf (COTS) manuals TM # 09-6910-722-20

Special Installation Requirements:

None

Power Requirements:

120 VAC, 60 Hz, Single-phase power source

Reference Publications:

IETM: Operator and Field Maintenance Manual, Including Field and Sustainment Maintenance Repair Parts and Special Tools List (RPSTL) for Tank, Combat, Full-Track: 120 MM Gun, M1A2 SEPv2 (2350-01-328-5964), 15 January 2018

Applicable Publications:

The following Technical Manuals (TM) support the operational, training, and maintenance requirements of the training device: Operator User's Manual (OUM) TM # 09-6910-722-10; System Maintenance Manual (SMM) TM # 09-

Training Requirements Supported:

The Abrams M1A2 ED/TT supports training for maintenance personnel in the 91A, 913A, and 915A Military Occupational Specialties (MOS)

BASIC ELECTRONICS MAINTENANCE TRAINER (BEMT) II

NSN 6910-01-681-3291

DVC 09-156 BEMT II Set (1 ea Instructor Station, 1 ea Server, and 12 ea Student Station)

NSN 6910-01-681-3304

[DVC 09-156/1](#) Basic Electronics Maintenance Trainer (BEMT), Instructor Station

NSN 6910-01-681-3301

[DVC 09-156/2](#) Basic Electronics Maintenance Trainer (BEMT), Student Station

NSN 7025-01-671-7677

[DVC 09-156/3](#) Basic Electronics Maintenance Trainer (BEMT), Server Station

Training Category/Level Utilized:
Signal/Level 1

Logistic Responsible Command, Service, or Agency:
PEO STRI

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
BEMT is designed to support the training of students in all aspects of basic electronics including theory and hands-on application. The system allows instructors to assign lesson modules to either a class of students or individual students and to track their progress.

Functional Description:
The BEMT is comprised of a SQL Server, Instructor/Operator Station, and Student Training Station. A standard RTS-M BEMT configuration consists of 12 STS and 1 IOS connected to the SQL Server via CAT5 or CAT6 cabling. Larger configurations are compatible and can support multiple IOS's and well over 500 STS's. Both IOS and STS are based on a standard Windows 10 computer and are identical with one exception being the OIS has dual monitors where the STS has a single monitor. Each IOS and STS will include a Model 130ST Console and complement of experiment cards. Depending on MOS and training standard each IOS and STS will be equipped with a combination of multimeter, oscilloscope, function generator, and/or logic probe.

The BEMT server runs on Windows Server 2016+, Standard+. The workstations run Windows 10.0. Most of the courseware is written in Nida SBE 1.0, while student administrative and progress data is stored in a SQL Server 2016+, Standard+ database. The interface for all the above software is written and compiled using Visual Studio 2019.

Physical Information:
Workbench or computer desk.

Equipment Required, Not Supplied:
(None)

Special Installation Requirements:
(None)

Power Requirements:
(Information not available)

Applicable Publications:
Commercial-off-the-Shelf (COTS) Manual.

Reference Publications:
COTS Manual
DVC 09-156 was previously assigned as DVC 09-134

Training Requirements Supported:
MOSC - Various

**BASIC SERIES 11
SIGNAL**



SECURE MOBILE ANTI-JAM RELIABLE TACTICAL-TERMINAL TRAINING SYSTEM (SMART-T TS)



(SMART-T-TS) Classroom Setup

Training Category/Level Utilized:

Signal/Level 1

Logistic Responsible Command, Service, or Agency:

TSS ENTERPRISE

Source and Method of Obtaining:

Not generally available for issue (limited production). Training System is installed in fixed facility at the Signal School, U.S. Army Cyber COE, Fort Gordon Ga. Access to the SMART-T Training System is by enrollment through the Army Training Requirements & Resources System (ATRRS) for both Army and Joint Service SMART-T Training.

Purpose of Trainer:

The SMART-T Training System provides 80 hours of student instructional material using Interactive Courseware and Interface Device Software Simulations. The SMART-T Training System is capable of instructing students in simulated usual and unusual conditions, plus faulted conditions for troubleshooting instruction.

Functional Description:

The SMART-T Training System is a Computer Based Training (CBT) system that provides individual self-paced training modules for operation of the AN/TSC-154 SMART-T Satellite Communications Terminal. The CBT combines tasks and objectives of the SMART-T lesson plan for the students to accomplish through interaction with SMART-T simulation, courseware and practical exercises. The complete SMART-T Training System consists of four CBT Labs. Each CBT Lab consists of multiple computer workstations, each capable of performing specific training

and instructional functions. Training system consist of two (2) Instructor/Operator Stations (IOSs), twenty four 24 Student Stations, one (1) Server and a separate Support Environment consisting of a Courseware Support Environment and a Software Support Environment. The Instructor Station provides the ability to administer and manage training by controlling Training System operations and monitoring student progress utilizing both the Instructor and Training System Services software. These applications enable instructors to organize, distribute and manage student lessons, progress and evaluations. Students interact with the Training System and instructors from a student station. 20 student stations are used per CBT Lab to provide students with a capability to learn SMART-T operations and maintenance through the use of sequential multimedia lessons. 4 student stations per CBT Lab remain in hot stand-by as backup systems. The combined training capability is 80 student positions and 16 backup systems with all four CBT Labs.

Physical Information

SMART-T Training System is installed Moran Hall, School of Information Technologies, at U.S. Army Cyber COE, Fort Gordon Ga

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

Commercial Power 110v, single-phase

Applicable Publications:

SMART-T Training System
Support Document Volume 1 Part 1
1 April 2000

SMART-T Training System
Support Document Volume 1 Part 2
1 March 2000

SMART-T Training System
Support Document Volume 2
1 March 2000

SMART-T Training System
Support Document Volume 3 Part 1

13 September 1999

SMART-T Training System
System maintenance Manual
22 October 1999

Reference Publications:

None

Training Requirements Supported:

MOSC- 260-F9 Air Force and Marine Smart-T
Operator/Maintenance Course.
260-25QF10 Army Smart-T
Operator/Maintenance Course.

MILSTAR SATELLITE SIMULATOR

**Training Category/Level Utilized:**

Signal/Level 1

Logistic Responsible Command, Service, or Agency:

TSS ENTERPRISE

Source and Method of Obtaining:

Not available for issue (limited production). The Satellite Simulator (SATSIM) is part of the SMART-T Training System installed in a fixed facility at the Signal School, U.S. Army Cyber COE, Fort Gordon Ga. Access to the Training System is by enrollment through the Army Training Requirements & Resources System (ATRRS) for both Army and Joint Service SMART-T training courses.

Purpose of Trainer:

The SATSIM augments the SMART-T Training system and provides an Over-The-Air training capability for students without being dependent on continuous daily access to the operational AEHF satellite constellation. Satellite constellations are limited Joint Service resources. Access is priority based and subject to pre-emption by operational users with higher mission priorities. The SATSIM mitigates the risk and impact pre-emption would impose on training.

Functional Description:

The SATSIM was originally designed to support development of the Extremely High Frequency (EHF) Milstar constellation and terminal programs including the Army's SMART-T. Once development and test of those programs matured, the SATSIM was moved to Fort Gordon and officially designated a training asset. In 2012 the SATSIM was upgraded to Advanced Extremely High Frequency (AEHF) to accommodate AEHF upgrades made to the SMART-T. The SATSIM provides real over-the-air AEHF links for SMART-T operators to train with. It provides enough AEHF Extended Data Rate (XDR) capability that Fort Gordon's twelve SMART-Ts can support training simultaneously.

The major subsystems of the SATSIM are the Computer Processing Subsystem; Digital Signal Processing Subsystem; Radio Frequency (RF) and Antenna Subsystem. A Sun Workstation is used to configure and operate the SATSIM. The Digital Processing Subsystem is comprised of a VME chassis that houses a single board computer and multiple Lincoln Lab digital signal processing boards. The RF & Antenna Subsystem consists of multiple equipment suites that can support both Legacy Milstar Low Data Rate (LDR) and Medium Data Rate (MDR) and AEHF XDR communications links. Each suite provide uplink/downlink hopping synchronization, transmitter/receiver and receiver/transmitter modulation and demodulation. The antenna portion is comprised of two 18-degree beam-width 22-dBi gain horns; one 44 GHz uplink receive horn; and one 20.7 GHz downlink transmit horn.

Physical Information:

The SATSIM is housed in a climate controlled shelter in the SMART-T Training area on Fort Gordon. The antenna feed horn assemblies are mounted atop Signals Towers, (Bldg. 29808 Chamberlain Ave, Fort Gordon, GA). This location provides a line of sight, or look angle to the SMART-T Training sites. The antenna assemblies are remoted back to the SATSIM Shelter via a ½ mile fiber optic run from the top of Signal Towers.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Lighting protection required for antenna feed horns, and power distribution panel.

Power Requirements:

Commercial Power 110v single-phase

Applicable Publications:

SATSIM Quick Start Guide-1 Lincoln Laboratory

Reference Publications:

SATSIM Technical Reference Volume 1-1 r15 Lincoln Laboratory

SATSIM Technical Reference Volume 2-1 r15 Lincoln Laboratory

SATSIM Technical Reference Volume 3-1 r15 Lincoln Laboratory

SATSIM Technical Reference Volume 4-1 r15 Lincoln Laboratory

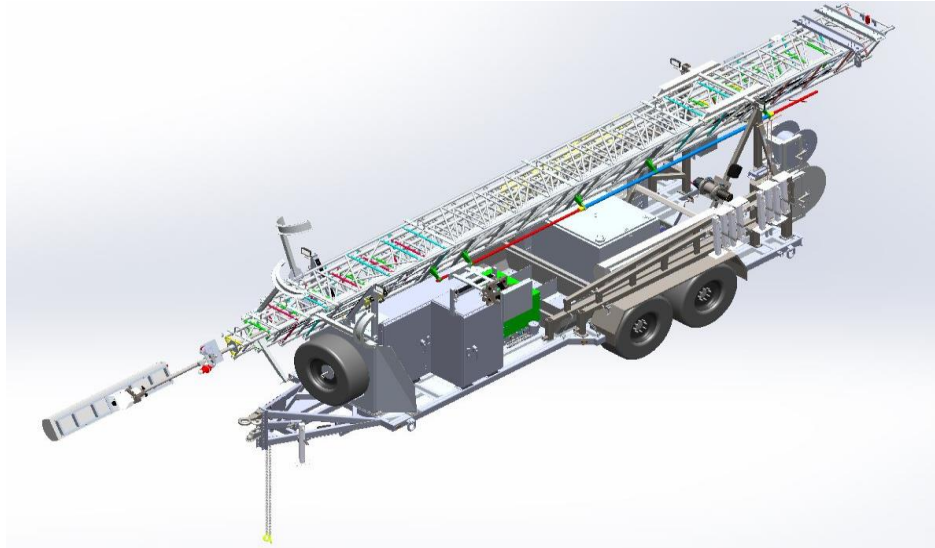
SATSIM Technical Reference Volume 5-1 r15 Lincoln Laboratory

Training Requirements Supported:

260-F9 Air Force and Marine Smart-T Operator/Maintainer Course.

260-25Q10 Army Smart-T Operator/Maintainer Course

MOBILE ACCESS NODE (MAN), NATIONAL TRAINING CENTER (NTC)

**Training Category/Level Utilized:**

Signal/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL, PM Soldier

Source and Method of Obtaining:

Available through PEO STRI

Purpose of Trainer:

The MAN System provides portable wireless access and connectivity to coverage gaps or dead zone pockets caused by terrain masking in the Range Communication System (RCS) network?

Functional Description:

The MAN tower extends to 100 feet without Mast (106 feet with Mast) and features 65 degrees horizontal beam width for wireless coverage in the LTE 700 frequency range

Physical Information:

32' $\frac{3}{4}$ " x 8' $\frac{1}{4}$ " x 9' overall dimensions.

Equipment Required, Not Supplied:

AC Shore Power if not operating on Generator or fuel for the generator

Special Installation Requirements:

NA

Power Requirements:

AC power from Shore power or self-contained generator power

Applicable Publications:

OUM 11-6940-716-10

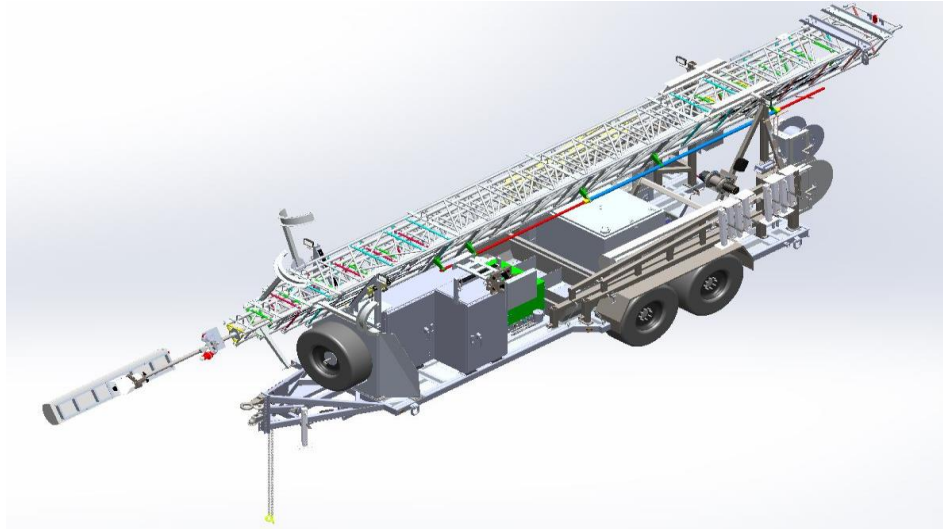
Reference Publications:

SMM 11-6940-716-24&P

Training Requirements Supported:

NA

MOBILE ACCESS NODE (MAN), JOINT READINESS TRAINING CENTER (JRTC)

**Training Category/Level Utilized:**

Signal/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL, PM Soldier

Source and Method of Obtaining:

Available through PEO STRI

Purpose of Trainer:

The MAN System provides portable wireless access and connectivity to coverage gaps or dead zone pockets caused by terrain masking in the Range Communication System (RCS) network?

Functional Description:

The MAN tower extends to 100 feet without Mast (106 feet with Mast) and features 65 degrees horizontal beam width for wireless coverage in the LTE 700 frequency range

Physical Information:32' $\frac{3}{4}$ " x 8' $\frac{1}{4}$ " x 9' overall dimensions.**Equipment Required, Not Supplied:**

AC Shore Power if not operating on Generator or fuel for the generator

Special Installation Requirements:

NA

Power Requirements:

AC power from Shore power or self-contained generator power

Applicable Publications:

OUM 11-6940-716-10

Reference Publications:

SMM 11-6940-716-24&P

Training Requirements Supported:NA

**BASIC SERIES 17
ARMOR**



ADVANCED GUNNERY TRAINING SYSTEM (AGTS) FOR THE M1A2 SYSTEM ENHANCED PACKAGE (SEP) (PERMANENT) (PAGTS)

NSN 6920-01-582-8632

DVC 17-176/A (AGTS) for M1A2 System Enhanced Program (SEP) (Permanent)

**AGTS Crew Station Subsystem****Commander's Station**

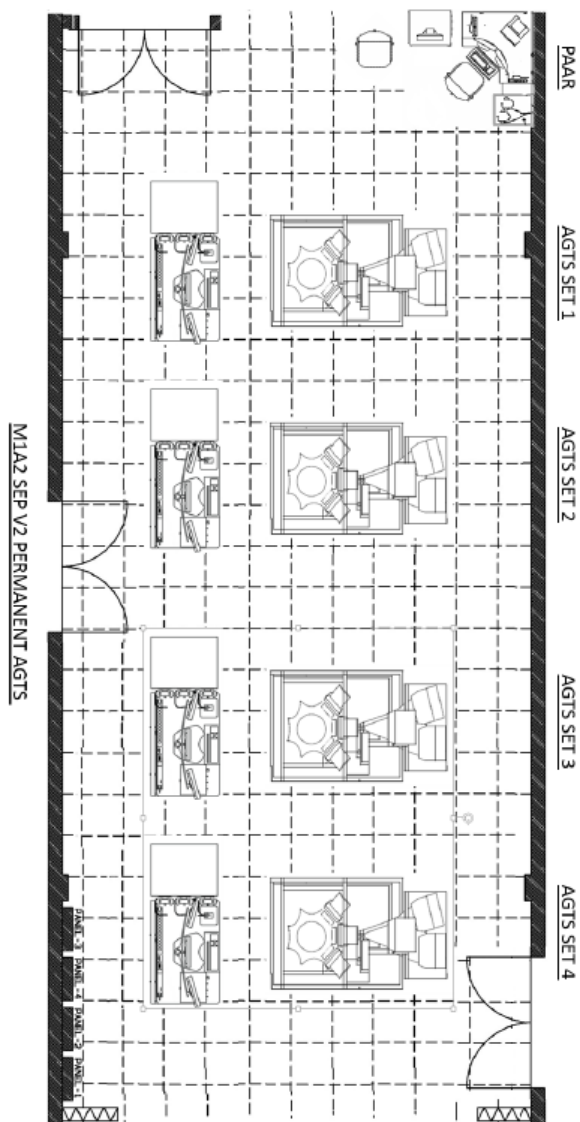
Training Category/Level Utilized:
Armor/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Not generally available for issue (limited production)

Purpose of Trainer:

The AGTS provides individual crew and platoon precision and degraded mode gunnery training for tank commanders and gunners of the M1A2SEP Abrams Tank. The AGTS can be setup in any one of three configurations: permanent, relocatable, or mobile. This section addresses the permanent configuration.

**AGTS Classroom Setup**

Functional Description:

The M1A2 AGTS provides crew gunnery to commanders and gunners of the M1A2 Abrams Tank. This is accomplished by means of four functional subsystems; Computational, Instructional, Visual and Crew station. The Crew Station subsystem provides the crew with simulated vehicle components of the actual crew stations, which provide proper stimulus of and response to crew actions



Instructor/Operator Station (IOS) with a Crew Station in the background

in a manner approximating the associated operational system. The visual subsystem simulates tactical scenes consisting of a variety of terrain and man-made cultural features and a number of potential target types so that the crew members can be trained in target detection, classification, and gunnery under combat conditions. The Instructional subsystem provides training exercises in which crew(s) interacts with each other and the trainer, in response to visual and aural cues while performing a variety of special-purpose task training and tactical firing exercises.

The Instructor/Operator Station (IOS) is an element of the instructional subsystem and provides for the selection and assignment of desired exercises from a list of multi-problem exercises correlated to crew capabilities in European or desert terrain databases. The evaluation of crew performance is provided in the form of IOS displays and computer printouts. A training management program provides data necessary to assess crew readiness, direct crew training, and judge crew gunnery proficiency.

The trainer is equipped with Force XXI Battle Command Brigade-and-Below (FBCB2) digital communication capability. FBCB2 is a battle command information

system designed for units performing missions at the tactical level. The AGTS provides FBCB2 functionality at both the crew station and at the IOS to enable digital communications during training exercises. FBCB2 displays the relevant Situational Awareness (SA) picture for the tank commander by plotting the location of his own vehicle, adjacent friendly units, graphical overlays, and enemy icons.

The AGTS has undergone a series of improvements to its capabilities. P3I initiatives include two (2) additional unity vision blocks for the tank commander increasing his field of view, a new European terrain database, and improvements to the PAAR. The AGTS continues to mimic the most current capabilities of the Abrams tank through recurring upgrades to the Abrams Common Software Library (ACSL) and FBCB2.

Physical Information:

The M1A2 Advanced Gunnery Training System (Permanent-PAGTS) is designed for installation in a training area approximately 92.2 by 22.8 meters to provide for a Field Service Representative (FSR) area, a Two Bay Training area, and a Prebrief/After Action Review (PAAR) area.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

The AGTS trainer, monitoring system and special support equipment operates on standard 230/115-volts, $\pm 10\%$, single-phase, 50/60 Hz power. The system will tolerate the stated input power, $\pm 1\%$. Power line conditioners have been installed to protect the equipment from power fluctuations, sags, surges, and transients. Trainer utility power receptacles have been provided as part of the equipment installation. The receptacles have been placed so that a 120-volt duplex receptacle is within 6 feet of any area where maintenance is to be performed.

Applicable Publications:

SMM 17-6920-706-L10A (Volumes 1-4)
TSUH 17-6920-920-10 (Volumes 1-2)

Reference Publications:

TC 3-20-31 (FM 3-20.21) Training and Qualification Crew, 17 March, 2015

Training Requirements Supported:

MOSC 19K, M1 Abrams Armor Crewman

ADVANCED GUNNERY TRAINING SYSTEM (AGTS) FOR THE M1A2 (PERMANENT) (PAGTS) PRE-BRIEF AFTER ACTION REVIEW (PAAR)



PRE-BRIEF AFTER ACTION REVIEW (PAAR) STATION

Training Category/Level Utilized:
Engineer/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Not available for general issue (limited production)

Purpose of PAAR Trainer:
The PAAR station is used when conducting section and platoon training. It is not a trainer, but rather a component of the Abrams M1A2SEP AGTS trainer, where two to four co-located crew stations are linked for training. It does not operate alone, but only in conjunction with Abrams M1A2SEP AGTS crew stations (Training Device 17-176A).

It provides the instructor the capability to conduct platoon/section training exercises where offensive and defensive tactical operations gunnery tasks and procedures are being trained. These exercises provide the capability to train command and control procedures and fire distribution planning while conducting tactical operations.

Functional Description:

The PAAR station provides both a plan view (2D) and stealth (3D) display and logs and re-plays the exercises

with digital voice communications using the logger and exercise manager software. The operator can also initiate a scan of the log file from previous fired exercises to permit the operator to select data for playback to analyze and brief the platoon/section during the (AAR).

Physical Information:

The PAAR consists of the operator's station with monitors and keyboards, after-action displays and PAAR computer. This equipment may be housed in a shelter or arranged in an institutional setting as pictured.

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:

The Abrams M1A2SEP AGTS PAAR operates on standard 380/415/480 VAC, 3 phase, 50/60 Hz Commercial Site power. The system will tolerate the stated input power, $\pm 1\%$. Power line conditioners have been installed to protect the equipment from transient power fluctuations, sags, and surges.



Shelterized PAAR

Applicable Publications:

SMM 17-6920-706-L10A (Volumes 1-4)
TSUH 17-6920-920-10 (Volumes 1-2)

Reference Publications:

TC 3-20.31 (FM 3-20.21) Training and Qualification
Crew, 17 March, 2015

Training Requirements Supported:

MOSC 19K, M1 Abrams Armor Crewman

ADVANCED GUNNERY TRAINING SYSTEM (AGTS) FOR THE M1A2 SYSTEM ENHANCED PACKAGE (SEP) (RELOCATABLE) (RAGTS)

NSN 6920-01-582-8706

DVC 17-177/A (AGTS) for M1A2 System Enhanced Package (SEP) (Relocatable)

**AGTS Crew Station Subsystem****Commander's Station****Training Category/Level Utilized:**

Armor/Level 3

Logistic Responsible Command, Service, or Agency:

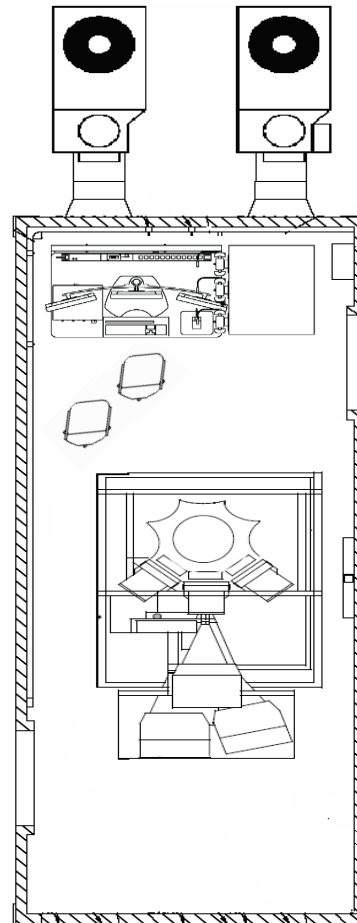
PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The AGTS provides individual crew and platoon precision and degraded mode gunnery training for tank commanders and gunners of the M1A2 SEP Abrams Tank. The AGTS can be setup in any one of three configurations: permanent, relocatable, or mobile. This section addresses the relocatable configuration. The AGTS is also capable of provide training skills for platoon operations. The relocatable system is designed to be set up in an outdoor environment. Additional equipment to support this type of setup includes a trainer shelter assembly and a Heating Ventilation Air Conditioning (HVAC) unit. Power must be readily available as well as a solid foundation on which the trainer shelter can be placed.

**Shelter Setup****Functional Description:**

The M1A2SEP AGTS provides crew gunnery to commanders and gunners of the M1A2SEP Abrams Tank. This is accomplished by means of four functional subsystems; Computational, Instructional, Visual and Crew station. The Crew Station subsystem provides the crew with simulated vehicle components of the actual crew stations, which provide proper stimulus of and response to crew actions in a manner approximating the associated operational system. The visual subsystem simulates tactical scenes consisting of a variety of terrain and man-made cultural features and a number of potential target types so that the crew members can be trained in target detection, classification, and gunnery under combat conditions. The Instructional subsystem provides training exercises in which crew(s) interacts with each other and the trainer, in response to



(AGTS) (RAGTS) Shelter (Relocatable)

visual and aural cues while performing a variety of special-purpose task training and tactical firing exercises. The (IOS) is an element of the instructional subsystem and provides for the selection and assignment of desired exercises from a list of multi-problem exercises correlated to crew capabilities in European or desert terrain databases. The evaluation of crew performance is provided in the form of IOS displays and computer printouts. A training management program provides data necessary to assess crew readiness, direct crew training, and judge crew gunnery proficiency.

The trainer is equipped with Force XXI Battle Command Brigade-and-Below (FBCB2) digital communication capability. FBCB2 is a battle command information system designed for units performing missions at the tactical level. The AGTS provides FBCB2 functionality at both the crew station and at the IOS to enable digital communications during training exercises. FBCB2 displays the relevant Situational Awareness (SA) picture for the tank commander by plotting the location of his own vehicle, adjacent friendly units, graphical overlays, and enemy icons.

The AGTS has undergone a series of improvements to its capabilities. P3I initiatives include two (2) additional unity vision blocks for the tank commander increasing his field of view, a new European terrain database, and improvements to the PAAR (Device 17-177P). The AGTS continues to mimic the most current capabilities of the Abrams tank through recurring upgrades to the Abrams Common Software Library (ACSL) and FBCB2.

Physical Information:

The shelter for the AGTS for M1A2 (Relocatable-RAGTS) is approximately 20 feet in length, 8 feet wide, and 8 ½ feet high.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

The AGTS trainer, monitoring system and special support equipment operates on standard 230/115 volts, $\pm 10\%$, single-phase, 50/60 Hz power. The system will tolerate the stated input power, $\pm 1\%$. Power line conditioners have been installed to protect the equipment from power fluctuations, sags, surges, and transients.

Trainer utility power receptacles have been provided as part of the equipment installation. The receptacles have been placed so that a 120-volt duplex receptacle is within 6 feet of any area where maintenance is to be performed.

Applicable Publications:

SMM 17-6920-706-L10A (Volumes 1-4)
TSHU 17-6920-920-10 (Volumes 1-2)

Reference Publications:

TC 3-20-31 (FM 3-20.21) Training and Qualification Crew, 17 March, 2015

Training Requirements Supported:

MOSC 19K, M1 Abrams Armor Crewman

ADVANCED GUNNERY TRAINING SYSTEM (AGTS) FOR THE M1A2 (RELOCATABLE) (RAGTS) PRE-BRIEF AFTER ACTION REVIEW (PAAR)

**Training Category/Level Utilized:**

Engineer/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not available for general issue (limited production)

Purpose of PAAR Trainer:

The PAAR station is used when conducting section and platoon training. It is not a trainer, but rather a component of the Abrams M1A2SEP AGTS trainer, where two to four co-located crew stations are linked for training. It does not operate alone, but only in conjunction with Abrams M1A2SEP AGTS crew stations (Training Device 17-177A).

It provides the instructor the capability to conduct platoon/section training exercises where offensive and defensive tactical operations gunnery tasks and procedures are being trained. These exercises provide the capability to train command and control procedures and fire distribution planning while conducting tactical operations.

Functional Description:

The PAAR station provides both a plan view (2D) and stealth (3D) display and logs and re-plays the exercises with digital voice communications using the logger and

exercise manager software. The operator can also initiate a scan of the log file from previous fired exercises to permit the operator to select data for playback to analyze and brief the platoon/section during the (AAR).

Physical Information:

The PAAR consists of the operator's station with monitors and keyboards, after-action displays and PAAR computer. This equipment may be housed in a shelter or arranged in an institutional setting as pictured.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

The Abrams M1A2SEP AGTS PAAR operates on standard 380/415/480 VAC, 3 phase, 50/60 Hz Commercial Site power. The system will tolerate the stated input power, $\pm 1\%$. Power line conditioners have been installed to protect the equipment from transient power fluctuations, sags, and surges.



Shelterized PAAR

Applicable Publications:

SMM 17-6920-706-L10A (Volumes 1-4)
TSHU 17-6920-920-10 (Volumes 1-2)

Reference Publications:

TC 3-20.31 (FM 3-20.21) Training and Qualification
Crew, 17 March, 2015

Training Requirements Supported:

MOSC 19K, M1 Abrams Armor Crewman

ADVANCED GUNNERY TRAINING SYSTEM (AGTS) FOR THE M1A2 SYSTEM ENHANCED PACKAGE (SEP) (MOBILE) (MAGTS)

NSN 6920-01-582-8694

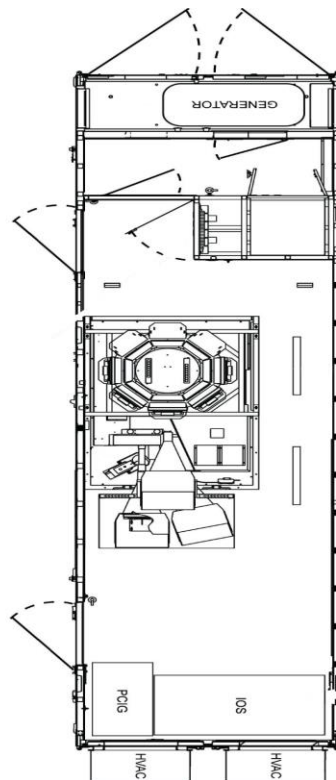
DVC 17-178/A (AGTS) for M1A2 System Enhanced Package (SEP) (Mobile)



AGTS Crew Station Subsystem



Commander's Station



Shelter Setup

Training Category/Level Utilized:

Armor/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

The AGTS provides individual crew and platoon precision and degraded mode gunnery training for tank commanders and gunners of the M1A2SEP Abrams Tank. The AGTS can be setup in any one of three configurations: permanent, relocatable, or mobile. This section addresses the mobile configuration.

Functional Description:

The M1A2 AGTS provides crew gunnery to commanders and gunners of the M1A2SEP Abrams Tank. This is accomplished by means of four functional subsystems; Computational, Instructional, Visual and Crew station.

The Crew Station subsystem provides the crew with simulated vehicle components of the actual crew stations, which provide proper stimulus of and response to crew actions in a manner approximating the associated operational system. The visual subsystem simulates tactical scenes consisting of a variety of terrain and man-made cultural features and a number of potential target types so that the crew members can be trained in target detection, classification, and gunnery under combat conditions. The Instructional subsystem provides training exercises in which crew(s) interacts with each other and the trainer, in response to visual and aural cues while performing a variety of special-purpose task training and tactical firing exercises. The (IOS) is an element of the instructional subsystem and provides for the selection and assignment of desired exercises from a list of multi-problem exercises correlated to crew capabilities in European or desert terrain databases. The evaluation of crew performance is provided in the form of IOS displays and computer printouts. A training management program provides data necessary to assess crew readiness, direct crew training, and judge crew gunnery proficiency.

**M1A2SEP (Mobile-MAGTS) Shelter**

The trainer is equipped with Force XXI Battle Command Brigade-and-Below (FBCB2) digital communication capability. FBCB2 is a battle command information system designed for units performing missions at the tactical level. The AGTS provides FBCB2 functionality at both the crew station and at the IOS to enable digital communications during training exercises. FBCB2 displays the relevant Situational Awareness (SA) picture for the tank commander by plotting the location of his own vehicle, adjacent friendly units, graphical overlays, and enemy icons.

The AGTS has undergone a series of improvements to its capabilities. P3I initiatives include two (2) additional unity vision blocks for the tank commander increasing his field of view, a new European terrain database, and improvements to the PAAR (Device 17-178P). The AGTS continues to mimic the most current capabilities of the Abrams tank through recurring upgrades to the Abrams Common Software Library (ACSL) and FBCB2.

Physical Information:

The shelter for the AGTS for M1A2SEP (Mobile-MAGTS) is approximately 20 feet in length, 8 feet wide, and 8 ½ feet high. The recommended clearance area for a trailer mounted shelter is 68 x 28 feet.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

The AGTS trainer, monitoring system and special support equipment operates on standard 230/115-volts, $\pm 10\%$, single-phase, 50/60 Hz power. The system will tolerate the stated input power, $\pm 1\%$. Power line conditioners have been installed to protect the equipment from power fluctuations, sags, surges, and transients. Trainer utility power receptacles have been provided as part of the equipment installation. The receptacles have been placed so that a 120-volt duplex receptacle is within 6 feet of any area where maintenance is to be performed.

Applicable Publications:

SMM 17-6920-706-L10A (Volumes 1-4)
TSUH 17-6920-920-10 (Volumes 1-2)

Reference Publications:

TC 3-20.31 (FM 3-20.21) Training and Qualification Crew, 17 March, 2015

Training Requirements Supported:

MOSC 19K, M1 Abrams Armor Crewman

ADVANCED GUNNERY TRAINING SYSTEM (AGTS) FOR THE M1A2 (MOBILE) (MAGTS) PRE-BRIEF AFTER ACTION REVIEW (PAAR)

**Training Category/Level Utilized:**

Engineer/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not available for general issue (limited production).

Purpose of PAAR:

The PAAR station is used when conducting section and platoon training. It is not a trainer, but rather a component of the Abrams M1A2SEP AGTS trainer, where two to four co-located crew stations are linked for training. It does not operate alone, but only in conjunction with Abrams M1A2SEP AGTS crew stations (Training Device 17-178A).

It provides the instructor the capability to conduct platoon/section training exercises where offensive and defensive tactical operations gunnery tasks and procedures are being trained. These exercises provide the capability to train command and control procedures and fire distribution planning while conducting tactical operations.

Functional Description:

The PAAR station provides both a plan view (2D) and stealth (3D) display and logs and re-plays the exercises

with digital voice communications using the logger and exercise manager software. The operator can also initiate a scan of the log file from previous fired exercises to permit the operator to select data for playback to analyze and brief the platoon/section during the (AAR).

Physical Information:

The PAAR consists of the operator's station with monitors and keyboards, after-action displays and PAAR computer. This equipment may be housed in a shelter or arranged in an institutional setting as pictured.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

The Abrams M1A2SEP AGTS PAAR operates on standard 380/415/480 VAC, 3 phase, 50/60 Hz Commercial Site power. The system will tolerate the stated input power, $\pm 1\%$. Power line conditioners have been installed to protect the equipment from transient power fluctuations, sags, and surges.



Shelterized PAAR

Applicable Publications:

SMM 17-6920-706-L10A (Volumes 1-4)
TSHU 17-6920-920-10 (Volumes 1-2)

Reference Publications:

TC 3-20.31 (FM 3-20.21) Training and Qualification
Crew, 17 March, 2015

Training Requirements Supported:

MOSC 19K, M1 Abrams Armor Crewman

M1A1 CONDUCT OF FIRE TRAINER – ADVANCED GUNNERY TRAINING SYSTEM (M1A1 COFT-AGTS)

NSN 6920-01-583-0256

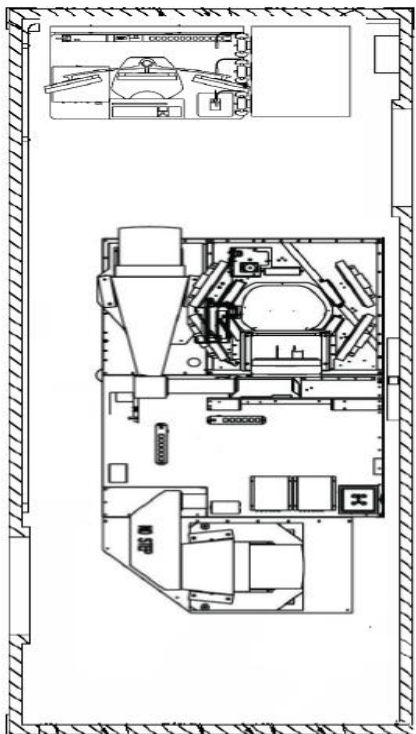
NSN 6920-01-582-8658

DVC 17-224/A

DVC 17-224/B

(C-AGTS) for M1A1 (COFT-AGTS) SA/TUSK

(C-AGTS) for M1A1 (COFT-AGTS) SA/TUSK/SCWS

**M1A1 C-AGTS Crew Station Shelter****M1A1 C-AGTS Crew Station****Training Category/Level Utilized:**

Armor/Level 1

Logistic Responsible Command, Service, or Agency:

TSS ENTERPRISE

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

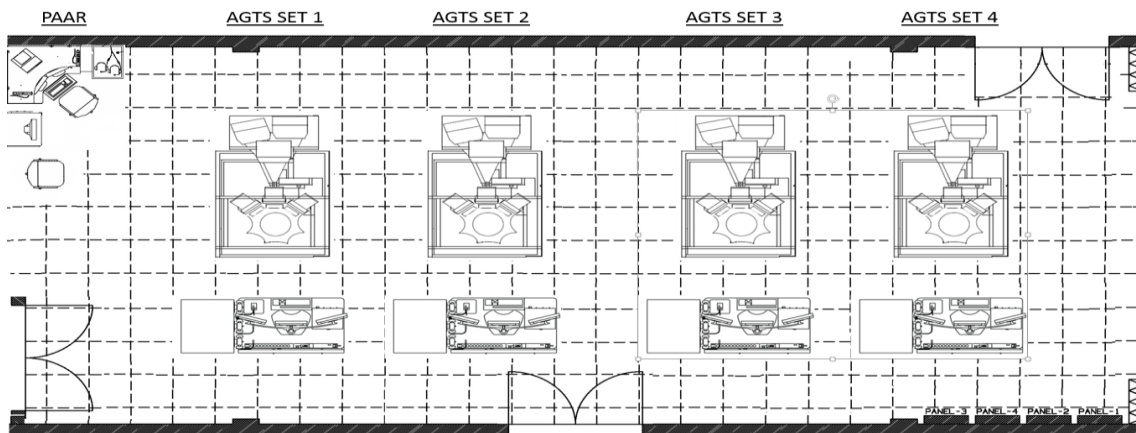
The Abrams M1A1 C-AGTS provides individual crew and platoon precision and degraded mode gunnery training, organizational procedures, target acquisition, reticle aim, target engagement and system management for tank commanders and gunners of the M1A1 Abrams Tank. The CAGTS can be setup in any one of three configurations: permanent, relocatable, or mobile. The M1A1 C-AGTS is used at the battalion level, primarily to sustain gunnery proficiency of unit gunners and tank commanders (TC) between annual qualification periods.

Functional Description:

Each M1A1 C-AGTS consists of a crew compartment replicating the gunner station and TC station and an instructor/operator station. Training exercises are presented to the gunner and commander through the tank's optical system utilizing a computer system with visual and aural/audio sub-systems.

M1A1 C-AGTS has the ability to train operational procedures, target acquisition, and identification / engagement using either primary or alternate fire control and sighting equipment. The training scenarios provide a simulated battlefield environment challenging the crew with stabilized and unstabilized, stationary and moving, single and multiple target arrays, in day / night and reduced visibility conditions.

The instructor/operator station controls the training scenario and allows the instructor to monitor the gunner and commander's operation of fire control equipment and target engagement procedures, while the computer's training management matrix system scores the crew's performance. Training proficiency and advancement records are maintained and records can be transferred with the students between locations as required.

**M1A1 C-AGTS Platoon Configuration****M1A1 C-AGTS Mobile Configuration**

The M1A1 C-AGTS AIM (DVC 17-224) has undergone a series of improvements to its capabilities. P3I initiatives include improvements to the PAAR (DVC 17-124P), the addition of FBCB2 and IIGEN FLIR under SA/TUSK, (DVC 17-224/A), and the addition of the Stabilized Commanders Weapon Station (SCWS) (DVC 17-224/B). The M1A1 C-AGTS continues to mimic the most current capabilities of the M1A1 Abrams tank via recurring upgrades from the Abrams Common Software Library (ACSL).

Physical Information:

20' L x 8' W x 8" H; approx. 13,000 lb.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

(Information not available)

Power Requirements:

120/208vac, 60 Hz, 3-phase, 4-wires
Maximum peak power is 125kva including 20% design reserve.

Applicable Publications:

SMM 17-6920-706-L10A (Volumes 1-4)
TSUH 17-6920-920-10 (Volumes 1-2)

Reference Publications:

TC 3-20.31 (FM 3-20.21) Training and Qualification Crew, 17 March, 2015

Training Requirements Supported:

MOSC 19K, 12-Series

M1A1 CONDUCT OF FIRE TRAINER – ADVANCED GUNNERY TRAINING SYSTEM (M1A1 COFT-AGTS) PRE-BRIEF AFTER ACTION REVIEW (PAAR)



PRE-BRIEF AFTER ACTION REVIEW (PAAR) STATION

Training Category/Level Utilized:
Engineer/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Not available for general issue (limited production).

Purpose of PAAR:

The PAAR station is used when conducting section and platoon training. It does not operate alone, but only in conjunction with M1A1 Abrams C-AGTS crew stations (Training Devices 17-224, 17-224A, 17-224B) where two to four co-located crew stations are linked for training.

It provides the instructor the capability to conduct platoon/section training exercises where offensive and defensive tactical operations gunnery tasks and procedures are being trained. These exercises provide the capability to train command and control procedures and fire distribution planning while conducting tactical operations.

Functional Description:

The PAAR station provides both a plan view (2D) and stealth (3D) display and logs and re-plays the exercises

with digital voice communications using the logger and exercise manager software. The operator can also initiate a scan of the log file from previous fired exercises to permit the operator to select data for playback to analyze and brief the platoon/section during the (AAR).

Physical Information:

The PAAR consists of the operator's station with monitors and keyboards, after-action displays and PAAR computer. This equipment may be housed in a shelter or arranged in an institutional setting as pictured.

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:

The M1A1 Abrams C-AGTS PAAR operates on standard 380/415/480 VAC, 3 phase, 50/60 Hz Commercial Site power. The system will tolerate the stated input power, $\pm 1\%$. Power line conditioners have been installed to protect the equipment from transient power fluctuations, sags, and surges.



Shelterized PAAR

Applicable Publications:

SMM 17-6920-706-L10A (Volumes 1-4)
TSUH 17-6920-920-10 (Volumes 1-2)

Reference Publications:

TC 3-20.31 (FM 3-20.21) Training and Qualification
Crew, 17 March, 2015

Training Requirements Supported:

MOSC 19K, 12-Series

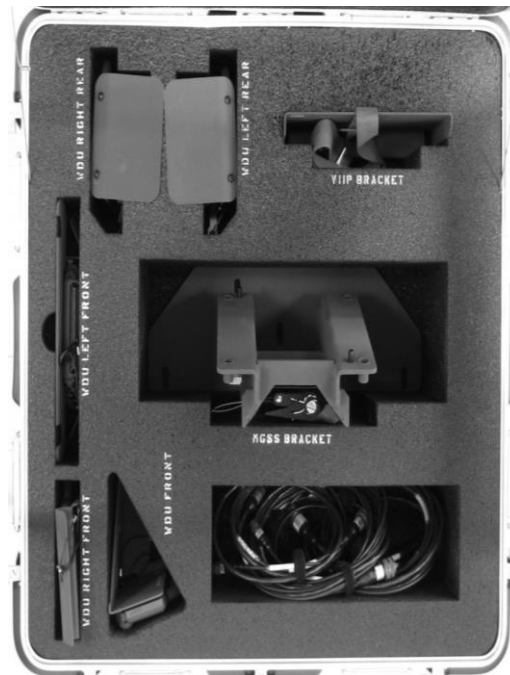
STRYKER MOBILE GUN SYSTEM - TACTICAL ENGAGEMENT SIMULATION SYSTEM (MGS-TESS)

NSN Not Assigned
NSN 6920-01-622-6536

DVC 17-243/4/1 STRYKER (MGS) (TESS) AIMTEST-SA
DVC 17-243/4/2 STRYKER (MGS) (TESS) (TSV) (AAR) Playback System



Transit Case



Transit Case

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for use (limited production)

Purpose of Trainer:

MGS-TESS is designed to operate on the Stryker MGS during Force-on-Force (FOF) and gunnery training exercises.

Functional Description:

MGS-TESS provides laser based Precision Gunnery (PG) capabilities and FOF training for the U.S. Army Stryker MGS. The Inbore Device Stryker (IDS) is available as a cost saving alternative to main gun live fire. While utilizing the Vehicle Instrumentation Interface Package (VIIP) the system interfaces with instrumentation systems at Maneuver Combat Training Centers (MCTCs). MGS-TESS is a 28 Volts Direct Current (VDC) system powered by the vehicle and interconnecting cables. User replacement of batteries is necessary only for the Wireless

Detector Units (WDU) and Commander's .50 Caliber (Cal) Small Arms Transmitter (SAT). MGS-TESS simulates both the firing capabilities and the vulnerability of the vehicle. The main weapon and secondary weapon are simulated with the Transceiver Unit (TU) and the Commander's .50 Cal is simulated with the SAT. The simulator interfaces both to the vehicle and crew; to the vehicle with brackets and connectors and to the crew with audio and visual signals.

Physical Information:

The MGS-TESS system will be contained in two transit cases. Contains components, mounting hardware, cables, manuals. Case 2 is only needed for Force on Force training. The GFE equipment is delivered in separate transit cases. MGSS, DIFCUE, Inbore Device, VIIP, AAR/Setup Computer, Controller Gun.

Operation Temperature	-20°C to 55°C
Humidity	Rainproof
Current Draw Rate	2.5 Amp
WDU batteries (2 each)	1.5 V (AA)
SAT battery	3.0 V Lithium (CR2)

Equipment Required, Not Supplied:

AA1.5V Batteries, Vehicle BII

Special Installation Requirements:

Training Device Interface Panel (TDIP) Cover must
Installed by depot personnel and must be present for
MGS-TESS system installation

Power Requirements:

28 VDC (10 Amp)

Applicable Publications:

TM 9-6920-921-10

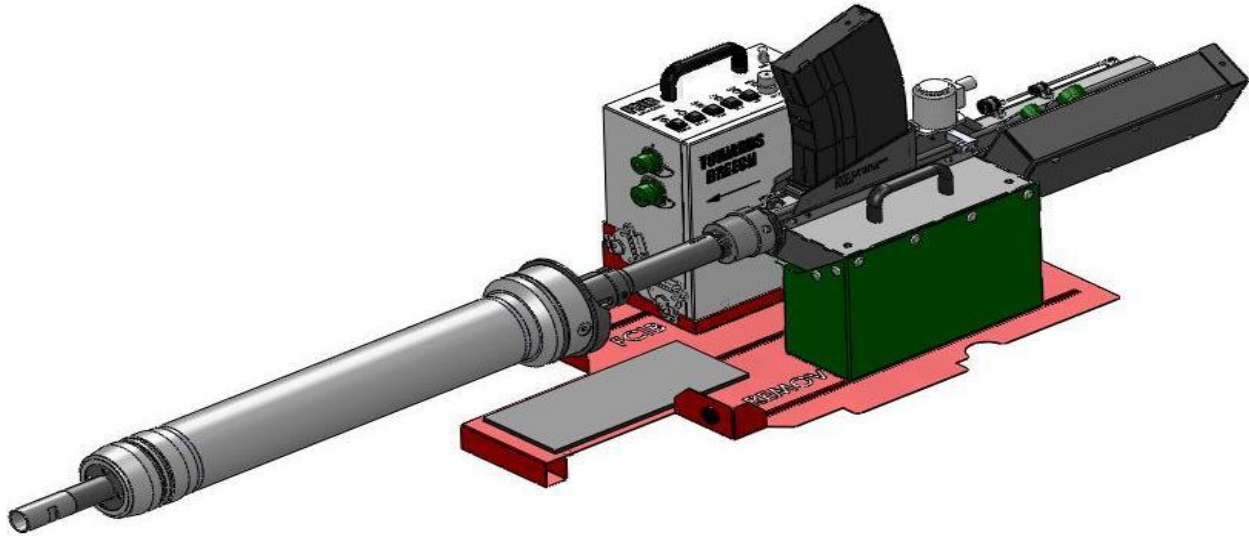
Reference Publications:

TM 9-2355-321-10, ST 3-20.13-2, DA Form 2408-
4, DA Form, TM 9-1265-376-10

Training Requirements Supported:

MOSC 19K

SUB-CALIBER INBORE 105MM SEMI-AUTOMATIC, STRYKER (IDS)

**Training Category/Level Utilized:**

Armor/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally Available for issue (limited production)

Purpose of Trainer:

Used in conjunction with MGS TESS to provide full and half scale, sub caliber live fire gunnery and urban (MOUT), warfare training.

Functional Description:

The IDS is designed for use with the Stryker MGS 105mm, M68A1E8 cannon. The IDS is intended for live fire gunnery or urban gunnery training with full or half scale targets. Maximum target engagements of 2000 meters are achieved using Cal. 50, M17 Tracer. Urban training using M860 SRTA-T has a maximum effective range of 170 meters. Ballistic solution data for both M962 and M17 is incorporated into the ballistic computer of the STRYKER MGS vehicle.

Physical Information:**Device Statistics**

Caliber	50 (12.7X99)
System of Operation	Electronically controlled
Type of Action	Electronically controlled, mechanically actuated

Rate of Fire	6 rounds per minute. Electronically controlled. (Factory Adjustable)
Length	70 Inches
Width	7 5/8 Inches
Height	14 Inches (with 18 round magazine installed)
Weight (Barrel Assembly)	50 Lbs
Weight (Receiver Assembly)	28 Lbs
Weight (Total Shipping in Box)	215 Lbs
Barrel Length	45 In
Muzzle Velocity	1210 m/s (M962 SLAP-T)
	886 m/s (M17 Tracer)
	850 m/s (M860 SRTA-T)
Maximum Effective Range	2000 Meters (M962 SLAP-T)
	1500 Meters (M17 Tracer)
	170 Meters (M860 SRTA-T)
Used in Conjunction with	US M68A1E8, 105mm Gun
Safety	Mechanical Safe, Electrical Safe and Main Gun Safety System

Device Physical Information

ENVIRONMENTAL CONDITIONS.

VARIABLE	VALUE
Humidity	Rainproof
Operation Temperature Range	0° C to 70° C
Storage Temperature Range	-40° C to +70° C

Device Weather Operational**Equipment Required, Not Supplied:**

None

Power Requirements:

24V DC

Special Installation Requirements:

The IDS is used in conjunction with the MGS TESS system in Sub-Cal mode and cannot be used as a standalone training device

Applicable Publications:

TM 9-6920-921-10

Reference Publications:

TM 9-2355-321-10, ST 3-20.13-2 DA 2408-4 DA Form

Training Requirements Supported:MOSC 19K

BARREL STAND TEST UNIT (BSTU), FOR THE MOBILE GUN SYSTEM – TACTICAL ENGAGEMENT SIMULATION SYSTEM (MGS-TESS) SUB CALIBER IN-BORE 105MM SA STRYKER

**Training Category/Level Utilized:**

Armor/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC that support MGS-TESS
Sub Caliber In-bore 105mm SA Stryker

Purpose of Trainer:

Purpose of Equipment: The BSTU serves as a test stand and power source for Training Device 17-243-04/03, Sub Caliber in-Bore 105MM SA, Stryker. Maintenance personnel can use the BSTU in a shop environment to trouble shoot suspected faults with the Sub Caliber In-bore Device for the Stryker MGS.

Functional Description:

As with any piece of equipment, there may be malfunctions reported by the user. For TSC or maintenance personnel to properly troubleshoot any reported malfunctions they must be able assemble and power the device up to perform function checks. The BSTU provides a stable mounting platform for assembly of the IDS and an electrical connection so maintenance personnel can perform all functions of the IDS without having to install the device in a MGS Stryker vehicle.

Physical Information:

1. BSTU Case/w Power Supply and Harnesses
2. Tool Kit
 - Hex Keys, 5/16 and 7/32,
 - 6 inch Adjustable Wrench

3. 4 EA. Flange Nut, 1/2-13 X 7/8 Wd X 11/16 Ht
(4 spare are also included)
4. 4 EA. Socket Head Cap Screw 3/8-16 X 1" Lg.
(4 spare are also included)
5. 2 EA. C-Clamp, 4" X 3" Throat
6. Barrel Stand (Shown Assembled)
7. Foam Block, Tool Pocket Support
8. Foam Block, Rod Support
9. TM 105-BSTU-10 Operators Manual

Equipment Required, Not Supplied:

None

Special Installation Requirements:

The BSTU kit comes with everything necessary to assemble the stand, to include Hex keys and an adjustable wrench.

Power Requirements:

The power supply in the BSTU supports 100-240 volts incoming power and supplies 24volts to power up and operate the IDS. The power module automatically senses incoming voltage and there are no external switches that must be manipulated to compensate for the power supply in your region

Applicable Publications:

TM 105-BSTU-10

Reference Publications:

None

Training Requirements Supported:MOSC 19K

COMMON DRIVER TRAINING, COMMON EQUIPMENT (CDT/CE)

NSN 6910-01-599-5528
NSN 6910-01-616-3811
NSN 6910-01-592-6900
NSN 6910-01-592-6778
NSN 6910-01-616-3810

DVC 17-260/1
DVC 17-260/1/1
DVC 17-260/2
DVC 17-260/3
DVC 17-260/5

CDT/Stryker Variant (CDT/SV)
CDT/Stryker Variant-1 (CDT/SV-1)
CDT, Tank Variant (CDT/TV)
CDT, Mine Resistance Ambush Protected Variant (CDT/MV)
CDT, Autoflug Trainer Variant (CDT/AV)



Training Category/Level Utilized:
Armor/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando, FL

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:

The CDT provides initial and sustainment vehicle driver training simulation for Soldiers at both the operational institution and training installation levels. The CDT vehicle cab variants are interchangeable and reconfigurable allowing multiple variant training on one common training platform.

Functional Description:

The CDT software recognizes the current vehicle variant installed on the system and simulates that vehicle's operational, performance and handling characteristics. Use of the common equipment platform allows the proponent combat developer and materiel developer to focus on the

unique, system-specific driver training requirements for their specific vehicle.

Device 17-260: CDT Common Equipment (CDT-CE). The CE makes up 80% of the CDT system and includes a 6 degree-of-freedom (DOF) motion platform, Image Generation/Display system, Instructor Operator Station (IOS) and an (AAR) Station. The CE is able to support multiple driver cab variants; Geo-typical terrain databases that support multiple driving environments; SE Core-geo-specific databases that meet operational requirements; Scenario Generation system to develop additional training scenarios at the unit/institution level

Device 17-260/1: CDT Stryker Variant (CDT/SV) provides training in driving and operating skills for the multiple variants of the Stryker vehicle.

Device 17-260/1/1: CDT Tank Variant (CDT/SV2) Cabs support unit training for the new Stryker Brigade Combat Teams (SBCTs). The cabs are ready to use on the existing CDT/CE for use in the Mobile Training Facility (MTF) or institutional facility.

Device 17-260/2: CDT Tank Variant (CDT/TV) provides training in driving and operating skills of the M1A1 and M1A2 SEP Main Battle Tanks.

Device 17-260/3: CDT Mine Resistance Ambush Protected Variant (CDT/MV) provides training in driving and operating skills for the RG33, RG31, Caiman, Maxxpro and MATV vehicles.

Device 17-260/5: CDT Autoflug Trainer (CDT/AV) provides training on ingress, egress and operating vehicles equipped with an Autoflug seat.

Physical Information:

The CDT includes a modular cab affixed to a six degree-of-freedom (6-DOF) motion platform and surrounded by three visual display units. There is also an Instructor Station, Commander Station and an After Action Review Station. The total footprint is L36' x W25' x H12½'.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

Motion Platform: Two (2) dedicated 30-amp@120VAC circuit, each with 2 plugs per circuit and six (6) dedicated 20-amp@120VAC circuit, each with 2 plugs per circuit.

Applicable Publications:

OUM 17-6920-913-10
SMM 17-6920-913-24&P

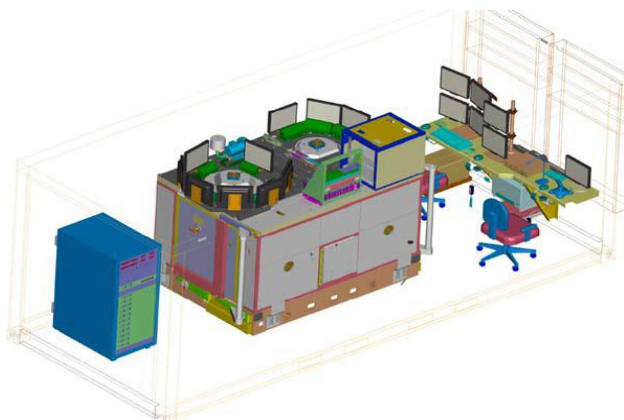
Reference Publications:

None

Training Requirements Supported:

Individual Training: MOSC 12B, ASI B6, and any MOSC with a mission requirement to operate a vehicle in any environment.

STRYKER MOBILE GUN SYSTEM (MGS) ADVANCED GUNNERY TRAINING SYSTEM (AGTS)



Stryker (MGS) Crew Station Trailer

Training Category/Level Utilized:

Engineer/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The Stryker MGS AGTS provides gunnery simulation training for MGS crews, MOS 19D. Stryker MGS AGTS trainers are setup in two configurations, institutional and mobile. In the institutional configuration, illustration 1 above, three crew stations are capable of being linked for MGS section or platoon training. In mobile configuration, illustration 2 above, the trainer is mounted and is capable of being linked for section and platoon training. These stand-alone crew trainers provide gunner and vehicle commander training in precision and degraded mode gunnery tasks. The instructor, via the instructor/operator station, is capable of selecting a gunnery exercise, starting, pausing and stopping the exercise, and monitoring each crew's performance. Malfunctions and battle damage are randomly induced in exercises.

Functional Description:

Each Stryker MGS AGTS consists of a crew station replicating the gunner's and vehicle commander's compartment; an instructor/operator station; a visual system; an aural/audio system; and a computer system. A computer generated image system provides visual presentations to the gunner and VC through the optical system. Stryker MGS AGTS has the ability to train



(MGS) IMS

operational procedures, target acquisition, identification and engagement using either the primary or alternate fire control and sighting equipment. Stryker MGS AGTS provides a simulated battlefield environment with stationary and moving single and multiple target arrays presented in day, night and reduced visibility conditions. The instructor/operator station allows monitoring of the gunner and VC and selection of training scenarios to be conducted and provides a scoring system for evaluation of crew performance. A Pre-brief After Action Review (PAAR) capability is also provided for review of section and platoon training analysis.

Physical Information:

Crew Station Shelter: 20' L x 8' W x 8' H

Mobile Trainer: approximately 45' L x 8' W x 12 1/2' H.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

The Stryker MGS AGTS trainer, monitoring system and special support equipment operates on standard 380/415/480 VAC, 3 phase, 50/60 Hz Commercial Site power. The system will tolerate the stated input power, $\pm 1\%$. Power line conditioners have been installed to protect the equipment from power fluctuations, sags, surges, and transients. Trainer utility power receptacles have been provided as part of the equipment installation. The receptacles have been placed so that a 120-volt duplex receptacle is within 6 feet of any area where maintenance is to be performed.

Applicable Publications:

SMM 17-6920-706-L10A (Volumes 1-4)
TSUH 17-6920-920-10 (Volumes 1-2)

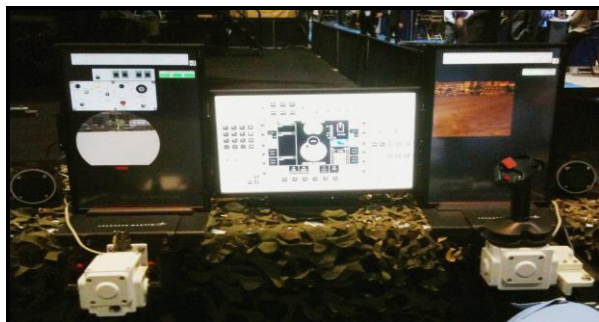
Reference Publications:

TC 3-20.31 (FM 3-2021) Training and Qualification
Crew, 17 March, 2015

Training Requirements Supported:

MOSC 19D

STRYKER MOBILE GUN SYSTEM TABLETOP ADVANCED GUNNERY TRAINING SYSTEM (MGS TAGTS)



(MGS TAGTS) Instructor Station



Crew Station Setup

Training Category/Level Utilized:

Engineer/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The Stryker MGS TAGTS provides virtual gunnery simulation training for MGS crews, MOS 19D. An instructor via a separate instructor/operator station (seen on the right-side of illustration 2), controls the training sessions by selecting gunnery exercise scenarios, and while monitoring each crew's performance, advances the crew through the different reticle aim levels of training to prepare them for their tasks in the actual vehicle.

Functional Description:

The Stryker MGS TAGTS is a crew training device based upon the Stryker MGS AGTS (Training Device 17-261). Using the same operating system software, databases and training exercises, these stand-alone tabletop versions of the full fidelity MGS AGTS trainer provide gunner and vehicle commander training in precision and degraded mode gunnery tasks.

Each Stryker MGS TAGTS consists of a crew station with gunner and vehicle commander control handles; touch-screen control panels replicating actual vehicle control panel switches and controls; flat panel visual displays; an instructor/operator station; and a computer operating system with an aural/audio system and speakers.

The image generator system provides visual presentations to the gunner and commander through the flat screen displays. Stryker MGS TAGTS has the ability to train operational procedures, target acquisition, identification and engagement tasks. The training exercises provide a virtual battlefield environment with stationary / moving, single and multiple target arrays presented in day, night and

reduced visibility conditions. Malfunctions and battle damage are randomly induced in the training exercises. The instructor/operator station monitors the gunner and commander and selection of training scenarios to be conducted, and scores the exercises for evaluation of crew performance and training progression.

Physical Information:

The Stryker MGS TAGTS physically requires a table of (8'L x 30"W x 30"H) for crew station setup, with a separate smaller (6'L x 30"W x 30"H) table for the instructor station and host computer. The trainer uses standard 3-prong, ground-fault protected plugs requiring two 15A receptacles to power the system.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

The Stryker MGS TAGTS trainer operates on standard 120 VAC, single phase, 50/60 Hz Commercial Site power. The system will tolerate the stated input power, $\pm 1\%$. The trainer uses standard 3-prong, ground-fault protected plugs requiring two 15A receptacles to power the system.

Applicable Publications:

TM 6454402 SMM for Stryker MGS (Volumes 1-4)
TM 6454959 Stryker MGS User's Guide TAGTS
TSUH 17-6920-920-10 (Volumes 1-2)

Reference Publications:

TC 3-20.31 (FM 3-20.21) Training and Qualification Crew, 17 March, 2015

Training Requirements Supported:

MOSC 19D

STRYKER MOBILE GUN SYSTEM (MGS) ADVANCED GUNNERY TRAINING SYSTEM (AGTS) PRE-BRIEF AFTER ACTION REVIEW (PAAR)



PRE-BRIEF AFTER ACTION REVIEW (PAAR) STATION

Training Category/Level Utilized:

Engineer/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not available for general issue (limited production)

Purpose of PAAR Trainer:

The PAAR station is used when conducting section and platoon training. It is not a trainer, but rather a component of the Stryker MGS AGTS trainer, where two or three co-located crew stations are linked for training. It does not operate alone, but only in conjunction with Stryker MGS AGTS crew stations (Training Device 17-261).

It provides the instructor the capability to conduct platoon/section training exercises where offensive and defensive tactical operations gunnery tasks and procedures are being trained (IAW FM 3-20.151). These exercises provide the capability to train command and control procedures and fire distribution planning while conducting tactical operations. The PAAR also provides the instructor the capability to insert Computer Generated Forces (CGF) into the training scenarios to enhance training.

Functional Description:

The PAAR station provides both a plan view (2D) and stealth (3D) display and logs and re-plays the exercises with digital voice communications using the logger and exercise manager software. The operator can also initiate a scan of the log file from previous fired exercises to permit the operator to select data for playback to analyze and brief the platoon/section during the (AAR).

Physical Information:

The PAAR consists of the operator's station with monitors and keyboards, after-action displays and PAAR computer. This equipment may be housed in a shelter or arranged in an institutional setting as pictured.

Equipment Required, Not Supplied:

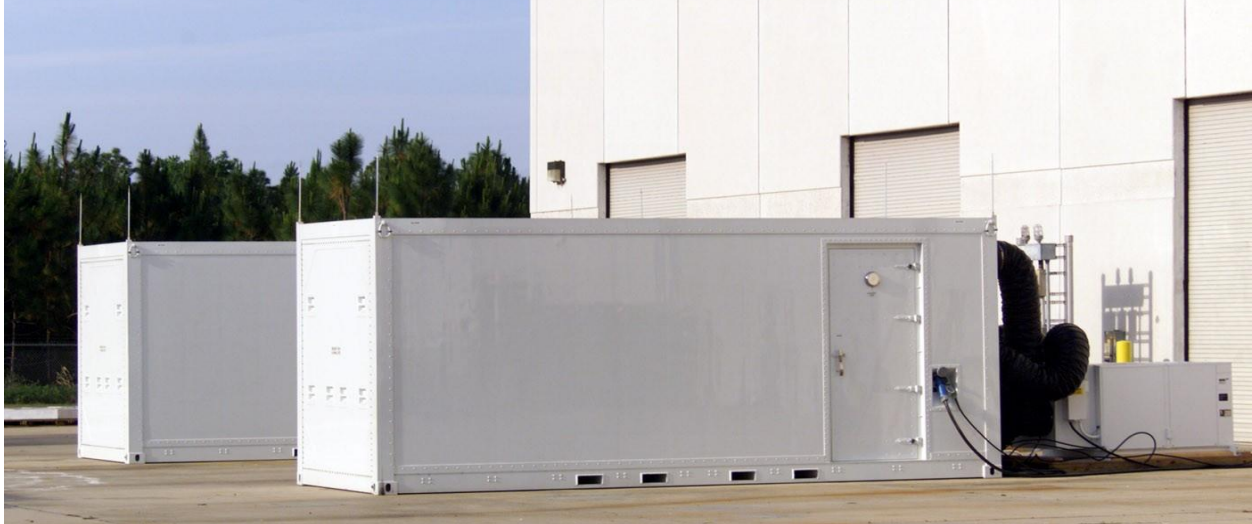
None

Special Installation Requirements:

None

Power Requirements:

The Stryker MGS AGTS PAAR operates on standard 380/415/480 VAC, 3 phase, 50/60 Hz Commercial Site power. The system will tolerate the stated input power, $\pm 1\%$. Power line conditioners have been installed to protect the equipment from transient power fluctuations, sags, and surges.



Shelterized PAAR

Applicable Publications:

SMM 17-6920-706-L10A (Volumes 1-4)
TSUH 17-6920-920-10 (Volumes 1-2)

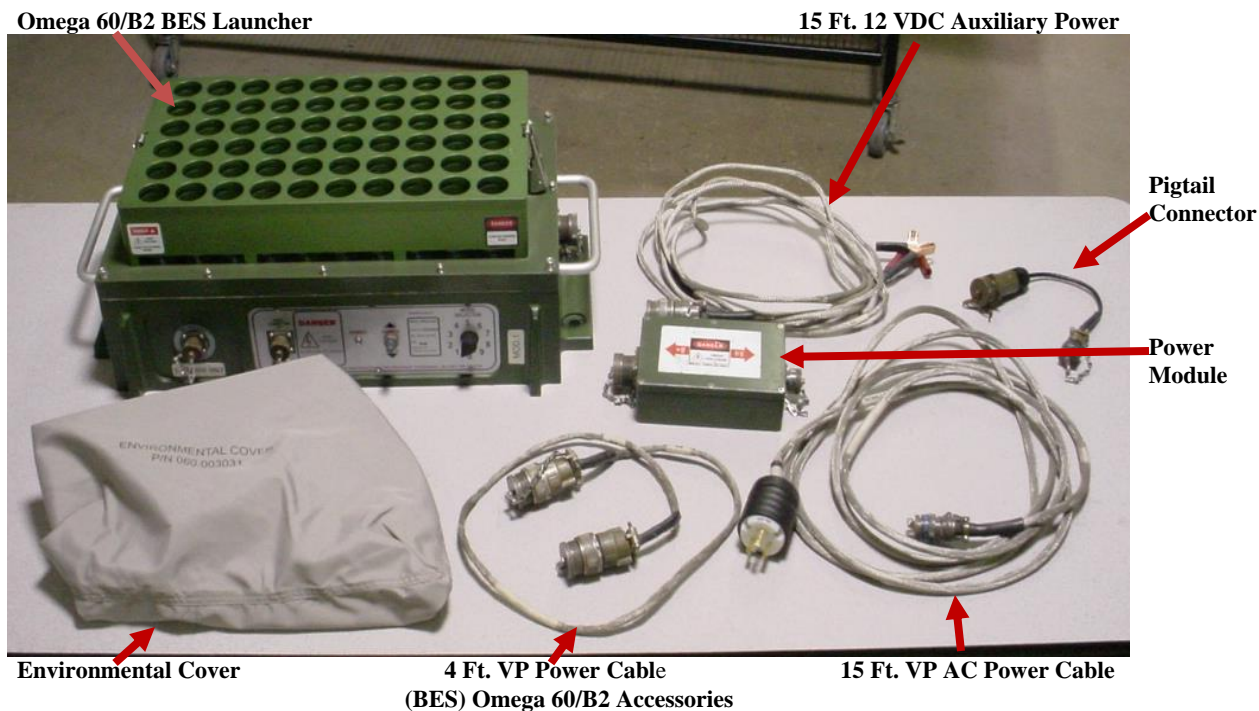
Reference Publications:

TC 3-20.31 (FM 3-20.21) Training and
Qualification Crew, 17 March, 2015

Training Requirements Supported:

MOSC 19K

BATTLEFIELD EFFECTS SIMULATOR (BES) OMEGA 60/B2

**Training Category/Level Utilized:**

Combined Arms/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

TSS ENTERPRISE PM TRADE ID/IQ Contract

Purpose of Trainer:

Battlefield Effects Simulator (BES) is a pyrotechnic-type system used in Force-on-Target live-fire training to simulate the flash/bang of weapon's discharge and target impact.

Functional Description:

When used with the M34 Hostile Fire (NSN: 1370-01-534-9191, DODIC: LA54) cartridge, it produces a flash/bang and smoke signature which simulates hostile weapon fire; when used with the M35 Target Hit, White Star (NSN: 1370-01-534-7733, DODIC: LA53) cartridge, it produces the flash/bang/stars, simulating the impact of a round on a target.

Physical Information:

13.29"W (including the fins) x 25.66"L (including the handles) x 9.0"H, 75 lbs

OMEGA 60/B2 BES Launcher: 60-chamber capacity for firing Hostile Fire and Target Hit Cartridges
Cover, Environmental: Canvas cover protects launcher from the elements.

Power Module: Converts 120 volts of alternating current (VAC) to 12 volts of direct current (VDC).

4-foot vermin-proof (VP) Power Cable: Connects to BES from the Power Module, supplying 12 VDC.

15-foot VAC Power Cable: Connects to Power Module from 120-VAC source.

FASIT Pigtail Connector Cable: Provides Ethernet connection between the OMEGA 60/B2 S2 connector and the FASIT communication cable.

8 foot cable for FASIT communication: Provides Ethernet communication between the pigtail and the Ethernet hub for MAT applications.

10 foot cable for FASIT communication: Provides Ethernet communication between the pigtail and the Ethernet hub for MAT applications. Used with the DP-63 MAT.

Physical Information cont:

25 foot cable for FASIT communication: Provides Ethernet communication between the pigtail and the Ethernet hub for SAT applications.

Wall Mount Bracket: Steel bracket bolted to a stationary retaining wall in a SAT to mount the launcher.

MAT Bracket: Steel bracket bolted to MAT to mount launcher.

Mounting Bracket Bolt Set: Used to secure SAT/MAT mounting brackets.

Pad Mount OMEGA 60: Placed between bracket and launcher to absorb shock.

Equipment Required, Not Supplied:

(No information available)

Special Installation Requirements:

(No information available)

Power Requirements:

The OMEGA 60/B2 BES launcher requires 12 volts of direct current to power the unit. Use with a 120 VAC power source via the OMEGA 60/B2's 120VAC to 12VDC power module or a 12 VDC auxiliary power source (such as a battery or power supply) to power the launcher.

Applicable Publications:

TM 17-6920-720-14&P, June 16, 2009

OUM 17-6920-720-10, FASIT, June 16, 2009

Reference Publications:

(No information available)

Training Requirements Supported:

No MOSC specific

SUBCALIBER INBORE TRAINING DEVICE



.50 Caliber Inbore Device

Training Category/Level Utilized:

Armor/Level 3 Abrams Tank Gunnery

Logistic Responsible Command, Service, or Agency:

PM Ground Combat Systems

Source & Method of obtaining

Available through the supporting TSC

Purpose of Trainer:

This device (known as the .50 caliber Advanced Inbore Marksmanship Training Enhancement System for Tanks – AIMTEST) is an integral component to the Combined Arms Training Strategy (CATS) for Abrams Tank Crew Gunnery Training to conduct sustainment and remedial training.

Functional Description:

The device is installed into the breech of the Abrams 120mm cannon. It consists of a single shot bolt-action receiver, solenoid actuated trigger, which is activated through a single connection on the right side of the Breechblock assembly and interfaces with and utilizes the vehicles firing circuits. In operation, the device provides full crew interaction and utilizes the Abrams fire control system.

Physical Information:

The device is a heavy .50 caliber bolt-action receiver and barrel encased in a precision machined, 120mm casing. The barrel is a standard Browning M2HB machinegun barrel. It fires all standard NATO .50 caliber ammunition to include M962 Saboted Light Armor Penetrator – Tracer (SLAP-T).

Major Components:

- a. Assembly, Barrel, 120mm
- b. Assembly, Receiver
- c. Assembly, Bolt
- d. Assembly, Trigger 24 volts DC (vdc)

- e. Assembly, Electrical Lead (120mm by type gun)
- f. Assembly, Anti-Roll & Counter Recoil Assist (ARCRA)
- g. Tray, Ammunition 2 ea. (120mm by type tank)

Equipment Data:

Caliber.....	50 BMG
(12.7 x 99mm)	
System of Operation.....	Manual
Type of Action.....	Bolt Action,
Single Shot	
Length.....	59 inches
Width.....	6 5/8 inches
Height.....	9 3/4 inches
Weight (Barrel Assembly).....	59 lbs
Weight (Receiver/Bolt/Trigger Assy).....	17 lbs
Weight (Total Shipping in Box).....	141 lbs
Barrel Length.....	45 in
Muzzle Velocity.....	4000 fps with
M962 SLAP-T	
Muzzle Velocity.....	3050 fps with
M20 API-T	
Maximum Effective Range.....	2000 meters
w/ M962 SLAP-T	
Maximum Effective Range.....	1500 meters
with M20 API-T	
Trigger Pull.....	20 lbs

Trigger Assembly (SOLENOID):

Weight.....	4 lbs
Width.....	5.2 inches
Height.....	3.4 inches
Operational Voltage Range.....	22 - 28 volts DC
Operational Amperage Range.....	2 - 8 Amps
Operational Temperature Range.....	-46 to +60
Celsius	
Operational Force.....	Maximum 52
daN (116 lbs) Normal 45 daN (100 lbs)	

Equipment Required, Not Supplied:

(Information not available)

Applicable Publications:

(Information not available)

Special Installation Requirements:

N/A

Reference Publications:

(Information not available)

Power Requirements:

(Information not available)

Training Requirements Supported:MOSC 19K

BRADLEY A3 MULTI MEDIA RECORDER (MMR) THRU SITE VIDEO (TSV)

**Training Category/Level Utilized:**

Armor/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC at Ft Bliss, Carson, Knox, Hood, Sill, and Benning.

Purpose of Trainer:

The Bradley A3 MMR TSV is a vehicle mounted recorder that records video from CIV, IBAS and the intercom communication system during live fire or laser based training. The recording is trigger event based or manual (continuous) by use of the control panel. The (AAR) Laptop computer provides simultaneous playback of up to four (4) channels of audio/video with Synchronized Play, Pause, Fast

Forward, Rewind and Stop controls on a 14 inch screen display using a 110/220 VAC power source.

Functional Description:

The kit consists of four (4) distinct subsystems: TSV Main Assembly, Rubber Housing, Compact Flash Memory Card, and a Control Panel (CP), as described below:

a) TSV Main Assembly – contains the electronics for the TSV system. It consists of the Power Module; Computer Module; Multimedia Recorder (MMR) Module; CF Memory Card Holder with LED,

b) Rubber Housing - The TSV Main Assembly is placed in a shock absorbing rubber housing.

c) Compact Flash Memory Card - The Memory Card is a commercial 8 Gb Compact Flash memory card.

d) Control Panel (CP) – The operator uses the LCD screen and the CP push buttons to interact with the simulator.

The TSV Kit also includes video and audio cabling, Operators Manual and transit case. Due to packaging and lifting constraints, there are two transit cases consisting of four (4) MMRs, four (4) Rubber Housings, eight (8) CF memory cards, 4 CPs, and eight (8) Cable Sets.

Physical Information:

(Information not available)

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

None

Power Requirements:

28 V DC

Applicable Publications:

(Information not available)

Reference Publications:

8875 809-647

Training Requirements Supported:

MOSC 19 Series

THRU SITE VIDEO RECORDER COMMON (TSVRC) THRU SITE VIDEO (TSV)

**Training Category/Level Utilized:**

Armor/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC at Fort Knox, Fort Hood, Fort Bliss and Fort Carson.

Purpose of Trainer:

The Thru Site Video Recorder Common (TSVRC) is an upgrade to the TSVR System (NSN: 5836-01-559-2503) to make it compatible with the Bradley ODS Fighting Vehicle. In addition, the TSVRC system replaces the spinning hard drive based Vehicle Recording Unit (VRU) of the TSVR System with a 4 channel SD Card Media recorder (VRU-4SD). With the upgrade to a solid state media recorder afforded by the SD card media, the TSVRC system also eliminates the need for the Vibration Cage Assembly (VCA) of the TSVR System.

Functional Description:

The TSVRC system consists of the following components:

- a) Vehicle Recording Unit (VRU-4SD) - The VRU houses a 4 channel SD Card A/V Recorder.

A total of 4 removable SD media card ports are provided with output ports to allow the unit to be used as a playback device. Download capability of all files to a PC via USB is also provided.

- b) Universal Through Site Camera (TSC) - The TSC is an aluminum housed camera with beam splitter optics to allow images to be captured through the gun sight optics onboard the vehicle. The TSC mounts on to the M1 Series GPS-E or GAS (using the GAS adapter). The TSC allows the commander or gunner to see through their sights while the embedded camera captures video from the sight.

- c) Low Light Crew Cameras (CRW-CAM) - Two (2) black and white Low Light Crew Cameras with infrared illuminators capture crew coordination with-in the vehicle cabin.

- d) External Audio Adapter (EAA) - The External Audio Adapter connects between the vehicle communications J Box and the crew communication helmet to capture audio from the radio and intercom for recording on the VRU.

- e) CDU Video Adapter cable (CDU) - The CDU Video Adapter Cable is a "T" adapter that taps into the read panel of the Commanders

-
- f) TIS Video Adapter (TIS) - The TIS Video adapter cable captures TIS video from the M1A2SEP vehicle.
- g) M1 Gunners Aux Sight Camera Adapter (GAS)- The Gunner Aux Sight Camera adapter allows the Through Sight Camera to mount on the Gunners Aux Sight (GAS)
- h) M1 Loaders Camera Bracket (MCB)- Camera bracket for the M1 Loaders Crew Camera.
- i) M1 Gunners Camera Bracket (SGB)- Camera bracket for the M1 Gunners Crew Camera
- j) M2 Dual Camera Bracket (DCB)- M2 Dual Crew Camera Mounting Bracket
- k) M2 GPS Adapter Ring (M2C) – M2 GPS Through Sight Camera Adapter Ring
- l) M2 Aux Sight Adapter Ring (ASA)- M2 Aux Sight Through Sight Adapter Ring
- m) Bradley Floor Plate Power Cable (C121-20)- Bradley ODS Floor Plate Power Cable
- n) Hand Held Monitor (HHM) - The Hand Held Monitor connects to the AVB and provides a means to position crew cameras prior to a recording evolution.

Physical Information:

(Information not available)

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

None

Power Requirements:**Technical Characteristics**

- Current draw < 5 amps @ 28 volts
- Four channel Video/Audio Approximately 1 hour per GB subject to the record/playback complexity of the scene
- Remote Control Unit Operational (from 1/2 foot to 3 feet)
- USB data transfer rate 120mb per second
- Operating Temperature -10°C to 40°C

Applicable Publications:

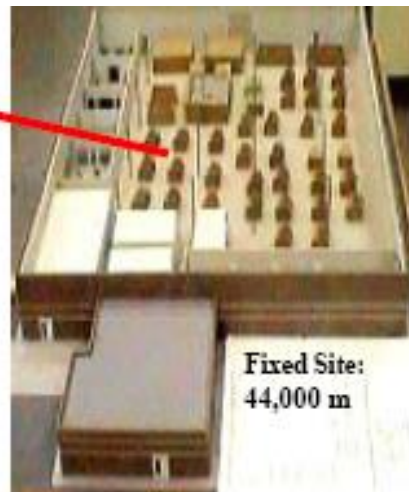
TM 17-6920-906-10

Reference Publications:

N/A

Training Requirements Supported:MOSC 19 Series

CLOSE COMBAT TACTICAL TRAINER (CCTT) M1A1-SA, MODULE FIXED SITE (FS)

**Training Category/Level Utilized:**

Armor & Mechanized Infantry/Level I

Logistic Responsible Command, Service, or Agency:

TSS ENTERPRISE

Source and Method of Obtaining:

Not generally available for issue (limited distribution).

Purpose of Trainer:

To provide a realistic, virtual, collective (unit) training environment in which to train and sustain proficiency in Mission Training Plan (MTP) tasks. The primary tasks supported include command and control, maneuver/movement techniques, and fire support. All tasks are performed by full combat vehicle crews within a stressful, fully task loaded, synthetic combined arms environment in which the training audience must integrate the functions of combat and combat service support into their maneuver battle.

**Functional Description:**

CCTT sites include M1, M2/M3, and HMMWV combat vehicle interior mock-ups, which replicate, with high precision, the form, fit, and function of the actual vehicle crew compartments. Each station is equipped with most of the operational controls and Indicators that are found in the real vehicle's crew

stations. Each simulator is a stand-alone unit that networks with other simulators using a host computer, image generator, sound system, and voice communication system. Exercises take place in areas such as the National Training Center (Ft Irwin), an area of Central Germany, Kosovo, Korea, Ft Hood, Grafenwoehr, Ft. Riley, Ft Carson, Ft. Stewart, Pinon Canyon or Baghdad using terrain databases. During an exercise, the interaction of indirect fire, close air support, resupply, repair, command posts, howitzers, mortars, and supply trucks are all simulated.

Semi-automated forces (platoons, companies, and battalions) are inserted into an exercise and are controlled by an operator to provide both enemy and friendly adjacent and supporting units. Realism is further enhanced by the imposition of real-world limitations such as fuel consumption, basic ammunition loads, expended ammunition, and reliability and maintenance of components.

The M1A1 SA (Situation Awareness) Manned Module (MM) contains the Stabilized Commanders Weapon Station (SCWS), Driver's Viewer Enhancer (DVE) and Driver's Rear View Sensor System (DRSS). The fire control system for the M1A1 SA simulation system replicates the capability for target acquisition, aiming and firing of the main gun, 50 caliber machine gun and M240 machine gun. These components, in combination with the other simulated systems, will provide the tank crew the capability to engage targets from both stationary and on the move positions with a precision that match real world results.

Physical Information:

M1 Simulator:
16' 1" L x 14' 1" W x 10' 6" H; 3800lbs
M2/M3 Simulator:
16' 0" L x 14' 0" W x 10' 6" H; 3900lbs
HMMWV Simulator:
11' 8" L x 20' 2" W x 9' 4" H; 3900lbs

Equipment Required, Not Supplied:

Combat Vehicle Crewman (CVC) helmets Personal
Chemical Protective Equipment (if required by scenario)

Special Installation Requirements:

Due to the size and complexity of (CCTT), it is housed in a 44,000-m² building specifically designed to meet its needs. The Army Corps of Engineers developed a common design which has been locally adapted at each of 7 Fixed Sites. Each building has power, temperature and humidity controls, office areas, Semi-Automated Forces workstations, and five After Action Review rooms to support the simultaneous training of platoons and companies or a battalion (-) size unit.

Power Requirements:

208 and 120vac, 3-phase, 60 Hz

Applicable Publications:

CCTT Facilitator's Guide – Fixed Site, CFG1-01
TD 17-6930-702, Maintenance Manual

Reference Publications Not Supplied:

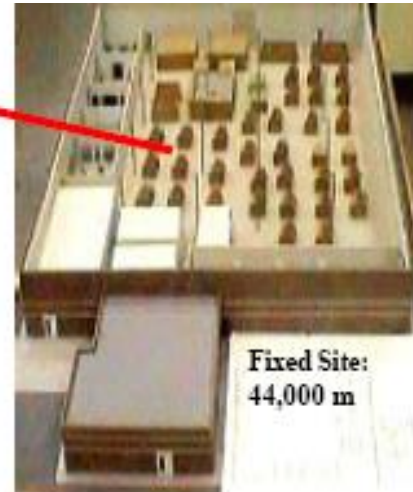
OUM 17-6920-930-10 15 February 2018 Technical Manual
Operator User's Manual for Close Combat Tactical Trainer
Fixed and Mobile (combined) Operator's User Manual (OUM)

SMM 17-6920-930-24&P 15 February 2018 Technical
Manual Field and Sustainment Maintenance Manual for
Close Combat Tactical Trainer Fixed and Mobile
(combined) System Maintenance Manual (SMM)

Training Requirements Supported:

MOSCs 19 and 11-Series

CLOSE COMBAT TACTICAL TRAINER (CCTT) M1A2-SEPV2, MODULE FIXED SITE (FS)

**Training Category/Level Utilized:**

Armor & Mechanized Infantry/Level I

Logistic Responsible Command, Service, or Agency:

TSS ENTERPRISE

Source and Method of Obtaining:

Not generally available for issue (limited distribution).

Purpose of Trainer:

To provide a realistic, virtual, collective (unit) training environment in which to train and sustain proficiency in Mission Training Plan (MTP) tasks. The primary tasks supported include command and control, maneuver/movement techniques, and fire support. All tasks are performed by full combat vehicle crews within a stressful, fully task loaded, synthetic combined arms environment in which the training audience must integrate the functions of combat and combat service support into their maneuver battle.

**Functional Description:**

CCTT sites include M1, M2/M3, and HMMWV combat vehicle interior mock-ups, which replicate, with high precision, the form, fit, and function of the actual vehicle crew compartments. Each station is equipped with most of the operational controls and indicators that are found in the real vehicle's crew stations. Each simulator is a stand-

alone unit that networks with other simulators using a host computer, image generator, sound system, and voice communication system. Exercises take place in areas such as the National Training Center (Ft Irwin), an area of Central Germany, Kosovo, Korea, Ft Hood, Grafenwoehr, Ft. Riley, Ft Carson, Ft. Stewart, Pinon Canyon or Baghdad using terrain databases. During an exercise, the interaction of indirect fire, close air support, resupply, repair, command posts, howitzers, mortars, and supply trucks are all simulated.

Semi-automated forces (platoons, companies, and battalions) are inserted into an exercise and are controlled by an operator to provide both enemy and friendly adjacent and supporting units. Realism is further enhanced by the imposition of real-world limitations such as fuel consumption, basic ammunition loads, expended ammunition, and reliability and maintenance of components.

The M1A2 SEPv2 Manned Module (MM) contains the Common Remotely Operated Weapon System (CROWS) and Drivers Rearview Sensor System. The M1A2 SEPv2 has the capability for target sighting, aiming and firing of the 120mm Main Gun, M240 Machine Gun and M2 .50 Cal. Machine Gun. The simulated fire control system accurately incorporates sighting reticles and fire control models and enables precision gunnery techniques in simulated battlefield environments. The Laser Range Finder and the FBCB2 will provide the capability for Far Target Designate.

Physical Information:

M1 Simulator:
16' 1" L x 14' 1" W x 10' 6" H; 3800lbs
M2/M3 Simulator:
16' 0" L x 14' 0" W x 10' 6" H; 3900lbs
HMMWV Simulator:
11' 8" L x 20' 2" W x 9' 4" H; 3900lbs

Equipment Required, Not Supplied:

Combat Vehicle Crewman (CVC) helmets Personal
Chemical Protective Equipment (if required by scenario)

Special Installation Requirements:

Due to the size and complexity of (CCTT), it is housed in a 44,000-m² building specifically designed to meet its needs. The Army Corps of Engineers developed a common design which has been locally adapted at each of 7 Fixed Sites. Each building has power, temperature and humidity controls, office areas, Semi-Automated Forces workstations, and five After Action Review rooms to support the simultaneous training of platoons and companies or a battalion (-) size unit.

Power Requirements:

208 and 120vac, 3-phase, 60 Hz

Applicable Publications:

CCTT Facilitator's Guide – Fixed Site, CFG1-01
TD 17-6930-702, Maintenance Manual

Reference Publications Not Supplied:

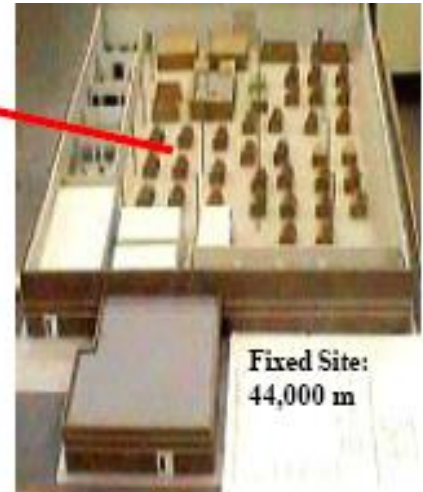
OUM 17-6920-930-10 15 February 2018 Technical Manual
Operator User's Manual for Close Combat Tactical Trainer
Fixed and Mobile (combined) Operator's User Manual
(OUM)

SMM 17-6920-930-24&P 15 February 2018 Technical
Manual Field and Sustainment Maintenance Manual for
Close Combat Tactical Trainer Fixed and Mobile
(combined) System Maintenance Manual (SMM)

Training Requirements Supported:

MOSCs 19 and 11-Series

CLOSE COMBAT TACTICAL TRAINER (CCTT) M2/M3A2-ODS-SA, MODULE FIXED SITE (FS)

**Training Category/Level Utilized:**

Armor & Mechanized Infantry/Level I

Logistic Responsible Command, Service, or Agency:

TSS ENTERPRISE

Source and Method of Obtaining:

Not generally available for issue (limited distribution).

Purpose of Trainer:

To provide a realistic, virtual, collective (unit) training environment in which to train and sustain proficiency in Mission Training Plan (MTP) tasks. The primary tasks supported include command and control, maneuver/movement techniques, and fire support. All tasks are performed by full combat vehicle crews within a stressful, fully task loaded, synthetic combined arms environment in which the training audience must integrate the functions of combat and combat service support into their maneuver battle.

**Functional Description:**

CCTT sites include M1, M2/M3, and HMMWV combat vehicle interior mock-ups, which replicate, with high precision, the form, fit, and function of the actual vehicle crew compartments. Each system to display visuals in all of the vehicle displays or periscopes. The fire control system for the M2/M3 A2 ODS

station is equipped with most of the operational controls and indicators that are found in the real vehicle's crew stations. Each simulator is a stand-alone unit that networks with other simulators using a host computer, image generator, sound system, and voice communication system. Exercises take place in areas such as the National Training Center (Ft Irwin), an area of Central Germany, Korea, Ft Hood, Grafenwoehr, Ft. Riley, Ft Carson, Ft. Stewart, Pinon Canyon or Baghdad using terrain databases. During an exercise, the interaction of indirect fire, close air support, resupply, repair, command posts, howitzers, mortars, and supply trucks are all simulated.

Semi-automated forces (platoons, companies, and battalions) are inserted into an exercise and are controlled by an operator to provide both enemy and friendly adjacent and supporting units. Realism is further enhanced by the imposition of real-world limitations such as fuel consumption, basic ammunition loads, expended ammunition, and reliability and maintenance of components.

The M2/M3A2 ODS SA is a reconfigurable Manned Module (MM). The difference between the M2A3 and the M3A3 is the mounted infantry, missile, and ammunition allocations. The module replicates the tactical vehicle's interior of the turret, driver and squad leader compartments. It replicates the instrumentation, functionality, weapons systems and capabilities of the M2/M3 A2 ODS SA, to include the indicators and controls used by the gunner, commander and squad leader. It uses an Image Generator SA simulation system replicates the ability for target acquisition, tracking, aiming, and firing of the M242 25 mm Automatic Gun, the Tube-launched, Optically-tracked, Wire-guided (TOW) weapon system, the M240C Machine Gun, and the M257 Smoke Grenade Launcher.

Physical Information:

M1 Simulator:

16' 1" L x 14' 1" W x 10' 6" H; 3800lbs

M2/M3 Simulator:

16' 0" L x 14' 0" W x 10' 6" H; 3900lbs

HMMWV Simulator:

11' 8" L x 20' 2" W x 9' 4" H; 3900lbs

Equipment Required, Not Supplied:

Combat Vehicle Crewman (CVC) helmets Personal

Chemical Protective Equipment (if required by scenario)

Special Installation Requirements:

Due to the size and complexity of (CCTT), it is housed in a 44,000-m² building specifically designed to meet its needs. The Army Corps of Engineers developed a common design which has been locally adapted at each of 7 Fixed Sites.

Each building has power, temperature and humidity controls, office areas, Semi-Automated Forces workstations, and five After Action Review rooms to support the simultaneous training of platoons and companies or a battalion (-) size unit.

Power Requirements:

208 and 120vac, 3-phase, 60 Hz

Applicable Publications:

CCTT Facilitator's Guide – Fixed Site, CFG1-01

TD 17-6930-702, Maintenance Manual

Reference Publications Not Supplied:

OUM 17-6920-930-10 15 February 2018 Technical Manual

Operator User's Manual for Close Combat Tactical Trainer

Fixed and Mobile (combined) Operator's User Manual

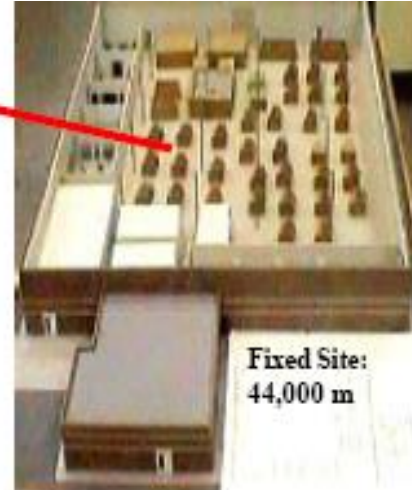
(OUM)

SMM 17-6920-930-24&P 15 February 2018 Technical Manual Field and Sustainment Maintenance Manual for Close Combat Tactical Trainer Fixed and Mobile (combined) System Maintenance Manual (SMM)

Training Requirements Supported:

MOSCs 19 and 11-Series

CLOSE COMBAT TACTICAL TRAINER (CCTT) M2/M3A3, MODULE FIXED SITE (FS)

**Training Category/Level Utilized:**

Armor & Mechanized Infantry/Level 1

Logistic Responsible Command, Service, or Agency:

TSS ENTERPRISE

Source and Method of Obtaining:

Not generally available for issue (limited distribution).

Purpose of Trainer:

To provide a realistic, virtual, collective (unit) training environment in which to train and sustain proficiency in Mission Training Plan (MTP) tasks. The primary tasks supported include command and control, maneuver/movement techniques, and fire support. All tasks are performed by full combat vehicle crews within a stressful, fully task loaded, synthetic combined arms environment in which the training audience must integrate the functions of combat and combat service support into their maneuver battle.

**Functional Description:**

(CCTT) sites include M1, M2/M3, and HMMWV combat vehicle interior mock-ups, which replicate, with high precision, the form, fit, and function of the actual vehicle crew compartments. Each station is equipped with most of the operational controls and indicators that are found in the real vehicle's crew stations.

Each simulator is a stand-alone unit that networks with other simulators using a host computer, image generator, sound system, and voice communication system. Exercises take place in areas such as the National Training Center (Ft Irwin) and surrounding area, an area of Central Germany, Korea, Ft Hood, Grafenwoehr, Ft. Riley, Ft Carson, Ft. Stewart, or Baghdad using terrain databases. During an exercise, the interaction of indirect fire, close air support, resupply, repair, command posts, howitzers, mortars, and supply trucks are all simulated.

Semi-automated forces (platoons, companies, and battalions) are controlled by a few personnel through a special computer interface to provide both enemy and friendly adjacent and supporting units. Realism is further enhanced by the imposition of real-world limitations such as fuel consumption, basic ammunition loads, expended ammunition, and reliability and maintenance of components.

Physical Information:

M1 Simulator:

16' 1" L x 14' 1" W x 10' 6" H; 3800lbs

M2/M3 Simulator:

16' 0" L x 14' 0" W x 10' 6" H; 3900lbs

HMMWV Simulator:

11' 8" L x 20' 2" W x 9' 4" H; 3900lbs

The M2/M3 A3 CM/ED (Chassis Modernization/ Embedded Diagnostics) is a reconfigurable Manned Module (MM). The difference between the M2A3 and the M3A3 is the mounted infantry, missile, and ammunition allocations. The module replicates the tactical vehicle's interior of the turret, driver and squad leader compartments. It replicates the instrumentation, functionality, weapons systems and capabilities of the M2/M3 A3 CM/ED, to

include the indicators and controls used by the gunner, commander and squad leader. It uses an Image Generator system to display visuals in all of the vehicle displays or periscopes. The fire control system for the M2/M3 A3 CM/ED simulation system replicates the ability for target acquisition, tracking, aiming, and firing of the M242 25 mm Automatic Gun, the Tube-launched, Optically-tracked, Wire-guided (TOW) weapon system, the M240C Machine Gun, and the M257 Smoke Grenade Launcher.

Equipment Required, Not Supplied:

Combat Vehicle Crewman (CVC) helmets
Personal Chemical Protective Equipment (if required by scenario)

Special Installation Requirements:

Due to the size and complexity of (CCTT), it is housed in a 44,000-m2 building specifically designed to meet its needs. The Army Corps of Engineers developed a common design which has been locally adapted at each of 7 Fixed Sites. Each building has power, temperature and humidity controls, office areas, Semi-Automated Forces workstations, and five After Action Review rooms to support the simultaneous training of platoons and companies or a battalion (-) size unit.

Power Requirements:

208 and 120vac, 3-phase, 60 Hz

Applicable Publications:

(CCTT) Facilitator's Guide – Fixed Site, CFG1-01
TD 17-6930-702, Maintenance Manual

Reference Publications Not Supplied:

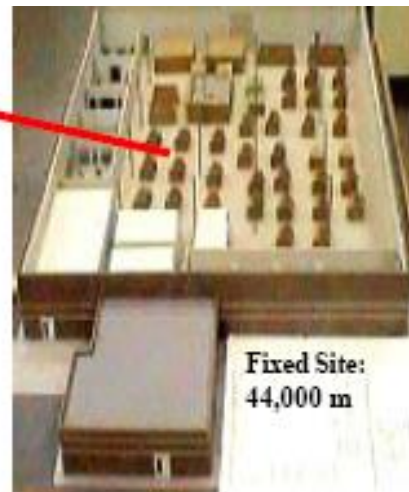
OUM 17-6920-930-10 15 February 2018 Technical Manual Operator User's Manual for Close Combat Tactical Trainer Fixed and Mobile (combined) Operator's User Manual (OUM)

SMM 17-6920-930-24&P 15 February 2018 Technical Manual Field and Sustainment Maintenance Manual for Close Combat Tactical Trainer Fixed and Mobile (combined) System Maintenance Manual (SMM)

Training Requirements Supported:

MOSCs 19 and 11-Series

CLOSE COMBAT TACTICAL TRAINER (CCTT) M2A3-BFIST, MODULE FIXED SITE (FS)

**Training Category/Level Utilized:**

Armor & Mechanized Infantry/Level I

Logistic Responsible Command, Service, or Agency:

TSS ENTERPRISE

Source and Method of Obtaining:

Not generally available for issue (limited distribution).

Purpose of Trainer:

To provide a realistic, virtual, collective (unit) training environment in which to train and sustain proficiency in Mission Training Plan (MTP) tasks. The primary tasks supported include command and control, maneuver/movement techniques, and fire support. All tasks are performed by full combat vehicle crews within a stressful, fully task loaded, synthetic combined arms environment in which the training audience must integrate the functions of combat and combat service support into their maneuver battle.

**Functional Description:**

(CCTT) sites include M1, M2/M3, and HMMWV combat vehicle interior mock-ups, which replicate, with high precision, the form, fit, and function of the actual vehicle crew compartments. Each station is equipped with most of the operational controls and indicators that are found in the real vehicle's crew stations.

Each simulator is a stand-alone unit that networks with other simulators using a host computer, image generator, sound system, and voice communication system. Exercises take place in areas such as the National Training Center (Ft Irwin), an area of Central Germany, Korea, Ft Hood, Grafenwoehr, Ft. Riley, Ft Carson, Ft. Stewart, Pinon Canyon or Baghdad using terrain databases. During an exercise, the interaction of indirect fire, close air support, resupply, repair, command posts, howitzers, mortars, and supply trucks are all simulated.

Semi-automated forces (platoons, companies, and battalions) are inserted into an exercise and are controlled by an operator to provide both enemy and friendly adjacent and supporting units. Realism is further enhanced by the imposition of real-world limitations such as fuel consumption, basic ammunition loads, expended ammunition, and reliability and maintenance of components.

The M2/M3 A3 CM/ED BFIST (Bradley Fire Support Team Vehicle replicates the tactical vehicle's interior of the turret, driver and squad leader compartments. It replicates the instrumentation, functionality, weapons systems and capabilities of the M2/M3 A3 CM/ED BFIST to include the indicators and controls used by the gunner, commander and squad leader. It uses an Image Generator system to display visuals in all of the vehicle displays or periscopes. The fire control system for the M2/M3vA3 CM/ED BFIST simulation system replicates the ability for target acquisition, tracking, aiming, and firing of the M242 25mm Automatic Gun, the M240C Machine Gun, and the M257 Smoke Grenade Launcher. The BFIST module replicates the FS3 (Fire Support Sensor System) installed in the M2/M3 A3 CM/ED BFIST tactical vehicles.

The BFIST w/FS3 system provides the FIST HQs the capability of automated enhanced surveillance, target acquisition, target identification, tracking, designation, position location, and communications functionality while mounted. The system provides the FIST the capability to automate the command and control functions requiring performance of the fire support planning, directing, controlling, and cross functional area coordination's, as well as provide battlefield combat identification.

Physical Information:

M1 Simulator:

16' 1" L x 14' 1" W x 10' 6" H; 3800lbs

M2/M3 Simulator:

16' 0" L x 14' 0" W x 10' 6" H; 3900lbs

HMMWV Simulator:

11' 8" L x 20' 2" W x 9' 4" H; 3900lbs

Equipment Required, Not Supplied:

Combat Vehicle Crewman (CVC) helmets

Personal Chemical Protective Equipment (if required by scenario)

Special Installation Requirements:

Due to the size and complexity of (CCTT), it is housed in a 44,000-m2 building specifically designed to meet its needs. The Army Corps of Engineers developed a common design which has been locally adapted at each of 7 Fixed Sites. Each building has power, temperature and humidity controls, office areas, Semi-Automated Forces workstations, and five After Action Review rooms to support the simultaneous training of platoons and companies or a battalion (-) size unit.

Power Requirements:

208 and 120vac, 3-phase, 60 Hz

Applicable Publications:

(CCTT) Facilitator's Guide – Fixed Site, CFG1-01
TD 17-6930-702, Maintenance Manual

Reference Publications Not Supplied:

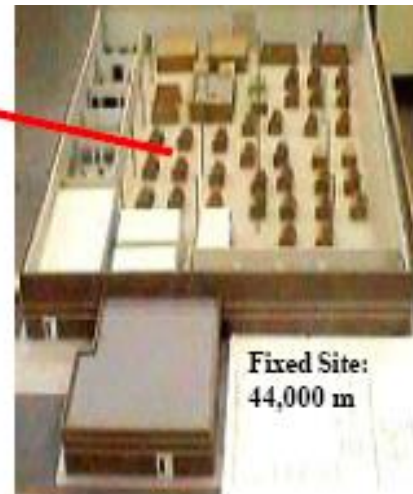
OUM 17-6920-930-10 15 February 2018 Technical Manual
Operator User's Manual for Close Combat Tactical Trainer
Fixed and Mobile (combined) Operator's User Manual (OUM)

SMM 17-6920-930-24&P 15 February 2018 Technical
Manual Field and Sustainment Maintenance Manual for
Close Combat Tactical Trainer Fixed and Mobile
(combined) System Maintenance Manual (SMM)

Training Requirements Supported:

MOSCs 19 and 11-Series

CLOSE COMBAT TACTICAL TRAINER (CCTT) HMMWV, MODULE FIXED SITE (FS)

**Training Category/Level Utilized:**

Armor & Mechanized Infantry/Level I

Logistic Responsible Command, Service, or Agency:

TSS ENTERPRISE

Source and Method of Obtaining:

Not generally available for issue (limited distribution).

Purpose of Trainer:

To provide a realistic, virtual, collective (unit) training environment in which to train and sustain proficiency in Mission Training Plan (MTP) tasks. The primary tasks supported include command and control, maneuver/movement techniques, and fire support. All tasks are performed by full combat vehicle crews within a stressful, fully task loaded, synthetic combined arms environment in which the training audience must integrate the functions of combat and combat service support into their maneuver battle.

Functional Description:

(CCTT) sites include M1, M2/M3, and HMMWV combat vehicle interior mock-ups, which replicate, with high precision, the form, fit, and function of the actual vehicle crew compartments. Each station is equipped with most of the operational controls and indicators that are found in the real vehicle's crew stations. Each simulator is a stand-alone unit that networks with other simulators using a host computer, image generator, sound system, and voice communication system. Exercises take place in areas such as the National Training Center (Ft Irwin), an area of Central Germany, Korea, Ft Hood, Grafenwoehr, Ft. Riley, Ft Carson, Ft. Stewart, Pinon Canyon or Baghdad using

terrain databases. During an exercise, the interaction of indirect fire, close air support, resupply, repair, command posts, howitzers, mortars, and supply trucks are all simulated.

Semi-automated forces (platoons, companies, and battalions) are controlled by a few personnel through a special computer interface to provide both enemy and friendly adjacent and supporting units. Realism is further enhanced by the imposition of real-world limitations such as fuel consumption, basic ammunition loads, expended ammunition, and reliability and maintenance of components.

HMMWV - The (CCTT) Fixed Site HMMWV module operates in two modes: the driver mode or the observer mode. The driver's position is the primary function when the HMMWV is in the driver mode and the observer's position is the primary function when the HMMWV is in the observer mode.

The HMMWV module can be configured either as a M1025 or a M1043 vehicle as determined during initialization by the Master Control Console (MCC).

Physical Information:

M1 Simulator:

16' 1" L x 14' 1" W x 10' 6" H; 3800lbs

M2/M3 Simulator:

16' 0" L x 14' 0" W x 10' 6" H; 3900lbs

HMMWV Simulator:

11' 8" L x 20' 2" W x 9' 4" H; 3900lbs

Equipment Required, Not Supplied:

Combat Vehicle Crewman (CVC) helmets
Personal Chemical Protective Equipment (if required by scenario)

Special Installation Requirements:

Due to the size and complexity of (CCTT), it is housed in a 44,000-m2 building specifically designed to meet its needs. The Army Corps of Engineers developed a common design which has been locally adapted at each of 7 Fixed Sites. Each building has power, temperature and humidity controls, office areas, Semi-Automated Forces workstations, and five After Action Review rooms to support the simultaneous training of platoons and companies or a battalion (-) size unit.

Power Requirements:

208 and 120vac, 3-phase, 60 Hz

Applicable Publications:

(CCTT) Facilitator's Guide – Fixed Site, CFG1-01
TD 17-6930-702, Maintenance Manual

Reference Publications Not Supplied:

OUM 17-6920-930-10 15 February 2018 Technical Manual Operator User's Manual for Close Combat Tactical Trainer Fixed and Mobile (combined) Operator's User Manual (OUM)

SMM 17-6920-930-24&P 15 February 2018 Technical Manual Field and Sustainment Maintenance Manual for Close Combat Tactical Trainer Fixed and Mobile (combined) System Maintenance Manual (SMM)

Training Requirements Supported:

MOSCs 19 and 11-Series

CLOSE COMBAT TACTICAL TRAINER (CCTT) MOBILE SERIES

**Training Category/Level Utilized:**

Armor/Level 1

Mechanized Infantry/ Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited distribution).

Purpose of Trainer:

To provide a realistic, virtual, collective (unit) training environment in which to train and sustain proficiency in tank and Bradley platoon Mission Training Plan (MTP) tasks. The primary tasks supported include command and control, maneuver/ movement techniques, and fire support. All tasks are performed by full combat vehicle crews within a stressful, fully task loaded synthetic combined arms environment in which the training audience must integrate the functions of combat and combat service support.

Functional Description:

The (CCTT) Mobile Series consists of two types of platoon sets i.e. M1 tank and M2/M3 Bradley. Each mobile platoon set is a self-contained system housed and transported in four or five climate controlled 48' or 53' foot trailers. A trailer contains two (2) combat crew manned module (MM) simulator, a Semi-Automated Forces workstation suite, an (AAR) system and briefing space, a 350 Kw generator and power conditioner, and a small repair area.

The workstations for the platoon leader and M1 and M2/M3 simulators are combat vehicle interior mock-ups which replicate, with high-precision, the form, fit, and function of the actual vehicle crew compartments – driver, loader, gunner and commander. Each station is equipped with most of the operational controls and indicators that are found in actual M1 and M2/M3 crew stations including the communication radios.

Each simulator is a stand-alone unit that networks with other simulators use a microprocessor based host computer, graphics imaging computer, sound system, and control and interface controller cards. Vehicles operate on a virtual terrain database that represents the area surrounding the National Training Center (Ft Irwin), Afghanistan East, Korea, Ft. Hood, Ft. Riley, Ft. Carson, Ft. Stewart, Ft. Bliss, Ft. Campbell, and Ft. Drum. During the exercise the interaction of indirect fire, close air support, resupply, repair, command posts, howitzers, mortars, and supply trucks are all simulated.

A SAF operator through a special computer interface, controls semi-automated forces (SAF) representing both adjacent and supporting friendly units as well as enemy units. The imposition of real-world limitations, such as fuel consumption, basic ammunition loads, expended ammunition, and reliability and maintenance of components further enhance realism.

Physical Information:

The tank platoon set consists of four M1A1 Simulators (16' 1" L x 14' 1" W x 10' 6" H; 3800lbs) in 2 trailers. Remaining two trailers contain Master Control Console, SAF, (AAR), maintenance console, power generator, and maintenance workspace.

The Bradley platoon set consists of four M2/M3 Simulators (16' 0" L x 14' 0" W x 10' 6" H; 3900lbs) in two trailers. – Master Control Console, SAF, AAR, maintenance console, power generator, and maintenance workspace.

Equipment Required, Not Supplied:

Combat Vehicle Crewman (CVC) helmets.
Personal Chemical Protective Equipment (if required by scenario).

Special Installation Requirements:

The (CCTT) mobile sets are designed to support U. S. Army National Guard unit training on weekends and at Annual Training at geographically dispersed sites. The sets are therefore required to be set-up, dismantled, and moved up to 40 times per year and must to be able to operate autonomously while supporting training.

[17-292/3/1](#)

NSN 6910-01-619-1477 (CCTT) Mobile M1A1 SA Variant Kit – M1A1 Situational Awareness SA is removable from the Manned Module (MM) and contains the Stabilized Commanders Weapon Station (SCWS) and the fire control system for the M1A1 SA simulation system and will replicate the capability for target acquisition, aiming and firing of the 120 mm main gun, 0.50 caliber machine gun, M240 machine gun and M250 smoke grenade launcher. The M1A1SA kit consists of: (1) Safe / Arm module (2) SCWS Control Handle (3) Remote Thermal sight module/display control module. (4) Driver's Viewer Enhancer (5) Driver's Rear View Sensor System (DRSS). These components, in combination with the other simulated systems, will provide the tank crew the capability to engage targets from both stationary and on the move positions with a precision that match real world results. The simulated fire control system will accurately incorporate sighting reticules and fire control models which will enable training precision gunnery techniques in a simulated battle field environment.

[17-292/3/2](#)

NSN 6910-01-619-1483 (CCTT) Mobile M1A2 (SEPV2) Variant Kit – The M1A2 System Enhancement Package Version 2 (SEPV2) is removable from the MM and contains the Common Remotely Operated Weapon System (CROWS) and Drivers Rearview Sensor System installed. These systems will have the capability for target sighting, aiming and firing of the 120mm

Main Gun, M240 Machine Gun, M2 .50 Cal. Machine Gun and M250 Smoke Grenade Launchers. The simulated fire control system will accurately incorporate sighting reticules and fire control models and will enable precision gunnery techniques in simulated battlefield environments. The Laser Range Finder and the FBCB2 will provide the capability for Far Target Designate.

[17-292/4/1](#)

NSN 6910-01-619-1492 (CCTT) Mobile M1A1 SA Hardwire – M1A1 Situational Awareness SA is hardwired to the Manned Module (MM) and contains the Stabilized Commanders Weapon Station (SCWS) and the fire control system. It will replicate the capability for target acquisition, aiming and firing of the 120 mm main gun, 0.50 caliber machine gun, M240 machine gun and M250 smoke grenade launcher. The M1A1 SA kit consists of: (1) Safe / Arm module (2) SCWS Control Handle (3) Remote Thermal sight module/display control module (4) Driver's Viewer Enhancer (5) Driver's Rearview Sensor System (DRSS).

These components in combination with the other simulated systems in the M1A1 SA (H/W) MM simulation system provide the tank crew the capability to engage targets from both stationary and on the move positions with a precision that match real world results. The simulated fire control system will accurately incorporate sighting reticules and fire control models which will enable training precision gunnery techniques in a simulated battle field environment.

[17-292/4/2](#)

NSN 6910-01-619-1338 (CCTT) Mobile M1A1 FEP Hardwire – The fire control system for the M1A1 Firepower Enhancement Program (FEP) simulation system will replicate the capability for target acquisition, aiming and firing of the main gun, 0.50 caliber machine gun, M240 7.62 mm coaxial machine gun and M250 smoke grenade launcher. The simulated fire control system components will replicate the operational equipment in both design and performance. The M1A1 FEP upgrade will be designed to include the SCWS to meet the Abrams tactical platform design. These components in combination with the other simulated systems in the M1A1 FEP simulation system will provide the tank crew the capability to engage targets from both stationary and on the move positions with a precision that matches real world results.

[17-292/5/1](#) **NSN 6910-01-619-1337** (CCTT) Mobile M2 (M3)/A3 CM/ED Variant Kit – The M2 (M3)/A3 Chassis Modernization / Embedded Diagnostics (CM/ED) Variant kit will be either an M2A3 or M3A3 vehicle, as determined during initialization by the Mission Control Commander. The difference between the M2A3 and the M3A3 is the mounted infantry, missile, and ammunition allocations. The fire control system for the M2/M3A3 simulation system replicates the ability for target acquisition, tracking, aiming, and firing of the M242 25 mm Automatic Gun, the Tube-launched, Optically-tracked, Wire-guided (TOW) weapon system, the M240C Machine Gun, and the M257 Smoke Grenade Launcher. CM/ED will include a new dashboard configuration and enhanced night vision, a Driver's Tactical Display (DTD) which replaces the Driver's Instrument Panel, a Driver's Switch and Indicator Panel (DSIP), and an Overlay Processor Video Switch, which allows the computer to output a digital dash overlay onto the DTD while also allowing the DTD to display other views.

[17-292/5/2](#) **NSN 6910-01-619-1336** (CCTT) Mobile M2A2 ODS SA Variant Kit – M2A2 Operations Desert Storm (ODS) improvements consist of off-the-shelf technology improvements that provide capabilities required for Force XXI Battle Command Brigade and Below (FBCB2) operations. and Eye-safe Laser Range Finder (ELRF), a Tactical Navigation System (TACNAV) which incorporates the Defense Advanced GPS Receiver (DAGR) a Digital Compass System (DCS), and a missile countermeasure device designed to defeat first-generation wire-guided missiles using an the thermal imaging system. The Situational Awareness (SA) is removable from the Manned Module (MM) and contains the Stabilized Commanders Weapon Station (SCWS) and the fire control system for the M2A2 SA simulation system will replicate the capability for target acquisition, aiming and firing of the M242 25 mm Automatic Gun, the Tube-launched, Optically-tracked, Wire-guided (TOW) weapon system, the M240C Machine Gun, and the M257 Smoke Grenade Launcher. These components in combination with the other simulated systems in the M2A2 ODSSA MM simulation system provide the tank crew the capability to engage targets

from a stationary positions with a precision that match real world results.

[17-292/5/3](#) (CCTT) Mobile M2 (M3)/A3 (CM/ED) (BFIST) Variant Kit – The Mobile M2 (M3)/A3 Chassis Modernization / Embedded Diagnostics (CM/ED) Bradley Fire Support Team (BFIST) Variant Kit will be either an M2A3 or M3A3 vehicle, as determined during initialization by the Mission Control Commander. CM/ED will include a new dashboard configuration and enhanced night vision, a Driver's Tactical Display (DTD) which replaces the Driver's Instrument Panel, a Driver's Switch and Indicator Panel (DSIP), and an Overlay Processor Video Switch, which allows the computer to output a digital dash overlay onto the DTD while also allowing the DTD to display other views. The BFIST system will provide the FIST HQs the capability of automation enhanced surveillance, target acquisition, target identification, tracking, designation, position location, and communications functionality while mounted. The system will provide the FIST the capability to automate the command and control functions requiring performance of the fire support planning, directing, controlling, and cross functional area coordination, as well as provide battlefield combat identification.

[17-292/6](#) **NSN 6120-01-619-1330** (CCTT) Mobile Trailer, Portable Power System; 350kW – Provides 350kW and contains five sets of cables and reels.

[17-292/7](#) **NSN 6120-01-619-1329** (CCTT) Mobile Trailer, Portable Power System; 350kW; Spread Axle – Provides 350 Kw and has five set of cables/reels. Exception – the axle length is different than the 17-292/6 version.

[17-292/8](#) **NSN 5895-01-619-1326** (CCTT) Mobile Operations Center, Trailer System/48 foot – This 48 foot trailer contains and transports all the Operations Center workstations and equipment.

[17-292/9](#) **NSN 6910-01-580-6106** (CCTT) Mobile Operations Center, Trailer System/53 foot – This 53 foot trailer contains and transports all the Operations Center workstations and equipment. Old DVC 71-03/3/1.

[17-292/10](#)

NSN 6910-01-581-5676 (CCTT) Mobile Theater After Action Review (MTAAR) – The MTAAR has an Environmental Control Unit mounted on the front of the trailer. Portions of the trailer side wall expand and support 4 projector screens. The remainder of the trailer is divided into a Control Room and has tiered theater seating for 40 persons. The trailer has hard points for mounting projectors, speakers, and electrical cabinets. Old DVC 71-03/5.

[17-292/11](#)

NSN 6910-01-619-1323 (CCTT) Mobile Theater After Action Review/AVCATT – The MTAAR interfaces with the AVCATT during exercises and has an Environmental Control Unit mounted on the front of the trailer. Portions of the trailer side wall expand and support 4 projector screens. The remainder of the trailer is divided into a Control Room and has tiered theater seating for 40 persons. The trailer has hard points for mounting projectors, speakers, and electrical cabinets.

[17-292/12](#)

NSN 6930-01-576-4027 (CCTT) Mobile Reconfigurable Vehicle Simulator (with weapons) – The RVS (Reconfigurable Vehicle Simulator) will provide mounted leaders with a virtual training simulator, which will emulate selected combat and tactical vehicles of combat, combat support, and combat service support. Built around the (CCTT) HMMWV simulator, it will provide the crew members the ability to see the battlefield in 3-dimensions from their crew position point of view, maneuver on the battlefield, utilize available weapon systems and communicate via simulated voice and digital communications systems to other leaders/crew members within the exercise. Wheeled vehicles being simulated include several variants of HMMWV and HEMTT and the Family of Medium Tactical Vehicles. Ring Mount weapons include .50 cal, MK-19, M240 and the M249 SAW. Crew weapons include M4, M9 and AT4.

Power Requirements:

480vac, 3-phase, 60 Hz

Reference Publications:

SMM 71-6920-917-24 Manned Maintenance Manual/(SMM)
Reconfigurable Vehicle Tactical Trainer

(RVTT) Reconfigurable Vehicle Simulator (RVS)

OUM 71-6920-917-10 Manned Operator's Guide/(OUM) Reconfigurable Vehicle Tactical Trainer (RVTT)
Reconfigurable Vehicle Simulator (RVS)

Training Requirements Supported:

MOSC 11; 19-Series

[17-292/12/1](#)

NSN 6910-01-619-1334 (CCTT) Mobile RVS M978/M977 WAGO Kit – The M977 (Cargo Truck-10 Ton), M978 (Fuel Truck-10 Ton) and CREW-2 are the HEMTT kits and the HMMWV kits are the M998 (Cargo/Troop-1-1/4 Ton) and M1026 (Armament Carrier) for the RVS. WAGO is the replacement for the Programmable Interface Electronics (PIE). Kit parts to be added to the RVS could number between 4 and 16 parts or be a software configuration change. See the CCTT Baseline Document.

[17-292/12/2](#)

NSN 6910-01-619-1654 (CCTT) Mobile RVS M978/M1026 PIE Kit – The M998 (Cargo/Troop 1-1/4 Ton) and M1026 (Armament Carrier) are the HEMTT Programmable Interface Electronics (PIE) kits and the M977 (Cargo-10 Ton) and M978 (Fuel- 10 Ton) are the HEMTT PIE kits. These kits are made up of parts ranging from 2 to 12 parts or a change to the software configuration, see the CCTT Baseline Document.

[17-292/13](#)

NSN 6910-01-582-5544 (CCTT) Mobile Reconfigurable Vehicle Support Semitrailer – This is the old 71-03/8 (RVSS) Semitrailer.

Purpose of Trainer:

Provide operators and maintainers maintenance and storage support for the equipment they work on (Reconfigurable Vehicle System) (RVS)

Functional Description:

Reconfigurable Vehicle Simulator Support Semitrailer (RVSS) is 53 ft long, 102 in wide, 162 in high trailer. The Environmental Control Unit is mounted on the front of the trailer. The Fire Detection System (FDS) includes a Fenwel FP-D Panel that requires interconnection with and Operation Center (OC) trailer and or fixed site equipped with a Fenwal Fire Alarm Control panel. This trailer is meant to serve as storage and transport for the kits, weapons, screens and RVS trailer support items that service a group of up to three (3) RVS trailers.

Physical Information:

53 ft long, 102 in wide, 162 in high trailer.
Part number (57039) 120443-90.

Equipment Required, Not Supplied:

RVS System

Special Installation Requirements:

CCTT RVS Mobile installation and set up.

Power Requirements:

Requires interconnection with an Operation Center (OC) trailer and/or fixed site.

Applicable Publications:

TD 17-6930-701 series

Reference Publications:

None

Device 17-292 was previously assigned as DVC 71-03, and ALL devices Variants in this template.

DVC 17-291 template will not have an NSN assigned as this is the main trainer heading containing various Variants and not necessarily a part of the trainer.

Training Requirements Supported:

MOSC 11; 18; 19-Series

CLOSE COMBAT TACTICAL TRAINER (CCTT) M1A1-SA, MOBILE TRAILER (MOB)

**Training Category/Level Utilized:**

Armor/Level I

Mechanized Infantry/ Level 1

Logistic Responsible Command, Service, or Agency:

TSS ENTERPRISE

Source and Method of Obtaining:

Not generally available for issue (limited distribution).

Purpose of Trainer:

To provide a realistic, virtual, collective (unit) training environment in which to train and sustain proficiency in tank and Bradley platoon Mission Training Plan (MTP) tasks. The primary tasks supported include command and control, maneuver/movement techniques, and fire support. All tasks are performed by full combat vehicle crews within a stressful, fully task loaded synthetic combined arms environment in which the training audience must integrate the functions of combat and combat service support.

Functional Description:

The (CCTT) Mobile Series consists of two types of platoon sets i.e. M1A1 tank and M2/M3 Bradley. Each mobile platoon set is a self-contained system housed and transported in four or five climate controlled 48' (or 53') trailers. The trailers house 4 combat crew manned module simulators, a Semi-Automated Forces (SAF) workstation suite, an After Action Review (AAR) system/workstation and briefing space, a 350 Kw or 500 Kw generator and power conditioner (optional), and a repair facility (trailer).

The M1 and M2/M3 simulators are combat vehicle interior mock-ups which replicate, with high-precision, the form, fit, and function of the actual vehicle crew compartments – driver, loader, Fire Support Officer (FSO), gunner and commander. Each station is equipped with most of the operational controls and indicators that are

found in actual M1 and M2/M3 crew stations. Each simulator is a stand-alone unit that networks with other simulators using a host computer, image generator, sound system, and voice communication system. Exercises take place in areas such as the National Training Center (Ft Irwin), an area of Central Germany, Korea, Ft Hood,



Grafenwoehr, Ft. Riley, Ft Carson, Ft. Stewart, Pinon Canyon or Baghdad using terrain databases. During an exercise, the interaction of indirect fire, close air support, resupply, repair, command posts, howitzers, mortars, and supply trucks are all simulated.

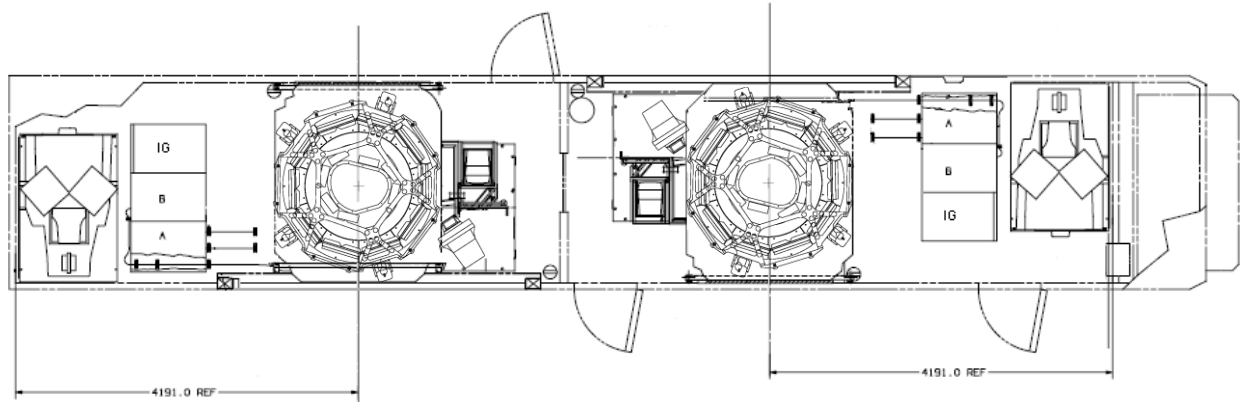
A SAF operator through a special computer interface controls semi-automated forces (SAF) representing both adjacent and supporting friendly units as well as enemy units. The imposition of real-world limitations, such as fuel consumption, basic ammunition loads, expended ammunition, and reliability and maintenance of components further enhance realism.

Each M1A1 SA (Situation Awareness) Trailer contains two M1A1 SA Manned Modules (MMs) with a Stabilized Commanders Weapon Station (SCWS), Driver's Viewer Enhancer (DVE) and Driver's Rear View Sensor System (DRSS). The fire control system for the M1A1 SA simulation system replicates the capability for target acquisition, aiming and firing of the main gun, 50 caliber machine gun and M240 machine gun. These components, in combination with the other simulated systems, will provide the tank crew the capability to engage targets from both stationary and on the move positions with a precision that match real world results.

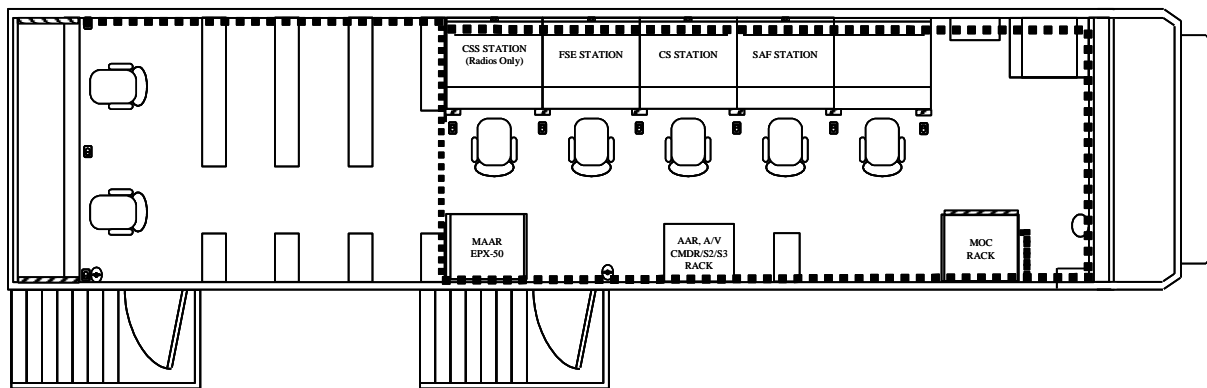
Physical Information:

The tank platoon set consists of four M1A1 Simulators (16' 1" L x 14' 1" W x 10' 6" H; 3800lbs) in 2 trailers. Remaining two trailers contain Master Control Console,

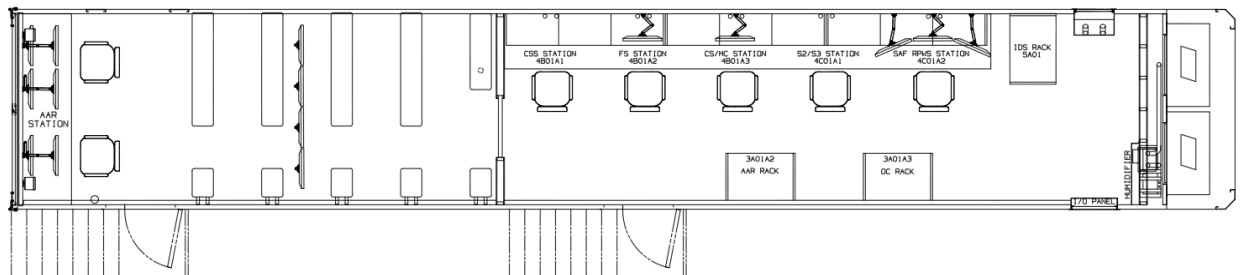
SAF, After Action Review, maintenance console, power generator, and maintenance workspace.



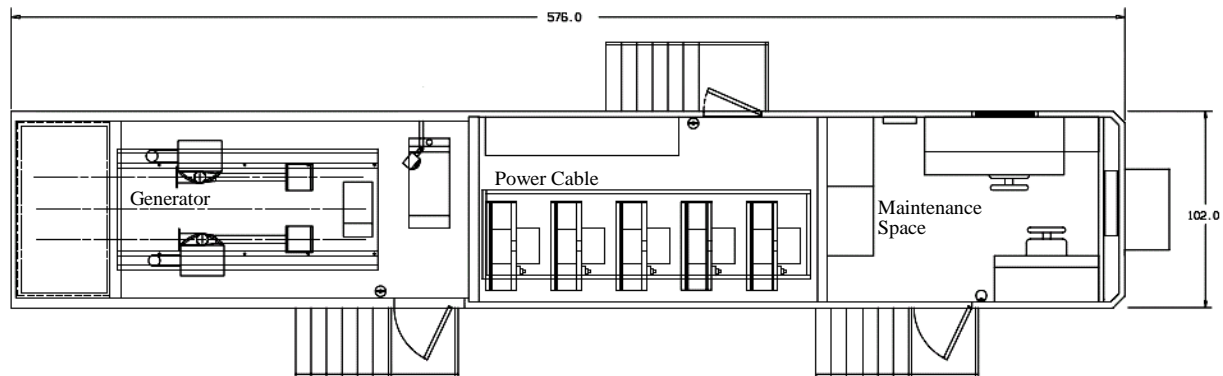
M1/M2 Trailer Layout



48 ft long Mobile OC Trailer Layout



53 ft long Mobile OC Trailer Layout



PPS Trailer Layout

Equipment Required, Not Supplied:

Combat Vehicle Crewman (CVC) helmets.
Personal Chemical Protective Equipment (if required by scenario).

Special Installation Requirements:

The (CCTT) mobile sets are designed to support U. S. Army National Guard unit training on weekends and at Annual Training at geographically dispersed sites. The sets are therefore required to be set-up, dismantled, and moved up to 40 times per year and must be able to operate autonomously while supporting training.

Power Requirements:

480vac, 3-phase, 60 Hz (CONUS).
380vac, 3-phase, 50 Hz (OCONUS).

Applicable Publications:

(CCTT) Facilitator's Guide – Mobile Set, CFG2-02
TD 17-6930-702, Maintenance Manual

Reference Publications:

OUM 17-6920-930-10 15 February 2018 Technical Manual Operator User's Manual for Close Combat Tactical Trainer Fixed and Mobile (combined) Operator's User Manual (OUM)
SMM 17-6920-930-24&P 15 February 2018 Technical Manual Field and Sustainment Maintenance Manual for Close Combat Tactical Trainer Fixed and Mobile (combined) System Maintenance Manual (SMM)

Training Requirements Supported:

MOSC 11 and 19-Series

CLOSE COMBAT TACTICAL TRAINER (CCTT) M1A1 SEPv2, MOBILE TRAILER (MOB)

**Training Category/Level Utilized:**

Armor/Level I

Mechanized Infantry/ Level 1

Logistic Responsible Command, Service, or Agency:

TSS ENTERPRISE

Source and Method of Obtaining:

Not generally available for issue (limited distribution).

Purpose of Trainer:

To provide a realistic, virtual, collective (unit) training environment in which to train and sustain proficiency in tank and Bradley platoon Mission Training Plan (MTP) tasks. The primary tasks supported include command and control, maneuver/movement techniques, and fire support. All tasks are performed by full combat vehicle crews within a stressful, fully task loaded synthetic combined arms environment in which the training audience must integrate the functions of combat and combat service support.

Functional Description:

The (CCTT) Mobile Series consists of two types of platoon sets i.e. M1A1 tank and M2/M3 Bradley. Each mobile platoon set is a self-contained system housed and transported in four or five climate controlled 48' (or 53') trailers. The trailers house 4 combat crew manned module simulators, a Semi-Automated Forces (SAF) workstation suite, an After Action Review (AAR) system/workstation and briefing space, a 350 Kw or 500 Kw generator and power conditioner (optional), and a repair facility (trailer).

The M1 and M2/M3 simulators are combat vehicle interior mock-ups which replicate, with high-precision, the form, fit, and function of the actual vehicle crew compartments – driver, loader, Fire Support Officer (FSO), gunner and commander. Each station is equipped with most of the operational controls and indicators that are

found in actual M1 and M2/M3 crew stations. Each simulator is a stand-alone unit that networks with other simulators using a host computer, image generator, sound system, and voice communication system. Exercises take place in areas such as the National Training Center (Ft Irwin), an area of Central Germany, Korea, Ft Hood,



Grafenwoehr, Ft. Riley, Ft Carson, Ft. Stewart, Pinon Canyon or Baghdad using terrain databases. During an exercise, the interaction of indirect fire, close air support, resupply, repair, command posts, howitzers, mortars, and supply trucks are all simulated.

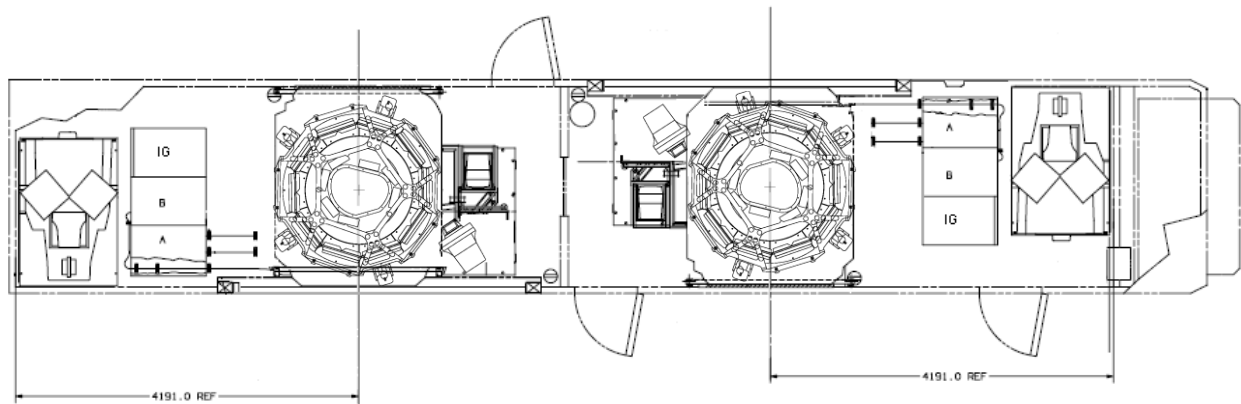
A SAF operator through a special computer interface controls semi-automated forces (SAF) representing both adjacent and supporting friendly units as well as enemy units. The imposition of real-world limitations, such as fuel consumption, basic ammunition loads, expended ammunition, and reliability and maintenance of components further enhance realism.

Each M1A2 SEPv2 Trailer contains two M1A2 SEPv2 Manned Modules (MMs) with a Common Remotely Operated Weapon System (CROWS) and Drivers Rearview Sensor System. The M1A2 SEPv2 has the capability for target sighting, aiming and firing of the 120mm Main Gun, M240 Machine Gun and M2 .50 Cal. Machine Gun. The simulated fire control system accurately incorporates sighting reticles and fire control models and enables precision gunnery techniques in simulated battlefield environments. The Laser Range Finder and the FBCB2 will provide the capability for Far Target Designate.

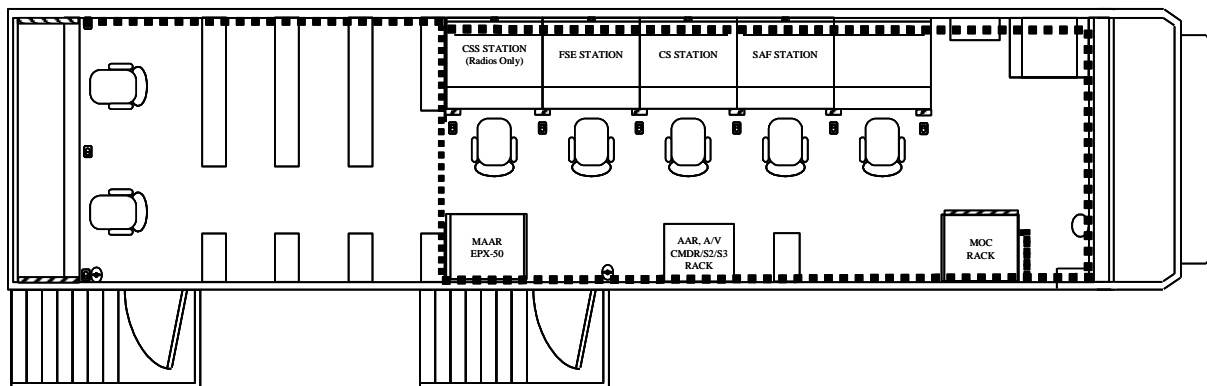
Physical Information:

The tank platoon set consists of four M1A2 SEPv2 Simulators (16' 1" L x 14' 1" W x 10' 6" H; 3800lbs) in 2

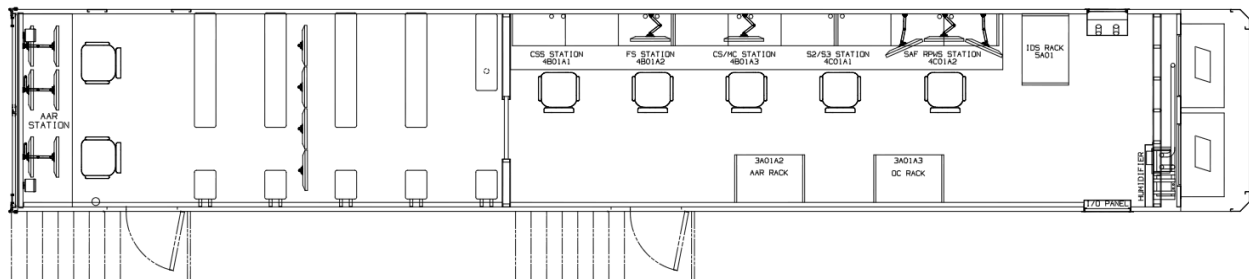
trailers. Remaining two trailers contain Master Control Console, SAF, After Action Review, maintenance console, power generator, and maintenance workspace.



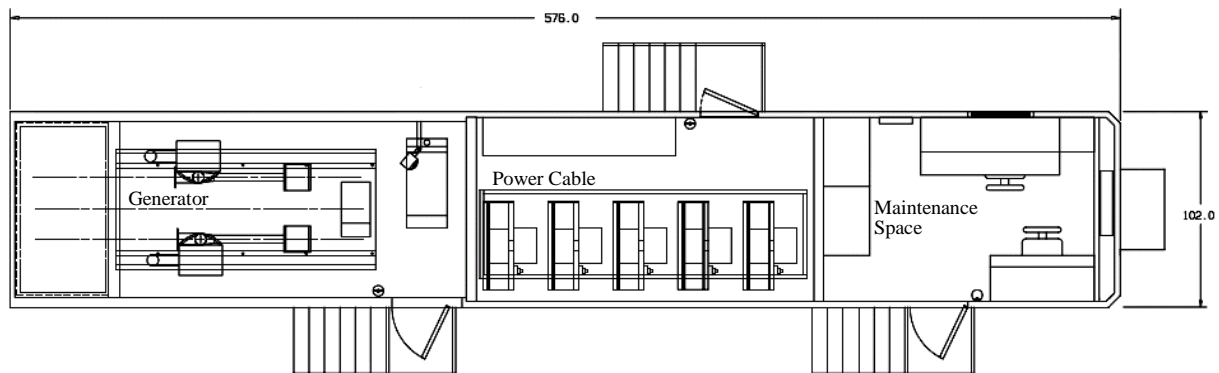
M1/M2 Trailer Layout



48 ft long Mobile OC Trailer Layout



53 ft long Mobile OC Trailer Layout



PPS Trailer Layout

Equipment Required, Not Supplied:

Combat Vehicle Crewman (CVC) helmets.
Personal Chemical Protective Equipment (if required by scenario).

Special Installation Requirements:

The (CCTT) mobile sets are designed to support U. S. Army National Guard unit training on weekends and at Annual Training at geographically dispersed sites. The sets are therefore required to be set-up, dismantled, and moved up to 40 times per year and must be able to operate autonomously while supporting training.

Power Requirements:

480vac, 3-phase, 60 Hz (CONUS).
380vac, 3-phase, 50 Hz (OCONUS).

Applicable Publications:

(CCTT) Facilitator's Guide – Mobile Set, CFG2-02
TD 17-6930-702, Maintenance Manual

Reference Publications:

OUM 17-6920-930-10 15 February 2018 Technical Manual Operator User's Manual for Close Combat Tactical Trainer Fixed and Mobile (combined) Operator's User Manual (OUM)
SMM 17-6920-930-24&P 15 February 2018 Technical Manual Field and Sustainment Maintenance Manual for Close Combat Tactical Trainer Fixed and Mobile (combined) System Maintenance Manual (SMM)

Training Requirements Supported:

MOSC 11 and 19-Series

CLOSE COMBAT TACTICAL TRAINER (CCTT) M2/M3A2-ODS-SA, MOBILE TRAILER (MOB)

**Training Category/Level Utilized:**

Armor/Level I

Mechanized Infantry/ Level 1

Logistic Responsible Command, Service, or Agency:

TSS ENTERPRISE

Source and Method of Obtaining:

Not generally available for issue (limited distribution).

Purpose of Trainer:

To provide a realistic, virtual, collective (unit) training environment in which to train and sustain proficiency in tank and Bradley platoon Mission Training Plan (MTP) tasks. The primary tasks supported include command and control, maneuver/movement techniques, and fire support. All tasks are performed by full combat vehicle crews within a stressful, fully task loaded synthetic combined arms environment in which the training audience must integrate the functions of combat and combat service support.

Functional Description:

The (CCTT) Mobile Series consists of two types of platoon sets i.e. M1A1 tank and M2/M3 Bradley. Each mobile platoon set is a self-contained system housed and transported in four or five climate controlled 48' (or 53') trailers. The trailers house 4 combat crew manned module simulators, a Semi-Automated Forces (SAF) workstation suite, an After Action Review (AAR) system/workstation and briefing space, a 350 Kw or 500 Kw generator and power conditioner (optional), and a repair facility (trailer).

The M1 and M2/M3 simulators are combat vehicle interior mock-ups which replicate, with high-precision, the form, fit, and function of the actual vehicle crew compartments – driver, loader, Fire Support Officer (FSO), gunner and commander. Each station is equipped with most of the operational controls and indicators that are

found in actual M1 and M2/M3 crew stations. Each simulator is a stand-alone unit that networks with other simulators using a host computer, image generator, sound system, and voice communication system. Exercises take place in areas such as the National Training Center (Ft Irwin), an area of Central Germany, Korea, Ft Hood, Grafenwoehr, Ft. Riley, Ft Carson, Ft. Stewart, Pinon Canyon or Baghdad using terrain databases. During an exercise, the interaction of indirect fire, close air support, resupply, repair, command posts, howitzers, mortars, and supply trucks are all simulated.

A SAF operator through a special computer interface controls semi-automated forces (SAF) representing both adjacent and supporting friendly units as well as enemy units. The imposition of real-world limitations, such as fuel consumption, basic ammunition loads, expended ammunition, and reliability and maintenance of components further enhance realism.



The M2/M3A2 ODS SA is a reconfigurable Manned Module (MM). The difference between the M2A3 and the M3A3 is the mounted infantry, missile, and ammunition allocations. The module replicates the tactical vehicle's interior of the turret, driver and squad leader compartments.

It replicates the instrumentation, functionality, weapons systems and capabilities of the M2/M3 A2 ODS SA, to

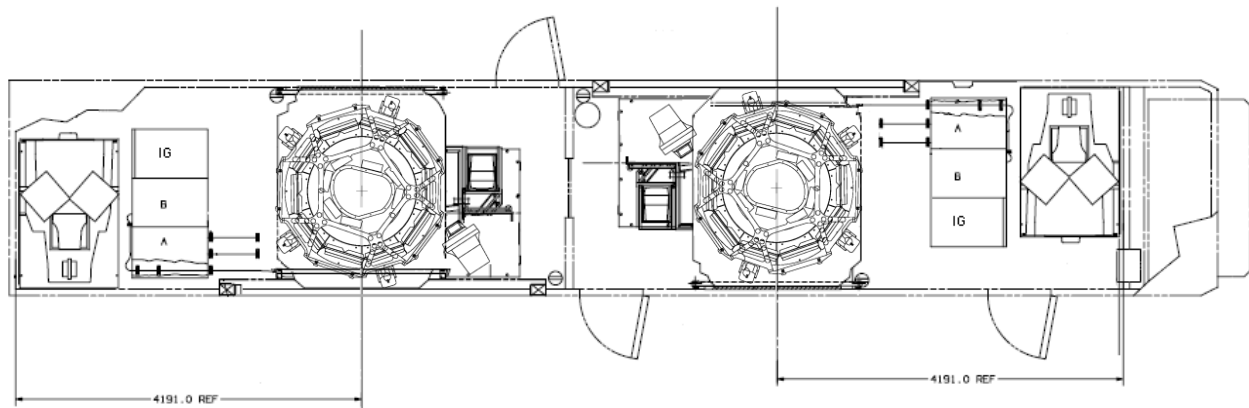
include the indicators and controls used by the gunner, commander and squad leader. It uses an Image Generator system to display visuals in all of the vehicle displays or periscopes. The fire control system for the M2/M3 A2

ODS SA simulation system replicates the ability for target acquisition, tracking, aiming, and firing of the M242 25 mm Automatic Gun, the Tube-launched, Optically-tracked,

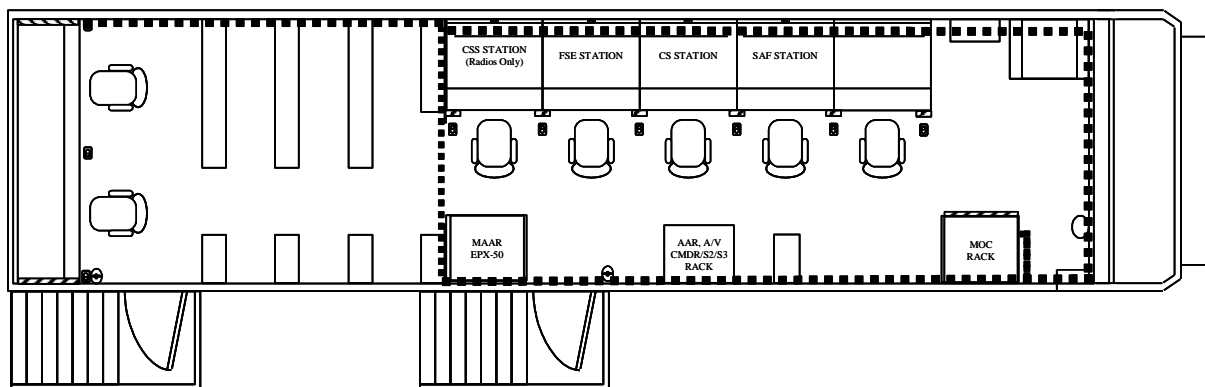
Wire-guided (TOW) weapon system, the M240C Machine Gun, and the M257 Smoke Grenade Launcher.

Physical Information:

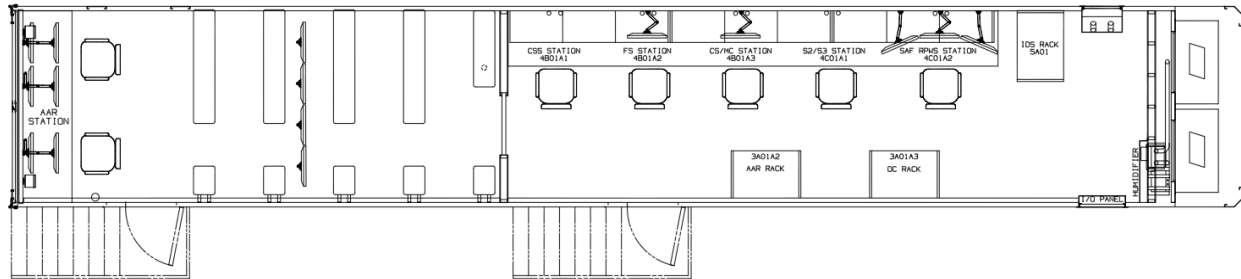
The Bradley platoon set consists of four M2/M3 Simulators (16' 0" L x 14' 0" W x 10' 6" H; 3900lbs) in two trailers. Master Control Console, SAF, AAR, maintenance console, power generator, and maintenance workspace.



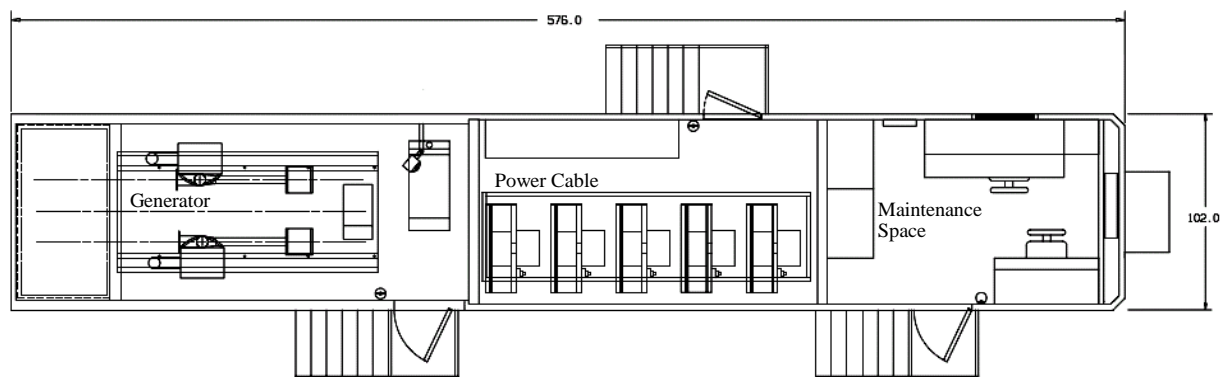
M1/M2 Trailer Layout



48 ft long Mobile OC Trailer Layout



53 ft long Mobile OC Trailer Layout



PPS Trailer Layout

Equipment Required, Not Supplied:

Combat Vehicle Crewman (CVC) helmets.
Personal Chemical Protective Equipment (if required by scenario).

Special Installation Requirements:

The (CCTT) mobile sets are designed to support U. S. Army National Guard unit training on weekends and at Annual Training at geographically dispersed sites. The sets are therefore required to be set-up, dismantled, and moved up to 40 times per year and must be able to operate autonomously while supporting training.

Power Requirements:

480vac, 3-phase, 60 Hz (CONUS).
380vac, 3-phase, 50 Hz (OCONUS).

Applicable Publications:

(CCTT) Facilitator's Guide – Mobile Set, CFG2-02
TD 17-6930-702, Maintenance Manual

Reference Publications:

OUM 17-6920-930-10 15 February 2018 Technical Manual Operator User's Manual for Close Combat Tactical Trainer Fixed and Mobile (combined) Operator's User Manual (OUM)
SMM 17-6920-930-24&P 15 February 2018 Technical Manual Field and Sustainment Maintenance Manual for Close Combat Tactical Trainer Fixed and Mobile (combined) System Maintenance Manual (SMM)

Training Requirements Supported:

MOSC 11 and 19-Series

CLOSE COMBAT TACTICAL TRAINER (CCTT) M2/M3 A3, MOBILE TRAILER (MOB)

**Training Category/Level Utilized:**

Armor/Level I

Mechanized Infantry/ Level 1

Logistic Responsible Command, Service, or Agency:

TSS ENTERPRISE

Source and Method of Obtaining:

Not generally available for issue (limited distribution).

Purpose of Trainer:

To provide a realistic, virtual, collective (unit) training environment in which to train and sustain proficiency in tank and Bradley platoon Mission Training Plan (MTP) tasks. The primary tasks supported include command and control, maneuver/movement techniques, and fire support. All tasks are performed by full combat vehicle crews within a stressful, fully task loaded synthetic combined arms environment in which the training audience must integrate the functions of combat and combat service support.

Functional Description:

The (CCTT) Mobile Series consists of two types of platoon sets i.e. M1A1 tank and M2/M3 Bradley. Each mobile platoon set is a self-contained system housed and transported in four or five climate controlled 48' (or 53') trailers. The trailers house 4 combat crew manned module simulators, a Semi-Automated Forces (SAF) workstation suite, an After Action Review (AAR) system/workstation and briefing space, a 350 Kw or 500 Kw generator and power conditioner (optional), and a repair facility (trailer).

The M1 and M2/M3 simulators are combat vehicle interior mock-ups which replicate, with high-precision, the form, fit, and function of the actual vehicle crew

compartments – driver, loader, gunner and commander. Each station is equipped with most of the operational controls and indicators that are found in actual M1 and M2/M3 crew stations. Each simulator is a stand-alone unit that networks with other simulators using a host computer, image generator, sound system, and voice communication system. Exercises take place in areas such as the National Training Center (Ft Irwin), an area of Central Germany, Korea, Ft Hood, Grafenwoehr, Ft. Riley, Ft Carson, Ft. Stewart, Pinon Canyon or Baghdad using terrain databases. During an exercise, the interaction of indirect fire, close air support, resupply, repair, command posts, howitzers, mortars, and supply trucks are all simulated.



A SAF operator through a special computer interface controls semi-automated forces (SAF) representing both adjacent and supporting friendly units as well as enemy units. The imposition of real-world limitations, such as fuel consumption, basic ammunition loads, expended ammunition, and reliability and maintenance of components further enhance realism.

The M2/M3 A3 CM/ED BFIST (Bradley Fire Support Team Vehicle) replicates the tactical vehicle's interior of the turret, driver and squad leader compartments. It replicates the instrumentation, functionality, weapons systems and capabilities of the M2/M3 A3 CM/ED BFIST to include the indicators and controls used by the gunner, commander and

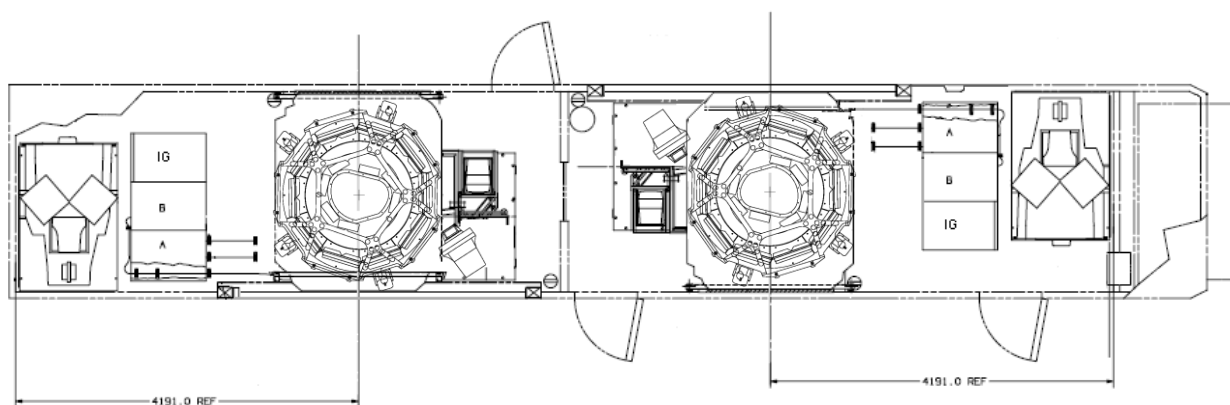
squad leader. It uses an Image Generator system to display visuals in all of the vehicle displays or periscopes. The fire control system for the M2/M3vA3 CM/ED BFIST simulation system replicates the ability for target acquisition, tracking, aiming, and firing of the M242 25 mm Automatic Gun, the M240C Machine Gun, and the M257 Smoke Grenade Launcher. The BFIST module replicates the FS3 (Fire Support Sensor System) installed in the M2/M3 A3 CM/ED BFIST tactical vehicles.

The BFIST w/FS3 system provides the FIST HQs the capability of automated enhanced surveillance, target acquisition, target identification, tracking, designation, position location, and communications functionality while

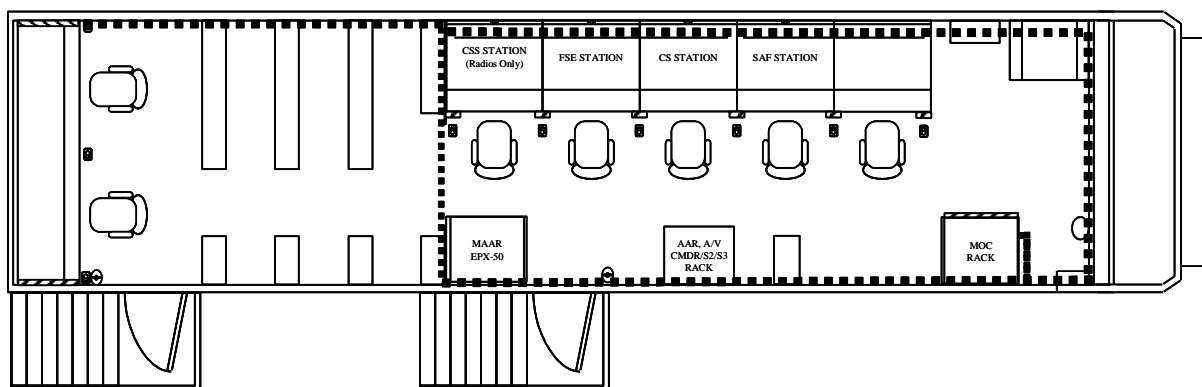
mounted. The system provides the FIST the capability to automate the command and control functions requiring performance of the fire support planning, directing, controlling, and cross functional area coordination's, as well as provide battlefield combat identification.

Physical Information:

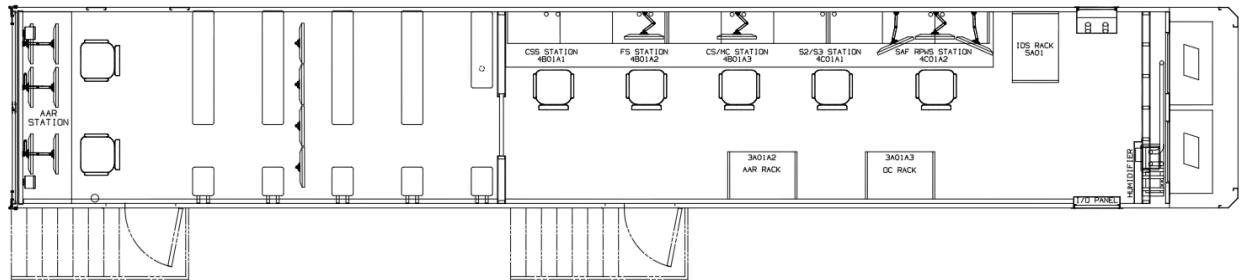
The Bradley platoon set consists of four M2/M3 Simulators (16' 0" L x 14' 0" W x 10' 6" H; 3900lbs) in two trailers. Master Control Console, SAF, AAR, maintenance console, power generator, and maintenance workspace.



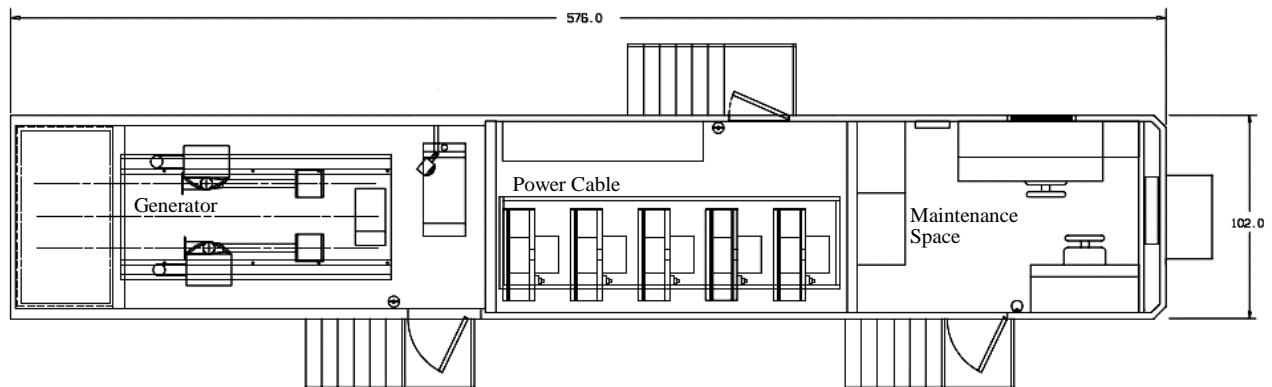
M1/M2 Trailer Layout



48 ft long Mobile OC Trailer Layout



53 ft long Mobile OC Trailer Layout



PPS Trailer Layout

Equipment Required, Not Supplied:

Combat Vehicle Crewman (CVC) helmets.
 Personal Chemical Protective Equipment (if required by scenario).

Special Installation Requirements:

The (CCTT) mobile sets are designed to support U. S. Army National Guard unit training on weekends and at Annual Training at geographically dispersed sites. The sets are therefore required to be set-up, dismantled, and moved up to 40 times per year and must to be able to operate autonomously while supporting training

Power Requirements:

480vac, 3-phase, 60 Hz (CONUS).
 380vac, 3-phase, 50 Hz (OCONUS).

Applicable Publications:

(CCTT) Facilitator's Guide – Mobile Set, CFG2-02
 TD 17-6930-702, Maintenance Manual

Reference Publications:

OUM 17-6920-930-10 15 February 2018 Technical Manual Operator User's Manual for Close Combat Tactical Trainer Fixed and Mobile (combined) Operator's User Manual (OUM)
 SMM 17-6920-930-24&P 15 February 2018 Technical Manual Field and Sustainment Maintenance Manual for Close Combat Tactical Trainer Fixed and Mobile (combined) System Maintenance Manual (SMM)

Training Requirements Supported:

MOSC 11 and 19-Series

COMMON THRU-SIGHT VIDEO-CREW MODULE UNIT RECORDER (CTSV-CMUR) KIT



Two Each Crew Module Unit Recorder Transit Case



Four Each Vehicle Accessory Cases

Training Category/Level Utilized:
Armor/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC at Depot Louisville KY, Ft. Benning GA, Ft. Bliss TX, Rodriguez Live Fire Complex, Korea, Ft. Stewart GA, Ft. Carson CO, Ft. Hood TX, Ft. McCoy WI, Ft. Lewis WA, Gowen Field ID, Ft. Knox KY, Ft. Campbell KY, Grafenwoehr, Germany, Ft. Indiantown Gap, PA, Ft. Bragg NC, Ft. Sill, OK, Ft. Riley KS, Ft. Irwin CA, Camp Shelby MS

Purpose of Trainer:

The Common Thru-Sight Video Crew Module Unit with Recorder (CTSV-CMUR) provides the capability to track, monitor and record the vehicle's time & position, audio, video and digital training data. The recorded data is used to



Crew Module Unit Recorder (CMUR)



Encoder

supports training data analysis, preparation, presentation and feedback for After Action Review (AARs).

Functional Description:

The CMUR is designed to collect audio, video, and sensory data during training operations. The CMUR is able to connect up to eight video sources (4 12V Powered/4 Non-Powered), including a combination of crew cameras; weapons platform video signals; and any vehicle optics via the Thru-sight Cameras. The CMUR is also capable of recording up to eight audio channels (one per each video channel). The CMUR records the audio, video, and data during the training event for later transfer to the After Action Review (AAR)/Take Home Package (THP) Laptop using a removable hard drive.

Physical Information:

Processor: Inter Core 2 Duo (Penryn)
Aux Power: 12VDC Output @ 500 mA max

Equipment Required, Not Supplied:

None



One Startech Drive Bay



AAR Laptop



IPUR-VAC-TS



IPUR-CMUR/BMUE-TS-CSE

Special Installation Requirements:

Equipment is issued as a Kit.

Power Requirements:

Standard Vehicle 24VDC bus (10-36 VDC range)
2 Amps at 24VDC/48Watts

Applicable Publications:

OUM-71-6920-924-10
SMM 71-6920-924-24&P

Reference Publications:

(Information not available)

Training Requirements Supported:

MOSC 19K

AFTER ACTION REVIEW (AAR) LAPTOP ACCESSORY KIT



Kit Accessories (see Physical Information)

Training Category/Level Utilized:

Armor/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The AAR/THP Laptop is a Dell Latitude E6420 XFR ruggedized laptop, which is used to create the AAR Presentation and THP disk. Using a 4 Bay Docking Station or a USB 3.0 to SATA cable, the removable CMUR hard drive is connected to the AAR/THP laptop. Using the 4 Bay Docking Station, the AAR/THP laptop is able to pull in data from four separate hard drives simultaneously. Using the USB 3.0 to SATA cable, only one hard drive can be connected at a time; however, the data can be pulled from a hard drive without the need for a power source.

Functional Description:

The Sight software loads video, audio, and 1553 data for the time segment contained in the replay slide metadata. Data from all attached storage devices are incorporated in the AAR and viewed using appropriate Video Display Panel (VDP) layouts. The recording software stores all data in a manner that may be quickly accessed and utilized by the AAR presentation software following a strict directory structure. The Sight software also supplies the ability to include a IPU Data Viewer as a VDP source. The IPU Data Viewer will replay recorded 1553 data time synchronized with the recorded video and audio sources. The user will be

able to interact with the IPU Data Viewer like any other player unit video source. Replay controls are provided that allows the user to play, pause, stop, change replay speed, change layout, and add bookmarks.

Using the (AAR)/Take Home Package (THP) laptop, the collected data can be accessed. The Startech 4 Bay Docking Station allows four drives to be connected simultaneously. Once the drive is accessed, the data can be used to create an AAR presentation.

AAR Presentation. The AAR Presentation Software uses GPS time tagged video, audio, and 1553 data to compile and create a PowerPoint presentation. The data collected by the CMUR is stored on the removable Solid State Drive (SSD). The user is able to read the data by connecting the hard drive to the Startech 4 Bay Docking Station. The CMUR AAR PowerPoint Plug-in is able to use templates to generate slides which consist of both user generated and Sight software data. During a presentation, the user is able to interact with the Sight software which loads audio, video, and 1553 data for the time segment designated in the slide. If more than one hard drive is being used for the presentation, data from each attached hard drive is collected and used during the presentation.

THP Generation. The THP Generation tool creates an HTML page containing audio, video, and 1553 data for selected time periods. The THP tool also includes the generated AAR PowerPoint presentation which is launched by selecting HTML links. The user is able to burn the THP to a DVD for later review and distribution.

Physical Information:

Components include Dell E6420 XFR 14.0 inch high definition (HD) AAR/THP Laptop, Startech Drivebay, USB 3.0 E-Modular Bay, Removable Optical Drive, Laptop Battery, SATA Wire to USB Cable, CAT 5 UPT Cable (Blue), Laptop Shoulder Strap, USB 3.0 Cable for Startech Drivebay, Dell Power Adapter, Startech Power Adapter, Dell eSATA cable.

Equipment Required, Not Supplied:

CTSV-CMUR Device 17-293 NSN 6920-01-618-4275

Special Installation Requirements:

N/A

Power Requirements:

Dell Battery Module for Laptop Battery (4-cell “smart” lithium ion

Applicable Publications:

OUM-71-6920-924-10
SMM 71-6920-924-24&P

Reference Publications:

N/A

Training Requirements Supported:

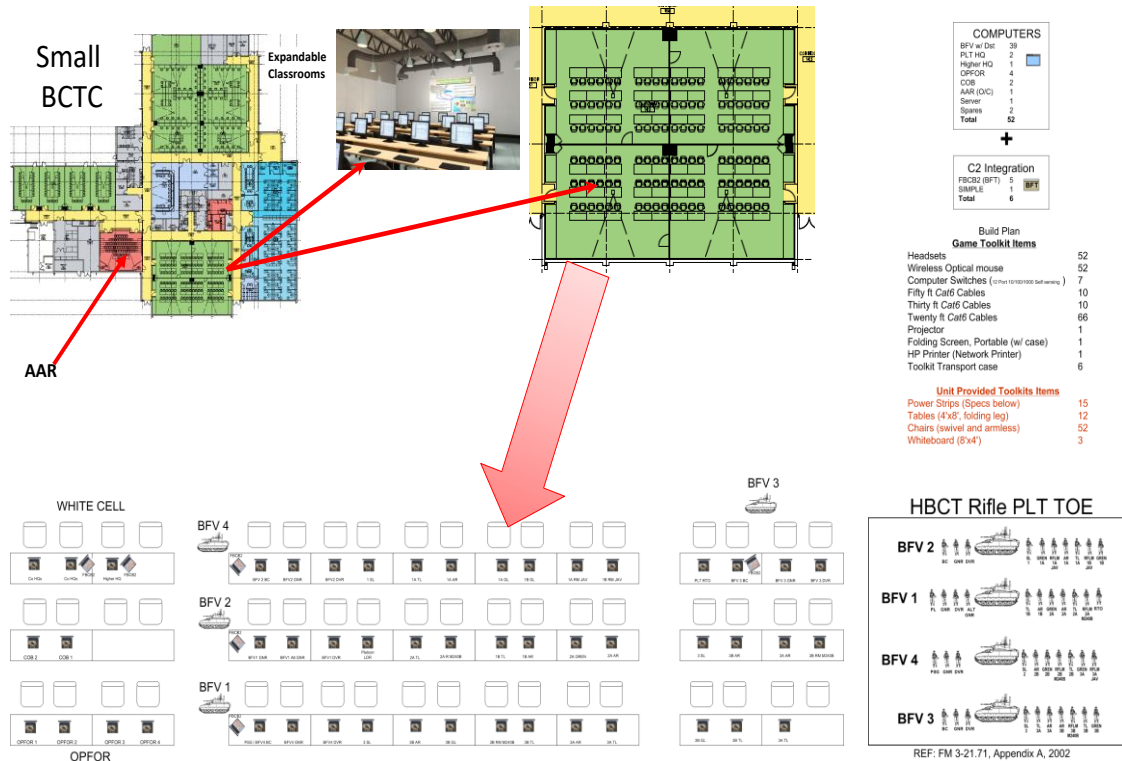
MOSC 19K

**BASIC SERIES 20
GENERAL**



GAMES FOR TRAINING (GFT)

Example Classroom Layout in a Small BCTC "A Way – not The Way"



Training Category/Level Utilized:
Communications/Electronics/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Not available through local TSC

Purpose of Trainer:

The U. S. Army Training and Doctrine Command (TRADOC) gaming training capability production document addresses the need to improve current Battalion (leaders & staff)/company & below, individual, collective, and multi-echelon training and fill training capability gaps caused by limited capability and availability of Training Aids, Devices, Simulations and Simulators (TADSS) and live training opportunities.

Gaming technology presents an immersive environment where training for a wide variety of individual and collective tasks and associated cognitive and commander-centric skills can occur. Gaming applications can provide the conditions to train tasks to enhance cultural awareness, language skills, Improvised Explosive Device (IED) recognition, and negotiation skills to name but a few.

The U. S. Army TRADOC concept for Gaming is not for the development, production, and fielding of a custom software package. Instead, the concept calls for an alternative, low cost training solution that leverages commercial and government off-the-shelf (COTS/GOTS) games and advanced simulation technology. Gaming technology is comprised of individual applications, each with unique characteristics that lend to improving an existing training capability or fill training capability gaps.

Functional Description:

The Games for Training Family of Systems utilizes (COTS) equipment and COTS/(GOTS) software training solutions. The system comes in a portable toolkit that includes hardware and software. The kit may be configured in a classroom environment with a server networked to multiple student stations with various ancillary equipment (headsets, steering wheels, head mounted displays, joysticks) or for individual training to support training on a variety of task, techniques and procedures.

Physical Information:

Each gaming system consists of 52 laptops with ancillary equipment (headsets, steering wheels, head mounted displays, and joysticks)

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None. The GFT may be configured in one classroom or multiple classrooms, depending on the needs of the installation.

Power Requirements:

Example of Power Requirements of the 52-laptop suite:

1. The power requirements for the 52 laptops with switches and steering wheel control is twelve 20 amp circuits or eight 30 amp circuits.
2. Based upon an average draw of 4 amps per laptop and 2.5 amps per switch.
3. This does not include HVAC/lighting/other power requirements.

This is the minimum requirement, and this should be used as a reference. The installation's Directorate of Public Works or similar directorate would have the correct requirements and coding for the building in which the GFT is installed.

Applicable Publications:

None

Reference Publications:

(COTS) Manuals

Training Requirements Supported:

Supports individual and collective Soldier and leader training. Gaming will help units meet training requirements and address the educational needs of the Army in the operational, institutional, and self-development domains. Could be used to train in any MOSC.

GAMES FOR TRAINING – STRYKER VIRTUAL COLLECTIVE TRAINER (GFT-SVCT)



Training Category/Level Utilized:
Communications/Electronic/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:
The U. S. Army Training and Doctrine Command (TRADOC) gaming training capability production document addresses the need to improve current Battalion (leaders & staff)/company & below, individual, collective, and multi-echelon training and fill training capability gaps caused by limited capability and availability of Training Aids, Devices, Simulations and Simulators (TADSS) and live training opportunities.

Functional Description:
The Games for Training Family of Systems utilizes Commercial-Off-The-Shelf (COTS) equipment and COTS/Government-Off-The Shelf (GOTS) software training solutions. The system comes in a portable toolkit

that includes hardware and software. The kit may be configured in a classroom environment with a server networked to multiple student stations with various ancillary equipment (headsets, steering wheels, head mounted displays, joysticks) or for individual training to support training on a variety of task, techniques and procedures.

Physical Information:
Each gaming system consists of 52 laptops with ancillary equipment (headsets, steering wheels, head mounted displays, and joysticks)

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
Example of Power Requirements of the 52-laptop suite:
1. The power requirements for the 52 laptops with switches and steering wheel control is twelve 20 amp circuits or eight 30 amp circuits.

2. Based upon an average draw of 4 amps per laptop and 2.5 amps per switch.

3. This does not include HVAC/lighting/other power requirements.

This is the minimum requirement, and this should be used as a reference. The installation's Directorate of Public Works or similar directorate would have the correct requirements and coding for the building in which the GFT is installed.

Applicable Publications:

Games For Training Instruction Guide.

Reference Publications:

Applicable COTS manuals

Training Requirements Supported:

Supports individual and collective Soldier and leader training. Gaming will help units meet training requirements and address the educational needs of the Army in the operational, institutional, and self-development domains. Could be used to train in any MOSC.

REMOTED TARGET SYSTEM (RETS) TARGET HOLDING MECHANISM TANK GUNNERY (THMTG)

**Training Category/Level Utilized:**

Armor/Level 3

Logistic Responsible Command, Service, or Agency:

ACALA

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

Target Holding Mechanism Tank Gunnery (THMTG) is a component of the Remote Target System (RETS) DVC 09-24. THMTG is also used in other training applications. THMTG supports the training of tank gunnery personnel in identifying and firing on hostile vehicles and personnel. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer consists of a transmitter, transmitter battery (nickel-cadmium), transmitter battery charger, receiver, electronic control assembly, hit sensor assembly, visual hit indicator, tank target mechanisms, tank target mechanism battery charger (lead-acid), and lead-acid battery. The transmitter is man-portable and transmits signals to the receiver. Housing the receiver is the tank target mechanism which, when activated by means of the electronic control unit, elevates and lowers the target. The target will automatically drop to the down position by means of the hit sensor assembly when struck. A visual hit indicator (12v 15 W lamp) is also activated when the target is struck. Provisions are included to permit a hostile fire indicator.

Physical Information:

Transmitter: 13" x 7" x 7"
Receiver: 5" x 6" x 7"
Tank target mechanism: 61" x 24" x 16"

Equipment Required, Not Supplied:

Silhouette targets

Special Installation Requirements:

None

Power Requirements:

Transmitter: 12vdc nickel-cadmium battery
Tank target mechanism: 12vdc lead-acid battery

Applicable Publications:

TM 9-6920-742-14-5
TM 9-6920-742-24P-5

Reference Publications:

FM 17-12 with supplements
DVC 20-92 was previously assigned as DVC 17-63.

Training Requirements Supported:

SM 171-121 Tasks
1008

SM 171-123 Tasks
1204 1354

SM 171-124 Tasks
1754 2055

SM 171-127 Tasks
1009 1389 1539 1555
1014 1395 1544 1778
1018 1397 1552 1781
1381 1521

SM 171-139 Tasks
1016 1017 1036 1038

M21 BLANK FIRING ATTACHMENT FOR M240 MACHINE GUN



Disassemble Parts

Training Category/Level Utilized:

Armor/Level 3

Logistic Responsible Command, Service, or Agency:

ACALA

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The M21 Blank Firing Attachment permits the firing of linked blank 7.62mm ammunition in the M240 Machine Gun. This allows simulation of live round firing in tactical engagement exercises to support tactical training.

Functional Description:

The M240 MG is gas operated, i.e.; gases behind the exiting bullet are bled off through ports in the barrel and this back pressure is used to cycle the weapon for continuous firing. The orifice in the M21 BFA is designed to duplicate that action by restricting blank firing gases and creating back pressure that will provide a cyclic rate similar to the rates experienced using service ammunition.

The M21 BFA for the M240 Machine Gun is designed to replace the Flash Hider on the weapon for training exercises. Of one-piece cast corrosion-resistant steel, the BFA design incorporates a specific sized orifice to restrict gases generated by blank firing just as a bullet passing through the barrel and a parabolic chamber to enhance the

aural signature of the weapon under blank firing conditions. Fins on the outer diameter of the BFA help dissipate heat buildup. The front end of the BFA is designed to accept installation of various extensions to insure expulsion of gases when the M240 MG/M21 BFA combination is used in the M60A1/A3 Tank, or M1/M1A1 MBT.

Physical Information:

Weight: Approximately 3 lb. (Each component)

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

TM 9-1005-316-12&P

Reference Publications:

TM 9-1005-313 Series

DVC was previously assigned as DVC 17-134.

Training Requirements Supported:

MOSC 11B; 19D; 19K

ARTILLERY, MINE, AND DEMOLITION NOISE SIMULATOR



Accessories

Training Category/Level Utilized:

Combat/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC.

Purpose of Trainer:

To provide realistic simulation of common battle noises.
Supports general basic training.

Functional Description:

The devices are noise simulators which can be used in all types of combat courses. They can be used to simulate the noise of artillery and mortar fire, demolition, and mines instead of high explosives in demolition pits. The device operates on the oxygen-propane principle with gases metered through solenoid valves with a timing device initiating a spark in the gas filled chamber to cause the explosion. A remote trigger switch is used to fire the device from a remote location and it can fire a single shot or a sequence of six shots at 10 second intervals. During normal firing, the device is safe at a distance of 10 feet.

Physical Information:

Firing Chamber Assembly: 24" x 24" x 32 1/2" high

Timing Box: 18" x 13" x 5 1/2" high

Total Weight: 125 lb.

Equipment Required, Not Supplied:

12vdc battery

Special Installation Requirements:

Two pits approximately 48" deep, 48" wide, and 48" long are required. One pit is used for the explosion chamber. The other pit is for the oxygen and propane cylinders and the timing assembly. The pits should be separated by at least one foot of earth and reinforced by 4" x 4" corner posts with 2" x 6"

sideboards to prevent the walls from collapsing due to the shock experienced when the device is detonated.

Power Requirements:

100vac, single-phase, 60 Hz. Can also be operated from 12vdc battery.

Applicable Publications:

NAVTRADEV P-4909, Operation and Maintenance Guide.

Reference Publications:

DVC was previously assigned as DVC 06-19/C.

Training Requirements Supported:

MOSC 11 Series; 13 Series

SMALL ARMS FLASH-NOISE GUNFIRE SIMULATOR

**Accessories****Training Category/Level Utilized:**

Infantry/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC.

Purpose of Trainer:

To provide simulated small-arms gunfire (rifle or machine gun noise and flash) for infantry training. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The trainer consists of a gun simulator, a carrying case, and an ac-to-dc converter. Outwardly, the device resembles a real machine gun. It may be fired from the device or remotely in single shots or bursts, using a metered mixture of oxygen and propane, which is ignited

inside the barrel by a spark plug. Oxygen and propane cylinders are enclosed in the carrying case.

An instructor may fire the device remotely while observing results or a number of these devices may be operated simultaneously by locating remote trigger switches for all related devices at a central location.

Note: Earlier models (DVC 07-22, 07-22A, and 07-22B) used a standard ignition system. Both C and D models use solid state ignition assemblies for greater reliability.

Physical Information:

Gun simulator: 51" x 19" x 46"; 36 lb

Carrying case: 13" x 12" x 23"; 137 lb

Converter: 8" x 7"; 6 lb

Equipment Required, Not Supplied:

One 24-volt storage battery (for optional dc operation only)

One 3-conductor electrical cable (AC power)

Special Installation Requirements:

None

Power Requirements:

110/220vac, single-phase, or 24vdc.

Applicable Publications:

For earlier models use: NAVSO P-2964, Maintenance Handbook with Parts List for Simulator, Small Arms, Flash Noise, Device 3F63

For DVC 07-22C use: NAVTRADEV P-4427, Maintenance Manual with Parts List

For DVC 07-22D use: NAVTRADEV P-4650

Reference Publications:

DVC was previously assigned as DVC 07-22/D.

Training Requirements Supported:

MOSC - This trainer supports individual and collective training requiring a reaction to small arms fire.

Individual Tasks:

(STP 21-1 SMCT) 071-326-0502

(STP 7-11B24-SM-TG) 1071-410-0002

Battle Drills (ARTEP 7-1), 07-3-D3992, 07-3-D3993

Collective Training: supports platoon and below collective tasks in all modular Brigade Combat Team (BCT)

Combined Arms Strategies (CATS)

LIVE VIRTUAL CONSTRUCTIVE – INTEGRATED ARCHITECTURE (LVA-IA) SYSTEM



MTC Classroom



Communication Cabinets

Training Category/Level Utilized:

General/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

System will be maintained and operated at the Mission Training Complex (MTC)

Purpose of Trainer:

The Live, Virtual, Constructive - Integrating Architecture (LVC-IA) program will provide a link between various LVC components to create a multi-echelon, joint interoperable, training environment that interfaces with and stimulates digital Mission Command Systems (MCS) providing the appropriate 'conditions' for realistic training to increase unit force effectiveness and readiness. The LVC-IA system supports collective and Battle Staff training and mission rehearsals for a Brigade Combat Team (BCT) Commander and Staff.

Functional Description:

LVC-IA is an integrated architecture and is dependent upon the installation supporting infrastructure. LVC-IA functions as a two-way network-centric linkage between model, simulations, instrumentation and (MCS) that supports Collective Battle Staff training and mission rehearsals for a (BCT). The goal of LVC-IA is to enable a LVC Integrated Training Environment that approximates the Operating Environment and thus provides realistic training and mission rehearsal capabilities for units, leaders and staffs.

Physical Information:

LVC-IA system consists of two communications cabinets of network equipment that function as virtual servers, one provides

classified (highside) and the other provides the unclassified (lowside) capabilities. The network equipment is housed in either a 48" or 72" communications cabinet based on MTC room space availability. A video wall that consist of nine 46" monitor is utilized to project a video display of the Battlespace, Gateway control Status and 3-D viewing of specific training areas. Cabinet Dimensions H x W and Monitor Dimensions H x W.

Equipment Required, Not Supplied:

Single mode fiber optic, point to point connectivity to each of the training aids, devices, simulators and simulations (TADSS) utilizing class one encryption.

Special Installation Requirements:

The system must be located in the MTC Designated Safe storage Location.

Power Requirements:

The system requires six 20 amp circuits with Nema 5-20R terminators for the high side system; five 20 amp three 20 amp circuits with Nema 5-20R terminators for the circuits with Nema 5-20R terminators for the low side system and Video Wall.

Applicable Publications:

(Information not available)

Reference Publications:

(Information not available)

Training Requirements Supported:

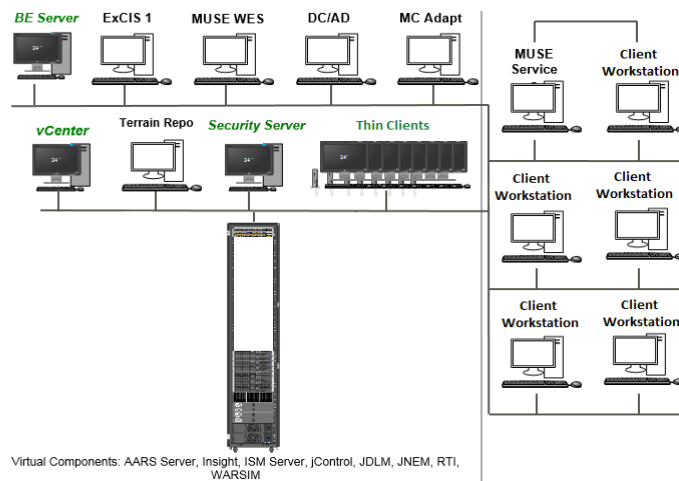
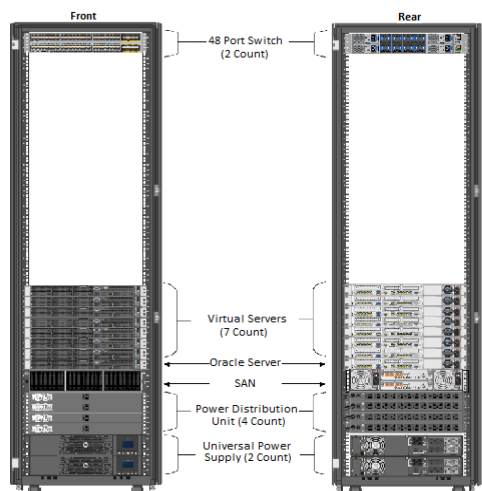
This is a Leader Battle Staff training device for Brigade Combat Teams. MOSC non-specific.

JOINT LAND COMPONENT CONSTRUCTIVE TRAINING CAPABILITY – BRIGADE LOWER ENCLAVE (JLCCTC - BDE LE)

NSN 6930-01-670-4246
NSN 6930-01-670-4243
NSN 6930-01-670-4238

DVC 20-101/A
DVC 20-101/B
DVC 20-101/C

(JLCCTC) Middle Enclave
(JLCCTC) Upper Enclave
(JLCCTC) Stand-Alone System



Training Category/Level Utilized:
General/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The Joint Land Component Constructive Training Capability (JLCCTC) BDE hardware suite supports the Joint Land Component Constructive Training Capability (JLCCTC) software. JLCCTC is a software modeling and simulation capability that contributes to the joint training functional concept and the Army training mission area by providing the appropriate levels of model and simulation resolution as well as the fidelity needed to support both Army and joint training requirements. The JLCCTC is a federated set of constructive simulation software that is supported by commercial software and commercial-off-the-shelf hardware that will support training of commanders and their staff in maneuver, logistics, intelligence, air defense and artillery.

Functional Description:

JLCCTC combines the actions of personnel, weapon systems, platforms, etc., into combined entities that can be controlled by a response cell operator and given to an entire infantry company at once. The unit would execute the operation in a doctrinally sound manner, and generate realistic effects/damage. JLCCTC provides feedback through native Mission Command systems in the TOC and processes training audience response.

Physical Information:

Standard Pallet Rack 600mmx1075mm

Hardware layout of functional system is dependent upon the Common Hardware Platform (CHP) allotment (based on Use Case)

Equipment Required, Not Supplied:

Additional CHPs and/or Thin Clients required for use;
CHP procurement and distribution are managed through the
Common Battle Command Support Equipment per TCM-C
directive.

Special Installation Requirements:

Installation of fielded suites is completed by TSS ENTERPRISE contractors at Mission Training Complex locations per TCM-C directive.

Power Requirements:

Facility AC, 100-240 VAC, 50-60Hz
CHP Power Requirements are similar.

Applicable Publications:

JLCCTC-0023-02

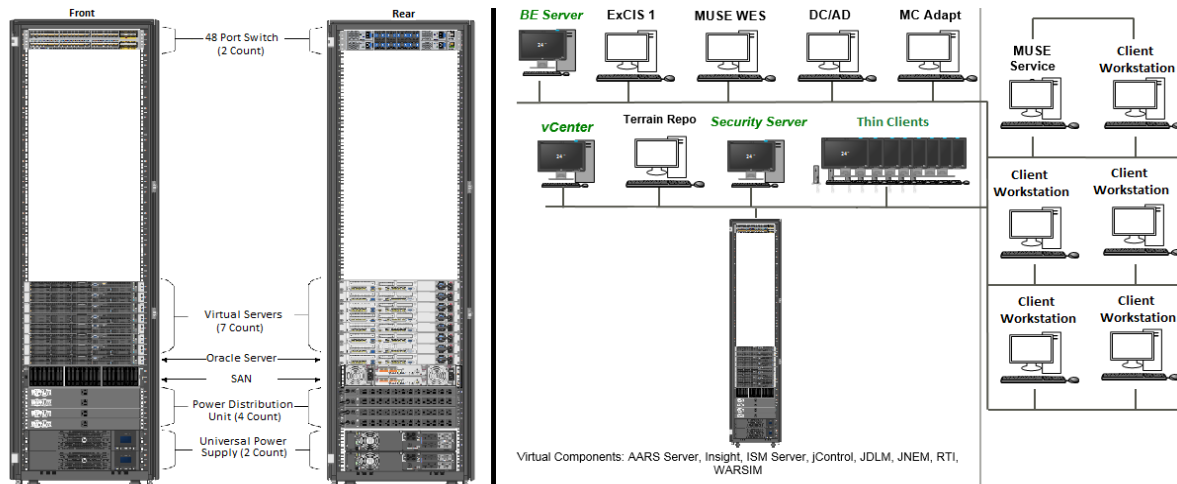
Reference Publications:

N/A

Training Requirements Supported:

JLCCTC supports the training of commanders and staff at the Division & Brigade levels, as well as support for Mission Readiness & Coalition exercises.

JOINT LAND COMPONENT CONSTRUCTIVE TRAINING CAPABILITY – DIVISION LOWER ENCLAVE (JLCCTC DIV LE)



Training Category/Level Utilized:
General/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The JLCCTC DIV hardware suite supports the Joint Land Component Constructive Training Capability (JLCCTC) software. JLCCTC is a software modeling and simulation capability that contributes to the joint training functional concept and the Army training mission area by providing the appropriate levels of model and simulation resolution as well as the fidelity needed to support both Army and joint training requirements. The JLCCTC is a federated set of constructive simulation software that is supported by commercial software and commercial-off-the-shelf hardware that will support training of commanders and their staffs in maneuver, logistics, intelligence, air defense and artillery.

Functional Description:

JLCCTC combines the actions of personnel, weapon systems, platforms, etc., into combined entities that can be controlled by a response cell operator and given to an entire infantry company at once. The unit would execute the operation in a doctrinally sound manner, and generate realistic effects/damage. JLCCTC provides feedback through native Mission Command systems in the TOC and processes training audience response.

Physical Information:

Standard Pallet Rack 600mmx1075mm

Hardware layout of functional system is dependent upon the Common Hardware Platform (CHP) allotment (based on Use Case)

Equipment Required, Not Supplied:

Additional CHPs and/or Thin Clients required for use; CHP procurement and distribution are managed through the Common Battle Command Support Equipment per TCM-C directive.

Special Installation Requirements:

Installation of fielded suites is completed by TSS ENTERPRISE contractors at Mission Training Complex locations per TCM-C directive.

Power Requirements:

Facility AC, 100-240 VAC, 50-60Hz
CHP Power Requirements are similar.

Applicable Publications:

JLCCTC-0023-02

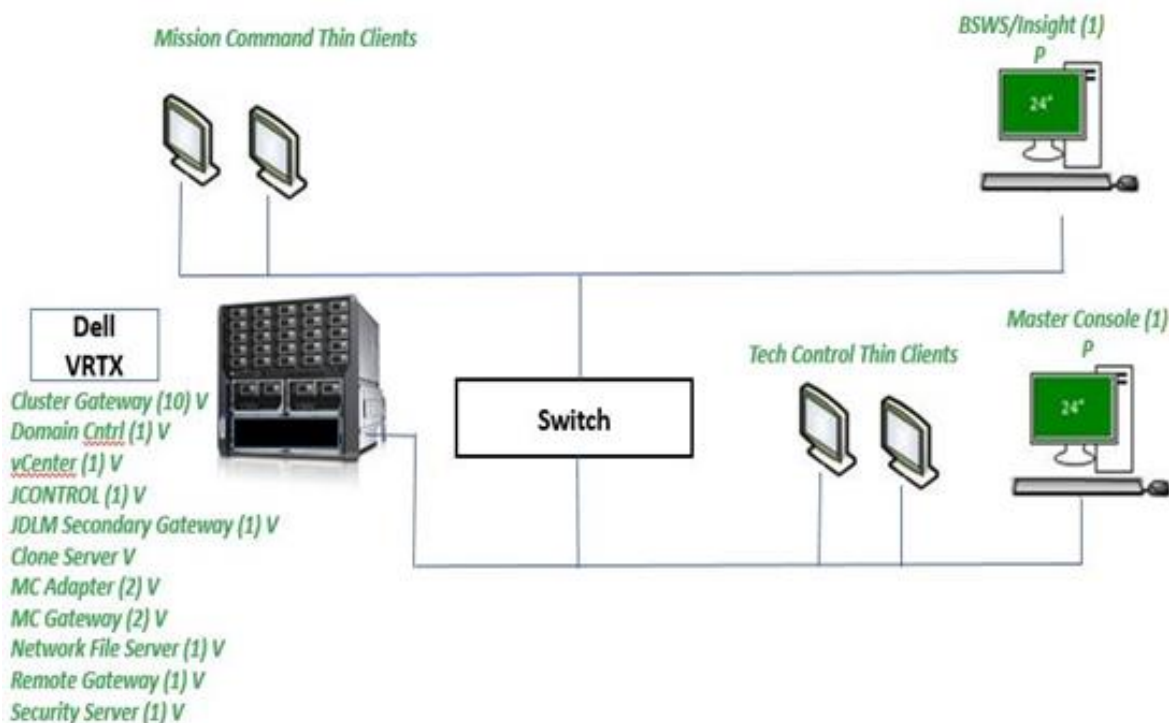
Reference Publications:

N/A

Training Requirements Supported:

JLCCTC supports the training of commanders and staff at the Division & Brigade levels, as well as support for Mission Readiness & Coalition exercises. This hardware configuration is intended to support training at the Division level & above.

JOINT LAND COMPONENT CONSTRUCTIVE TRAINING CAPABILITY (JLCCTC) – VIRTUAL TECH CONTROL FORWARD (VTCF)



Training Category/Level Utilized:

General/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The Virtualized Tech Control Forward hardware suite supports participation of remote operators in Joint Land Component Constructive Training Capability (JLCCTC) simulation exercises. The JLCCTC hardware suite supports the JLCCTC software. JLCCTC is a software modeling and simulation capability that contributes to the joint training functional concept and the Army training mission area by providing the appropriate levels of model and simulation resolution as well as the fidelity needed to support both Army and joint training requirements. The JLCCTC is a federated set of constructive simulation software that is supported by commercial software and commercial-off-the-shelf hardware that will support training of commanders and their staffs in maneuver, logistics, intelligence, air defense and artillery.

Functional Description:

JLCCTC combines the actions of personnel, weapon systems, platforms, etc., into combined entities that can be controlled by a response cell operator and given to an entire infantry company at once. The unit would execute the operation in a doctrinally sound manner, and generate realistic effects/damage. JLCCTC provides feedback through native Mission Command systems in the TOC and processes training audience response.

Physical Information:

Mobile Rack 1026mm x 686mm x 422mm

Mobile Rack 1026mm x 686mm x 838mm

6x Thin Client

8x 24" Monitor

Equipment Required, Not Supplied:

N/A

Special Installation Requirements:

Installation of fielded suites is completed by PEO STRI contractors at Mission Training Complex locations per ACM-C directive.

Power Requirements:

Facility AC, 100-240 VAC, 50-60Hz

Applicable Publications:

JLCCTC-0023-02

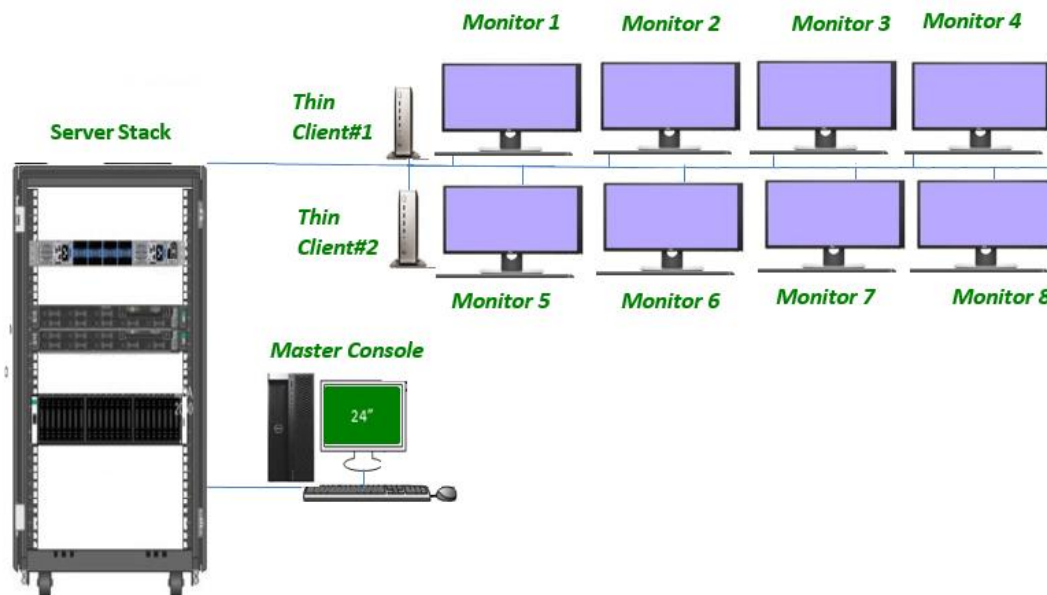
Reference Publications:

N/A

Training Requirements Supported:

JLCCTC supports the training of commanders and staff at the Division & Brigade levels, as well as support for Mission Readiness & Coalition exercise.

JOINT LAND COMPONENT CONSTRUCTIVE TRAINING CAPABILITY (JLCCTC) – JOINT DEPLOYMENT LOGISTICS MODEL (JDLM) VIRTUALIZED SUITE (JVS)



Training Category/Level Utilized:
General/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:

JLCCTC exercise support scheduled via National Simulation Center Logistics Exercise & Simulation Directorate (NSC LESD)

Purpose of Trainer:

The Joint Deployment Logistics Model Virtualized Suite hardware suite supports robust operational logistics modeling in Brigade level through echelons above Corps (EAC) Joint Land Component Constructive Training Capability (JLCCTC) simulation exercises. The JLCCTC hardware suite supports the JLCCTC software. JLCCTC is a software modeling and simulation capability that contributes to the joint training functional concept and the Army training mission area by providing the appropriate levels of model and simulation resolution as well as the fidelity needed to support both Army and joint training requirements. The JLCCTC is a federated set of constructive simulation software that is supported by commercial software and commercial-off-the-shelf

hardware that will support training of commanders and their staffs in maneuver, logistics, intelligence, air defense and artillery.

Functional Description:

JLCCTC combines the actions of personnel, weapon systems, platforms, etc., into combined entities that can be controlled by a response cell operator and given to an entire infantry company at once. The unit would execute the operation in a doctrinally sound manner, and generate realistic effects/damage. JLCCTC provides feedback through native Mission Command systems in the TOC and processes training audience response.

Physical Information:

Standard Rack 1070mm x 600mm
2x Thin Client
1x Workstation
8x 27" Monitor
1x 24" Monitor

Equipment Required, Not Supplied:

N/A

Special Installation Requirements:

Installation of fielded suites is completed by PEO STRI contractors at LESD per ACM-C directive.

Power Requirements:

Facility AC, 100-240 VAC, 50-60Hz

Applicable Publications:

JLCCTC-0023-02

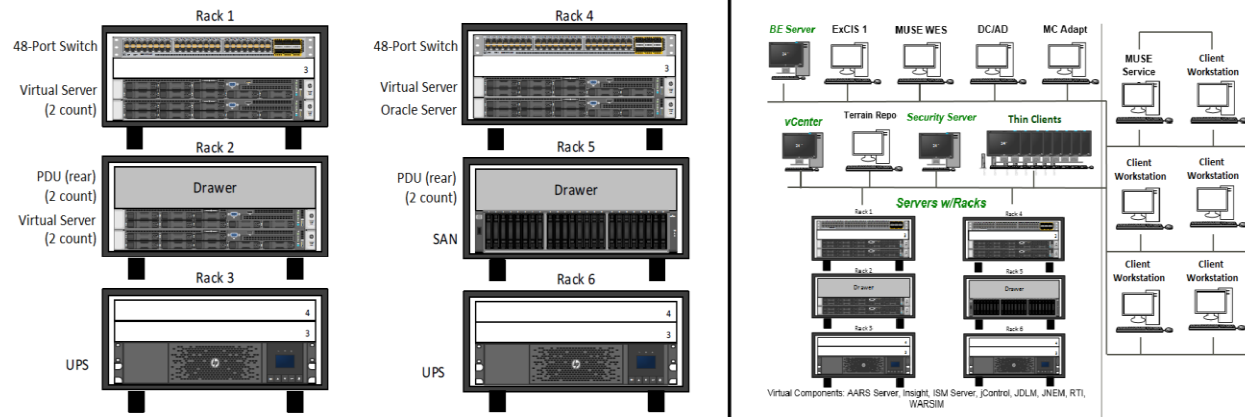
Reference Publications:

N/A

Training Requirements Supported:

JLCCTC supports the training of commanders and staff at the Division & Brigade levels, as well as support for Mission Readiness & Coalition exercise.

MULTI RESOLUTION FEDERATION – BRIGADE (MRF BDE) MOBILE SUITE



Training Category/Level Utilized:
General/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The MRF BDE Mobile hardware suite supports the Joint Land Component Constructive Training Capability (JLCCTC) MRF software. JLCCTC is a software modeling and simulation capability that contributes to the joint training functional concept and the Army training mission area by providing the appropriate levels of model and simulation resolution as well as the fidelity needed to support both Army and joint training requirements. The MRF is a federated set of constructive simulation software that is supported by commercial software and commercial-off-the-shelf hardware that will support training of commanders and their staffs in maneuver, logistics, intelligence, air defense and artillery.

Functional Description:

MRF combines the actions of personnel, weapon systems, platforms, etc., into combined entities that can be controlled by a response cell operator and given to an entire infantry company at once. The unit would execute the operation in a doctrinally sound manner, and generate realistic effects/damage. MRF provides feedback through native Mission Command systems in the TOC and processes training audience response.

Physical Information:

30" Deep 4U Server Rack x6

Hardware layout of functional system is dependent upon the Common Hardware Platform (CHP) allotment (based on Use Case)

Equipment Required, Not Supplied:

Additional CHPs and/or Thin Clients required for use; CHP procurement and distribution are managed through the Common Battle Command Support Equipment per TCM-C directive.

Special Installation Requirements:

Installation of fielded suites is completed by TSS ENTERPRISE contractors at Mission Training Complex locations per TCM-C directive.

Power Requirements:

Facility AC, 100-240 VAC, 50-60Hz
CHP Power Requirements are similar.

Applicable Publications:

JLCCTC-0023-02

Reference Publications:

N/A

Training Requirements Supported:

MRF mobile suite supports the training of commanders and staff at the brigade & below level

COMMON HARDWARE PLATFORM (CHP)

NSN 6910-01-688-0375

[DVC 20-103/A](#)

Common Hardware Platform Mobile Variant



Training Category/Level Utilized:
General/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The Common Hardware Platform (CHP) serves as the individual workstation or workstations that allow for functional training tasks for constructive mission command training systems (e.g.; Joint Land Component Constructive Training Capability [JLCCTC], Division eXercise Training & Review System [DXTRS]) at Combat Training Centers, Mission Training Complexes, and designated TRADOC schoolhouses.

Functional Description:

The initial fielding of the CHP consists of a state-of-the-art Personal Computer with sufficient processing and storage to run the functional operations of JLCCTC, DXTRS, and other constructive simulations utilizing the Microsoft Windows or Red Hat Enterprise LINUX operating systems.

Physical Information:

1x 24" Monitor
1x Stationary Workstation
1x USB Keyboard
1x USB Optical Mouse

Equipment Required, Not Supplied:

No additional equipment required for operation

Special Installation Requirements:

No special installation requirements above and beyond standard workstation installation.

Power Requirements:

Monitor: 100–240 VAC, 50-60 Hz
Workstation: 100-240 VAC, 50-60Hz

Applicable Publications:

JLCCTC-0023-02

Reference Publications:

N/A

Training Requirements Supported:

JLCCTC supports the training of commanders and staff at the Division & Brigade levels, as well as support for Mission Readiness & Coalition exercises. DXTRS provides high capability, low overhead training on tactical decision making for commanders and their staffs.

**BASIC SERIES 23
WEAPONS**



MOTORIZED SECTIONALIZED GUN .50 CALIBER, M2 MACHINE GUN



Training Category/Level Utilized:
Basic Weapons/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
For classroom use to demonstrate the cycle of operation of the .50 Caliber M2 Machinegun.

Functional Description:
The device is a motorized, sectionalized .50 caliber machinegun with sections cut out to expose important features for easy examination by students. The firing pin spring, oil buffer spring, and bolt driving spring have been shortened to reduce the force required to drive the device. Electric motors drive the gun through slow motion firing cycles (approximately seven times per minute) while dummy ammunition is fed into the breech mechanism, demonstrating clearly the interrelationship of the working parts. Dummy cartridges that have been ejected from the chamber fall into a compartment below the gun. Movement can be halted at any time with the motor switch, located on top of the cabinet, enabling the instructor or student to point out the relative positions of various parts at any point in the firing cycle. The gun is mounted on a cabinet assembly containing a 1/3 HP 110vac motor. Thirty dummy cartridges and links are furnished with each gun.

Physical Information:
54" x 24" x 24"; 175 lb

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:
110vac

Applicable Publications:
Maintenance Handbook for DVC 23-03

Reference Publications:
TM 9-1005-213

Training Requirements Supported:
MOSC 11-Series

SIMULATED AREA WEAPONS EFFECTS (SAWE) MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM (MILES) II FOR THE M1A1 TANK



Training Category/Level Utilized:
Armor/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The SAWE MILES II M1/M1A1 System accurately, and in real time, simulates the effects of direct and indirect weapons fire, nuclear and chemical weapons, and mines as they would affect the Abrams tank and crew in combat. This allows realistic combat training without the hazards of live ammunition.

Functional Description:

The SAWE MILES II M1/M1A1 Abrams Tank System uses eye-safe laser transmitters, compatible with all other MILES training devices. The system simulates firing capabilities of the 105mm or 120mm main gun, the coax machine gun, and the M2 and M240 machine guns, using normal firing procedures. A laser firing code includes a Player ID for identification of other vehicles. Blank fire and MTGSD pyrotechnic charges add realism to weapons. The system detects all opposing fire, identifies opposing weapons and Player ID, and determines the effect of incoming fire on the using vehicle, and it has a high-

visibility Combat Vehicle Kill Indicator (CVKI) that signals others that the vehicle has received incoming direct or indirect fire.

An M1/M1A1 SAWE MILES II kit consists of: M2 and M240 Laser Transmitters, Combat Vehicle Kill Indicator (CVKI), Detector Belt system, Mine Effects Simulator (MES) Receivers, Blank Firing Adapters/Attachments, Global Positioning Satellite/Mission Control Station (GPS/MCS) Antenna, Hull to Turret Transmitter (HUTT), Man Worn Detector Device (MWDD), and Chemical Agent Alarm Simulator (CAAS). The SAWE MILES II M1/M1A1 system can operate safely at temperatures from -35 degrees C (-25 degrees F) to +62 degrees C (+144 degrees F).

MAN WORN DETECTOR DEVICE (MWDD): The MWDD contains an adjustable cloth helmet harness containing an electronics module, and induction loop antenna, and four detectors. The Torso vest consists of a cloth and web assembly with pockets for magazines and grenades, a display console and audio alarm, an electronics module, a battery, eight laser detectors, a GPS antenna, an MCS receiver antenna, and a MES antenna.

PROTECTIVE MASK INTERFACE (PMI): The PMI (CAAS) is a simulator device that mounts between the M40 protective mask and its canister. It is a sealed, self-contained unit that contains a breathing sensor and a low frequency transmitter.

Physical Information:

<u>Laser Transmitters:</u>	<u>Weight</u> (Pounds)	<u>Dimensions</u> (Inches)	<u>Base Load</u> (Rounds)	<u>Standard Kill</u> (Range) (Meters)
120mm/Coax Machine Gun	6.62	10.7 x 5.5 x 5.5	40/9900	200-2500/25-800
105 mm/Coax Machine Gun	6.62	10.7 x 5.5 x 5.5	55/9900	200-2500/25-800
M2 Machine Gun	5.5	7.2 x 6.3 x 9.3	1200	25-800
M240 Machine Gun	5.5	5.25 x 3.0 x 6.3	600	25-800

<u>Detector Assemblies:</u>			<u>Number of Detectors</u>
Belt Segment C(2)	2.6	116 ± 2 x 2	6
Belt Segment D	1.8	78 ± 2 x 2	4
Belt Segment E	2.06	194 ± 2 x 2	4
Man-Worn Helmet Harness	1.56	11.0 (diameter) x 3.5	5
Man-Worn Torso Harness	2.81	40 x 7.75 to 18 x 2	8

<u>Equipment:</u>		
CVKI	11.62	14 x 7.3 (diameter) without adapter
SAWE MILES II Console	9.2	9.5 x 6.0 x 5.5 without adapter
Remote Display Assembly	0.2	4 x 3.4 x 1.4 without adapter
Battery Box	1.31	7 x 5 x 4
GPS/MCS Antenna	2.0	7 x 7 x 1.5 without adapter
HUTT	0.7	4 x 4 x 2
Radio Control Device	1.5	5 x 5 x 3
SAT/SAW	5.50	4 x 3.2 x 3.6
PMI	PMI is approximately the size and shape of the M8A1 Chemical Agent Alarm.	

Equipment Required, Not Supplied:

Hoffman Device
 Battery, Lithium, 12v (80058) BA-5590/U
 Battery, Alkaline, 6v (2) (80058) BA-5200/U
 Battery, Alkaline, 9v (90058) BA-3090/U
 Small Arms Alignment Fixture (SAAF)
 Blank-Fire Attachment (BFA) M19
 Blank-Fire Attachment (BFA) M21

Reference Publications:

FM 21-11
 DA PAM 738-750
 SB 11-6
 TM 9-1005-213-10
 TM 9-1005-313-10
 TM 9-1005-314-12&P
 TM 9-1005-316-12&P
 TM 9-1005-265-12&P
 TM 9-2350-255-10
 TM 9-2350-264-10

Special Installation Requirements:

None

Power Requirements:

M1/M1A1 – 24vdc vehicle power or 12vdc external (battery box)
 Console - Battery, Alkaline, 6v (2) (80058) BA-5200/U
 MWDD - Battery, Lithium, 12v (80058) BA-5590/U
 (Approximately 100 hours of power or 4 days of normal use.)
 Battery, Alkaline, 9v (90058) BA-3090/U
 (Approximately 100 hours of power or 4 days of normal use.)

Training Requirements Supported:

ARTEPs Supported
 7-15, 17-55, 71-2
 MOSC 19K; 12-Series

Applicable Publications:

TM 86-90-0

**SIMULATED AREA WEAPONS EFFECTS (SAWE)
MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM (MILES) II
FOR THE
M2/M3 BRADLEY FIGHTING VEHICLE (BFV)**

NSN Not Assigned

DVC 23-07/A M2/M3 Bradley (SAWE)/MILES II (TOW XMRT w/MAIS Laser)

**Training Category/Level Utilized:**

Armor/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

To provide remotely directed and realistic combat training exercises without the use of live ammunition.

Functional Description:

The Simulated Area Weapons Effects Multiple Integrated Laser Engagement System II (SAWE MILES II) for the M2/M3 Bradley Fighting Vehicle (BFV) simulates the effects of incoming direct fire from laser transmitters, and indirect fire, nuclear, chemical, and mine simulation from the Mission Control Station (MCS). A console contains the computer that receives and interprets incoming-fire signals. Laser transmitters fitted to the weapons simulate outgoing direct fire. Laser detector belts mounted on the four sides of the turret detect incoming direct fire and send the signals to the console for interpretation. The commander, gunner, and driver wear laser detectors and are vulnerable to incoming laser fire when outside the vehicle.

The SAWE MILES II system for the BFV contains the following components: TOW Laser Transmitter, Main Gun (25mm)/M240C Machine Gun Laser Transmitter, Detector Belt System, Combat Vehicle Kill Indicator, Mine Effects Simulator (MES) Receiver, Global Positioning

System/Mission Control Station Antenna, Flashwess or AWESS, Tow Tube Simulator, Hull-To-Turret Transmitter, Cables, Coax Machine Gun Microphone, Console, Battery Box, Remote Display Assembly, Radio Control Device, and Man Worn Detection Devices.

Physical Information:

(Information not available)

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

(Information not available)

Applicable Publications:

(Information not available)

Reference Publications:

(Information not available)

Training Requirements Supported:

MOSC 19K; 12-Series

**SIMULATED AREA WEAPONS EFFECTS (SAWE)
MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM (MILES) II
FOR THE M113 ARMORED PERSONNEL CARRIER (APC)**

**Training Category/Level Utilized:**

Armor/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

To provide remotely directed and realistic combat training exercises without the use of live ammunition.

Functional Description:

The Simulated Area Weapons Effects Multiple Integrated Laser Engagement System II (SAWE MILES II) for the M113 Armored Personnel Carrier (APC) simulates the effects of incoming direct fire from laser transmitters, and indirect fire, nuclear, chemical, and mine simulation from the Mission Control Station (MCS). A console contains the computer that receives and interprets incoming-fire signals. Laser transmitters fitted to the weapons simulate outgoing direct fire. Laser detector belts mounted on the vehicle detect incoming direct fire and send the signals to the console for interpretation. The commander, driver, and infantrymen wear laser detectors and are vulnerable to incoming laser fire when outside the vehicle.

The SAWE MILES II system for the M113 APC contains the following components: Combat Vehicle Kill Indicator, Mine Effects Simulator Receiver, M2 Laser Transmitter, Detector Belt System, Global Positioning System/Mission Control Station Antenna, Cables, Console, Battery Box, Radio Control Device, and Man Worn Detection Devices.

Physical Information:

(Information not available)

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

(Information not available)

Applicable Publications:

(Information not available)

Reference Publications:

(Information not available)

Training Requirements Supported:

MOSC 19K; 12-Series

SIMULATED AREA WEAPONS EFFECTS (SAWE) MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM (MILES) II FOR THE T72/T80 TANK



Training Category/Level Utilized:
Armor/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:
To provide remotely directed and realistic combat training exercises without the use of live ammunition.

Functional Description:
The Simulated Area Weapons Effects Multiple Integrated Laser Engagement System II (SAWE MILES II) system for the T72/T80 Tank simulates the effects of incoming direct fire from laser transmitters, and indirect fire, nuclear, chemical, and mine simulation from the Mission Control Station (MCS). A console contains the computer that receives and interprets incoming-fire signals. Laser transmitters fitted to the weapons simulate outgoing direct fire. Laser detector belts mounted on the vehicle detect incoming direct fire and send the signals to the console for interpretation. The commander, driver, and loader wear laser detectors and are vulnerable to incoming laser fire when outside the vehicle.

The SAWE MILES II system for the T72/T80 Tank contains the following components: M2 Laser Transmitter, Detector Belt System, Combat Vehicle Kill Indicator, Mine

Effects Simulator Receiver, Blank Firing Adapters, Global Positioning System/Mission Control Station Antenna, Hull-To-Turret Transmitter, Cables, Console, Battery Box, Remote Display Assembly, Main Gun/Coax Machine Gun Transmitter, Radio Control Device, and Man Worn Detection Devices.

Physical Information:
(Information not available)

Equipment Required, Not Supplied:
(Information not available)

Special Installation Requirements:
(Information not available)

Power Requirements:
(Information not available)

Applicable Publications:
(Information not available)

Reference Publications:
(Information not available)

Training Requirements Supported:
MOSC 19K; 12-Series

SIMULATED AREA WEAPONS EFFECTS (SAWE) MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM (MILES) II FOR THE BMP (M551) TANK

NSN Not Assigned

DVC 23-13/A (SAWE) (MILES) II for the BMP (551) Tank (Upgrade Kit)

**Training Category/Level Utilized:**

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The SAWE MILS II BMP Armored Fighting Vehicles M551 System accurately, and in real time, simulates the effects of direct and indirect weapons fire, nuclear and chemical weapons, and mines as they would affect the Abrams tank and crew in combat. This allows realistic combat training without the hazards of live ammunition.

Functional Description:

The SAWE MILES II M1/M1A1 Abrams Tank System uses eye-safe laser transmitters, compatible with all other MILES training devices. The system simulates firing capabilities of the 105mm or 120mm main gun, the coax machine gun, and the M2 and M240 machine guns, using normal firing procedures. A laser firing code includes a Player ID for identification of other vehicles. Blank fire and MTGSD pyrotechnic charges add realism to weapon. The system detects all opposing fire, identifies opposing weapons and Player ID, and determines the effect of

incoming on the using vehicle, and it has a high-visibility Combat Vehicle Kill Indicator (CVKI) that signal others that the vehicle has received incoming direct or indirect fire.

An M1/M1A1 SAWE MILES II kit consists of: M2 and M240 Laser Transmitters, Combat Vehicle Kill Indicator (CVKI), Detector Belt system, Mine Effects Simulator (MES) Receivers, Blank Firing Adapters/Attachments, Global Positioning Satellite/Mission Control Station (GPS/MCS) Antenna, Hull to Turret Transmitter (HUTT), Man Worn Detector Device (MWDD), and Chemical Agent Alarm Simulator (CAAS). The SAWE MILES II M1/M1A1 system can operate safely at temperatures from -35 degrees C (-25 degrees F) to +62 degrees C (+144 degrees F).

MAN WORN DETECTOR DEVICE (MWDD): The MWDD contains an adjustable cloth helmet harness containing an electronics module, and induction loop antenna, and four detectors. The Torso vest consists of a cloth and web assembly with pockets for magazines and grenades, a display console and audio alarm, an electronics module, a battery, eight laser detectors, a GPS antenna, an MCS receiver antenna, and a MES antenna.

PROTECTIVE MASK INTERFACE (PMI): The PMI (CAAS) is a simulator device that mounts between the M40 protective mask and its canister. It is a sealed, self-contained unit that contains a breathing sensor and a low frequency transmitter.

Physical Information:

<u>Laser Transmitters:</u>	<u>Weight</u> (Pounds)	<u>Dimensions</u> (Inches)	<u>Base Load</u> (Rounds)	<u>Standard Kill</u> (Range) (Meters)
152 mm/Missile/ Coax Machine Gun	6.62	10.7 x 5.5 x 5.5	40/5/9900	200-2500/25-800

<u>Detector Assemblies:</u>			<u>Number of Detectors</u>
Belt Segment K	1.8	78 ± 1 x 2	4
Belt Segment L	2.06	194 ± 2 x 2	16
Man-Worn Helmet Harness	1.56	11.0 (diameter) x 3.5	5
Man-Worn Torso Harness	2.81	40 x 7.75 to 18 x 2	8

<u>Equipment:</u>		
CVKI	11.62	14 x 7.3 (diameter) without adapter
SAWE MILES II Console	9.2	9.5 x 6.0 x 5.5 without adapter
Remote Display Assembly	0.2	4 x 3.4 x 1.4 without adapter
Battery Box	1.31	7 x 5 x 4
GPS/MCS Antenna	2.0	7 x 7 x 1.5 without adapter
HUTT	0.7	4 x 4 x 2
Radio Control Device	1.5	5 x 5 x 3
Missile Tube Simulator	20.0	56 x 8.0 (diameter)
Radio Control Device	1.5	5 x 5 x 3
SAT/SAW	5.50	4 x 3.2 x 3.6
PMI	PMI is approximately the size and shape of the M8A1 Chemical Agent Alarm.	

Equipment Required, Not Supplied:

Battery, Lithium, 12v (80058) BA-5590/U
 Battery, Alkaline, 6v (2) (80058) BA-5200/U
 Battery, Alkaline, 9v (90058) BA-3090/U
 Blank-Fire Attachment (BFA) M21, for 7.62mm Machine
 Gun M240

Applicable Publications:

TM 132-92-0

Reference Publications:

FM 21-11
 DA PAM 738-750
 SB 11-6

Special Installation Requirements:

None

Training Requirements Supported:

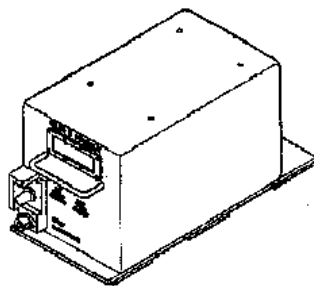
ARTEPs Supported
 7-15, 17-55, 71-2

Power Requirements:

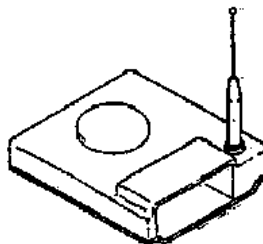
Battery, Lithium, 12v (80058) BA-5590/U
 Battery, Alkaline, 6v (2) (80058) BA-5200/U
 Battery, Alkaline, 9v (90058) BA-3090/U

MOSC 19D; 19E; and 19Z

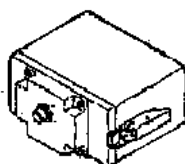
**SIMULATED AREA WEAPONS EFFECTS (SAWE)
MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM (MILES) II
FOR THE MOBILE INDEPENDENT TARGET SYSTEM (MITS)**



1



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5



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Components

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Available Kits:

Armored Vehicle, Launched Bridge (AVLB)
D7F Tractor, Full-Track
Generators
*JD410 Backhoe
*MW24C Loader
M35A 2-1/2 Ton Cargo Truck
M88A1 Recovery Vehicle, Armored
M109A1 Howitzer, Medium Self-Propelled

M110A1 Howitzer, Heavy Self-Propelled

M151 Truck, Utility 1/4 Ton Jeep

*M250 Crane

M548 Carrier, Cargo, Full Tracked

M578 Recovery Vehicle, Light Armored

M728 Combat Engineer Vehicle (CEV)

M911 Truck, HET

M916 Truck, Tractor, Support Equipment Transport

M925 Truck, Cargo 5 Ton

M966 HMMWV TOW, 1-1/4 Ton

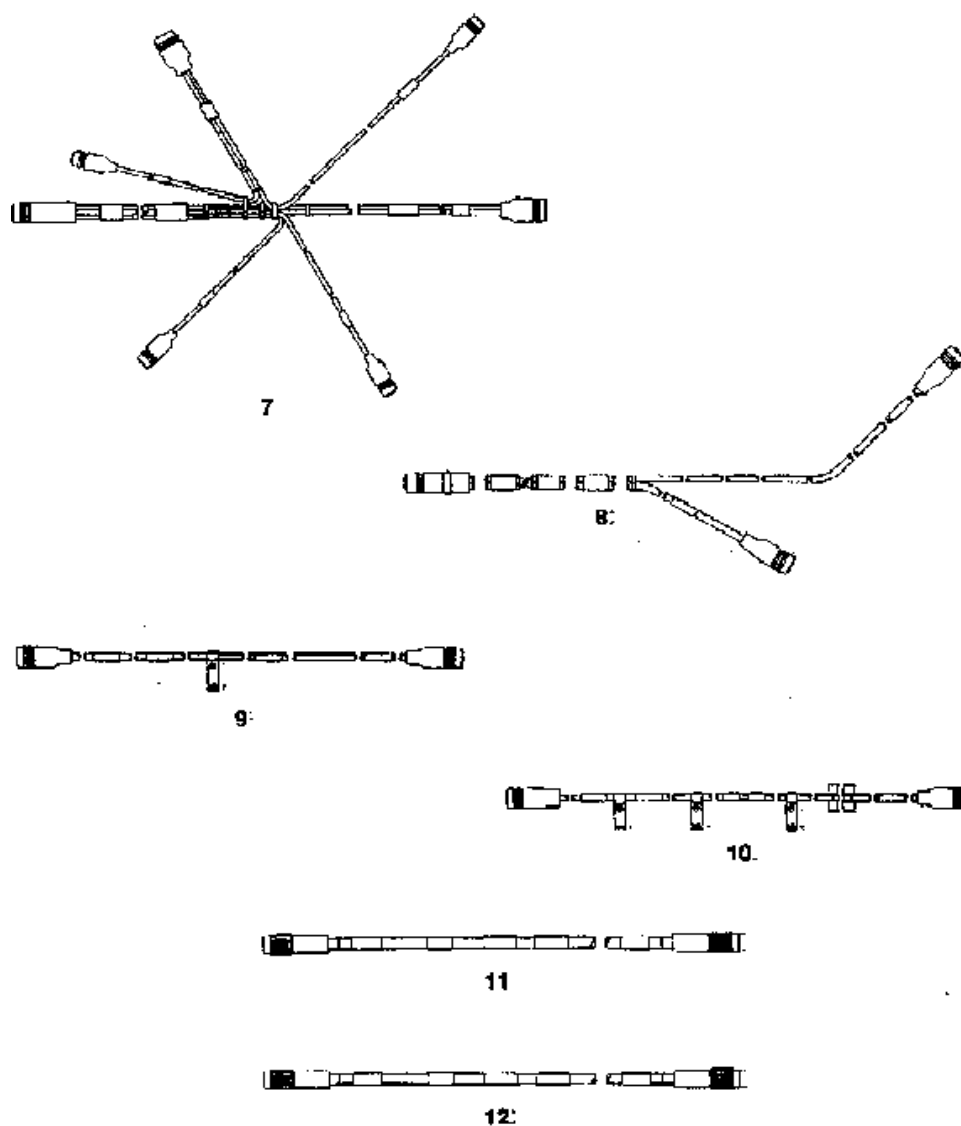
M977 Cargo Truck, 10 Ton

M968 HMMWV, Utility Truck, TON 1-1/4 Ton

M1008 Truck, Cargo, 1/4 Ton

M1009 Truck, Utility, 3/4 Ton

*Vehicles that use the Basic MITS Kits. See DVC 07-56/17.



(SAWE) (MILES II) (MITS), Components (cont.)

Purpose of Trainer:

The SAWE MILES II MITS simulator lets you take part in realistic combat training exercises. The system permits computerized simulation of direct fire, nuclear or chemical weapons and mines as they would affect your equipment during actual combat.

Functional Description:

The console contains the electronics for the SAWE MILES II SYSTEM that replaces the ECU of the basic system.

The SAWE MILES II MITS system simulates the effects of incoming direct fire from laser transmitters, and indirect fire, nuclear and chemical events, and mine simulations sent from the Mission Control Station (MCS), a console

that contains the computer that receives and interprets incoming fire signals.

For direct fire against the vehicle or equipment, a detector signals that a laser beam has fire. The console decodes the laser signal, identifies the weapon, and evaluates the possible damage that the weapon can have upon the particular type of vehicle or equipment. If it determines that the weapon would have "killed" or "damaged" the vehicle/equipment, the computer activates various devices to identify that the vehicle/equipment has been hit or killed. This information is also provided to the opposing force. These devices include CVKI or SDA, the Audio/visual Cue Device, if installed and the Audio Buzzer Assembly.

Indirect nuclear or chemical events, or mines, the MCS transmits an event message that signals to players the type of event, the type of ammunition being fired, and the location of the impact (or affected) area. The system console maintains an internal record of the location of receiving signals from overhead Global Positioning Satellites. When an indirect fire, nuclear, chemical, or mine event is signaled by the MCS, the console receives and decodes the signal. If the computer determines that you are within the target area, it then determines the effects of the incoming fire on the vehicle or equipment, and signals to the player and opposing force the effects of the fire. A NEAR MISS, a HIT, or a KILL, against using the CVKI or SDA, the Audio/Visual Cue Device, if installed and the Audio Buzzer Assembly.

In addition to the devices that visually or audibly indicate a NEAR MISS, HIT, or KILL to the vehicle or equipment, the console keeps a record of the events that have affected the vehicle equipment and displays this information on a display window on the front panel of the console. Like the MITS ECU, the console maintains a record of all these events during the course of an exercise, and the last 16 events can be "recalled" for display at any time.

A later version of the MITS is the Universal Detection System (Device 23-14A) that also has an expansion kit (Device 23-14A/1).

Physical Information:

Total system weight: 40.5
Battery Box
Buzzer Assembly, MITS
Cable Assembly, Interface Control MITS
Cable Assembly, System MITS
Plate Assembly, GPS/MCS Antenna
Cable Assembly, GPS Antenna
Cable Assembly, MCS Antenna
Cable Assembly, MES Receiver
Cable Assembly, A/V Cue
Cable Assembly, Battery Charger MITS
(Those items that are not identified as MITS are new MILES SAWE II components.)

Equipment Required, Not Supplied:

Battery, Lantern type, 6v (4 ea) BA-200
Battery, Lantern type, 9v (1 ea) EN-522

Special Installation Requirements:

See TM 9-1265-379-10 - Operator's Manual
Multiple Integrated Laser Engagement (MILES),
Simulator System, Laser, Mobile Independent
Target System (MITS).

Power Requirements:

Input: 24vdc
Start-up Max Power: 24vdc at 1.2 A = 35VA
Nominal Power: 24vdc at .058 A = 1.4VA

Applicable Publications:

None

Reference Publications:

SD 133-90-0
TM 9-1265-379-10
SMM 1265-379-24&P

Training Requirements Supported:

ARTEPs Supported
7-15, 17-55, 71-2

MOSC 11B; 11Z; 19D, 19E; 19Z

SM Tasks

All tactical task for skill levels 1 through 5.

M2K MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM 2000 (MILES 2000) M16A1/M16A2 RIFLE KIT



MILES 2000 Torso (front/back)

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The Purpose of this trainer is to replace Basic MILES systems at home-station due to age of technology and cost to maintain. The M2K system incorporates an After Action Review capability not in the Basic MILES, which greatly enhances training for the soldiers participating in the exercises.

This device is a component of the Multiple Integrated Laser Engagement System 2000 (M2K). The M2K is a family of training systems, which simulate the effects of direct-fire weapons at their operational ranges. The M2K system is primarily used for force-on-force training from squad up to and including Brigade level. M2K equipment is downward compatible with the Basic MILES equipment presently fielded.

Functional Description:

The M2K kit, consisting of 5 fielded distinct weapon firing simulator systems, employs eye-safe lasers and microelectronics to realistically simulate the firing capabilities of rifles, machine guns, and other direct-fire weapons (man-worn, crew served and vehicle systems). The laser firing SATs attach easily to conventional field weapons, (with much greater boresight retention than the Basic MILES), allow ground troops to fire coded (to distinguish weapon type, and player ID) laser signals. Soldiers fire blank ammunition, the "flash and bang"



Fig. 23.8.1, CUBIC
MILES 2000 Halo



Fig. 23.8.2, ICON
MILES 2000 Halo



M16A2/M4 SAT

triggers the laser transmitter. The receiving laser detectors determine Hit, Near Miss, Kill status of received fire.

If Killed the receiving target loses the ability to "cheat" the system and no longer can fire his weapon. If the battery in the DCPU is removed and replaced without the "low bat" indicator being activated, a "cheat" kill is assessed when the battery is reinserted. An automated small arms alignment fixture (ASAAF) (DVC 99-88) is available to align weapons equipped with the small arms transmitter (SAT).

Physical Information:

One Torso detector (Vest), one Helmet detector (HALO) and 1SAT (for the correct weapon) make up the MILES kit.

Transit case dimensions: 46.3" L x 40.3" W x 17.5" H

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

9vdc battery for the vest

Applicable Publications:

Operator User's Manuals: M16A2 23-6920-702-10
M24 SWS 23-6920-702-10
M249 SAW 23-6920-702-10
M60 MG 23-6920-702-10; M2 MG 23-6920-702-10

Reference Publications:

None

Training Requirements Supported:

ARTEPs 7-15, 17-55, 71-2
MOSCs 11B; 11Z; 19D; 19E; 19Z

M2K MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM 2000 (MILES 2000) M249 SQUAD AUTOMATIC WEAPON KIT



MILES 2000 Torso (front/back)

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The Purpose of this trainer is to replace Basic MILES systems at home-station due to age of technology and cost to maintain. The M2K system incorporates an After Action Review capability not in the Basic MILES, which greatly enhances training for the soldiers participating in the exercises.

This device is a component of the MILES 2000 (M2K). The M2K is a family of training systems which simulate the effects of direct-fire weapons at their operational ranges. The M2K system is primarily used for force-on-force training from squad up to and including Brigade level. M2K equipment is downward compatible with the Basic MILES equipment presently fielded.

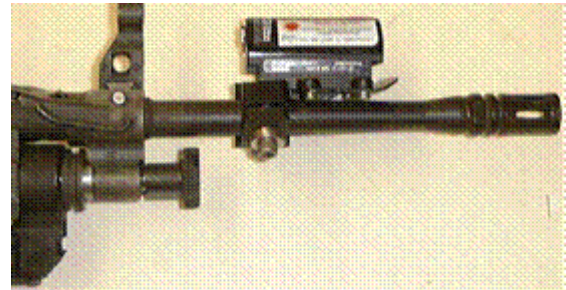
Functional Description:

The M2K kit, consisting of 5 fielded distinct weapon firing simulator systems, employs eye-safe lasers and microelectronics to realistically simulate the firing capabilities of rifles, machine guns, and other direct-fire weapons (man-worn, crew served and vehicle systems). The laser firing SATs attach easily to conventional field weapons, (with much greater Bore-sight retention than the Basic MILES), allow ground troops to fire coded (to distinguish weapon type, and player ID) laser signals. Soldiers fire blank ammunition, the "flash and bang"



CUBIC MILES 2000 Halo

triggers the laser transmitter. The receiving laser detectors determine Hit, Near Miss, Kill status of received fire. If Killed the receiving target loses the ability to "cheat" the system and no longer can fire his weapon. If the battery in the DCPU is removed and replaced without the "low bat" indicator being activated, a "cheat" kill is assessed when the battery is reinserted. An automated small arms alignment fixture (ASAAF) (DVC 99-88) is available to align weapons equipped with the small arms transmitter (SAT).



MILES 2000 M249 SAT

Physical Information:

One Torso detector (Vest), one Helmet detector (HALO) and 1SAT (for the correct weapon) make up the MILES kit. Transit case dimensions: 46.3"L x 40.3"W x 17.5"H

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

9vdc battery for the vest.

Applicable Publications:

Operator User's Manuals:
M16A2 23-6920-702-10
M24 SWS 23-6920-702-10
M249 SAW 23-6920-702-10
M60 MG 23-6920-702-10
M2 MG 23-6920-702-10

Reference Publications:

None

Training Requirements Supported:

ARTEPs 7-15, 17-55, 71-2
MOSCs 11B; 11Z; 19D; 19E; 19Z

M2K MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM 2000 (MILES 2000) M24/M40 SNIPER WEAPON SYSTEM KIT

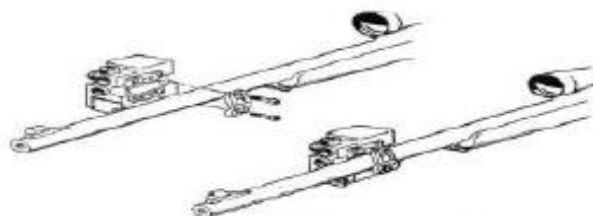


Figure 23.10, Laser Firing SAT Attached



Figure 23.10.1, CUBIC MILES 2000 Halo

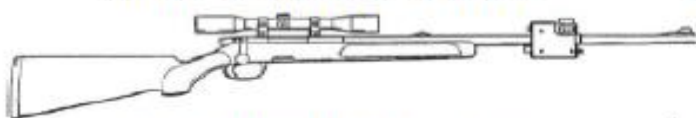


Figure 23.10.2, M24/M40 Sniper Weapon



Figure 23.10.3, ICON MILES 2000 Halo

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The Purpose of this trainer is to replace Basic MILES systems at home-station due to age of technology and cost to maintain. The M2K system incorporates an After Action Review capability not in the Basic MILES, which greatly enhances training for the soldiers participating in the exercises.

This device is a component of the MILES 2000 (M2K). The M2K is a family of training systems, which simulate the effects of direct-fire weapons at their operational ranges. The M2K system is primarily used for force-on-force training from squad up to and including Brigade level. M2K equipment is downward compatible with the Basic MILES equipment presently fielded.

Functional Description:

The M2K kit, consisting of 5 fielded distinct weapon firing simulator systems, employs eye-safe lasers and microelectronics to realistically simulate the firing capabilities of rifles, machine guns, and other direct-fire weapons (man-worn, crew served and vehicle systems). The laser firing SATs attach easily to conventional field weapons, (with much greater Bore-sight retention than the Basic MILES), allow ground troops to fire coded (to distinguish weapon type, and player ID) laser signals. Soldiers fire blank ammunition, the “flash and bang” triggers the laser transmitter. The receiving laser detectors determine Hit, Near Miss, Kill status of received fire.

If Killed the receiving target loses the ability to “cheat” the system and no longer can fire his weapon. If the battery in the DCPU is removed and replaced without the “low bat” indicator being activated, a “cheat” kill is assessed when the battery is reinserted. An automated small arms alignment fixture (ASAAF) (DVC 99-88) is available to align weapons equipped with the small arms transmitter (SAT).

Physical Information:

One Torso detector (Vest), one Helmet detector (HALO) and 1SAT(for the correct weapon) make up the MILES kit.

Transit Case dimensions: 46.3" L x 40.3" W x 17.5" H

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

9vdc battery for the vest

3.6-volt lithium battery for the SAT

Applicable Publications:

Operator Manuals:

M16A2 23-6920-702-10

M24 SWS 23-6920-702-10

M249 SAW 23-6920-702-10

M60 MG 23-6920-702-10

M2 MG 23-6920-702-10

Reference Publications:

TD 23-6920-705-10; TM 3920-10/2

Training Requirements Supported:

ARTEPs 7-15, 17-55, 71-2

MOSCs 11B; 11Z; 19D; 19E; 19Z

M2K MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM 2000 (MILES 2000) M60 MACHINE GUN KIT



MILES 2000 Torso (front/back)

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The Purpose of this trainer is to replace Basic MILES systems at home-station due to age of technology and cost to maintain. The M2K system incorporates an After Action Review capability not in the Basic MILES, which greatly enhances training for the soldiers participating in the exercises.

This device is a component of the MILES 2000 (M2K). The M2K is a family of training systems, which simulate the effects of direct-fire weapons at their operational ranges. The M2K system is primarily used for force-on-force training from squad up to and including Brigade level. M2K equipment is downward compatible with the Basic MILES equipment presently fielded.

Functional Description:

The M2K kit, consisting of 5 fielded distinct weapon firing simulator systems, employs eye-safe lasers and microelectronics to realistically simulate the firing capabilities of rifles, machine guns, and other direct-fire weapons (man-worn, crew served and vehicle systems). The laser firing SATs attach easily to conventional field weapons, (with much greater Bore-sight retention than the Basic MILES), allow ground troops to fire coded (to distinguish weapon type, and player ID) laser signals. Soldiers fire blank ammunition, the “flash and bang” triggers the laser transmitter. The receiving laser detectors



CUBIC MILES 2000 Halo

If Killed the receiving target loses the ability to “cheat” the system and no longer can fire his weapon. If the battery in the DCPU is removed and replaced without the “low bat” indicator being activated, a “cheat” kill is assessed when the battery is reinserted. An automated small arms alignment fixture (ASA AF) (DVC 99-88) is available to align weapons equipped with the small arms transmitter (SAT).

Physical Information:

One Torso detector (Vest), one Helmet detector (HALO) and 1SAT (for the correct weapon) make up the MILES kit.

Transit case dimensions: 46.3" L x 40.3" W x 17.5" H

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

9vdc battery for the vest

Applicable Publications:

Operator User's Manuals:

M16A2 23-6920-702-10

M24 SWS 23-6920-702-10

M249 SAW 23-6920-702-10

M60 MG 23-6920-702-10

M2 MG 23-6920-702-10

Training Requirements Supported:

ARTEPs 7-15, 17-55, 71-2

MOSCs 11B; 11Z; 19D; 19E; 19Z

M2K MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM 2000 (MILES 2000) M240 MACHINE GUN KIT



MILES 2000 Torso (front/back)

Figure 23.12.1,
CUBIC MILES 2000 HaloFigure 23.12.2,
ICON MILES 2000 Halo

Fig. 23.12.3, M240 SAT

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The Purpose of this trainer is to replace Basic MILES systems at home-station due to age of technology and cost to maintain. The M2K system incorporates an After Action Review capability not in the Basic MILES, which greatly enhances training for the soldiers participating in the exercises.

This device is a component of the MILES 2000 (M2K). The M2K is a family of training systems, which simulate the effects of direct-fire weapons at their operational ranges. The M2K system is primarily used for force-on-force training from squad up to and including Brigade level. M2K equipment is downward compatible with the Basic MILES equipment presently fielded.

Functional Description:

The M2K kit, consisting of 5 fielded distinct weapon firing simulator systems, employs eye-safe lasers and microelectronics to realistically simulate the firing capabilities of rifles, machine guns, and other direct-fire weapons (man-worn, crew served and vehicle systems). The laser firing SATs attach easily to conventional field weapons, (with much greater Bore-sight retention than the Basic MILES), allow ground troops to fire coded (to distinguish weapon type, and player ID) laser signals. Soldiers fire blank ammunition, the "flash and bang"

triggers the laser transmitter. The receiving laser detectors determine Hit, Near Miss, Kill status of received fire.

If Killed the receiving target loses the ability to "cheat" the system and no longer can fire his weapon. If the battery in the DCPU is removed and replaced without the "low bat" indicator being activated, a "cheat" kill is assessed when the battery is reinserted. An automated small arms alignment fixture (ASAAF) (DVC 99-88) is available to align weapons equipped with the small arms transmitter (SAT).

Physical Information:

One Torso detector (Vest), one Helmet detector (HALO) and 1SAT (for the correct weapon) make up the MILES kit.

Transit case dimensions: 46.3" L x 40.3" W x 17.5" H

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

9vdc battery for the vest

Applicable Publications:

Operator User's Manuals:

M16A2 23-6920-702-10

M24 SWS 23-6920-702-10

M249 SAW 23-6920-702-10

M60 MG 23-6920-702-10

M2 MG 23-6920-702-10

Training Requirements Supported:

ARTEPs 7-15, 17-55, 71-2

MOSCs 11B; 11Z; 19D; 19E; 19Z

M2K MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM 2000 (MILES 2000) M2 MACHINE GUN KIT



M2 SAT (Small Arms Transmitter)



Figure 23.13.1,
CUBIC MILES 2000 Halo



Figure 23.13.2,
ICON MILES 2000 Halo



.50 CAL

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The Purpose of this trainer is to replace Basic MILES systems at home-station due to age of technology and cost to maintain. The M2K system incorporates an After Action Review capability not in the Basic MILES, which greatly enhances training for the soldiers participating in the exercises.

This device is a component of the MILES 2000 (M2K). The M2K is a family of training systems, which simulate the effects of direct-fire weapons at their operational ranges. The M2K system is primarily used for force-on-force training from squad up to and including Brigade level. M2K equipment is downward compatible with the Basic MILES equipment presently fielded.

Functional Description:

The M2K kit, consisting of 5 fielded distinct weapon firing simulator systems, employs eye-safe lasers and microelectronics to realistically simulate the firing capabilities of rifles, machine guns, and other direct-fire weapons (man-worn, crew served and vehicle systems). The laser firing SATs attach easily to conventional field weapons, (with much greater Bore-sight retention than the Basic MILES), allow ground troops to fire coded (to distinguish weapon type, and player ID) laser signals. Soldiers fire blank ammunition, the "flash and bang"

triggers the laser transmitter. The receiving laser detectors determine Hit, Near Miss, Kill status of received fire.

If Killed the receiving target loses the ability to "cheat" the system and no longer can fire his weapon. If the battery in the DCPU is removed and replaced without the "low bat" indicator being activated, a "cheat" kill is assessed when the battery is reinserted. An automated small arms alignment fixture (ASAAF) (DVC 99-88) is available to align weapons equipped with the small arms transmitter (SAT).

Physical Information:

One Torso detector (Vest), one Helmet detector (HALO) and one SAT (for the correct weapon) make up the MILES kit. Transit case dimensions: 46.3" L x 40.3" W x 17.5" H

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

9vdc battery for the vest

Applicable Publications:

OUMs: M16A2 23-6920-702-10
M24 SWS 23-6920-702-10
M249 SAW 23-6920-702-10
M60 MG 23-6920-702-10
M2 MG 23-6920-702-10

Reference Publications:

None

Training Requirements Supported:

ARTEPs 7-15, 17-55, 71-2
MOSCs 11B; 11Z; 19D; 19E; 19Z

M2K MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM 2000 (MILES 2000) AT-04 KIT

PICTURE NOT AVAILABLE

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The MILES 2000 system uses laser beams to simulate actual weapons fire. An eye-safe invisible laser beam is sent out by each weapon's transmitter when it is fired. The laser beam is coded, and simulates all of the weapon's capabilities including range, accuracy, and destructive capability.

Laser detector systems are used to sense incoming fire. The detector systems register incoming laser beams and determine whether they have scored a Near Miss, Hit, or Kill. Incoming fire can result in more than one type of a Hit or Kill. Types of Hits or Kills include Mobility, Communications, Firepower, or a Catastrophic Kill of the entire vehicle.

Functional Description:

- a. Realistic simulation of flash, bang and smoke by pyrotechnic means.
- b. Uses blank fire and Anti-Tank Weapons Effect Signal true Simulator (ATWESS) to add realism.
- c. Electrically initiated pyrotechnics.
- d. Normal firing procedures used for all weapons.
- e. Detects all incoming fire, identifies opposing weapons and player ID (PID), and determines the effect of incoming fire on the individual or vehicle.
- f. Uses eye-safe laser transmitters.
- g. Compatible with all other MILES devices.

Physical Information:

14.8lbs, 40" L x 3.4" W

Equipment Required, Not Supplied:

Two AA (1.5vdc) batteries.

Special Installation Requirements:

None

Power Requirements:

(Information not available)

Applicable Publications:

TM 08673A/09134A-10/3

Reference Publications:

Applicable Weapon System Manual

Training Requirements Supported:

MOSCs 11B; 11Z; 19D; 19E; 19Z

M2K MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM 2000 (MILES 2000) TOW GROUND MOUNT/DAY TRACKER KIT



MILES 2000 Torso (front/back)

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The device is a component of the Multiple Integrated Laser Engagement System (MILES) 2000. MILES is a family of training systems which simulate the effects of direct-fire weapons at their operational ranges and operate in a fully integrated tactical training environment. MILES provides the capability for two-sided, real-time tactical engagement at unit sizes up to battalion and for realistic casualty assessments.

Firing the weapon simulators is much like firing the actual weapons. However, instead of firing live ammunition, these simulators transmit harmless laser beams. To allow the simulation to be as real as possible, the rifle and machine guns use blank ammunition, and the missiles and main guns use weapons effect simulators to simulate the noise, blast, and smoke of the actual weapons. Training Device 07-56/6D has modified printed wiring boards which reduce time of flight but do not shorten the effective range of the transmitters. The specific training requirements supported are shown following the descriptive data.



Figure 23.14.1,
CUBIC MILES 2000 Halo



Figure 23.14.2,
ICON MILES 2000 Halo

Functional Description:

The MILES family, consisting of 18 fielded distinct weapon firing simulator systems, employ eye-safe lasers and microelectronics to realistically simulate the firing capabilities of rifles, machine guns, and other direct-fire weapons. Small battery-operated laser transmitters, which attach easily to conventional field weapons, allow ground troops to fire coded (to distinguish range and killing power of specific weapons) invisible laser pulses instead of live ammunition. Receiving detectors, located on opposing troops and vehicles, pick up the laser pulses and instantly provide audio/ visual indications of a kill, hit, or near miss. Kill indicators on men or vehicles will disable the victim's weapon. The hit and kill probabilities are similar to those achieved when using live ammunition.

The Simulator System, Firing, Laser, M64 for TOW consists of a laser transmitter resembling a TOW tracker head which completely replaces the actual TOW tracker head, an antitank weapons effect simulator and detector mounted in a simulated TOW tube, and two man-worn detector assemblies installed on load-carrying harnesses and straps which fit over standard issue steel helmets.

Physical Information:

Transit case: 33" x 29" x 19"

Equipment Required, Not Supplied:

Battery, BA 3090 (9v, transistor)

Special Installation Requirements:

None

Power Requirements:

9vdc

Applicable Publications:

TM 9-6920-368-10-2

Reference Publications:

Applicable Weapon System Manual

Training Requirements Supported:

ARTEPs Supported 7-15, 17-55, 71-2

MOSC 11B; 11Z; 19D; 19E; 19Z

SM Tasks

All tactical tasks for skill levels 1 through 5

**M2K MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM 2000 (MILES 2000)
M113 ARMORED PERSONNEL CARRIER (APC) VEHICLE SYSTEM KIT**



M113 Armored Personnel Carrier (APC)

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The Purpose of this trainer is to replace Basic MILES systems at home-station due to age of technology and cost to maintain. The M2K system incorporates an After Action Review capability not in the Basic MILES, which greatly enhances training for the soldiers participating in the exercises.

The Combat Vehicle System (CVS) is a component of the MILES 2000 (M2K). The M2K is a family of training systems, which simulate the effects of direct-fire weapons at their operational ranges. The M2K system is primarily used for force-on-force training from squad up to and including Brigade level. M2K equipment is downward compatible with the Basic MILES equipment presently fielded.

Functional Description:

The Laser Detectors (belts) receive incoming coded laser information and interpret the signal into Hit, Near Miss, or Kill. A Hit will cause the KSI to flash 4 times, a Near Miss causes 2 flashes, and a Kill causes continuous flashing which is seen by other players. When Killed, the vehicle can not maneuver nor fire its weapons.

Physical Information:

The M2K M113 Vehicle System consists of the following:

- a. Detector Belts on all four sides of the vehicle.
- b. A Laser Transmitter attached to the barrel of the M2 Machine Gun.
- c. A Control Unit.
- d. A Kill Status Indicator (KSI).
- e. Battery Box Assy.
- f. System Cable.
- g. 2 Individual Weapon System (IWS).
- h. Transit case dimensions: 46.3" L x 40.3" W x 17.5" H (1 Kit per case).

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

9vdc battery (for IWS)
Vehicle power to system

Applicable Publications:

M16A2 23-6920-702-10
M2 MG 23-6920-702-10
M113 TD 9-6920-713-10
TD 23-6920-713-10
TM 6920-10/10

Reference Publications:

TD 23-6920-893-10
TM 6920-10/5

Training Requirements Supported:

ARTPs
7-15, 17-55, 71-2

MOSCs 11B; 11Z; 19D; 19E; 19Z

M2K MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM 2000 (MILES 2000) M1/M1A1/M1A2 KIT

**Training Category/Level Utilized:**

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The Purpose of this trainer is to replace Basic MILES systems at home-station due to age of technology and cost to maintain. The M2K system incorporates an After Action Review capability not in the Basic MILES, which greatly enhances training for the soldiers participating in the exercises.

This device (IWS) is a component of the MILES 2000 (M2K). The M2K is a family of training systems, which simulate the effects of direct-fire weapons at their operational ranges. The M2K system is primarily used for force-on-force training from squad up to and including Brigade level. The M2K system incorporates a (AAR) capability not in the Basic MILES, which greatly enhances training for the soldiers participating in the exercises. M2K equipment is downward compatible with the Basic MILES equipment presently fielded.

Functional Description:

The Laser Detectors (belts) receive incoming coded laser information and interpret the signal into Hit, Near Miss, Communications Kill, Mobility Kill, and Catastrophic Kill. A Hit will cause the KSI to flash 4 times, a Near Miss causes 2 flashes, and a Catastrophic Kill causes continuous flashing which is seen by other players. When a Communication Kill takes place the tanks radio communication ceases. A Mobility Kill disables the tank maneuverability. A catastrophic Kill disables the vehicle completely.

Physical Information:

The M1A1/A2 Vehicle System consists of the following:
1 Universal Laser Transmitter (ULT) w/adaptor for the barrel of the Main Gun.

- 1 Control Unit
- 1 Loaders Unit
- 1 Kill Status Indicator (KSI)
- 1 Optical Turret Position Detector (OTPD)
- 1 Battery Box Assy.
- 1 Coax Mic Assy.
- Detector Belts LR and RF
- 1 System Cable
- 1 Transmitter Cable
- 1 M240 SAT w/adaptor
- 1 M2 SAT w/adaptor
- 4 IWS

Transit case dimensions: 46.3" L x 40.3" W x 17.5" H
(1 Kit per case).

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

9vdc battery (for IWS)
Vehicle power to system

Applicable Publications:

M16A2 23-6920-702-10
M2 MG 23-6920-702-10
M1A1/A2 TD 9-6920-720-10

Reference Publications:

None

Training Requirements Supported:

ARTEPs 7-15, 17-55, 71-2
MOSCs 11B; 11Z; 19D; 19E; 19Z

M2K MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM 2000 (MILES 2000) M2/M3 FAMILY OF FIGHTING VEHICLES KIT

NSN Not Assigned

DVC 23-51/A M2K (MILES 2000) VIS COM

**Training Category/Level Utilized:**

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The Purpose of this trainer is to replace Basic MILES systems at home-station due to age of technology and cost to maintain. The M2K system incorporates an After Action Review capability not in the Basic MILES, which greatly enhances training for the soldiers participating in the exercises.

This device (CVS) is a component of the MILES 2000 (M2K). The M2K is a family of training systems, which simulate the effects of direct-fire weapons at their operational ranges. The M2K system is primarily used for force-on-force training from squad up to and including Brigade level. M2K equipment is downward compatible with the Basic MILES equipment presently fielded.

Functional Description:

The Laser Detectors (belts) receive incoming coded laser information and interpret the signal into Hit, Near Miss, Communications Kill, Mobility Kill, and Catastrophic Kill. A Hit will cause the KSI to flash 4 times, a Near Miss causes 2 flashes, and a Catastrophic Kill causes continuous flashing which is seen by other players. When a Communication Kill takes place, the vehicle radio

communication ceases. A Mobility Kill disables the vehicle maneuverability. A catastrophic Kill disables the vehicle completely.

Physical Information:

The M2/M3 Vehicle System consists of the following:

- 1 Universal Laser Transmitter (ULT) w/adaptor and Flash WESS for the barrel of the 25mm main gun
- 1 Control Unit
- 1 Kill Status Indicator (KSI)
- 1 Optical Turret Position Detector (OTPD)
- 1 Battery Box Assy.
- 1 Coax Mic Assy.
- 2 TOW Vehicle Simulation Tube
- TOW Tube Connector
- TOW interface Assy.
- ATWESS
- Shorting Plug Assy.
- Detector Belts LR and RF
- 1 System Cable
- 1 Transmitter Cable
- 3 IWS
- Transit case dimensions: 46.3" L x 40.3" W x 17.5" H (1 Kit per case)
- Transit Case for TOW Tubes (2 per Case) 61.6" x 24.7" x 16"

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

9vdc battery (for IWS)
9vdc battery (for OTPD)
Vehicle power to system

Applicable Publications:

M16A2 23-6920-702-10
M2/M3 TD 9-6920-720-10

Reference Publications:

None

Training Requirements Supported:

ARTEPs 7-15, 17-55, 71-2
MOSCs 11B; 11Z; 19D; 19E; 19Z

M2K MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM 2000 (MILES 2000) INDEPENDENT TARGET SYSTEM (ITS) KIT

PICTURE NOT AVAILABLE

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The Purpose of this trainer is to replace Basic MILES systems at home-station due to age of technology and cost to maintain. The M2K system incorporates an After Action Review capability not in the Basic MILES, which greatly enhances training for the soldiers participating in the exercises.

The Combat Vehicle System (CVS) is a component of the MILES 2000 (M2K). The M2K is a family of training systems, which simulate the effects of direct-fire weapons at their operational ranges. The M2K system is primarily used for force-on-force training from squad up to and including Brigade level. M2K equipment is downward compatible with the Basic MILES equipment presently fielded.

Functional Description:

The Laser Detectors (belts) receive incoming coded laser information and interpret the signal into Hit, Near Miss, and Kill. A Hit will cause the KSI to flash 4 times, a Near Miss causes 2 flashes, and a Kill causes continuous flashing which is seen by other players. This Kit can be placed on

non-combatant vehicles, bridges, bunkers and ancillary equipment like generators.

Physical Information:

The ITS Kit consists of the following:

- 1 Control Unit
- 1 KSI w/Adapter
- 1 KSI Post Assy.
- 1 Battery Box Assy.
- 1 Detector Array
- 1 Cable Assy. Dome
- 2 Cable Assy. Power
- 1 Cable Assy ITS

Transit case dimensions: 46.3" L x 40.3" W x 17.5" H
(1 Kit per case)

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

24vdc

Applicable Publications:

63-6920-701-10

Reference Publications:

None

Training Requirements Supported:

ARTEPs 7-15, 17-55, 71-2

M2K MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM 2000 (MILES 2000) CONTROLLER DEVICE/TRAINING DATA TRANSFER DEVICE (CD/TDTD)

**Training Category/Level Utilized:**

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The Purpose of this trainer is to replace Basic MILES systems at home-station due to age of technology and cost to maintain.

This device (CD/TDTD) is a component of the MILES 2000 (M2K). The M2K is a family of training systems, which simulate the effects of direct-fire weapons at their operational ranges. The M2K system is primarily used for force-on-force training from squad up to and including Brigade level. The M2K system incorporates a After Action Review capability not in the Basic MILES, which greatly enhances training for the soldiers participating in the exercises. M2K equipment is downward compatible with the Basic MILES equipment presently fielded.

Functional Description:

The CD/TDTD is used by Exercise Controllers to control exercises by (1) setting up weapon type and Player ID for each IWS. (2) The CD/TDTD downloads data stored in components of the device (up to 500 events). The CD/TDTD can also fire MILES codes (SELECTABLE) Hit, Near Miss, and Kill. In addition, the device can be used to resurrect/reset any weapon system after it has been "Killed". This component is used to download events from any M2K component, then upload the information into a

computer loaded with the MILES After Action Review Software (MAARS) via the TDTD/PC Interface Device. The computer (MARRS Laptop Kit) and MAARS "interpret" and manipulate the data to generate the After Action Report used to present the After Action review to the participants.

Physical Information:

1 Controller Device

Transit case dimensions: 38.7" L x 25" W x 13.5" H
(10 CD/TDTD Kits per case with 2 TDTD/PC Interface Devices)

Equipment Required, Not Supplied:

Computer w/MAARS software.

TDTD/PC Interface Device (Not supplied for each CD/TDTD).

Special Installation Requirements:

None

Power Requirements:

2 AA Batteries

Applicable Publications:

63-6920-703-10

Reference Publications:

None

Training Requirements Supported:

ARTEPs 7-15, 17-55, 71-2

MOSCs 11B; 11Z; 19D; 19E; 19Z

M2K MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM 2000 (MILES 2000) M4/M16A1/M16A2



MILES 2000 Torso (front/back)



**Figure 23.19.1,
CUBIC MILES 2000 Halo**



**Figure 23.19.2,
ICON MILES 2000 Halo**



M16A2/M4 SAT

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The Purpose of this trainer is to replace Basic MILES systems at home-station due to age of technology and cost to maintain. The M2K system incorporates an After Action Review capability not in the Basic MILES, which greatly enhances training for the soldiers participating in the exercises.

This device is a component of the MILES 2000 (M2K). The M2K is a family of training systems, which simulate the effects of direct-fire weapons at their operational ranges. The M2K system is primarily used for force-on-force training from squad up to and including Brigade level. M2K equipment is downward compatible with the Basic MILES equipment presently fielded.

Functional Description:

The M2K kit, consisting of 5 fielded distinct weapon firing simulator systems, employs eye-safe lasers and microelectronics to realistically simulate the firing capabilities of rifles, machine guns, and other direct-fire weapons (man-worn, crew served and vehicle systems). The laser firing SATs attach easily to conventional field weapons, (with much greater boresight retention than the Basic MILES), allow ground troops to fire coded (to distinguish weapon type, and player ID) laser signals. Soldiers fire blank ammunition, the "flash and bang" triggers the laser transmitter. The receiving laser detectors

determine Hit, Near Miss, Kill status of received fire.

If Killed the receiving target loses the ability to "cheat" the system and no longer can fire his weapon. If the battery in the DCPU is removed and replaced without the "low bat" indicator being activated, a "cheat" kill is assessed when the battery is reinserted. An automated small arms alignment fixture (ASAAF) (DVC 99-88) is available to align weapons equipped with the small arms transmitter (SAT).

Physical Information:

Transit case: 29" x 22" x 28"

Equipment Required, Not Supplied:

Battery, BA 3090 (9v, transistor)
Firing attachment, blank ammunition, M16A2
Cartridge, 5.56mm blank, M200

Special Installation Requirements:

None

Power Requirements:

9vdc

Applicable Publications:

TM 9-1265-211-10

Reference Publications:

TM 9-1005-249-10
TM 9-1005-319-10

Training Requirements Supported:

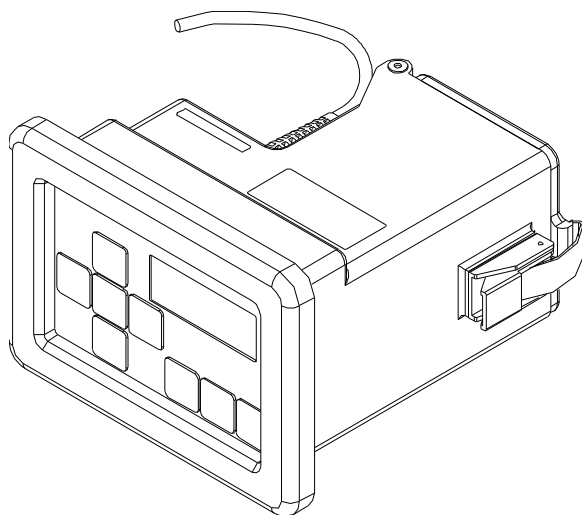
ARTEPs Supported 7-15, 17-55, 71-2
MOSC 11B; 11Z; 19D; 19E; 19Z
SM Tasks:
All tactical tasks for skill levels 1 through 5.

MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM 2000 (MILES 2000) ASAAF KIT

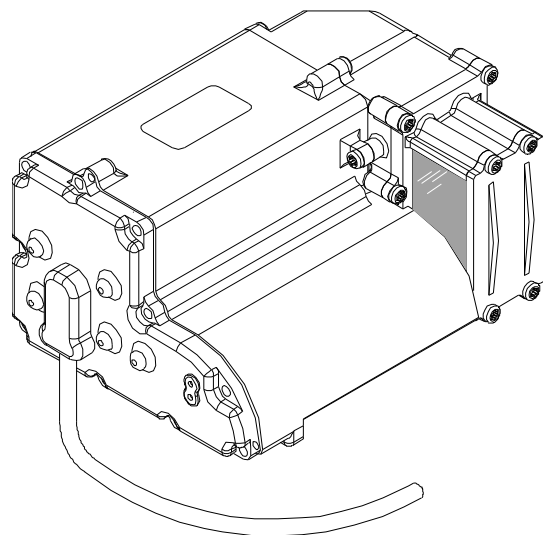
NSN Not Assigned

DVC 23-58/A

MILES 2000 ASAAF Kit



32020186-DT

ASAAF DISPLAY ASSEMBLY32020185-DT
147950**ASAAF ALIGNMENT HEAD****Training Category/Level Utilized:**

Combined Arms

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

The ASAAF is used for automatic boresight alignment of all small arm weapons and machine guns.

Functional Description:

The ASAAF consists of a Display Assembly and Alignment Head. The Display Assembly provides an LCD display of information as user of his/her weapon processes through the alignment process. The Alignment Head is attached to the Small Arms Transmitter (SAT) which has been attached to the barrel of the weapon. The Alignment Head is an electromechanical device, which automatically adjusts the SAT's laser position as directed by the Display Assembly. The Display Assembly is battery powered which allows the ASAAF to be operated at any location.

Physical Information:

ASAAF Control Unit:

Length: 5 inches

Width: 4 3/8 inches

Depth: 2 1/2 inches

Weight: 2 lbs.

Alignment Head:

Weight: 1 lb.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

6-volt Battery (DVC 23-58)

6-volt Battery or AC (DVC 23-58A)

Applicable Publications:

(Information not available)

Reference Publications:

(Information not available)

Training Requirements Supported:

MOSC 11B; 11Z; 19D; 19E; 19Z

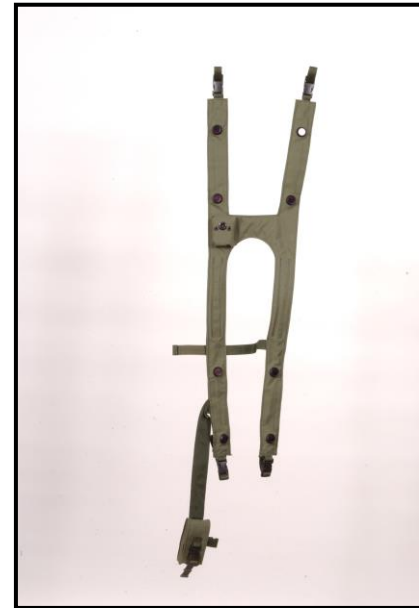
MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM INDIVIDUAL WEAPONS SYSTEM (MILES IWS) M2 MACHINE GUN KIT, INSTRUMENTABLE



MILES IWS Halo



Mounted SAT



Manworn Harness

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The purpose of this trainer is to replace Basic MILES and MILES 2000 systems at home-station and the Combat Training Centers (CTCs) due to age of technology and cost to maintain. The major differences between MILES Individual Weapons Systems (MILES IWS) and predecessor devices is in battery selection; the use of 2.4GHz ZigBee to communicate between the vest and Small Arms Transmitter (SAT); the use of a red laser, alignment knobs, and reflective paper targets to align the SAT. Weight of the device is also reduced from earlier devices. The MILES IWS kits are instrumentable for use in instrumented ranges.

This device is a component of the MILES Individual Weapons Systems (MILES IWS). MILES IWS is a family of training systems, which simulate the effects of direct-fire weapons at their operational ranges. MILES IWS is primarily used for force-on-force training from squad up to and include Brigade level.

Functional Description:

The MILES IWS consists of 6 fielded distinct weapon firing systems, employs eye-safe lasers and microelectronics to realistically simulate the firing capabilities of rifles, machine guns, and other direct-fire weapons. The laser firing SATs attach easily to conventional field weapons, allow ground troops to fire coded (to distinguish weapon type and player ID) laser signals. Soldiers fire blank ammunition, the "flash and bang" triggers the SAT. The receiving laser detectors determine, Hit, Near Miss, or Kill status of received fire. If Killed, the receiving target disables the system preventing the "killed" player from firing his/her weapon.

Physical Information:

The Manworn Harness consists of an infrared detector array attached to a vest that contains a sound transmitting device and a Harness Control Unit (HCU). The HCU has a local Radio Frequency (RF) transceiver that allows it to communicate to the Small Arms Transmitter (SAT). The HCU receives encoded messages from the detectors.

The Halo consists of an electronic module and a set of infrared detectors mounted on a durable fabric. The Halo encircles the head providing 360 degrees coverage as a target. The Halo electronics receives encoded messages from the detectors and repeats the message to the Harness through embedded inductive loops.

The Small Arms Transmitter (SAT) is mounted on the barrel of personnel weapons and transmits MILES Laser messages to a target. When the Harness is killed, the SAT is automatically disabled.

Transit case dimensions:

37.3" (L) x 35.3" (W) x 17.5" (H)

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

SAT and Halo: ½ AA, 3.6v, lithium-thionyl chloride battery.

HCU: AA, 3.6v, lithium-thionyl chloride battery.

Applicable Publications:

OUM 23-6920-706-10, (MILES), (IWS)

SMM 23-6920-706-24 (MILES), (IWS)

OUM 23-6920-707-10 (MILES (IWS), Training Data Transfer Device (TDTD)

Reference Publications:

None

Training Requirements Supported:

MOSC 11B; 11Z; 19D; 19E; 19Z

**MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM
INDIVIDUAL WEAPONS SYSTEM (MILES IWS)
M16/M4 RIFLE KIT, INSTRUMENTABLE**



MILES IWS Halo



Mounted SAT



Manworn Harness

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The purpose of this trainer is to replace Basic MILES and MILES 2000 systems at home-station and the Combat Training Centers (CTCs) due to age of technology and cost to maintain. The major differences between MILES Individual Weapons Systems (MILES IWS) and predecessor devices is in battery selection; the use of 2.4GHz ZigBee to communicate between the vest and Small Arms Transmitter (SAT); the use of a red laser, alignment knobs, and reflective paper targets to align the SAT. Weight of the device is also reduced from earlier devices. The MILES IWS kits are instrumentable for use in instrumented ranges.

This device is a component of the MILES Individual Weapons Systems (MILES IWS). MILES IWS is a family of training systems, which simulate the effects of direct-fire weapons at their operational ranges. MILES IWS is primarily used for force-on-force training from squad up to and include Brigade level.

Functional Description:

The MILES IWS consists of 6 fielded distinct weapon firing systems, employs eye-safe lasers and microelectronics to realistically simulate the firing capabilities of rifles, machine guns, and other direct-fire weapons. The laser firing SATs attach easily to conventional field weapons, allow ground troops to fired coded (to distinguish weapon type and player ID) laser signals. Soldiers fire blank ammunition, the "flash and bang" triggers the SAT. The receiving laser detectors determine, Hit, Near Miss, or Kill status of received fire. If Killed, the receiving target disables the system preventing the "killed" player from firing his/her weapon.

Physical Information:

The Manworn Harness consists of an infrared detector array attached to a vest that contains a sound transmitting device and a Harness Control Unit (HCU). The HCU has a local Radio Frequency (RF) transceiver that allows it to communicate to the Small Arms Transmitter (SAT). The HCU receives encoded messages from the detectors.

The Halo consists of an electronic module and a set of infrared detectors mounted on a durable fabric. The Halo encircles the head providing 360 degrees coverage as a target. The Halo electronics receives encoded messages from the detectors and repeats the message to the Harness through embedded inductive loops.

The Small Arms Transmitter (SAT) is mounted on the barrel of personnel weapons and transmits MILES Laser messages to a target. When the Harness is killed, the SAT is automatically disabled.

Transit case dimensions:

37.3" (L) x 35.3" (W) x 17.5" (H)

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

SAT and Halo: ½ AA, 3.6v, lithium-thionyl chloride battery.

HCU: AA, 3.6v, lithium-thionyl chloride battery.

Applicable Publications:

OUM 23-6920-706-10, (MILES), (IWS)
SMM 23-6920-706-24, (MILES), (IWS)
OUM 23-6920-707-10, (MILES), (IWS), Training Data Transfer Device (TDTD)

Reference Publications:

None

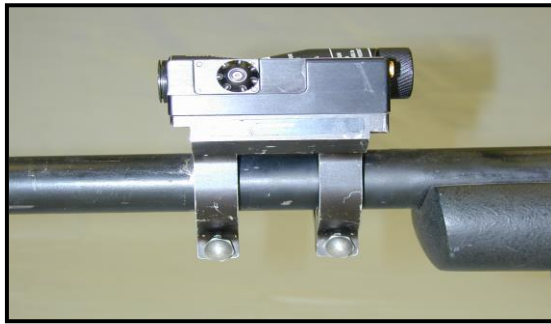
Training Requirements Supported:

MOSC 11B; 11Z; 19D; 19E; 19Z

**MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM
INDIVIDUAL WEAPONS SYSTEM (MILES IWS)
M24 SNIPER WEAPON SYSTEM KIT, INSTRUMENTABLE**



MILES IWS Halo



Mounted SAT



Manworn Harness

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The purpose of this trainer is to replace Basic MILES and MILES 2000 systems at home-station and the Combat Training Centers (CTCs) due to age of technology and cost to maintain. The major differences between MILES Individual Weapons Systems (MILES IWS) and predecessor devices is in battery selection; the use of 2.4GHz ZigBee to communicate between the vest and Small Arms Transmitter (SAT); the use of a red laser, alignment knobs, and reflective paper targets to align the SAT. Weight of the device is also reduced from earlier devices. The MILES IWS kits are instrumentable for use in instrumented ranges.

This device is a component of the MILES Individual Weapons Systems (MILES IWS). MILES IWS is a family of training systems, which simulate the effects of direct-fire weapons at their operational ranges. MILES IWS is primarily used for force-on-force training from squad up to and include Brigade level.

Functional Description:

The MILES IWS consists of 6 fielded distinct weapon firing systems, employs eye-safe lasers and microelectronics to realistically simulate the firing capabilities of rifles, machine guns, and other direct-fire weapons. The laser firing SATs attach easily to conventional field weapons, allow ground troops to fired coded (to distinguish weapon type and player ID) laser signals. Soldiers fire blank ammunition, the “flash and bang” triggers the SAT. The receiving laser detectors determine, Hit, Near Miss, or Kill status of received fire. If Killed, the receiving target disables the system preventing the “killed” player from firing his/her weapon.

Physical Information:

The Manworn Harness consists of an infrared detector array attached to a vest that contains a sound transmitting device and a Harness Control Unit (HCU). The HCU has a local Radio Frequency (RF) transceiver that allows it to communicate to the Small Arms Transmitter (SAT). The HCU receives encoded messages from the detectors.

The Halo consists of an electronic module and a set of infrared detectors mounted on a durable fabric. The Halo encircles the head providing 360 degrees coverage as a target. The Halo electronics receives encoded messages from the detectors and repeats the message to the Harness through embedded inductive loops.

The Small Arms Transmitter (SAT) is mounted on the barrel of personnel weapons and transmits MILES Laser messages to a target. When the Harness is killed, the SAT is automatically disabled.

Transit case dimensions:

37.3" (L) x 35.3" (W) x 17.5" (H)

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

SAT and Halo: ½ AA, 3.6v, lithium-thionyl chloride battery.

HCU: AA, 3.6v, lithium-thionyl chloride battery.

Applicable Publications:

OUM 23-6920-706-10, (MILES), (IWS)

SMM 23-6920-706-24, (MILES), (IWS)

OUM 23-6920-707-10, (MILES), (IWS), Training Data Transfer Device (TDTD)

Reference Publications:

None

Training Requirements Supported:

MOSC 11B; 11Z; 19D; 19E; 19Z

M107 MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM INDIVIDUAL WEAPONS SYSTEM (MILES IWS) SNIPER WEAPON SYSTEM KIT, INSTRUMENTABLE



M107 Mounted SAT



MILES IWS Halo



MILES IWS Harness

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The MILES IWS M107 Sniper Set includes the M107 Small Arms Transmitter, a MILES IWS Halo, and a MILES IWS H Harness, and all associated support items of equipment (ASIOE). The purpose of this set is to provide the operator with all the equipment he will need to perform his assigned training mission, using his real world weapon in a MILES IWS training environment.

Functional Description:

The MILES IWS M107 Sniper Set is used exactly as all other MILES IWS sets are used. The M107 Small Arms Transmitter (SAT) is mounted on the operator's real world weapon, and the operator is outfitted with the MILES IWS harness and halo. The SAT on the weapon associates with the harness and halo, and the operator is ready to align the SAT to the weapon and proceed through the training scenario.

Physical Information:

SAT Dimensions:
3.30"L X 2.00"W X 1.47"H
Weight: 22.7 oz.

Halo Dimensions:

31" Circumference x 3" Width
Weight: 7.2 oz.

Harness Dimensions:

39"L x 10.25"W
Weight: 38.4 oz.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

The M107 SAT uses a 3.6v Lithium battery
NSN: 6135-01-435-4921
The Halo uses a 3.6v lithium battery
NSN: 6135-01-435-4921
The Harness uses 2 each 3.0v Lithium batteries
NSN: 6135-01-351-1131

Applicable Publications:

The MILES IWS manuals:
OUM 23-6920-706-10
SMM 23-6920-706-24&P

Reference Publications:

None

Training Requirements Supported:

This Set supports CTC rotational exercises, as well as other Force On Force training events.

MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM INDIVIDUAL WEAPONS SYSTEM (MILES IWS) M240 MACHINE GUN KIT, INSTRUMENTABLE



Figure 23.25, MILES IWS Halo



Mounted SAT



Manworn Harness

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The purpose of this trainer is to replace Basic MILES and MILES 2000 systems at home-station and the Combat Training Centers (CTCs) due to age of technology and cost to maintain. The major differences between MILES Individual Weapons Systems (MILES IWS) and predecessor devices is in battery selection; the use of 2.4GHz ZigBee to communicate between the vest and Small Arms Transmitter (SAT); the use of a red laser, alignment knobs, and reflective paper targets to align the SAT. Weight of the device is also reduced from earlier devices. The MILES IWS kits are instrumentable for use in instrumented ranges.

This device is a component of the MILES Individual Weapons Systems (MILES IWS). MILES IWS is a family of training systems, which simulate the effects of direct-fire weapons at their operational ranges. MILES IWS is primarily used for force-on-force training from squad up to and include Brigade level.

Functional Description:

The MILES IWS consists of 6 fielded distinct weapon firing systems, employs eye-safe lasers and microelectronics to realistically simulate the firing capabilities of rifles, machine guns, and other direct-fire weapons. The laser firing SATs attach easily to conventional field weapons, allow ground troops to fired coded (to distinguish weapon type and player ID) laser signals. Soldiers fire blank ammunition, the "flash and bang" triggers the SAT. The receiving laser detectors determine, Hit, Near Miss, or Kill status of received fire. If Killed, the receiving target disables the system preventing the "killed" player from firing his/her weapon.

Physical Information:

The Manworn Harness consists of an infrared detector array attached to a vest that contains a sound transmitting device and a Harness Control Unit (HCU). The HCU has a local Radio Frequency (RF) transceiver that allows it to communicate to the Small Arms Transmitter (SAT). The HCU receives encoded messages from the detectors.

The Halo consists of an electronic module and a set of infrared detectors mounted on a durable fabric. The Halo encircles the head providing 360 degrees coverage as a target. The Halo electronics receives encoded messages from the detectors and repeats the message to the Harness through embedded inductive loops.

The Small Arms Transmitter (SAT) is mounted on the barrel of personnel weapons and transmits MILES Laser messages to a target. When the Harness is killed, the SAT is automatically disabled.

Transit case dimensions:

37.3" (L) x 35.3" (W) x 17.5" (H)

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

SAT and Halo: ½ AA, 3.6v, lithium-thionyl chloride battery.

HCU: AA, 3.6v, lithium-thionyl chloride battery.

Applicable Publications:

OUM 23-6920-706-10, (MILES), (IWS)

SMM 23-6920-706-24, (MILES), (IWS)

OUM 23-6920-707-10, (MILES), (IWS), Training Data Transfer Device (TDTD)

Reference Publications:

None

Training Requirements Supported:

MOSC 11B; 11Z; 19D; 19E; 19Z

**MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM
INDIVIDUAL WEAPONS SYSTEM (MILES IWS)
M249 SQUAD AUTOMATIC WEAPON KIT, INSTRUMENTABLE**



Figure 23.26, MILES IWS Halo



Mounted SAT



Manworn Harness

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The purpose of this trainer is to replace Basic MILES and MILES 2000 systems at home-station and the Combat Training Centers (CTCs) due to age of technology and cost to maintain. The major differences between MILES Individual Weapons Systems (MILES IWS) and predecessor devices is in battery selection; the use of 2.4GHz ZigBee to communicate between the vest and Small Arms Transmitter (SAT); the use of a red laser, alignment knobs, and reflective paper targets to align the SAT. Weight of the device is also reduced from earlier devices. The MILES IWS kits are instrumentable for use in instrumented ranges.

This device is a component of the MILES Individual Weapons Systems (MILES IWS). MILES IWS is a family of training systems, which simulate the effects of direct-fire weapons at their operational ranges. MILES IWS is primarily used for force-on-force training from squad up to and include Brigade level.

Functional Description:

The MILES IWS consists of 6 fielded distinct weapon firing systems, employs eye-safe lasers and microelectronics to realistically simulate the firing capabilities of rifles, machine guns, and other direct-fire weapons. The laser firing SATs attach easily to conventional field weapons, allow ground troops to fire coded (to distinguish weapon type and player ID) laser signals. Soldiers fire blank ammunition, the “flash and bang” triggers the SAT. The receiving laser detectors determine, Hit, Near Miss, or Kill status of received fire. If Killed, the receiving target disables the system preventing the “killed” player from firing his/her weapon.

Physical Information:

The Manworn Harness consists of an infrared detector array attached to a vest that contains a sound transmitting device and a Harness Control Unit (HCU). The HCU has a local Radio Frequency (RF) transceiver that allows it to communicate to the Small Arms Transmitter (SAT). The HCU receives encoded messages from the detectors.

The Halo consists of an electronic module and a set of infrared detectors mounted on a durable fabric. The Halo encircles the head providing 360 degrees coverage as a target. The Halo electronics receives encoded messages from the detectors and repeats the message to the Harness through embedded inductive loops.

The Small Arms Transmitter (SAT) is mounted on the barrel of personnel weapons and transmits MILES Laser messages to a target. When the Harness is killed, the SAT is automatically disabled.

Transit case dimensions:

37.3" (L) x 35.3" (W) x 17.5" (H)

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

SAT and Halo: ½ AA, 3.6v, lithium-thionyl chloride battery.

HCU: AA, 3.6v, lithium-thionyl chloride battery.

Applicable Publications:

OUM 23-6920-706-10, (MILES), (IWS)

SMM 23-6920-706-24, (MILES), (IWS)

OUM 23-6920-707-10, (MILES), (IWS), Training Data Transfer Device (TDTD)

Reference Publications:

None

Training Requirements Supported:

MOSC 11B; 11Z; 19D; 19E; 19Z

M110 MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM (MILES) INDIVIDUAL WEAPONS SYSTEM (IWS), SNIPER WEAPON SET, INSTRUMENTABLE

**M110 Mounted SAT****MILES IWS Halo****MILES IWS Harness**

Training Category/Level Utilized:
Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The MILES IWS M110 Sniper Set includes the M110 Small Arms Transmitter, a MILES IWS Halo, and a MILES IWS H Harness, and all associated support items of equipment (ASIOE). The purpose of this set is to provide the operator with all the equipment he will need to perform his assigned training mission, using his real world weapon in a MILES IWS training environment.

Functional Description:

The MILES IWS M110 Sniper Set is used exactly as all other MILES IWS sets are used. The M110 Small Arms Transmitter (SAT) is mounted on the operator's real world weapon, and the operator is outfitted with the MILES IWS harness and halo. The SAT on the weapon associates with the harness and halo, and the operator is ready to align the SAT and proceed through the training scenario.

Physical Information:

SAT Dimensions:
3.30"L X 2.00"W X 1.47"H
Weight: 22.7 oz.

Halo Dimensions:
31" Circumference x 3" Width
Weight: 7.2 oz.

Harness Dimensions:
39"L x 10.25"W
Weight: 38.4 oz.

Equipment Required, Not Supplied:
None

Special Installation Requirements:
None

Power Requirements:

The M110 SAT uses a 3.6v Lithium battery
NSN: 6135-01-435-4921
The Halo uses a 3.6v lithium battery
NSN: 6135-01-435-4921
The Harness uses 2 each 3.0v Lithium batteries
NSN: 6135-01-351-1131

Applicable Publications:

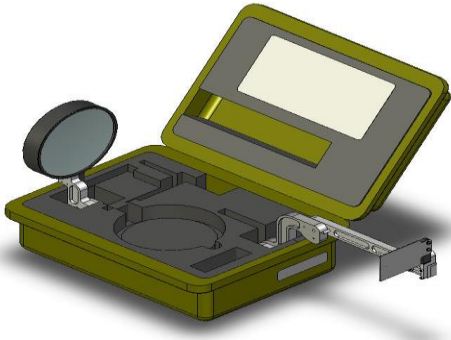
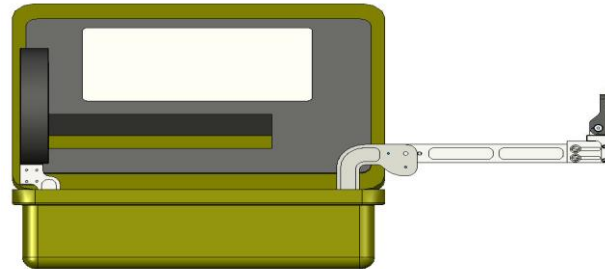
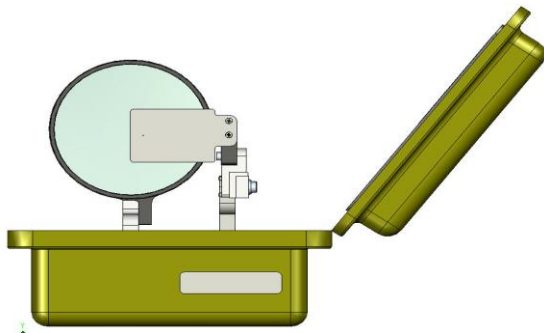
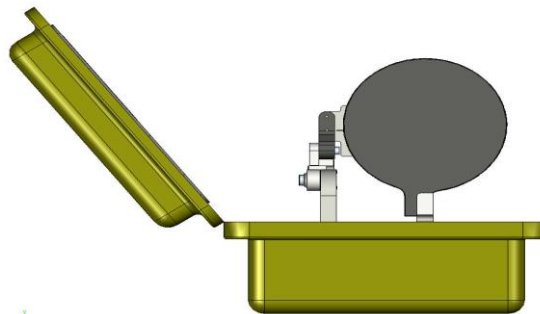
The MILES IWS manuals:
OUM 23-6920-706-10
SMM 23-6920-706-24&P

Reference Publications:
None

Training Requirements Supported:

MOSC - This Set supports CTC rotational exercises, as well as other Force On Force training events.

MIRROR ALIGNMENT JIG KIT (MAJiK)

**Top MAJiK View****Front MAJiK View****Left MAJiK View****Right MAJiK View****Training Category/Level Utilized:**

Combat Arms Level/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The purpose of the trainer is to replace the current target sheet alignment method for all MILES-IWS SAT with MAJiK. The MAJiK is an ancillary aid device used to align the MILES IWS SAT laser to the soldier's weapon sight picture.

Functional Description:

The MAJiK is a mechanical device that employs a mirror to reflect the laser transmitter's visible alignment onto a target card that uses a crosshair as reference point. The setup and device allow the user to set his weapon's sight at an infinite range so that the laser transmitter unit is aligned with the weapon's sight at long distance for better weapon simulation accuracy.

Physical Information:

External: Transit case weighs 15 lbs and dimensions of 16.25" (L) x 13" (W) x 7" (H). Internal: A mirror and extended arm with target card that fold down into the transit case.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

OUM 23-6920-706-10, (MILES), (IWS)
SMM 23-6920-706-24&P, (MILES), (IWS)
OUM-23-6920-707-10, (MILES), (IWS), Training Data Transfer Device,

Reference Publications:

N/A

Training Requirements Supported:

MOSC - (MILES), (IWS)

MIRROR ALIGNMENT JIG ASSEMBLY (MAJiK) VARIANT

**MAJiK Mechanical Device Transit Case****Training Category/Level Utilized:**

Weapons/Level 3

Special Installation Requirements:

None

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Power Requirements:

None

Source and Method of Obtaining:

Available through local TSC

Applicable Publications:

Operator Manual, Multiple Integrated Laser Engagement (MILES), Individuals Weapons System (IWS)
TM 23-6920-706-10
Maintenance Manual, Multiple Integrated Laser Engagement (MILES), Individuals Weapons System (IWS)
TM 23-6920-706-24&P
Operator Manual, Instrumentable Multiple Integrated Laser Engagement System (I-MILES) 2 TM 23-6920-710-10
System Maintenance Manual (SMM) Instrumentable Multiple Integrated Laser Engagement System (I-MILES) 2
TM 23-9320-710-24&P
Operator Manual, Multiple Integrated Laser Engagement (MILES), Individuals Weapons System (IWS), Training Data
Transfer Device TM-23-6920-707-10,

Purpose of Trainer:

The purpose of the trainer is to align the IWS SAT laser after installation to the weapon sighting mechanism. The MAJiK is an ancillary aid device used with IWS and IWS 2 systems.

Functional Description:

The MAJiK is a mechanical device that employs a mirror to reflect the laser transmitter's visible alignment onto a target card that uses a crosshair as reference point. The setup and device allow the user to set his weapon's sight at an infinite range so that the laser transmitter unit is aligned with the weapon's sight at long distance for better weapon simulation accuracy.

Reference Publications:

N/A

Physical Information:

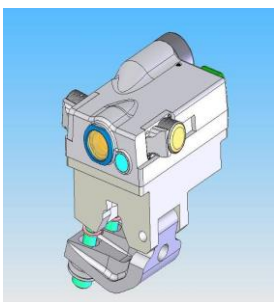
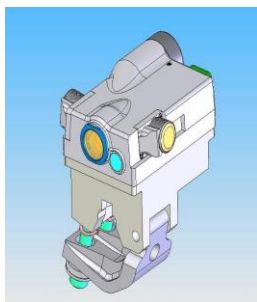
External: Transit case weighs 15 lbs and dimensions of 16.25" (L) x 13" (W) x 7" (H). Internal: A mirror and extended arm with target card that fold down into the transit case.

Training Requirements Supported:

Multiple Integrated Laser Engagement (MILES),
Individuals Weapons System (IWS) & Instrumentable
Multiple Integrated Laser Engagement System (I-MILES) 2

Equipment Required, Not Supplied:None

MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM, INDIVIDUAL WEAPONS SYSTEM (MILES IWS) SNIPER KIT

**M107 SAT****M110 SAT****MILES IWS Halo****MILES IWS Harness****Training Category/Level Utilized:**

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The MILES IWS Sniper Kit includes one M107 and one M110 Small Arms Transmitter, two MILES IWS Halos, two MILES IWS H Harnesses, and all associated support items of equipment (ASIOE). The purpose of this kit is to provide the Sniper Team with all the MILES IWS equipment needed by the sniper team to perform their MILES environment training mission.

Functional Description:

The sniper kit contains all MILES IWS equipment needed to perform the MILES environment training mission, and is used exactly as all other MILES IWS sets are used; the kit simply encases the MILES IWS equipment (M107 and M110 SAT, halos, and harnesses) so that the sniper team is properly equipped to perform the training mission in the MILES training environment. The M107 and M110 Small Arms Transmitters (SATs) are mounted on the operator's real world weapon, and the operator is outfitted with the MILES IWS harness and halo. The SAT on each weapon associates with the operator's harness and halo, and the operator is ready to align the SAT and proceed through the training scenario.

Physical Information:

M107 and M110 SAT Dimensions:
3.30"L X 2.00"W X 1.47"H

Weight: 22.7 oz.

Halo Dimensions:

31" Circumference x 3" Width

Weight: 7.2 oz.

Harness Dimensions:

39"L x 10.25"W

Weight: 38.4 oz.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

The M107 and M110 SAT uses a 3.6v Lithium battery

NSN: 6135-01-435-4921

The Halo uses a 3.6v lithium battery

NSN: 6135-01-435-4921

The Harness uses 2 each 3.0v Lithium batteries

NSN: 6135-01-351-1131

Applicable Publications:

The MILES IWS manuals:

OUM 23-6920-706-10

SMM 23-6920-706-24&P

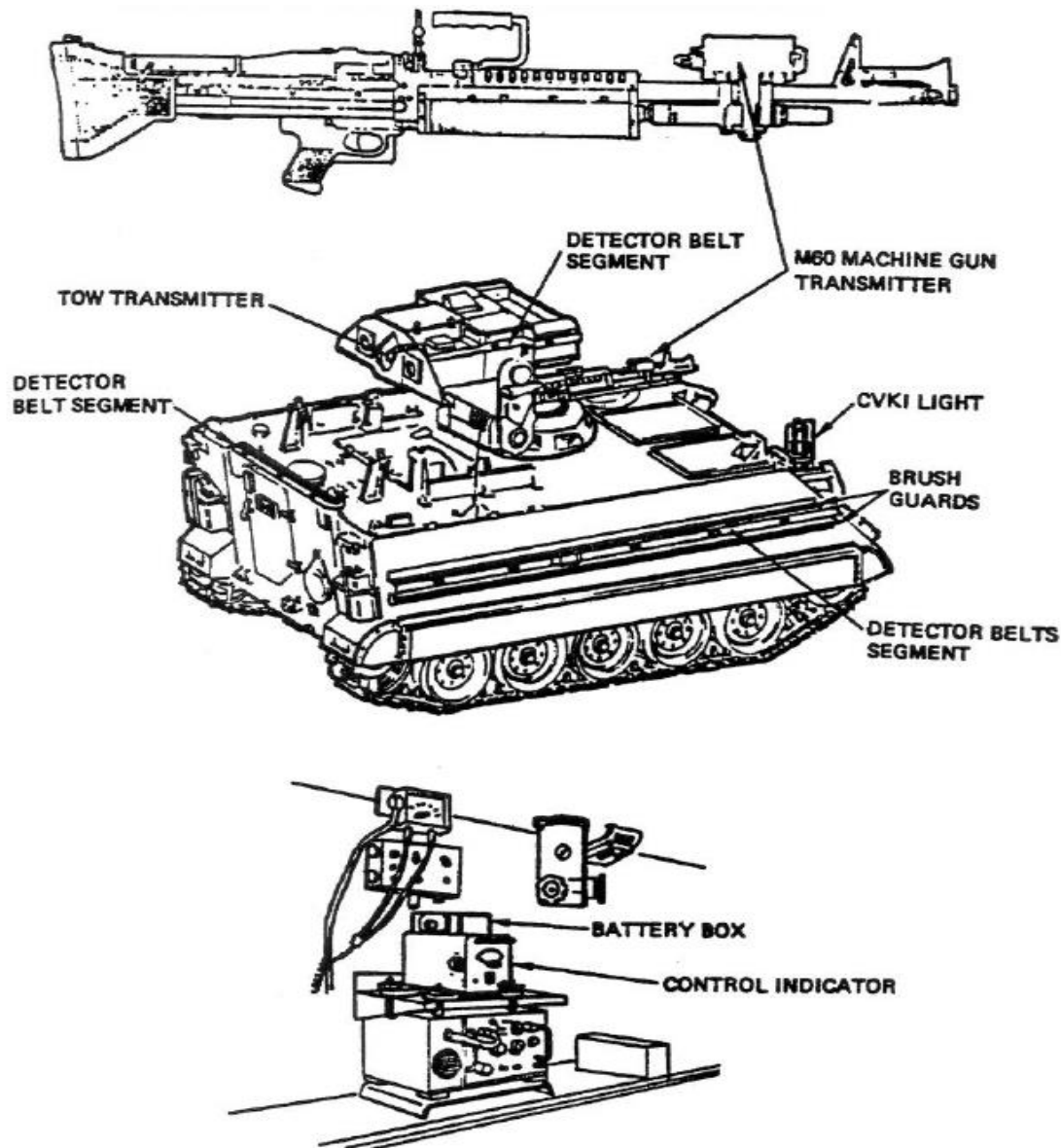
Reference Publications:

None

Training Requirements Supported:

MOSC - This Set supports CTC rotational exercises, as well as other Force On Force training events.

SIMULATOR SYSTEM, FIRING, LASER: M73 FOR M901 IMPROVED TOW VEHICLES



Training Category/Level Utilized:
Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The device is a component of the Multiple Integrated Laser Engagement System (MILES). MILES is a family of training systems which simulate the effects of direct-fire weapons at their operational ranges and operate in a fully integrated tactical training environment. MILES provides the capability for two-sided, real-time tactical engagement at unit sizes up to battalion and for realistic casualty assessments.

Firing the weapon simulators is much like firing the actual weapons. However, instead of firing live ammunition, these simulators transmit harmless laser beams. To allow the simulation to be as real as possible, the rifle and machine guns use blank ammunition, and the missiles and main guns use weapons effect simulators to simulate the noise, blast, and smoke of the actual weapons. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The MILES family, consisting of 18 fielded distinct weapon firing simulator systems, employ eye-safe lasers and microelectronics to realistically simulate the firing capabilities of rifles, machine guns, and other direct-fire weapons. Small battery-operated laser transmitters, which attach easily to conventional field weapons, allow ground troops to fire coded (to distinguish range and killing power of specific weapons) invisible laser pulses instead of live ammunition. Receiving detectors, located on opposing troops and vehicles, pick up the laser pulses and instantly provide audio/ visual indications of a kill, hit, or near miss. Kill indicators on men or vehicles will disable the victim's weapon. The hit and kill probabilities are similar to those achieved when using live ammunition.

In the M73 Simulator System, all weapons on the M901 Improved TOW Vehicle are equipped with laser transmitters that are fired using normal operating procedures. Special detector belts on the vehicle's exterior sense opposing fire. Crew members wear torso and helmet

harnesses that detect fire against them. A control console and flashing light are included.

Physical Information:

Transit Cases: 37" L x 35.5" W x 16.5" H

Equipment Required, Not Supplied:

Battery, BA 3090 (9v, transistor)
Battery, BA 200U (6v)

Special Installation Requirements:

None

Power Requirements:

9vdc

Applicable Publications:

TM 9-1265-202-10

Reference Publications:

TM 9-1006-224-10
TM 9-1265-368-10-2
TM 9-1425-470-12
Device was previously assigned as DVC 07-56/11.

Training Requirements Supported:

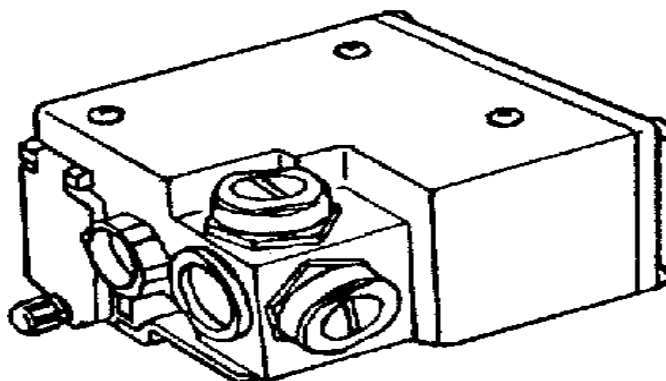
ARTEPs Supported
7-15 17-55 71-2

MOSC 11B; 11Z; 19D; 19E; 19Z

SM Tasks

All tactical tasks for skill levels 1 through 5.

SIMULATOR SYSTEM, FIRING, LASER: M89 FOR M16/M16A2 RIFLE



Training Category/Level Utilized:
Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The device is a component of the Multiple Integrated Laser Engagement System (MILES). MILES is a family of training systems which simulate the effects of direct-fire weapons at their operational ranges and operate in a fully integrated tactical training environment. MILES provides the capability for two-sided, real-time tactical engagement at unit sizes up to battalion and for realistic casualty assessments.

Firing the weapon simulators is much like firing the actual weapons. However, instead of firing live ammunition, these simulators transmit harmless laser beams. To allow the simulation to be as real as possible, the rifle and machine guns use blank ammunition, and the missiles and main guns use weapons effect simulators to simulate the noise, blast, and smoke of the actual weapons. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The MILES family, consisting of 18 fielded distinct weapon firing simulator systems, employ eye-safe lasers and microelectronics to realistically simulate the firing capabilities of rifles, machine guns, and other direct-fire weapons. Small battery-operated laser transmitters, which attach easily to conventional field weapons, allow ground troops to fire coded (to distinguish range and killing power of specific weapons) invisible laser pulses instead of live ammunition. Receiving detectors, located on opposing troops and vehicles, pick up the laser pulses and instantly provide audio/ visual indications of a kill, hit, or near miss. Kill indicators on men or vehicles will disable the victim's weapon. The hit and kill probabilities are similar to those achieved when using live ammunition.

The Simulator System for M16A1/M16A2 Rifle consists of a small arms laser transmitter mounted on the barrel of the weapon, a man-worn detector assembly installed on a load-carrying harness, and a strap which fits over a standard issue steel helmet. When a laser beam from a transmitter strikes a detector, an alarm located near the soldier's left ear informs him when he has suffered a "near miss" or that, he has been "killed". If the soldier is killed the alarm will be continuous. To shut off the alarm, the soldier must remove a key from his transmitter and put it into a receptacle on his load carrying harness. With the key removed from the transmitter, the laser transmitter will not operate. Removing the weapon capability to fire simulates a combat casualty.

Physical Information:

Transit case: 29" x 22" x 28"

Equipment Required, Not Supplied:

Battery, BA 3090 (9v, transistor)
Firing attachment, blank ammunition, M15A2
Cartridge, 5.56mm blank, M200

Special Installation Requirements:

None

Power Requirements:

9vdc

Applicable Publications:

(Information not available)

Reference Publications:

Device was previously assigned as DVC 07-56/2.

Training Requirements Supported:

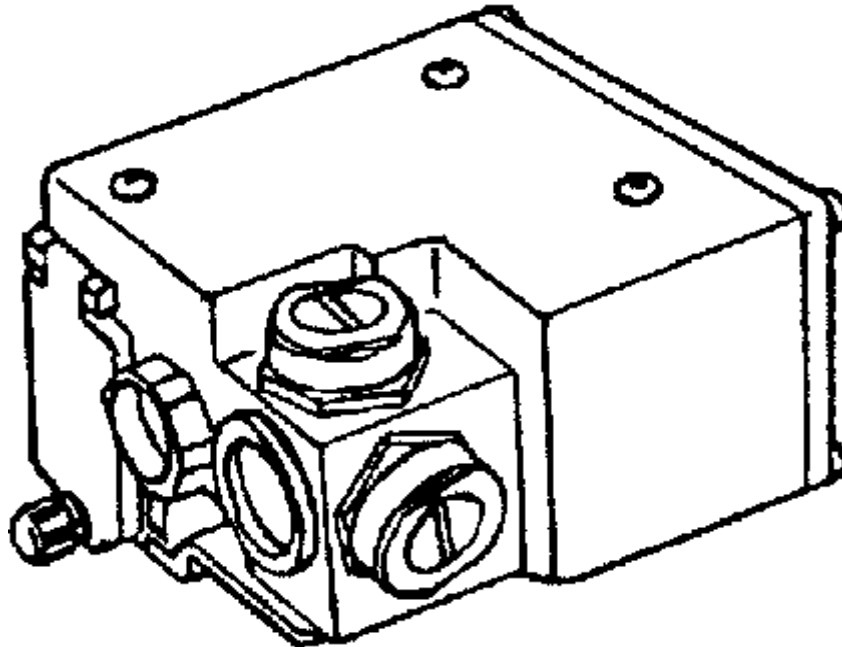
ARTEPs Supported
7-15 17-55 71-2

MOSC 11B; 11Z; 19D; 19E; 19Z

SM Tasks

All tactical tasks for skill levels 1 through 5.

SIMULATOR SYSTEM, FIRING, LASER: M90 FOR SQUAD AUTOMATIC WEAPON (SAW)

**Training Category/Level Utilized:**

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The device is a component of the Multiple Integrated Laser Engagement System (MILES). MILES is a family of training systems which simulate the effects of direct-fire weapons at their operational ranges and operate in a fully integrated tactical training environment. MILES provides the capability for two-sided, real-time tactical engagement at unit sizes up to battalion and for realistic casualty assessments.

Firing the weapon simulators is much like firing the actual weapons. However, instead of firing live ammunition, these simulators transmit harmless laser beams. To allow the simulation to be as real as possible, the rifle and machine guns use blank ammunition, and the missiles and main guns use weapons effect simulators to simulate the noise, blast, and smoke of the actual weapons. The specific training requirements supported are shown following the descriptive data.

Functional Description:

The MILES family, consisting of 18 fielded distinct weapon firing simulator systems, employ eye-safe lasers and microelectronics to realistically simulate the firing capabilities of rifles, machine guns, and other direct-fire weapons. Small battery-operated laser transmitters, which attach easily to conventional field weapons, allow ground troops to fire coded (to distinguish range and killing power of specific weapons) invisible laser pulses instead of live ammunition. Receiving detectors, located on opposing troops and vehicles, pick up the laser pulses and instantly provide audio/ visual indications of a kill, hit, or near miss. Kill indicators on men or vehicles will disable the victim's weapon. The hit and kill probabilities are similar to those achieved when using live ammunition.

The M90 Simulator System for M249 SAW consists of a small arms laser transmitter mounted on the barrel of the weapon, a man-worn detector assembly installed on a load-carrying harness, and a strap which fits over a standard issue steel helmet. When a laser beam from a transmitter strikes a detector, an alarm located near the soldier's left ear informs him when he has suffered a "near miss" or that he has been "killed". If the soldier is killed the alarm will be continuous. To shut off the alarm, the soldier must remove a key from his transmitter and put it into a receptacle on his load carrying harness. With the key removed from the transmitter, the laser transmitter will not operate. Removing the weapon capability to fire simulates a combat casualty.

Physical Information:

Transit case: 29" x 22" x 28"

Equipment Required, Not Supplied:

Battery, BA 3090 (9v, transistor)
Firing attachment, blank ammunition, M15A2
Cartridge, 5.56mm blank, M200

Special Installation Requirements:

None

Power Requirements:

9vdc

Applicable Publications:

TM 9-1265-211-10

Reference Publications:

TM 9-1005-201-10
TM 9-1005-319-10
Device was previously assigned as DVC 07-56/14.

Training Requirements Supported:

ARTEPs Supported
7-15 17-55 71-2

MOSC 11B; 11Z; 19D; 19E; 19Z

SM Tasks

All tactical tasks for skill levels 1 through 5.

SIMULATOR SYSTEM, LASER INDICATOR, M40: FOR INDEPENDENT MOBILE TARGET SYSTEM (IMTS)

**Training Category/Level Utilized:**

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The Independent Mobile Target System (IMTS) provides the capability of conducting Tactical Engagement Simulation (TES) exercises using Multiple Integrated Laser Engagement Systems (MILES). The IMTS provides realistic combat training using military vehicles and weapons equipped with MILES without the danger of live ammunition.

Functional Description:

When a weapon is properly aimed at a IMTS equipped person or vehicle and laser fired IMTS records the score, (Hit, Near Miss, or Kill), and the identification number of the firing laser. The target type of each IMTS equipped vehicle is selected and set into IMTS by switch selection and a MILES controller key prior to the start of the combat exercise. IMTS is composed of an Electronics Controller

Unit (ECU) which houses the necessary electronics, control panel, and four BA-200/U six volt batteries; a detector assembly for receiving MILES laser code; mounting bracket for attachment of the IMTS to various vehicles; power cables; a strobe light and cage with integrated 360 degree detector, and transit case to carry all the IMTS items. The IMTS controls are located on the ECU front panel.

The IMTS has two visual indicators; the display located on the ECU front panel, and the strobe light (part of the SDA). An audio indicator (sonalert) is also located on the ECU front panel. The strobe light is used in the Built In Test (BIT) mode to indicate proper operation, and during training to indicate a Near Miss, Hit or Kill during an engagement exercise. The BIT function helps the operator test the battery and decide if a IMTS field replaceable component is faulty.

The probability of Kill Loader (PKL) for IMTS is a battery operated, hand-held device with a 1-foot, none removable cable for interfacing with the IMTS electronic controller unit (ECU) to upload PK tables. Also included are software and a personal computer (PC)/PKL interface cable for connecting the PKL to an IBM compatible or laptop computer for downloading the PK tables to the PKL. The PKL provides the capability to change the PK tables in IMTS for MILES training exercises.

Physical Information:

ECU: 5" x 5" x 11.5", 7.5 lb.
SDA: 6.25" x 6.5", 5.8 lb.
Detector Array: 2 arrays 18' each, 2 arrays 12' each,
2.5 lb.
System weight: 40.5 lb.

Equipment Required, Not Supplied:

Batteries, 6v lantern type, BA 200, 4ea. 9v (EN 522),
1ea.
Hook Type Velcro, Cleaner and Glue.

Special Installation Requirements:

N/A

Power Requirements:

Input: 24vdc
Start-up Max Power: 24vdc at 1.2 A = 36 VA
Nominal Power: 24vdc at .058 A = 1.4 VA

Applicable Publications:

OUM 9-1265-379-10, (MILES), Simulator System,
Laser, and (IMTS)
SMM 1265-379-24&P, (MILES), Simulator System, Laser,
and (IMTS)

Reference Publications:

Device was previously assigned as DVC 07-56/15.

Training Requirements Supported:

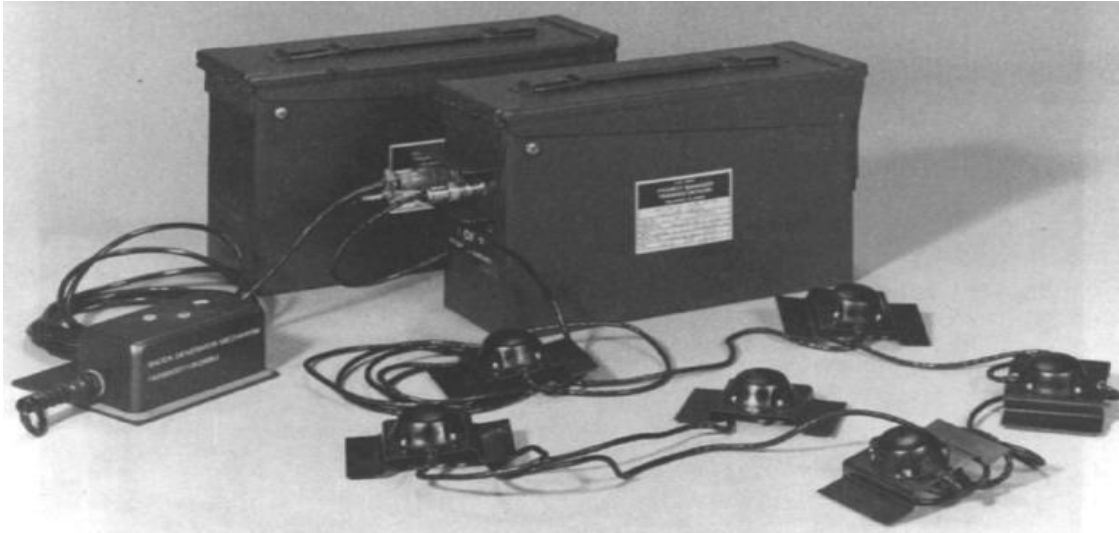
ARTEPs Supported
7-15 17-55 71-2

MOSC 11B; 11Z; 19D; 19E; 19Z

SM Tasks

All tactical tasks for skill levels 1 through 5.

INDICATOR, SIMULATOR SYSTEM, LASER TARGET INTERFACE DEVICE (LTID)



Training Category/Level Utilized:
Armor/Level 3

Logistic Responsible Command, Service, or Agency:
ACALA

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The Laser Target Interface Device (LTID) interfaces existing live-fire tank/man target mechanisms with standard MILES transmitters enabling the transmitters to knock down targets. LTID provides realistic and valuable marksmanship training without the high cost of ammunition and target repair/replacement encountered in live-fire training programs.

Functional Description:

LTID is comprised of a Detection Assembly, an Electronic Assembly, and a Shock Generator Mechanism (SGM).

The Detection Assembly simulates target vulnerability using six detectors fastened with Velcro to the target. The Electronic Assembly contains the detector amplifier, decoder, SGM activation electronics, and two standard 6-volt lantern batteries. The SGM activates the target lift mechanism when a "hit" is decoded.

In operation, a MILES transmitter-equipped weapon engages an LTID-equipped target, the Detection Assembly receives the transmitter laser signal, converts it to electrical pulses, and routes them to the Electronic Assembly where they are amplified and decoded. If a "hit" is decoded, the SGM triggers the target lift mechanism to lower the target. DVC 17-146/A has been assigned to LTIDs modified for use during APACHE MILES training.

Physical Information:

Number of Pieces: Four
Electronics Assembly: 11" x 4" x 7"
Storage Case, containing: 11" x 4" x 7"
Detection Assembly: 8" x 4" x 2" (packaged)
SGM: 6" x 6" x 3" (packaged)
Total Weight: 9 lb

Equipment Required, Not Supplied:

Batteries, 6-volt, BA-200/U
Velcro, 11749428
Primer, 11749034
Roller, Hand, 6523520
Controller Gun, 11748811
Target Holding Mechanisms
MILES Transmitters

Special Installation Requirements:
None

Power Requirements:
Two standard 6-volt lantern batteries.

Applicable Publications:

OUM 9-1265-376-10, - for Indicator Simulator System, Laser Target Interface Device (LTID).

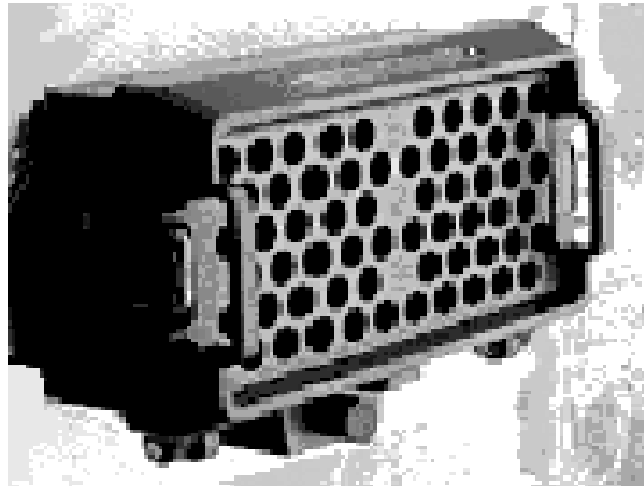
Reference Publications:

Device 23-91 was previously assigned as DVC 17-146.

Training Requirements Supported:

MOSC - Simulated live-fire training on ranges.

MAIN GUN SIGNATURE SIMULATOR (MGSS) (MILES 2000)

**Training Category/Level Utilized:**

Combat Arms/Level 3

Logistic Responsible Command, Service, or**Agency:**

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC.

Purpose of Trainer:

The Purpose of this trainer is to replace Basic MILES systems at home-station due to age of technology and cost to maintain.

The MGSS is a component of the Multiple Integrated Laser Engagement System 2000 (M2K). The M2K is a family of training systems which simulate the effects of direct-fire weapons at their operational ranges. The M2K system is primarily used for force-on-force training from squad up to and including Brigade level. The M2K system incorporates a After Action Review capability not in the Basic MILES, which greatly enhances training for the soldiers participating in the exercises. M2K equipment is downward compatible with the Basic MILES equipment presently fielded.

Functional Description:

The MGSS is mounted on the M1A1/M1A2 tank and simulates the main gun firing. The MGSS holds 60 pyrotechnics when fully loaded and is "keyless" for

safety. When the main gun trigger is activated a signal goes to the MGSS and fires 1 pyrotechnic for each firing. The pyrotechnic creates the flash and bang of the main gun, triggering the Universal Laser Transmitter (ULT).

Physical Information:

MGSS Launcher

Interface Cable

Transit case dimensions: 46.3" L x 40.7" W x 17.5" H
(1 MGSS Kits per case)

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

Vehicle power

Applicable Publications:

OUM 9-6920-892-10

Reference Publications:

Device was previously assigned as DVC 17-180.

Training Requirements Supported:

ARTEPs 7-15, 17-55, 71-2

MOSCs 11B; 11Z; 19D; 19E; 19Z

MILES XXI (STRYKER) COMMON KIT



MILES Stryker Kit Case



MILES Stryker Kit Case w/Harness

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The device is a component of the Multiple Integrated Laser Engagement System (MILES). MILES XXI is a family of training systems, accurately, and in real time, simulates the effect of direct and indirect fire (artillery, nuclear, or chemical weapons, and mines) as they would affect a vehicle/soldier in combat. This permits realistic combat training without the hazards of live ammunition. MILES XXI provides the capability for two-sided, real-time tactical engagement at unit sizes up to battalion and for realistic casualty assessments.

Firing the weapon simulators is much like firing the actual weapons. However, instead for firing live ammunition, these simulators transmit harmless laser beams. To allow the simulation to be as real as possible, the rifle and machine guns use blank ammunition, and the missiles and main gun use weapon effect simulators to simulate the noise, blast, and smoke of the actual weapons.

Functional Description:

The MILES XXI family employs eye-safe lasers and microelectronics to realistically simulate the firing capabilities of combat vehicles, rifles, machine gun, and other direct-fire weapons. Small battery operated laser transmitters, which attach easily to conventional field weapons, allow ground troops to fire coded (to distinguish range and killing power of the specific weapons) invisible

laser pulses instead of live ammunition. Receiving detectors, located on opposing troops and vehicles, pick up the laser pulses and instantly provide audio/visual indications of a kill, hit, or near miss. Kill indicators on personnel or vehicles will disable the victim's weapon. The hit and kill probabilities are similar to those achieved when using live ammunition.

The Combat Vehicle, Simulator System, Firing, Laser on the M113 Armored Personnel Carrier are equipment with a laser transmitter that are fired using normal operating procedures. Special detector belts on the vehicle's exterior sense opposing force fire. Crewmembers wear man-worn devices that detect incoming fire against them. A control console and flashing light are included in the system.

Outgoing Direct Fire from the vehicle main gun, coax, and missile is simulated by "firing" coded laser beams from laser transmitters mounted on the front of the turret. Each weapon (missile, 25mm Main Gun, and Coax Machine Gun) has a different MILES code. Muzzle flash from the 25mm main gun is simulated by the FLASHWESS, a high-intensity light mounted next to the laser transmitter, which flashes each time the main gunfire's. The fire, smoke, and backblast of a weapon firing is simulated by one of four ATWESS devices that are part of the Signature Simulator, which fires pyrotechnic cartridges each time a simulated weapon is "launched".

Incoming fire, the MILES XXI system simulates the effects of both direct and indirect fire engagements. Direct fire is simulated by receiving coded laser beams "fired" from laser transmitters. Indirect fire (artillery, nuclear, chemical, and mines) is simulated by receiving radio signals transmitted from the Mission Control Station (MCS). When incoming fire is received, the console will determine whether your vehicle sustains a NEAR MISS, HIT, or KILL. The visual message on the console will display Miles Code and Player Identification (PID).

The MILES Code is a 2-digit MILES XXI code number used to identify simulated weapons. The PID is a 4-digit number that is a unique Player Identification of the player engaging you. This event information is stored in the console and downloaded after exercises for use in After Action Reviews. The MILES Code and PID accurately show the performance of specific troops and weapons. KILL simulates total disability to your vehicle. In addition to incoming fire, disconnecting or interrupting power to vehicle console will also cause a KILL. Vehicles can sustain 4 types of HIT — FIREPOWER KILL on the weapon simulates damage to the Main Gun, Coax, and STINGER. MOBILITY KILL simulates power train, track, wheel or other damage that would keep the vehicle from driving. COMMO KILL simulates loss of radio communications. HIT NO DAMAGE simulates vehicles being engaged, but your vehicle received no damage as a result of the engagement. NEAR MISS means direct or indirect fire was close, but did not hit vehicle.

Physical Information:

Transit case: 52" L x 43" W x 17" H

Equipment Required, Not Supplied:

Battery
Blank Ammunition
Weapon/Vehicle

Special Installation Requirements:

None

Power Requirements:

Lithium Ion

Applicable Publications:

TM Number TBD

Reference Publications:

Device was previously assigned as DVC 17-233.

Training Requirements Supported:

ARTEPs 7-15, 15-55, 71-2
MOSCs 11B; 11Z; 19D; 19E; 19Z

M2/M3A2/A3 BRADLEY FIGHTING VEHICLE, (MILES XXI)

**MILES XXI Components****Training Category/Level Utilized:**

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Only used at CTCs, not available for use at other locations.

Purpose of Trainer:

This device is a component of the Multiple Integrated Laser Engagement System (MILES). MILES XXI is a family of training systems, accurately, and in real time, simulates the effect of direct and indirect fire (artillery, nuclear, or chemical weapons, and mines) as they would affect a vehicle/soldier in combat. This permits realistic combat training without the hazards of live ammunition. MILES XXI provides the capability for two-sided, real-time tactical engagement at unit sizes up to battalion and for realistic casualty assessments. Firing the weapon simulators is much like firing the actual weapons. However, instead for firing live ammunition, these simulators transmit harmless laser beams. To allow the simulation to be as real as possible, the rifle and machine guns use blank ammunition, and the missiles and main gun use weapon effect simulators to simulate the noise, blast, and smoke of the actual weapons.

Functional Description:

The MILES XXI family employs eye-safe lasers and microelectronics to realistically simulate the firing capabilities of combat vehicles, rifles, machine gun, and other direct-fire weapons. Small battery operated laser transmitters, which attach easily to conventional field weapons, allow ground troops to fire coded (to distinguish range and killing power of the specific weapons) invisible laser pulses instead of live ammunition. Receiving detectors, located on opposing troops and vehicles, pick up the laser pulses and instantly provide audio/visual

indications of a kill, hit, or near miss. Kill indicators on personnel or vehicles will disable the victim's weapon. The hit and kill probabilities are similar to those achieved when using live ammunition.

The Combat Vehicle, Simulator System, Firing, Laser on the M2/M3 Bradley Fighting Vehicle are equipped with a laser transmitter that is fired using normal operating procedures. Special detector belts on the vehicle's exterior sense opposing force fire. Crewmembers wear man-worn devices that detect incoming fire against them.

Outgoing Direct Fire from the vehicle main gun, coax, and missile is simulated by "firing" coded laser beams from laser transmitters mounted on the front of the turret. Each weapon (missile, 25mm Main Gun, and Coax Machine Gun) has a different MILES XXI code. Muzzle flash from the 25mm main gun is simulated by the FLASHWESS, a high-intensity light mounted next to the laser transmitter, which flashes each time the main gunfire's. The fire, smoke, and backblast of a weapon firing is simulated by one of four ATWESS devices that are part of the Signature Simulator, which fires pyrotechnic cartridges each time a simulated weapon is "launched".

Incoming fire, the MILES XXI system simulates the effects of both direct and indirect fire engagements. Direct fire is simulated by receiving coded laser beams "fired" from laser transmitters. Indirect fire (artillery, nuclear, chemical, and mines) is simulated by receiving radio signals transmitted from the Mission Control Station (MCS). When incoming fire is received, the console will determine whether your vehicle sustains a NEAR MISS, HIT, or KILL. The visual message on the console will display Miles Code and Player Identification (PID). The MILES Code is a 2-digit MILES XXI code number used to identify simulated weapons. The PID is a 4-digit number that is a unique Player Identification of the player engaging you. This event information is stored in the console and downloaded after exercises for use in After Action

Reviews. The MILES Code and PID accurately show the performance of specific troops and weapons. KILL simulates total disability to your vehicle. In addition to incoming fire, disconnecting or interrupting power to vehicle console will also cause a KILL. Vehicles can sustain 4 types of HIT — FIREPOWER KILL on the weapon simulates damage to the Main Gun, Coax, and STINGER. MOBILITY KILL simulates power train, track, wheel or other damage that would keep the vehicle from driving. COMMO KILL simulates loss of radio communications. HIT NO DAMAGE simulates vehicles being engaged, but your vehicle received no damage as a result of the engagement. NEAR MISS means direct or indirect fire was close, but did not hit vehicle.

Physical Information:

Transit case: 46" L x 40" W x 17" H

Equipment Required, Not Supplied:

Battery
Blank Ammunition
Weapon

Special Installation Requirements:

None

Power Requirements:

Lithium Ion

Applicable Publications:

TM Number TBD

Reference Publications:

Device was previously assigned as DVC 17-234.

Training Requirements Supported:

MOSCs 11B; 11Z; 19D

M1A1/A2/SYSTEM ENHANCED PACKAGE (SEP) TANK, (MILES XXI)



SEP Cables Display



SEP Transit Case



SEP Laser Transmitter

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Only used at CTCs, not available for use at other locations.

Purpose of Trainer:

The device is a component of the Multiple Integrated Laser Engagement System (MILES). MILES XXI is a family of training systems, accurately, and in real time, simulates the effect of direct and indirect fire (artillery, nuclear, or chemical weapons, and mines) as they would affect a vehicle/soldier in combat. This permits realistic combat training without the hazards of live ammunition. MILES XXI provides the capability for two-sided, real-time tactical engagement at unit sizes up to battalion and for realistic casualty assessments. Firing the weapon simulators is much like firing the actual weapons. However, instead for firing live ammunition, these simulators transmit harmless laser beams. To allow the simulation to be as real as possible, the rifle and machine guns use blank ammunition, and the missiles and main gun use weapon effect simulators to simulate the noise, blast, and smoke of the actual weapons.

Functional Description:

The MILES XXI family employs eye-safe lasers and microelectronics to realistically simulate the firing capabilities of combat vehicles, rifles, machine gun, and other direct-fire weapons. Small battery operated laser transmitters, which attach easily to conventional field weapons, allow ground troops to fire coded (to distinguish range and killing power of the specific weapons) invisible laser pulses instead of live ammunition. Receiving detectors, located on opposing troops and vehicles, pick up the laser pulses and instantly provide audio/visual

indications of a kill, hit, or near miss. Kill indicators on personnel or vehicles will disable the victim's weapon. The hit and kill probabilities are similar to those achieved when using live ammunition.

The Combat Vehicle, Simulator System, Firing, Laser on the M2A3/M3A3 Bradley Fighting Vehicle are equipment with a laser transmitter that are fired using normal operating procedures. Special detector belts on the vehicle's exterior sense opposing force fire. Crewmembers wear man-worn devices that detect incoming fire against them. A control console and flashing light are included in the system.

Outgoing Direct Fire from the vehicle main gun, coax, and missile is simulated by "firing" coded laser beams from laser transmitters mounted on the front of the turret. Each weapon (missile, 25mm Main Gun, and Coax Machine Gun) has a different MILES XXI code. Muzzle flash from the 25mm main gun is simulated by the FLASHWESS, a high-intensity light mounted next to the laser transmitter which flashes each time the main gunfire's. The fire, smoke, and backblast of a weapon firing is simulated by one of four ATWESS devices that are part of the Signature Simulator, which fires pyrotechnic cartridges each time a simulated weapon is "launched." Incoming fire, The MILES XXI System simulates the effects of both direct and indirect fire engagements. Direct fire is simulated by receiving coded laser beams "fired" from laser transmitters. Indirect fire (artillery, nuclear, chemical, and mines) is simulated by receiving radio signals transmitted from the Mission Control Station (MCS). When incoming fire is received, the console will determine whether your vehicle sustains a NEAR MISS, HIT, or KILL. The visual message on the console will display Miles Code and Player Identification (PID). The Miles Code is a 2-digit MILES XXI code number used to identify simulated weapons. The PID is a 4-digit number that is a unique Player Identification of the player engaging you. This event information is stored in the console and downloaded after exercises for use in After Action Reviews.

The MILES XXI Code and PID accurately show the performance of specific troops and weapons. KILL simulates total disability to your vehicle. In addition to incoming fire, disconnecting or interrupting power to vehicle console will also cause a KILL. Vehicles can sustain 4 types of HIT — FIREPOWER KILL on the weapon simulates damage to the Main Gun, Coax, and STINGER. MOBILITY KILL simulates power train, track, wheel or other damage that would keep the vehicle from driving. COMMO KILL simulates loss of radio communications. HIT NO DAMAGE simulates vehicles being engaged, but your vehicle received no damage as a result of the engagement. NEAR MISS means direct or indirect fire was close, but did not hit vehicle.

Physical Information:

Transit case: 46" L x 40" W x 17" H

Equipment Required, Not Supplied:

Battery
Blank Ammunition
Weapon

Special Installation Requirements:

None

Power Requirements:

Lithium Ion

Applicable Publications:

TM Number TBD

Reference Publications:

Device was previously assigned as DVC 17-236.

Training Requirements Supported:

MOSCs 11B; 11Z; 19D; 19K; 19Z

UNITECH/ICON INDEPENDENT TARGET SYSTEM (ITS), (MILES)

**Accessories****Training Category/Level Utilized:**

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC.

Purpose of Trainer:

The purpose of the trainer is to replace the Basic MILES target systems at Home Stations and Maneuver Combat Training Center Centers Army wide. The ITS system is capable of providing the following functions over and above that of the Basic MILES system it is replacing: Player Identification (PID), fratricide identification, multiple levels of kill and vulnerability due to direction of attack.

Functional Description:

The ITS is comprised of a set of detector belts that gather and route laser-based data and information to the ITS Vehicle Detection Device (ITS VDD). The system also comprises a Kill Indicator Assembly, which flashes to give an indication the player has been engaged, and a power module. The subsystems that make up the ITS are connected using industry standard

networking technologies and processing hardware. The software is an amalgamation of Commercial-off-the-shelf products (COTS) and ITS product-unique applications.

Physical Information:

Transit case: 3' L x 2' W x 1' H, two person lift transit case.

Equipment Required, Not Supplied:

Not Applicable

Special Installation Requirements:

None

Power Requirements:

Vehicle Power or Six (6) internal rechargeable D-cells Batteries.

Applicable Publications:

TM 9-6920-3660-10
SMM 9-6920-3660-24&P

Reference Publications:

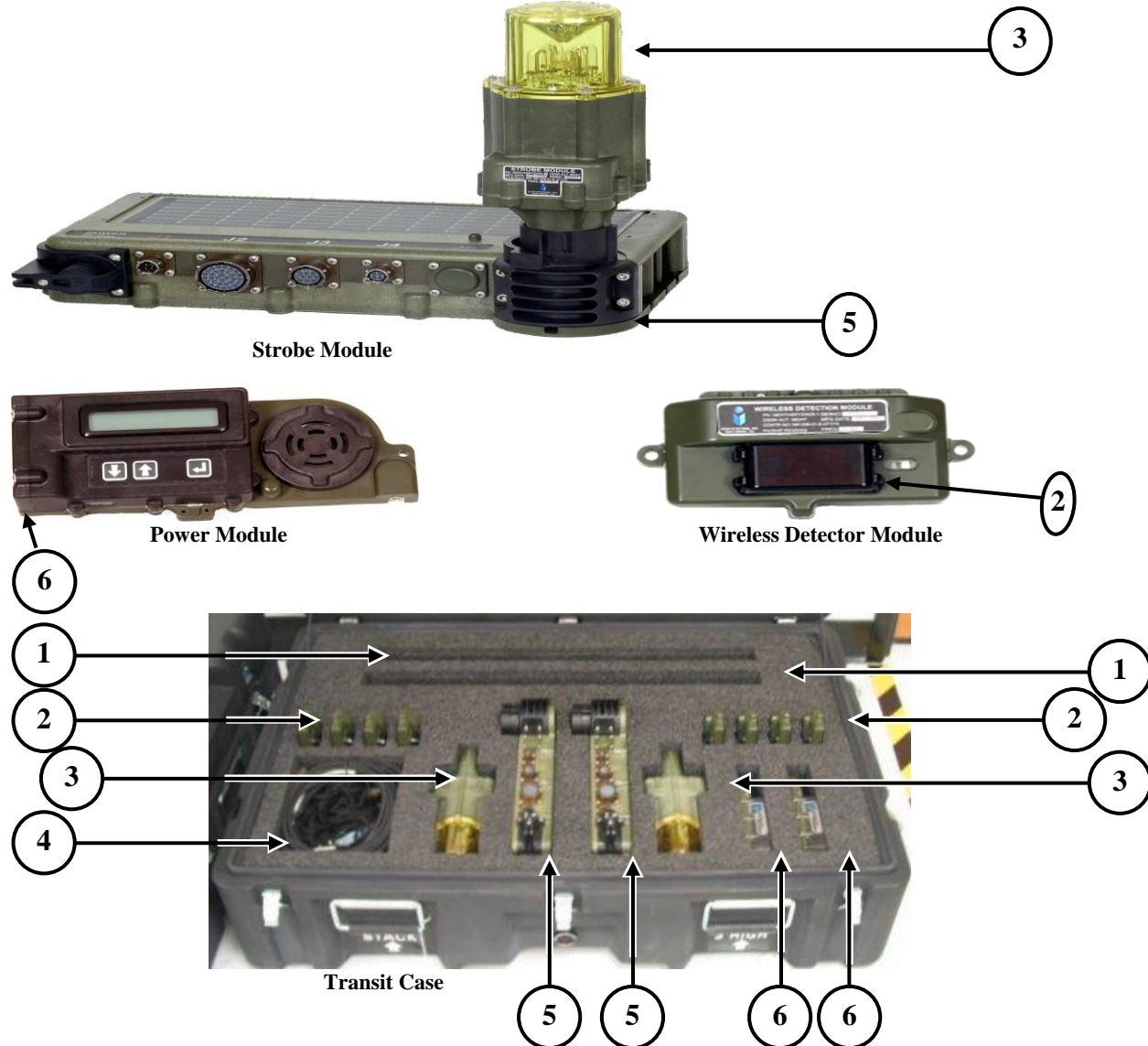
Device was previously assigned as DVC 17-237.

Training Requirements Supported:

MOSCs 11B; 11Z; 19D; 19K; 19Z

WIRELESS INDEPENDENT TARGET SYSTEM (WITS) BASIC KIT (915 MHz)

Picture of WITS outside of the storage case.



1. Mast Assembly (TBD – underdevelopment will be supplied at later date) 2 each
2. Wireless Detector Modules (WDM) 8 each
3. Strobe Module 2 each
4. Universal Power Cables 2 each
4. Dome Light Power Cable 2 each
5. Power Module 2 each
6. Remote Display Module (RDM) 2 each
- *7. WITS Transit & Storage Container Case (*Item drawing number for case not shown) 1 each

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The Purpose of this trainer is to replace Basic MILES systems at home-station due to age of technology and cost to maintain.

The WITS is a component of the Multiple Integrated Laser Engagement System (MILES)

The MILES system is primarily used for force-on-force training from squad up to and including Brigade level. The system incorporates an After Action Review capability not in the Basic MILES, which greatly enhances training for the soldiers participating in the exercises. The WITS equipment is downward compatible with the Basic MILES equipment presently fielded.

Functional Description:

The WITS can be mounted on tactical vehicles, trailers and even bridges. It is designed to support all noncombat tactical vehicles and other items that are not involved in the direct combat scenario.

Physical Information:

WITS Training Devices

Transit case dimensions:

38.5 x 25 x 13

(L x W x H), 65 lbs.

Measured in inches not cm.

(2ea WITS Kits per case)

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

Vehicle Power

Applicable Publications:

SMM 9-6920-3693-24&P

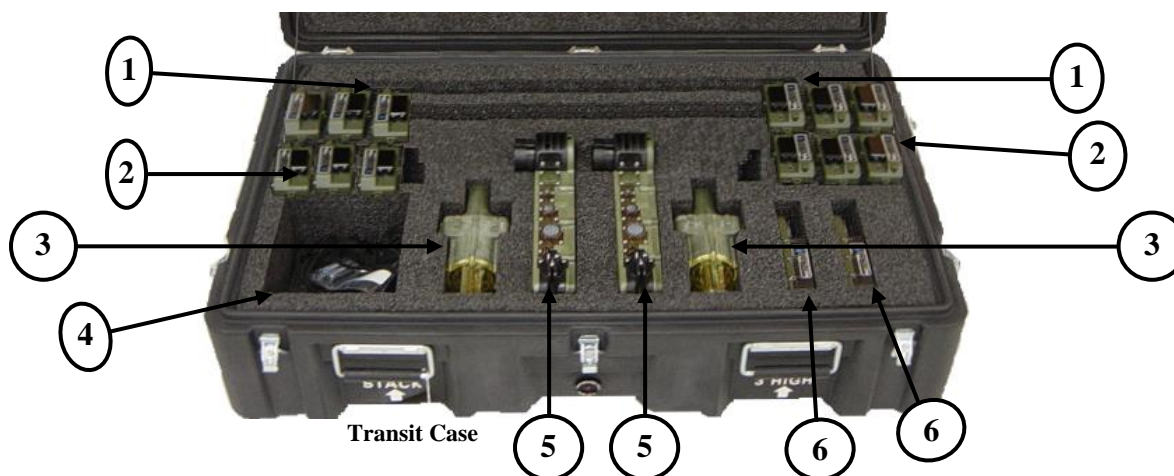
Reference Publications:

Device was previously assigned as DVC 17-237/A.

Training Requirements Supported:

MOSCs 11B; 11Z; 19D; 19K; 19Z

WIRELESS INDEPENDENT TARGET SYSTEM (WITS) M113 KIT (915 MHz)



Training Category/Level Utilized:
Engineer/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The WITS M113 KIT system is capable of operating in a (MILES) environment in force-on-force live training areas. The WITS M113 KIT system is capable of providing the following functions over and above that of the Basic MILES system it is replacing: Player Identification (PID), fratricide identification, multiple levels of kill and vulnerability due to direction of attack. The WITS M113 KIT provides additional detectors to support the M113 Armored Personnel Carrier (APC). New weapons, ammunition, and weapon performance will be accommodated.

Functional Description:

The MILES WITS program trains Active Duty and Reserve battalion task forces in Force-on-Force (FoF) exercises at home station, and the Combat Training Centers (CTCs). The MILES WITS program detects the direct fire effects and simulates signature effects of actual weapon systems primarily during FoF exercises from squad through brigade level (i.e. engage committed forces, Military Operations in Urban Terrain (MOUT), special operations, mobility, and counter mobility). By providing these capabilities in a training environment MILES WITS enable soldiers to make, then correct mistakes and therefore help reduce casualties in actual combat. It is comprised of a set of wireless detector modules (WDM) that gather and route laser-based data and information to the WITS Remote Display Module (WITS RDM). The system also comprises a kill indicator assembly by way of Strobe Module which

flashes to give an indication the player has been engaged. The Strobe Module energy source is driven by a separately detached battery operated Power Module. The subsystems that make up the WITS are connected using industry standard networking technologies and processing hardware. The software is an amalgamation of Commercial-off-the-shelf products (COTS) and WITS product-unique applications.

Physical Information:

Note: each case contains 2ea WITS M113 Kits

1. Mast Assembly (TBD – underdevelopment will be supplied at later date) 2 each
2. Wireless Detector Modules (WDM) 12 each
3. Strobe Module 2 each
4. Universal Power Cables 2 each
4. Dome Light Power Cable 2 each
5. Power Module 2 each
6. Remote Display Module (RDM) 2 each
- *7. WITS Transit & Storage Container Case (*Item drawing number for case not shown) 1 each

Equipment Required, Not Supplied:
(Information not available)

Special Installation Requirements:
None

Power Requirements:
(Information not available)

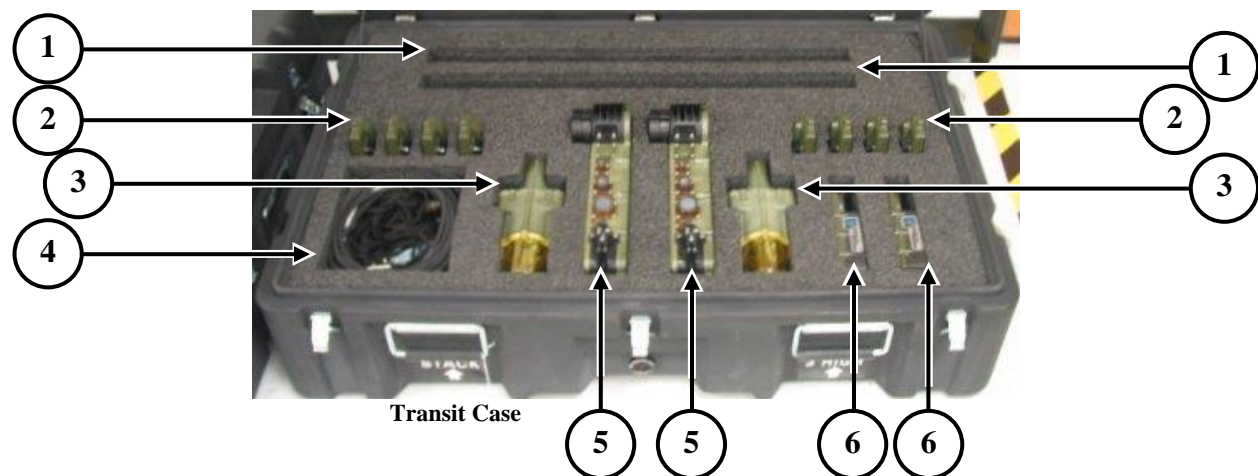
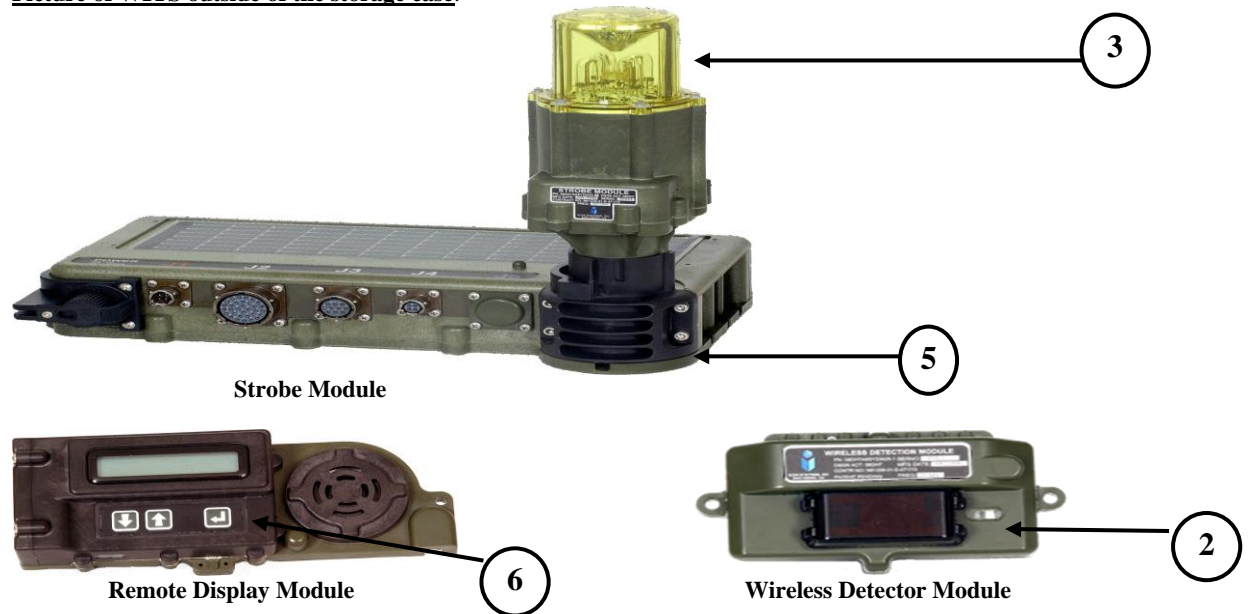
Applicable Publications:
TM Number TBD

Reference Publications:
Device was previously assigned as DVC 17-237/B.

Training Requirements Supported:
MOSC 11B; 11Z; 19D; 19K; 19Z

WIRELESS INDEPENDENT TARGET SYSTEM (WITS) BASIC KIT (2.4 GHz)

Picture of WITS outside of the storage case.



1. Mast Assembly (TBD – underdevelopment will be supplied at later date) 2 each
2. Wireless Detector Modules (WDM) 8 each
3. Strobe Module 2 each
4. Universal Power Cables 2 each
4. Dome Light Power Cable 2 each
5. Power Module 2 each
6. Remote Display Module (RDM) 2 each
- *7. WITS Transit & Storage Container Case (*Item drawing number for case not shown) 1 each

Training Category/Level Utilized:
Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local Training Support Center (TSC)

Purpose of Trainer:

The Purpose of this trainer is to replace Basic MILES systems at home-station due to age of technology and cost to maintain.

The WITS is a component of the Multiple Integrated Laser Engagement System (MILES)

The MILES system is primarily used for force-on-force training from squad up to and including Brigade level. The system incorporates an After Action Review capability not in the Basic MILES, which greatly enhances training for the soldiers participating in the exercises. The WITS equipment is downward compatible with the Basic MILES equipment presently fielded.

Functional Description:

The WITS can be mounted on tactical vehicles, trailers and even bridges. It is designed to support all noncombat tactical vehicles and other items that are not involved in the direct combat scenario.

Physical Information:

WITS Training Devices

Transit case dimensions:

38.5 x 25 x 13

(L x W x H), 65 lbs.

Measured in inches not cm.

(2ea WITS Kits per case)

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

Vehicle Power

Applicable Publications:

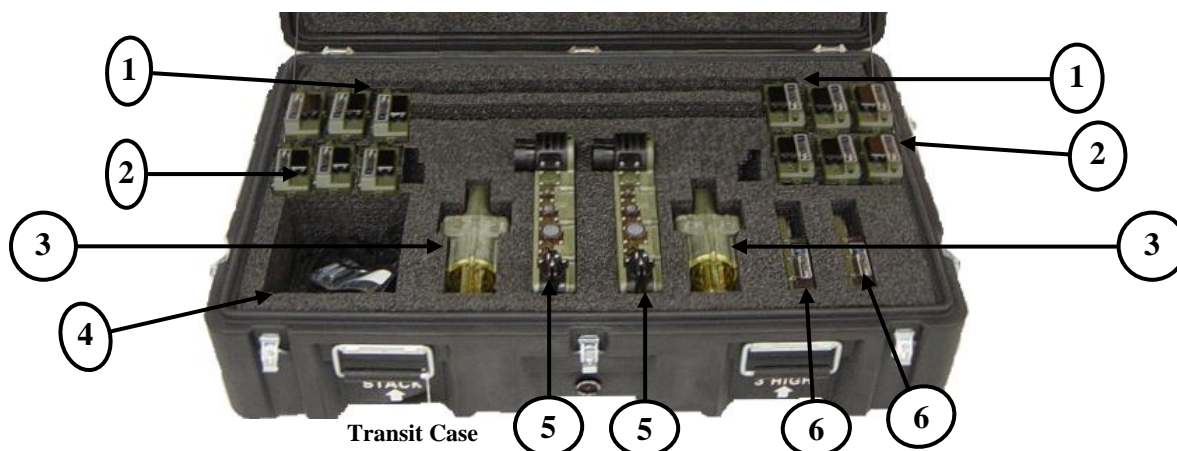
SMM 9-6920-3693-24&P

Reference Publications:

Device was previously assigned as DVC 17-237/B.

Training Requirements Supported:

MOSCs 11B; 11Z; 19D; 19K; 19Z

WIRELESS INDEPENDENT TARGET SYSTEM (WITS) M113 KIT (2.4 GHz)

Training Category/Level Utilized:
Engineer/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The WITS M113 Extended KIT system is capable of operating in a (MILES) environment in force-on-force live training areas. The WITS M113 Extended KIT system is capable of providing the following functions over and above that of the Basic MILES system it is replacing: Player Identification (PID), fratricide identification, multiple levels of kill and vulnerability due to direction of attack. New weapons, ammunition, and weapon performance will be accommodated. The WITS 2.4 Ghz M113 Extended Kit editions are designed to work in the higher frequency environments in Overseas Continental United States (OCONUS) training areas Germany and Korea.

Functional Description:

The MILES WITS program trains Active Duty and Reserve battalion task forces in Force-on-Force (FoF) exercises at home station, and the Combat Training Centers (CTCs). The MILES WITS program detects the direct fire effects and simulates signature effects of actual weapon systems primarily during FoF exercises from squad through brigade level (i.e. engage committed forces, Military Operations in Urban Terrain (MOUT), special operations, mobility, and counter mobility). By providing these capabilities in a training environment MILES WITS enable soldiers to make, then correct mistakes and therefore help reduce casualties in actual combat. It is comprised of a set of wireless detector modules (WDM) that gather and route laser-based data and information to the WITS Remote Display Module (WITS RDM). The system also comprises

a kill indicator assembly by way of Strobe Module which flashes to give an indication the player has been engaged. The Strobe Module energy source is driven by a separately detached battery operated Power Module. The subsystems that make up the WITS are connected using industry standard networking technologies and processing hardware. The software is an amalgamation of Commercial-off-the-shelf products (COTS) and WITS product-unique applications.

Physical Information:

Note: each case contains 2ea WITS M113 Kits

1. Mast Assembly (TBD – underdevelopment will be supplied at later date) 2 each
2. Wireless Detector Modules (WDM) 12 each
3. Strobe Module 2 each
4. Universal Power Cables 2 each
4. Dome Light Power Cable 2 each
5. Power Module 2 each
6. Remote Display Module (RDM) 2 each
- *7. WITS Transit & Storage Container Case (*Item drawing number for case not shown) 1 each

Equipment Required, Not Supplied:
(Information not available)

Special Installation Requirements:
None

Power Requirements:
(Information not available)

Applicable Publications:
(Information not available)

Reference Publications:
Device was previously assigned as DVC 17-237/D.

Training Requirements Supported:
MOSCs 11B; 11Z; 19D; 19K; 19Z

MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM (MILES) MK-19 SIMULATION PLAYER UNIT (SPU)

NSN 6920-01-543-0355

**MK-19 Simulation Player Unit (SPU)****Training Category/Level Utilized:**

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The MK-19 SPU system supports realistic combat training exercises without using live ammunition. It provides a common approach for the Stryker Remote Weapon Station, M113 pintle mount, AAV, HMMWV and ground mount. The MK-19 SPU system consists of a Laser Module, Operator Module, Audio Cue Device (ACD), and Trigger Assembly. The MK-19 Simulation Player Unit incorporates a modular design resulting in an interoperable solution simulating the firing and actual effects of a MK-19 in a MILES environment.

The SCG provides MILES equipment control and set-up. It allows the Observer Controller to kill, reset, and resurrect individuals or vehicles that have been "killed" during an exercise. The SCG also provides the controller with selectable features: four ammo types along with their unique ballistic characteristics, accurate time of flight (TOF) simulation based on range and ammo type selected, compensation for super elevation due to ammo ballistics, and an integrated detection system for casualty assessment.

Functional Description:

MK-19 SPU: The Laser Module emits visible flash cues and an invisible (infrared) laser beam toward a target. A blue LED Laser Firing Indicator located on the rear of the Laser Module provides the gunner with a visible indication the laser has fired. A target is outfitted with a detector assembly that senses the laser beam from the Laser Module to cause a target KILL or NEAR MISS.

The SCG sends laser codes to the detector module on MILES equipment. It also lets the Observer Controller reset MILES equipment, configure players, and verify operational status of MILES equipment. The SCG is easy to use and ergonomically friendly. The shape resembles a

DVC 23-98/1 Smart Controller Gun (SCG)

**Smart Controller Gun (SCG)**

9mm handgun. User controls consist of a finger activated trigger for quick laser firing and simple switch panel with three keys; Up, Down and Enter for quick MILES code selection.

Physical Information:

The MK-19 SPU has the following features: independent casualty assessment, programmable lethality using the smart controller gun, rechargeable battery for power source, built-in optical alignment, easy boresight verification, 20 hrs of alignment retention and a lighted display for real time information to the user.

The SCG has the following features: MILES laser encoding/decoding functions, 904 nm laser operating frequency, Pre-aligned sights, Blue LED at the back of SCG indicates transmission of code or firing of the device, Backlit LCD shows laser transmission status and MILES code data received from laser transmitter, Laser detector for incoming MILES codes detection, Rugged aluminum housing for all-weather use, Single 3.6 V AA battery power source for easy replacement (approx 1 year operating life with normal use), Sleep mode after 10 second non-use for power saving, and IRDA port for software reprogramming and player download.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

(Information not available)

Applicable Publications:

Device 23-98 previously assigned as DVC 17-242.
Device 23-98/1 previously assigned as DVC 17-242/A.

Reference Publications:

(Information not available)

Training Requirements Supported:

MOSCs 11 Series

GEO-BEARING MARK-19 SIMULATION PLAYER UNIT (GBMK-19 SPU)

**Training Category/Level Utilized:**

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The GBMK-19 SPU is an upgrade to the already fielded MK-19 SPU, P/N 162073, Device Number: 17-242, NSN: 6920-01-543-0349 Training Device. This upgrade inserts the Geo-Bearing and Geo-Pairing capability into the basic SPU. The GBMK-19 SPU is a major subsystem in the MILES family of Force-on-Force (FOF) training devices. The GBMK-19 SPU training device is provided with the capability to be used independently or as part of the instrumented range.

The Geo-Bearing capability being added to the MK-19 SPU will add better targeting capability in an instrumented training area, as well as adding more realism to the training device performance. The

purpose of this set is to provide the operator with all the equipment he will need to perform his assigned training mission, using his real world weapon in a MILES IWS training environment.

Functional Description:

The GBMK-19 Simulation Player Unit (MK-19 SPU) is a training device that uses laser technology and simulated audio report to support realistic combat training exercises without using live ammunition. The GBMK-19 SPU is issued as a kit that appends to the MK-19 Automatic Grenade Launcher. The MK-19 SPU system consists of a Laser Module, Operator Module, Audio Cue Device (ACD), and Trigger Assembly. The Laser Module emits visible flash cues and an invisible (infrared) laser beam toward a target. A blue LED Laser Firing Indicator located on the rear of the Laser Module provides the gunner with a visible indication the laser has fired. A target is outfitted with a detector assembly that senses the laser beam from the Laser Module to cause a target KILL or NEAR MISS. The Geo-Bearing capability being added to the MK-19 SPU will add better targeting capability in an instrumented training area, as well as adding more realism to the training device performance. Also, see chart at the end of second page.

Physical Information:

Due to continued development of upgrades, this data will be supplied when upgrades are complete.

Assy, Audio Cue Device (ACD), MK-19

Battery: 12 Volt, Recharged buy Solar Cells mounted on case exterior

Equipment Required, Not Supplied:

MILES Controller Device

Applicable Publications:

The GBMK-19 SPU Operator and Maintenance Manuals (publications numbers not yet assigned).

Special Installation Requirements:

None

Reference Publications:

Device was previously assigned as DVC 17-242/A.

Power Requirements:

Assy, Laser Module, GB MK-19

Battery: 2 Volt, recharged by interconnection to the ACD Module power source.

Assy, Operator Module, MK-19

Cable-powered from interconnection to Audio Cue Device

Training Requirements Supported:

MOSC - This training device supports CTC rotational exercises, as well as other Force On Force training events.

The GBMK-19 SPU Kit P/N: 186128-1 consists of the following items:

Name	Part Number	Quantity (each)
Prime Item Spares		
Assembly, Operator Module	162074-1	1
Assembly, Laser Module	162075-1	1
Target, Interim Armored Vehicle (IAV) / Remote Weapon Station (RWS)	162078-1	1
Target, Ground	162079-1	1
Assembly, Trigger	162128-1	1
Bracket, Interface, Audio Cue Device (ACD)	162282-1	1
Assembly, Audio Cue Device (ACD)	162928-1	1
Assembly, Laser Module	186131-1	1
Associated Support Items Of Equipment (ASIOE)		
Assembly, Transit Case	162077-2	1
Wrench, Allen, Hex, 3/16", T-Handle	7041A16	1
Any Approved MILES Controller Device		

STRYKER DELTA KIT FOR THE ICV, CV, FSV, RV

NSN 6920-01-543-0366

DVC 23-99/1 STRYKER MCV and MEV MILES XXI Delta Kit

NSN 6920-01-543-0429

DVC 23-99/2 MILES XXI Engineer Squad Vehicle (ESV) Delta Kit

NSN 6920-01-543-0438

DVC 23-99/3 MILES XXI Anti-Tank Guided Missile (ATGM) Delta Kit

NSN 6920-01-543-0443

DVC 23-99/5 MILES XXI NBCRV Delta Kit



DVC 23-99



DVC 23-99/1



DVC 23-99/2

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The device is a component of the Multiple Integrated Laser Engagement System (MILES). MILES XXI is a family of training systems, accurately, and in real time, simulates the effect of direct and indirect fire (artillery, nuclear, or chemical weapons, and mines) as they would

affect a vehicle/soldier in combat. This permits realistic combat training without the hazards of live ammunition. MILES XXI provides the capability for two-sided, real-time tactical engagement at unit sizes up to battalion and for realistic casualty assessments.

Firing the weapon simulators is much like firing the actual weapons. However, instead of firing live ammunition, these simulators transmit harmless laser beams. To allow the simulation to be as real as possible, the rifle and machine guns use blank ammunition, and the missiles and main gun use weapon effect simulators to simulate the noise, blast, and smoke of the actual weapons.

Functional Description:

The MILES XXI family employs eye-safe lasers and microelectronics to realistically simulate the firing capabilities of STRYKER Combat vehicles, machine guns, and other direct-fire weapons. Small battery operated laser transmitters, which attach easily to conventional field weapons, allow STRYKER Vehicle Crews to fire coded (to distinguish range and killing power of the specific weapons) invisible laser pulses instead of live ammunition. Receiving detectors, located on opposing troops and vehicles, pick up the laser pulses and instantly provide audio/visual indication of a kill, hit, or near miss. Kill indicators on personnel or vehicles will disable the victim's weapon. The hit and kill probabilities are similar to those achieved when using live ammunition.

Outgoing Direct Fire from the vehicles missile or small arms transmitter is simulated by "firing" coded laser beams from laser transmitters mounted on the front of the vehicle. Each weapon (Missile, M240 and M2 Machine Gun) has a different MILES XXI code. Muzzle flash from the Missile is simulated using ATWESS Charges and Machine Guns use blank ammunition, which is simulated each time a weapon is fired providing weapon signatures. The MILES XXI System simulates the effects of both direct and indirect fire engagements. Direct fire is simulated by receiving coded laser beams "fired" from laser transmitters. Indirect fire (artillery, nuclear, chemical, and mines) is simulated by receiving radio signals transmitted from the Mission Control Station (MCS). When incoming fire is received, the console will determine whether your vehicle sustains a NEAR MISS, HIT, or KILL. The visual message on the console will display MILES Code and Player Identification (PID). The MILES Code is a 2-digit MILES XXI code number used to identify simulated weapons. The PID is a 4-digit number that is a unique Player Identification of the player engaging you. This event information is stored in the console and downloaded after exercises for use in After Action Reviews. The MILES Code and PID accurately show the performance of specific troops and weapons. KILL simulates total disability to your vehicle. In addition to incoming fire, disconnecting or interrupting power to vehicle console will also cause a KILL. Vehicles can sustain 4 types of HIT-FIREPOWER KILL on the weapon simulating damage to the Main Gun, Coax, and Missile. MOVILITY KILL simulates power train, track, wheel or other damage that would keep the vehicle from driving. COMMO KILL simulates loss of radio

communications. HIT NO DAMAGE simulates vehicles being engaged, but your vehicle received no damage as a result of the engagement. NEAR MISS means direct or indirect fire was close, but did not hit vehicle.

Physical Information:

The STRYKER Vehicle System Tactical Engagement Simulator System is equipped with a laser transmitter that is fired using normal operating procedures. Special detector belts on the vehicle's exterior sense opposing forces fire. The STRYKER MILES XXI kit consists of 2 transit cases, one is a common kit and the second is a Delta Kit for the different variants of the STRYKER. All will require the common kit and then the Delta kit that supports that variant. The different variants of STRYKER are, Infantry Carrier Vehicle (ICV), Command Vehicle (CV), Fire Support Vehicle (FSV), Reconnaissance Vehicle (RV), Mortar Carrier (MC), Medical Vehicle (MEV), Engineer Support Vehicle (ESV), Anti Tank Guided Missile Vehicle (ATGM), and the Nuclear Biological Chemical Reconnaissance Vehicle (NBCRV). There are 5 different Delta Kits and they support (ICV,CV,FSV,RV), (MC and MEV), (ESV), (ATGM), and (NBCRV).

Equipment Required, Not Supplied:

- Battery
- Blank Ammunition
- Weapon/Vehicle

Special Installation Requirements:

- None

Power Requirements:

- Lithium Ion

Applicable Publications:

- TM number TBD

Reference Publications:

- Device 23-99 previously assigned as DVC 17-243.
- Device 23-99/1 previously assigned as DVC 17-243/1.
- Device 23-99/2 previously assigned as DVC 17-243/2.
- Device 23-99/3 previously assigned as DVC 17-243/3.
- Device 23-99/5 previously assigned as DVC 17-243/5.

Training Requirements Supported:

- ARTEPs 7-15, 15-55, 71-2
- MOSCs 11B; 11Z; 19D; 19E; 19Z

UNITECH/MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM (MILES), UNIVERSAL CONTROLLER DEVICE (UCD) INDICATOR SIMULATOR SYSTEM, LASER

**Training Category/Level Utilized:**

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC.

Purpose of Trainer:

The purpose of the trainer is to replace the Basic MILES controller devices at Home Stations and Maneuver Combat Training Center Centers Army wide. The MILES Universal Controller (UCD) Device performs the following:

- a. Transmit all MILES Codes for a maximum range of greater than 100 meters with special function outputs to 500 meters [Kill, Near Miss, Reset, Resurrect, time sync] to approximately 500 meters.
- b. Expanded decode functions for system checks and fault isolation.
- c. Lab and field testing of MILES target systems.
- d. Player/Equipment preparation for force-on-force or force-on-target exercises.

Functional Description:

The MILES UCD is a lightweight device carried in a standard M-12 service holster and is fully compatible with

the MILES Communication Code Standard. It contains a mounting rail that is compatible with MIL-STD-1913 for attaching a supplemental sighting device. The UCD is used to remotely set and control TES weapons effects, TES devices, and the soldier in training.

Physical Information:

Transit case: 22" L x 25.4" W x 13.8" H - two-person lift transit case (24 per case).

Equipment Required, Not Supplied:

N/A

Special Installation Requirements:

None

Power Requirements:

The UCD contains two replaceable AA batteries.

Applicable Publications:

TM 9-6920-3682-10
SMM 9-6920-3682-24&P

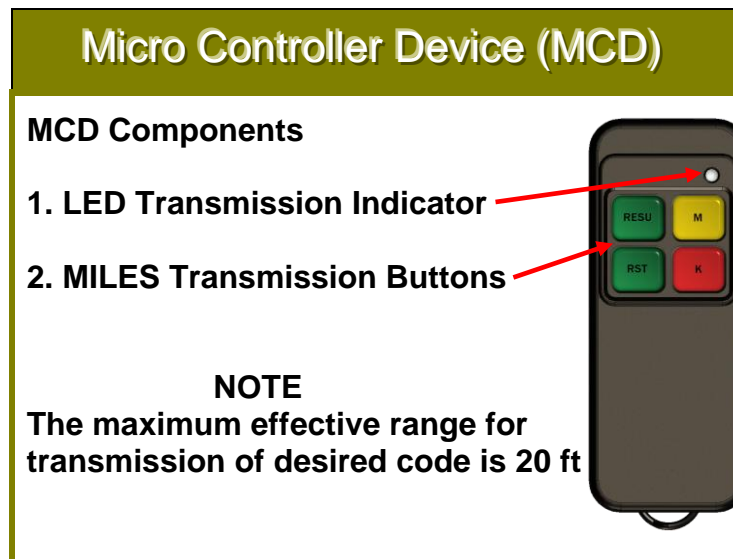
Reference Publications:

Device was previously assigned as DVC 17-275.

Training Requirements Supported:

ARTEPs 7-15, 15-55, 71-2
MOSCs 11B; 11Z; 19D; 19E; 19Z

UNITECH/MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM (MILES), MICRO CONTROLLER DEVICE (MCD) INDICATOR SIMULATOR SYSTEM, LASER



Micro Controller Device (MCD)

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The purpose of the trainer is to replace the Basic MILES controller devices at Home Stations and Maneuver Combat Training Center Centers Army wide. The MILES Micro Controller Device performs the following:

- Transmit the universal kill, reset, resurrect, and near miss sequence code for a maximum range of 5 meters IAW the MILES Communication Code standard except the Player Identification (PID) and ammunition type shall not be transmitted.
- Provides a visual indication of the laser transmit.

Functional Description:

The MILES MCD will be used to support:

- Lab and field testing of MILES target systems.

- Player/Equipment preparation for force-on-force or force-on-target exercises.
- Player training of MILES systems.

Physical Information:

Transit case: 22" L x 25.4" W x 13.8" H - two-person lift transit case (48 per case). The MCD's are shipped with 24 UCD per case.

Equipment Required, Not Supplied:

N/A

Special Installation Requirements:

None

Power Requirements:

MCD contains one replaceable CR-2032 battery.

Applicable Publications:

TM 9-6920-3682-10
SMM 9-6920-3682-24&P

Reference Publications:

Device was previously assigned as DVC 17-275/A.

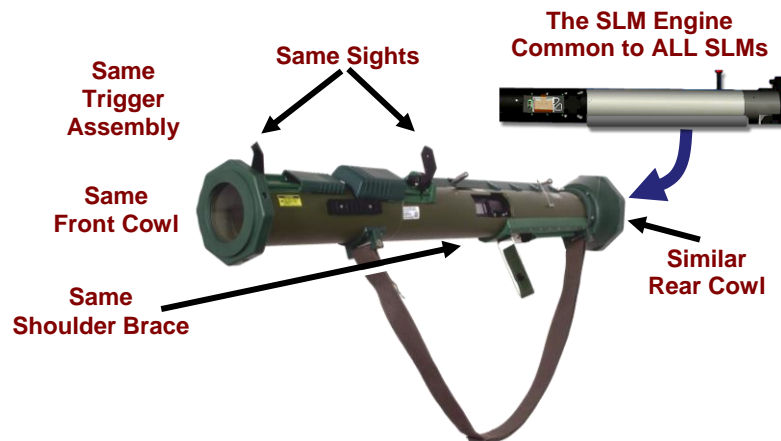
Training Requirements Supported:

MOSCs 11B; 11Z; 19D; 19K; 19Z

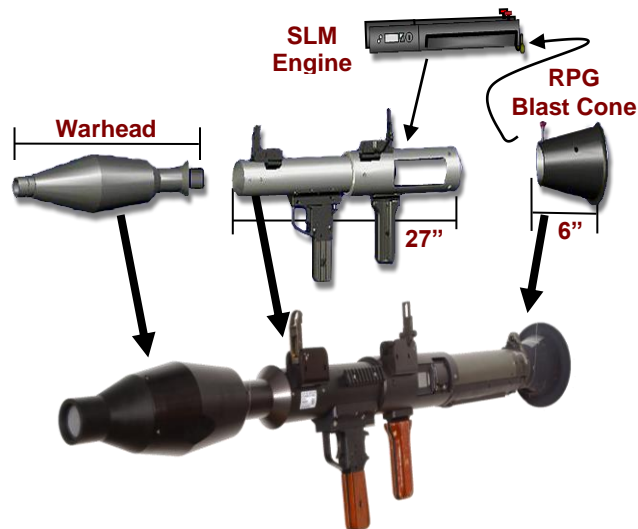
MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM (MILES) SHOULDER LAUNCHED MUNITIONS (SLM)

NSN 6920-01-568-4494
NSN 6920-01-568-3181
NSN 6920-01-568-3183

DVC 23-102/A (MILES), (SLM), AT4 VISMOD
DVC 23-102/B (MILES), (SLM), RPG7VISMOD
DVC 23-102/C (MILES), (SLM), Engine Assembly



DVC 23-102/A, AT4



DVC 23-102/B, RPG7

Training Category/Level Utilized:
Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL, PM Field OPS

Source and Method of Obtaining:
Available through local TSC.

Purpose of Trainer:

The device is a component of the Multiple Integrated Laser Engagement System (MILES). MILES is a family of training systems which simulate the effects of direct-fire weapons at their operational ranges and operate in a fully integrated tactical training environment. MILES provides the capability for two-sided, real-time tactical engagement for realistic casualty assessments. Firing the weapon simulators is much like firing the actual weapons. However, instead of firing live ammunition, these simulators transmit harmless laser beams. To allow the

simulation to be as real as possible the missiles use weapons effect simulators to simulate the noise, blast, and smoke of the actual weapons.

Functional Description:**AT4 Description**

The SLM systems are stand alone and operationally similar devices used by soldiers during force-on-force exercises. The SLM trainer used to simulate the AT4 is the most realistic of the systems and is shown above. When activated by placing it on one's shoulder and firing the trigger, it transmits a laser message which simulates the firing of a missile. It also can activate a pyrotechnic cue to simulate the back blast. It is powered from either an alkaline or Lithium magnesium 9 volt transistor style battery. The Pyrotechnic used for this simulation is the previously qualified M22.

RPG7 Description

The SLM representing the RPG7 is shown below. While its similarity to an actual weapon is less than the AT4 version, it looks very much like an actual weapon including a removable warhead. Like the AT4, it transmits a laser optical message and can trigger the same pyrotechnic device.

SLM Engine ASSY Description

The SLM Engine ASSY transmits a laser message which simulates the firing of a missile. It also can activate a pyrotechnic cue to simulate the back blast. It is powered from either an alkaline or Lithium

magnesium 9 volt transistor style battery. The Pyrotechnic used for this simulation is the previously qualified M22.

Physical Information:

Transit Case is 43" L, 25" W, 12" H, 98 lbs
Each transit case contains 3 AT4 launchers

Equipment Required, Not Supplied:

ATWESS Cartridges

Special Installation Requirements:

None

Power Requirements:

9 vdc

Applicable Publications:

OUM 9-6920-3692-10
SMM 9 6920-3692-24&P
OUM 23-6920-709-10
SMM 23-6920-709-24

Reference Publications:

Infantry Manuals
Device 23-102 previously assigned as DVC 17-276.
DVC 23-102/A was previously DVC 17-276/A.
DVC 23-102/B was previously DVC 17-276/B.
DVC 23-102/C was previously DVC 17-276/C.

Training Requirements Supported:

MOSC 11B; 19D

INSTRUMENTABLE MULTIPLE INTEGRATED LASER ENGAGEMENT (IMILES), SHOULDER LAUNCHED MUNITIONS (SLM), BUNKER DEFEAT MUNITIONS (BDM)



Training Category/Level Utilized:
Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL, PM Field Ops

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The purpose of the I-MILES SLM BDM training device is to simulate operation and firing procedures of the tactical M141 Bunker Defeat Munitions during Force-on-Force exercises at home station and the Combat Training Centers (CTCs). The I-MILES SLM BDM will have the capability for use during periods of reduced visibility and darkness. The I-MILES SLM BDM emulates the weight, length, mechanical action, and external features of the tactical M141 BDM.

Functional Description:

The I-MILES SLM BDM is a one man portable and reusable training device which visually represents the tactical BDM used by BLUFOR, and has the ability to stimulate all legacy MILES and I-MILES systems. When activated and fired, it transmits a laser message which simulates the firing of a missile. It also can activate a pyrotechnic cue to simulate the back blast. It is powered from either an alkaline or Lithium magnesium 9 volt

transistor style battery. The Pyrotechnic used for this simulation is the previously qualified M22.

Physical Information:

Collapsed Length: 33.5 inches
Extended Length: 55.5 inches
Weight: 12.5 pounds

Equipment Required, Not Supplied:
ATWESS Cartridges

Special Installation Requirements:

Must be used in conjunction with the following:
DVC 23-102/C
(MILES), (SLM), Engine Assembly

Power Requirements:
9 vdc

Applicable Publications:
OUM 23-6920-709-10
SMM 23-6920-709-24

Reference Publications:
Infantry Manuals

Training Requirements Supported:

Army Training and Evaluation Program
Approved SLM TRADOC POI for Home Station Training.
MOSC 11B; 19D

STRYKER TOW SIMULATOR (STS) FOR ATGM DELTA KIT

**Training Category/Level Utilized:**

Armor/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The STS is used for situational training exercises (STX) or field training exercises (FTX) in a MILES or TES force on-force environment. The STS is designed to be used in conjunction with the MILES XXI Stryker Common Kit, P/N 2031790-1, and MILES XXI Stryker ATGM Delta Kit, P/N 2031794-1, when installed on the M1134 Stryker ATGM Vehicle. The STS replaces the ATGM Field Tactical Trainer (FTT), previously used on this vehicle for force-on-force training applications.

Functional Description:

The STS is comprised of two main assemblies, the TOW Laser Device (TLD) and TOW ATWESS Device (TAD). Also included are three cables used to interface the STS to the Stryker ATGM weapons system when used in MILES training exercises.

The TLD provides for the laser simulation of the TOW missile round. The TLD is built in a "tube" configuration that is approximately half the length of a TOW missile body, and is installed into the ATGM launch tube in a similar manner.

The TAD fires Anti-Tank Weapons Effect Signature Simulator (ATWESS) cartridges that replicate the initial launch explosion of a TOW missile. The TAD is built in a "tube" configuration that is approximately half the length of a TOW missile body, and is installed into the ATGM launch tube in a similar manner.

The STS system is fully interoperable with the MILES XXI system, and receives configuration information such as Player ID, and ammo load from the MILES XXI, as well as vehicle casualty status which is used to determine if the TOW weapon may be fired.

Physical Information:

TOW Laser Device

Weight: 20 lbs (9.1 kg)
Dimensions: Length = 29.5 inches (74.9 cm)
Diameter = 8.25 inches (21 cm)

**TOW ATWES Device**

Weight: 19 lbs (8.6 kg)
Dimensions: Length = 29.5 inches (74.9 cm)
Diameter = 8.25 inches (21 cm)

Equipment Required, Not Supplied:

MILES XXI Stryker Common Kit -- P/N 2031790-1
MILES XXI Stryker ATGM Delta Kit -- P/N 2031794-1

Special Installation Requirements:

Required tools are part of Stryker BII toolkit. For installation procedures, see App. F of TM 9-6920-919-10.

Power Requirements:

+24 VDC vehicle power

**STS Kit in Transit Case**

Weight: 79 lbs (35.8 kg)
Dimensions: Length = 38.5 inches (97.8 cm)
Height = 13.0 inches (33.0 cm)
Width = 24.5 inches (62.2 cm)

Applicable Publications:

OUM 9-6920-919-10 – Multiple Integrated Laser Engagement System (MILES XXI), Combat Vehicle System (CVS) Kit for STRYKER Series Vehicle – Anti-tank Guided Missile (ATGM)

Reference Publications:

SMM 9-6920-908-24 – General Support Maintenance, Repair Parts and Special Tools Lists, Multiple Integrated Laser Engagement System (MILES XXI), Combat Vehicle System (CVS) Kits

Device was previously assigned as DVC 17-288.

Training Requirements Supported:

MOSC- MILES force-on-force and force-on-target training

MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM, INDIVIDUAL WEAPONS SYSTEMS (MILES-IWS) TRAINING DATA TRANSFER DEVICE (TDTD)

**Training Category/Level Utilized:**

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The purpose of this trainer is to replace Basic MILES and MILES 2000 systems at home-station and the Combat Training Centers (CTCs) due to age of technology and cost to maintain. The major differences between MILES Individual Weapons Systems (MILES IWS) and predecessor devices is in battery selection; the use of 2.4Ghz ZigBee to communicate between the vest and Small Arms Transmitter (SAT); the use of a red laser, alignment knobs, and reflective paper targets to align the SAT. Weight of the device is also reduced from earlier devices. The MILES IWS kits are instrumentable for use in instrumented ranges.

This device is a component of the MILES Individual Weapons Systems (MILES IWS). MILES IWS is a family of training systems, which simulate the effects of direct-fire weapons at their operational ranges. MILES IWS is primarily used for force-on-force training from squad up to and include Brigade level.

Functional Description:

The Combat Analysis System (CAS) package runs the

MILES IWS data base to record and analyze exercise events information and print reports for after action review (AAR). The CAS provides for data to be downloaded to the PC from the harness processing unit via the COP interface. The CAS software package is loaded on an industry standard IBM compatible laptop or PC running Windows XP.

Physical Information:

The TDTD system comprises the Combat Analysis System (CAS) computer software package installed on a PC and the Computer Optical Port (COP). The CAS software and the COP are supplied as part of the CAS system.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

(Information not available)

Applicable Publications:

(Information not available)

Reference Publications:

Device was previously assigned as DVC 17-239.

Training Requirements Supported:

MOSC 11 Series

STRYKER VEHICLE INSTRUMENTATION INTERFACE PACKAGE (VIIP)

**Training Category/Level Utilized:**

Armor/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The Vehicle Instrument Interface Package (VIIP) provides the communications interface between vehicles and the instrumentation systems at maneuver Combat Training Centers (CTC) and the Alaska Range, Homestation Instrumentation Training System (HITS), Deployable Instrumented Training System (DITS) and Deployable System for Training and Readiness (DSTAR). The VIIP appends to vehicles and allows for simulated direct and indirect-fire engagements. The VIIP instruments tanks, Bradleys and Strykers using the Multiple Integrated

Laser Engagement System (MILES) XXI, the Mobile Gun System Tactical Engagement Simulation System (MGS TESS), the Tank Weapon Gunnery Simulation System (TWGSS) or Precision Gunnery System (PGS). VIIP provides brigade commanders and training exercise managers exercise oversight and capability for comprehensive (AAR) production.

Functional Description:

The VIIP provides the communication interface between all of the STRYKER vehicle variants and the instrumentation systems at Joint Readiness Training Center (JRTC), National Training Center (NTC), and Combat Maneuver Training Center (CMTC). It enables the STRYKER Brigade Combat Team (SBCT) to conduct exercises. VIIP merges the communication between the MILES XXI (most current version of MILES) vehicle control unit (VCU) and the data communication interface (DCI).

This makes it possible for the core instrumentation subsystem (CIS) to receive and to interact with the MILES XXI CVS (combat vehicle system) mounted on the STRYKER. The CIS receives player position (GPS) from the VIIP. Casualty commands are sent from the CIS to the player and are then picked up by the DCI, processed by the VIIP, and sent to the MILES XXI CVS. Direct fire causing a HIT in the MILES XXI CVS will be reported back to the CIS via VIIP and the DCI. Status changes in the MILES XXI CVS are handled in a similar way. In conjunction with the MILES XXI-equipped STRYKER, the VIIP will allow for real-time tracking, status, and control capability. It will also provide SBCT commanders and training exercise managers' oversight and data for comprehensive after action review (AAR) production. The VIIP is used on the following vehicle platforms: Infantry carrier vehicle (ICV), Command vehicle (CV), Mortar carrier (MC), Reconnaissance vehicle (RV), Medical evacuation vehicle (MEV), Engineering support vehicle (ESV), Fire support vehicle (FSV), and Anti-tank guided missile vehicle (ATGM). The VIIP will also be included on the following vehicles: Mobile gun system (MGS) and Nuclear biological chemical reconnaissance vehicle (NBCRV). The VIIP system is housed in a refurbished 60-mm ammunition box. This housing will be attached to the STRYKER vehicle in the bustle racks on the side of the vehicle utilizing heavy-

duty straps already available on the vehicle. The GPS and DCI antennas are mounted on the lid of the housing. In addition the VIIP has its own power conditioner; the STRYKER batteries provide power.

Physical Information:

(Information not available)

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

Own power conditioner; Batteries operated

Applicable Publications:

(Information not available)

Reference Publications:

Device was previously assigned as DVC 17-244.

Training Requirements Supported:

MOSC Various

INSTRUMENTABLE MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM (I-MILES) TACTICAL VEHICLE SYSTEM (TVS)

NSN 6920-01-592-5974

DVC 23-106/1

I-MILES TVS, M2 SAT (Small Arms Laser Transmitter)

NSN 6920-01-592-5978

DVC 23-106/2

I-MILES TVS, M240 SAT

NSN 6920-01-592-5980

DVC 23-106/3

I-MILES TVS, Detector Module



DVC 23-106



M2 SAT

DVC 23-106/1



M240 SAT

DVC 23-106/2



Detector Module

DVC 23-106/3

Training Category/Level Utilized:

Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

This device is a member of the I-MILES family of training systems. This trainer provides real-time casualty effects during Force on Force training scenarios. MILES is a family of training systems that accurately, and in real time, simulates the effect of

direct, and when connected to an instrumentation system, indirect fire (artillery, nuclear, or chemical weapons, and mines) as they would affect a vehicle/soldier in combat. This permits realistic combat training without the hazards of live ammunition. MILES provides the capability for force-on-force, real-time tactical engagement at unit sizes up to battalion level, and realistic casualty assessments. Crews served weapons have a laser transmitter attached that activates when the weapon is fired with blank ammunition. However, instead of firing live ammunition, this simulator transmit an eye safe laser beam.

Functional Description:

I-MILES TVS is a laser-based training device that supports the force-on-force and force-on-target training needs of soldiers occupying various heavy weight, medium weight, and light weight, tracked or multi-wheeled tactical vehicles that do not have an embedded fire control system. I-MILES TVS supports weapon systems that are appended to, installed on, or associated with the vehicle. I-MILES TVS is versatile in that it can also be used on low and medium protected structures and fixed equipment, such as bridges, bunkers, ammunition caches, refuel depots, and buildings. The TVS Small Arms Laser Transmitter (SAT) and laser detectors use laser light in the form of pulses to receive and transmit weapons engagement information. These pulses are transmitted each time a weapon is fired. Information contained in the pulses includes a unique Player Identification (PID), weapon and ammunition code. The target entity processes the information to produce real-time casualty assessment (RTCA). The RTCA can produce one of several outcomes: catastrophic kill, firepower kill, mobility kill, communication kill, hit, or near miss.

Physical Information:

- a. Vehicle Kill Controller (VKC) – Central processing unit.
- b. Vehicle Detector Module (VDM) – Receives and decodes laser engagement and passes to VKC.
- c. Crew Control Module (CCM) - informs the crew of system events and provides graphical step by step installation and configuration instructions for the I-MILES TVS
- d. Small Arms Laser Transmitter (SAT) - Laser transmitter simulates small arms.

- e. Serial Module RF Interface (SMRFI) - RF device communicates data between components inside and outside the vehicle.
- f. Mirror Alignment Jig Assemble and Tripod (MAJIK) – The MAJIK is used with the tripod to align the SAT to the weapons sights.

Equipment Required, Not Supplied:

Controller Device
Blank Ammunition/Pyro
DIFCUE

Special Installation Requirements:

OUM and New Equipment Training (NET)

Power Requirements:

External Power Source

- Vehicle's NATO power connector
- Vehicle 12V cigarette lighter
- Vehicle dome light
- Automotive/Marine/Deep cycle battery terminals
- AC wall plug

Batteries (Energizer L91 Ultimate Lithium)

Applicable Publications:

OUM 23-6920-708-10
SMM 23-6920-708-24&P

Reference Publications:

Device 23-106 previously assigned as DVC 17-289.

Training Requirements Supported:

MOSC - Force on Force (FoF)
Force on Target (FoT)

INSTRUMENTABLE MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM (I-MILES), COMBAT VEHICLE TACTICAL ENGAGEMENT SIMULATION SYSTEM (CVTESS) ABRAMS



CVTESS Transit Case

#	Part Number	Name	Qty
1	8845 023-610	WEAPON KIT M240	1
2	8845 023-603	WEAPON KIT M2	1
3	8851 361-101	TIM ASSEMBLY ABRAMS	1
4	8845 023-701	WEAPON KIT ABRAMS	1
5	8847 146-721	CABLE W1 VIM-TIM BFV/ABRAMS	1
6	8847 132-725	CABLE W11 POWER ABRAMS	1
7	8847 140-725	CABLE W12 INTERFACE 1 ABRAMS ANALOG	1
8	8847 140-726	CABLE W13 INTERF. 1 ABRAMS DIGITAL	1
9	8847 141-725	CABLE W14 MGSS/DIFCUE ABRAMS	1
10	8854 245-011	BRACKET WDU REAR	2
11	8854 245-311	BRACKET WDU FRONT	1
12	8839 115-501	TURRET POSITON SENSOR	1
13	6853 492-506	VELCRO	-
14	8839 105-201	GROMMET M1/M1A1	1
15	8851 362-101	VIM ASSEMBLY ABRAMS	1
16	8851 083-101	CM	1
17	8851 366-101	CKM ASSEMBLY	2
18	8875 802-214	OUM 17-6920-927-10 MILES, CVTESS KIT, FOR ABRAMS MAIN BATTLE TANK, OUM	1
	8875 802-217	POCKET GUIDE CVTESS ABRAMS	1
19	6853 500-571	CABLE TIES	-
20	8851 365-101	WDU ASSEMBLY	10
21	8854 245-091	STORAGE CASE CVTESS ABRAMS	1

CVTESS Transit Case Parts Names

Training Category/Level Utilized:

Weapons/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

Provided Force on Force training capability for the Abrams tank. The CVTESS accurately and in real time simulates the firing and the firing effect of the primary and secondary weapons on all Abrams Variants. The system provides Real Time Casualty Assessment (RTCA), After Action Review (AAR) and works with Training Center Instrumentation.

Functional Description:

The CVTESS uses eye-safe laser transmitters, compatible with all other MILES training devices. The system simulates firing capabilities of the 120mm main gun, Canister Round, M2 and M240 machine guns, using normal firing procedures. A laser firing code includes a Player ID for identification of other vehicles. Blank fire and pyrotechnic charges add realism to weapons. The system detects all opposing fire, identifies opposing weapons and Player ID, and determines the effect of incoming fire using an adjudication algorithm on the target vehicle, and it has a high-visibility Target Interface Module (TIM) that signals others that the vehicle has received incoming direct or indirect fire. The system stores 2000 events and can be downloaded for After Action Review (AAR).

Physical Information:

Fully Loaded Abrams Variant Kit w/Transit Case:
36 inches x 36 inches x 12 inches; 91.5 lbs.

Equipment Required, Not Supplied:

Abrams vehicle

Special Installation Requirements:

See OUM-17-6920-927-10

Power Requirements:

CVTESS will use vehicle power to run the Vehicle Interface Module or operate on internal power for 100 hours. It uses Ultimate Lithium AA batteries as well as CR2 Batteries.

Applicable Publications:

Operator's Manual for Instrumentable - Multiple Integrated Laser Engagement System (I-MILES) Combat Vehicle Tactical Engagement Simulation System (CVTESS) Kit for Abrams Main Battle Tank OUM-17-6920-926-10

Field and Sustainment Maintenance Manual for Instrumentable - Multiple Integrated Laser Engagement System (I-MILES) Combat Vehicle Tactical Engagement Simulation System (CVTESS) SMM 17-6920-929-24&P

Reference Publications:

N/A

Training Requirements Supported:

ARTEPs Supported
7-15, 17-55, 71-2
MOSC 19k, 12-Series

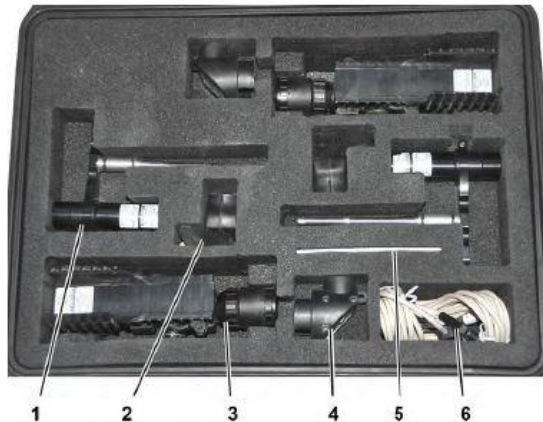
ALIGNMENT DEVICE ABRAMS

Introduction

There are three weapon kits to align on the Abrams:

- Weapon kit Abrams (120 mm and coax)
- Weapon kit M2 (CROWS or SCWS)
- Weapon kit M240 (loader's M240)

The weapon kits are aligned before the exercise, using the Alignment Device Abrams.



LEGEND:

- | | |
|---------------------------------------------|-----------------------------------|
| 1 Fixed alignment scope (2 ea) | 4 Right-angle prism (2 ea) |
| 2 Small Arms Alignment Device (SAAD) (2 ea) | 5 Installation DVD WinExcon |
| 3 Alignment kit (2 ea) | 6 IrDA transceiver with USB cable |

Figure 1. Alignment Device, Abrams.

Transit Case

Training Category/Level Utilized:

Weapons/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

This device aligns the laser transmitters for the Combat Vehicle Tactical Engagement Simulation System with the actual line of site on the Abrams Main Battle Tank weapons.

Functional Description:

This device aligns the laser transmitters through the use of a fixed alignment scope, alignment kit, and small arms alignment device (see OUM 17-6920-927-10 for procedures).

Physical Information:

Transit Case: 19.2 inches x 15.4 inches x 7.4 inches;
18 lbs.

Equipment Required, Not Supplied:

The CVTESS kit and an Abrams Main Battle Tank.

Special Installation Requirements:

All the installation requirements are in the publication.

Power Requirements:

The Small Arms Alignment Device is the only component of the Alignment Device Abrams that is powered by a battery. This battery is embedded in the device and it is not replaceable at the operator level.

Applicable Publications:

OUM 17-6920-927-10, (MILES), (CVTESS), Kit for Abrams Main Battle Tank

Reference Publications:

N/A

Training Requirements Supported:

MOSC: 19K

INSTRUMENTABLE MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM (I-MILES), COMBAT VEHICLE TACTICAL ENGAGEMENT SIMULATION SYSTEM (CVTESS) BRADLEY

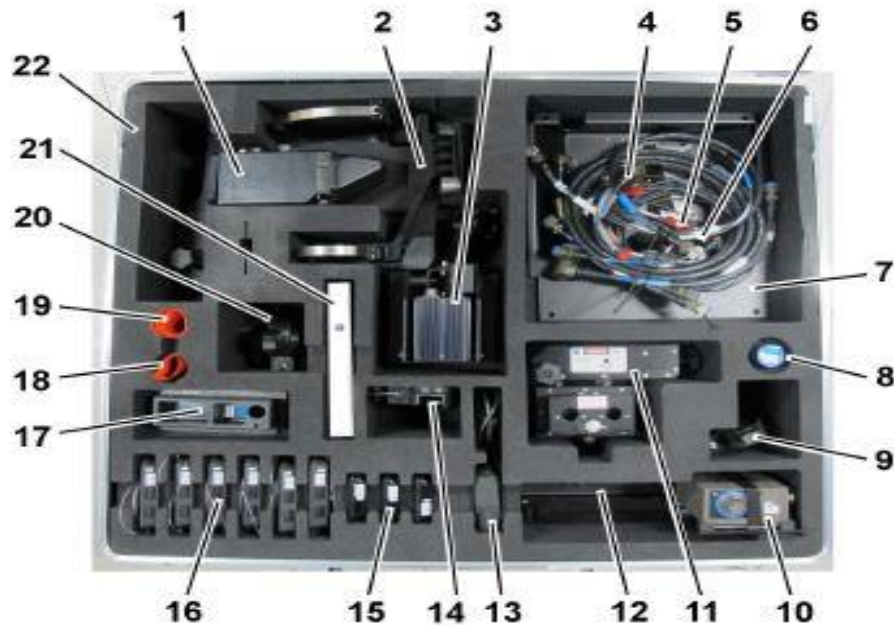


Figure 1. CVTESS Kit Storage Case, Bradley Analog and Digital.

CVTESS Transit Case

#	Part Number	Name	Qty
1	8851 360-101	TIM ASSEMBLY BRADLEY	1
2	8845 023-702	WEAPON KIT BRADLEY	1
3	8851 364-101	AUDIO UNIT ASSEMBLY	1
4	8847 146-721	CABLE W1 VIM-TIM BFV/ABRAMS	1
	8847 132-721	CABLE W3 POWER BFV ANALOG	1
	8847 132-722	CABLE W4 POWER BFV DIGITAL	1
	8847 140-721	CABLE W5 INTERFACE 1 BFV ANALOG	1
	8847 140-722	CABLE W6 INTERFACE 1 BFV DIGITAL	1
	8847 141-721	CABLE W7 AU/DIFCUE/ATWESS BFV	1
	8847 146-722	CABLE W8 CAN TDIP J7 BFV DIGITAL	1
5	6853 500-571	CABLE TIES	-
6	6853 492-506	VELCRO	-
7	8854 245-171	BRACKET VIM ANALOG (Replacement floor plate)	1
8	8839 108-212	SHORTING PLUG, 25 MM GUN (BLUE)	1
9	8854 245-111	BRACKET WDU L/F	1
10	8851 081-201	VIM	1
11	8851 363-101	ATWESS ASSEMBLY BRADLEY	1
12	8854 245-181	BRACKET VIM DIGITAL	1
13	8851 083-101	CM	1
	8848 020-301	CM II	
14	8854 245-301	BRACKET WDU FRONT	1
15	8851 366-101	CKM ASSEMBLY	3
16	8851 365-101	WDU ASSEMBLY	6
17	8839 105-301	GROMMET BRADLEY	1
18	8839 479-004	LIGHT COVER, AP AMMO LOW	1
19	8839 479-005	LIGHT COVER, HE AMMO LOW	1
20	8854 245-121	BRACKET WDU R/F	1
21	8875 802-215	OUM 17-6920-926-10 MILES, CVTESS, KIT FOR BRADLEY FIGHTING VEHICLES, OUM	1
	8875 802-218	POCKET GUIDE CVTESS BRADLEY	1
22	8854 245-191	STORAGE CASE CVTESS BRADLEY	1

CVTESS Transit Case Parts Names

Training Category/Level Utilized:

Weapons/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

Provides Force on Force training capability for the Bradley Fighting Vehicle. The CVTESS accurately and in real time simulates the firing and the firing effect of the primary and secondary weapons on all Bradley Fighting Vehicle variants. The system provides Real Time Casualty Assessment (RTCA), After Action Review (AAR) and works with Training Center Instrumentation.

Functional Description:

The CVTESS uses eye-safe laser transmitters, compatible with all other MILES training devices. The system simulates firing capabilities of the 25mm, TOW, and Coax Machine Gun, using normal firing procedures. A laser firing code includes a Player ID for identification of other vehicles. Blank fire and pyrotechnic charges add realism to weapons. The system detects all opposing fire, identifies opposing weapons and Player ID, and determines the effect of incoming fire using an adjudication algorithm on the target vehicle, and it has a high-visibility Target

Physical Information:

Fully Loaded BFV Variant Kit w/Transit Case:
36 inches x 36 inches x 12 inches; 100 lbs.

Interface Module (TIM) that signals others that the vehicle has received incoming direct or indirect fire. The system stores 2000 events and can be downloaded for After Action Review (AAR).

Equipment Required, Not Supplied:

Bradley Fighting Vehicle

Special Installation Requirements:

See OUM-17-6920-926-10

Power Requirements:

CVTESS will use vehicle power to run the Vehicle Interface Module or operate on internal power for 100 hours. It uses Ultimate Lithium AA batteries as well as CR2 Batteries.

Applicable Publications:

OUM-17-6920-926-10, (I-MILES), (CVTESS) Kit for Bradley Fighting Vehicle

SMM 17-6920-929-24&P, (I-MILES), (CVTESS)

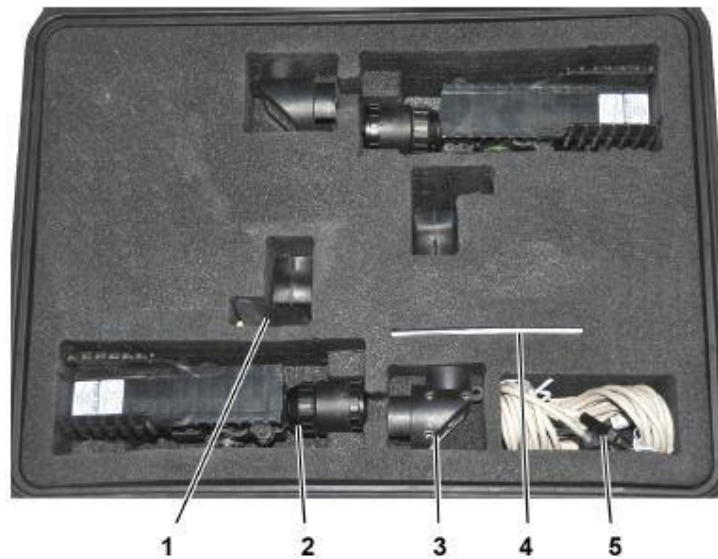
Reference Publications:

N/A

Training Requirements Supported:

ARTEPs Supported
7-15, 17-55, 71-2
MOSC 19K; 12 Series

ALIGNMENT DEVICE BRADLEY

**LEGEND:**

- 1 Small Arms Alignment Device (SAAD) (2 ea)
- 2 Alignment kit (2 ea)
- 3 Right-angle prism (2 ea)

- 4 Installation DVD WinExcon
- 5 IrDA transceiver with USB cable

Transit Case**Training Category/Level Utilized:**

Weapons/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

This device aligns the laser transmitters for the Combat Vehicle Tactical Engagement Simulation System with the actual line of site on weapons for the Bradley Fighting Vehicle the OPFOR Surrogate Vehicle, and the OPFOR Surrogate Vehicle-Tank.

Functional Description:

This device aligns the laser transmitters through the use of an alignment kit and small arms alignment device (see OUM 17-6920-926-10 or OUM 17-6920-928-10 for procedures)

Physical Information:

Transit Case: 19.2 inches x 15.4 inches x 7.4 inches;
14 lbs.

Equipment Required, Not Supplied:

The CVTESS kit and a Bradley Fighting Vehicle, CVTESS kit and OPFOR Surrogate Vehicle (OSV), or a CVTESS kit and OPFOR Surrogate Vehicle –Tank (OSVT).

Special Installation Requirements:

All the installation requirements are in the publication.

Power Requirements:

None

Applicable Publications:

OUM 17-6920-926-10, (MILES), (CVTESS), Kit for Bradley Fighting Vehicle

OUM 17-6920-928-10, (MILES), (CVTESS), Kit for Opposing Forces Vehicles

Reference Publications:

N/A

Training Requirements Supported:

MOSC: 11B; 13F; 19D

INSTRUMENTABLE MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM (I-MILES), COMBAT VEHICLE TACTICAL ENGAGEMENT SIMULATION SYSTEM (CVTESS) OPPOSING FORCE SURROGATE VEHICLE (OSV)



Figure 1. ToC for OSV Storage Case.
CVTESS Transit Case

Table 1. ToC for OSV Storage Case.

#	Part Number	Name	Qty
1	8847 146-724	CABLE W19 VIM-TIM OSV/OSV-T	1
2	8847 132-724	CABLE W20 POWER OSV/OSV-T	1
	8847 142-721	CABLE W15 IS NTC	1(*)
	8847 143-721	CABLE W16 IS JMRC	
	8847 144-721	CABLE W17 IS JRTC	
	8847 141-726	CABLE W23 AU/DIFCUE/ATWESS OSV	
3	8847 140-724	CABLE W21 INTERFACE 1 OSV/OSV-T	1
4	8851 368-101	TIM ASSEMBLY	1
5	8851 081-201	VIM	1
6	8854 245-171	BRACKET VIM ANALOG	1
7	8875 802-230	OUM 17-6920-928-10 MILES, CVTESS KIT, FOR OPPOSING FORCES VEHICLES, OUM	1
	8875 802-219	POCKET GUIDE CVTESS OSV/OSV-T	1
8	8854 245-481	GROMMET	1
9	8851 367-101	ATWESS ASSEMBLY OSV	1
10	8851 368-101	WEAPON KIT OSV	1
11	8851 083-101	CM	1
12	8839 108-212	SHORTING PLUG, 25 MM GUN (BLUE)	1
13	8851 366-101	CKM ASSEMBLY	3
14	8851 365-101	WDU ASSEMBLY	7
15	8851 370-101	AUDIO UNIT ASSEMBLY	1
16	8854 245-421	BRACKET WDU	5
17	6853 500-571	CABLE TIES	-
	6853 492-506	VELCRO	-
18	8854 245-571	BRACKET WDU RIGHT FRONT	1
	8854 245-581	BRACKET WDU LEFT FRONT	1
-	8854 245-293	STORAGE CASE CVTESS OSV	1

(*) The IS cable is specific for the training center. There is only one IS cable per kit.

CVTESS Transit Case Parts Names

Training Category/Level Utilized:

Weapons/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

Provides Force on Force training capability for OPFOR combat vehicles at the U.S. Army's Combat Training Centers (CTCs). The CVTESS accurately and in real time simulates the firing and the firing effect of the primary and secondary weapons on OPFOR combat vehicles. The system provides Real Time Casualty Assessment (RTCA), After Action Review (AAR) and works with Training Center Instrumentation.

Functional Description:

The CVTESS uses eye-safe laser transmitters, compatible with all other MILES training devices. The system simulates firing capabilities of the OSV using normal firing procedures. A laser firing code includes a Player ID for identification of other vehicles. Blank fire and pyrotechnic charges add realism to weapons. The system detects all opposing fire, identifies opposing weapons and Player ID, and determines the effect of incoming fire using an adjudication algorithm on the target vehicle, and it has a

Physical Information:

Fully Loaded OSV Variant Kit w/Transit Case:
36 inches x 36 inches x 12 inches; 95 lbs.

high-visibility Target Interface Module (TIM) that signals others that the vehicle has received incoming direct or indirect fire. The system stores 2000 events and can be downloaded for After Action Review (AAR).

Equipment Required, Not Supplied:

Opposing Forces Surrogate Vehicle

Special Installation Requirements:

See OUM-17-6920-928-10

Power Requirements:

CVTESS will use vehicle power to run the Vehicle Interface Module or operate on internal power for 100 hours. It uses Ultimate Lithium AA batteries as well as CR2 Batteries.

Applicable Publications:

OUM-17-6920-928-10, (I-MILES), (CVTESS) Kit for Opposing Forces Vehicles

SMM 17-6920-928-24&P, (I-MILES), (CVTESS)

Reference Publications:

N/A

Training Requirements Supported:

ARTEPs Supported
7-15, 17-55, 71-2
MOSC 19K; 12 Series

**INSTRUMENTABLE MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM
(I-MILES), COMBAT VEHICLE TACTICAL ENGAGEMENT SIMULATION SYSTEM
(CVTESS) OPPOSING FORCE SURROGATE VEHICLE – TANK (OSV-T)**

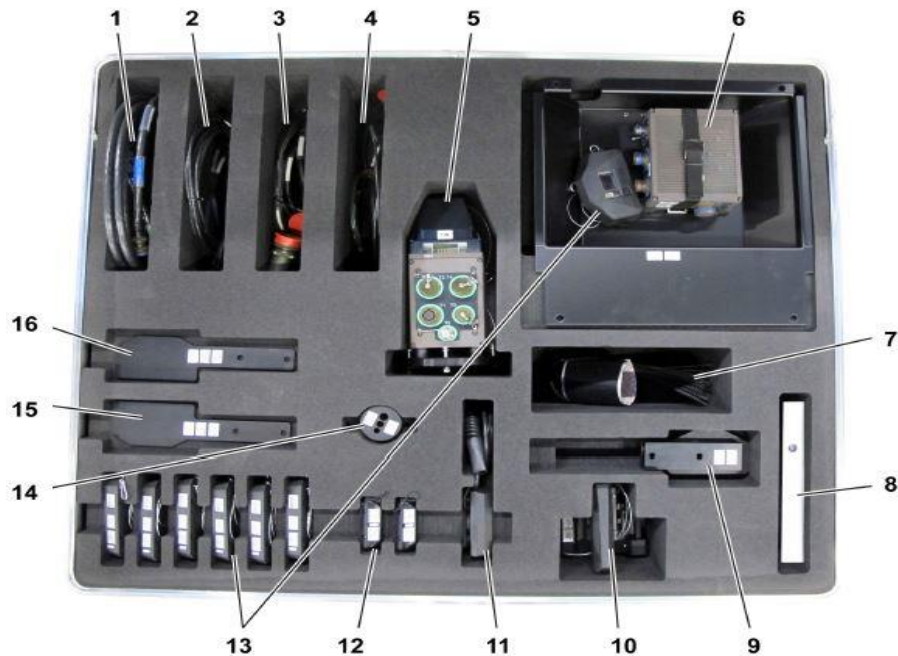


Figure 2. ToC for OSV-T Storage Case.

CVTESS Transit Case

Table 2. ToC for OSV-T Storage Case.

#	Part Number	Name	Qty
1	8847 146-724	CABLE W19 VIM-TIM OSV/OSV-T	1
2	8847 132-724	CABLE W20 POWER OSV/OSV-T	1
	8847 142-721	CABLE W15 IS NTC	1(*)
	8847 143-721	CABLE W16 IS JMRC	
	8847 144-721	CABLE W17 IS JRTC	
3	8847 141-724	CABLE W22 MGSS/DIFCUE OSV-T	1
4	8847 140-724	CABLE W21 INTERFACE 1 OSV/OSV-T	1
5	8851 369-101	TIM ASSEMBLY	1
6	8851 081-201	VIM	1
	8854 245-171	BRACKET VIM ANALOG	1
7	6853 500-571	CABLE TIES	1
	6853 492-506	VELCRO	1
8	8875 802-230	OUM 17-6920-928-10 MILES, CVTESS KIT, FOR OPPOSING FORCES VEHICLES, OUM	1
	8875 802-219	POCKET GUIDE CVTESS OSV/OSV-T	1
9	8854 245-511	BRACKET WDU RIGHT FRONT	1
	8854 245-541	BRACKET WDU LEFT FRONT	1
10	8851 371-101	WEAPON KIT OSV-T	1
11	8851 083-101	CM	1
12	8851 366-101	CKM ASSEMBLY	2
13	8851 365-101	WDU ASSEMBLY	7
14	8854 245-431	GROMMET	1
15	8854 245-521	BRACKET WDU RIGHT	1
	8854 245-531	BRACKET WDU RIGHT REAR	1
16	8854 245-551	BRACKET WDU LEFT	1
	8854 245-561	BRACKET WDU LEFT REAR	1
-	8854 245-294	STORAGE CASE CVTESS OSV-T	1

(*) The IS cable is specific for the training center. There is only one IS cable per kit.

CVTESS Transit Case Parts Names

Training Category/Level Utilized:

Weapons/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

Provides Force on Force training capability for OPFOR combat vehicles at the U.S. Army's Combat Training Centers (CTCs). The CVTESS accurately and in real time simulates the firing and the firing effect of the primary and secondary weapons on OPFOR combat vehicles. The system provides Real Time Casualty Assessment (RTCA), After Action Review (AAR) and works with Training Center Instrumentation.

Functional Description:

The CVTESS uses eye-safe laser transmitters, compatible with all other MILES training devices. The system simulates firing capabilities of the OSV-T using normal firing procedures. A laser firing code includes a Player ID for identification of other vehicles. Blank fire and pyrotechnic charges add realism to weapons. The system detects all opposing fire, identifies opposing weapons and Player ID, and determines the effect of incoming fire using an adjudication algorithm on the target vehicle, and it has a

Physical Information:

Fully Loaded OSV Variant Kit w/Transit Case:
36 inches x 36 inches x 12 inches; 90 lbs.

high-visibility Target Interface Module (TIM) that signals others that the vehicle has received incoming direct or indirect fire. The system stores 2000 events and can be downloaded for After Action Review (AAR).

Equipment Required, Not Supplied:

Opposing Forces Surrogate Tank Vehicles

Special Installation Requirements:

See OUM-17-6920-928-10

Power Requirements:

CVTESS will use vehicle power to run the Vehicle Interface Module or operate on internal power for 100 hours. It uses Ultimate Lithium AA batteries as well as CR2 Batteries.

Applicable Publications:

OUM-17-6920-928-10, (I-MILES), (CVTESS) Kit for Opposing Forces Vehicles

SMM 17-6920-928-24&P, (I-MILES), (CVTESS)

Reference Publications:

N/A

Training Requirements Supported:

ARTEPs Supported
7-15, 17-55, 71-2
MOSC 19K; 12 Series

HOME STATION INSTRUMENTATION TRAINING SYSTEM (HITS)

NSN 6920-01-608-8244
NSN 6920-01-608-8239
NSN 6920-01-608-8228
NSN 6920-01-609-1378
NSN 6920-01-609-1377
NSN 6920-01-609-1389
NSN 6920-01-615-0973

DVC 23-109/1 HITS Battalion Exercise Control (BN EXCON)
DVC 23-109/2 HITS Company Exercise Control (CO EXCON)
DVC 23-109/3 HITS Communications Network (CN)
DVC 23-109/4 HITS Dismount Instrumentation (DI)
DVC 23-109/5 HITS Vehicle Instrumentation (VI)
DVC 23-109/6 HITS Radio Receiver Transmitter (RRT)
DVC 23-109/7 HITS Exercise Control (EXCON)

**DVC 23-109/1****DVC 23-109/2****DVC 23-109/3****DVC 23-109/4****DVC 23-109/5****DVC 23-109/6****DVC 23-109/7**

Training Category/Level Utilized:

Weapons/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through the local TSCs at FT Bliss, FT Hood, FT Campbell, FT Drum, FT Stewart, FT Riley and Korea.

Purpose of Trainer:

The Home Station Instrumented Training System (HITS) provides mobile exercise control and audio/visual After Action Review (AAR) capability to support collective maneuver training for Battalion and smaller units. When used with instrumented MILES (I-MILES) the HITS tracks soldiers and vehicles, provides real-time casualty assessment, exhibits area weapon effects, captures radio transmissions, displays video, presents a multimedia AAR and uses automated scanning equipment for property accountability.

Functional Description:

The HITS is a training device that provides to U.S. Army units at their home stations many of the training enablers previously only available at the Maneuver Combat Training Centers. Operated by two civilian contractors, HITS is an integrated system of computer software and hardware; workstations; databases; voice, video, and data recording, production, and presentation equipment; interface devices; and radio networks. It provides the tools for the training unit's Observer/Controllers (O/C) to collect, analyze, and present training performance feedback to the training unit in a multi-media (AAR) and Take Home Package (THP). HITS is comprised of two subsystems, a data processing and presentation subsystem known as Exercise Control (EXCON), and an instrumentation communication subsystem known as the Communication Network (CN). The EXCON is an automated information system that assists in collecting, storing, analyzing, and presenting electronic, audio, and video training performance feedback. The EXCON has four Unit Kits, each of which can manage that portion of the exercise associated with a subunit (team, squad, section, platoon, company, etc.) The CN provides the bidirectional interface between the EXCON and vehicles and personnel equipped with Tactical Engagement Simulation Systems (TESS) such as instrumented MILES (I-MILES). The HITS consists of deployable components on trailers and in containers that can be assembled and transported to support field training exercises. TSCs are

authorized up to 295 HITS vehicle instrumentation kits interoperable with MILES XXI and WITS plus 867 HITS dismount instrumentation kits that are interoperable with instrumented IWS MILES. Using 2-D and 3-D electronic map displays, a Battalion EXCON can display data from up to 2000 HITS radio transmitters, while the Company EXCON can display data from up to 450 HITS radio transmitters.

Physical Information:

Battalion EXCON: Work stations, computer racks and AAR screen occupy a 32 feet by 5 feet floor area that can be divided.

Company EXCON: Computer racks and AAR screen occupy a 7 feet by 3 feet area.

EXCON: The EXCON is the 3.0 and later versions of the HITS EXCON and replaces both the Battalion and Company EXCONs with a containerized, more portable version of the EXCON.

Communications Network: Three trailers are usually deployed. Each trailer occupies a 15 feet by 18 feet ground area when the panels are open for operation. Maximum antenna height is 110 feet.

Equipment Required, Not Supplied:

a) Supplied by the training unit:

- * Instrumented MILES (MILES 2000, MILES XXI and MILES IWS) for all personnel and vehicles that will be tracked by HITS.

- * An Observer/Controller communication network (tactical radios or O/C communications system).

- * Shelter for the HITS EXCON operators and work stations.

b) Optional facilities, support and services that may be provided by the training unit to enhance HITS capabilities:

- * AAR Theater Screens. The HITS is capable of a two-screen presentation at a CACTF or similar facility.

- * Voice Tactical Monitoring (VTM). The training unit provides SINCGARS radios and sets the channels for the HITS VTM to access and record.

- * Video. The HITS EXCON provides a camcorder for O/C use to enhance the AAR.

Special Installation Requirements:

Installations have identified training land has been identified that provides approximately 90% radio frequency coverage over 400 square kilometers. HITS communications network set up takes 8 hours.

Power Requirements:

Two HITS diesel generators power the EXCON and accessories if AC electricity is not available. Each trailer in the Communications Network has a diesel generator that can be used if AC electricity is not available. Dismount Instrumentation battery life is approximately 96 hours before recharging is required. The Vehicle Instrumentation batteries are charged through I-MILES or vehicle power.

Applicable Publications:

HITS System User's Manual and Maintenance Manuals for Release 2.1 and 3.0, Web-based manuals located on the LT2 Portal at <https://www.lt2portal.org/>

OUM for the LT2 Interim Range System (IRS)

SSM for the LT2 Interim Range System (IRS)

Reference Publications:

ADP 3-0 Unified Land Operations
FM 7-0 Training for Full Spectrum Operations

Training Requirements Supported:

MOSC - HITS supports Table of Equipment (TOE) unit training requirements for active, and reserve component training at home station, and in limited OCONUS training sites worldwide. Training of unit and staff personnel will be accomplished by achieving or sustaining proficiency in individual and collective leader tasks using the HITS AAR, and scenario development capability.

MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM, INDIVIDUAL WEAPONS SYSTEM (MILES IWS) (V) 2, CODE 24 WEAPON SYSTEM KIT, INSTRUMENTABLE

**ODE 24 SAT****HALO****HARNESS**

Training Category/Level Utilized:
Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The purpose of this trainer is to replace Basic MILES and MILES 2000 systems at home-station and the Combat Training Centers (CTCs) due to age of technology and cost to maintain. The MILES Individual Weapons Systems (MILES IWS) communicate between the vest and Small Arms Transmitter (SAT); the use of a red laser, alignment knobs to align the SAT. Weight of the device is also reduced from earlier devices. The MILES IWS Code 24 kits are instrumentable for use in instrumented ranges. This device is a component of the (MILES IWS). MILES IWS is a family of training systems, which simulate the effects of direct-fire weapons at their operational ranges. MILES IWS is primarily used for force-on-force training from squad up to and include Brigade level.

Functional Description:

The MILES IWS Code 24 Kit is used with heavy weapon firing systems, employs eye-safe lasers and microelectronics to realistically simulate the firing capabilities of rifles, machine guns, and other direct-fire weapons. The laser firing SATs attach easily to conventional field weapons, allow ground troops to fired coded (to distinguish weapon type and player ID) laser signals. Soldier's fire blank ammunition, the —flash and

bang triggers the SAT. The receiving laser detectors determine, Hit, Near Miss, or Kill status of received fire. If Killed, the receiving target disables the system preventing the killed player from firing his/her weapon.

Physical Information:

The Manworn Harness consists of an infrared detector array attached to a vest that contains a sound transmitting device and a Harness Control Unit (HCU). The HCU has a local Radio Frequency (RF) transceiver that allows it to communicate to the Small Arms Transmitter (SAT). The HCU receives encoded messages from the detectors. The Halo consists of an electronic module and a set of infrared detectors mounted on a durable fabric. The Halo encircles the head providing 360 degrees coverage as a target. The Halo electronics receives encoded messages from the detectors and repeats the message to the Harness through embedded inductive loops. When the Harness is killed, the SAT is automatically disabled. The Small Arms Transmitter (SAT) is mounted on the Picatinny Rail or using a Universal Barrel Clamp of personnel and crew served weapons and transmits MILES Laser messages to a target, it communicates via IR to Soldier's harness or communicates Radio Frequency(RF) to TVS (Tactical Vehicle System). Transit case dimensions: 37.3" (L) x 35.3" (W) x 17.5" (H)

Equipment Required, Not Supplied:

MIRROR ALIGNMENT JIG KIT (MAJiK), NSN 6920-01-570-1797.

Special Installation Requirements:

None

Power Requirements:

SAT and Halo: ½ AA, 3.6v, lithium battery NSN: 6135-01-435-4921.
HCU: AA, 3.6v, lithium battery NSN: 6135-01-351-1131.

Applicable Publications:

OUM 23-6920-710-10 – (MILES), (IWS 2)

SMM 23-6920-710-24P (MILES), (IWS 2)

Reference Publications:

None

Training Requirements Supported:

MOSC: Combat Arms Series

MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM, INDIVIDUAL WEAPONS SYSTEM (MILES IWS) (V) 2, CODE 27 WEAPON SYSTEM KIT, INSTRUMENTABLE

**CODE 27 SAT****HALO****HARNESS**

Training Category/Level Utilized:
Combat Arms/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:

The purpose of this trainer is to replace Basic MILES and MILES 2000 systems at home-station and the Combat Training Centers (CTCs) due to age of technology and cost to maintain. The MILES Individual Weapons Systems (MILES IWS) communicate between the vest and Small Arms Transmitter (SAT); the use of a red laser, alignment knobs to align the SAT. Weight of the device is also reduced from earlier devices. The MILES IWS Code 27 kits are instrumentable for use in instrumented ranges. This device is a component of the (MILES IWS). MILES IWS is a family of training systems, which simulate the effects of direct-fire weapons at their operational ranges. MILES IWS is primarily used for force-on-force training from squad up to and include Brigade level.

Functional Description:

The MILES IWS Code 27 Kit is used with heavy weapon firing systems, employs eye-safe lasers and microelectronics to realistically simulate the firing capabilities of rifles, machine guns, and other direct-fire weapons. The laser firing SATs attach easily to conventional field weapons, allow ground troops to fired coded (to distinguish weapon type and player ID) laser signals. Soldier's fire blank ammunition, the —flash and

bang triggers the SAT. The receiving laser detectors determine, Hit, Near Miss, or Kill status of received fire. If Killed, the receiving target disables the system preventing the killed player from firing his/her weapon.

Physical Information:

The Manworn Harness consists of an infrared detector array attached to a vest that contains a sound transmitting device and a Harness Control Unit (HCU). The HCU has a local Radio Frequency (RF) transceiver that allows it to communicate to the Small Arms Transmitter (SAT). The HCU receives encoded messages from the detectors. The Halo consists of an electronic module and a set of infrared detectors mounted on a durable fabric. The Halo encircles the head providing 360 degrees coverage as a target. The Halo electronics receives encoded messages from the detectors and repeats the message to the Harness through embedded inductive loops. When the Harness is killed, the SAT is automatically disabled. The Small Arms Transmitter (SAT) is mounted on the Picatinny Rail or using a Universal Barrel Clamp of personnel and crew served weapons and transmits MILES Laser messages to a target, it communicates via IR to Soldier's harness or communicates Radio Frequency(RF) to TVS (Tactical Vehicle System). Transit case dimensions: 37.3" (L) x 35.3" (W) x 17.5" (H)

Equipment Required, Not Supplied:

MIRROR ALIGNMENT JIG KIT (MAJiK), NSN 6920-01-570-1797.

Special Installation Requirements:

None

Power Requirements:

SAT and Halo: ½ AA, 3.6v, lithium battery NSN: 6135-01-435-4921.

HCU: AA, 3.6v, lithium battery NSN: 6135-01-351-1131.

Applicable Publications:

OUM 23-6920-710-10, – (MILES), (IWS 2)

SMM 23-6920-710-24P, (MILES), (IWS 2)

Reference Publications:

None

Training Requirements Supported:

MOSC: Combat Arms Series

JOINT MULTINATIONAL READINESS CENTER (JMRC) MOBILE INSTRUMENTATION SYSTEM (MIS)

**Training Category/Level Utilized:**

Combined Arms/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through TSS ENTERPRISE
PM TRADE CTIS

Purpose of Trainer:

The MIS is based at the Joint Multinational Readiness Center (JMRC) in Hohenfels, Germany. The MIS is a mobile air, land, and sea deployable training system. The MIS has been developed iteratively starting with a core land deployable mobile system funded in FY 2003. From there an air deployable component was added under MIS Phase II, funded in late 2006. Phase III of the MIS project brought the system to Full Operational Capability (FOC) with Information Assurance (IA) certification and accreditation

Functional Description:

The MIS is comprised of a main site, and up to eight remote sites located in HMMWV mounted Remote Base

Station (RBS) communications shelters. The eight RBS shelters connect back to the main site via direct microwave, microwave-relay, or fiber optic cable, when available. Through these eight RBS shelters the MIS can instrument areas as large as 20x40 km depending on environmental and Line-of-Sight (LOS) constraints. The main site is housed in three Global Hawk electronics shelters, six Hard Sided Expandable Light Air Mobile Shelters (HELAMS) Training Analysis and Feed Back (TAF) shelters, a Dome-X AAR theater tent, and multiple 20 and 40 foot ISO shipping containers.

Physical Information:

The Main Site Power Distribution System is designed to provide clean 220V 50Hz power, a 106 Foot SRS Tower that can be rapidly deployed, and is a hydraulic self-supporting tower to hold critical communications equipment at the main site, HELAMS system containing six shelters that are inter-connected via a vestibule tent. The vestibule tent can be climate-controlled by three Environmental Control Units (ECUs) and allows personnel to interact between the HELAMS. Each HELAM houses up to 10 workstations, a printer, plasma display and Ethernet switch for TAF and EXCON work areas.

Equipment Required, Not Supplied:

MILES Tactical Engagement Simulation Systems.

Special Installation Requirements:

None

Power Requirements:

220/380V, 3PH, 50Hz in two 20-foot ISO shelters Cummins 250 KW generators, and a third ISO shelter called the Power Distribution Center (PDC). Three HELAMS require a 110V/60 Hz power source.

Applicable Publications:

HELAMS - TM 86075-171, *Operator's Manual GenSet*, DRS Mobile Environmental Systems, Redline

Communications. AN-80i PTP & PMP System User Manual, ETC.

Reference Publications:

Applicable (COTS) Manuals

Reassigned DVC was originally assigned as DVC 71-36.

Training Requirements Supported:

MOSC - Exercise planning tailored to the rotational training unit's mission, mission essential tasks, SOPs, and commander's requirements. Provide training performance feedback to the rotational training unit in the form of After Action Reviews (AAR) and unit Take Home Packages (THP).

TSS-ENTERPRISE TADSS INDEX AND CATALOG

**BASIC SERIES 30
MILITARY INTELLIGENCE**

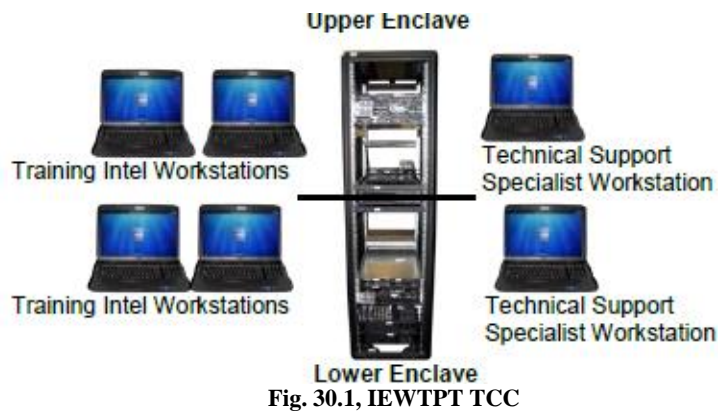


INTELLIGENCE AND ELECTRONIC WARFARE TACTICAL PROFICIENCY TRAINER (IEWTPT) TECHNICAL CONTROL CELL (TCC)

NSN 6930-01-647-9348
NSN 6930-01-647-9346
NSN 6930-01-660-1585
NSN 6930-01-667-8751
NSN 6930-01-667-8753

DVC 30-26/A
DVC 30-26/B
DVC 30-26/C
DVC 30-26/D
DVC 30-26/E

(IEWTPT), Upper Enclave (UE)
(IEWTPT), Lower Enclave (LE)
(IEWTPT), TCC Lower Enclave (LE), V2
(IEWTPT), TCC Upper Enclave (UE), V2
(IEWTPT), TCC Enclave Bridge (EB)



Training Category/Level Utilized:
Military Intelligence/Level 3

Logistic Responsible Command, Service, or Agency:
TSS ENTERPRISE

Source and Method of Obtaining:

The local Training Support Center (TSC) is responsible for the accountability of the IEWTPT TCC. Once the TCC is added to the property book, it is hand-receipted to the

using organization, either Mission Training Complex (MTC) or select Foundry sites.

Purpose of Trainer:

The IEWTPT TCC enables the Military Intelligence (MI) War-Fighter at home-station to support sustainment of critical individual and collective tasks/skills. It's the key enabler for Military Intelligence (MI) analyst/operator training and supports Signals Intelligence (SIGINT) All Source Intelligence, and Geospatial Intelligence (GEOINT) tasks. It enables individual and collective training.

Functional Description:

IEWTPT supports the US Army Intelligence Center of Excellence MI holistic training strategy and includes both stand-alone and network enabled training. It provides Warfighting Commanders at all echelons the ability to train the Intelligence Warfighting Function (IWfF) based on accurately portraying the operational environment, trains intelligence Warfighters by stimulating MI warfighting equipment where system operators and analysts are able to synchronize collection and co-relate products from their Intelligence, Surveillance, and Reconnaissance (ISR) assets to exploit exercise intelligence data and provide the commander with relevant, actionable, intelligence information. It provides proficiency training for analyst/system operators to exploit intelligence data during training just as they would in "Real World" operations. IEWTPT system provides dynamic training events (interactive environment for individual, collective, and mission rehearsals/exercises) in integrated (networked), playback, and standalone mode. It generates an After Action Review (AAR) of operator performance, crew performance, and battle-staff activities. It uses unclassified through classified data from the simulation/scenarios (up to the Top Secret Sensitive Compartmented Information (TS/SCI) level). It includes exercise scenario development tools, management tools, and an AAR capability.

(IEWTPT), Upper Enclave (UE) & (IEWTPT), Upper Enclave, V2 – Supports interfacing with a constructive simulation training environment and provides training capabilities at the Top Secret (TS)/Sensitive Compartmented Information (SCI) level.

(IEWTPT), Lower Enclave (LE) & (IEWTPT), LE, V2 – Supports interfacing with a constructive simulation training environment and provides training capabilities at the Secret level.

(IEWTPT), TCC Enclave Bridge (EB) - The EB provides and inter-domain one-way connection between the IEWTPT TCC LE Local LAN and the IEWTPT UE Local LAN for the US Army. The EB one-way connection allows data from IEWTPT TCC LE Local LAN to be presented to the US Army users on IEWTPT TCC UE Local LAN.

Physical Information:

The IEWTPT TCC can be installed at fixed sites. Portable configurations are also available.

Equipment Required, Not Supplied:

These items should be provided by the simulation center responsible for running exercises supported by IEWTPT. These items include:

Constructive Simulations:

Warfighters' Simulation (WARSIM)
Joint Conflict and Tactical Simulation (JCATS)
Combat Training Centers (CTC)
Joint Land Component Constructive Training Capability (JLCCTC)
Tactical Signature Arrays (TSAs)/System/Interface of Intelligence Platform:
Tactical Ground Station (TGS)
Prophet
Distributed Common Ground Station – Army (DCGS-A).
Tactical Ground Station (TGS)

Special Installation Requirements:

Legacy TCC configurations are fielded in a standard 42U rack configuration requiring approximately 12 square feet of floor space along with access to the front and back of the rack. The TCC can also be fielded as a SECRET enclave and separate TS/SCI enclave in two 21U half racks, each requiring approximately 12 square feet of floor space. At least three feet of separation is required between each enclave. Also needed is a safe connection to the LAN/wide area network to the constructive simulation driver and out to the local TSA locations is required. Doors should be 36" wide by 84" tall or larger for ease of movement of the TCC equipment. Approximately 20 square feet is required for storage area of spare parts.

Power Requirements:

The TCC system requires 120 Volts Alternating Current (AC) provided to each Uninterruptible Power Supply (UPS) system located in the server rack.

- Power for a single TCC System Rack requires two, 20 amp circuit drops, installed in the facility.
- 120V power receptacles are needed for up to 6 laptops, 6 monitors, and 2 printers.

Applicable Publications:

TCC Software Version Description (SVD) document
TCC (OUM)
TCC (SMM)

Reference Publications:

FM 2.0 Intelligence
Army Doctrine Reference Publication 2-0 Intelligence
Army Intelligence Training Strategy, December 2012

Training Requirements Supported:

MOSC 35F, Intelligence Analyst
MOSC 35G, Imagery Analyst
MOSC 35N, Signals Intelligence Analyst
MOSC 35P, Cryptologist Linguist

COUNTER RADIO (CONTROLLED IMPROVISED EXPLOSIVE DEVICE) ELECTRONIC WARFARE, INCREMENT 2 TRAINING DEVICE (CREW 2, 315 MHz)

NSN 6910-01-565-1383

DVC 30-30/1 Counter Radio (Controlled Improvised Explosive Device) Electronic Warfare, Increment 2 Training Device (CREW 2, 433MHz)

Primary Unit



Remote Control Unit



Training Category/Level Utilized:

Military Intel/Cyber Center of Excellence/Level 3

Logistic Responsible Command, Service, or Agency:

TSS ENTERPRISE, Orlando, FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

Provides realistic training in the use of current electronic countermeasures (ECM) equipment in respect to an adaptive threat and the potential impacts of radio frequency (RF) emitters on C2 systems equipment.

Functional Description:

DVC 30-30 provides a training simulator that looks, feels, and operates like the current ECM equipment fielded to operational units for protection against Radio-Controlled Improvised Explosive Devices (RCIED) with the exception that the (RF) environment and emissions will reside in a virtual environment so as best to recreate battlefield conditions.

Physical Information:

Unit Dimensions: 13" x 16" x 12.5",
Weight: 58.4 lb. with Mounting Tray.

Remote Control Unit Dimensions: 11" x 7.5" x 3.5",
Weight: 2.8 lb.

Equipment Required, Not Supplied:

Primary Unit and Remote Control Unit: Mounted with commercial fasteners.

Special Installation Requirements:

Primary Unit: Mounted within an "A" kit enclosure on vehicle.

Remote Control Unit: Mounted in right-front seat area of vehicle.

Power Requirements:

Primary and Remote Control Unit: 24V vehicle power.

Applicable Publications:

OUM 11-6920-703-10
SMM 11-6920-703-24&P

Reference Publications:

DVC 30-30 was previously assigned as DVC 11-122.
DVC 30-30/1 was previously assigned as DVC 11-122/1.

Training Requirements Supported:

Individual Training: Any MOSC with a mission requirement to operate a vehicle in an environment where the Radio Controlled Improvised Explosive Device threat is likely. Operators may also include military civilians and contractors.

COUNTERMEASURE INDICATOR UNIT (CIU)

NSN 6910-01-565-1360

DVC 30-32/1

Countermeasure Indicator Unit (CIU), 433 MHz



Training Category/Level Utilized:

Military Intel/Cyber Center of Excellence /Level 3

Logistic Responsible Command, Service, or Agency:

TSS ENTERPRISE, Orlando, FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The Countermeasure Indicator Unit (CIU) provides a 360 degree visual indication via a Light Emitting Diode (LED) indicator beacon to personnel within visual range of the CIU when operating in both day and night operations that an operational CREW 2 training device is within range of the CIU. The CIU is capable of receiving radio frequency from the CREW 2 training device across all four assigned frequencies.

Functional Description:

When the CIU is in normal mode operations (2) red LEDs within the indicator beacon will illuminate indicating an operating CREW 2 training device is NOT within operational range of the CIU. When the CIU is in tactical mode operations the red LEDs are not illuminated also indicating an operating CREW 2 training device is NOT within operational range of the CIU, and enabling a reduction of position awareness and saving CIU battery power. When an operating CREW 2 training device is within operational range of the CIU (2) green LEDs within the indicator beacon will illuminate indicating the CREW 2

training device is transmitting. The CIU is powered by a 12 volt rechargeable battery, and includes a 110/220 volt recharging pack capable of being housed within the CIU.

Physical Information:

Dimensions: 9-5/8" wide x 4-3/8" high x 7-1/2" deep
Weight: 6.436 lb.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

12 volt lead-acid rechargeable battery

Applicable Publications:

OUM 11-6920-704-10
SMM 11-6920-704-24&P

Reference Publications:

DVC 30-32 was previously assigned as DVC 11-124.
DVC 30-32/1 was previously assigned as DVC 11-124/1.

Training Requirements Supported:

Individual Training: Any MOSC with a mission requirement to operate in an environment where the Improvised Explosive Device threat is likely.

NSN 6910-01-569-0880

TSS-ENTERPRISE TADSS INDEX AND CATALOG

[DVC 30-34](#)

CREW VEHICLE RECEIVER/JAMMER (CVRJ) 315 MHz TRAINING DEVICE



RECEIVER / TRANSMITTER



REMOTE CONTROL UNIT (RCU)

Training Category/Level Utilized:

Military Intel/Cyber Center of Excellence/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

Provides realistic training in the use of current electronic countermeasures (ECM) equipment in respect to an adaptive threat and the potential impacts of radio frequency (RF) emitters on C2 systems equipment.

Functional Description:

The CVRJ trainer provides a training simulator that looks, feels, and operates like the current ECM equipment fielded to operational units for protection against Radio-Controlled Improvised Explosive Devices (RCIED) with the exception that the (RF) environment and emissions will reside in a virtual environment so as best to recreate battlefield conditions. This device operates at 315 MHz.

Physical Information:

Receiver / Transmitter Dimensions: 17.5" x 13.5" x 13.0" Weight: 24.0 lb.
Remote Control Unit Dimensions: 5.8" x 3.9" x 2.0"
Weight: 2.0 lb

Equipment Required, Not Supplied:

The Receiver / Transmitter Unit: Mounted with commercial fasteners.

Remote Control Unit: N/A

Special Installation Requirements:

Receiver / Transmitter: Mounted in right-rear area of the vehicle.

Remote Control Unit: N/A

Power Requirements:

Receiver / Transmitter and Remote Control Unit: 24V vehicle power

Applicable Publications:

OUM 11-6920-70610
SMM 11-6920-706-24 & P

Reference Publications:

DVC was previously assigned as 11-126.

Training Requirements Supported:

Individual Training: Any MOSC with a mission requirement to operate a vehicle in an environment where the Radio Controlled Improvised Explosive Device threat is likely. Operators may also include military civilians and contractors.

THOR III – TRAINER (THOR III-T), 315MHz

NSN 6910-01-596-3894

30-35/1

THOR III – Trainer (THOR III-T), 433MHz



THOR III-T System

Training Category/Level Utilized:

Military Intel/Cyber Center of Excellence/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The THOR III-T system is used to train soldiers in use of the actual THOR III system that is used to provide protection against Remote Controlled Improvised Explosive Devices (RCIEDs).

Functional Description:

The THOR III-Trainer (THOR III-T) is a dismantled three-backpack system that replicates the operational system by providing full functionality of all trainer switches, indicators, and procedures which provides a training simulator that looks, feels and operates like the equipment fielded to operational units. When operated correctly the trainer interrupts radio frequency bands that

can be used by other IED simulator trainers. The trainer provides appropriate devices to train users to employ CREW 3.1 electronic countermeasure (ECM) equipment in response to a simulated adaptive threat.

Physical Information:

Overall Dimensions and Weight:

Height – 29.46 IN

Width – 22.87 IN

Depth – 38.57 IN

Weight – 157 lbs

Basic System Weight – 26 lbs

The THOR III-T system is comprised of a three unit suite. There are three Receiver Transmitter (RT) units in a suite which allows for low, mid, and high band coverage. Maximum protection is achieved when all three units are used as a suite.

Each THOR III-T system contains the following equipment:

- RECEIVER TRANSMITTER, THOR III (Low Band) Qty 1
- RECEIVER TRANSMITTER, THOR III (Mid Band) Qty 1

Physical Information cont.:

- RECEIVER TRANSMITTER, THOR III (High Band) Qty 1
- REMOTE CONTROL UNIT ASSY Qty 3
- ANTENNA, LOW BAND Qty 1
- ANTENNA, MID BAND Qty 1
- ANTENNA, HIGH BAND Qty 1
- BATTERY, RECHARGEABLE Qty 6
- RCU INTERFACE CABLE ASSEMBLY Qty 3
- GLOBAL POSITION SYSTEM (GPS) ANTENNA Qty 3
- BATTERY CHARGER ASSEMBLY Qty 6
- OPERATION AND MAINTENANCE MANUAL CD Qty 1
- POCKET GUIDE Qty 3
- TRANSIT CASE Qty 1

There are three antennas with the THOR III-T system. Each antenna connects to a specific Receiver Transmitter (RT), and is distinguishable by the notches on the base of the antenna. One notch for low, two notches for mid, and three notches for high. The antennas mounts on the RTs are also notched accordingly to ensure the correct RT and antennas are used together.

Equipment Required, Not Supplied:

A CREW2 Training Device (CF30) Toughbook is required for event log download from the THOR III-T. The CF30s were provided to local TSCs with the CREW2 Training Device fielding.

Special Installation Requirements:

None

Power Requirements:

The THOR III-T uses two custom rechargeable SLA 12V batteries. Each battery has a connector that plugs into the battery module of the transceiver. The battery module is attached to the integrate pack frame located below the transceiver. The batteries have six-pin circular connectors, and are not interchangeable with the operational device batteries. Six batteries are provided for a system, two per unit, along with six battery chargers. The battery charger plugs into a power outlet and is used with input voltages of 110-240 VAC, 50 or 60Hz.

Applicable Publications:

OUM 30-6910-701-10

Reference Publications:

None

Training Requirements Supported:

Individual Training: Any MOSC with a mission requirement to operate in an environment where the Radio Controlled Improvised Explosive Device threat is likely.

THOR III TRAINER (2) (THOR III T-2) 315 MHz, KIT



(THOR III-T-2) System

Training Category/Level Utilized:

Military Intel/Cyber Center of Excellence/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The THOR III-T system is used to train soldiers in use of the actual THOR III system that is used to provide protection against Remote Controlled Improvised Explosive Devices (RCIEDs).

Functional Description:

The THOR III-Trainer (THOR III-T) is a dismantled three-backpack system that replicates the operational system by providing full functionality of all trainer switches, indicators, and procedures which provides a training simulator that looks, feels and operates like the equipment fielded to operational units. When operated

correctly the trainer interrupts radio frequency bands that can be used by other IED simulator trainers. The trainer provides appropriate devices to train users to employ CREW 3.1 electronic countermeasure (ECM) equipment in response to a simulated adaptive threat.

Physical Information:

Overall Dimensions and Weight:

Height – 29.46 IN

Width – 22.87 IN

Depth – 38.57 IN

Weight – 157 lbs

Basic System Weight – 26 lbs

The THOR III-T system is comprised of a three unit suite. There are three Receiver Transmitter (RT) units in a suite which allows for low, mid, and high band coverage. Maximum protection is achieved when all three units are used as a suite.

Each THOR III-T system contains the following equipment:

Physical Information cont.:

RECEIVER TRANSMITTER, THOR III (Low Band)
Qty. 1
RECEIVER TRANSMITTER, THOR III (Mid Band)
Qty. 1
RECEIVER TRANSMITTER, THOR III (High Band)
Qty. 1

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

Two Sealed Lead Acid (SLA) Rechargeable batteries
provided with the KIT

Applicable Publications:

OUM 11-5865-1085-10
SMM 11-5865-1085-23&P

Reference Publications:

None

Training Requirements Supported:

Individual Training: Any MOS with a mission
requirement to operate a vehicle in an environment where
the (RCIEDs) threat is likely

DISTRIBUTIVE COMMON GROUND SYSTEM-ARMY (DCGS-A) TRAINER SUITES



(DCGS-A) Trainer Suites

Training Category/Level Utilized:

Military Intelligence/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Fielded only in Fort Huachuca

Purpose of Trainer:

The DCGS-A Trainer Suites replicates the various DCGS-A operational configurations (CO to DIV) within the classroom environment. It can be configured as a MICO Intel Section, E-MIB Single Source section, or other Processing, Exploitation, and Dissemination (PED) element.

Functional Description:

The overarching architecture is specially designed to enable multiple configurations and broad access by the training audiences with differing training objectives associated with unique MOS skill-sets. DCGS-A Trainer Suites student workstation configurations may be Zero Client or Thick Client, based on required processing power.

All systems on NIPR, SIPR, JWICS and NSA networks function the same way.

Physical Information:

331 reconfigurable suites/classrooms, 9511 positions, and 18315 workstations that can be adjusted from 17 to 72 positions as needed to support the MOS/student load.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

AC current

Applicable Publications:

None

Reference Publications:

None

Training Requirements Supported:

All Military Intelligence Occupational Specialties

DISTRIBUTIVE COMMON GROUND SYSTEM-ARMY (DCGS-A) INTELLIGENCE ANALYSTE (35F) TRAINER SUITES

**Training Category/Level Utilized:**

Military Intelligence/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Fielded only in Fort Huachuca

Purpose of Trainer:

The DCGS-A Trainer pod replicates the various DCGS-A operational configurations (CO to DIV) within the classroom environment. For the class environment, the classroom Zero Client or Thick Client systems are configured per individual pod. A pod is considered ten virtual Portable Multi-function Workstation (P-MFWS) terminals specific for student use, arranged in two rows of five, with each row facing the other. One end of the pod is aligned within one inch of the classroom wall. At the end of the student rows, the instructor P-MFWS station acts as a cap to the row, facing towards a wall. The instructor's Zero or Thick Client is connected to a multimedia terminal that replicates the instructor's computer display on a large monitor facing towards the instructor. The monitors are at minimum 55" screens in measurement and physically mounted to the wall in a landscape configuration. All desks used in pods allow the placement of the computer monitor under the desk, visible through glass to prevent visual impairments.

Functional Description:

Classrooms consist of three pod configurations, with each pod orientation changing to interweave the pods through the classroom against different walls. Only two pods will align to the same wall, the first and last pods in the classroom. Horizontal or vertical configuration would depend on individual classroom orientation. The use of pods allows the class to replicate a MICO Intel Section, E-MIB Single Source section, or other Processing, Exploitation, and Dissemination (PED) element.

Physical Information:

331 reconfigurable suites/classrooms, 9511 positions, and 18315 workstations that can be adjusted from 17 to 72 positions as needed to support the MOS/student load.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

AC current

Applicable Publications:

None

Reference Publications:

None

Training Requirements Supported:

Military Intelligence Analyst (35F)

OPERATOR PROCEDURAL TRAINER (OPT)



(OPT)

Training Category/Level Utilized:

Military Intelligence/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Only available for the ICoE

Purpose of Trainer:

The Operator Procedural Trainer (OPT) is a system training device that supports the training of Aerial Intelligence Surveillance Reconnaissance GEOINT Payload Operator Course. Students will gain the necessary skills and knowledge required to operate the aerial sensors on an EMARSS aircraft and provide intelligence in support of the full spectrum of military operations. Students will learn to operate the MX-15D camera along with other sensors during both the ground and air portion of this course.

Functional Description:

OPT serves as a training platform for the development of Airborne Sensor Operator (ASO) skills. The OPT contains two (2) Student Operator Workstations that simulate the geometry and ergonomics of the actual ASO workstations on the aircraft. The OPT Student Operator Workstations have integrated tactical hardware and software from the aircraft to train system familiarization, mission tasks, communications, and troubleshooting procedures. The OPT contains one (1) Instructor Station to initiate training scenarios, inject errors for troubleshooting, and simulate

interactions with other mission actors. The OPT also contains two (2) Communication Stations that are used for injecting voice and chat communications into the training scenarios.

Physical Information:

Student Workstations: Height: 53", Width: 36", Depth: 55"

Instructor Stations / Communication Stations: Desktop PC

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

120vac, 60 Hz

Applicable Publications:

Operator Procedural Trainer Instructor Manual
Operator Procedural Trainer Scenario Guide

Reference Publications:

SNC Manual: OE-05-14-0033-10, Orion-E System Operator Manual.
MetaVR Manual: Virtual Reality Scene Generator (VRSG) Version 5.11 User's Guide.

Training Requirements Supported:

MOSC 35G

TACTICAL GROUND STATION (TGS) GEOSPATIAL INTELLIGENCE (GEOINT) (TGT) TRAINER



(TGS)



(GEOINT) Classroom Stations

Training Category/Level Utilized:

Military Intelligence/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not available. Only fielded at Fort Huachuca

Purpose of Trainer:

GEOINT Trainer (TGT)) is the systems training device for the Tactical Ground Station (TGS) for the Geospatial Intelligence (GEOINT) Imagery Analyst course at the Intelligence Center of Excellence (ICoE).

Functional Description:

The TGT is used to provide GEOINT training to Students in support to unified land operations. The DSSE allows Student training on the exploitation of imagery from all types of imaging sensors and platforms, to include Infrared, Multi Spectral, Synthetic Aperture, Hyper Spectral and Motion Imagery as well as Moving Target Indicator, and geospatial data. Students learn to identify, analyze and report on conventional and unconventional military activity, installations, weapons systems, orders of battle, defenses, lines of communications, and to perform physical battle damage assessments

Physical Information:

20 student stations and 1 Instructor station. Standard Classroom 30' x 30', with the standard 4 rack floor space 96 square feet (8' x 12')

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

AC current. The TGS TGT system consist of TGS components mounted in 4 racks, 4 portable multifunctional workstations (MFWS), and 1 GBS terminal laptop. It requires five (5) dedicated 120 volt / 20 amp circuits/60 cycle. Providing a maximum of 3400 watts per circuit with a three (3) duplex (2-plug) outlets and two (2) quad (4-plug) outlets.

Applicable Publications:

None

Reference Publications:

None

Training Requirements Supported:

MOSC 35G

TACTICAL GROUND STATION (TGS) MAINTENANCE TRAINER (TMT)



(TGS)



(TMT) Classroom Stations

Training Category/Level Utilized:

Military Intelligence/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not available

Purpose of Trainer:

The Tactical Ground Station Maintenance Trainer (TMT) is the systems training device for the Tactical Ground Station (TGS) Military Systems Maintainer/Integrator course at the Intelligence Center of Excellence (ICoE).

Functional Description:

The TMT allows entry level Students to perform entry level maintenance tasks associated with the Tactical Ground Station (TGS). Soldiers are introduced to, advanced concept and troubleshooting theory which includes basic and advanced computer concepts using the Army's advanced IEW systems. This includes basic analog and digital electronics; communications theory (antennas, receivers and transmitters) microwave/satellite communications, fiber optic cable construction, installation and repair; computer architecture (standalone/work station computer hardware, routers, and switches) computer system administrator and computer operating systems fundamentals; computer network

operations/troubleshooting; theory of operation and troubleshooting techniques for Imagery Analysis systems.

Physical Information:

Standard Classroom 30' x 30', with the standard 4 rack floor space 96 square feet (8' x 12')

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

AC current. AC current. The TGS TMT system consist of TGS components mounted in 4 racks, 4 portable multifunctional workstations (MFWS), and 1 GBS terminal laptop. It requires five (5) dedicated 120 volt / 20 amp circuits/60 cycle. Providing a maximum of 3400 watts per circuit with a three (3) duplex (2-plug) outlets and two (2) quad (4-plug) outlets.

Applicable Publications:

None

Reference Publications:

None

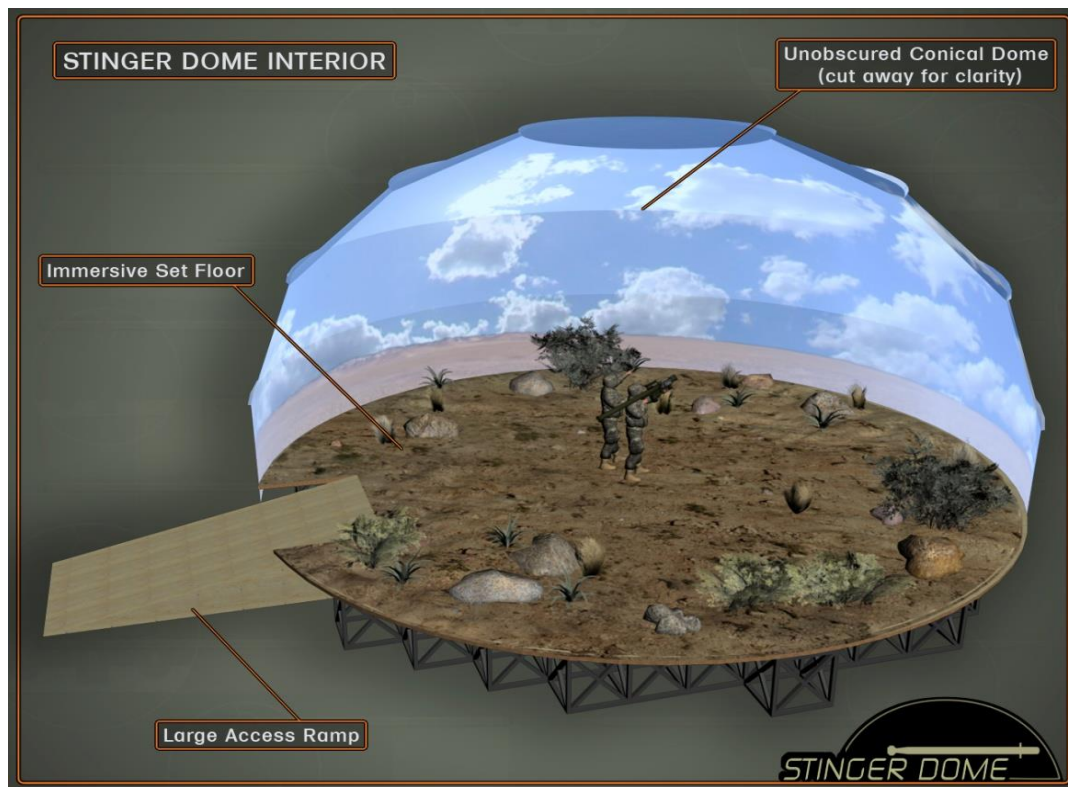
Training Requirements Supported:

MOSC 35T

**BASIC SERIES 44
AIR DEFENSE ARTILLERY**



IMPROVED MOVING TARGET SIMULATOR (IMTS) 2010 UPGRADE

**Training Category/Level Utilized:**

Air Defense/Level 1

Logistic Responsible Command, Service, or Agency:

TSS ENTERPRISE, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

The Improved Moving Target Simulator (IMTS) Upgrade program incorporates the latest technology to train the Stinger team in the techniques and skills required for successful operation of the Stinger Man Portable Air Defense System (MANPADS) used to train two MANPADS teams individually or simultaneously, to identify, acquire and track airborne targets and launch Stinger missiles.

Functional Description:

The IMTS training system consists of a 360 degree, 36 foot diameter hemispherical dome, an instructor/Operator Station, Computer Image Generator capable of projecting simulated scene, weather, clouds, aircraft (with Countermeasures), IFF, 8 background environments.

Physical Information:

36-foot diameter hemispherical screen Instructor console

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Suitable building or structure

Power Requirements:

110 vac 60 Hz

Applicable Publications:

FM 44-18-1

Reference Publications:

FM 44-18-1

TM 9-1425-429-12

FM 3-01.80

TM 9-6920-429-12

MCN: 6920-01-T00-1717

Training Requirements Supported:

MOSC 14S

STINGER TROOP PROFICIENCY TRAINER (STPT)



(STPT) Instructor Interface Unit



(STPT) Desktop Setup

Training Category/Level Utilized:
Air Defense/Level 3

Source and Method of Obtaining:
Available through local TSC.

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Purpose of Trainer:
To provide realistic training in the tactics and use of the Stinger weapon system.

Functional Description:

The STPT is a training device that uses computer generated graphics and sound to provide realistic background and targets for the purpose of training gunners in target identification, tactics and firing procedures used with the Stinger weapons. The trainer is configured with 20 preplanned scenarios using various aircraft and terrains. The instructor can determine the scenarios to be used by specifying selected targets, terrain, target speed, flight path, distance and disturbances. The instructor has the ability to start/stop a scenario at any time and can also freeze the action and critique the student at any time. The instructor can communicate with the student and a third party by the use of headsets provided with the trainer. After completion of a scenario the instructor can replay the mission and critique the gunners on their performance. A permanent record can be generated from the trainer's database showing the scenarios performed and the gunner's score.

The trainer consists of three assemblies. Unit 1 contains the monitor assembly and Unit 2 contains the computer assembly. Together they make up the instructor station that is used to run the scenarios and evaluate the gunner. They are each housed in a separate ruggedized container that also serves as their shipping containers. The instructor station also contains the communication hook-up for the headsets used by the instructor, gunner and observer. Unit 3 is an interface unit that attaches the weapon to the instructor station. The interface unit for the Stinger is a mock-up of the weapon on which a monitor is mounted for the sight picture and gyros are used to sense the gunner's movements and to detect the weapons position. The controls and functions of the surrogate Stinger are the same as those on the actual weapon. The weapons weight and center of gravity are maintained to provide the actual feel of the weapon in the field.

Physical Information:

Number of pieces: 3

Unit 1: 28" H x 27 1/2" D x 26 14/16" W; 125.7 lb

Unit 2: 28" H x 27 1/2" D x 26 14/16" W; 255.7 lb

Unit 3: 14 3/8" H x 59 13/16" D x 19 1/2" W; 34.5 lb

Total System Weight: 315.9 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

115vac, 50/60 Hz

220vac, 50/60 Hz

24vdc

Applicable Publications:

Stinger Instructor/OUM 44-6920-702-10

SSM 44-6920-703-24

Reference Publications:

FM 44-18-1

Training Requirements Supported:

MOSC 16S

STINGER TROOP PROFICIENCY TRAINER (STPT) (IMPROVED)



Monitor/Keyboard Case & MANPADS

Training Category/Level Utilized:

Air Defense/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC.

Purpose of Trainer:

The Stinger Troop Proficiency Trainer (STPT) is an engagement skills trainer for the US man-portable, shoulder-fired infrared radiation (IR), home (heat seeking), guided missile systems known as MANPADS. The legacy system can be found under NSN 6920-01-283-5015. Utilizing the latest commercially available hardware and software, the STPT provides a state of the art, reliable, effective, low cost training solution for Stinger firing procedures under battle conditions. Providing interactive three-dimensional (3D) simulations of tactical engagement sequences, the device delivers the gunners with the basic technical skills required to successfully engage targets with the Stinger weapon system.



Instructor and Student Stations

Functional Description:

There are 2 main components of the STPT's hardware, an Instructor Station and a Student Station. The Instructor Station is a ruggedized personal computer, running on Windows 2000 that drives the student station. The Student Station hardware replicates Stinger weapon with a simulated terrain scene that reacts to the operation and orientation of the launch tube.

Instructor Station: During exercise sessions, various combinations of targets are presented that follow pre-set routes across the terrain. The gunner observes and tracks the targets through the Sight Assembly and performs a variety of tasks to engage those targets, as determined by the particular requirements of each exercise. The system evaluates the trainee throughout the whole firing procedure. The Instructor Station automatically scores certain aspects of gunner performance (tracking score, hit/miss, etc.), while the instructor scores other aspects manually (scanning the sector, target prioritization, etc.). As part of the after action report, the computer will note incorrect actions performed by the trainee, so examples are: fired at a friendly target; failed to properly super elevate; failed to hold fire trigger for 3 seconds; failed to remove the BCU after firing; failed to IFF target before engagement.

Student Station: The size, weight and feel of the STPT system is closely replicated with the real Stinger missile system. The system is designed to be disassembled for ease of storage without the need of hand tools (See Figure 6). The STPT housing is made primarily out of aluminum and was designed to withstand the hazards of frequent transport and field use.

The display used to represent the terrain scene is a high-resolution color LCD display in a ruggedized custom enclosure. The virtual horizon is an actual photograph of real locations utilizing stereoscopic imaging to create depth perception while maintaining real-time feedback to the gunner's inputs from his position in the battlefield. The operator can traverse 180 degrees, viewing the virtual battlefield.

Physical Information:

Instructor Station: 16" W, 11" H, 9" D, 40 lbs
Student Station: 64" W, 14" H, 22.5" D, 38 lbs
Transit Case (Instructor): 25" W, 19" H, 17" D, 50 lbs
Transit Case (Student): 52" W, 28" H, 24" D, 93 lbs

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

115vac, 50/60 Hz
220vac, 50/60 Hz

Applicable Publications:

Stinger Instructor/OUM 44-6920-702-10
SSM 44-6920-703-24

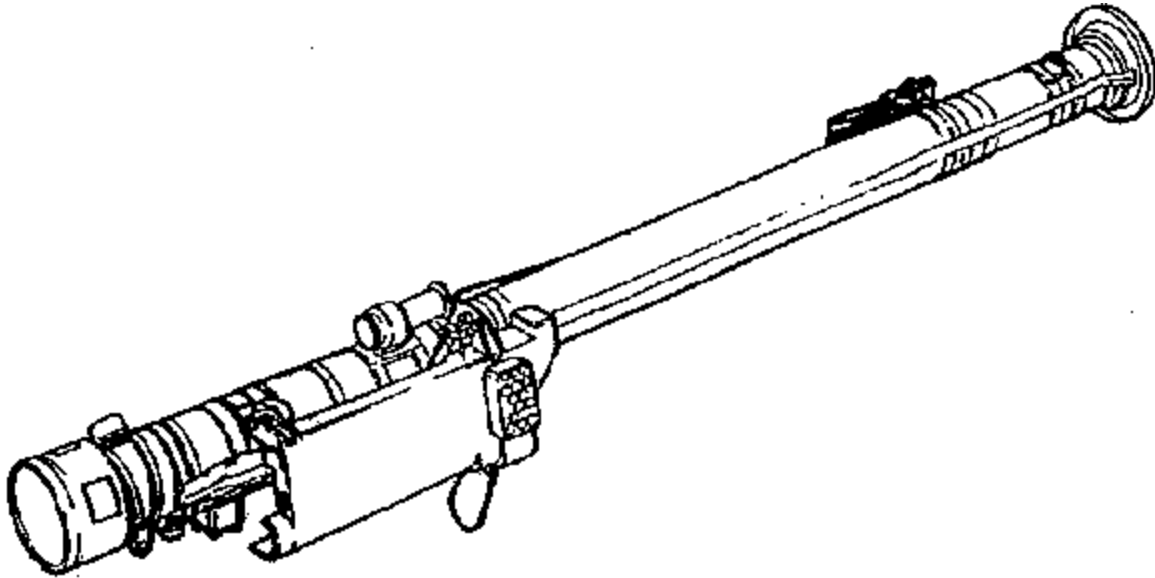
Reference Publications:

FM 44-18-1
MCN: 6920-01-C91-4775

Training Requirements Supported:

MOSC 16S

AVENGER CAPTIVE FLIGHT TRAINER (CFT)

**Training Category/Level Utilized:**

Air Defense/Platoon/Level 1

Logistic Responsible Command, Service, or**Agency:**

AMCOM

Source and Method of Obtaining:

If a requirement exists, NICP at (AMCOM)

Purpose of Trainer:

To train in the techniques of acquiring tracking and engaging targets with the AVENGER, ATAS and LINEBACKER Weapon Systems.

Functional Description:

A simulated weapon with the same appearance as the tactical round with electrical components necessary to provide the trainer with the same audio/visual indications as the tactical weapon for the purpose of acquiring and tracking a target.

Physical Information:

In storage container:

Weight: 76 pounds

Length: 66 inches

Width: 13.5 inches

Height: 13.2 inches

Unpacked/Ready for Training:

Weight: 23 pounds

Length: 60 inches

Equipment Required, Not Supplied:

AVENGER, ATAS or LINEBACKER Weapon System

Argon Gas Bottles (usually supplied with weapon system)

Argon Gas

Special Installation Requirements:

None

Power Requirements:

Powered by the Weapon System

Applicable Publications:

TM 9-6920-429-12

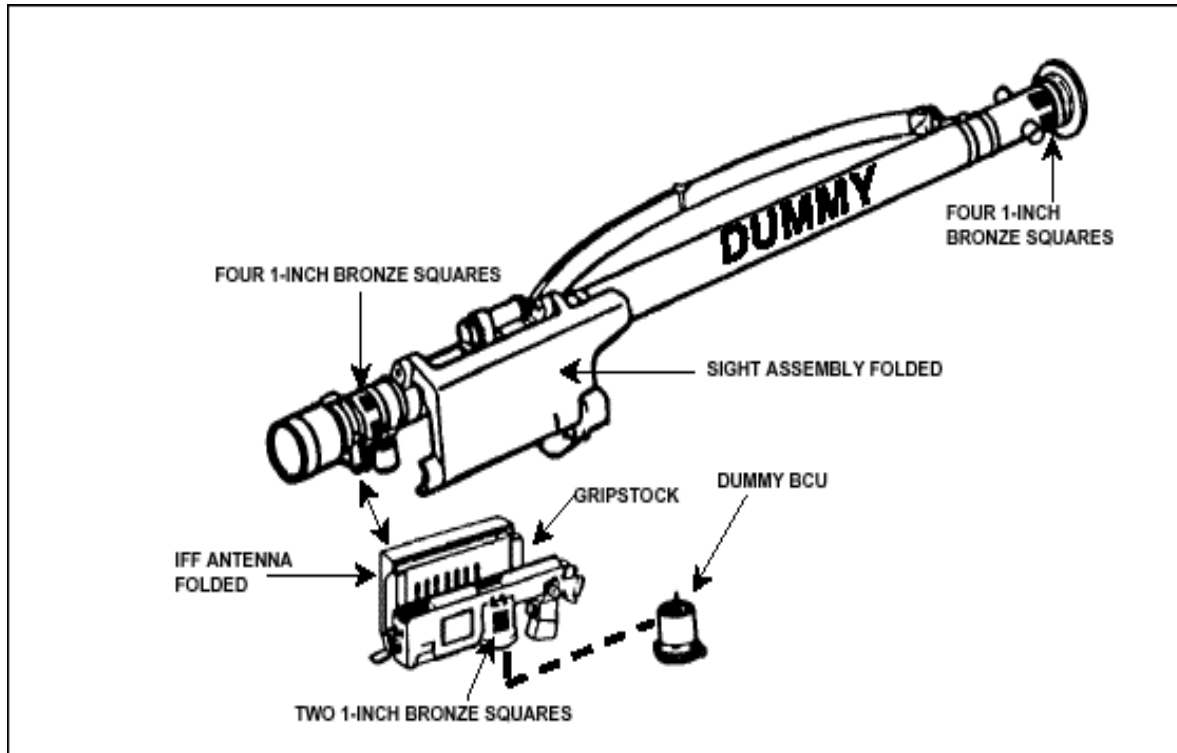
Reference Publications:

TM 9-1440-431-23P

Training Requirements Supported:

MOSC 16 Series

STINGER FIELD HANDLING TRAINER (FHT)

**Training Category/Level Utilized:**

Air Defense/Team or Squad /Level 1

Logistic Responsible Command, Service, or Agency:

AMCOM

Source and Method of Obtaining:

If Requirement Exists, NICP at AMCOM

Purpose of Trainer:

To provide practice in the basic skills of Weapon Handling to Include Reaction Times, Sighting and Ranging.

Functional Description:

A Dummy Missile Round, a Dummy Separable Grip stock, a Dummy IFF Interrogator Belt pack with interconnecting Cables, and a Dummy Battery Coolant Unit (BCU).

Physical Information:

In storage container:

Weight: 100 pounds

Length: 66 inches

Width: 13.5 inches

Height: 18 inches

Unpacked/Ready for Training:

Weight: 36.1 pounds

Length: 59.5 inches

Equipment Required, Not Supplied:

MANPADS None

ATAS, AVENGER, and LINEBACKER Weapon System

ARGON Gas

Special Installation Requirements:

None

Power Requirements:

None

Applicable Publications:

TM 9-1425-429-12

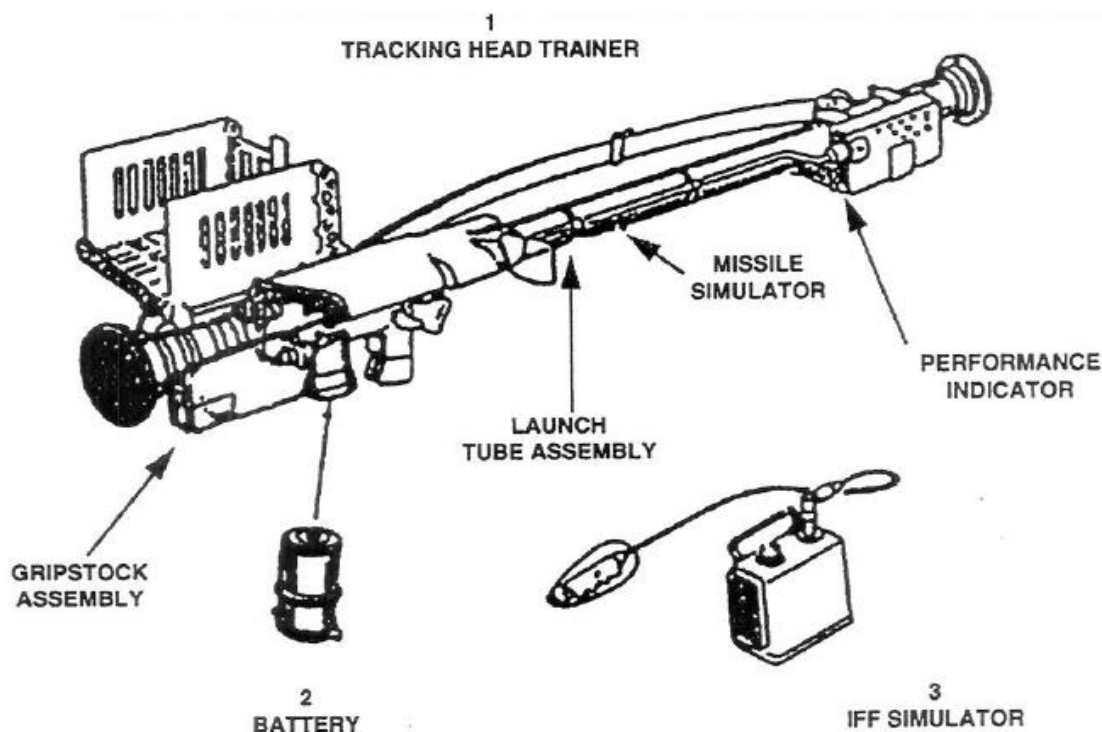
Reference Publications:

TM 9-1425-429-24P

Training Requirements Supported:

MOSC 16 Series

STINGER TRACKING HEAD TRAINER SET (THT)

**Training Category/Level Utilized:**

Air Defense/Team or Squad

Logistic Responsible Command, Service, or Agency:

AMCOM

Source and Method of Obtaining:

If Requirement Exists, NICP at AMCOM.

Purpose of Trainer:

To train in the techniques of acquiring, tracking, and engaging targets in the MANPADS mode.

Functional Description:

A simulated weapon with the same appearance as the tactical round with electrical components necessary to provide the trainer with the same audio/visual indications as the tactical weapon.

Physical Information:

In Storage Container:

Weight: 123 pounds

Length: 66 inches

Width: 13.5 inches

Height: 13.2 inches

Unpacked/Ready for Training:

Weight: 37 pounds

Length: 60 inches

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

None

Power Requirements:

Trainer Battery (6920-01-186-0517)

Argon Gas

Applicable Publications:

TM 9-6920-429-12

Reference Publications:

TM 9-1425-429-24P

Training Requirements Supported:

MOSC 16 Series

PATRIOT MISSILE ROUND TRAINER (MRT) PAC 2 - WEIGHTED

**Training Category/Level Utilized:**

Air Defense Artillery/Level 3

Logistic Responsible Command, Service, or Agency:

AMCOM

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

The PAC-2 Missile Round Trainer (MRT) is used at the institution and unit to teach PATRIOT missile crewmembers handling, loading, and electrical checks without using a ready round. There are two variations of MRTs to represent the two types of Missiles used for PATRIOT; the PATRIOT Advanced Capability-2 (PAC-2), and PAC-3. The PAC-2 MRTs are fielded at the Fires Center of Excellence FCoE at Fort Sill, OK and in the PATRIOT tactical units around the world.

Functional Description:

PAC-2 MRTs are full-scale training only devices that simulate the pre-launch electrical continuity and duplicate the external physical features and handling characteristics

of the tactical PATRIOT PAC-2 Guided Missile canisters. MRTs contain a ballast and missile simulator assembly.

Physical Information:

The ballast simulates a full-up PAC-2 missile with exact weight and center of gravity.

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

(Information not available)

Applicable Publications:

TM 9-1410-600-14

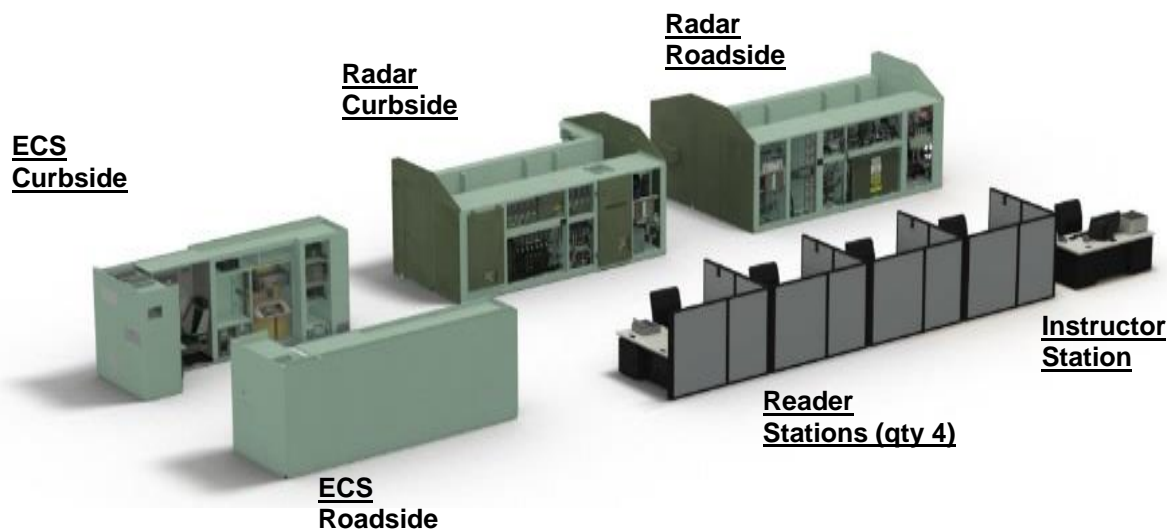
Reference Publications:

None

Training Requirements Supported:

MOSC 14 Series

PATRIOT ORGANIZATIONAL MAINTENANCE TRAINER (POMT)

**Training Category/Level Utilized:**

Air Defense Artillery/Level 3

Logistic Responsible Command, Service, or Agency:

AMCOM

Source and Method of Obtaining:

(Information not available)

Purpose of Trainer:

The POMT training device provides the capability to simultaneously train fourteen, two man PATRIOT operator/maintainer teams in the maintenance of the PATRIOT ECS and radar in a school environment.

Functional Description:

POMPT training is accomplished at the system and part tasks levels using display aided maintenance (DAM) and non-DAM procedures. Tasks include fault locate, remove and replace (R&R), calibrate, adjust, operate and test.

The POMT assemblies are simulations of the tactical assemblies, which are either actively or passively simulated. Active assemblies are active to the extent necessary to perform the maintenance task. Active assemblies may contain switches, lamps, alphanumeric displays, keyboards and loop back sensing connections. Passive assemblies are simulators designed for fidelity reasons only. There are two tactical RF oscillators in the POMT system. There are no tactical circuit card assemblies in the POMT. The POMT systems use

commercial computer workstations along with a local area network and a VME interface rack/modules to control and process training and maintenance activities.

The POMT is separated into three major sections: The Active Maintenance Training Simulator (AMTS), Part Task Trainer (PTT) and ECS Curbside (ECSCS) stand-alone.

The POMT AMTS consists of an ECS curbside shelter, an ECS roadside shelter, a radar curbside interior/exterior shelter and a radar roadside interior/exterior shelter. The AMTS provides system training on the ECS and radar. Several hardware items are duplicated in non-tactical positions to enhance training capabilities.

The POMT ECSCS consists of two ECS curbside shelters that duplicate the hardware and training capabilities of the AMTS ECS curbside.

The POMT PTT consists of an ECS Display and Control Console Simulator (DCCS) and a radar Final Modulator Simulator (FMS). In addition, the PATRIOT System Maintenance Trainer (PSMT) student scenarios utilize PTT hardware.

Physical Information:

(Information not available)

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

N/A

Power Requirements:

(Information not available)

Applicable Publications:

(Information not available)

Reference Publications:MI-CP1503761F, POMT Prime Item Development
Specification.

BR 22816-1, POMT 1 and 2 AMTS OUM

BR 22816-2, POMT 1 and 2 AMTS SMM

BR 22816-3, POMT 1 and 2 AMTS RPSTL

BR 22816-4, POMT 1 and 2 PTT OUM

BR 22816-5, POMT 1 and 2 PTT SMM

BR 22816-6, POMT 1 and 2 PTT RPSTL

BR 22816-7, POMT 1 and 2 ECSCS OUM

BR 22816-8, POMT 1 and 2 ECSCS SMMI

BR 22816-9, POMT 1 and 2 ECSCS RPSTL

MCN: 6920-01-C91-4772**Training Requirements Supported:**MOSC 14E

RADAR SET MARCH ORDER AND EMPLACEMENT (RSMO&E) TRAINER

**Training Category/Level Utilized:**

Air Defense Artillery/Level 3

Logistic Responsible Command, Service, or Agency:

AMCOM

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

To train Patriot missile crew members, Patriot operators and system mechanics, Patriot system maintenance technicians, and Patriot and Air Defense Commissioned officers in March order and emplacement (MO&E) tasks. All MO&E tasks will be trained using a training device instead of a tactical system. This reduces the Patriot radar set requirement for MO&E tasks by 223 hours.

Functional Description:

RSMO&E trainer is a mockup of the PATRIOT radar set physical characteristics as applied to march order and emplacement tasks. The trainer consists of a radar set trailer

with outriggers, electrical power, a rotating platform with antenna face, and shelter.

Physical Information:

(Information not available)

Equipment Required, Not Supplied:

(Information not available)

Special Installation Requirements:

(Information not available)

Power Requirements:

(Information not available)

Applicable Publications:

(Information not available)

Reference Publications:

(Information not available)

MCN Assigned: 6920-01-C91-4774

Training Requirements Supported:

Supports MOSCs 14E and 140E training.

AVENGER INSTITUTIONAL CONDUCT OF FIRE TRAINER (I-COFT)

**Training Category/Level Utilized:**

Air Defense/Artillery

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

The Avenger Institutional Conduct of Fire Trainer (ICOFT) consists of instructor and student stations. The system is capable of training in individual or unit mode without any physical changes. Monitors duplicate the Student Station FLIR display. A Scenario Generation tool is inside the instructor station. Student Stations simulate the tactical Avenger turret interior, supporting hardware/software components, and physically and functionally simulates the physical components.

Functional Description:

The system enables an instructor to create exercises from the Instructor Station; enables a student in the Student Station to perform the mental and physical activities required during search and engagement missions; and provides dynamic and hard copy graphical displays to facilitate Scenario Generation by approved operator personnel. An upgrade to the software has been installed to enhance the capabilities of more scenarios to meet current mission requirements.

Physical Information:

One Instructor station and six student stations. The ICOFT consists of the following systems: Power Distribution System, Instructor Station Computer system, student station computer video system, communications system, ICOFT control Electronics, and elevation control system. Student Station: height-76", width-47", length-100", weight-1395lbs, noise level-68dBA.

Equipment Required, Not Supplied:

None.

Special Installation Requirements:

The Government provides a clear and level site to specified drainage and compactness, and also electrical and telephone lines. The site must be a minimum of 40'X32". The contractor provides a concrete pad and the electrical interface from the power source. In CONUS and where 60 Hz power is available at OCONUS sites, the contractor provides an electrical distribution center and isolation transformer as the interface between the power source and the trainer. Where only 50 Hz power is available, the contractor installs a transformer and electrical distribution center or an electrical service center which encompasses both.

Power Requirements:

Rating-110vac/208vac
Frequency-60 Hz single-phase at 110vac, 60 Hz at 208vac single-phase.
Current-13.2 Amps max at 120vac, 13 Amps max at 208vac.
Power-1200 watts nominal at 120vac
Consumption-1900 watts nominal at 208vac
Humidity: Operating or 20 to 80% relative, non-condensing Non-operating.

Applicable Publications:

Detailed tactical procedures for operating the Student Station turret mockup are identical to the real Avenger as described in the Avenger OUM 9-1425-433-10.

Reference Publications:

TM 9-1425-433-10
FM 44-44
ARTEP 44-117-21-MTP

Training Requirements Supported:

MOSC 14S

AVENGER SLEW TO CUE TABLE TOP TRAINER (AT3)

NSN Not Assigned

DVC 44-93/A AVENGER Table Top Trainer (AT3), (Student Station)

NSN Not Assigned

DVC 44-93/B AVENGER Table Top Trainer (AT3), (Instructor Station)**Student Station****Instructor Station****Training Category/Level Utilized:**

Air Defense/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The Avenger Slew-To-Cue Table Top Trainer is an interactive desktop trainer that provides a deployable system capable of meeting the Air Defense gunnery training requirements. This trainer will provide a basic entry level training system to train crewmembers in engagement techniques (alert, cue, search, detect, acquire, identify, track, and engage).

Functional Description:

DVC 44-93 is an interactive graphics trainer of the principle features of the Avenger turret/gunner station. The system includes a monitor that presents the out-of-window (canopy) view and the gunner's Forward Looking Infrared (FLIR) display. The system also provides an interface to a tactical gunner hand station, control foot switches, and other Graphical User Interface switches used to simulate gunner controls to allow the gunner to perform air defense engagements. The system provides training for the additional Slew-To-Cue (STC) capabilities. Additionally the training systems can be networked to an instructor station capable of supporting up to eight crew stations at one time. This device will replace DVC 44-73, Avenger Table Top Trainer (AT3).

Physical Information:

Student station: 2 transit cases
Crew station case: 29" H x 22" W x 22" D, weight ~ 107 lbs
Computer case: 17" H x 27" W x 31" D, weight ~ 105 lbs
Instructor Operator Station: 1 transit case
IOS case: 18" H x 22" W x 22" D, weight ~ 51 lbs

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

115/220vac, 50/60 Hz

Applicable Publications:

Student Station/Instructor Station Manual: MIS-54524
TM 9-1425-433-10/Operator's Manual for the Avenger Weapon System.

Reference Publications:

None

Training Requirements Supported:

MOS 14S
MOS 14B

Added Improvements/Upgrades:

Recent software and hardware upgrades have been installed through 50% of current Avenger AT3 systems. This upgrade meets current requirements for ongoing Army missions.

AVENGER TABLE TOP TRAINER (AT3), (Student Station – Upgrade)

**Student Station****Training Category/Level Utilized:**

Air Defense/Level 3

Logistic Responsible Command, Service, or Agency:

TSS ENTERPRISE

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The Avenger Slew-To-Cue Table Top Trainer is an interactive desktop trainer that provides a deployable system capable of meeting the Air Defense gunnery training requirements. This trainer will provide a basic entry level training system to train crewmembers in engagement techniques (alert, cue, search, detect, acquire, identify, track, and engage).

Functional Description:

The AT3 is an interactive graphics trainer of the principle features of the Avenger turret/gunner station. The system includes a monitor that presents the out-of-window (canopy) view and the gunner's Forward Looking Infrared (FLIR) display. The system also provides an interface to a tactical gunner hand station, control foot switches, and other Graphical User Interface switches used to simulate gunner controls to allow the gunner to perform air defense engagements. The system provides training for the additional Slew-To-Cue (STC) capabilities. Additionally the training systems can be networked to an instructor station capable of supporting up to eight crew stations at one time. Description. The Avenger Table Top Trainer is a Crew Chief Air Situation Display (CCASD) Emulator. It improves training for Avenger teams by allowing a Team Chief to interact with the gunner. The Team Chief can

Hook, Enter, and Slew the gunner to targets using the CCASD Emulator laptop.

Physical Information:

Student station: 1 transit cases

Crew station case: 30" H x 24" W x 34" D, weight ~ 160 lbs

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

115/220vac, 50/60 Hz

Applicable Publications:

Student Station Manual: MIS-54524

TM-9-1425-433-10/Operator's Manual for the Avenger Weapon System.

Reference Publications:

None

Training Requirements Supported:

MOS 14P

MOS 14S

Added Improvements/Upgrades:

Recent hardware upgrades have been installed throughout 90% of current Avenger AT3 systems. This upgrade meets current requirements for ongoing Army missions.

RECONFIGURABLE TABLE TOP TRAINER (RT3)

**Training Category/Level Utilized:**

Air Defense Artillery/Level 3

Logistic Responsible Command, Service, or Agency:

AMCOM

Source and Method of Obtaining:

GSA contract or Engineering Services Contract

Purpose of Trainer:

The Reconfigurable Table Top Trainer (RT3) Student Station supports unit and school training needs without the use of tactical equipment. The RT3 stand alone trainer has the capability of being linked together to allow training at a 'system' level if desired with the use of additional hardware such as Ethernet routers / switches. The RT3 serves as a hardware platform for various software applications. RT3 is highly flexible and reconfigurable to support or replicate other trainer needs as required. Interfaces include TCP/IP as the basis for interconnecting several stand-alone stations together to support system level training exercises. Larger scale training is supported with DIS and TADIL-J capability. The RT3 runs PATRIOT Conduct of Fire Trainer (PCOFT) and PATRIOT-Multi Echelon Training (P-MET) training products and is capable of running other system training programs via removable hard drive.

Functional Description:

The RT3 station is COTS based hardware comprised of both x86 and PowerPC processors with two configurable 30" touch screen displays, capable of supporting different

display outlays/button positions/sizes as well as keyboards such as COTS QWERTY style, mouse, and the PATRIOT unique keyboard. Interfaces include TCP/IP, serial RS232, X.25. The RT3 Student Station interacts with the students using PATRIOT console replicas of man stations 1 and 3 in the ECS and ICC.

Physical Information:

The RT3 work station computer dimensions are: 20.4"H x 8.4" W x 25.8"D and weighs 81.5 lbs. There are also Two 30" flat panel monitors mounted vertically. Plus there are two keyboards and a mouse.

Equipment Required, Not Supplied:

Allen Wrench (supplied with kits)

Special Installation Requirements:

See Equipment Required section.

Power Requirements:

60 Hz or 400 Hz power source. Two separate 15 AMP circuit breaker protected power sources.

Applicable Publications:

(Information not available)

Reference Publications:

(Information not available)

Training Requirements Supported:

MOSCs 14E; 14T; 140E and 94S depending on the software loaded.

Reconfigurable Table Top Trainer (RT3) Version 1.5

**Training Category/Level Utilized:**

Air Defense Artillery/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

PEO Missile & Space, LTPO

Purpose of Trainer:

The Reconfigurable Table Top Trainer (RT3) The RT3 hardware platform supports various training applications. Interfaces include TCP/IP as the basis for interconnecting several stand-alone stations together to support system level training exercises. Applications include PATRIOT Conduct of Fire Trainer (PCOFT), PATRIOT Tactical Command System (TCS) for Training, PATRIOT-Multi Echelon Training (P-MET), PATRIOT Skills Library (PSL), and Multi-Player Training (MPT). The PCOFT supports operational and tactics training and can interface with other systems via Distributed Interactive Simulation (DIS) and Tactical Digital Information Link (TADIL) -J. Several RT3s running PCOFT software can be networked via TCP/IP. P-MET, PSL, and MPT train maintenance and operational tasks. P-MET and MPT can network with other RT3s running the same application via TCP/IP. One RT3 can run other system training programs via removable hard drive.

Functional Description:

The RT3 station is COTS based hardware comprised of both x86 and PowerPC or Emulator processors with two configurable 30-32" touch screen displays, capable of supporting different display outlays/button positions/sizes as well as keyboards such as COTS QWERTY style, mouse, and the PATRIOT unique keyboard. Interfaces

include TCP/IP, serial RS232, X.25. Optional items include a DOT matrix printer and an Uninterrupted Power Supply (UPS) which can be purchased separately at buyer's request. Individual components will be substituted as technology advances and items become obsolete. The RT3 Student Station interacts with the students using PATRIOT console replicas of man stations 1 and 3 in the ECS and ICC.

Physical Information:

The RT3 work station computer dimensions are: 20.4"H x 8.4" W x 25.8"D and weighs 81.5 lbs. There are two 30-32" flat panel monitors mounted vertically, CPU, and two keyboards (Tactical and Conventional) and a mouse.

Equipment Required, Not Supplied:

- 2 Allen Wrench (supplied with kits)
- 2 Cross Tip Screwdrivers (supplied with kits)

Special Installation Requirements:

See Equipment Required section.

Power Requirements:

60 Hz or 400 Hz power source. Two separate 15 AMP circuit breaker protected power sources.

Applicable Publications:

TM 9-6920-1610-13&P

Reference Publications:

COTS documents provided with system upon delivery.

Training Requirements Supported:

MOSCs 14E; 14T; 140E, 94S and 948D depending on the software loaded.

ENGAGEMENT CONTROL STATION (ECS) PATRIOT MAINTENANCE TRAINER (EPMT)



Instructor Station



(ECS-CS) Simulator



(ECS-RS) Simulator

Training Category/Level Utilized:

Air Defense Artillery/Level 3

Logistic Responsible Command, Service, or Agency:

AMCOM

Source and Method of Obtaining:

Procurement Authority dollars using Lower Tier Project Office Engineering Services Contract with Raytheon

Purpose of Trainer:

The Engagement Control Station PATRIOT Maintenance Trainer (EPMT) is a component of the PATRIOT Maintenance Trainer (PMT) which is a hands-on trainer that will be used at the two PATRIOT schools at Fort Sill, OK. The PMT will include the Launcher PMT, EPMT and the Radar PMT (RPMT). The three components of the PMT will be fielded separately and will operate independently. Each component will have its own Life Cycle Management Plan and will have individual Army Device Numbers.

The EPMT provides the capability of training personnel to perform select maintenance tasks at the ECS. The two EPMT subsystems consist of the ECS Curbside (ECS CS) and ECS Roadside (ECS RS) simulators. Each subsystem provides visual and tactile simulation. The ECS CS and ECS RS emulate the tactical ECS in relative location, proportion, size, user interface, and functionality. The simulated manstation simulates the PATRIOT software screens required for maintenance.

Functional Description:

The EPMT is capable of training operator / maintainer teams to perform maintenance tasks for fault location, BRU removal and replacement, adjustment, operation and testing of major subassemblies. The EPMT procedures will preface the situation with an introductory statement at the student station. Students follow the TM Work Packages (WP) and proceed through each step or phase. The TMs are available to view on the upper student station display monitor. Steps require student input at either the hardware or virtual student station. Upon completion of a

maintenance task, a conclusion statement is displayed at the student station, and then completion is reported to the instructor station.

Physical Information:

The EPMT consist of hardware, electronics and software that simulate lights, switches, cables, jacks, meters, displays, and circuit cards. It includes Ethernet to interface with hardware and software. The courseware consists of a suite of procedures that simulate the PATRIOT ECS maintenance activities and correspond to TM WPs

The EPMT dimensions are: Roadside - height = 78.3", weight = 3123.9 lbs, length = 175.8", width = 29.8"
Curbside - height = 78.8", weight = 2861.1 lbs, length = 178.7", width = 35.4"

Equipment Required, Not Supplied:

Forklift with extended blades

Special Installation Requirements:

An attachment will be provided

Power Requirements:

60 Hz or 400 Hz power source

Applicable Publications:

A3118893-OPERATOR'S MANUAL FOR ECS
PATRIOT MAINTENANCE TRAINER (EPMT)
March 2015

Reference Publications:

TM 9-1430-600-10-1, TM 9-1430-1600-10-1, TM 9-1430-600-10-2, TM 9-1430-1600-10-2, , TM 9-1430-600-20-1, TM 9-1430-1600-20-2, TM 9-1430-600-20-2, TM 9-1430-1600-20-2, TM 9-1430-600-20-3, TM 9-1430-1600-20-3, TM 9-1430-600-24P, TM 9-1430-1600-24P, TM 9-1430-600-34, TM 9-1430-1600-34

Training Requirements Supported:

These training systems are used for formal courses of instruction in an institutional setting at Fort Sill, OK. The EPMT will train MOSCs 14E; 140E; 94S; and 948D.

LAUNCHER PATRIOT MAINTENANCE TRAINER (LPMT)

**Training Category/Level Utilized:**

Air Defense Artillery/Level 3

Logistic Responsible Command, Service, or Agency:

AMCOM

Source and Method of Obtaining:

Procurement Authority dollars using Lower Tier Project Office Engineering Services Contract with Raytheon

Purpose of Trainer:

Launcher PATRIOT Maintenance Trainer (LPMT) is a component of the PATRIOT Maintenance Trainer (PMT) which is a hands-on trainer that will be used at the two PATRIOT schools at Fort Sill, OK. The PMT will include the LPMT, Engagement Control Station PMT (EPMT) and the Radar PMT (RPMT). The three components of the PMT will be fielded separately and will operate independently. Each component will have its own Life Cycle Management Plan and will have individual Army Device Numbers.

The Launcher PATRIOT Maintenance Trainer (LPMT) is intended to provide a realistic, hands-on simulator and

virtual simulation of tactical equipment for the training of PATRIOT maintenance personnel in a school environment. LPMT provides training in locating, troubleshooting and repairing faults in the PATRIOT Launching Station (LS). LPMT hardware consists of three Student Stations which display a virtual simulation of the launcher. In addition, a separate Part Task Trainer (PTT) is installed for specific elements of training that require isolated hands-on training. LPMT incorporates both hardware and software simulation that enables enhanced training capabilities.

Functional Description:

The LPMT System consists of select active and passive simulators which emulate tactical equipment in form and function for training purposes. The simulators provide adequate operational and visual fidelity to support execution of the training tasks. The design exercises reasonable tradeoffs between the simulator's fidelity and the fully functional tactical hardware. The level of fidelity for a given simulator was determined by the particular training procedure requirements, the limitations of the classroom environment, safety and general cost effectiveness.

Physical Information:

LPMT consists of the following:

- a) Enhanced Launcher Electronics System (ELES)

Simulator, with a PMP PTT

- b) Data Link Terminal Module (DLTM) Simulator
- c) Munitions Simulator
- d) A Student Station at each of the simulators, with virtual simulation capabilities
- e) Information Station
- f) Software (Operating System and Applications)
- g) Courseware (Maintenance Procedures and Publications)

The three major sections of the LPMT are: DLTM, ELES, and Munitions.

The LPMT dimensions are: Height=103.2", weight=7892lbs, length=272.4", width=130.4"

Equipment Required, Not Supplied:

Forklift with extended blades

Special Installation Requirements:

LMPT Installation Tools list provided upon request

Power Requirements:

60 Hz or 400 Hz power source

Applicable Publications:

H493969 - OUM for Launcher PATRIOT Maintenance Trainer (LPMT) March 2015

H493970 – SMMI for Launcher PATRIOT Maintenance Trainer (LPMT) TBD 2015

Reference Publications:

TM 9-1440-600-10, TM 9-1440-1600-10, TM 9-1440-600-20-1, TM 9-1440-1600-20-2, TM 9-1440-600-20-2, TM 9-1440-1600-20-2, TM 9-1440-600-20-3, TM 9-1440-1600-20-3, TM 9-1440-600-24P, TM 9-1440-1600-24P, TM 9-1440-600-34, TM 9-1440-1600-34, TM 9-4935-603-12, TM 9-4935-603-34

Training Requirements Supported:

These training systems are used for formal courses of instruction in an institutional setting at Fort Sill, OK. The LPMT will train MOSCs 14T; 140E; 94S and 948D

**COUNTER ROCKET ARTILLERY AND MORTAR (C-RAM)
LAND-BASED PHALANX WEAPON SYSTEM (LPWS)
STAND ALONE GUN ASSEMBLY (SAGA) TRAINER**



C-RAM-LPWS-SAGA Trainer

Training Category/Level Utilized:

Air Defense Artillery/Level 1

tall, 36"wide and 8'in length (including the barrels), weighs 1100lbs and is platform mounted.

Logistic Responsible Command, Service, or Agency:

PD-C-RAM

Physical Information:

(Information not available)

Source and Method of Obtaining:

Not generally available for issue (Limited Production)

Equipment Required, Not Supplied:

None

Purpose of Trainer:

The SAGA shall provide a working model of the LPWS ammo gun and handling system. This working model will afford trainers/students the ability to train on loading, unloading and the maintenance repair of the ammo gun and handling system. The SAGA will be used to support the 14P, 14S and 94T Institutional Training Base and the Unit sustainment training. The SAGA is a stand-alone piece of equipment that will be made available through the TSCs at the various locations.

Special Installation Requirements:

None

Power Requirements:

No power requirements.

Applicable Publications:

OUM 1005-460-10 1
SMM - TBD

Functional Description:

The SAGA Trainer is a replica of the LPWS's gun and ammo handling system. The SAGA was produced by the Navy to support schoolhouse training of the aboard ship CWIS operators. The SAGA is manually operated, 51"

Reference Publications:

None

Training Requirements Supported:

MOSC 14S; 94T; 94

COUNTER ROCKET ARTILLERY AND MORTAR (C-RAM) LAND-BASED PHALANX WEAPON SYSTEM (LPWS) OPERATOR/MAINTAINER TRAINER (OMT) CLASSROOM CONFIGURATION

**Training Category/Level Utilized:**

Air Defense Artillery/Level 1

Logistic Responsible Command, Service, or Agency:

U.S. Army PEO-STRI, Orlando FL

Source and Method of Obtaining:

For information concerning availability, supply and maintenance support, contact the local Training Support Center (TSC)

Purpose of Trainer:

The C-RAM LPWS OMT provides 2D and 3D graphical depictions of the C-RAM LPWS that allows the training of operational tasks and maintenance actions in a virtual environment.

Functional Description:

The C-RAM LPWS OMT delivers three modes of training: Instructional, Tutorial, and Free Play. Students participate in lessons that teach the skills necessary to perform operator and maintenance procedures while being monitored by the classroom Instructor.

The classroom configuration provides Instructor/Operator functionality via an Instructor Operator Station (IOS). Through the IOS, the instructor can select the Instructional mode under which student training is completed and performance saved. The student can also train in the Tutorial or the Free Play mode. The Classroom

Student Stations can be setup to operate in a closed loop Local Area Network (LAN) or in standalone mode.

Physical Information:

There are twelve (12) student stations and one (1) Instructor Operator Station (IOS) per classroom. Each student station consists of a desktop computer, two monitors, keyboard, mouse, UPS, and communication headset.

The fielding locations are: Ft Sill, Fires Center of Excellence, 2-6 ADA BN; Ft Lee, ORDNANCE Munitions and Electronics' Maintenance School (OMEMS)

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

120vac, 60Hz, 15A, single-phase

Applicable Publications:

Software User's Manual (SUM) 44-6920-707-10
System Maintenance Manual (SMM) 44-6920-708-23

Reference Publications:

TM 9-1005-460-10-1 & 2
TM 9-1005-460-23&P
TM 9-6115-672-14
DVC supersedes DVC 44-106/1.

COUNTER ROCKET ARTILLERY AND MORTAR (C-RAM) LAND-BASED PHALANX WEAPON SYSTEM (LPWS) OPERATOR/MAINTAINER TRAINER (OMT) UNIT CONFIGURATION



Training Category/Level Utilized:

Air Defense Artillery/Level 1

Logistic Responsible Command, Service, or Agency:

U.S. Army PEO-STRI, Orlando FL

Source and Method of Obtaining:

For information concerning availability, supply and maintenance support, contact the local Training Support Center (TSC)

Purpose of Trainer:

The C-RAM LPWS OMT provides 2D and 3D graphical depictions of the C-RAM LPWS that allows the training of operational tasks and maintenance actions in a virtual environment.

Functional Description:

The C-RAM LPWS OMT delivers three modes of training: Instructional, Tutorial, and Free Play. Students participate in lessons that teach the skills necessary to perform operator and maintenance procedures.

The unit configuration has no IOS. The Soldier(s) use the ruggedized laptop to complete the self-paced training in all three modes. The unit configuration does not track or archive performance scoring. The unit configuration is a standalone trainer.

Physical Information:

The unit configuration is a ruggedized laptop
The fielding locations are: FT Sill and FT Campbell

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

120vac, 60Hz, 15A, single-phase

Applicable Publications:

Software User's Manual (SUM) 44-6920-707-10
System Maintenance Manual (SMM) 44-6920-708-23

Reference Publications:

TM 9-1005-460-10-1 & 2
TM 9-1005-460-23&P
TM 9-6115-672-14
DVC supersedes DVC 44-106/2.

Training Requirements Supported:

MOSC: 14P, 94T, & 94M

Radar PATRIOT Maintenance Trainer (RPMT)



Device Picture

Training Category/Level Utilized:

Air Defense Artillery/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

PEO Missile & Space, LTPO

Purpose of Trainer:

The Radar PATRIOT Maintenance Trainer (RPMT) is intended to provide a realistic, hands-on simulator and virtual simulation of tactical equipment for the training of PATRIOT maintenance personnel in a school environment. RPMT provides training in locating, troubleshooting and repairing faults in the PATRIOT Radar for Organizational and Intermediate Maintenance personnel. RPMT hardware consists of four (4) Student Stations which display a virtual simulation of the Radar. In addition, RPMT simulates TMDE with a simulated Probe Interface Controller (PIC) Panel and Tablet. RPMT incorporates both hardware and software simulation that enables enhanced training capabilities.

Functional Description:

The RPMT System consists of select active and passive simulators which emulate tactical equipment in form and function for training purposes. The simulators provide adequate operational and visual fidelity to support execution of the training tasks. The design exercises reasonable tradeoffs between the simulator's fidelity and the fully functional tactical hardware. The level of fidelity for a given simulator was determined by the particular training procedure requirements, the limitations of the classroom environment, safety and general cost effectiveness.

Physical Information:

RPMT consists of the following:

- a) Radar Curbside (CS) Exterior Simulator
 - b) Radar Curbside (CS) Interior Simulator
 - c) Radar Roadside (RS) Exterior Simulator
 - d) Radar Roadside (RS) Interior Simulator
 - e) A Student Station at each of the simulators, with virtual simulation capabilities
 - f) Information Station
 - g) Software (Operating System and Applications)
 - h) Courseware (Maintenance Procedures and Publications)
- The four major sections of the RPMT are: Curbside Exterior, Curbside Interior, Roadside Exterior, and Roadside Interior.

Equipment Required, Not Supplied:

All required maintenance and support equipment is supplied at issue.

Special Installation Requirements:

See Equipment Required section.

Power Requirements:

60 Hz or 400 Hz power source. Two separate 15 AMP circuit breaker protected power sources.

Applicable Publications:

EM 0197

Reference Publications:

COTS documents provided with system upon delivery.

Training Requirements Supported:

MOSCs 14E; 14T; 140E, 94S and 948D

TSS-ENTERPRISE TADSS INDEX AND CATALOG

**BASIC SERIES 55
TRANSPORTATION**



COLLISION AVOIDANCE RADAR NAVIGATION SYSTEM (CARNS)

**Training Category/Level Utilized:**

Transportation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

To provide a classroom installation that duplicates radar and navigational signals and relays these signals to receivers which provide audio, visual, or a combination of both for training and certification of maritime personnel. Four types of navigational aids can be demonstrated by using the nucleus of the device (computer and interface) plus the proper receivers.

Functional Description:

The Collision Avoidance Radar Navigation System (CARNS) utilizes a digital microcomputer, which is interfaced to radar and Electronic Chart Display and Information Systems (ECDIS) displays. Exercises stored on disk simulate own ships, vessels, and harbors or

shorelines. The student is positioned in front of a Plan Position Indicator (PPI). The instructor selects the exercise and can manually make changes to the exercise parameters.

CARNS is a four-ownership system: it has four observer student stations. Each student station contains radar displays, ECDIS displays, and radios.

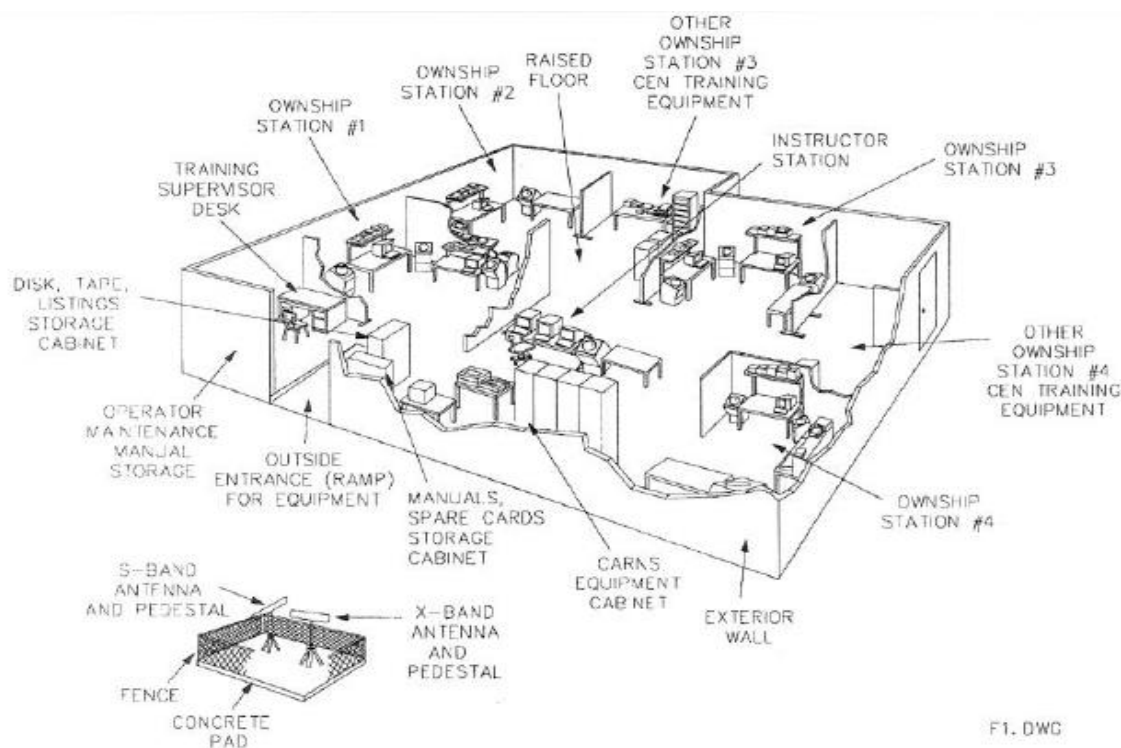
Personal Computers with keyboard terminals located at all student stations enable student interactions with the instructor, such as briefing/debriefing, question/answer, data-input, etc. Over 90 exercises are included as well as a complete lesson plan package.

Physical Information:

Item:	"W"	"H"	"D"	Weight (lb)
CARNS Equipment Cabinet:	63	77	31	1,200

Instructor's Station:

Table:	72	26	30	35
Keyboard Display	18	14.5	14.25	41
Printer LAIOO-CA/JKSR	22	7	15.5	25
Plotter DMP-29	22	5.5	19	25
Radar Display w/Video				
Select Switch	28	46	29	165
12' B&W Monitor	22	24	18	53
19' CRT Monitor				
(Digitizer Display)	19	18	20	56



(CARNS) Classroom Positions Layout

Item:	"W"	"H"	"D"	Weight (lb)
Joy Stick	10	7	4	2
Data Bid Pad	16	3	16	10
Radio Telephone RAY 66	9	4.5	14.25	7

Power Requirements:

208vac, 60 Hz, 3-phase, 4 wires
120vac, 60 Hz

Student's Station:

Radar Display (8)	28	46	29	165
Owship Control Unit (4)	19	9	1	620
Keyboard Display (VT101) (8)	18	14.5	14.25	41
Chart Table (6)	72	38	30	30
Radio Telephone Ray 66 (8)	9	4.5	14.25	7
Raytheon Pathfinder - MK-II ECDIS (4)	27.5	47.3	43.3	374

Applicable Publications:

TD 55-6940-701-14-1
Commercial Computer Documentation Set (CCDS)
Volumes -2 thru -56.
Instructor's Utilization and On-The-Job Training Handbooks.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

The trainer dissipates approximately 27,000 BTU per hour. It can be expected to withstand the following environmental conditions:

Temperature: 5 0° to 120° F (Operating), -40° 150° F (Nonoperating) 10° to 49° C (Operating), -40° to 66° C (Nonoperating).

Humidity, noncondensing: 10% to 90% (Operating), 5 to 95% (Nonoperating).

No special ducting is required. The free standing equipment rack is provided with sufficient fans to induce cooling air into the rack.

Reference Publications:

Dutton's "Navigation and Piloting" (Maloney).
"Radar Instruction Manual" Maritime Administration, US Dept. of Commerce, January 1978.
"Radar Navigation Manual", publication 1310, Defense Mapping Agency, Hydrographic/Topographic Center.

Training Requirements Supported:

MOSC's 500A; 510A
Marine Warrant Officer pre-appointment and advanced training.
Marine Radar Observer Courses (one specifically for air cushion vehicle personnel, and another for certificate renewal).

HIGH SPEED CRAFT COLLISION AVOIDANCE RADAR NAVIGATION SYSTEM (HSC-CARNS)



Training Category/Level Utilized:
Transportation/Level 1

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Not generally available for issue (limited production)

Purpose of Trainer:

To provide a classroom installation that duplicates radar and navigational signals and relays these signals to receivers which provide audio, visual, or a combination of both for training and certification of maritime personnel. Four types of navigational aids can be demonstrated by using the nucleus of the device (computer and interface) plus the proper receivers.

Functional Description:

The Collision Avoidance Radar Navigation System (CARNS) utilizes a digital microcomputer, which is interfaced to radar and Electronic Chart Display and Information Systems (ECDIS) displays. Exercises stored on disk simulate own ships, vessels, and harbors or shorelines. The instructor selects the exercise and can manually make changes to the exercise parameters. CARNS is a six-ownship system: it has six observers student stations. Each student station contains two radar displays, ECDIS display, virtual radios, steering controls and one 42 inch visual display. Personal Computers with keyboard terminals located at all student stations enable student interactions with the instructor, such as briefing/debriefing, question/answer, data-input, etc. Over

90 exercises are included as well as a complete lesson plan package.

Physical Information:

Student Stations:
Radar Display (12)
ECDIS Display (6)
Steering Control Stands with virtual Radio (6)
Chart Table (6)
PC with 15" Video Display (6)
42 inch Video Display with Stand (6)
Surround Sound four (4) speaker system

IOS:

PC with two (2) 15" Displays
Radio Telephone Ray 66 (1)

Equipment Required, Not Supplied:
Uninterrupted power supply (UPS)

Special Installation Requirements:
None

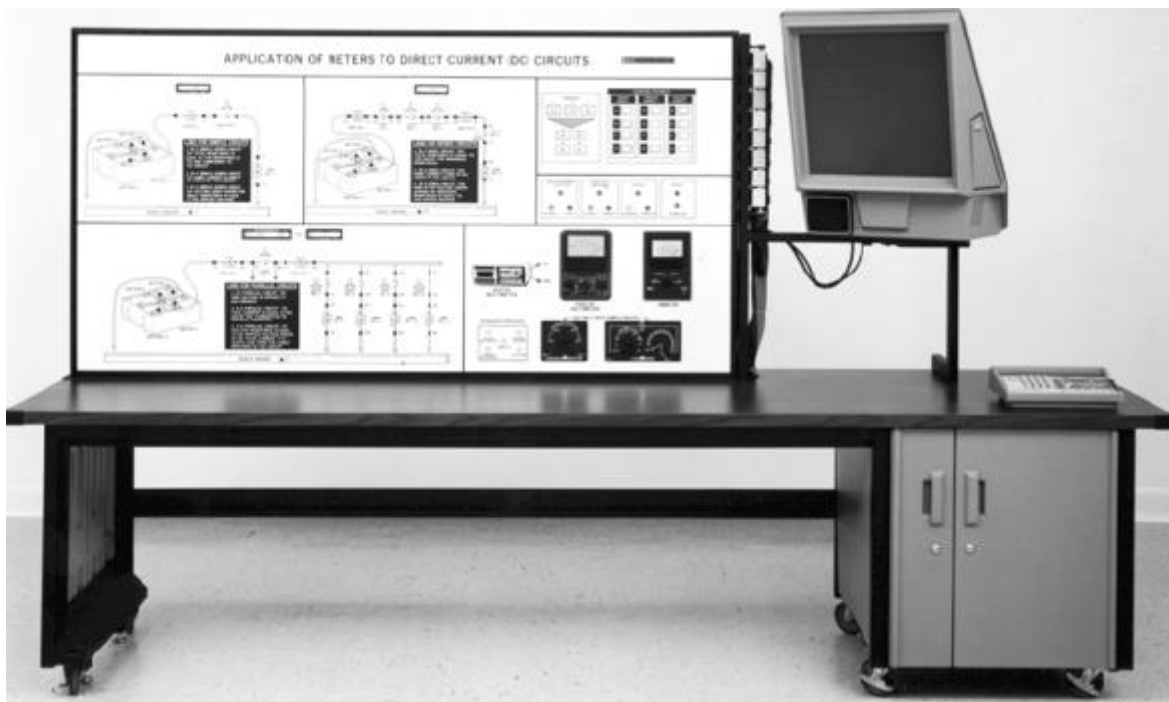
Power Requirements:
120V-60Hz AC

Applicable Publications:
BCG (COTS) Manuals

Reference Publications:
JHSV STRAP

Training Requirements Supported:
MOSC - USCG HSC Radar Endorsement both initial and renewal for Mariners

APPLICATION OF METERS TO DIRECT CURRENT (DC) CIRCUITS

**Training Category/Level Utilized:**

Transportation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

For classroom use to provide training and familiarization in taking measurements on various circuit types (simple series, and parallel). The trainer provides maintenance personnel with training in proper test instrument selection and operation for different simulated circuit types.

Functional Description:

Device 55-11 is a computer-based training system, providing test instrument operating characteristics for various types of circuits.

The device consists of a display panel of simulated circuit types and test instruments (ammeter, analog multimeter, digital multimeter, loadbank, and variable resistor), and EC 3 computer, video-disc player and monitor, control console, two diskette drive units, visuals, two flexible diskettes, trainer power cable, operator's manual, and maintenance manual. Five test lead assemblies are also supplied with the trainer.

This student/instructor operated device is designed for demonstration or student exercise hands-on use and

requires minimal familiarization time. No warm-up time, special cooling, or special maintenance personnel are required.

Student motivation is accomplished through 22 unique exercises and immediate performance feedback as the student uses the various simulated test equipment to take measurements on the appropriate circuit type.

Through the use of the control console, the simulated circuits and test instruments on the display panel respond according to actual test instrument circuit interface. Student performance is monitored by indicators contained on the control console to indicate total time to solve the problem. Display panel switches allow the student to select and answer exercise problems, check instrument selection and test procedure and call up information on the videodisc monitor. Display panel indicators provide exercise problem, instrument selection, and test procedure feedback.

Physical Information:

120" L x 71" H x 29" D; 485 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

The trainer is designated to operate in a standard classroom within a temperature range of 30° F to 100° F and a relative humidity of up to 80%.

Power Requirements:

115vac, single-phase, 60 Hz, 15A

Reference Publications:

None

Applicable Publications:

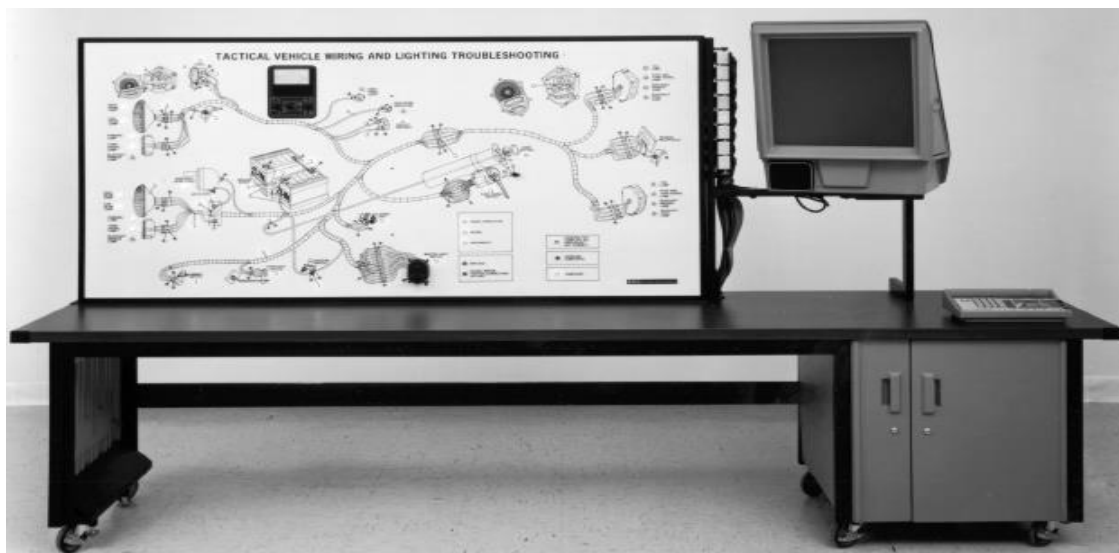
TM 9-6910-249-10, - Operator's Manual for Application of Meters to Direct Current (DC) Circuits Device 55-11.

TM 9-6910 249-24&P, - Organizational, Direct Support, and General Support Maintenance Manual Including Repair Parts and Special Tools List (Including Depot Maintenance Repair Parts) for Application of Meters to Direct Current (DC) Circuits, Device 55-11.

Training Requirements Supported:

MOSC 63B

TACTICAL VEHICLE WIRING AND LIGHTING TROUBLESHOOTING TRAINER

**Training Category/Level Utilized:**

Transportation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

For classroom use to provide maintenance training and familiarization with tactical vehicle wiring and lighting systems. The trainer provides organizational, direct support (DS), and general support (GS) maintenance personnel with training in operating procedures, symptom analysis, and troubleshooting procedures.

Functional Description:

Device 55-14 is a computer-based training system, providing operating and maintenance characteristics for simulated Tactical Vehicle wiring and lighting systems.

The device consists of a display panel of simulated wiring and lighting system components and multimeter, an EC 3 computer, video disc player and monitor, control console, two diskette drive units, visuals, two flexible diskettes, trainer power cable, operator's manual, and maintenance manual. Two test leads are also supplied with the trainer.

This student/instructor operated device is designed for demonstration or system maintenance hands-on use and requires minimal familiarization time. No warm up time, special cooling, or special maintenance personnel are required.

Student motivation is accomplished through 23 unique malfunction simulations, 4 measuring exercises, and

immediate performance feedback as the student operates the system and multimeter.

Through the use of the control console, the simulated systems on the display panel respond with normal operation or system malfunctions similar to the actual vehicle systems. Student performance is monitored by indicators contained on the control console to indicate total time to solve the problem and components replaced.

Physical Information:

Length: 120" L x 71" H x 29" D; 485 lb

Equipment Required, Not Supplied:

None

Special Installation Requirements:

The trainer is designed to operate in a standard classroom within a temperature range of 39° F to 100° F and a relative humidity of up to 80%.

Power Requirements:

115vac, single-phase, 60 Hz, 15 A

Applicable Publications:

TM 9-6910-251-10
TM 9-6910-251-24&P

Reference Publications:

None

Training Requirements Supported:

MOSC 63B
SM 091-474, Task 3143

REFRIGERATION AND AIR CONDITIONING TRAINER

**Training Category/Level Utilized:**

Transportation/Level 2

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

To provide classroom training in refrigeration and air conditioning theory with hands-on application through the performance of practical laboratory experiments.

Functional Description:

The Refrigeration and Air Conditioning Trainer is comprised of a number of training devices which are used to demonstrate experiments in the electrical and mechanical aspects of the refrigeration cycle and its application to all types of residential, commercial, and industrial air chilling mechanisms and controls.

All machines and control components are standard commercially available models-mounted, plumbed, wired and arranged for ease of understanding, simplification of connection, and convenience of operation.

Physical Information:

Item:	"W"	"H"	"D"	Weight(lb)
Potential Relay Demonstrator, H-PRD	20	8	10	40
Refrigeration Test Branch, 262-19x	75	48	36	350
Commercial Refrigeration Trainer, H-CRT-1	61	76	31	750
Industrial Refrigeration Trainer, H-1RT-1	90	77	33	1000

Item:	"W"	"H"	"D"	Weight(lb)
Water Cooling Tower, H-ACTK-CT.....	50	55	36	35
Portable Charging Machine, 10770.....	21	43	20	100
Refrigeration/Freezer Training Kit, H-ACTK-2.....	40	40	26	300
Domestic Two-Door Refrigerator Training Kit, H-ACTK-3.....	40	40	26	300
Walk-in Cooler Training Kit, H-ACTK-5.....	40	40	26	300
Ice Cream Freezer Training Kit, H-ACTK-7.....	40	40	26	300
Air Conditioning Training Kit, H-ACTK-10.....	40	40	26	300
Three-phase Compressor Controls Trainer, H-TPCT.....	38	39	22	120
Single-phase Compressor Trainer w/stand, H-CPT-1-MCI-1000.....	52	76	31	260
Compressor Fault Simulator w/stand, H-CFS-1A-MCI-1000.....	52	76	31	265
Oil Burner Demonstrator, H-OBDD-1.....	60	48	32	500
Oil Burner Furnace Control Demonstrator w/stand, H-0BF-2-MC1-1000.....	52	76	31	260
Air Conditioning Controls Trainer, H-ACCS.....	50	36	16	250
Heat Pump Controls Trainer, H-HPT-1.....	38	39	22	120
Refrigeration System Trainer, H-RST-2.....	52	76	31	480
Basic Refrigeration Trainer, H-RST-3B.....	52	76	31	480

Equipment Required, Not Supplied:

Standard air conditioning and refrigeration tool cabinet with tools and commercial test instruments. Fume hood or Oil Burner Demonstrator is required.

Special Installation Requirements:

None

Power Requirements:

120/240vac, 60 Hz, single-phase, 3-wires with ground
120vac, 60 Hz, single-phase with ground

Applicable Publications:

TD 55-6910-723

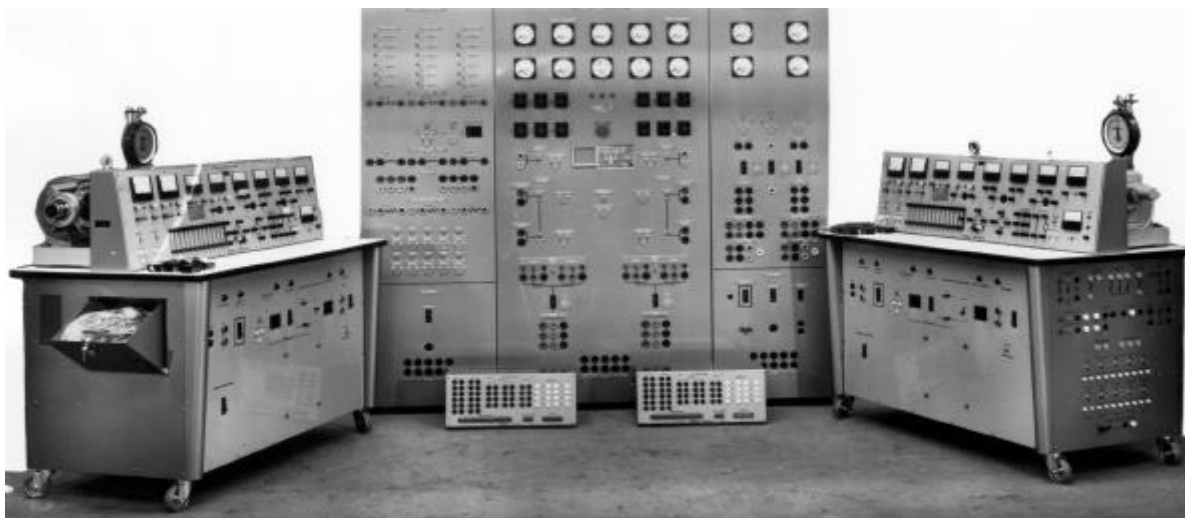
Reference Publications:

(COTS) Manuals
MCN: 6930-01-C04-1989

Training Requirements Supported:

SM Task:
551-750-1501 551-750-4504
551-750-1502 551-750-4507
551-750-4501 551-750-4508
551-750-4502 551-750-4509
551-750-4503

ELECTRICAL TRAINER

**Training Category/Level Utilized:**

Transportation/Level 2

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

To provide classroom training in electric power generation and control theory with hands-on application through the performance of practical laboratory experiments.

Functional Description:

The Electrical Trainer is comprised of a number of training devices which are used to demonstrate experiments in DC and AC power generation, as well as single- and three-phase motor and control theory, typically on various types of 1/3 horsepower motors/generators. Provisions are made for experiment type training in such areas as transformer configurations, AC and DC controllers, AC and DC solid state motor drives, angular position control, DC servomotor control and coordinate linear position controllers.

All machines and control components are standard commercially available models-mounted, wired, and arranged for ease of understanding, simplification of connection, and convenience of operation.

Physical Information:

Item:	"W"	"H"	"D"	Weight(lb)
Electrical Laboratory Switchboard, HME-3.....	85.5	92	84	1300
Electrical Laboratory Machine, H-REM-120-CMMP (2).....	64	60	42	1600

AC and DC Machine Experimental Student Station (12)

Item:	"W"	"H"	"D"	Weight(lb)
Student Station, HMD-100-CM	65	60	34	1000
Bedplate, MGE3-100-DG	4	48	16	27
DC Machine, DM-100A	12	13.5	14	50
Multifunction Machine, MFM-100	11	13.5	14	45
Synchronous Machine, SM-100-3	10.5	13.5	14	60
Wound Rotor Motor, VRM-100-3A.....	10.5	13.5	14	50
Induction Motor, IM-100.....	10.5	13.5	14	35
Universal AC Motor, ACUM-100.....	10.5	13.5	14	35
Shaded Pole Motor, SHPM-100	10.5	13.5	14	35
Split Phase Motor, SPM-100.....	10.5	13.5	14	35
Capacitor Start Motor, CSM-100	10.5	13.5	14	35
Wound Rotor Speed Controller, WRSC-100	5	12.5	9	15
DC Armature Resistance Controller, DC-ARC-100.....	7	9	7	15
Variable AC Voltage and Paralleling Controller, H-IEC-B1	7.56	19	6.25	25
Alternator Voltage Controller, H-IEC-B2	7.56	19	6.25	25
Power Factor Controller, H-IEC-B3.....	7.56	19	6.25	25
Adjustable Frequency Speed Controller, H-IEC-B4	7.56	19	6.25	25
DC Motor Mag-Amp Controller, H-IEC-DC1	7.56	19	6.25	25
DC SCR-Controller, H-IEC-DC2	7.5	12	8	25
Manual DC Starter DC-MS-100.....	8.5	14	8	20
Automatic DC Starter, DC-AS-100.....	7.5	19	8.25	30
Automatic DC CEMF Starter, DC-CEMF-100.....	7.5	19	8.25	30
Three-Phase AC Magnetic Starter, MS-100-3A.....	7.5	9	7	20
Resistance Load, RL100A	5	19	8.25	30
Resistance/Reactance Load RLC-100	7.5	19	8.25	50
Variable Inertia Load, VIL-100.....	10	20	14	40
Series Field Rheostat, SFR-100.....	7.25	5	4.75	2
Speed Control Rectifier, SCR-100B.....	7.5	19	8.25	25
Prony Brake, PB-100	14	11	16	25

Item:	"W"	"H"	"D"	Weight(lb)
Dynamic Brake, DB-100.....	7.25	5	4.75	5
DC Injection Brake, DCIB-100	7.5	9	7	10
Electro Dynamometer				
DYN-100A-DM.....	19	13	14	70
Strobe Tachometer, SLA-100-D	5.5	4	6.75	2
Synchronous Lamp, SYN-100	7.5	9	7	10
Phase Sequence Indicator PSI-100	7.5	9	7	10
Digital Photo Tachometer, HPT-100	3.5	6	6.25	5
Tachometer, HT-100-H.....	1.5	4.75	3.75	2

Transformer Learning Package (12):

Experimental Transformer, T-100A(3)...	7.5	9	7	15
Dissectable Transformer, 1290B-6C	7	16	16	20
Dissectable Storage Case, HC-1290	7	16	16	20
AC Controller, ACC-100-FT (12)	24.375	37	15	140
DC Controller DCC-100-FT (12)	24.375	37	15	140
Modular AC Motor Controller,				
ACC-100-K (12).....	24	25	10	150
Modular DC Motor Controller,				
DCC-100-K (12).....	24	25	10	150
Three Phase Frequency Drive,				
H-VFD-100-A (12).....	18	23	12	120
Single Board Microcomputer Unit (12)...	4	12.5	12.5	15
Microcomputer, MCB-1	4	12.5	12.5	15
Experimental Board Section				
Accessory, EBA-2	1.5	8.5	4.5	1
Solid State Relay Interface, EBA-3	1.5	8.5	4.5	1

Angular Position Control Unit (12):

Angular Position Controller, H-IEC-A..	7.56	19	8.25	25
Unipolar Stepper Motor, H-IEC-A1	7.5	7.25	7.25	5
Bipolar Stepper Motor, H-IEC-A2.....	7.5	7.25	7.25	5
DC Servo Motor Unit H-IEC-DCS (12)	7.56	19	8.25	25
Multiple Axis Linear Position Trainer,				
H-IEC-XY (12).....	7.5	12	8.5	20

Equipment Required, Not Supplied:

Optional: Dual Trace Oscilloscope

Special Installation Requirements:

None

Power Requirements:208vac, 60 Hz, 3-phase, 4-wire with ground
120vac, 60 Hz, single-phase with ground**Applicable Publications:**

TD 55-6910-722

Reference Publications:

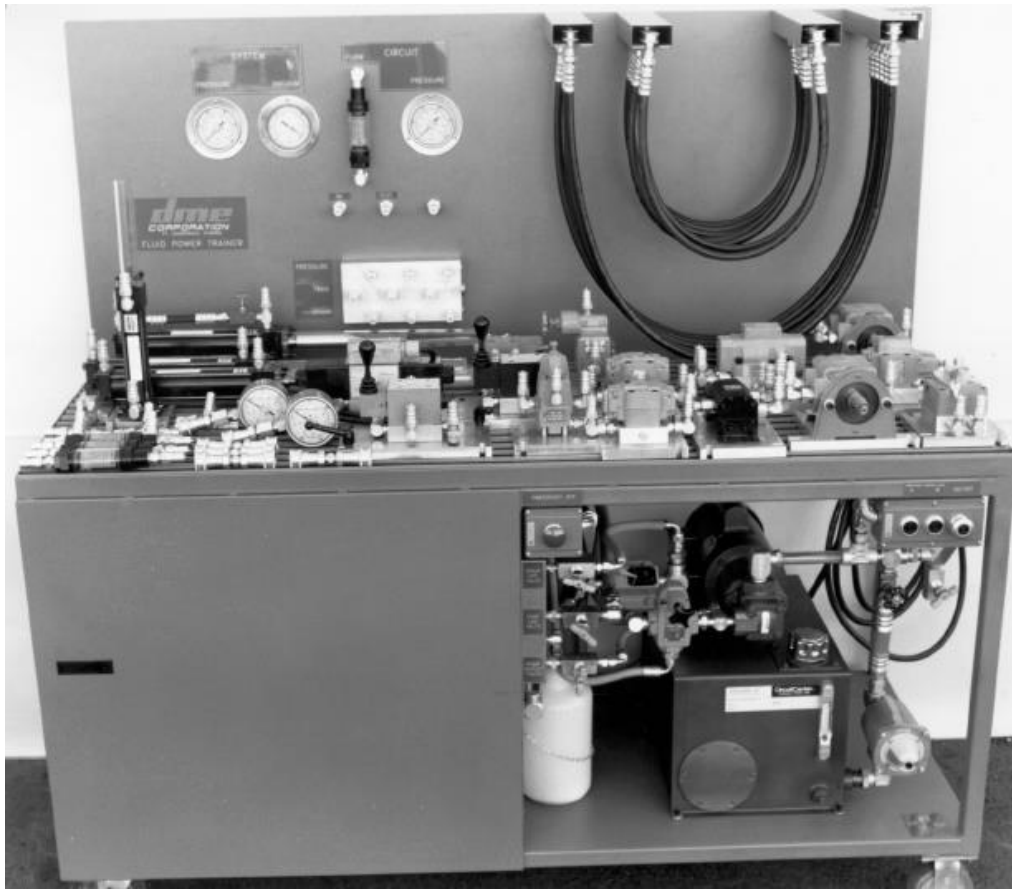
(COTS) Manuals

Training Requirements Supported:

MOSC - SM Task:

551-727-1204	551-749-1704
551-746-1501	551-749-2501
551-746-1506	551-749-2503
551-746-1508	551-749-2505
551-747-1201	551-749-2507
551-749-1201	551-749-2508
551-749-1501	551-749-2510
551-749-1502	551-749-2515
551-749-1503	551-749-2516
551-749-1504	551-749-2520
551-749-1508	551-749-2521
551-749-1513	551-749-2525
551-749-1514	551-749-2506

HYDRAULIC TRAINER



Student Hydraulic Training Bench

Training Category/Level Utilized:

Transportation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

For classroom use to provide training and familiarization in hydraulic circuit design and maintenance. The trainer provides personnel with training in configuring hydraulic circuits for a variety of operations using operational hardware. The trainer also provides maintenance and troubleshooting training for typical hydraulic system malfunctions and the opportunity to observe and operate a fully functional ship hydraulic steering system.

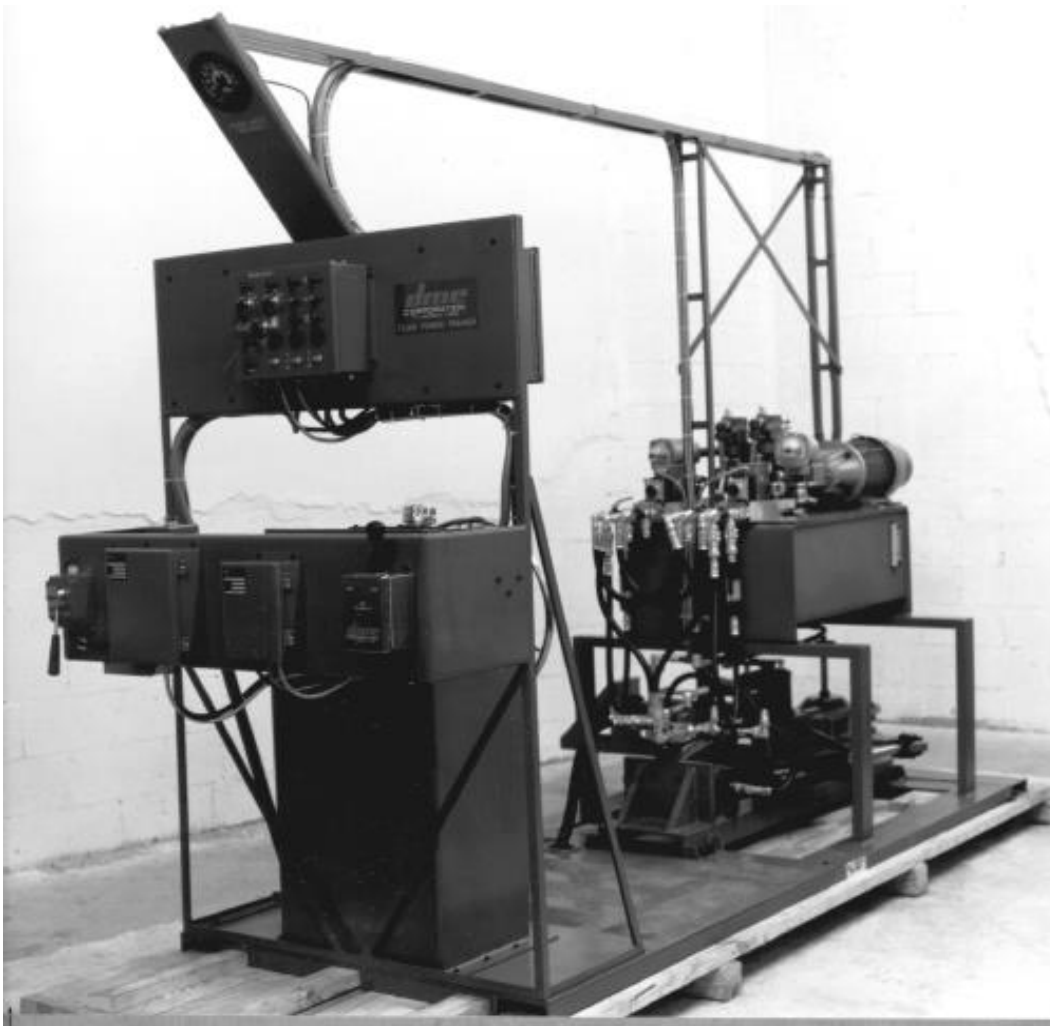
Functional Description:

Device 55-22 consists of two separate hydraulic assemblies: (1) the Student Hydraulic Training Bench, and (2) the Hydraulic Steering System Demonstrator. Each

assembly is a self-contained fully functional system incorporating a hydraulic power source and operational hydraulic components.

The Student Hydraulic Training Bench provides entry and advanced level training in hydraulic systems assembly, maintenance, troubleshooting, and repair. Each bench is a fully operational independent test station equipped with a hydraulic power unit, instrument panel, and quick-mount component mounting surface for hydraulic circuit assembly and component disassembly. A full set of hydraulic components are provided with the bench, including manual and solenoid directional control valves, linear actuators, motors, a flow divider, and deceleration, sequencing, brake, check and flow control valves. Additional pumps, motors, actuators, and control valves are provided for disassembly and assembly.

Hydraulic power is provided by an electrically driven, fixed displacement pump rated at 1.5 gallons per minute at 1000 psi. A compound relief valve limits system pressure to 500 psi at all times. All hydraulic fluid power for circuit assembly is obtained from ports on the panel-mounted manifold.



Hydraulic Steering System Demonstrator

Hydraulic circuits typically found in marine, industry, and aerospace applications can be assembled using the hydraulic components provided, and quick disconnect hoses. Two 4-inch pressure gauges, a vacuum gauge, and a flowmeter are panel mounted to monitor system performance. Additional quick-disconnect pressure gauges and flowmeters, included with each bench, may be inserted at any point in the assembled circuits.

All components used on the bench are commercial off-the-shelf items mounted on quick-mount subplates to secure components operating under pressure. Two lengths of quick disconnect hoses, are suspended from a rack for ease of access and use.

The Hydraulic Steering System Demonstrator is a complete, independent, fully functional marine steering system mounted on a rigid foundation. The demonstrator consists of a duplex hydraulic power unit, a hydraulic

steering engine, an emergency-hand hydraulic system, a full follow-up control system, a non follow-up control system, a rudder angle indicator system, and a rudder loading system. Quick disconnects between all major system components allow connection of pressure gauges and flowmeters to monitor system performance. All components used on the demonstrator, including all controls and indicators, are typical of hardware actually used shipboard.

The system is configured to show the functional elements of a ship steering system in a compact, accessible assembly. A control console allows student to experience the "feel" of the helmsman's controls. Quick, realistic, and positive response of the steering system is provided by the demonstrator, and a rudder loading system simulates rudder forces typical of a vessel under way.

Physical Information:

Student Hydraulic Training Bench:
72" L, 70" H (Overall), 40" H (Work Surface), 30" W
Hydraulic Steering System Demonstrator:
Length: 110" L, 72" H (Disassembled), 86" H
(Assembled), 44" W

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Student Hydraulic Training Bench: None
Hydraulic Steering System Demonstrator: Designed for permanent installation in a classroom or laboratory. The demonstrator is to be wired directly to 220 vac power.

Power Requirements:

Student Hydraulic Training Bench:
120vac, 60 Hz, 20 A
Hydraulic Steering System Demonstrator:
220vac, 60 Hz, 40 A, 3-phase

Applicable Publications:

TD 55-6910-724-1
TD 55-6910-724-2
TD 55-6910-724-3

Reference Publications:

None

Training Requirements Supported:

MOSC – 88H; 88M; 88A

CRANE OPERATOR TRAINING SYSTEM



Operator Student Station

Training Category/Level Utilized:

Transportation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The crane simulator is a computerized, full mission trainer that simulates the operating controls and handling characteristics of the hagglund ship tower crane, dock gantry crane, and the 40-ton rough terrain container crane. The simulator creates deployment scenarios that require army crane operators to on-load / off-load M1A1 battle tanks, and Bradley fighting vehicles from various ocean going cargo vessels.

Functional Description:

Commuter based system: silicon graphics 1000 system. Operates in real time to simulate out-the-window viewing from the crane cab. Generates full color scene content of a crane operating from an ocean vessel. Pier and on a beach. Has a sound system that produces a variety of sounds of the crane-operating environment, including crane engine noises, collisions, hoist, and trolley noises. Has 3 degree of freedom electric motion system capable of providing motion sensations to the operator, including the sensation of crane depression when a heavy object is raised, up or down, shock and payload. Has a number of portable subsystems, laptop configuration, that replicates control systems, movement and lift actions and reactions as and introduction to the full motion system.



Crane Simulator Vessel

Physical Information:

Instructor/Operator Station:

Computer: 26" H x 21" W x 29" D
 UPS Cabinet: 9.91" H x 5.61" W x 15.75" D
 UPS Battery Unit: 9.91" H x 5.61" W x 15.75" D
 UPS Powerpass Distribution Mdl: 9.91" H x 5.61" W x 15.75" D
 X-Terminal Computer: 1.75" H x 13.5" W x 12.5" D
 X-Terminal Monitor: 16.02" H x 17.71" W x 16.69" D
 Simulation Monitors: 19.34" H x 19.21" W x 21.02" D
 Printer: Unknown
 Modem: 1.5" H x 6.4" W x 5.26" D

Student Station:

Head Tracker Control Unit: 1.625" H x 7.25" W x 9.5" D
 Head Tracker Transmitter: 7.625" H x 10.875" W x 1.25" D
 Head Tracker Receiver: 2.625" H x 3.25" W x .375" D

Motion System (MS):

MS Computer: 7.1" H x 4.5" W x 1" D
 MS Power Supply: 3.0" H x 5.0" W x 1.35" D

Display System:

Projector: 14.25" H x 22.68" W x 42.36" D

Equipment Required, Not Supplied:

None

Special Installation Requirements:

(Information not available)

Power Requirements:Instructor/Operator Station:

Computer: 240vac, 30 Amps
Uninterruptible Power Supply: 240vac
X-Terminal Computer: 120vac
X-Terminal Monitor: 120vac
Simulation Monitors: 120vac
Printer: 120vac
Modem: 120vac
Real-time Input/output Sys Power Sup: 120vac

Student Station:

Aural Cue Amplifier: 12vdc, 100watts
Head Tracker: 120vac

Motion System (MS):

Motion System Motors: 80vdc

Motion System Computer: Unavailable

Motion System Power Supply: 90-264vac, 57-63Hz

Display System:

Projector: 120vac

Applicable Publications:

OUM 55-6930-701, - Crane Operator Training System
SMM 55-6930-701, - Crane Operator Training System

Reference Publications:

N/A

Training Requirements Supported:

MOSC 88H

CRANE SIMULATOR (PORTABLE)

**Training Category/Level Utilized:**

Transportation/Level 1

Logistic Responsible Command, Service or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainers:

The Portable Crane Simulator is a computerized, full mission trainer, which simulates the operating controls and handle characteristics of the hagglund ship tower crane. The simulator creates deployment scenarios that require army crane operators to on-load/off-load MIAI battle tanks and Bradley fighting vehicles from various ocean going cargo vessels.

Functional Description:

The Portable Crane Simulator is a computerized based system operating in real-time to simulate out the window viewing from the crane cab. It generates full color scene content of a crane operating from an ocean vessel.

Physical Information:

All components contained in a portable metal case.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

115vac, 60 Hz

Applicable Publications:

(COTS) Manuals

Reference Publications:

N/A

Training Requirements Supported:MOSC 88H

GLOBAL MARITIME DISTRESS SIGNALING SYSTEM (GMDSS)



(GMDSS) Instructor Station



Student Station

Training Category/Level Utilized:

Watercraft Communications Operation

Logistic Responsible Command, Service or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainers:

Provide a simulation-based training curriculum to master skills necessary to operate GMDSS communications equipment in all operational conditions. Simulated equipment includes: MF/HF DSC Radio, VHF DSC Radio, Inmarsat C, NAVTEX, and MF/HF Radiotelex. Ancillary equipment includes EPIRB, SART and SCT-VHF.

Functional Description:

The US Army GMDSS Simulators consist of three major parts: realistic instrumentation / controls (real and simulated), PC video display with keyboard, and instructor operator station. The realistic instrumentation / controls provides an immersive, fully interactive, realistically depicted communications base. Each student station can be configured with scenarios to provide training in the mechanics of actual equipment operation as well as operational techniques. Manufactured stations with configurations of instrumentation/controls (emulating the LSV, LCU, and LT) provide the operator interface. Stations include fully functional radios, laptops and modems within an interactive system. All stations are compatible with other stations, allowing for interactive scenarios. The student stations have been produced in two configurations: A Real Gear Trainer system and a Personal Computer (PC) Simulation system. The Real Gear Trainer version mounts the communications equipment, copies of those on our Army vessels, on a base station. The PC

system incorporates virtual bridge communications equipment. The Instructor Operator Station is the main simulation control point supporting the instructor's role in simulator training. The Instructor Operator Station initializes / configures the attached student stations, conducts training scenarios, monitors and assesses student performance, and maintains simulation scenarios and the approved curriculum. Simulated procedures encompass voice and radiotelex operation over a wide range of frequencies with a variety of propagation conditions, satellite communications, receipt of maritime safety information, sending and receiving distress, urgency and safety messages.

Physical Information:

Real Gear Trainers: 5'6" high x 6'2" wide x 3' long.

IOS: 6' high x 7'10" wide x 2'9" long.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

None

Power Requirements:

Standard 120vac

Minimum 40 Amps per IOS

Applicable Publications:

Commercial documentation

Reference Publications:

US Coastguard Publications

Training Requirements Supported:

MOSCs 88K; 880 A1; 880 A2

VS300 FULL MISSION VESSEL BRIDGE SIMULATOR, FIXED BASE, (NO MOTION)

NSN 6910-01-582-3722

DVC 55-51/B VS200 Small Craft Vessel Bridge Simulator, Fixed Base, (No Motion)

NSN 6910-01-582-3746

DVC 55-51/C Theater Support Vessel (TSV), Full Mission Vessel Bridge Simulator, Fixed Base, (No Motion)

**Instructor Operator Station****Training Category/Level Utilized:**

Watercraft Vessel Operations

Logistic Responsible Command, Service or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainers:

Provide a simulation-based training curriculum to master skills necessary to operate a wide variety of current Army watercraft, selected Naval, USCG and commercial vessels in all operational conditions. Simulated vessels include; 1) 55-51/A, VS300 - LCU-2000, LSV, LT-800, USCG cutter, aircraft carrier and various commercial container ships., 2) 55-51/B, VS 200 - LCM-8 MOD I & II, SLWT, MT, ST 900, and High Speed Vessel X1, and 3) 55-51/C, TSV - High Speed Vessel X1 and Theater Support Vessel 1X. Ancillary equipment include; 1) 55-51/A, VS300 - a full GMDSS communications suite, EPIRB, SART, SCT-VHF, VHF radio, 3cm and 10 cm Navigational Radars, ECDIS, Magnetic compass, intercom and CCTV., 2) 55-51/B, VS 200 - VHF radio, 3cm and 10 cm Navigational Radars, ECDIS, Magnetic compass, intercom and CCTV, and 3) 55-51/C, TSV - a full GMDSS communications suite, EPIRB, SART, SCT-VHF, VHF radio, UHF Radio 3cm and 10 cm Navigational Radars, ECDIS, Magnetic compass, intercom and CCTV.

**Student Stations****Functional Description:**

The US Army Bridge Simulator consists of three major parts; 1) realistic instrumentation/maneuvering controls (real and simulated), 2) PC based graphic user interface video displays, and 3) instructor operator station. The realistic instrumentation/controls provide an immersive, fully interactive, realistically depicted vessel bridge. The interior of the simulator is configured to emulate; 1) 55-51/A, VS300 - the LSV, LCU and LT, 2) 55-51/B, VS 200 - the LCM, ST, and SLWT, and 3) 55-51/C, TSV - TSV. Each student or students can be placed into scenarios, which will provide training in the mechanics of actual vessel operations, underway watch procedures as well as operational techniques. The simulator is equipped with virtual reality binoculars and head mounted displays which provide students with overall situational awareness. Virtual spotlight enhances realistic nighttime operations training.

The Instructor Operator Station is the main simulation control point supporting the instructor's role in simulator training. The Instructor Operator Station initializes and conducts training scenarios, monitors and assesses student performance, and maintains simulation scenarios and the approved curriculum.

Simulated procedures encompass vessel operations in over 28 major US and world ports in countries such as Kuwait, Korea, Japan, Saudi Arabia, and Italy. Simulator can be integrated with Vessel Bridge Simulators and Barge Derrick cranes simulators to provide multiple ship exercises, piloting scenarios and multiple towing scenarios. Weather effects include wind, rain, snow, fog, sand, haze and the ability to dictate sea and tidal conditions. Daytime and nighttime operations are included. Intelligent autonomous vessel traffic can be simulated to provide a realistic environment to train vessel maneuvering and

adherence to the maritime navigational rules of the road. Simulated procedures encompass vessel operations in over 25 major US and world ports in countries such as Kuwait, Korea, Japan, Saudi Arabia, and Italy. Simulator can be integrated with Vessel Bridge Simulators to provide multiple ship exercises, piloting scenarios and multiple towing scenarios. Weather effects include wind, rain, snow, fog, sand, haze and the ability to dictate sea and tidal conditions. Daytime and nighttime operations are included. Intelligent autonomous vessel traffic can be simulated to provide a realistic environment to train vessel maneuvering and adherence to the maritime navigational rules of the road.

Physical Information:

55-51/A, VS300 - 16'8" high x 50' wide x 42' long. 20 Ft Radius screen with seven projected visual channels providing 270 x 31 degree field of view front and sides. Two (2) 50-inch display monitors providing 125-degree field of view rear.

55-51/B, VS200 - 16'8" high x 15' wide x 15' long. Seven - 50 inch displays providing 315 x 33 degree field of view front, sides and rear.

55-51/C, TSV - 14' high x 32' wide x 56' long. 15 Ft Radius screen with 11 projected visual channels providing 270 x 31 degree field of view front and sides. Three (3) 50-inch display monitors providing 125 degree field of view rear. IOS: 6' high x 18'8" wide x 8' long.

Power Requirements:

Standard 120VAC

Minimum 40 Amps per IOS

HVAC Requirements:

HVAC System shall maintain the interior of the facility at a temperature between 62 and 76 degrees F with a relative humidity between 50% and 80%. System shall provide for 30 persons in the facility at any given time

Equipment Required, Not Supplied:

None

Special Installation Requirements:

N/A

Training Requirements Supported:

MOSC 88K

BARGE DERRICK (BD) CRANE SIMULATOR

**Training Category/Level Utilized:**

Transportation/Level 1

Logistic Responsible Command, Service or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

The Barge Derrick (BD) Crane Simulator is a CSC Virtual Crane® Simulator configured to meet U.S Army requirements.

Functional Description:

The BD Crane simulator is an integral component of CSC Virtual Ship®, which is the basis of the Full Mission Bridge (FMB) and Straddle Carrier Bridge (SCB) simulators. The crane and ship simulators share common functions such as visualization, environment definition, and dynamic response.

Physical Information:

Fixed Base: 3 ft x 4 ft Operators Cab with seat and controls

Screen: Rear projections 6 x 8 ft

IOS: Key Board attached to student station

Equipment Required:

Uninterrupted power supply (UPS)

Special Installation Requirements:

None

Power Requirements:

Standard 120VAC

Maximum 40 Amps per IOS and 109 Amps per STS

Applicable Publications:

(COTS) Manuals

Reference Publications:

N/A

Training Requirements Supported:

MOSC 88H

ELECTRIC SWITCHBOARD SIMULATOR



Emergency Switchboard Panel

Training Category/Level Utilized:

Transportation/Level 1 - Watercraft Vessel Operations

Logistic Responsible Command, Service or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainers:

Provide a simulation-based training curriculum to master skills necessary to operate and maintain a shipboard switchboard.

Functional Description:

The switchboard is divided into three main sections. The two generator sections and one shore power section. A small add-on panel houses power factor and VAR meters for each generator. There is also an external emergency switch board and a load bank connected via power cables.

The main switchboard provides generator selection for control and power distribution for both 240 and 120 volts AC.

The main switchboard generator sections control, paralleling, and power distribution for both 240 and 120 volts AC. Power monitoring is provided by ammeters, voltmeters, frequency meters, and synchronization meters. Controls are provided for manual and automatic generator voltage regulation and generator engine speed regulation.

The power generation system provides primary (240 VAC, 3-phase, 60 Hz 250kW) and emergency (240vac, 3-phase, 60 Hz, 40kW) electrical power.

Primary power is generated by one of two ship's service diesel generator (SSDG) sets, which supply the main switchboard and the emergency switchboard through a bus tie from the main switchboard. Emergency power is generated by an emergency diesel generator set, which supplies the emergency switchboard for continued operation of vital systems and equipment during loss of primary power. The switchboard is capable of receiving



Main Switchboard Panel

shore power (480/240vac) through a shore power cable terminating at a two-connection shore power box. If available shore power is 480vac, the power is selected at the main switchboard through a circuit breaker and stepped down to 240vac by three shore power transformers, prior to main switchboard entry. Shore power of 240vac is selected at the main switchboard by circuit breaker, and bypasses the 480vac transformers. Automatic bus transfer equipment, located in the emergency switchboard, isolates the emergency switchboard from the main switchboard upon loss.

An interlock system is incorporated into the switchboard to prevent shore power from being applied to the switchboard while generator power is applied. The interlock system also prevents the emergency switchboard emergency generator circuit breaker from being closed.

The emergency switchboard bus tie provides 240vac to the emergency switchboard. Power selection is provided by closing circuit breakers on the switchboard. The switchboard bus tie also serves as an emergency 240vac power feedback source for the main switchboard from the emergency switchboard, to power selected equipment systems during emergency power conditions.

The Dynamite 300 Portable Load Bank is capable of providing a total of 289 Kilowatts of load at 240vac, 3 phase. The load can be added and subtracted in increments.

Physical Information:

Main Switchboard

77 ¾" H; 62" W; 36 ¼" D

Add-on panel

15 ¾" H; 19 ¾" W

Emergency Switchboard

78" H; 65" W; 36 ¼" D

Equipment Required, Not Supplied:

N14 Cummins(V8) Diesel Engine with a Newage International Stamford AC generator.

Special Installation Requirements:

N/A

289 KW @ 240vac

Applicable Publications:

N/A

Power Requirements:

Power is supplied by an N14 Cummins(V8) Diesel Engine with a Newage International, Stamford AC generator; 250KW, 240v, 3-phase, 60 Hertz, .8pf, WYE wound.

Reference Publications:

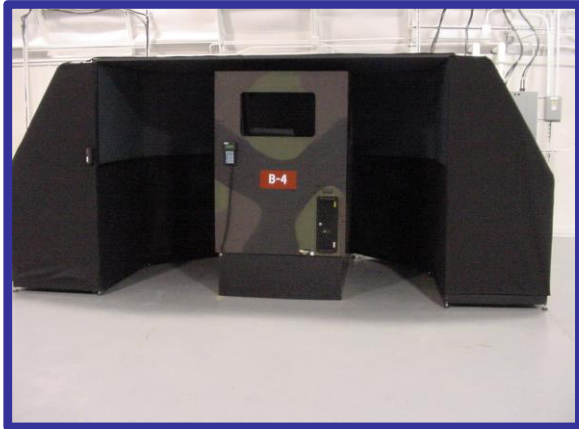
TM 55-1905-223 Series

Load Bank

300 KW @ 480vac

Training Requirements Supported:MOSCs 88; 881

US ARMY OPERATOR DRIVING SIMULATOR (USA-ODS)



(USA-ODS)



Visual Display System



Student Stations

Training Category:

Transportation/Level 1 - Motor Transport Operation

Logistic Responsible Command:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

Provide a simulation-based training curriculum to master skills necessary to operate medium and heavy tactical vehicles in all operational conditions. Simulated vehicles include: FMTV, M915, M939, HEMTT, PLS, & HET.

Functional Description:

The USA ODS consists of four major parts: visual display system, cab and dash instrumentation/controls, motion cueing device, and instructor operator station. The visual display system provides an immersive, fully

interactive, realistically depicted virtual world using high-resolution fully textured 3-D databases. Each student station can be configured with 3 or 5 visual channels to provide over 180° and 220° field of view, respectively. Manufactured cabs with 3 configurations of instrumentation/controls (emulating the HTV, MTV, Generic vehicles) provide the operator interface. Cabs include fully functional gauges and indicators with a force feedback steering system. All cabs are compatible with all vehicles simulated; with the particular cab types being designed to more closely match the controls of the target vehicle. The student station has been produced in two configurations: A full-motion system and a limited motion system. The full-motion version mounts the cab and visual displays on a full 6-Degrees-of-Freedom motion platform.

The limited motion system incorporates a 3-DOF seat actuator. The Instructor Operator Station is the main simulation control point supporting the instructor's role in simulator training.

The Instructor Operator Station initializes/configures the attached student stations, conducts training scenarios, monitors and assesses student performance, and maintains simulation scenarios and the approved curriculum. Simulated procedures encompass vehicle operation on-road and off-road -over a range of terrain- with a variety of weather conditions. Weather effects include wind, rain, snow, and fog. Daytime and nighttime, including blackout operations, are included. Intelligent autonomous traffic is simulated to provide a realistic environment to train for vehicle maneuvering.

Physical Information:

Full-Motion STS: Operational envelope – 12'6" high x 15' wide x 22' long (does not include a suggested 2' safety buffer on all sides).

Limited-Motion STS: 7' high x 10' wide x 16' long.

IOS: 7' high x 5' wide x 8' lo

Power Requirements:

Standard 120vac

Maximum 40 Amps per IOS and 109 Amps per STS

Equipment required (but not supplied):

None

Special Installation Requirements:

None

Applicable Publications:

TC 21-305. Training Program for Wheeled Vehicle Accident Avoidance

TC 21-305-1. Training Program for the Heavy Expanded Mobility Tactical Truck (HEMTT), Palletized Load System (PLS),

and Load Handling System (LHS) Family of Vehicles

TC 21-305-3. Training Program for the M939 Series 5-Ton Tactical Cargo Truck

TC 21-305-4. Training Program for the High Mobility Multipurpose Wheeled Vehicle

TC 21-305-5. Training Program for Equipment Transporters

TC 21-305-6. Training Program for the Tractor and Semitrailer

TC 21-305-7. Training Program for Light Vehicles

TC 21-305-8. Training Program for Medium Vehicles

TC 21-305-9. Training Program for the Heavy Equipment Transporter System

TC 21-305-10. Training Program for the Pelletized Load System

TC 21-305-11. Training Program for the Family of Medium Tactical Vehicles Operator

Reference Publications:

N/A

Training Requirements Supported:

MOSC 88M10-30 – Motor Transport Operator

RT 240 ROUGH TERRAIN CONTAINER HANDLER (RTCH) SIMULATOR, FIXED BASE, GENERIC, (NO SEAT MOTION)

**Training Category/Level Utilized:**

Transportation/Level 1 - Rough Terrain Container Handler

Logistic Responsible Command, Service or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainers:

Provides a simulation-based training curriculum to master skills necessary to operate the Kalmar RTCH in all operational conditions.

Functional Description:

The USA RTCH Trainer consists of four major parts: visual display system, cab and dash instrumentation/controls, and instructor operator station. The visual display system provides an, interactive, virtual world using a high-resolution fully textured database. Each student station is configured with 1 visual channel to provide the operator a field of view as seen from the operator's seat. The Instructor Operator Station is the main simulation control point supporting the instructor's role in simulator training. The Instructor Operator Station initializes/configures the attached student stations, conducts training scenarios, monitors and assesses student

performance, and maintains simulation scenarios and the approved curriculum.

Simulated procedures encompass RTCH operations, start up procedures, signal, double and triple stacking of containers, on-road and off-road driving, with a variety of Instructor induced faults that require a reaction from the student.

Physical Information:

Fixed Motion Base
3ft x 4ft Operators Cab With seat & controls
Screen: Rear projection 6 x 8 ft
IOS: Key Board attached to student station

Equipment Required, (But Not Supplied):

Uninterrupted power supply (UPS)

Special Installation Requirements:

None

Power Requirements:

Standard 120vac
Maximum 40 Amps per IOS and 109 Amps per STS

Applicable Publications:

(COTS) Manuals

Reference Publications:

N/A

Training Requirements Supported:

MOSC 88H

RT 240 ROUGH TERRAIN CONTAINER HANDLER (RTCH) SIMULATOR, FIXED BASE, GENERIC, (CONTAINERIZED, 20 FT)



(RTCH) Container



Cab w/Seat and Controls



Heat/AC Unit

Training Category/Level Utilized:

Transportation/Level 1 - Rough Terrain Container Handler

Logistic Responsible Command, Service or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainers:

Provides a simulation-based training curriculum to master skills necessary to operate the Kalmar RTCH in all operational conditions. This device is used to support Mobile Training Team (MTT) training request by taking training to the unit.

Functional Description:

The USA RTCH Trainer consists of four major parts: visual display system, cab and dash instrumentation/controls, and instructor operator station. The visual display system provides an, interactive, virtual world using a high-resolution fully textured database. Each student station is configured with 1 visual channel to provide the operator a field of view as seen from the operator's seat. The Instructor Operator Station is the main simulation control point supporting the instructor's role in simulator training. The Instructor Operator Station initializes/configures the attached student stations, conducts training scenarios, monitors and assesses student performance, and maintains simulation scenarios and the approved curriculum.

Simulated procedures encompass RTCH operations, start up procedures, signal, double and triple stacking of containers, on-road and off-road driving, with a variety of Instructor induced faults that require a reaction from the student.

This training device is mounted in a 20ft ISO container with its own 10KW diesel generator set (GENSET) and door mounted Heat/AC unit.

Physical Information:

Fixed Motion Base
3ft x 4ft Operators Cab with seat & controls
Screen: Rear projection 6ft x 8ft
IOS: Key Board attached to student station
20 Ft ISO Container
10KW Diesel Generator
Door Mounted Heat/AC Unit

Equipment Required, (But Not Supplied):

Uninterrupted power supply (UPS)
Capability to lift/move container

Additional Equipment:

10KW Diesel GENSET
Door Mounted Heat/AC Unit

Special Installation Requirements:

None

Power Requirements:

Standard 120vac
Maximum 40 Amps per IOS and 109 Amps per STS

Applicable Publications:

(COTS) Manuals

Reference Publications:

N/A

Training Requirements Supported:

MOSC 88H

RT 240 ROUGH TERRAIN CONTAINER HANDLER (RTCH) SIMULATOR, FIXED BASE, GENERIC, (CONTAINERIZED 40 FT)



(RTCH) Container



(RTCH) Classroom Setup

Training Category/Level Utilized:

Transportation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

Provides same training capability as Device 55-56. This device is mounted in a 40 ft ISO container with its own 10KW Diesel GENSET and door mounted Heat & AC unit, with the addition of a small classroom. This device is used to support MTT Training request by taking Training to the unit.

Functional Description:

The USA RTCH Trainer consists of four major parts: visual display system, cab and dash instrumentation/controls, and instructor operator station. The visual display system provides an, interactive, virtual world using a high-resolution fully textured database. Each student station is configured with 1 visual channel to provide the operator a field of view as seen from the operator's seat. The Instructor Operator Station is the main simulation control point supporting the instructor's role in simulator training. The Instructor Operator Station initializes/configures the attached student stations, conducts

training scenarios, monitors and assesses student performance, and maintains simulation scenarios and the approved curriculum.

Simulated procedures encompass RTCH operations, start up procedures, signal, double and triple stacking of containers, on-road and off-road driving, with a variety of Instructor induced faults that require a reaction from the student.

Physical Information:

Fixed Motion Base
3ft x 4ft Operators Cab With seat & controls
Screen: Rear projection 6 x 8 ft
IOS: Key Board attached to student station
40 Ft ISO Container
10KW Diesel Generator
Door Mounted Heat / AC Unit
Pull Down Screen (Manual)
Mounted Projector

Additional Equipment :

10KW Diesel Gen Set
Door Mounted Heat / AC Unit
2 Tables (Student work areas)
8 Chairs
Pull Down Screen
Audio Visual Projector

Equipment Required, Not Supplied:

Uninterrupted power supply (UPS)
Capability to lift/Move container

Special Installation Requirements:

None

Power Requirements:

Standard 120vac

Applicable Publications:

(COTS) Manuals

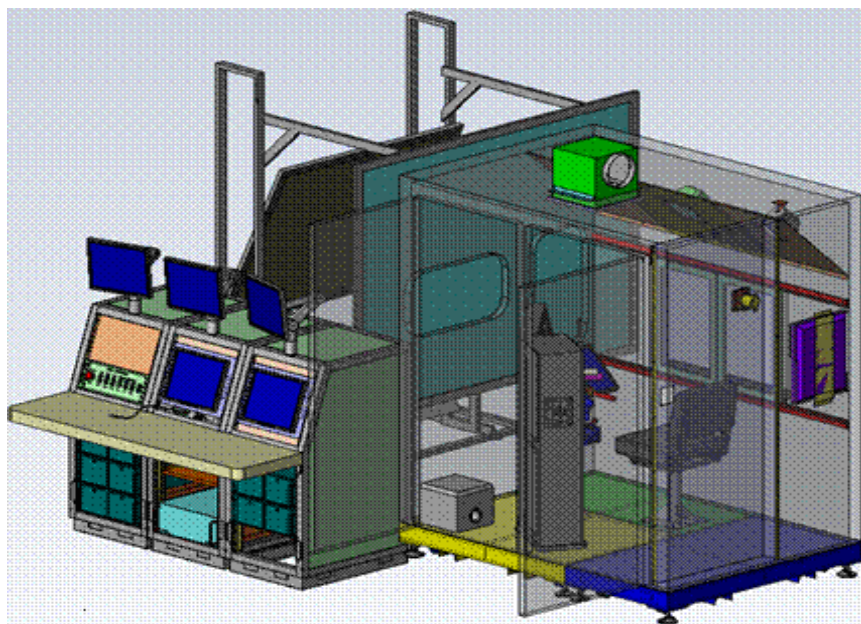
Reference Publications:

N/A

Training Requirements Supported:

MOSC 88H

LOCOMOTIVE ENGINEER TRAINING SIMULATOR (LETS)

**Training Category/Level Utilized:**

Transportation/Level 1 - Locomotive and Train Operation

Logistic Responsible Command, Service or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainers:

To provide realistic locomotive and train operating simulation-based training to master the skill of train dynamics and train handling simulating various type of freight cars, loaded or empty, over various track profiles.

Functional Description:

The LETS consists of three major parts: The locomotive half-cab which contains the AAR 105 control stand and rear visual monitor, the visual display system which consists of a 96" diagonal rear projection screen with projector supplying 1280x1024 resolution and a train performance display monitor providing the student with the information as to the train's status. The Instructor Operator Station, which control the simulation allowing the instructor/operator to input various scenarios involving type of motive power, train makeup, track configuration and scenarios testing student reaction to various situations. The system is run by five computers; a host computer, forward image generation, instructor operator station, rear view image generation, and records computer. The instructor/operators station also has a web camera to monitor the student's reaction and intercom with

microphone to communicate with the engineer. 105-style control stand has all functioning gauges and controls that would be found in the present DoD locomotive fleet. Visuals are all CGI generated with 50 miles of trackage embedded in the software. Instructor/operator has the ability to all types of weather occurring day or night. The audio speakers within the half cab will realistically reproduce all sounds associated with train operations.

Physical Information:

The simulator is non-motion based and is engineered to fit in a 16x18 feet room. The system runs on 115v AC power.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

N/A

Power Requirements:

(Information not available)

Applicable Publications:

(Information not available)

Reference Publications:

(Information not available)

MCN: 6910-01-T00-0348

Training Requirements Supported:

MOSC 88U

HIGH MOBILITY MULTIPURPOSE WHEELED VEHICLE (HMMWV) EGRESS ASSISTANCE TRAINER (HEAT)

**Training Category/Level Utilized:**

Transportation/ On-Site Personnel Trainer/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

_Not generally available for issue (limited production)

Purpose of Trainer:

The HEAT is used to provide safety instruction for vehicle occupants using a salvaged HMMWV body with doors, gunner's hatch, and ancillary items of correct dimensions and weight, such as seat belts; VIC-3 radio communications; gunner's platform; and combat locks. The purpose is to reduce injuries and fatalities associated with HMMWV rollover accidents. The trainer exposes the soldier to the disorienting effect of a vehicle rollover, and the associated physical effort required to execute a safe escape from an overturned vehicle. The HEAT builds and reinforces crew confidence by physically rehearsing and executing the steps required to survive a vehicle rollover.

Functional Description:

The trainer mechanically rotates the HMMWV training compartment in either direction through 90 to 180 degrees within nine (9) seconds of activation, and then returns the crew compartment to an upright position at the completion of the exercise. The HEAT is equipped with the capability for audio communication from the I/O to the students inside the trainer. The system has two video cameras in the crew compartment to give the I/O situational awareness of the interior; and also provides a recording tool for After Action Reviews (AAR). I/Os have the ability to stop and hold the trainer stationary at any time during operation, observing from any location in and around the device while using a remote control incorporating a dead man safety switch feature. Students also have the ability to stop the device from within the trainer via an emergency stop (E-Stop) button. The trainer automatically stops rotating if vehicle door combat locks are not properly engaged. The trainer can be operated indoors as well as outdoors in various weather environments. The HEAT is transportable on common military trailers using existing material handling equipment.

Physical Information:

HEAT in Stowed Position

- Height: 97 inches
- Width: 106 inches
- Length: 177 inches
- Weight: 13,200 lbs.

HEAT Fully Operational

- Height: 121 inches
- Width: 182 inches
- Length: 177 inches
- Weight: 13,200 lbs.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

No special requirements

Power Requirements:

The HEAT has battery power and can also be powered by existing, electrical power sources (110 and 220 voltage), using a power cable with universal power adapters.

Applicable Publications:

OUM/SMM

Reference Publications:

None

Training Requirements Supported:Trains all MOSC series.

ENGINE ROOM SIMULATOR (ERS), FIXED BASE, (NO MOTION)



(ERS) Operating Station



(ERS) Workstation Room

Training Category/Level Utilized:

Transportation/Level 1 - Watercraft Vessel Operations

Logistic Responsible Command, Service or Agency:

TSS ENTERPRISE, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

Provide a simulation-based training curriculum to master skills necessary to operate and maintain engineering systems of four classes of Army watercraft, to include a High Speed Vessel, based on the US Army Vessel Spearhead, TSV-1X and the US Navy USS Swift, HSV-2. The ERS will provide Army watercraft engineers, from entry level to Chief Engineer, with real-time, man-in-the-loop simulation training to Army doctrinal standards.

Part-task functionality training will allow dedicated training on each of the various sub-systems found in the engine room, linking theory to dynamically operating components. This simulator will train complex interaction between engine room systems and single sub-systems to entire ship systems. Training can be taught in either normal or abnormal operating condition, thus allowing students to be subjected to conditions that may not be encountered while underway. Collective-task (team training) will allow for advanced training of students working as a team to operate, maintain, and troubleshoot full-system/full mission simulation scenarios.

Functional Description:

The ERS combines computer-based simulation with vessel-specific, three-dimensional, physically interactive simulation and stimulation hardware components.

The ERS is comprised of several functional areas;

a. Instructor Operating Station (IOS) - the main simulation control point supporting the instructor's role in simulator training. The IOS initializes and conducts training scenarios, monitors and assesses student performance.

b. Engine Room (ER) - reconfigurable hardware to represent any of four vessel engine rooms.

c. Engine Operating Stations (EOS) - replicates the vessel's engine control room.

d. Workstation Room - includes student computer workstations and a briefing/AAR area.

e. Remote Operating Stations (ROS) - replicates vessels' bridge control and monitoring stations.

Physical Information:

ERS: Total 3300 square feet, two-level facility.

IOS: Centrally-located, raised, one-way reflective glass, with line-of-sight and electronic audio/visual monitoring of the ER and ROS areas.

Workstation Room: 900 square feet, 12 two-student computer-based workstations, projector, instructor operating station and smart board.

ER: 1000 Square feet, raised- panel floor, with modular electronic interface between moveable system hardware components and simulation software.

ROS: Approximately 400 square feet, contains bridge control and monitoring stations, power distribution and control compartment, and emergency generator compartment.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

The ERS facility requires 13-ton HVAC to dissipate the calculated heat load of simulation equipment and personnel. Additionally, the requirement for dedicated electrical circuits and amperage is approximately 1.5 time that of a typical classroom/office facility.

Power Requirements:

(Information not available)

Applicable Publications:

(Information not available)

Reference Publications:

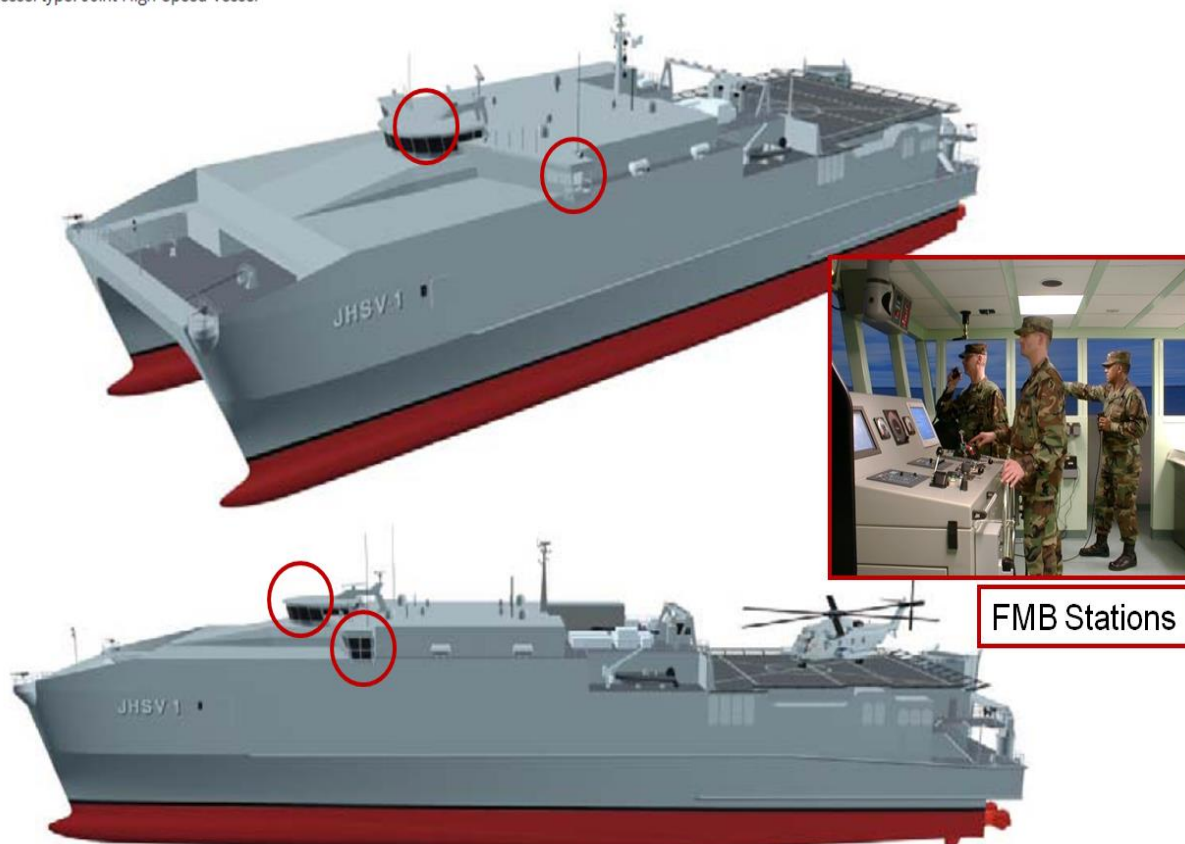
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Training Requirements Supported:

MOSC 88K

JOINT HIGH SPEED VESSEL (JHSV) ENGINE ROOM SIMULATOR (ERS)

Vessel type: Joint High Speed Vessel

**Training Category/Level Utilized:**

Transportation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not available for issue (limited production)

Purpose of Trainer:

The JHSV Engine Room Simulation (ERS) system is provided as an upgrade to the existing Maritime Integrated Training System (MITS) ERS. The JHSV ERS system upgrades the Theater Support Vessel (TSV) ERS elements of the existing multi-ship ERS system to the JHSV machinery system. All the other existing capabilities of the ERS, such as the instructor station, evaluation system and Command and Control Training Vehicle (CCTV) monitoring system, remain in place and fully functional. Existing ERS elements will be upgraded with the newest

JHSV software version in order to ensure native compatibility across all ERS student stations and Instructor/Operator Stations (IOSs).

Functional Description:

The JHSV trainer design will include an ERS training component which will be compatible with, and integrated with, the existing ERS trainer located at the USATSC, Fort Eustis, VA. The JHSV ERS design concept will be considered an upgrade of the existing ERS TSV engineering trainer and will be installed in the same physical space as the existing ERS TSV training system. It will use as much of the existing hardware and software as is determined practical. The upgraded JHSV system will integrate with, and be compatible with, the MITS. The upgrades will include the JHSV, Full Mission Bridge (FMB) simulator, and the ERS. With the exception of the ERS, all elements of the MITS will be networked to allow interactive training scenarios included in mission requirements.

Physical Information:

Multiple devices. This is an upgrade to the TSV, FMB, and ERS.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

N/A

Power Requirements:

No special power or electrical connections.

Applicable Publications:

JHSV (OUM)
JHSV (SMM)
JHSV (COTS) Manuals

Reference Publications:

Full Mission Bridge Simulator (OUM)
Full Mission Bridge (SMM)
JHSV (TSV Upgrade) Bridge Simulator (OUM)
JHSV (TSV Upgrade) Bridge (SMM)

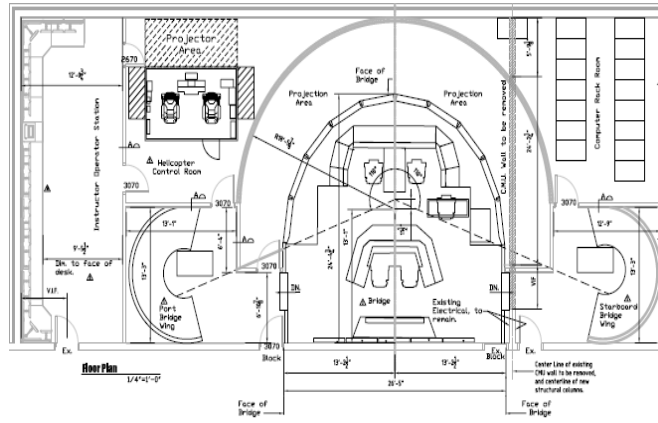
Training Requirements Supported:

MOSCs 880A-1-880A-2; 881A1-881A2; 88K10-40;
88L10-40; 92G10-20

JOINT HIGH SPEED VESSEL (JHSV), FULL MISSION VESSEL BRIDGE SIMULATOR, FIXED BASE, (NO MOTION)



(JHSV) Watercraft



(JHSV FMB) Simulator Positions

Training Category/Level Utilized:

Transportation/Level 1
Joint High Speed Craft Vessel / Watercraft Operations
Training

Logistic Responsible Command, Service, or Agency:

TSS ENTERPRISE, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

Provides a simulation-based training curriculum to master skills necessary to operate the Joint High Speed Vessel (JHSV) to selected Naval and Military Sealift Command Mariners.

Functional Description:

The JHSV Full Mission Bridge Simulator (JHSV FMB) consists of a fully integrated system of hardware and software that provides real-time, man-in-the-loop simulation training to the bridge watch team, as well as watch standing personnel, of a JHSV. Training tasks include all functions carried out underway on a High Speed Craft (HSC), such as the JHSV, which are required for Bridge Personnel HSC Type Rating. This includes direct coordination between the Vessel Master/Officer of the Deck, Engineer, Engineer Rover, and Navigator while operating at high speeds and in docking and undocking maneuvers. It also includes training and coordination with the Helicopter Flight Control Station operator during flight operations. The JHSV FMB simulator is able to simulate

all sea and environmental conditions encountered during anticipated JHSV operations.

The JHSV FMB simulator has the capability to operate as a stand-alone trainer or integrated in exercises with other JHSV simulation systems, including the JHSV Engine Room simulator and the JHSV Vessel Defense simulator. In addition, the JHSV FMB simulator has the capability to run integrated exercises with other MITS bridge simulators located in the Simulation Training Facility. In the JHSV, the bridge acts as the central control area for the ship with respect to navigation, engineering, communications, and damage control.

The Instructor Operator Station is the main simulation control point supporting the instructor's role in simulator training. The (IOS) initializes and conducts training scenarios, monitors and assesses student performance, and maintains simulation scenarios and the approved curriculum.

Simulated procedures encompass vessel operations in over 42 major US and world ports in countries such as Kuwait, Korea, Japan, Saudi Arabia, and Italy. Simulator can be integrated with Vessel Bridge Simulators, Engine Room Simulator and Vessel Defense Simulator to provide multiple ship exercises, piloting scenarios and multiple towing scenarios. Weather effects include wind, rain, snow, fog, sand, haze and the ability to dictate sea and tidal conditions. Daytime and nighttime operations are included. Intelligent autonomous vessel traffic can be simulated to provide a realistic environment to train vessel maneuvering and adherence to the maritime navigational rules of the road.

Physical Information:

14' high x 32' wide x 56' long.
15 Ft Radius screen with 7 projected visual channels
providing 270 x 31 degree field of view front and
sides. Five (5) 50 inch display monitors providing
125 degree field of view rear.
IOS: 8' high x 18'8" wide x 8' long.

Equipment Required, Not Supplied:

Uninterrupted power supply (UPS)

Special Installation Requirements:

None

Power Requirements:

120V-60Hz AC
240V-60Hz AC

Applicable Publications:

CSC JHSV (COTS) Manuals

Reference Publications:

JHSV STRAP

Training Requirements Supported:

MOSC - USCG HSC Type Rating for Mariners

CRADLE AND SPINNER, MINE RESISTANCE AMBUSH PROTECTED (MRAP) EGRESS TRAINER (MET)

NSN 6910-01-574-5377
NSN 6910-01-586-3632
NSN 6910-01-587-0945
NSN 6910-01-587-0932

DVC 55-66/1
DVC 55-66/2
DVC 55-66/7
DVC 55-66/8

Maxx Pro Cab
MATV Cab
RG-33LCab
RG-33 SOCOM Cab



(MRAP) Simulator Control Panel



(MRAP) Simulator Trainer

Training Category/Level Utilized:

Transportation/Level 3 - On Site Personnel Trainer

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

TSS ENTERPRISE, Orlando FL

Purpose of Trainer:

The MET is an urgent need acquisition for training Soldiers to survive rollover accidents. The MET will be used to train Soldiers on the effects of rollover and conduct drills that will provide them with the skills to react properly during a rollover and/or egress situation.

Functional Description:

The MET is used to provide safety instruction for vehicle occupants using different MRAP Cab variants currently fielded by the military - the MaxxPro, MATV, RG-33L and RG-SOCOM with door's, gunner's hatch, and ancillary items of correct dimensions and weight, such as seat belts; radio communications; gunner's platform; and combat locks. The purpose is to reduce injuries and fatalities associated with MET rollover accidents. The trainer exposes the soldier to the disorientating effect of a vehicle rollover, and the associated physical effort required to

execute a safe escape from an overturned vehicle. The MET builds and reinforces crew confidence by physically rehearsing and executing the steps required to survive a vehicle rollover.

The trainer mechanically rotates the MRAP training compartment in either direction 360 degrees however egress training is conducted at 90 or 180 degrees, and then returns the crew compartment to an upright position at the completion of the exercise. The MET is equipped with the capability for audio communication from the I/O to the students inside the trainer; has a video camera in the crew compartment to give the I/O situational awareness of the interior; and provides a recording tool for After Action Review (AAR). I/Os have the ability to stop and hold the trainer stationary at any time during operation, observing from any location in and around the device, while using a remote control incorporating a dead man safety switch feature. Students also have the ability to stop the device from within the trainer via an emergency shutoff switch. The trainer automatically stops rotating if vehicle door combat locks are not properly engaged. The trainer can be operated indoors as well as outdoors in various weather environments. The MET is transportable on common military trailers using existing material handling equipment.

Physical Information:

MET Cradle and Spinner Dimensions: 18' wide, 34' long and 12' high Weight:

Minimum Cab variants configuration: 26,000 for small MRAP cab.

Maximum Cab variants configuration: 33,000 pounds for large MRAP cab.

There are no hard facility requirements for MET, however, optimal size for facility training space and pad would be 55' long X 50' wide.

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Adequate lighting require for indoor training

Adequate HVAC facility recommended for extremely hot and cold environments

Proper lifting devices must be use for cabs changing

Power Requirements:

220-volt 50 hertz

Commercial power (power cable included); small generator (not included); 12-volt batteries (1) (included), NATO slave cable receptacle (included).

Applicable Publications:

MET OUM

MET SMM

Reference Publications:

New Equipment Material documents

MCM: 6910-01-C13-8446

Training Requirements Supported:

Individual Training: Any MOSC with a mission requirement to operate a vehicle in an environment where a vehicle rollover threat is likely. Operators may also include military civilians and contractors. (2)

Operators/Maintainers are recommended for safe operations

ALL TERRAIN LIFTER ARMY SYSTEM (ATLAS) SIMULATOR, WITH MOTION BASE, (2 DOF MOTION)

**Training Category/Level Utilized:**

Transportation/Level 1

Logistic Responsible Command, Service, or Agency:

TSS ENTERPRISE, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production)

Purpose of Trainer:

Provides a simulation-based training curriculum to master skills necessary to operate the Atlas Forklift in all operational conditions.

Functional Description:

The USA Atlas simulator consists of four major parts: 4 visual displays, cab, dash instrumentation/controls, motion platform, and instructor operator station. The visual displays provide an, interactive, virtual world using a high-resolution fully textured database. Each student station is configured with 4 visual channels to provide the operator a field of view as seen from the operator's seat. The Instructor Operator Station is the main simulation control point supporting the instructor's role in simulator training. The Instructor Operator Station initializes/configures the attached student stations, conducts training scenarios, monitors and assesses student performance, and maintains simulation scenarios and the approved curriculum.

Simulated procedures encompass ATLAS operations, start up procedures, loading / unloading of Cargo pallets,

on-road and off-road driving, with a variety of Instructor induced faults that require a reaction from the student.

Physical Information:

2 DOF Motion Base
3ft x 4ft Operators Cab With seat & controls
4 LCD Monitors
IOS: stand alone system with monitors
6.000 /10,000 LB Rough Terrain Forklift

Equipment Required, Not Supplied:

Uninterrupted power supply (UPS)

Special Installation Requirements:

None

Power Requirements:

Standard 120vac
Maximum 40 Amps per IOS and 109 Amps per STS

Applicable Publications:

(COTS) Manuals

Reference Publications:

N/A

Training Requirements Supported:

MOSC 88H; 89B; 92A

**ALL TERRAIN LIFTER ARMY SYSTEM (ATLAS) SIMULATOR, WITH MOTION
BASE, (2 DOF MOTION), (CONTAINERIZED, 20FT)**

**(ATLAS) Container****Setup****2 DOF****IOS**

Training Category/Level Utilized:
Transportation/Level 1

Logistic Responsible Command, Service, or Agency:
TSS ENTERPRISE, Orlando FL

Source and Method of Obtaining:
Not generally available for issue (limited production)

Purpose of Trainer:
Provides a simulation-based training curriculum to master skills necessary to operate the Atlas Forklift in all operational conditions.

Functional Description:
The USA Atlas simulator consists of four major parts: 4 visual displays, cab, dash instrumentation/controls, motion platform, and instructor operator station. The visual displays provide an, interactive, virtual world using a high resolution fully textured database. Each student station is configured with 4 visual channels to provide the operator a field of view as seen from the operator's seat. The Instructor Operator Station is the main simulation control point supporting the instructor's role in simulator training. The Instructor Operator Station initializes/configures the attached student stations, conducts training scenarios, monitors and assesses student performance, and maintains simulation scenarios and the approved curriculum. Simulated procedures encompass ATLAS operations, start up procedures, loading / unloading of Cargo pallets, on-road and off-road

driving, with a variety of Instructor induced faults that require a reaction from the student.

Physical Information:
2 Degrees of Freedom (DOF) Motion Base
3ft x 4ft Operators Cab With seat & controls
4 LCD Monitors
IOS: stand alone system with monitors
6,000 /10,000 LB Rough Terrain Forklift
20 Ft ISO Container
10KW Diesel Generator
Door Mounted Heat/AC Unit

Equipment Required, Not Supplied:
Uninterrupted power supply (UPS)
Capability to lift/move container

Additional Equipment:
10KW Diesel GENSET
Door Mounted Heat/AC Unit

Special Installation Requirements:
None

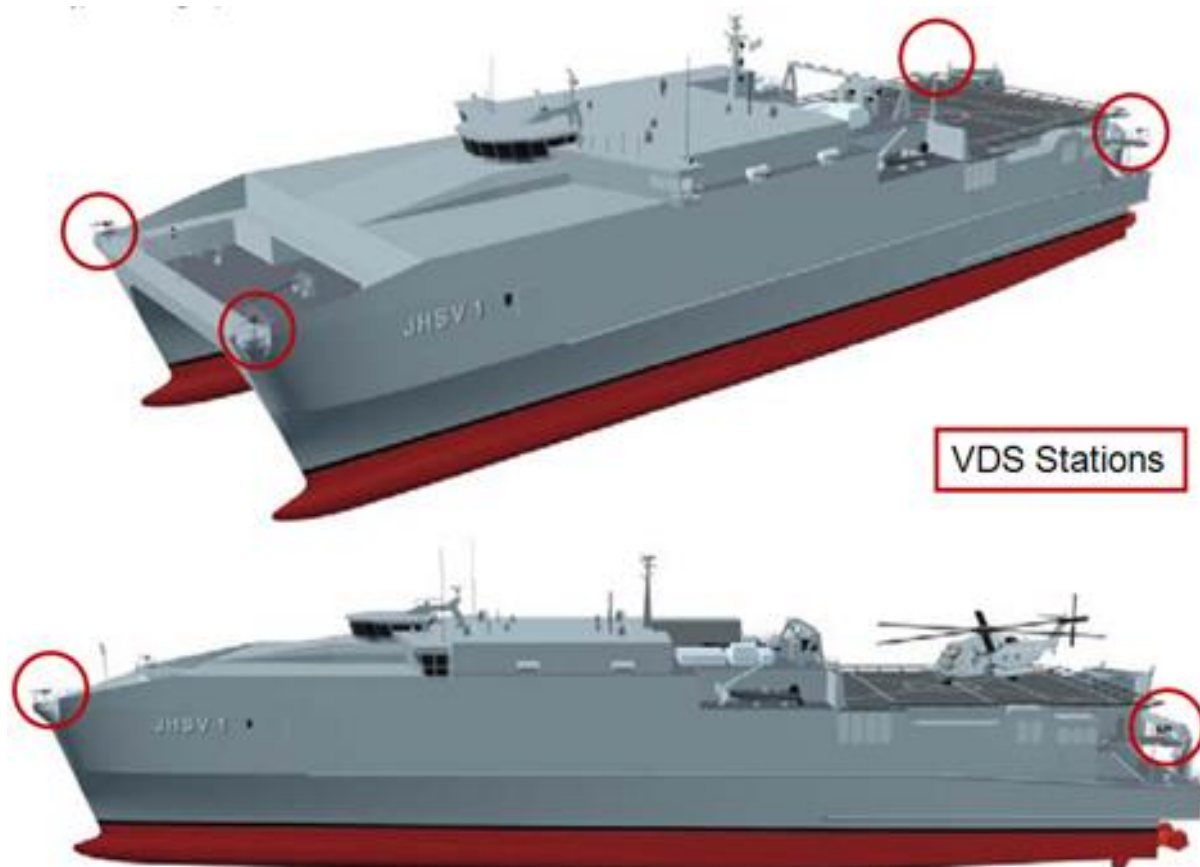
Power Requirements:
Standard 120vac
Maximum 40 Amps per IOS and 109 Amps per STS

Applicable Publications:
(COTS) Manuals

Reference Publications:
N/A

Training Requirements Supported:
MOSC 88H; 89B; 92A

VESSEL DEFENSE SIMULATOR (VDS)

**Training Category/Level Utilized:**

Transportation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not available for issue (limited production).

Purpose of Trainer:

The mission of the Vessel Defense Simulator (VDS) is to provide the Army with the joint training needs for crews operating and defending a vessel from armed threat at close range. The VDS will be specifically designed to provide a highly effective training and learning environment for defensive tactics, techniques, and procedures employing weapons in defense of vessels. The intended training purpose of the VDS is to enable total team training for vessel crews, to include the command and leadership roles of officers and crew.

Functional Description:

The VDS will be designed to train crews operating and defending maritime vessels from armed threat at close range, which is generally between 50 and 500 yards. The VDS will have four physical gun positions which represent the actual gun mount positions on an Army Joint High Speed Vessel (JHSV), Logistics Support Vessel (LSV), Landing Craft Utility-2000 (LCU-2000), and Landing Craft Medium-8 (LCM-8), allowing for an effective training and learning environment for defensive tactics, techniques and procedures. The VDS trainer will be capable of facilitating training scenarios for threat activity while in port or underway. The VDS will contain training weapons with simulated representation of ballistics. The premise of the VDS is that it is not sufficient to simply have qualified gunners; it is essential that the entire team is trained and practiced in skills and knowledge for legal and effective management of weapons, personnel, ammunition, and communications within the context of governing law and regulatory authority.

Physical Information:**Dimensions:** 47'2" W, 32'0" D, 9'7" H**Equipment Required, Not Supplied:**

None

Special Installation Requirements:

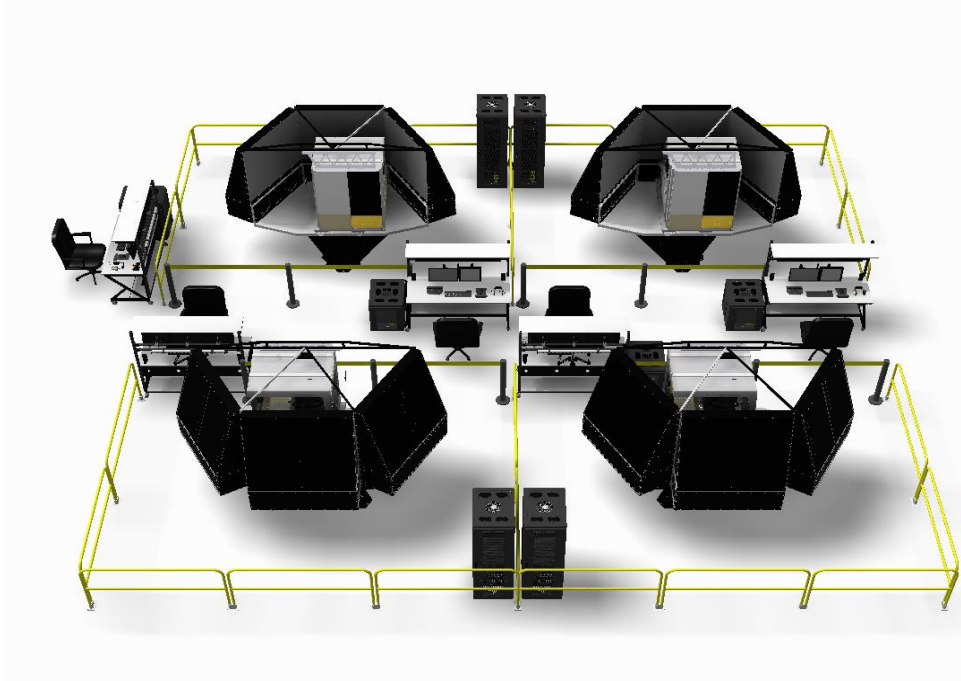
N/A

Power Requirements:

No special power or electrical connections

Applicable Publications:VDS OUM
VDS SMM,
VDS (COTS) Manuals**Reference Publications:**_Full Mission Bridge Simulator OUM,
Full Mission Bridge SMM,
JHSV (TSV Upgrade) Bridge Simulator OUM,
JHSV (TSV Upgrade) Bridge SMM**Training Requirements Supported:**MOSCs 880A2; 881A2; 88K10-40; 88L10-40; 92G10-20; 25C10-10; 68W20

COMMON DRIVER TRAINER, TACTICAL WHEELED VARIANT (CDT-TWV)



(CDT TWV) Vehicle Simulator Platform

Training Category/Level Utilized:

Transportation/Level 1

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Not generally available for issue (limited production).

Purpose of Trainer:

The CDT-TWV will assist in the training of tactical vehicle drivers during Initial Entry Training (IET) and sustainment. Vehicle variants are:

M1083A1, Medium Tactical Truck (MTV) with M1095 MTV Trailer.

M915A3 Line Haul Truck Tractor with M872A4 Semitrailer Flatbed

M915A5 Line Haul Truck Tractor with M872A4 Semitrailer Flatbed

M1120A4 HEMTT Load Handling System with M1077A1 Palletized Load System (PLS) Flatrack and M1076 PLS Trailer

Functional Description:

The CDT-TWV will enable training in critical driver tasks that can be repetitively trained and that are dangerous and/or infrequently trained in the “real world”. Examples are driving on ice, fording streams, driving under blackout conditions and driving down steep embankments when coming off an improved road, etc.).

The CDT-TWV vehicle platform shall be composed of common modules along with a specific module for the different vehicle variants. The components of the specific module shall be the driver’s compartment, instruments, driver controls and the software required to operate the driver compartment and interact with the common modules. The driver training scenarios can be “scripted” to enable practice encountering the same tactical, terrain and traffic conditions repetitively or programmed for random variations in traffic along the same route. The training scenarios can also be executed “unscripted” allowing maximum variability of route and environmental conditions.

Physical Information:

The CDT-TWV consists of one pod which includes one Instruction Operator Station (IOS), four Student Training Stations (STS) and four After Action Review (AAR) stations. The AAR stations may also be used for assistant drivers. The total footprint is L40’ x W48’.

Equipment Required, Not Supplied:

None

STS (QTY 4): 4 dedicated 20A120VAC circuits with 2 plugs each.

Special Installation Requirements:

None

Motion Platform (QTY 4): Preferred A dedicated 25A 3X480VAC.

Power Requirements:

CDT-TWV Pod consisting of 1 ea. IOS, 4 ea. AARs, 4 ea. STS and 4 ea. Motion Platforms.

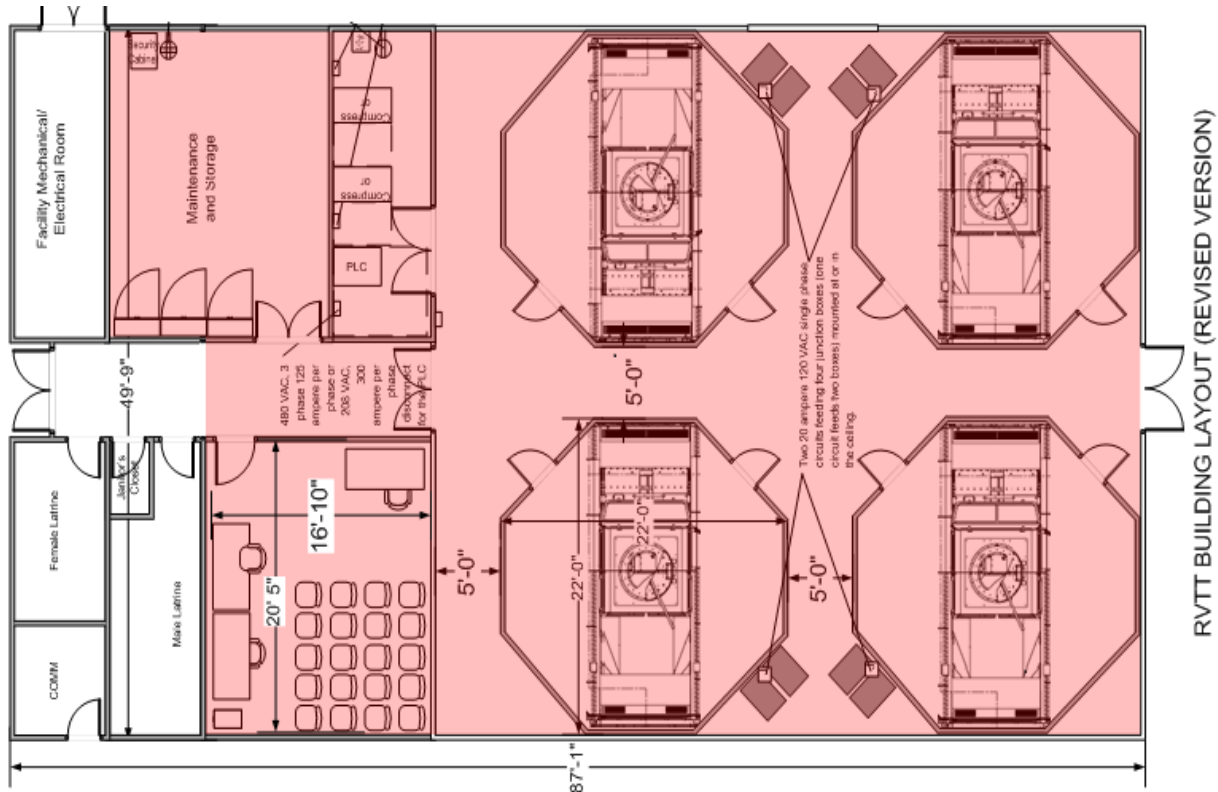
IOS (QTY 1): 2 dedicated 20A@120VAC circuits with 2 plugs each.

AAR (QTY 4): 1 dedicated 20A@120VAC circuit with 2 plugs each.

Applicable Publications:TM 17-6920-913-10, (OUM)
TM 17-6920-913-24&P, (SMM)**Reference Publications:**

None

Training Requirements Supported:MOSC 88M

FIXED SITE RECONFIGURABLE VEHICLE TACTICAL TRAINER (FS/RVTT)

Training Category/Level Utilized:
Transportation/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Not generally available for issue. Limited to Basis of Issue locations.

Purpose of Trainer:
The Fixed Site Reconfigurable Vehicle Tactical Trainer (FS/RVTT) is a part of the Close Combat Tactical Trainer (CCTT) and helps units train on the family of High Mobility Multi-Wheeled Vehicle (HMMWV) and Heavy Expanded Mobility Tactical Truck (HEMTT) tactical wheeled vehicles across the warfighting functions of Movement and Maneuver, Fires, Intelligence, Sustainment, Command and Control and Protection.

Functional Description:

The FS/RVTT system is a computer-driven, manned simulator replicating the HMMWV and HEMTT tactical wheeled vehicles found in Infantry Brigade Combat Teams (IBCT) and Airborne, Ranger and Special Forces units. The system computer creates a simulated battlefield when viewed by Soldiers creating the illusion of moving and fighting over actual terrain while operating or riding inside the actual vehicles and employing the actual weapons. Ring mount weapons include .50 cal, MK-19, M240 and the M249 SAW. Crew weapons include M4, M9 and AT4 mounted in or on the vehicles. The system consists of four Reconfigurable Vehicle Simulator (RVS) manned modules and the following workstations: (not shown) After Action Review (AAR), Maintenance Console (MC) / Master Control Console (MCC), Operations Center (OC) and a Semi-Automated Forces (SAF) workstation. The system utilizes the same software as the CCTT system and therefore is fully interoperable with the CCTT system and any other system that interoperates with the CCTT system.

Physical Information:

62 feet x 64 feet (TYPICAL)
Fixed sites vary in size

Equipment Required, Not Supplied:

Combat Vehicle Crewman (CVC) helmets. Equipment
(if required by scenario).

Special Installation Requirements:

Phone and cable lines not provided.

Power Requirements:

480vac, 3-phase, 60 Hz
208vac 3 phase, 60 Hz

Applicable Publications:

TD 17-6930-702, System Maintenance Manual
(CCTT) Facilitator's Guide – Mobile Set, CFG2-02

Reference Publications:

SMM 71-6920-917-24 Manned Maintenance
Manual/System Maintenance Manual Reconfigurable
Vehicle Tactical Trainer (RVTT) Reconfigurable Vehicle
Simulator (RVS)

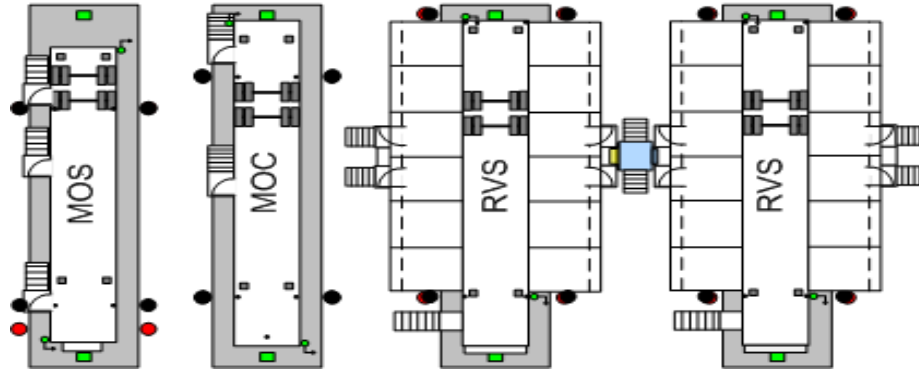
OUM 71-6920-917-10 Manned Operator's
Guide/Operator's User Manual Reconfigurable Vehicle
Tactical Trainer (RVTT) Reconfigurable Vehicle Simulator
(RVS)

DVC 55-71 was previously assigned as DVC 71-02/15.

Training Requirements Supported:

MOSC 11; 18; and 19 Series

CCTT RECONFIGURABLE VEHICLE TACTICAL TRAINER, MOBILE (RVTT/MOB)


Training Category/Level Utilized:

Transportation/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The CCTT Reconfigurable Vehicle Tactical Trainer, Mobile (RVTT/MOB) is part of the Close Combat Tactical Trainer (CCTT) product line and helps units train on the family of High Mobility Multi-Wheeled Vehicle (HMMWV) and Heavy Expanded Mobility Tactical Truck (HEMTT) tactical wheeled vehicles across the warfighting functions of Movement and Maneuver, Fires, Intelligence, Sustainment, Command and Control and Protection.

Functional Description:

The RVTT/MOB system is a computer-driven, manned simulator replicating the HMMWV and HEMTT tactical wheeled vehicles found in Infantry Brigade Combat Teams (IBCT) and Airborne, Ranger and Special Forces units. The system computer creates a simulated battlefield creating the illusion of moving and fighting over actual terrain while operating or riding inside the actual vehicles and employing the actual weapons. Ring mount weapons include .50 cal, MK-19, M240 and the M249 SAW. Crew weapons include M4, M9 and AT4 mounted in or on the vehicles. The RVTT/MOB consists of four (4) semitrailers: two (2) Reconfigurable Vehicle Simulator (RVS) Semitrailers housing four (4) RVS manned modules, one (1) Mobile Operations Center (MOC) Semitrailer with an After Action Review (AAR) capability, one (1) Operations Center (OC) Workstation, one (1) Semi-Automated Forces (SAF) Workstation and one (1) Maintenance, Office, Storage (MOS) Semitrailer providing space for kits,

weapons storage and a maintenance work area.

An optional Portable Power System (PPS) from CCTT can be hooked up if shore power is unavailable.

The RVTT/MOB utilizes the same software as the Close Combat Tactical Trainer (CCTT) system and therefore is fully interoperable with the CCTT system and any other system that interoperates with the CCTT system.

Physical Information:

Two (2) RVS Semitrailers (NSN 6930-01-576-4027, DVC 55-72/A) - 48' Long, 102" Wide, 162" High

One (1) MOC Semitrailer (NSN 6910-01-641-6419, DVC 55-72/D) - 53' Long, 102" Wide, 162" High

One (1) MOS Semitrailer:
53' (NSN 6910-01-582-5531, DVC 55-72/B) - 102" Wide, 162" High

OR

48' (NSN 6910-01-582-5483, DVC 55-72/C) - 102" Wide, 162" High

One (1) PPS Semitrailer (NSN 6120-01-619-1329 (DVC 17-292/E) - As Required

OR

One (1) PPS Semitrailer (NSN 6920-01-619-1330 (DVC 17-292/F) - As Required

Equipment Required, Not Supplied:

Combat Vehicle Crewman (CVC) helmets
Personal Chemical Protective Equipment (if required by scenario)

Special Installation Requirements:

Requires data and phone line provided by installation.

Power Requirements:

480vac, 3-phase, 60 Hz

Applicable Publications:

SMM 71-6920-917-24 Manned Maintenance
Manual/System Maintenance Manual Reconfigurable
Vehicle Tactical Trainer (RVTT) Reconfigurable
Vehicle Simulator (RVS)

QUM 71-6920-917-10 Manned Operator's
Guide/ Operator's User Manual Reconfigurable

Vehicle Tactical Trainer (RVTT) Reconfigurable
Vehicle Simulator (RVS).

Training Requirements Supported:

MOSC 11, 18 and 19 Series

CCTT MOBILE RECONFIGURABLE VEHICLE SIMULATOR (M/RVS) SEMITRAILER



Training Category/Level Utilized:
Transportation/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Available through local TSC

Purpose of Trainer:
The CCTT Mobile Reconfigurable Vehicle Simulator (M/RVS) Semitrailer is the main component of the CCTT Reconfigurable Vehicle Tactical Trainer, Mobile (RVTT/MOB) and trains units on the family of High Mobility Multi-Wheeled Vehicle (HMMWV) and Heavy Expanded Mobility Tactical Truck (HEMTT) tactical wheeled vehicles across the warfighting functions of Movement and Maneuver, Fires, Intelligence, Sustainment, Command and Control and Protection.

Functional Description:
Each M/RVS Semitrailer contains two manned module simulators which train soldiers in basic and advanced convoy skills using variable terrain and roads in a variety of weather, visibility and vehicle operational conditions. The manned module simulators incorporate small arms, Counter Radio-Controlled Improvised Explosive Devices (RCIED) Electronic Warfare Increment 2 (CREW-2) and crew served weapons within an interactive ground vehicle simulator. Additionally, the M/RVS manned modules provide training on Fire Coordination between vehicles, Call for Fire and Close

Air Support (CAS) and allow for rapid integration of lessons learned.

The system utilizes the same software as the CCTT system and therefore is fully interoperable with the CCTT system and any other system that interoperates with the CCTT.

Physical Information:
48' Long, 102" Wide, 162" High

Equipment Required, Not Supplied:
Combat Vehicle Crewman (CVC) helmets
Personal Chemical Protective Equipment (if required by scenario)

Special Installation Requirements:
Requires data and phone line provided by installation.

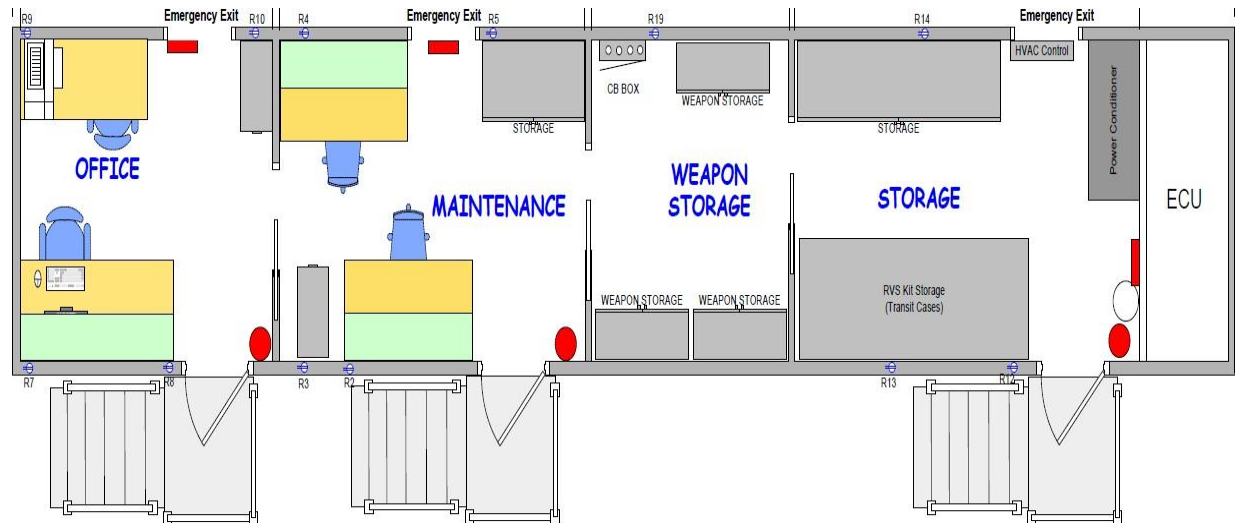
Power Requirements:
480vac, 3-phase, 60 Hz

Applicable Publications:
[SMM 71-6920-917-24](#) Manned Maintenance Manual/System Maintenance Manual Reconfigurable Vehicle Tactical Trainer (RVTT) Reconfigurable Vehicle Simulator (RVS)

[OUM 71-6920-917-10](#) Manned Operator's Guide/Operator's User Manual Reconfigurable Vehicle Tactical Trainer (RVTT) Reconfigurable Vehicle Simulator (RVS).

Training Requirements Supported:
MOSC 11, 18 and 19 Series.

CCTT MAINTENANCE, OFFICE, STORAGE (MOS) SEMITRAILER, 53', 380VAC 50Hz (MOS/MOB)



Training Category/Level Utilized:

Transportation/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available at local TSC.

Purpose of Trainer:

The CCTT Maintenance, Office, Storage (MOS) Semitrailer provides operator and maintainer personnel with office and storage support to perform maintenance on the CCTT Reconfigurable Vehicle Tactical Trainer, Mobile (RVTT/MOB), DVC 55-72.

Functional Description:

The MOS Semitrailer is available in either a 53' or a 48' version. This semitrailer is one (1) of the four (4) semitrailers that make up the CCTT RVTT/MOB System. The semitrailer has five (5) sections; 1) Environmental Control Unit (ECU) with ventilation supply and return air ducted in the ceiling, 2) Storage, 3) Weapons Storage, 4) Maintenance and 5) Office. The MOS Semitrailer is equipped with interfaces and cabling for security cameras and motion detection. Additional storage is provided in the under-belly storage cabinets.

Physical Information:

53' Long, 102" Wide, 162" High

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Requires data and phone line provided by installation.

Power Requirements:

380 VAC, 50Hz

Applicable Publications:

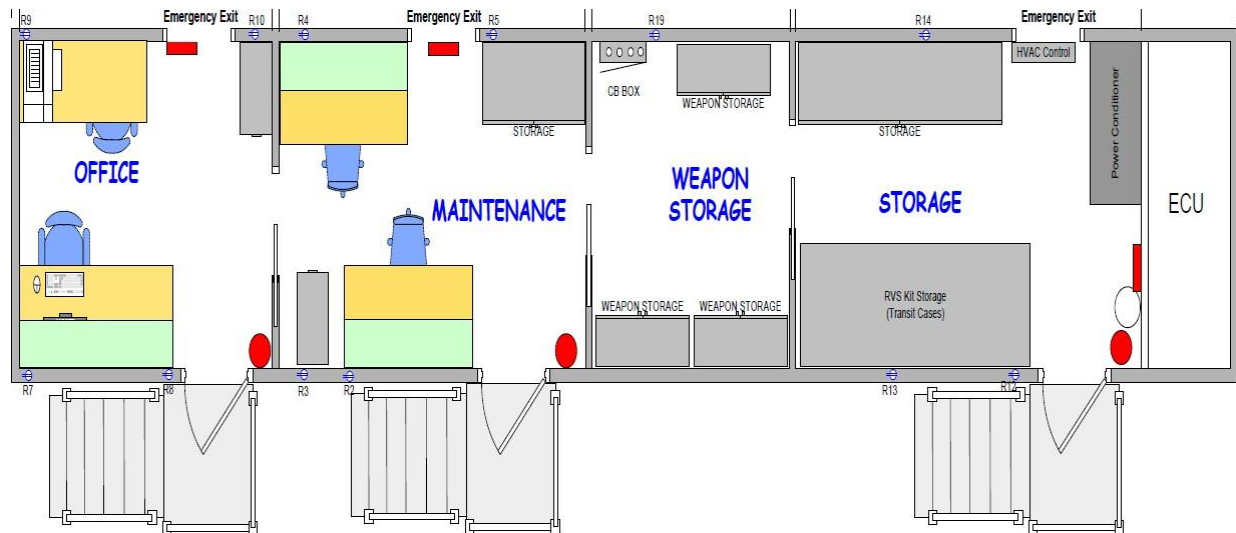
SMM 71-6920-917-24 Manned Maintenance Manual/System Maintenance Manual Reconfigurable Vehicle Tactical Trainer (RVTT) Reconfigurable Vehicle Simulator (RVS)

OUM 71-6920-917-10 Manned Operator's Guide/ Operator's User Manual Reconfigurable Vehicle Tactical Trainer (RVTT) Reconfigurable Vehicle Simulator (RVS).

Training Requirements Supported:

N/A

CCTT MAINTENANCE, OFFICE, STORAGE (MOS) SEMITRAILER, 48', 480VAC 60HZ (MOS/MOB)



Training Category/Level Utilized:

Transportation/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available at local TSC.

Purpose of Trainer:

The CCTT Maintenance, Office, Storage (MOS) Semitrailer provides operator and maintainer personnel with office and storage support to perform maintenance on the CCTT Reconfigurable Vehicle Tactical Trainer, Mobile (RVTT/MOB), DVC 55-72.

Functional Description:

The MOS Semitrailer is available in either a 53' or a 48' version. This semitrailer is one (1) of the four (4) semitrailers that make up the CCTT RVTT/MOB System. The semitrailer has five (5) sections; 1) Environmental Control Unit (ECU) with ventilation supply and return air ducted in the ceiling, 2) Storage, 3) Weapons Storage, 4) Maintenance and 5) Office. The MOS Semitrailer is equipped with interfaces and cabling for security cameras and motion detection. Additional storage is provided in the under-belly storage cabinets.

Physical Information:

48' Long, 102" Wide, 162" High

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Requires data and phone line provided by installation.

Power Requirements:

480VAC, 60Hz Applicable Publications:

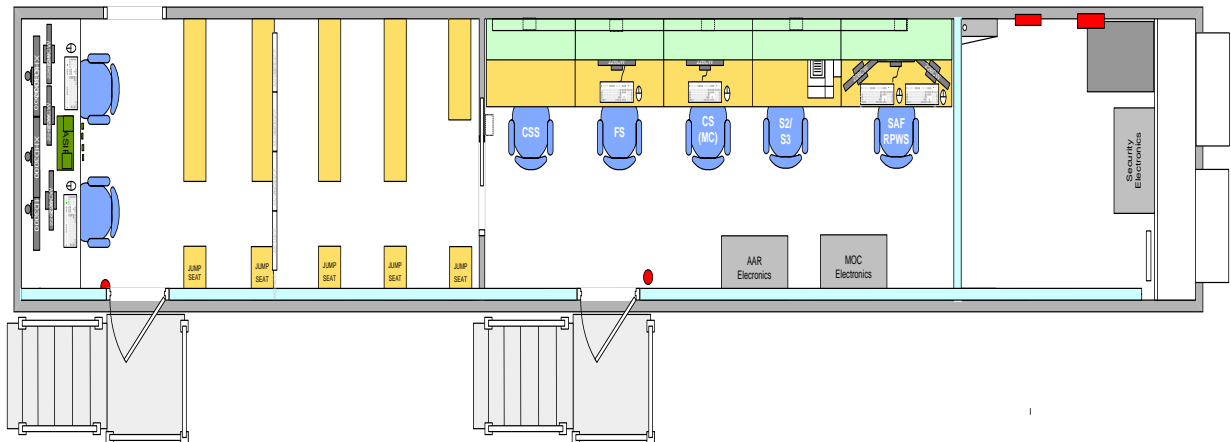
SMM 71-6920-917-24 Manned Maintenance Manual/System Maintenance Manual Reconfigurable Vehicle Tactical Trainer (RVTT) Reconfigurable Vehicle Simulator (RVS)

OUM 71-6920-917-10 Manned Operator's Guide/ Operator's User Manual Reconfigurable Vehicle Tactical Trainer (RVTT) Reconfigurable Vehicle Simulator (RVS).

Training Requirements Supported:

N/A

CCTT RVTT MOBILE OPERATIONS CENTER SEMITRAILER, 53', 380 VAC 50HZ (MOC/MOB)

**Training Category/Level Utilized:**

Transportation/Level 3

Logistic Responsible Command, Service, or Agency:

PEO-STRI, Orlando FL

Source and Method of Obtaining:

Available through local TSC

Purpose of Trainer:

The CCTT Mobile Operations Center (MOC) Semitrailer provides the After Action Review (AAR) capability, Semi-Automated Forces (SAF) workstation and Operations Console (OC) for CCTT Reconfigurable Vehicle Tactical Trainer, Mobile (RVTT/MOB), DVC 55-72.

Functional Description:

The MOC provides all the computer workstations required to run the simulation for training and also provides the AAR capability.

Physical Information:

53' Long, 102" Wide, 162" High

Equipment Required, Not Supplied:

None

Special Installation Requirements:

Requires data and phone line provided by installation.

Power Requirements:

380VAC, 50 Hz

Reference Publications:

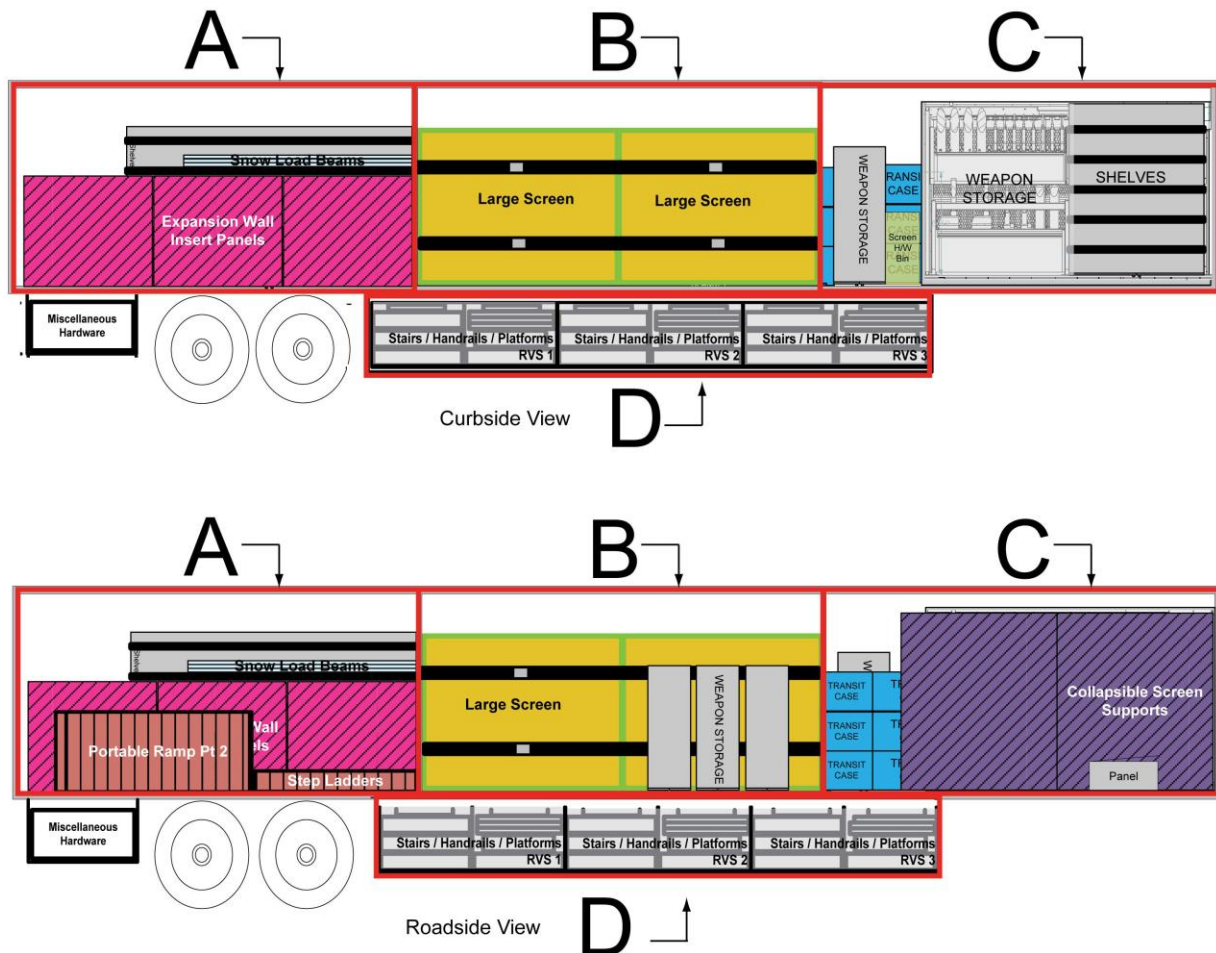
SMM 71-6920-917-24 Manned Maintenance Manual/System Maintenance Manual Reconfigurable Vehicle Tactical Trainer (RVTT) Reconfigurable Vehicle Simulator (RVS)

OUM 71-6920-917-10 Manned Operator's Guide/Operator's User Manual Reconfigurable Vehicle Tactical Trainer (RVTT) Reconfigurable Vehicle Simulator (RVS).

Training Requirements Supported:

MOSC 11, 18 and 19 Series

SUPPORT SEMITRAILER; MOBILE RECONFIGURABLE VEHICLE TACTICAL TRAINER (M/RVTT)



Support Semitrailer; M/RVTT Side Views (With Weapons Safes)

Training Category/Level Utilized:
Transportation/Level 3

Logistic Responsible Command, Service, or Agency:
PEO-STRI, Orlando FL

Source and Method of Obtaining:
Not generally available for issue (limited production).

Purpose of Trainer:
Provides storage support for the Reconfigurable Vehicle Simulator (RVS) Semitrailers, (DVC 55-72/1).

Functional Description:
The Support Semitrailer provides on-site storage and security of the RVS kits, projector containers and return weapon containers. It also provides transit space for those

items and transit and storage of the following items for up to three (3) RVS Semitrailers:

- Screen system components
- Expansion room filler panels
- Wind/snow load beams
- Trailer extension tripod-support stands
- Floor beam headers
- Handrails, steps, and platforms

Semitrailer utility and Environmental Conditioning Unit (ECU) power may be provided by a Portable Power Supply (PPS) or a hardstand connection.

Physical Information:

53ft long, 102 in wide, 162 in high trailer and 102 in wide.

Part number 120443-90 (16331) 480 VAC

Equipment Required, Not Supplied:

DVC 55-72/1 RVS Semitrailers
DVC 55-72/2/1 or DVC 55-72/2/2 MOS Semitrailer
DVC 55-72/3 MOC Semitrailer

Special Installation Requirements:

Requires data and phone line which is provided by User

Power Requirements:

Depending on the configuration of the trailer, it can operate on either 480 VAC 3-phase 60 cycle, or 360VAC 3-phase 50 cycle

Applicable Publications:

(CCTT) Facilitator's Guide – Mobile Set, CFG2-02

TD 17-6930-702, Maintenance Manual

Reference Publications:

SMM 71-6920-917-24 Manned Maintenance Manual/System Maintenance Manual Reconfigurable Vehicle Tactical Trainer (RVTT) Reconfigurable Vehicle Simulator (RVS)

OUM 71-6920-917-10 Manned Operator's Guide/Operator's User Manual Reconfigurable Vehicle Tactical Trainer (RVTT) Reconfigurable Vehicle Simulator (RVS)

Device 55-74 was previously assigned as DVC 71-03/8.

Training Requirements Supported:

MOSC 11, 18 and 19 Series

APPENDIX A

INDEX OF TRADOC TRAINING DEVICES

AVIATION (O1-SERIES)

<i>DVC No.</i>	<i>Nomenclature</i>	<i>Page</i>
T01-246	Communication Traffic Simulator (CTS).....	0
T01-248	Command Control Communication Computer (C4) Intelligence Surveillance & Recognizance.....	0

ENGINEER (O5-SERIES)

<i>DVC No.</i>	<i>Nomenclature</i>	<i>Page</i>
T05-119/1	Mine-Protected Clearance Vehicle (MPCV or Buffalo).....	0
T05-119/2	Vehicle-Mounted Mine-Detection Systems (VMMD or Husky)	0
T05-119/3	Medium Mine Protected Vehicle (MMPV or RG 31/Panther).....	0
T05-119/4	Man Transportable Robotic System (MTRS or Talon IIIb)	0

ARTILLERY (O6-SERIES)

<i>DVC No.</i>	<i>Nomenclature</i>	<i>Page</i>
T06-119	M7A1 Bradley Fire Support Team (BFIST) DesktopTrainer (BBDT)	0

TSS-ENTERPRISE TADSS INDEX AND CATALOG

APPENDIX B

Appendix B contains those devices for which there are device numbers assigned, however there has been limited or no data provided for the PEO STRI Catalog. The devices are arranged in the same order as Section II Index of Training Devices.

INDEX OF APPENDIX B DEVICES

AVIATION (O1-SERIES)

<i>DVC No.</i>	<i>Nomenclature</i>	<i>Page</i>
01-246	Communication Traffic Simulator (CTS).....	0
01-248	Command Control Communication Computer (C4) Intelligence Surveillance & Recognizance.....	0

ENGINEER (O5-SERIES)

<i>DVC No.</i>	<i>Nomenclature</i>	<i>Page</i>
05-119/1	Mine-Protected Clearance Vehicle (MPCV or Buffalo).....	0
05-119/2	Vehicle-Mounted Mine-Detection Systems (VMMD or Husky)	0
05-119/3	Medium Mine Protected Vehicle (MMPV or RG 31/Panther).....	0
05-119/4	Man Transportable Robotic System (MTRS or Talon IIIb)	0

ARTILLERY (O6-SERIES)

<i>DVC No.</i>	<i>Nomenclature</i>	<i>Page</i>
06-119	M7A1 Bradley Fire Support Team (BFIST) Desktop Trainer (BBDT)	0

TSS-ENTERPRISE TADSS INDEX AND CATALOG

GLOSSARY

Catalog Global Abbreviations		
A	ADF Automatic Direction Finder	ALE Advance Learning Environment
AAA Anti-Aircraft Artillery	ADFT Artillery Direct Fire Trainer	AM Amplitude Modulation
AADCOM Army Air Defense Command	ADM/LOG Administrative/Logistics	AMCOM US Army Aviation and Missile Command
AAF Army Air Field	ADS Advanced Distributed Simulation	AMEDD Army Medical Department
AAR After Action Review (AAR)	AEGS Armor Exercise Generation Subsystem	AMIT Aviation Maintenance Interchangeable Trainer
AAV-P Amphibious Assault Vehicle- Personnel Carrier	AET Avionics, Electronics Trainer	AMMT Advance Morse Mission Trainer
ABCSI Army Battle Command System Integration	AFCS Automatic Fire Control System	Amp Ampere
AC Alternating Current	A-FIST Abrams Full-Crew Interactive Simulation Trainer	AMTE Advanced Maintenance Training Environment
ACALA US Army Armament and Chemical Acquisition and Logistics Activity	AGE Auxiliary Ground Equipment	AMTS Active Maintenance Trainer Simulator
ACMS Automated Configuration Management Subsystem	AGES/AD Air-to-ground Engagement System/Air Defense	ANVIS/HUD Aviator's Night Vision Instrument System/Heads Up Display
ACMS/SSF Automated Configuration Management System/Software Support Facility	AGS Armored Gun System	APC Armored Personnel Carrier
ACSL Abrams Common Software Library	AGTS Advanced Gunnery Training System	APOBS Anti-Personnel Obstacle Breaching System
ACT Apache Crew Trainer	AHS Academy of Health Sciences	APU Auxiliary Power Unit
	AIS Aviation Integration Subsystem	AQC Aircraft Qualification Course
	AIT Advanced Individual Training	
	AL Alabama	

TSS-ENTERPRISE TADSS INDEX AND CATALOG

GLOSSARY (Continued)

AR Army Regulation	ATWESS Anti Tank Weapons Effects Signature Simulator	BEMT Basic Electronics Maintenance Trainer
ARF Airborne Relay Facility	AVCATT-A Aviation Combined Arms Tactical Trainer Aviation Reconfigurable Manned Simulator	BFA Blank Firing Adapter
ARNG Army National Guard	AVQ Used in Device 07-56/17	BFV Bradley Fighting Vehicle
ATLAS All Terrain Lifter Army System	AVR Audio And Video Recording	BGMTS Bradley Gunnery and Missile Tracking System
AT3 Avenger Table Top Trainer	AVTOC Aviation Tactical Operations Center	BHMT Black Hawk Maintenance Trainer
ARTBASS Army Training Battle Simulation System	AWS Area Weapon System	BIDS Biological Detection System
ARTEP Army Training Evaluation Program	AWSS Area Weapon Scoring System	BIT Built-On Test
ASAS-T All Source Analysis System Trainer	B	BITE Built-In Test Equipment
ASET IV AN/TPQ-45 Electronic Warfare Training Set	BATS-G Bradley Advanced Training System Gunnery	BMMT Basic Morse Mission Trainer
ATAS Air-to-Air Stinger	BBS Brigade/Battalion Battle Simulation	BN/TF Battalion/Task Force
ATC Air Traffic Control	BCIS Battlefield Combat Identification System	BNCOC Basic Non-Commissioned Officer Course
ATCOM US Army Aviation and Troop Command	BCLR Ballistic Computer and Laser Rangefinder	BRM Basic Rifle Marksmanship
ATGM Anti-Tank Guided Missile	BDU (Used in Device 08-15) Battle Dress Uniform	BST Basic Skills Trainer
ATHS Airborne Target Handover System	BEAT Black Hawk Electrical Avionics Trainer	BWO Backward Wave Oscillator
ATM Army Training Manual	BELRF Bradley Eyesafe Laser Rangefinder	C
ATS Advanced Training Simulator		C Celsius

TSS-ENTERPRISE TADSS INDEX AND CATALOG

GLOSSARY (Continued)

C-E Communications-Electronics	CAVSIM Combat Aviation Virtual Simulation	CFITS Composite Fault Insertion Training System
C3 Command Control and Communication	CBI Computer Based Instruction	CFF Call-for-Fire
CAAS Chemical Agent Alarm Simulator	CBS Corps Battle Simulation	CFFT Call-for-Fire Trainer
CAD Computer Aided Design	CCDS Commercial Computer Documentation Set	CFT Captive Flight Trainer
CAI Computer-Aided Instruction	CCHTF Close Combat Heavy/Light Battalion Task Force	CGF Computer Generated Force
CAMSIM Chemical Agent Monitor Simulator	CCM Crew Control Module	CHAALS Communications High Accuracy Airborne Location System
CANA Convulsant Antidote for Nerve Agent	CCTT Close Combat Tactical Trainer	CHP Common Hardware Platform
CANATD Convulsant Antidote for Nerve Agent Training Device	CCTV Closed Circuit Television	CID/GCDPS Commander's Integrated Display/ Gunner's Control Display Panel Subsystem
CARNS Collision Avoidance Radar Navigation System	CCU Communications Control Unit	CIG Computer Image Generation
CART Collision Avoidance Radar Trainer	CD Controller Device	CIS Core Instrumentation Subsystem
CAT Composite Armament Trainer	CECOM US Army Communications- Electronics Command	CIST Command Instrument System Trainer
CAT 91 Canadian Army Trophy 1991	CEPT Cockpit Emergency Procedures Trainer	CIU Countermeasure Indicator Unit
CATIES Combined Arms Training-Integrated Evaluation System	CET Composite Electrical Trainer	CK Conversion Kit
CATTS Combined Arms Tactical Training Simulator	CEV Combat Engineer Vehicle	CLU Command Launch Unit
CAV-T Combat Aviation Virtual Trainer	CEW Combat Engineer Workstation	CMI Computer-Managed Instruction
CAVSIM Chemical Agent Monitor Simulator		

TSS-ENTERPRISE TADSS INDEX AND CATALOG

GLOSSARY (Continued)

CMS Combat Mission Simulator	CS1 Tear Gas	CWEPT Cockpit, Weapons and Emergency Procedures Trainer
CMT Composite Maintenance Trainer	CSMET Crew Station Mission Equipment Trainer	D
CMTC Combat Maneuver Training Center	CS2 Tear Gas	DAM Display Aided Maintenance
CMTC-IS Combat Maneuver Training Center-Instrumentation System	CSCI Computer Software Configuration Item	DART Disappearing Automatic Retaliatory Target
CO/TM Company/Team	CSS Crew Station Subsystem	DASE Digital Automatic Stabilization Equipment
COFT Conduct Of Fire Trainer	CST Classroom System Trainer	DATA Department of the Army Training Aids
COI Course Of Instruction	CSTARS Combat Synthetic Training Assessment Range	DATS Data Automated Tower System
CONUS Continental/Contiguous United States	CTC Combat Training Centers	DB Decibel
COTS Commercial-Off-The-Shelf	CTS-U Communication Traffic Simulator-Upgrade	DBm Decibel (Referenced to Milliwatts)
CPT Cockpit Procedures Trainer	CVC Combat vehicle crewman	DBRITE Digital Bright Radar Indicator Tower Equipment
CPR Cardio-Pulmonary Resuscitation	CVKI Combat Vehicle Kill Indicator	DBST Digital Battle Staff Trainer
CPU Central Processing Unit	CVRJ Crew Vehicle Receiver/Jammer	DC Direct Current
CRT Cathode Ray Tube	CVS Combat Vehicle System	DEC Digital Equipment Corporation
CRYPTO Cryptographic	CW Continuous Wave	DECON Decontamination
CS Computational Subsystem	CWAR Continuous Wave Acquisition Radar	DFSK Double Frequency Shift Keying

TSS-ENTERPRISE TADSS INDEX AND CATALOG

GLOSSARY (Continued)

DI Dismounted Infantry	EEU Environmental Enclosure Unit	FCP-TPT Fire Control Panel Tactical Proficiency Trainer
DPERT Driver Procedural Emergency Reaction Trainer	EIDS Electronic Information Delivery System	FCPT Fire Control Panel Trainer
DPR Data Processing Rack	ELINT Electronic Intelligence	FCS Fire Control System
DPSC Defense Personnel Support Center	EMARSS Enhanced Medium-Altitude Reconnaissance and Surveillance System	FCUHPT Flight Control and Utility Hydraulic Panel Trainer
DS Direct Support	EMT Engine Maintenance Trainer	FFTD Firefinder Training Device
DSCS Defense Satellite Communications System	EPT Enhanced Procedural Trainer	FHT Field Handling Trainer
DT Desk Top	ERS Engine Room Simulator	FID Fault Insertion Device
DTOC Division Tactical Operations Center	ESV Engineer Squad Vehicle	FIMT Firefinder Intermediate Maintenance Trainer
DTT Diagnostic and Troubleshooting Trainer	EST Engagement Skills Trainer	FIST Fire Support Teams
DTV Day Television	F	FLIR Forward Looking Infrared
DVC Device	F Fahrenheit	FM Frequency Modulation
DVO Direct Video Optics	FAAD C2 Forward Area Air Defense Command and Control	FMB Full Mission Bridge
E	FAST Day Record Fire Range Target System	FMS Foreign Military Service
ECA Electronic Control Assembly	FATMT Field Artillery Turret Maintenance Trainer	FOT Family Of Trainers
ECM Electronic Countermeasures	FBCB2 Force XXI Battle Command Brigade-and-below	FOV Field-Of-View
ECS Engagement Control Stations		FS Fire Support
ECU Electronics Controller Unit		

TSS-ENTERPRISE TADSS INDEX AND CATALOG

GLOSSARY (Continued)

FSATS Fire Support Automated Test System	GMDS Global Maritime Safety Distress System	HITMORE Helicopter Installed Television Monitor and Recorder
FSCATT Fire Support Combined Arms Tactical Trainer	GPC General Purpose Computer	HITS Homestation Instrumentation Training System
FSE Fire Support Element	GPS Global Positioning System	HLA High Level Architecture
FSK Frequency Shift Keying	GPTS Generic Principles Training Suite	HMMWV High Mobility Multipurpose Wheeled Vehicle
FSR Field Service Representative	GRCS Guardrail/Common Sensor	HOT Hands-on Trainer
FSS Full System Simulator	GRMT Guardrail Maintenance Trainer	HP Hewlett Packard
FTD Flight Training Device	GS General Support	HPIR High Power Illuminator Radar
FTI Fixed Tactical Internet	GTA Graphic Training Aid	HSI Used in Device 01-143
FTS Field Termination Site	GUARDFIST Guard Unit Armory Device Full-crew Interactive Simulation Trainer	HSTAMIDS Handheld Standoff Mine Detection System
FTT Field Tactical Trainer	GUFS Gunfire Simulator	HSWS Home Station Workstation Subsystem
FTX Field Training Exercise	H	HTA Hohenfels Training Area
G	H High	HUTT Hull to Turret Transmitter
G/VLLD Ground Vehicular Laser Locator Designator	HATS Hawk Advanced Training Simulator	Hz Hertz
GGMTS Ground Station Module Trainer System	HEAT Egress Assistance Trainer	I
GHS Gunner's Handstation	HGSS Hellfire Ground Support Simulator	I/O Input/Output
GHz Gigahertz (thousands of MHz)	HIMARS High Mobility Artillery Rockets System	

TSS-ENTERPRISE TADSS INDEX AND CATALOG

GLOSSARY (Continued)

I/OSS Instructor/Operator Station Subsystem	ILTEM Improved Lift Target Elevating Mechanism	IVA Instructional Visual Aid
I-COFT Institutional Conduct Of Fire Trainer	IMC International Morse Code	IWS Individual Weapon System
IAW In Accordance With	IMT Institutional Maintenance Trainer	J
IBM International Business Machine	IMTC Infantry Moving Target Carrier	JCATS Joint Conflict and Tactical Simulation
ICP Indicator Control Panel	IMTS Improved Moving Target Simulator	JDLM Joint Deployment and Logistics Model
ICTS Integrated Communication Training System	IOS Instructor Operator Station	JLCCTC Joint Land Component Constructive Training Capability
ICW-SS Interactive Courseware Student Station	IPS Integrated Process Facility	JROMPS Joint Radio Operator and Maintenance Procedures Simulator
IEW Intelligence and Electronic Warfare	IR Infrared Radiation	JRTC Joint Readiness Training Center
ID Identification	IRETS Infantry Remoted Equipment Target System	JRTC-IS Joint Readiness Training Center- Instrumentation System
IDS Inbore Device Stryker	IRSAM Infrared Surface To Air Missile	JSTARS Joint-Surveillance and Target Attack Radar System
IETM Interactive Electronic Technical Manual	ISR Intelligence, Surveillance, and Reconnaissance	JUAV Joint Unmanned Aerial Vehicle
IFCST Institutional Fire Control System Trainer	ISU Integrated Sight Unit	JTIDS Joint Tactical Information Distribution System
IGRV Improved Guardrail V	ITAS Improved Target Acquisition System	K
IHADSS Integrated Helmet and Designation Sight System	ITM Infantry Target Mechanism	K-Band 12.5 - 17.5 GHz
IIS Improved Instructor Station	ITV Improved TOW Vehicle	

TSS-ENTERPRISE TADSS INDEX AND CATALOG

GLOSSARY (Continued)

km Kilometer	LMS Lightweight Moving Target System	MAPP Methyl acetylene Propadiene Propane Propylene
KSI Kill Status Indicator	LOMAH Location Of Hit And Miss System	MAST Man-Portable Aircraft Survivability Trainer
KVA Kilovolt-Ampere	LORAN Long Range Area Navigation	MBG Medium Girder Bridge
L		
L Long	LPMT Launcher Patriot Maintenance Trainer	MBT Main Battle Tank
L-Band 1220 - 1350 MHz	LPWS Land-Based Phalanx Weapon System	MC Maintenance Console
LAN Local Area Network	LR Long Rifle	MoC Modernized Cobra
LAV Light Armored Vehicle	LRF/D Laser Range Finder/Designator	MC/A Military Construction/Army
LAV-AT Light Armored Vehicle; Anti Tank	LRU Line Replaceable Unit	MCA Master Control Assembly
LBS Pounds	LSA Logistic Support Analysis	MCAV-T Combat Aviation Virtual Trainer-Mobile
LDS Launcher Control System	LTID Laser Target Interface Device	MCC Mission Control Center
LED Light-Emitting Diodes	M	MCD Missile Countermeasures Device
LES Launch Environment Simulator	MAGTS Mobile Advanced Gunnery Training System	MCOE U.S. Army Maneuver Center of Excellence
LETS Locomotive Engineer Training Simulator	MAIS Mobile Automated Instrumentation System	M-COFT Mobile Conduct of Fire Trainer
LGT Landing Gear Trainer	MANPADS Man Portable Air Defense System	MCS Mission Control Station
LLM Launcher Loader Module	MANSCEN Maneuver Support Center	MCTC Maneuver Combat Training Center

TSS-ENTERPRISE TADSS INDEX AND CATALOG

GLOSSARY (Continued)

MCV Mortar Carrier Vehicle	MLRS Multiple Launch Rocket System	MST Medical Suite Trainer
MDS Meteorological Data System	mm Millimeter	MTC Mission Training Complex
MEP Mission Equipment Package	MMBJ Mobile Multi-Band Jammer	MTEL Maintenance Trainer Exercise Lesson
MES Mine Effects Simulator	MMS Mast mounted Sight	MTELS Maintenance Trainer Exercise Lessons
METL Mission Essential Task List	MMT Morse Mission Trainer	MTP Mission Training Plan
MEV Medical Evacuation Vehicle	MO&E March Order And Emplacement	MTS Maintenance Training System
MFFT Maritime Fire Fighting Trainer	MOPMS Modular Pack Mine System	MVU Mobile Video Unit
MG Machine Gun	MOSC Military Occupational Speciality Code	MWDD Man Worn Detection Device
MGBTS Medium Girder Bridge Training Set	MOST Mobile Maintenance Operations Support Trailer	N
MGSS Main Gun Signature Simulator	MOUT Military Operations In Urban Terrain	N ₁ Compressor Speed
MHz Megahertz		N ₂ Turbine Speed
MICOM US Army Missile Command	MPC Mobile Production Center	NAV/POS Navigation/Positioning System
MILES Multiple Integrated Laser Engagement System	MPSU Mobile Power Supply Unit	NAVAID Navigational Aid
MISS Master Instructor Station Subsystem	MPU Mobile Production Unit	NAVEXOS Executive Office of the Secretary of the Navy
MITS Mobile Independent Target System	MRAP Mine Resistant Ambush Protected	NAVSO Navy Support Office
MIW Master Instructor Workstation	MRT Missile Round Trainer	NAVTRADEV Naval Training Device
	MSR Missile Simulation Round	

TSS-ENTERPRISE TADSS INDEX AND CATALOG

GLOSSARY (Continued)

NBC Nuclear Biological and Chemical	OIP/MPAT Optical Improvement Program/Multi-Purpose Anti- Tank	PCP Platoon Command Post
NBCRS Nuclear Biological Chemical Reconnaissance System	OMT Operator/Maintainer Trainer	PDCU Power and Distribution and Control Unit
NCO Non-Commissioned Officer	OneSAF One Semi-Automated Forces	PDS Power Distribution System
NCSRT Non-communication Signal Recognition Trainer	OPFOR Opposing Force	PDU Power Distribution Unit
NDI Nondevelopmental Item	ORP Operator Response Panel	PEO STRI Program Executive Office Simulation Training and Instrumentation
NET New Equipment Training	OSV OPFOR Surrogate Vehicle	PGS Precision Gunnery System
NSN National Stock Number	OUM Operator User's Manual	PGT Platoon Gunnery Trainer
NTC National Training Center	P	PGTS Precision Gunnery Training System
NTC-IS National Training Center- Instrumentation System	PAGTS Permanent Advanced Gunnery Training System	PIMIT Patriot Intermediate Maintenance Institutional Trainer
O	PCOFT Platoon Conduct of Fire Trainer	PK Probability of Kill
O.D. Olive Drab	PABX Private Automated Branch Exchange	PKL Probability of Kill Loader
OAP Overtemp Alarm Panel	PAD Portable Air Defense	PMI Protective Mask Interface
OBC Officer Basic Course	PC Personal Computer	PMT Paladin Maintenance Trainer
OC Operations Center	PCM Pulse Code Modulation	PNVS Pilot Night Vision Sensor
OCONUS Outside the Continental United States	PCOFT Patriot Conduct of Fire Trainer	POMT Patriot Organizational Maintenance Trainer
ODS Operation Desert Storm		

GLOSSARY (Continued)

PP1 Pseudopilot Position 1	RCIEDs Remote Controlled Improvised Explosive Devices	RT3 Reconfigurable Table Top Trainer
PP2 Pseudopilot Position 2	RCS Range Control Station	RTCA Real Time Casualty Assessment
PPI Plan Position Indicator	RDMS Range Data Measurement System	RTS Radio Terminal Set
PPDDDT Power Plant/Power Drive Dynamic Display Trainer	RDF Radio Direction Finder	RYA Relay Assembly
PPS Portable Power Supply	RETS Remoted Target System	S
PRIME Precision Range Integrated Maneuver Exercise	RF Radio Frequency	S-Band 2500 - 3500 MHz
PRTLS Precision Real Time Location System	RFS Rifle Fire Simulator	SA Situational Awareness
PSI Pounds Per Square Inch	RFSAM Radio Frequency Surface to Air	SAD Scenario Authoring Device
PTT Part Task Trainer	RMS Remote Monitoring Station	SAF Semi-Automated Forces
PTWS Point Target Weapon System	RMCS Range Monitoring and Control Subsystem	SAGA Stand Alone Gun Assembly
PVD Plan View Display	RMS Remote Monitoring Subsystem	SAL Semi-Automatic Laser
Q	RPM Revolutions Per Minute	SAT Small Arms Transmitter
QFMT Quickfix Maintenance Trainer	RS Radar Set	SATCOM Satellite Communications
QRD-T Quick Reaction Dismounted Trainer System	RSA Remote Station Assembly	SAW Squad Automatic Weapon
R	RSMO&E Radar Set March Order and Emplacement	SAWE Simulated Area Weapons Effects
RAGTS Relocatable Advanced Gunnery Training System	RT Receiver Transmitter	SCB Straddle Carrier Bridge
		SCC Support Control Console

GLOSSARY (Continued)

SCOE U.S. Army Sustainment Center of Excellence	SMT Sentinel Maintenance Trainer	STS Sentinel Training System
SCT Shadow Crew Trainer	SOACMS Special Operations Aviation Combat Mission Simulator	STX Situational Exercise
SDA Side Detector Assembly	SPACOL Space Collection Trainer	T
SEOS Electronic Warfare Equipment Operator Simulator Suite	SPC Special Purpose Computer	T2SS-SE TOW-2 Subsystem Support Equipment
SEP System Enhancement Program	SPH Self-Propelled Howitzer	TACOM US Army Tank-Automotive Command
SFHT Stinger Field Handling Trainer	SPORT Soldier's Portable On-System Repair Tool	TACSIM Tactical Simulation
SGM Shock Generator Mechanism	SPPRST Single Point Pressure Refueling System Trainer	TADS Target Acquisition and Designation Sight
SIM Simulant Mines	SS Shelter Subsystem	TAF Training Analysis Feedback
SIMNET Simulation Network	S-S Student Station	TAFO Training Analysis Feedback Officer
SINCGARS Single channel Ground and Airborne Radio System	SSF Software Support Facility	TBMT Trail Blazer Maintenance Trainer
SLAM Selectable Lightweight Attack Munition	SSS Sensor Signal Simulator	TC Tank Commander
SM Soldier's Manual	STE/ICE Simplified Test Equipment for Internal Combustion Engines	TCB Turret Control Box
SMART-T Secure Mobile Anti-Jam Reliable Tactical Terminal	STLS Stinger Launcher Simulator	TCF Technical Control Facilities
SMAW Shoulder-Mounted Multipurpose Assault Weapon	STPT Stinger Troop Proficiency Trainer	TD Technical Document
SMM System Maintenance Manual	STRICOM US Army Simulation Training and Instrumentation Command	TDVC Training Device
		TDB Turret Distribution Box

GLOSSARY (Continued)

TDECC Tactical Display and Engagement Control Console	TOMT Turret Organizational Maintenance Trainer	TTT Table Top Trainer
TDMA Time Division Multiplex Approach	TOW Tube Launched Optically Tracked Wire Guided	TWB Tow Control Box
TDT Tank Driver Trainer	TPP Tactics, Techniques and Procedures	TWGSS Tank Weapon Gunnery Simulation System
TDTD Training Data Transfer Device	TPT-DEU Tactical Proficiency Trainer-Digitation Enabler Unit	TWGSS/PGS Tank Weapon Gunnery Simulation System/Precision Gunnery System
TECCS Tactical Engagement Close Combat System	TRADOC US Army Training and Doctrine Command	U
TEHTT Turret Electrical and Hydraulic Troubleshooting Trainer	TRAINS Training Agent Chemical Detector Tickets Simulator	U-COFT Unit Conduct of Fire Trainer
TES Tactical Engagement Simulator	TRANS Transmission	UAS Unmanned Aircraft Systems
TESS Tactical Engagement Simulation System	TS Training System	UAV Unmanned Aerial Vehicle
TGS Tactical Ground Station	TSAs Target Signature Arrays	UCOFT Unit Conduct of Fire Trainer
THMTG Target Holding Mechanism Tank Gunnery	TSC Training Support Center	UH-72A Utility Helicopter 72A
THP Take Home Package	TSFO Training Set Fire Observation	UHPO Utility Helicopters Project Office
THT Tracking Head Trainer	TSGMS Used in Device 01-123/09	ULT Universal Laser Transmitter
TM Technical Manual	TSTT TADS Selected Task trainer	UPS Uninterruptable Power Supply
TMT Training Missile Tube	TSV Through-Sight Video	USAES U.S. Army Engineer School
TOC Tactical Operations Center	TTOMT Tank Turret Organizational Trainer	USAICS US Army Intelligence Center and School
		USAMMA US Army Medical Materiel Agency

GLOSSARY (Continued)

USAR US Army Reserve	VDS Vessel Defense Simulator	WAM Wide Area Munition
USAREUR United States Army Europe	VHF Very High Frequency	WARSIM Warfighter's Simulation
USMC United States Marine Corps	VIE Virtual Interactive Environment	WCB Weapons Control Box
V	VIGS Videodisc Gunnery Simulator	WESS Tank Gunfire Simulator
VAC Volts Alternating Current	VS Visual Subsystem	WRAP Warfighter Rapid Acquisition Program
VCK Vehicle Kill Controller	VTM Vehicle Test Meter	WSD Weapon System Development
VCR Video Cassette Recorder	W	WSD-T Weapon System Development- Trainer
VDB Vehicle Distribution Box	W Watt	X
VDC Volts Direct Current	Wd Wide	X-Band 8500 – 9600 MHz
	WO Warrant Officer	
