

**Improved Sentinel Increment 1**  
**(version 3.0)**

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FCoE- ADA School

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This System Training Plan (STRAP) is preliminary.  
Front end analysis (mission, task, job) is ongoing. FCoE- ADA School will  
amend and update this STRAP as details solidify.

FCoE- ADA School is the proponent for this STRAP.  
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### 1.0 System Description

Sentinel is an air defense sensor component of the Forward Area Air Defense (FAAD) Command, Control and Intelligence (C2I) system. Sentinel acquires, tracks, classifies and identifies fixed and rotary wing aircraft and unmanned vehicles. Sentinel is a mobile, phased-array radar. Communication and support elements are included to form a complete networked system for the forward combat zone. All mission essential elements of Sentinel are transported by standard military vehicles. The current AN/MPQ-64A1, Improved Sentinel can be transported as external air cargo by medium-lift helicopters or internally by C-5A, C-17, and C-130 in the High Mobility Multipurpose Wheeled Vehicle (HMMWV) configuration and by C-5A or C-17 aircraft in the new AN/MPQ-64A3, Enhanced Sentinel Family of Medium Tactical Vehicle (FMTV) configuration.

Under normal continuous operating conditions, Sentinel is operated by one person and march ordered and emplaced by two people. Sentinel uses a combination of radar techniques and computer-controlled signal processing techniques. The radar uses these techniques to provide automatic three-dimensional (range, azimuth and elevation) acquisition and for tracking of aircraft. Moving fixed-winged aircraft, moving or hovering rotary-wing aircraft, or low flying cruise missiles and unmanned aerial vehicles are acquired, tracked and identified over 6400 mils (360 degrees) of azimuth. Identification, Friend or Foe (IFF) interrogation permits identification of friendly and unknown aircraft. It automatically supplies the acquired and tracked target data to the C2I system.

Sentinel is completely self-contained. It can be operated independently acquiring, tracking and distributing data in the event of a data link failure.

Improved Sentinel includes waveform upgrades for the Receiver/Exciter, Target Classification upgrades and replacement of the Sentinel transmitter with Power Amplifier Modules (PAMs). The exciter upgrade provides low level Radio Frequency (RF) signal sufficient to support acquisition and tracking of small cruise missile targets and generate classification waveforms. Receiver upgrades accomplish receipt and signal conditioning of low level RF signal prior to Analog/Digital (A/D) conversion sufficient to support the acquisition and track of small cruise missile targets and target classification. Variable rotation rates provide capability to slow the antenna rotation, increasing time on target to acquire and track small cruise missile targets and to provide flexible antenna positioning capability for target classification waveforms. Target classification efforts include software implementation of target classification capability beyond visual range engagements.

The current prime mover vehicle, a M1097-Series High Mobility Multi-Purpose Wheeled Vehicle (HMMWV), does not provide adequate force protection for the soldier; therefore, the Army has decided to transition the system to a larger, armored platform, the Family of Medium Tactical Vehicles (FMTV) M1083A1 with B-Kit armor plus a M1082 Light Medium Tactical Vehicle Trailer (LMTVT).

Under the new AN/MPQ-64A3 configuration, the Sentinel systems prime mover will be a FMTV and the Antenna Transceiver Group (ATG) will be mounted on a LMTVT. The

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AN/MPQ-64A3 configuration of the Sentinel is similar to the A1 configuration with replacements for several obsolete components and parts. The obsolete parts being replaced are AN/TPX-56, the Remote Control Terminal (RCT) and three computer processor cards. These components are being replaced by the AN/TPX-57, the Enhanced Remote Control Terminal (eRCT), and three updated processor cards, respectively. In order to meet Information Assurance (IA) requirements, one new item, a router is being added.

First Unit Equipped: 1st QTR FY 2015.

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**2.0 Target Audience**

Fires Center of Excellence, U.S. Army Air Defense Artillery School (FCoE, USAADAS) has an established training base to support the Improved Sentinel Radar. Institutional training consists primarily of entry level 14G operators. Short Range Air Defense (SHORAD) Officers (14A) attend a basic (common core) track and advanced courses. Warrant Officers (140A) attend a basic course at FCoE, USAADAS. Maintenance personnel are trained by their supporting institutions. The following is a list of MOS's supporting the Improved Sentinel Radar system:

MOS	Proponent
14A Air Defense Artillery (Officer	Air Defense Artillery School
140A Command and Control Systems Integrator (Warrant Officer)	Air Defense Artillery School
14G Air Defense Battle Management System Operator	Air Defense Artillery School
94M Sentinel Radar Repairer	Ordnance School

No new MOS is required to support, operate or maintain the Improved Sentinel Radar. The information on each MOS related to grade/skill level, specialty, prerequisite training, reading grade level, battery test scores, civilian education level, average age, time in service and related experiences is in: AR 611-21 Smart Book.

Courses impacted by the Improved Sentinel Radar Increment 1		
Functional and Professional Courses	MOS	Proponent
2-44-C20B, Air Defense Artillery Basic Officer Leader Course III	14A	Air Defense School

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2-44-C22, Air Defense Artillery Captain Career Course (AC/RC)	14A, 140A	Air Defense School
2G-F25, Air Defense Artillery Pre-Command	14A	Air Defense School
4F, Command and Control Systems Integrator (WOBC)	140A	Air Defense School
2-44-C32 PH1, Command and Control Systems Integrator (WOAC)	140A	Air Defense School
043, Air Defense Battle Management System Operator	14G	Air Defense School
2G-F11/043-F33, ADAM/BAE Cell Air-Ground Integration	14A,140A,14G	Air Defense School
121, Radar Repairer	94M	Ordnance School

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### 3.0 Assumptions

- The requirement to increase the current ADA Soldier's reading level, battery test scores, and related experiences to operate and maintain the Improved Sentinel Radar remains the same.
- Training of Soldiers for Sentinel operations and maintenance will involve the Air Defense Artillery School, and the Ordnance School.
- There is no requirement to develop a new MOS to operate and maintain the Sentinel
- The increase in the total Army force structure to support the manning of the Sentinel remains the same.
- Institutional and unit training documents will require revision and upgrading.
- Training development resources, manpower, and equipment will be available to support the Enhanced Sentinel Radar (ESR) over the life cycle of the system.
- Required and future modification to existing Training, Training Support to include Training Aids, Devices, Simulations, and Simulators (TADSS) will be identified, developed and documented, and fielded to the training institution and the unit prior to Full Material Release IAW AR 700-142.
- FCoE, USAADAS will be fielded eight Enhanced Sentinel systems.
- The SCoE, USAOMEMS OTD Detachment at Fort Sill will be issued 2 Enhanced Sentinel Systems.
- The Sentinel fielding will continue to the units containing personnel from the present system.
- MOS 94M will maintain the Improved/Enhanced Sentinel system at the organizational (unit) level.

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### 4.0 Training Constraints

There are several training constraints in the Institutional training growth and the TRADOC policy restrict the growth of all institutional training courses. The impact of this no growth policy is the inability to increase the courses training times that will negatively impact the quality of training provided to the user. The impact of limited number of TRADOC manpower resources can cause delays in scheduling training location and classrooms. This course will require trained instructors to instruct the course and the new training will have to compete with the limited resources currently being used by other institutional training courses. Automation constraints at training locations may limit available information Sentinel Radar operators have at their home station databases. Institutional training could be affected by system availability. Due to the lack of platform simulators, all Sentinel radar training is conducted on tactical systems (USAADAS - 8ea and USAOMEMS - 2ea). Any system non-mission capable for supply or maintenance could directly affect the institutional domains ability to train soldiers. The size of Sentinel FMTV platform could restrict the freedom of movement during training. The increased height and additional square footage of the FMTV platform will increase the overall chance for injury due to slips, trips, and falls. Training facility requirements for Sentinel Radar operator will be the same. Operations and maintenance design of the Sentinel System and Training Aids, Devices, Simulators, and Simulations (TADSS) will meet Human Factors Engineering (HFE) design criteria and requirements from Military Standard (MIL-STD)-1472 and MIL-H-46855, Human Engineering Requirements for Military Systems, Equipment, and Facilities. The Material Developer (MATDEV) will provide training material IAW Analysis, Design, Development, Implement, and Evaluate (ADDIE) process.

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## **5.0 System Training Concept**

This concept supports fielding, replacement training, and sustainment training for the institutions and the field units. It contains all necessary training support, training products, and courses. The strategy includes training requirements for institutional, operational, and self-development domains.

The PM funds all training and training development associated with the fielding of the Improved Sentinel Radar. The PM, MATDEV with the TNGDEV collaborate to develop this STRAP, TSP, Lesson Plans, TADSS and IMI IAW TR 350-70 (including the ADDIE process) for all three training domains. The ADDIE outputs will be entered into the Training Requirements Analysis System (TRAS) for use in the Planning, Programming, Budgeting, and Execution System (PPBES) for Program Objective Memorandum ( POM) submission. The TSP, its lessons, IMI, and TADSS will be developed using the methods presented in TP 525-8-2 w/C1 and the Army Learning Model website. All the training products will be designed to be safe, mission focused, and based on Unified Land Operations doctrine, ADP and ADPR 3.0. All of the digital training materials will be entered into and managed through the TDC. This information drives embedded training and IMI product development for Distance Learning. The Sharable Content Object resource Model (SCORM) conformance will be required. The IMI products will be uploaded into ALMS. The individual and collective tasks updates will be used to update the Digital Training Management System (DTMS) and the Combined Arms Training Strategies (CATS). The TSP will be modified to become WTSP with the addition of CATS. The final TSP and WTSP will be uploaded into the Central Army Registry (CAR). These programs can be accessed via the Army Training Network (ATN).

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### 5.1 New Equipment Training Concept (NET)

NET is required for instructors and key personnel to support the initial fielding of the system. NET development and funding is the responsibility of the MATDEV. This training will include equipment familiarization (capabilities and limitations), tactics, techniques and procedures (TTP), maintenance, DTT, safety, and Manpower and Personnel Integration (MANPRINT). The MATDEV and TNGDEV use the Army Learning Model to develop the products for a learner-centric environment, supported by an adaptive development and delivery infrastructure that enables unit and self-development training. The focus is to produce leaders and forces which exhibit a high degree of operational adaptability, who can think critically and act ethically. The collaborative adult learning environment is nonthreatening; mistakes can be made as students weigh courses of action and as the facilitator guides the group to recognize better solutions. The model increases rigor and relevance through frequent learner assessments to maintain standards and remediation is applied when needed.

A NET TSP will be developed by the Material Developer and validated by FCoE, USAADS. The Net Manager and Material Developer will provide a NET. The NET will use the Train-the-Trainer concept throughout NET. The NET will provide Operator/Crew training, unit level, classes to fielded units. The NET will have total responsibility for training Soldiers on the operation and maintenance of the Sentinel Radar during system fielding.

- The Sentinel Radar training program will be implemented and accomplished in three phases: NET Training, Doctrine and Tactics Training (DTT) and Unit (Sustainment) Training.
- The NET will provide a complete package of digitized training materials that includes technical manuals, lesson plans, instructor and student guides to each unit receiving the Sentinel Radar. NET training (operator and unit level) will be coordinated by the MATDEV and FCoE USAADAS with SCoE identifying students requiring training.
- The NET will provide instructors, training aids, and digitized technical publications to teach the Train-the-Trainer concept to selected unit personnel on operation/operator maintenance, and troubleshooting.
- Once NET is completed, unit sustainment becomes a command responsibility. The unit will conduct all Sentinel Radar sustainment training with the stay behind digitized training support package (technical manuals, lesson plans, instructor and student guides, training aids) provided by the NET.
- United States Army Reserve (USAR) and Army National Guard (ARNG) units may be equipped with the Sentinel Radar (pending further determination of organization and distribution). The training concept for these components will

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be the same as Active Army (AA). Reserve Component (RC) unit training time is limited due to Inactive Duty Training, Unit Training Assemblies, and Annual Training Periods.

The strategy of conducting maintenance training at the fielding site will depend upon the cost and quantity of training aids required.

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**5.2 Displaced Equipment Training (DET)**

- Not Applicable

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### 5.3 Doctrine and Tactics Training (DTT)

Doctrine and tactics training (DTT) provides the guidance to commanders, leaders, staff, and operators on how to employ and sustain the combat capabilities of new or improved AMD equipment, systems, or organizations. The requirement for DTT is based on current AMD doctrine and tactics. A team of personnel from Doctrine, Officer, Enlisted, and Unit Training Branches of DOTD determines the training required for DTT upon receiving the NETP. DOTD will execute DTT. The team required to conduct DTT are civilians (GS-11 or above) and Soldiers (E-7 or above) from the Doctrine, Officer, IMT, and Unit Training Branches of DOTD. DTT provides information on how to employ the improved system to accomplish its wartime mission. The size of the team may vary depending on unit type, echelon, mission, and resources available. Resources for training include training support packages (TSP) on Sentinel Radar equipment, as well as, training devices enhanced with a common set of operational and user interfaces that look, feel, and function like actual system equipment. Training support packages facilitate maintenance and sustainment of warfighter skills. In addition to system/organization specific DTT, Soldiers will be provided the necessary instruction to enable them to maximize the capabilities of their system/organization while fully participating in Integrated/Joint AMD operations as an effective member of a Sentinel Radar team. DTT will be conducted during Test Player Training (TPT), and during unit collective training upon unit fielding. DTT will not be conducted in the intitution.

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### 5.4 Training Test Support Package (TTSP)

A Training Test Support Package (TTSP) is assembled by the FCoE, USAADAS training developer (TNGDEV) and provided to the test agency for each affected operator and maintainer MOS, utilizing training material developed by the Materiel Developer. Where system cross-proponent responsibilities exist, FCoE, USAADAS will assemble training materials for supporting MOSs. FCoE, USAADAS will consolidate the package and assure it does not contain conflicting requirements. The TTSP contains information used by the trainer to train test players and for the tester's use in evaluating training on a new materiel system. It focuses on the performance of specific individual and collective tasks during operational testing of a system. The TTSP package should be updated by the Materiel Developer and validated by the Training Developer prior to the Limited Users Test (LUT), Initial Operational Test and Evaluation (IOTE), and (First Unit Equipped) FUE during a system's development or as required by the TEMP or Operational Test Plan (OTP). The final TTSP contains the items listed below. Some listed products for draft TTSPs may not be available.

- Training schedule.
- POI for each MOS/SSI affected.
- Training Circulars (TC).
- List of training devices, embedded training components, and simulators.
- Target audience description.
- Soldier training publications (STP) or changes.
- Digital Training Management System (DTMS) Combined Arms Training Strategy (CATS)
- Lesson plans.
- Ammunition, targets, and ranges required for training.
- Critical MOS task list.
- Field manuals (FMs) or changes to FMs.
- Approved STRAP

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### 6.0 Institutional Training Domain

The institutional domain includes Initial Military Training (IMT), Professional Military Education (PME), and functional training for Soldiers. Operational assignments integrate individuals into a team and build on the foundation of individual skills learned in institutions. Individual learning is implemented primarily in the institutional training domain and prepares Soldiers to perform critical tasks and apply competencies that support the unit's Combined Arms Training Strategy (CATS). The institution ensures the learning environment and products are challenging, progressively and sequentially, and are critical tasks based. They manage risks without degrading essential learning requirements. The institution ensures use of valid feedback critical to providing relevant, efficient, effective, and current instruction. The classroom experiences are collaborative, problem-solving events led by instructors/facilitators who engage students to think and understand the relevance and context of what they learn. The institution effectively uses social media, games, digital applications and emerging technologies in the operational environment by incorporating these technologies into institutional training and education. The institution integrates learning strategies and develops learning products that provide a broad contextual understanding of national security issues and the role of senior leaders to ensure success at the strategic level.

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### 6.1 Institutional Training Concept and Strategy

Sentinel training will be integrated by FCoE, USAADAS and SCoE, USAOMEMS into Advanced Individual Training (AIT) schools for the following MOSs: 14G, 94M, and familiarization training for the 14A and 140A. Institutional training will use a variety of TADSS appropriate to the responsibilities of the trained Soldiers. Institutional training will leverage POIs and training material developed and produced for NET to streamline the integration of new system operational concepts, capabilities, and limitations into existing courses.

FCoE, USAADAS's Basic Officer Leader Course (BOLC ) will include a Sentinel Radar weapons track and prepare Air and Missile Defense officers to perform as ADA leaders. All Sentinel associated training and training products will prepare the Leader, Soldier, and Unit to execute force protection, Beyond Visual Range (BVR) engagement, and fire direction doctrine and techniques in the combined arms war fighting arena.

Sentinel impacts the training base of United States Army Ordnance Munitions Electronics Maintenance School (USAOMEMS/ Ordnance Training Detachment OTD) at Fort Sill, OK.

This proponent is responsible for 94M (Sentinel Radar Repairer) maintainer training. The training of unit and support maintainers will consist of initial entry and advanced training at their respective institutions through the use of lesson materials, NET, TADSS, and Interactive Multimedia Instruction (IMI) training support products provided.

Actual system equipment will be used to validate the transfer of knowledge and expertise learned through the use of TADSS. Gunnery tables, maneuver exercises, and other training material can be found in TCs, STPs, FMs, and TM/IETMs.

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### 6.1.1 Product Lines

The MATDEV provides the Sentinel NETP, Basis of Issue Plan Feeder Data (BOIPFD), NET TSP, TADSS, I&KPT, and NET to the training developer to produce DTT and TTSP. The proponent will incorporate the upgraded Sentinel courses into IMT and PME at the institution. The training developer posts the education/training products to local (FKN) and global network (ALMS,ATN, TADLP) for dissemination to institution, operational, and self-development domains.

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**6.1.1.1 Training Information Infrastructure**

The training information infrastructure consists of hardware, software, and communications systems. The AN/MPQ-64A3 interconnecting hardware, software, and communications systems will conform to both Joint and Army training architectures. CHS-3 Equipment Suite, consisting of FAAD C2I application software and hardware will be used to interconnect the Sentinel Radar during institutional training.

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### 6.1.1.1.1 Hardware, Software, and Communications Systems

The interconnected local and global network infrastructures such as the Army Training Network (ATN) will facilitate the dissemination and delivery of training support information. ATN is a "one-stop-shop" for all things related to training management, specifically resources that help train units and Soldiers. It's a secure (Common Access Card (CAC) only) web-based portal. There are many training management resources on ATN, to include the Digital Training Management System (DTMS), Combined Arms Training Strategy (CATS), HQDA Standardized Mission Essential Task List (METL) and much more. The TNGDEV from DOTD, FCoE USAADAS will use ATN to post completed training and doctrine products (Publications, how to manuals, (LL) UTL, Training Circulars to name a few). ATN is an important source of information about the many Army training resources available. ATN link is: <https://atn.army.mil> .

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### 6.1.1.1.2 Storage, Retrieval, and Delivery

USAADAS, FCoE will develop and maintain digital information, scenarios and store the products at the school repository or approved automated development system (TDC). Digital information will be shared through the Central Army Registry (CAR) and other military training repositories as necessary. New repositories will become available as they evolve through the Army Learning Management System (ALMS). The training products to include IMI, will be accessible and able to be delivered/downloaded anytime, anyplace to soldiers through use of portable web accessible devices IAW the Army Learning Concept 2015.

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**6.1.1.1.3 Management Capabilities**

The DTMS is an Army program of record, is a web-based planning and management tool that facilitates an organizations ability to plan, schedule, resource, record and report individual and collective training in units, brigade and below. DTMS has the capability to be use in the institutional training domain.

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### 6.1.1.1.4 Other Enabling Capabilities

An IETM and IMI exportable TSP will be used to augment delivery of interactive products for the Improved Sentinel Radar. These electronic TMs are archived in the Central Army Registry (CAR).

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### 6.1.1.2 Training Products

The following are outputs of the training development process: IMI, NET, IKPT, FMs, ATPs, UTLs, CATS, TCs, CTLs, STPs, and POIs. Institutional training will require courseware, courses, training publications, ET, and TADSS to support the Improved Sentinel Radar training. Interactive courseware will be combined with the use of ET/TADSS to teach the skills and knowledge needed to become proficient in the individual and collective tasks of the Improved Sentinel Radar. The ET and TADSS will be realistic in form, fit, and function and replicate the system's hardware, software, and operational functions.

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### 6.1.1.2.1 Courseware

Specific courseware products not currently identified may be inserted into courses defined in paragraph 6.1.1.2.2 (Courses) or paragraph 6.1.1.3 (TADSS). Courseware shall include Interactive Courseware (ICW), Interactive Multimedia Instruction (IMI) up to level 4, and Web-based instruction.

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### 6.1.1.2.2 Courses

As a minimum, the following courses will be required:

- 14G 043-14J10/20-IRR-RTUP Air DEF C4I Systems OPER RTUP
- 14A 2-44-C20 Air Defense Artillery Basic Officer Leader
- 140A 4F-140A Command and Control Systems Integrator WOBC
- 94M Radar Repairer (United Army Ordnance Maintenance Electronic School (USAOMEMS))

FCoE, USAADAS is the proponent for Sentinel Radar operator training, Officer Basic Course, Warrant Officer Basic course, and Captain Career Course training. The MOS 14G will train on Sentinel Radar operation. The Advanced Individual Training (AIT) design is based upon the training concept to prepare an entry-level Soldier to qualify as a skill level one (SL1) Soldier. Listed below are the institutional courses of instruction.

14G The AD C4I systems enhanced operator/maintainer supervises or serves in an air defense unit or as a member of an air defense activity engaged in operations or intelligence functions of liaison units. Responsible for AD C4I system march order, emplacement, initialization and operator/organizational level system maintenance.

- 14A Air Defense Artillery Officer Basic Officer Leadership Course Branch (BOLC B) Sentinel Radar Track and Captain Career Course (CCC). FCoE, USAADAS conducts AD officers' (14A) training. The Basic Officer Leader Course includes Avenger/MANPADS weapon system and Sentinel for all officers. The BOLC B is currently 9 weeks, 4 days. The CCC incorporates ADA weapons tactics into the POI small group instruction process.
- 140A (Command and Control Systems Integrator), the Warrant Officer Basic Course (WOBC) located at FCoE, USAADAS provides MOS and technical training for the warrant officer following completion of the Warrant Officer Candidate School (WOCS). In addition to technical training, WOBC prepares Air Defenders for junior warrant (W-1/W-2) positions by including Common Core subjects mandated by TRADOC and the Warrant Officer Education System (WOES). In order to ensure accurate, cost-effective training, the material developer must continue to provide and upgrade institutional TADSS as system modifications are made. The combination of institutional and unit training strategies are designed to prepare warrant officers for their first assignments with the common C2 component. After completion of WOCS, WOBC, NET, and unit sustainment training, the warrant is capable of performing respective skill level tasks to standard.

United States Army Ordnance Munitions & Electronic Maintenance School (USAOMEMS) is

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the proponent for Sentinel Radar institutional training for the 94M Radar Repairer. The AIT design is based upon the training concept to prepare an entry-level Soldier to qualify as a skill level one (SL1) Soldier.

94M MOS training course must provide instruction for repairer personnel to support Sentinel Radar. Graduates of 94M MOS training should be qualified to repair the Sentinel Radar components upon graduation .

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### 6.1.1.2.3 Training Publications

All doctrinal and training publications may be in printed and/or electronic format, used for training individuals or units. The term "training publications" includes training literature, both official and unofficial. The training literature is a body of writing published to provide information and training on the training, doctrine, operational doctrine, and tactics, techniques, and procedures (TTPs) adopted for use in training soldiers assigned to Air Defense or Brigade Combat Team units. The following are Training Bulletins and Field Manuals that are required to support the Improved/Enhanced Sentinel Radar:

Sentinel AN/MPQ-64 A1		
Reference	Title	Date
TB 11-7010-269-10	Operator's Manual for Communication Control Set AN/TSQ-182	01 Oct 1995
TB 11-7010-269-10-1	Operator's Manual for Communication Control Set AN/TSQ-182A	15 May 1998
TB 11-7010-305-10	Operator's Manual for Communication Control Sets AN/TSQ-182A, AN/TSQ-182B, AN/TSQ-183B, AN/TSQ-183C, AN/TSQ-183D, AN/TSQ-184C, AN/TSQ-184D, AN/TSQ-184E, and AN/TSQ-184F (Subsystems of FAAD C2I Systems)	15 Dec 2001
TM 5-6115-585-12	Operator and Organizational Maintenance Manual for Generator Set, Diesel Engine Driven, Tactical Skid MTD, 10KW, 1 Phase, 2 Wire, 1Phase, 3 Wire, and 3 Phase, 4 Wire; 120, 120/140 and 120/208 A (DOD Model MEP-003a), Utility Class, 60hz	25 Jul 1977
TM	Operators and Field Maintenance Manual	01 Sep

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11-5810-410-13&P	Including Repair Parts and	2007
TM 11-5820-1172-13	Operator and Maintenance Manual Defense Advanced GPS Receiver (DAGR)	01 Mar 2005
TM 11-5820-890-10-8	Operators Manual for SINCGARS Ground Combat Net Radio, ICOM Manpack Radio, AN/PRC-119A, Short Range Vehicular Radio AN/VRC-87A, Short Range Multiplexer (FHMUX) (item also produced in electronic media and included on EM 0071)	01 Dec 1998
TM 11-5825-291-13	Operations and Maintenance Manual for Satellite Signals Navigation	01 Apr 2001
TM 11-5895-1842-13	Operator and Field Maintenance Manual for Center, Communications Operation AN/TSQ-253 (NSN: 5895-01-547-0392) (ADAM CELL CPP SYSTEM)	15 Apr 2008
TM 11-5895-1842-23P	Field Maintenance Repair Parts and Special Tools List for Center, Communications Operation AN/TSQ-253 (NSN: 5895-01-547-0392)	15 May 2008
TM 9-1430-741-10	Operators Manual for Sentinel, AN/MPQ-64, (IETM)	15 Nov 2007
TM 9-2320-280-10	Operators Manual for TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, M998 (NSN 2320-01-107-7155) (EIC: BBD): M998A1 (2320-01-371-9577) (EIC:BBN); TRUCK UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4	31 Jan 1996
TM 11-5820-890-10-6	SINCGARS ICOM Ground Radios used with Automated NET Control Device (ANCD); Precision Lightweight GPS Receiver (PLGR); Handheld Remote Control Radio Device (HRCRD) Operators Pocket Guide Radio Sets MANPACK Radio	01 Jul 2007

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TM 11-5810-292-13&P	(O) Operators, Unit & Direct Support Maintenance for General Purpose Tape reader KOI-18 (NSN 7025-01-026-9620) Electronic Transfer Device KYK-13 (NSN 5810-01-026-9618), Net Control Device KYX-15/15A	31 May 1989
TM 11-5820-890-10-7	SINCGARS ICOM Ground Radios used with Automated Net Control Device (ANCD) AN/CYZ-10 and Precision Lightweight GPS Receiver (PLGR) AN/PSN-11 Net Control Station (NCS) Pocket Guide Radio Sets MANPACK Radio	01 Aug 2007
TM 9-6115-642-24	Unit, Direct Support and Genral Support Maintenance Manual for Generator Set, Skid Mounted, Tactical Quiet 10KW, 60 and 400 HZ MEP-803A (60HZ) (NSN 6115-01-275-5061) MEP-813A (400HZ) (NSN 6115-01-274-7392)	01 Sep 1993
Sentinel AN/MPQ-64 A3		
TM 9-1430-Sentinel	EM 0096, TM 9-1430-SENTINE; THIS CD CONTAINS THE FOLLOWING PUB LICATIONS: TM 9-1430-741-10; TM 9-1430-741-24&P; TM 4 3-0003-53; TM 43-0002-30; TM 9-1430-741-BD; TB 9-1430-741-20-1; TB 9-1430-741-20-2 (IETM)	01 Apr 2010
TB 9-1430-741-20-1	IETM INSTALLATION OF RADIO SET AN/VSQ-2 IN SENTINEL AN/MPQ-64 NSN 1430-01-420-8077; AN/MPQ-64A1, (NSN 1430-01-536-6089) (IETM)	01 Apr 2010
TM 9-1430-741-BD	BATTLE DAMAGE ASSESSMENT AND REPAIR MANUAL FOR SENTINEL, AN/MPQ-64, (NSN 1430-01-420-8077), AN/MPQ-64A1, (NSN 1430-01-536-6089) (IETM)	01 Apr 2010

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TM 9-1430-741-10	OPERATOR'S MANUAL FOR SENTINEL, AN/MPQ-64, (NSN 1430-01-420-8077), AN/MPQ-64A1, (NSN 1430-01-536-6089) (IETM)	01 Apr 2010
TM 9-1430-741-24&P	ORGANIZATIONAL, DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE MANUAL FOR SENTINEL, AN/MPQ-64, (NSN 1430-01-420-8077), AN/MPQ-64A1, (NSN 1430-01-536-6089) (IETM)	01 Apr 2010
TM 9-1430-740-BD	BATTLE DAMAGE ASSESSMENT AND REPAIR MANUAL FOR SENTINEL, AN/MPQ-64A3, (NSN 1430-01-620-6502) (IETM)	Under Dvlpmnt
TM 9-1430-740-10	OPERATOR'S MANUAL FOR SENTINEL, AN/MPQ-64A3, (NSN 1430-01-620-6502) (IETM)	Under Dvlpmnt
TM 9-1430-740-10	OPERATOR'S MANUAL FOR SENTINEL, AN/MPQ-64A3, (NSN 1430-01-620-6502) (PDF)	Under Dvlpmnt
TM 9-1430-740-23&P	ORGANIZATIONAL AND DIRECT SUPPORT MAINTENANCE MANUAL FOR SENTINEL, AN/MPQ-64A3, (NSN 1430-01-620-6502) (IETM)	Under Dvlpmnt
LO 9-6115-642-12	GENERATOR SET, SKID MOUNTED TACTICAL QUIET 10KW 60 AND 400 HZ 60 HZ NSN: 6115-01-275-5061 PART NUMBER: MEP-803A EIC: VG3 CAGEC: 30554 400 HZ NSN: 6115-274-7392 PART NUMBER: MEP-813A EIC: VN3 CAGEC: 30554 (PDF)	01 Jun 2009
TM 9-6115-642-10	OPERATOR'S MANUAL FOR GENERATOR SET, SKID MOUNTED, TACTICAL QUIET, 10 KW, 60 HZ MEP-803A (NSN 6115-01-275-5061) (EIC VG3) GENERATOR SET, SKID MOUNTED, TACTICAL QUIET, 10 KW, 400 HZ MEP-813A (NSN 6115-01-274-7392) (EIC VN3) (PDF)	15 Sep 2010

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TM 9-6115-750-10	OPERATORS MANUAL FOR GENERATOR SET, SKID MOUNTED (AMMPS) MEP-1040 50/60 HZ (NSN: 6115-01-561-7455) (EIC: N/A) MEP-1041 400 HZ (NSN: 6115-01-561-7466) (EIC: N/A) (PDF)	01 Feb 2011
TM 9-6115-750-24&P	FIELD AND SUSTAINMENT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST FOR GENERATOR SET, SKID MOUNTED 10KW ADVANCED MEDIUM MOBILE POWER SOURCES (AMMPS) MEP-1040, 50/60 HZ (NSN: 6115-01-561-7455) (EIC: MA3) MEP-1041, 400 HZ (NSN: 6115-01-561-7466) (EIC: MA4) (PDF)	31 Dec 2011
TM 9-2320-280-14&P	EM 0254 TM 9-2320-280-14&P FOR HIGH MOBILITY MULTI- PURPOSE VEHICLE (HMMWV) FOV {TO 36A12-1A (SERIES); TM 2320 (SERIES)} (THIS ITEM IS INCLUDED ON EM 0254) (IETM)	29 Jul 2005
	HAND RECEIPT COVERING CONTENTS OF COMPONENTS OF END ITEM (COEI) BASIC ISSUE ITEMS (BII), AND ADDITIONAL AUTHORIZATION LIST (AAL FOR TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, M998 NSN 2320-01-107-7155 (EIC: BBD) TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, M998A1 NSN 2320-01-371-9577 (EIC: BBN) TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, W/WINCH, M1038 NSN 2320-01-107-7156 (EIC: BBE) TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, W/WINCH, M1038A1 NSN 2320-01-371-9578 (EIC: BBP) TRUCK, UTILITY: HEAVY VARIANT, 4X4, M1097 NSN 2320-01-346-9317 (EIC: BBM) TRUCK, UTILITY: HEAVY VARIANT, 4X4, M1097A1 NSN	

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TM 9-2320-280-10-HR	2320-01-371-9583 (EIC: BBU) TRUCK, UTILITY: HEAVY VARIANT, 4X4, M1097A2, M1097R1 NSN 2320-01-380-8604 (EIC: BB6) TRUCK, UTILITY: HEAVY VARIANT, 4X4, M1123 NSN 2320-01-455-9593 (EIC: B6G) TRUCK, UTILITY: TOW CARRIER, ARMORED, 1-1/4 TON, 4X4, M966 NSN 2320-01-107-7153 (EIC: BBC) TRUCK, UTILITY: TOW CARRIER, ARMORED, 1-1/4 TON, 4X4, M966A1 NSN 2320-01-372-3932 (EIC: BBX) TRUCK, UTILITY: TOW CARRIER, ARMORED, 1-1/4 TON, 4X4, M1121 NSN 2320-01-956-1282 (EIC: B6H) TRUCK, UTILITY: TOW CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, M1045 NSN 2320-01-146-7191 TRUCK, UTILITY: TOW CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, M1045A1 NSN 2320-01-371-9580 (EIC: BBR) TRUCK, UTILITY: TOW CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, M1045A2 NSN 2320-01-380-8229 (EIC: BB5) TRUCK, UTILITY: TOW CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, W/WINCH, M1046 NSN 2320-01-146-7188 TRUCK, UTILITY: TOW CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, W/WINCH, M1046A1 NSN 2320-01-371-9582 (EIC: BBT) TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED, 1-1/4 TON, 4X4, M1025 NSN 2320-01-128-9551 (EIC: BBF) TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED, 1-1/4 TON, 4X4, M1025A1 NSN 2320-01-371-9584 (EIC: BBV) TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED, 1-1/4 TON, 4X4, M1025A2, M1025R1 NSN 2320-01-380-8233 (EIC: BB3) TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED, 1-1/4 TON, 4X4,	27 Sep 2013
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W/WINCH, M1026 NSN 2320-01-128-9552 (EIC: BBG)  
TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED,  
1-1/4 TON, 4X4, W/WINCH, M1026A1 NSN  
2320-01-371-9579 (EIC: BBQ) TRUCK, UTILITY:  
ARMAMENT CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4  
TON, 4X4, M1043 NSN 2320-01-146-7190 TRUCK,  
UTILITY: ARMAMENT CARRIER, /SUPPLEMENTAL  
ARMOR, 1-1/4 TON, 4X4, M1043A1 NSN  
2320-01-372-3933 (EIC: BBY) TRUCK, UTILITY:  
ARMAMENT CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4  
TON, 4X4, M1043A2 NSN 2320-01-380-8213 (EIC:  
BB4) TRUCK, UTILITY: ARMAMENT CARRIER,  
W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, W/WINCH,  
M1044 NSN 2320-01-146-7189 TRUCK, UTILITY:  
ARMAMENT CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4  
TON, 4X4, W/WINCH, M1044A1 NSN  
2320-01-371-9581 (EIC: BBS) TRUCK, UTILITY:  
S250 SHELTER CARRIER, 4X4, M1037 NSN  
2320-01-146-7193 (EIC: BBK) TRUCK, UTILITY:  
S250 SHELTER CARRIER, 4X4, W/WINCH, M1042 NSN  
2320-01-146-7187 TRUCK, AMBULANCE, 2-LITTER,  
ARMORED, 4X4, M996 NSN 2310-01-111-2275 (EIC:  
BBB) TRUCK, AMBULANCE, 2-LITTER, ARMORED, 4X4,  
M996A1 NSN 2310-01-372-3935 (EIC: BB2) TRUCK,  
AMBULANCE, 4-LITTER, ARMORED, 4X4, M997 NSN  
2310-01-111-2274 (EIC: BBA) TRUCK, AMBULANCE,  
4-LITTER, ARMORED, 4X4, M997A1 NSN  
2310-01-372-3934 (EIC: BBZ) TRUCK, AMBULANCE,  
4-LITTER, ARMORED, 4X4, M997A2 NSN  
2310-01-380-8225 (EIC: BB8) TRUCK, AMBULANCE,  
2-LITTER, SOFT TOP, 4X4, M1035 NSN

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2310-01-146-7194 TRUCK, AMBULANCE, 2-LITTER, SOFT TOP, 4X4, M1035A1 NSN 2310-01-371-9585 (EIC: BBW) TRUCK, AMBULANCE, 2-LITTER, SOFT TOP, 4X4, M1035A2 NSN 2310-01-380-8290 (EIC: BB9) (PDF)	
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OPERATOR'S MANUAL FOR TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, M998 NSN 2320-01-107-7155 (EIC: BBD) TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, M998A1 NSN 2320-01-371-9577 (EIC: BBN) TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, W/WINCH, M1038 NSN 2320-01-107-7156 (EIC: BBE) TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, W/WINCH, M1038A1 NSN 2320-01-371-9578 (EIC: BBP) TRUCK, UTILITY: HEAVY VARIANT, 4X4, M1097 NSN 2320-01-346-9317 (EIC: BBM) TRUCK, UTILITY: HEAVY VARIANT, 4X4, M1097A1 NSN 2320-01-371-9583 (EIC: BBU) TRUCK, UTILITY: HEAVY VARIANT, 4X4, M1097A2, M1097R1 NSN 2320-01-380-8604 (EIC: BB6) TRUCK, UTILITY: HEAVY VARIANT, 4X4, M1123 NSN 2320-01-455-9593 (EIC: B6G) TRUCK, UTILITY: TOW CARRIER, ARMORED, 1-1/4 TON, 4X4, M966 NSN 2320-01-107-7153 (EIC: BBC) TRUCK, UTILITY: TOW CARRIER, ARMORED, 1-1/4 TON, 4X4, M966A1 NSN 2320-01-372-3932 (EIC: BBX) TRUCK, UTILITY: TOW CARRIER, ARMORED, 1-1/4 TON, 4X4, M1121 NSN 2320-01-456-1282 (EIC: B6H) TRUCK, UTILITY: TOW CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, M1045 NSN 2320-01-146-7191	
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TM 9-2320-280-10

TRUCK, UTILITY: TOW CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, M1045A1 NSN  
2320-01-371-9580 (EIC: BBR) TRUCK, UTILITY: TOW CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, M1045A2 NSN 2320-01-380-8229 (EIC: BB5)  
TRUCK, UTILITY: TOW CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, W/WINCH, M1046 NSN  
2320-01-146-7188 TRUCK, UTILITY: TOW CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, W/WINCH, M1046A1 NSN 2320-01-371-9582 (EIC: BBT) TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED, 1-1/4 TON, 4X4, M1025 NSN 2320-01-128-9551 (EIC: BBF)  
TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED, 1-1/4 TON, 4X4, M1025A1 NSN 2320-01-371-9584 (EIC: BBV) TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED, 1-1/4 TON, 4X4, M1025A2, M1025R1 NSN 2320-01-380-8233 (EIC: BB3) TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED, 1-1/4 TON, 4X4, W/WINCH, M1026 NSN 2320-01-128-9552 (EIC: BBG)  
TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED, 1-1/4 TON, 4X4, W/WINCH, M1026A1 NSN  
2320-01-371-9579 (EIC: BBQ) TRUCK, UTILITY: ARMAMENT CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, M1043 NSN 2320-01-146-7190 TRUCK, UTILITY: ARMAMENT CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, M1043A1 NSN  
2320-01-372-3933 (EIC: BBY) TRUCK, UTILITY: ARMAMENT CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, M1043A2 NSN 2320-01-380-8213 (EIC: BB4) TRUCK, UTILITY: ARMAMENT CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, W/WINCH,

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2013

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	<p>M1044 NSN 2320-01-146-7189 TRUCK, UTILITY:          ARMAMENT CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4          TON, 4X4, W/WINCH, M1044A1 NSN          2320-01-371-9581 (EIC: BBS) TRUCK, UTILITY:          S250 SHELTER CARRIER, 4X4, M1037 NSN          2320-01-146-7193 (EIC: BBK) TRUCK, UTILITY:          S250 SHELTER CARRIER, 4X4, W/WINCH, M1042 NSN          2320-01-146-7187 TRUCK, AMBULANCE, 2-LITTER,          ARMORED, 4X4, M996 NSN 2310-01-111-2275 (EIC:          BBB) TRUCK, AMBULANCE, 2-LITTER, ARMORED, 4X4,          M996A1 NSN 2310-01-372-3935 (EIC: BB2) TRUCK,          AMBULANCE, 4-LITTER, ARMORED, 4X4, M997 NSN          2310-01-111-2274 (EIC: BBA) TRUCK, AMBULANCE,          4-LITTER, ARMORED, 4X4, M997A1 NSN          2310-01-372-3934 (EIC: BBZ) TRUCK, AMBULANCE,          4-LITTER, ARMORED, 4X4, M997A2 NSN          2310-01-380-8225 (EIC: BB8) TRUCK, AMBULANCE,          2-LITTER, SOFT TOP, 4X4, M1035 NSN          2310-01-146-7194 TRUCK, AMBULANCE, 2-LITTER,          SOFT TOP, 4X4, M1035A1 NSN 2310-01-371-9585          (EIC: BW) TRUCK, AMBULANCE, 2-LITTER, SOFT          TOP, 4X4, M1035A2 NSN 2310-01-380-8290 (EIC:          BB9) (PDF)</p>	
<p>TM          9-2330-392-13&amp;P</p>	<p>OPERATOR AND FIELD MAINTENANCE MANUAL          INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST          FOR TRAILER, CARGO: 2000 POUNDS, 2-WHEEL M1101          (NSN 2330-01-387-5443) (EIC CBC) M1102          (2330-01-387-5426) (EIC CBB) CHASSIS          (2330-01-387-5424) (EIC CCL) (PDF)</p>	<p>07 Dec          2012</p>
	<p>OPERATORS AND FIELD MAINTENANCE MANUAL</p>	

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<p>TM 11-5810-410-13&amp;P</p>	<p>INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST FOR TRANSFER UNIT, CRYPTOGRAPHIC KEY AN/PYQ-10(C) SIMPLE KEY LOADER (SKL) SKL UAS VERSION 8.0 (NSN 5810-01-517-3587) (EIC: N/A)</p>	<p>15 Aug 2013</p>
<p>TM 11-5895-1611-12&amp;P</p>	<p>OPERATOR'S AND UNIT LEVEL MAINTENANCE MANUAL FOR INTERROGATOR SET AN/TPX-56(V)2 (NSN 5895-01-392-2206) (EIC: IZL) INTERROGATOR SET AN/TPX-56(V)3 (NSN 5895-01-504-4594) (EIC: N/A) INTERROGATOR SET AN/TPX-56(V)4 (NSN 5895-01-586-3140) (EIC: N/A) (PDF)</p>	<p>01 Apr 2011</p>
<p>TM 11-5820-890-10-HR</p>	<p>SINGARS NON-ICOM AND ICOM RADIO SETS AN/PRC-119 (NSN 5820-01-151-9915), (EIC: L2A) AN/PRC-119A (5820-01-267-948 (EIC: L2Q) AN/VRC-87 (5820-01-151-9916), (EIC: L2T) AN/VRC-87A (5820-01-267-9480), (EIC: L22) AN/VRC-87C (5820-01-304-2045), (EIC: GDC) AN/VRC-87D (5820-01-351-5259), (EIC: N/A) AN/VRC-88 (5820-01-151-9917), (EIC: L2U) AN/VRC-88A (5820-01-267-9481), (EIC: L23) AN/VRC-88C (5820-01-304-2044), (EIC: GDD) AN/VRC-88D (5820-01-352-1694), (EIC: N/A) AN/VRC-89 (5820-01-151-9918), (EIC: L2V) AN/VRC-89A (5 (PDF)</p>	<p>01 Aug 2004</p>
<p>TM 11-5820-890-10-6</p>	<p>SINGARS ICOM GROUND RADIOS USED WITH AUTOMATED NET CONTROL DEVICE (ANCD); PRECISION LIGHTWEIGHT GPS RECEIVER (PLGR); HANDHELD REMOTE CONTROL RADIO DEVICE (HRCRD) OPERATORS POCKET GUIDE RADIO SETS MANPACK RADIO</p>	<p>01 Jul 2007</p>

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	(AN/PRC-119A/D) (NSN: N/A) (EIC: N/A) VEHICULAR RADIOS (AN/VRC-87A/D; THRU AN/VRC-92A/D) (NSN: N/A) (EIC: N/A) (PDF)	
TM 11-5820-890-10-7	SINGGARS ICOM GROUND RADIOS USED WITH AUTOMATED NET CONTROL DEVICE (ANCD) AN/CYZ-10 AND PRECISION LIGHTWEIGHT GPS RECEIVER (PLGR) AN/PSN-11 NET CONTROL STATION (NCS) POCKET GUIDE RADIO SETS MANPACK RADIO (AN/PRC-119A) (NSN: N/A) (EIC: N/A) VEHICULAR RADIOS (AN/VRC-87A-C THRU AN/VRC-92A) (NSN: N/A) (EIC: N/A) (PDF)	01 Aug 2007
TM 11-5820-890-10-8	SINGGARS GROUND COMBAT NET RADIO, ICOM MANPACK RADIO, AN/PRC-119A (NSN 5820-01-267-9482) (EIC: L2Q), SHORT RANGE VEHICULAR RADIO AN/VRC-87A (5820-01-267-9480) (EIC: L22), SHORT RANGE VEHICULAR RADIO WITH SINGLE RADIO MOUNT AN/VRC-87C (5820-01-304-2045) (EIC: GDC), SHORT RANGE VEHICULAR RADIO WITH DISMOUNT AN/VRC-88A (5820-01-267-9481) (EIC: L23), S RANGE/LONG RANGE VEHICULAR RADIO AN/VRC-88C (5820-01-304-2044) (EIC: 6DD), SHORT RANGE/LONG RANGE VEHICULAR RADIO AN/VRC-89A (5820-01-267-9479) (EIC: L24), LONG	01 Dec 2007
TM 11-5825-299-10	MANPACK RADIO SET (MP-RS) AIRBORNE RADIO SET AN/ASQ-177D(V)4 (NSN 5820-01-502-4043) (EIC: NA) GROUND RADIO SETS AN/PSQ-6D (NSN 5820-01-502-7234) (EIC:N/A) AN/VSQ-2D(V)1 (NSN 5820-01-502-4040) (EIC: N/A) AN/VSQ-2D(V)2 (NSN 5820-01-502-4041) (EIC: N/A) AN/VSQ-2D(V)4 (NSN 5820-01-502-4042) (EIC:	31 Aug 2011

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	N/A); GRID REFERENCE RADIO SETS AN/GRC-229D (NSN 5895-01-502-4044) (EIC: N/A) (PDF)	
TB 11-5820-1172-10	DAGR OPERATOR'S POCKET GUIDE FOR SATELLITE SIGNALS NAVIGATION SET AN/PSN-13 (NSN 5825-01-516-8038) (EIC: N/A) AN/PSN-13A (NSN 5825-01-526-4783) (EIC:N/A)	01 Mar 2005
TM 11-5820-1172-13	DEFENSE ADVANCED GPS RECEIVER (DAGR) SATELLITE SIGNALS NAVIGATION SET AN/PSN-13 (NSN 5825-01-516-8038) AND AN/PSN-13A (NSN 5825-01-526-4783) (PDF)	01 Mar 2005
TM 9-2320-333-14&P	IETM EM-0294 TM 9-2320-333-14&P, INTERACTIVE TECHNICAL ELECTRONIC TECHNICAL MANUAL FOR OPERATOR, FIELD AND SUSTAINMENT MAINTENANCE AND REPAIR PARTS AND SPECIAL TOOLS LIST FOR LMTV FAMILY OF MEDIUM TACTICAL VEHICLES (FMTV), 2 1/2 TON CARGO W/WINCH, M1078A1P2; 2 1/2 TON CARGO W/O WINCH, M1078A1P2; 2 1/2 TON VAN W/WINCH, M1079A1P2; 2 1/2 TON VAN W/O WINCH, M1079A1P2; AND MTV FAMILY OF MEDIUM TACTICAL VEHICLES, 5 TON CARGO W/WINCH, M1083A1P2; 5 TON CARGO W/O WINCH, M1083A1P2; 5 TON CARGO WITH MHE W/O WINCH, M1084A1P2; 5 TON LWB CARGO W/WINCH, M1085A1P2; 5 TON LWB CARGO W/O WINCH, M1085A1P2; 5 TON LWB CARGO W/MHE W/O WINCH, M1086A1P2; 5 TON EXPANSIBLE VAN W/O WINCH, M1087A1P2; 5 TON TRACTOR W/WINCH, M1088A1P2; 5 TON TRACTOR W/O WINCH, M1088A1P2; 5 TON LHS, M1148A1P2; 10 TON DUMP W/WINCH, M1157A1P2; 10 TON DUMP W/O WINCH, M1157A1P2; 5 TON WRECKER, M1089A1P2. (IETM)	15 Jun 2012

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<p>TM 9-2320-333-10-HR</p>	<p>COVERING CONTENTS OF COMPONENTS AND END ITEM (COEI), BASIC ISSUE ITEMS (BII), AND ADDITIONAL AUTHORIZATION LIST (AAL) FOR M1078A1P2 SERIES, 2-1/2 TON 4X4, LIGHT MEDIUM TACTICAL VEHICLES (LMTV), M1083A1P2 SERIES, 5-TON 6X6, MEDIUM TACTICAL VEHICLES (MTV), AND M1157A1P2 SERIES 10-TON, 6X6, MTV MODEL TRK, CAR, LMTV, M1078A1P2 W/WN (2320-01-549-8611) BH3 TSC W/O WN (2320-010549-8577) BH2 TSD TRK, VAN, LMTV, M1079A1P2 W/WN (2320-01-552-7749) BH5 TSE W/O WN (2320-01-552-7745) BH6 TSF TRK, CAR, MTV M1083A1P2 W/WN (2320-01-549-8565) BUS TSA W/O WM (2320-01-549-8610) BUT TSB TRK, CAR, MTV M1084A1P2 (2320-01-552-7739) BU9 TSG TRK, CAR MTV M1085A1P2 W/WN (2320-01-552-7770) BU4 TSL W/O WN (2320-01-552-7773) BU3 TSM TRK, CAR, MTV M1086A1P2 W/O WN (2320-01-552-7780) BUZ TSV W/O WM (2320-01-552-7781) TRK, EXP VAN, MTV, M1087A1P2 W/O WN (2320-01-552-77812) BUY TSP W/O WN TRK, TRACTOR, MTV, M1088A1P2 W/O WN (2320-01-552-7759) BU7 TSU W/WN (2320-01-5527753) BU8 TSH TRK, WKR,MTV, M1089A1P2 W/WN (2320-01-5527762)BU6 TSJ W/WN TRK, DUMP MTV, M1157A1P2 W/O WNN (2320-01-552-7787) BUW TSR W/WN (2320-01-552-7782) BUX TSQ TRK, LHS LTAS, MTV M1148A1P2 W/O WN (2320-01-557-4546) BUM TSX {TO 36A12-1B/C-1153-21} (PDF)</p>	<p>16 Oct 2009</p>
	<p>OPERATOR'S MANUAL FOR THE M1083A1P2 SERIES 5 TON, 6 X 6 MEDIUM TACTICAL VEHICLES (MTV)</p>	

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<p>TM 9-2320-333-10-1</p>	<p>VOLUME 1 OF 2 TRK, CAR., MTV, M1083A1P2 W/WN 2320-01-549-8565 BUS W/O WN 2320-01-549-8610 BUT TRK, CAR., MTV, M1084A1P2 2320-01-552-7739 BU5 TRK, CAR., LWB, MTV M1085A1P2 W/WN 2320-01-552-7770 BU4 W/O WN 2320-01-552-7773 BU3 TRK, CAR., LWB, MTV M1086A1P2 W/O WN 2320-01-552-7780 BUZ TRK., EX. VAN, MTV, M1087A1P2 2320-01-552-7781 BUY TRK., TRACTOR, MTV, M1088A1P2 W/WN 2320-01-552-7753 BU8 W/O WN 2320-01-552-7759 BU7 TRK, 10 TON DUMP, MTV, M1157A1P2 W/WN 2320-01-552-7782 BUX W/O WN 2320-01-552-7787 BUW (PDF)</p>	<p>20 Jan 2010</p>
<p>TM 9-2320-333-10-2</p>	<p>OPERATOR'S MANUAL FOR THE M1083A1P2 SERIES 5 TON, 6 X 6 MEDIUM TACTICAL VEHICLES (MTV) VOLUME 2 OF 2 TRK, CAR., MTV, M1083A1P2 W/WN 2320-01-549-8565 BUS W/O WN 2320-01-549-8610 BUT TRK, CAR., MTV, M1084A1P2 2320-01-552-7739 BU5 TRK, CAR., LWB, MTV M1085A1P2 W/WN 2320-01-552-7770 BU4 W/O WN 2320-01-552-7773 BU3 TRK, CAR., LWB, MTV M1086A1P2 W/O WN 2320-01-552-7780 BUZ TRK., EX. VAN, MTV, M1087A1P2 2320-01-552-7781 BUY TRK., TRACTOR, MTV, M1088A1P2 W/WN 2320-01-552-7753 BU8 W/O WN 2320-01-552-7759 BU7 TRK, 10 TON DUMP, MTV, M1157A1P2 W/WN 2320-01-552-7782 BUX W/O WN 2320-01-552-7787 BUW (PDF)</p>	<p>20 jan 2010</p>
<p>TM</p>	<p>OPERATOR'S, FIELD LEVEL MANUAL FOR THE M1082 SERIES, 2 1/2 TON LIGHT TACTICAL VEHICLE TRAILER (LMTVT)MODEL 1082, (NSN 2330-01-449-1775) (EIC: CMN) AND THE M1095</p>	<p>15 Dec</p>

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9-2330-394-13&P	SERIES, 5 TON MEDIUM TACTICAL VEHICLE TRAILER (MTVT) MODEL 1095 (NSN 2330-01-449-1776) (EIC:CPK) (PDF)	2010
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### 6.1.1.2.4 Training Support Package (TSP)

The Training Support Package (TSP) shall be multimedia based and include POIs, lesson plans, technical manuals, diagnostics, student and instructor guides, a course management plan, and any other training support products necessary to conduct an effective and efficient sustainment/ operations training program. The TSP shall include a tutorial "how to" module that permits identification of Soldier training proficiency by module.

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**6.1.1.3 TADSS**

This section provides a detailed description of TADSS/ET requirements necessary to support training in the institution. It is important to note that wherever and whenever possible TADSS/ET capabilities will be used. The focus of this strategy is to ensure training can be accomplished in real-time in the institutional training base. The ADA school has the capability to train the tasks necessary to ensure skills and proficiencies match operational requirements.

A variety of TADSS and ET were designed, developed, and fielded for the Sentinel system. As the Sentinel system is modified and/or upgraded in the future, all applicable TADSS/ET will also be changed to insure that the institutional and unit training capabilities match those of the tactical system. The following Table lists each of the Sentinel TADSS as well as how and where it is used:

The TADSS requirement will increase based on an increase of force structure.

**Training Devices and Total Quantities**

<b>Training Device/Embedded Trainer</b>	<b>Institution FCoE/SCoE</b>	<b>DIV HQ (18)</b>	<b>ADA Regiment/ Brigade Support BN (BSB)</b>	<b>AAMDC (4)</b>	<b>Sub-Total Operational Units</b>	<b>Total Quantity Needed (Oper + Inst) (Est.)</b>
Sentinel Embedded Troop Proficiency	8/2	36	84	0	120	130

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Trainer (TPT)						199 <sup>1</sup>
Sentinel Training System (STS) <sup>2</sup>	1/0	0	0	0	0	1
Sentinel Conduct of Fire Trainer (SCOFT) Software	1/1	1	1/1	1	4	6
Sentinel Improved Maintenance Trainer (SIMT) <sup>3</sup>	0/1	0	0	0	0	1
Sentinel Multi-Echelon Training (SMET) software	1/1	1	1	0	2	4
Sentinel Interactive Video Training software (SIVT)	3/1	1	1	1	24	28

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Notes:

1. The AAO is 199; so the final quantity will be the AAO.
2. Equipment requires updating to reflect current fielded system.
3. Sentinel Improved Maintenance Trainer (SIMT) will be the life cycle replacement for the Sentinel Maintenance Trainer (SMT) which is currently fielded.

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### 6.1.1.3.1 Training Aids

The training aids used at the institution are Interactive Electronic Technical Manual, Computer Based Trainer (IETM/CBT) and ET. All TADSS for system and non-system will support the four TADSS environments ( Live Virtual Constructive-Gaming LVC-G) .

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### 6.1.1.3.2 Training Devices

#### The Sentinel Improved Maintenance Trainer (SIMT)

SIMT will provide a single hands-on trainer for Field Maintenance personnel. Leveraging existing SMT architecture while upgrading functionality to facilitate Field Maintenance level training and provide for modular integration with any future system trainers. The SIMT will leverage the Sentinel Multi Echelon Training (SMET) model to provide a virtual simulation of all required software/hardware not physically modeled in the hands on trainer. Sentinel Maintenance Trainer is a hybrid trainer merging the traditional hands on trainer with a virtual simulation of software and hardware not available.

#### Training Capabilities:

- Field Maintenance
- Remove And Replace (R&R) procedures.
- Support for multiple "test points" to simulate signal path troubleshooting and isolation.
- Analysis via multiple signal paths.
- Use of simulated External Test Equipment (ETE)
- Instructor Station
- Controls selection, start, and termination of training scenarios.
- Monitors student progress.
- Free play
- Scenarios may be designed to be lock-stepped or non lock-stepped.

#### Option for free play would be limited by:

- Safety & training protocols.
- Customer-defined requirements.

#### Configurable Simulated Hardware:

- Single radar bay training scenario operation
- Up to four (4) individual (and independent) training scenarios may run.
- Hardware interactions would be limited to that radar bay (no cross-bay capabilities)
- Multiple radar bay training scenario operation
- Training scenario may involve all Radar Interior bays (Roadside&Curbside) ... if available
- Training scenario may involve all Radar Exterior faces (Roadside&Curbside) ... if available

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- Training scenario may involve all Radar Bays ... if available
- Hardware interactions would be limited to affected radar bay.

### **Student Throughput:**

- Student Reader Stations
- Stations will consist of standard Personal Computer (PC)
- All necessary switch actions will be represented graphically/virtually
- Possible re-use of SMET rendered models.
- Simulated enhanced Radar Control Terminal (eRCT) will not be used as a "Student Reader Station" for Radar training scenarios.

### **Hardware includes:**

- Instructor Station
- 4 radar bays and associated student stations.
- Antenna Task Trainer

### **Fault Insertion Training Modules**

Request support for tactical equipment training modules to insert non-destructive faults into Sentinel tactical equipment. The requirement should be for line replaceable units (LRUs) for each end item subsystem and developed to insert a fault without causing damage to equipment. The items will be marked for "training use only".

These modules will be required for the following equipment:

Transceiver Assembly (xx ea)

Antenna Pedestal (xx ea)

Antenna Group (xx ea)

Sensor Interface Unit (SIU) (xx ea)

### **AN/TPX-57(V)1 training device**

Request hardware to mount a AN/TPX-57(V)1 interrogator set on a tabletop configuration in a training lab to alleviate the use of a tactical radar for training. FCoE requires two each to support WOBC and 14G AIT courses of instruction.

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### 6.1.1.3.3 Simulators

#### **Sentinel Training System (STS)**

The STS is an operator trainer that consists of a two-position instructor/operator station, six student stations, an external interface unit, and a software support center. The student stations simulate the radar characteristics, provide realistic, interactive tactical scenarios, and allow for simultaneous simulation of multiple radars in adjacent sectors. Video presentations train students on march order and emplacement (MO&E) tasks and antenna rotation. The stations are Distributed Interactive Simulations (DIS)-compatible and interface with prime FAAD C2I hardware. The software support center provides the capability to maintain and develop exercises and scenarios. The instructor can monitor the students' switch actions and radar control terminal (RCT) displays and can communicate with the students during the training sessions. The STS is used by initial entry students at the institution and it trains the functions and operations listed in the table above.

#### **Sentinel Maintenance Trainer (SMT)**

The SMT is a 3D "delta" trainer used to establish organic 94M MOS training. The SMT includes an instructor/operator station, four student stations, and a software support center. The student stations simulate the Sentinel's physical characteristics and fault symptoms and provide interactive maintenance and repair exercises using the Sentinel Interactive Electronic Technical Manual (IETM). Interactive video discs train students on remove-and-replace maintenance actions and antenna rotation. The instructor can monitor all training operations and communicate with the students during the training sessions. The SMT is used by initial entry students at the institution and it trains the functions and operations listed in the table above.

#### **Sentinel Conduct of Fire Trainer (SCOFT) Software**

SCOFT software is a software application developed to operate within the RT3 hardware. SCOFT is designed to provide the Sentinel operator with the ability to script and generate a training scenario. SCOFT software will be a rehost of embedded training software with additional capabilities. SCOFT will replicate the tactical performance and user interface requirements. SCOFT software updates will coincide with the fielding of any major tactical software updates. SCOFT software will be a requirement for one copy at both all tactical units as well as the institution with the capability to reproduce and distribute as required.

#### **Sentinel Multi-Echelon Training (SMET)**

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The Sentinel Multi-Echelon Trainer (SMET) is a Microsoft Windows based software application developed to train Sentinel personnel in the proper troubleshooting techniques for the repair and maintenance of the Sentinel system at the Field Maintenance level. To meet this objective, the S-MET incorporates fully interactive three dimensional "virtual" renderings of the Sentinel system, including: interior and exterior of Antenna Transceiver Group (ATG) and Vehicle/Generator Group. The SMET simulates operation in tactical operations AIRDEF or ABT modes. It also includes all necessary accessory tools, such as adapter and cables. The SMET hardware platform is a standard PC. The SMET application will operate on the reconfigurable table top trainer hardware platform and can also support training requirements in the field as required. The institution has a current requirement of one SMET software package which has the capability for reproduction and distribution. The software will be a requirement for one copy at both all tactical units as well as the institution with the capability to reproduce and distribute as required.

### **Sentinel Interactive Video Training (SIVT) Software**

The SIVT lessons are especially useful before performing the maintenance task on the tactical equipment. The lessons provide a complete list of required tools and materials to perform the task. They also alert the maintainer to specific hazards they may face while working on the equipment. The maintainer can go through the entire procedure, refreshing prior training and ensuring the fastest and safest maintenance procedure. The software will be a requirement for one copy at both all tactical units as well as the institution with the capability to reproduce and distribute as required.

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### 6.1.1.3.4 Simulations

#### Embedded Trainers (ET)

##### Sentinel Embedded Troop Proficiency Trainer (TPT)

The Sentinel TPT is an individual/crew trainer that is embedded into the actual Sentinel equipment. It is used to train C3I operators on initialization procedures, operations to include establishing the data link and the evaluation of data/error messages, and BIT/BITE. The TPT has scenario generation capability that simulates total system operation, including the generation and passing of data tracks to the Sensor C2 node, and it displays incoming and outgoing information that stimulates operator procedural reactions. The TPT has feedback capability that provides reports of operator actions and summaries for each student. The TPT is used by the institution to train initial entry students and by the unit to provide sustainment training for all C3I operators and crews. The TPT trains the functions and operations listed in the table above.

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**6.1.1.3.5 Instrumentation**

Instrumentation systems will support training in the institution through digital, audio, video, and hard copy data capture, and exercise monitoring and control. Instrumentation systems in the school include those that support ET on the actual system equipment, and those that operate as an integral part of institutional training devices.

**ET Instrumentation.** ET Instrumentation will be available to monitor/record all Sentinel common C2 components Platoon/Battery/Battalion (Plt/Btry/Bn) in the Sentinel school as they enter and operate in communications nets that represent the tactical system in the training Joint netted environment equivalent to the tactical net. Tactical system equipment major end items (MEIs) will have ability to record operator activities to include switch actions and data entry in the course of operating or performing maintenance on the Sentinel system. Training devices and training simulators will have the abilities of digital, audio, video, and hard copy data capture, and monitoring and control to support instructors and students.

**Digital Range Instrumentation.** Digital range instrumentation support will be required to support Mission Readiness Exercises conducted as part of institutional training. Range instrumentation support will include video capture capability, telemetry support, and data capture.

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**6.1.1.4 Training Facilities and Land**

No new training facilities or land will be required.

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**6.1.1.4.1 Ranges**

Not Applicable

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**6.1.1.4.2 Maneuver Training Areas (MTA)**

No new maneuver training area is required.

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### 6.1.1.4.3 Classrooms

Classroom XXI. (Category Code 17136) CR XXI design focuses on instructor use, instructor led training, and instructor facilitated self-paced student training. The level classroom used in these facilities is a Level 3/High Tech Room. It is an open architecture, standards compliant, fully networked multimedia classroom with interpretable Video Teletraining (VTT), internet access, and installation networked with full distance learning capability. The space requires two video projectors and two 3048 mm [10 ft] wide motor operated projection screens. For ease of viewing and transmitting, other CR XXI technologies are used in favor of marker/integrated white boards. The instructor workstation and projection screens are located at the front of the room. An unobstructed view to the front of the room by all students is required. The instructor has digital access to each student computer. The instructor station has a computer, document camera, projector control, lighting and a sound system. Each student must have a networked computer on a desk. Rooms are generally square in plan with a wall at least 9144 mm [30 ft] long is optimal. A communication rack is required for the VTT function in each classroom. For renovations, the rack is often in an alcove leading into the room while in new construction it is usually in a closet within the room. This criterion uses a 20, 24 person classroom, which has been most common to the Army and very successful. Larger Classroom XXIs may be used in coordination with TRADOC.

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**6.1.1.4.4 CTCs**

Not Applicable

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### 6.1.1.4.5 Logistics Support Areas

The institution is responsible for storing, processing, supporting, and staging training products and systems, both classified and unclassified. Local Training Support Centers (TSC) for serviced areas must allocate storage space for TADSS that are signed out to a using unit for training. This would not apply to any TADSS that are part of a Table of Organization and Equipment (TOE). The Improved Sentinel Radar system will not require an increase in logistic support areas as it will replace the current systems fielded.

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**6.1.1.4.6 Battle Command Training Centers (BCTC)**

There are no requirements for the institution to interface with the BCTC.

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**6.1.1.5 Training Services**

FCoE, USAADAS will provide training support to fielded Improved/Enhanced Sentinel Radar elements by providing a online repository of training products and services via Army Knowledge Online (AKO) or similar access-restricted means. Sentinel Radar on-board communication/networked systems will be able to access these remote distributed repositories.

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### 6.1.1.5.1 Management Support Services

FCE, USAADAS and SCoE, USAOMEMS will manage courseware and distributed learning products through in-house course managers.

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### 6.1.1.5.2 Acquisition Support Services

Development of training materials for Improved Sentinel training, such as IMI products and TSPs, and at least some instructors support for efforts such as NET may require contractor support. All TADSS development and training support services will be managed through the MATDEV and existing contracting mechanism and business practices.

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### 6.1.1.5.3 General Support Services

The current General Support Services are provided by the PM and all the required action to keep the program operational through this increment and will continue until NET Training is complete. Typical general support services (such as distribution and replication) will be required to support training in the institutional domain; any requirement for additional support services such as video production services and TADSS development, procedure, distribution is yet to be determined.

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**6.1.2 Architectures and Standards Component**

Architectures and Standards are the second high level component of the TSS. Architectures are the structure of components, their relationship, and the principles and guidelines governing their design and evolution over time. They are the framework that describes missions, organizations, and systems; specifies interfaces and interrelationships amongst its various parts; and facilitates coordination and synchronization with internal and external interfaces. There are three types of architectures-organization, functional, and systems, each of which may have operational, technical, and systems views. The TSS focuses on the training domains, which have a direct correlation with the views; thus, this document focuses on the operational, technical, and systems views. Each view may also have the other views as part of their composition. The Sentinel training architecture integrates the institutional, operational and self-development training domains into a near-seamless training environment that must envelope and nurture AMD Soldiers and leaders for their entire career. The interlinked training domains require a networked system of systems that supports the institution, Joint Training Centers (JTC), Combat Training Centers (CTCs), and unit, including home station and deployed operational theaters.

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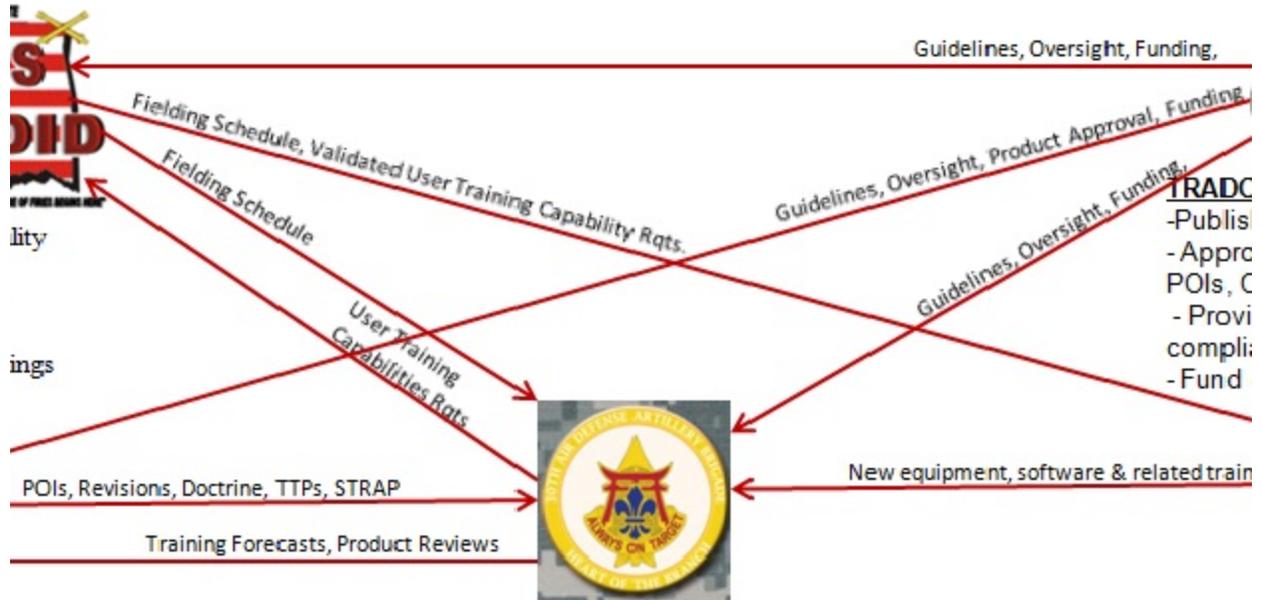
6.1.2.1 Operational View (OV)

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# Sentinel Institutional Training Operational Viewpoint



TTPs, TTSPs  
relative Data

ates

TCM – TRADOC Capabilities Manager
TRADOC – Training and Doctrine Command
TTP – Tactics, Techniques, and Procedures
TTSP – Training Test Support Package

### 30th ADA BDE (Institutional Training)

- Instruct Students
- Train/certify Instructors
- Validate POIs
- Develop User training and training capability requirements
- Forecast long term training requirements
- Manage training records (student and instructor)
- Manage Facilities
- Maintain training base tactical equipment
- Maintain training devices
- Provide STRAP inputs/review STRAP
- Review Doctrine, TTPs and Training Publications

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- Deve
- Traini

### Institution Tr

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- NCOES
- Officer
- FMS and Allie
- Joint Force P:

Institutional

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6.1.2.2 Systems View (SV)

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## Sentinel Institutional Training System Viewpoint



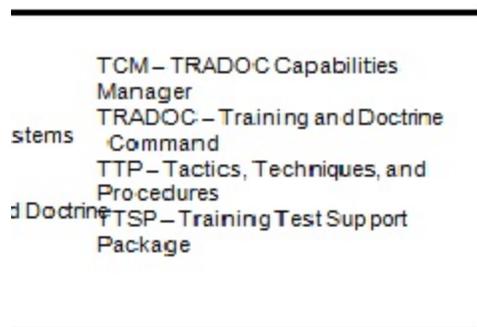
### 30th ADA BDE (Institutional Training)

- AN/MPQ-64A3 (Sentinel)
- Interactive Electronic Technical Manual (IETM)
- FAADC2 ver 5.5
- FMTV
- Communications (Harris /PRC-117), EPLRS, SINCGARS)
- DAGR
- Embedded Trainer ver 5.8.2.1
- Simulators for ETRAC:
- Sentinel Operator Trainer (SVOT)
- Sentinel Maintenance Trainer

### PM

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### Institution Training Target Audience

- AIT
- NCOES
- Officer
- FMS and Allied Nations
- Joint Force Participants

System View

**6.1.2.3 Technical View (TV)**

Training developed to support the AN/MPQ-64A1/A3 will adhere to the numerous "rules" governing the development of training materials. Individual tasks will be developed to support the Army Training Information Architecture. Distributed training materials will be SCORM compliant. Materials developed to support future simulations will support High Level Architecture. See Appendix A of the Capability Production Document for all architectures products.

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### 6.1.3 Management, Evaluation, and Resource (MER) Processes Component

The following paragraphs describe the Operational MER process.

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**6.1.3.1 Management**

Where possible the Improved Sentinel Radar will use existing facilities and support infrastructure. Training development will focus on producing products that are capable of being used in the institutional and operational training domains and focus on combat critical tasks. Training will incorporate the maximum use of simulators/simulations to mitigate cost and risk. Students and instructors will be routinely asked to evaluate training events and products to determine how best to improve the quality and efficiency of instruction and training events to provide the best quality training with the least expenditure of resources.

**6.1.3.1.1 Strategic Planning**

The development improvements and fielding of the Improved/Enhanced Sentinel Radar supports Army and Training Transformation and is consistent with the guidance found in the following documents:

- National Defense strategies
- Joint Vision 2020
- The Army Plan and other Service plans
- Future force documentation
- TRADOC supporting plan to the Army Transformation Campaign Plan (ATCP).

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### 6.1.3.1.2 Concept Development and Experimentation (CD&E)

The AN/MPQ-64A1/A3 Improved/Enhanced Sentinel air defense radar is the Army's primary intermediate air defense sensor. The Sentinel provides 360 degree detection of low to mid altitude tactical aerial threats, including Unmanned Aerial Systems (UAS), cruise missiles, and fixed and rotary-wing aircraft. Sentinel also provides a 360 degree air picture to support counter-rockets artillery and mortars (C-RAM) operations to rapidly clear the airspace and enable intercept of RAM threats. Sentinel will be included in the Army Intergrated Air and Missile Defense (AIAMD) architecture, integrated through interface kits to provide sensor data into the Integrated Fire Control Network. Future Sentinel upgrades will enable the radar to provide direct engagement (fire control quality data) support for future intercept systems, such as the Indirect Fire Protection Capability Increment 2 Intercept (IFPC Inc 2-I).

The need for AIAMD is discussed in the AIAMD Concept of Operations (CONOPS), Indirect Fire Protection capability CONOPS, THAAD CONOPS, JLENS CONOPS, and C-UAS CONOPS. Joint and Army experiments and demonstrations, such as Black Dart, Functional Concept Integrating Experiment (FCIE), Joint Forcible Entry Warfighting Experiment (JFEWE), the Fires Combined Arms Maneuver Experiment (CAMEX), Combined Arms Maneuver (CAM)/Wide Area Security (WAS) Experiment, and Earth, Wind, and Fire (EWF) 08 &09, C-UAS SIMEX 2013, and Joint Readiness Training Center exercises, examined air and missile defense gap(s) validating the requirements to integrate air and missile defense systems to defeat air and missile threats.

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**6.1.3.1.3 Research and Studies**

The FCoE Capabilities Development and Integration Directorate (CDID) and the Fires Battle Lab are the lead for supporting research and studies activities. Sentinel Radar institutional training and TADSS will be developed taking into consideration overarching research and studies as well as directives, system objective capabilities, and overall strategy for the future army. A Capability Based Assessment (CBA), Functional Needs Analysis (FNA) Report was approved 11 April 2011.

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### 6.1.3.1.4 Policy and Guidance

Refer to TRADOC Regulation 350-70, TRADOC Pamphlet 525-8-2 w/C1 06 Jun 2011, DA Pamphlet 73-1, and Army Regulation 350-1.

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### 6.1.3.1.5 Requirements Generation

Listed below are documents that support program initiation and development through JCIDS:

- ORD - Operational Requirements Document (FAAD C3I), DA Approved 12 June 1995
- ORD - Operational Requirements Document (Sentinel), DA Approved 12 June 1995
- STRAP - System Training Plan (FAAD C3I), Approved May 2009

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### 6.1.3.1.6 Synchronization

Training development resources, manpower, and equipment will be available to support systems over its life cycle, following the guidance in LOGSA Pamphlet 700-3, Total Package Fielding; AR 700-142, Materiel Release, Fielding, and Transfer; and DA Pamphlet 700-142, Instructions for Materiel Release, Fielding, and Transfer.

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**6.1.3.1.7 Joint Training Support**

The Improved/Enhanced Sentinel Radar will possess the capability to participate in appropriate joint training exercises, tactical and simulated. The Sentinel Radar will support most, if not all, the attributes articulated in the Joint Operations Concept such as fully integrating with the Joint Force; force tailoring within mission, enemy, terrain and weather, troops and support available, time available, civil considerations (METT-TC) constraints to support the combatant commands; participating in a net-centric environment fully integrated with Army and Joint forces linked with Joint sensors and other enablers to provide information necessary for full-spectrum training and operational considerations.

**6.1.3.2 Evaluation**

The evaluation process will validate training products and provide feedback to measure, audit, and analyze the efficiency and effectiveness of institutional training. The Quality Assurance Office (QAO), FCoE, will use proven techniques to determine the quality of training provided when available. External evaluations will focus on the use of tasks trained, the proper application of those tasks, and the tasks not trained but required. Internal evaluations will focus on the presentation of the tasks which will be trained, the course content, and the instructor presentation of the training material.

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### 6.1.3.2.1 Quality Assurance (QA)

The Design and Evaluation branch (DOTD) retains final approval for the POI.

Quality Assurance office (QAO) uses the training assessment tool-executive summary to conduct observation of FCoE classes and provide vital feedback to improve a course.

DOTD staffs UTLs, training circulars, and combined arms training strategies, with the units. After updating the training products base on comments from units, DOTD sends the training products to Combined Arms Center - Training (CAC-T) for final quality control. DOTD has the final collective training products posted on Fire Knowledge Network (FKN) and Digital Training Management System (DTMS).

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### 6.1.3.2.2 Assessments

Instructors of FCoE, USAADAS use Fort Sill (FS) 1087 to validate a lesson plan. A lesson plan is validated after the instructor uses the lesson plan three times without major changes.

Instructors of FCoE, USAADAS use FS 1087a to list comments concerning student questions, time allotment, and errors in the lesson plan content. The instructors sends DOTD completed FS 1087a to update lesson plans in TDC annually, two weeks before the validation date of the lesson plan.

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### 6.1.3.2.3 Customer Feedback

DOTD uses instructor and student feedback questionnaires in the course management plan (CMP) to improve the courses.

Soldiers complete the AIMS Student Evaluation which provides Soldiers an opportunity to rate the block of training they have completed.

Quality Assurance office (QAO) sends an automated survey to each student and their supervisor six months after course graduation. Soldier and supervisor assess if the Soldier can perform the individual critical tasks for their job.

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### 6.1.3.2.4 Lessons Learned/After-Action Reviews (AARs)

External and internal AARs, participant, and Unit feedback will be consolidated to develop lessons learned, and made available through the Center for Army Lessons Learned (CALL) information system.

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**6.1.3.3 Resource**

Sentinel is one of the more affordable programs in the Army, particularly when considering capability provided and number of sensors procured and maintain. The following table shows the program affordability as programmed in the FY 13 POM. There are no additional resource requirements for MOS and AOC for all courses directly related to the Improved Sentinel Radar for the institutional training domain.

((\$M, TY13)	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19	FYDP Total
RDT&E							
Funding	1.5	8.3	11.6	11.0	11.1	12.3	55.8
UFR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Procurement							
Funding	48.0	45.1	43.6	39.0	43.6	22.0	241.3
UFR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sustainment							
Funding	6.7	6.0	5.7	6.7	7.0	6.9	39.0
UFR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Personnel							
Funding	0.0	0.0	0.0	0.0	0.0	0.0	0.0
UFR	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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MILCON							
Funding	0.0	0.0	0.0	0.0	0.0	0.0	0.0
UFR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total UFRs	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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### 7.0 Operational Training Domain

The objectives of operational training are to support ARFORGEN. This objective is enabled by the training support system (TSS) which enhances the performance of Soldiers, leaders, and units through the best mix of integrated live, virtual, constructive, gaming (LVCG) in an integrated training environment. Operational training is further enabled with other system and non-system TADSS including Embedded Training (ET) at each training location. Sustainment training enables units to operate in a band of excellence (BOE) through appropriate repetition of critical tasks using a mixture of LVC training in an Integrated Training Environment (ITE).

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### 7.1 Operational Training Concept and Strategy

NET/TSP products left with units will be used to support sustainment training. Units participating in training will develop unit plan based on ADP and ADRP 7.0, Army Training Networks (ATN) Unit Training Management (UTM) STPs, Training Circulars (Crew Drills), and Combined Arms Training Circulars (Crew Drills), and Combined Arms Training Strategy to support METL requirements.

[https://atn.army.mil/dsp\\_template.aspx?dpID=446](https://atn.army.mil/dsp_template.aspx?dpID=446)

[This training prepares ADA soldiers, leaders, and units to fight as members of the AMD team and prepares them to execute the AMD mission without additional training or lengthy training adjustment periods.](#)

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**7.1.1 Product Lines**

The required product lines for the operational domain are listed in the below table.

Training Aids:	None
Training Devices:	TPT, SCOPT, SMET, SIVT
Simulators:	None
Simulations:	TPT, SCOPT, SMET, SIVT
Instrumentation:	None

**7.1.1.1 Training Information Infrastructure**

The training information infrastructure consists of hardware, software, and communications systems. These provide for local and global network infrastructures to facilitate the management, dissemination, and delivery of training product information. The Sentinel interconnecting hardware, software, and communications systems will conform to both Joint and Army training architectures. Future Sentinel Radar development must provide for networked embedded training capability to participate in joint training exercises and the capability to receive simulated track information as well as command and control information over C2 networks.

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### 7.1.1.1.1 Hardware, Software, and Communications Systems

The use of state-of-the-art distance learning capabilities (IAW TRADOC Reg 350-70) shall provide the capability to enhance and sustain Army readiness by delivering standardized training to soldiers and units at the right place and time using multiple delivery means and techniques. This will be accomplished by leveraging technology and training design efficiencies to provide more cost effective and efficient training. The Sentinel Radar will use dL in training all systems operations. Training sites, connectivity, software, hardware, and Internet access capabilities must be considered. The most commonly used dL delivery techniques are:

- Simulation - Any representation or imitation of reality (abstract) and includes simulating part of a system, the operation of a system, and the environment in which the system will operate.
- Distributed Interactive Simulation - DIS is linking all types of unit training into the same network permitting wide-scale integration of various simulation systems and live training without regard to geographic limitations.
- Embedded Training Systems - ET provides the capability to train a soldier to standard using embedded training capabilities contained in operational equipment. The goal is that ET will be interoperable within a common operating environment linking geographically separated units in live, virtual, and constructive simulation. It provides users assistance by embedded simulation, emulation or simulation capability, embedded connections between the prime system and the training system and training instrumentation.

It is important to note that wherever and whenever possible ET capabilities will be used. The focus of this strategy is to ensure training can be accomplished at unit locations in real-time without relying on non-unit resources.

The TNGDEV from DOTD, FCoE USAADAS will use ATN to post completed training and doctrine products (Publications, how to manuals, (LL) UTL, Training Circulars to name a few). ATN is an important source of information about the many Army training resources available. ATN link is: <https://atn.army.mil> .

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**7.1.1.1.2 Storage, Retrieval, and Delivery**

Digital information will be accessed via the Army Training Network (ATN), stored on the Central Army Registry (CAR), the Digital Training Management System (DTMS), or other military training repositories as necessary, and with new repositories as they evolve through the Army Training Information Architecture (ATIA). The LMS will manage both the content and the users, and is flexible enough to expand with growth and maturity of the system and the organization it supports. The LMS provides the capability to author and manage courseware and content delivery. It works with Learning Content Management Systems (LCMS), using learning objects for reuse and syndication. This management system may also interface with a development environment for rapid upgrades. The LMS tracks student progression through lessons, exercises, and evaluations.

**7.1.1.1.3 Management Capabilities**

The AKO LMS is an infrastructure platform through which learning content is delivered and managed. It consists of software tools that perform a variety of functions related to online and offline training administration, as well as student and performance management. The LMS will manage both the content and the users, and is flexible enough to expand with growth and maturity of the system and the organization it supports. The LMS provides the capability to author and manage courseware and content delivery. It works with Learning Content Management Systems (LCMS), using learning objects for reuse and syndication. This management system may also interface with a development environment for rapid upgrades. The LMS tracks student progression through lessons, exercises, and evaluations.

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### 7.1.1.1.4 Other Enabling Capabilities

An IETM and IMI exportable TSP will be used to augment delivery of interactive products. These electronic manuals and TSP will be archived on the Central Army Registry (CAR).

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**7.1.1.2 Training Products**

Operational training will require training publications, TSPs, ET and TADSS to support the Sentinel Radar. The ET and TADSS will be realistic in form, fit, and function and replicate the system's hardware, software, and operational functions.

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### 7.1.1.2.1 Courseware

Interactive courseware (ICW) available on FKN may be used at the operational training level to enhance sustainment or refresher training for Improved and Enhanced Sentinel operators.

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### 7.1.1.2.2 Courses

Interactive courseware (ICW) available on FKN may be used at the operational training level to enhance sustainment or refresher training for Improved and Enhanced Sentinel operators.

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**7.1.1.2.3 Training Publications**

All doctrinal and training publications may be in printed and/or electronic format, used for training individuals or units. The term "training publications" includes training literature, both official and unofficial. The training literature is a body of writing published to provide information and training on the training, doctrine, operational doctrine, and tactics, techniques, and procedures (TTPs) adopted for use in training soldiers assigned to Air Defense or Brigade Combat Team units. The following are Training Bulletins and Field Manuals that are required to support the Improved Sentinel Radar:

Sentinel AN/MPQ-64 A1		
Reference	Title	Date
TB 11-7010-269-10	Operator's Manual for Communication Control Set AN/TSQ-182	01 Oct 1995
TB 11-7010-269-10-1	Operator's Manual for Communication Control Set AN/TSQ-182A	15 May 1998
TB 11-7010-305-10	Operator's Manual for Communication Control Sets AN/TSQ-182A, AN/TSQ-182B, AN/TSQ-183B, AN/TSQ-183C, AN/TSQ-183D, AN/TSQ-184C, AN/TSQ-184D, AN/TSQ-184E, and AN/TSQ-184F (Subsystems of FAAD C2I Systems)	15 Dec 2001
TM 5-6115-585-12	Operator and Organizational Maintenance Manual for Generator Set, Diesel Engine Driven, Tactical Skid MTD, 10KW, 1 Phase, 2 Wire, 1Phase, 3 Wire, and 3 Phase, 4 Wire; 120, 120/140 and 120/208 A (DOD Model MEP-003a), Utility Class, 60hz	25 Jul 1977
TM	Operators and Field Maintenance Manual	01 Sep

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11-5810-410-13&P	Including Repair Parts and	2007
TM 11-5820-1172-13	Operator and Maintenance Manual Defense Advanced GPS Receiver (DAGR)	01 Mar 2005
TM 11-5820-890-10-8	Operators Manual for SINCGARS Ground Combat Net Radio, ICOM Manpack Radio, AN/PRC-119A, Short Range Vehicular Radio AN/VRC-87A, Short Range Multiplexer (FHMUX) (item also produced in electronic media and included on EM 0071)	01 Dec 1998
TM 11-5825-291-13	Operations and Maintenance Manual for Satellite Signals Navigation	01 Apr 2001
TM 11-5895-1842-13	Operator and Field Maintenance Manual for Center, Communications Operation AN/TSQ-253 (NSN: 5895-01-547-0392) (ADAM CELL CPP SYSTEM)	15 Apr 2008
TM 11-5895-1842-23P	Field Maintenance Repair Parts and Special Tools List for Center, Communications Operation AN/TSQ-253 (NSN: 5895-01-547-0392)	15 May 2008
TM 9-1430-741-10	Operators Manual for Sentinel, AN/MPQ-64, (IETM)	15 Nov 2007
TM 9-2320-280-10	Operators Manual for TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, M998 (NSN 2320-01-107-7155) (EIC: BBD): M998A1 (2320-01-371-9577) (EIC:BBN); TRUCK UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4	31 Jan 1996
TM 11-5820-890-10-6	SINCGARS ICOM Ground Radios used with Automated NET Control Device (ANCD); Precision Lightweight GPS Receiver (PLGR); Handheld Remote Control Radio Device (HRCRD) Operators Pocket Guide Radio Sets MANPACK Radio	01 Jul 2007

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TM 11-5810-292-13&P	(O) Operators, Unit & Direct Support Maintenance for General Purpose Tape reader KOI-18 (NSN 7025-01-026-9620) Electronic Transfer Device KYK-13 (NSN 5810-01-026-9618), Net Control Device KYX-15/15A	31 May 1989
TM 11-5820-890-10-7	SINCGARS ICOM Ground Radios used with Automated Net Control Device (ANCD) AN/CYZ-10 and Precision Lightweight GPS Receiver (PLGR) AN/PSN-11 Net Control Station (NCS) Pocket Guide Radio Sets MANPACK Radio	01 Aug 2007
TM 9-6115-642-24	Unit, Direct Support and Genral Support Maintenance Manual for Generator Set, Skid Mounted, Tactical Quiet 10KW, 60 and 400 HZ MEP-803A (60HZ) (NSN 6115-01-275-5061) MEP-813A (400HZ) (NSN 6115-01-274-7392)	01 Sep 1993
Sentinel AN/MPQ-64 A3		
TM 9-1430-Sentinel	EM 0096, TM 9-1430-SENTINE; THIS CD CONTAINS THE FOLLOWING PUB LICATIONS: TM 9-1430-741-10; TM 9-1430-741-24&P; TM 4 3-0003-53; TM 43-0002-30; TM 9-1430-741-BD; TB 9-1430-741-20-1; TB 9-1430-741-20-2 (IETM)	01 Apr 2010
TB 9-1430-741-20-1	IETM INSTALLATION OF RADIO SET AN/VSQ-2 IN SENTINEL AN/MPQ-64 NSN 1430-01-420-8077; AN/MPQ-64A1, (NSN 1430-01-536-6089) (IETM)	01 Apr 2010
TM 9-1430-741-BD	BATTLE DAMAGE ASSESSMENT AND REPAIR MANUAL FOR SENTINEL, AN/MPQ-64, (NSN 1430-01-420-8077), AN/MPQ-64A1, (NSN 1430-01-536-6089) (IETM)	01 Apr 2010

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TM 9-1430-741-10	OPERATOR'S MANUAL FOR SENTINEL, AN/MPQ-64, (NSN 1430-01-420-8077), AN/MPQ-64A1, (NSN 1430-01-536-6089) (IETM)	01 Apr 2010
TM 9-1430-741-24&P	ORGANIZATIONAL, DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE MANUAL FOR SENTINEL, AN/MPQ-64, (NSN 1430-01-420-8077), AN/MPQ-64A1, (NSN 1430-01-536-6089) (IETM)	01 Apr 2010
TM 9-1430-740-BD	BATTLE DAMAGE ASSESSMENT AND REPAIR MANUAL FOR SENTINEL, AN/MPQ-64A3, (NSN 1430-01-620-6502) (IETM)	Under Dvlpmnt
TM 9-1430-740-10	OPERATOR'S MANUAL FOR SENTINEL, AN/MPQ-64A3, (NSN 1430-01-620-6502) (IETM)	Under Dvlpmnt
TM 9-1430-740-10	OPERATOR'S MANUAL FOR SENTINEL, AN/MPQ-64A3, (NSN 1430-01-620-6502) (PDF)	Under Dvlpmnt
TM 9-1430-740-23&P	ORGANIZATIONAL AND DIRECT SUPPORT MAINTENANCE MANUAL FOR SENTINEL, AN/MPQ-64A3, (NSN 1430-01-620-6502) (IETM)	Under Dvlpmnt
LO 9-6115-642-12	GENERATOR SET, SKID MOUNTED TACTICAL QUIET 10KW 60 AND 400 HZ 60 HZ NSN: 6115-01-275-5061 PART NUMBER: MEP-803A EIC: VG3 CAGEC: 30554 400 HZ NSN: 6115-274-7392 PART NUMBER: MEP-813A EIC: VN3 CAGEC: 30554 (PDF)	01 Jun 2009
TM 9-6115-642-10	OPERATOR'S MANUAL FOR GENERATOR SET, SKID MOUNTED, TACTICAL QUIET, 10 KW, 60 HZ MEP-803A (NSN 6115-01-275-5061) (EIC VG3) GENERATOR SET, SKID MOUNTED, TACTICAL QUIET, 10 KW, 400 HZ MEP-813A (NSN 6115-01-274-7392) (EIC VN3) (PDF)	15 Sep 2010

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<p>TM 9-6115-750-10</p>	<p>OPERATORS MANUAL FOR GENERATOR SET, SKID MOUNTED (AMMPS) MEP-1040 50/60 HZ (NSN: 6115-01-561-7455) (EIC: N/A) MEP-1041 400 HZ (NSN: 6115-01-561-7466) (EIC: N/A) (PDF)</p>	<p>01 Feb 2011</p>
<p>TM 9-6115-750-24&amp;P</p>	<p>FIELD AND SUSTAINMENT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST FOR GENERATOR SET, SKID MOUNTED 10KW ADVANCED MEDIUM MOBILE POWER SOURCES (AMMPS) MEP-1040, 50/60 HZ (NSN: 6115-01-561-7455) (EIC: MA3) MEP-1041, 400 HZ (NSN: 6115-01-561-7466) (EIC: MA4) (PDF)</p>	<p>31 Dec 2011</p>
<p>TM 9-2320-280-14&amp;P</p>	<p>EM 0254 TM 9-2320-280-14&amp;P FOR HIGH MOBILITY MULTI- PURPOSE VEHICLE (HMMWV) FOV {TO 36A12-1A (SERIES); TM 2320 (SERIES)} (THIS ITEM IS INCLUDED ON EM 0254) (IETM)</p>	<p>29 Jul 2005</p>
	<p>HAND RECEIPT COVERING CONTENTS OF COMPONENTS OF END ITEM (COEI) BASIC ISSUE ITEMS (BII), AND ADDITIONAL AUTHORIZATION LIST (AAL FOR TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, M998 NSN 2320-01-107-7155 (EIC: BBD) TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, M998A1 NSN 2320-01-371-9577 (EIC: BBN) TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, W/WINCH, M1038 NSN 2320-01-107-7156 (EIC: BBE) TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, W/WINCH, M1038A1 NSN 2320-01-371-9578 (EIC: BBP) TRUCK, UTILITY: HEAVY VARIANT, 4X4, M1097 NSN 2320-01-346-9317 (EIC: BBM) TRUCK, UTILITY: HEAVY VARIANT, 4X4, M1097A1 NSN</p>	

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TM 9-2320-280-10-HR	2320-01-371-9583 (EIC: BBU) TRUCK, UTILITY: HEAVY VARIANT, 4X4, M1097A2, M1097R1 NSN 2320-01-380-8604 (EIC: BB6) TRUCK, UTILITY: HEAVY VARIANT, 4X4, M1123 NSN 2320-01-455-9593 (EIC: B6G) TRUCK, UTILITY: TOW CARRIER, ARMORED, 1-1/4 TON, 4X4, M966 NSN 2320-01-107-7153 (EIC: BBC) TRUCK, UTILITY: TOW CARRIER, ARMORED, 1-1/4 TON, 4X4, M966A1 NSN 2320-01-372-3932 (EIC: BBX) TRUCK, UTILITY: TOW CARRIER, ARMORED, 1-1/4 TON, 4X4, M1121 NSN 2320-01-956-1282 (EIC: B6H) TRUCK, UTILITY: TOW CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, M1045 NSN 2320-01-146-7191 TRUCK, UTILITY: TOW CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, M1045A1 NSN 2320-01-371-9580 (EIC: BBR) TRUCK, UTILITY: TOW CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, M1045A2 NSN 2320-01-380-8229 (EIC: BB5) TRUCK, UTILITY: TOW CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, W/WINCH, M1046 NSN 2320-01-146-7188 TRUCK, UTILITY: TOW CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, W/WINCH, M1046A1 NSN 2320-01-371-9582 (EIC: BBT) TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED, 1-1/4 TON, 4X4, M1025 NSN 2320-01-128-9551 (EIC: BBF) TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED, 1-1/4 TON, 4X4, M1025A1 NSN 2320-01-371-9584 (EIC: BBV) TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED, 1-1/4 TON, 4X4, M1025A2, M1025R1 NSN 2320-01-380-8233 (EIC: BB3) TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED, 1-1/4 TON, 4X4,	27 Sep 2013
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W/WINCH, M1026 NSN 2320-01-128-9552 (EIC: BBG)  
TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED,  
1-1/4 TON, 4X4, W/WINCH, M1026A1 NSN  
2320-01-371-9579 (EIC: BBQ) TRUCK, UTILITY:  
ARMAMENT CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4  
TON, 4X4, M1043 NSN 2320-01-146-7190 TRUCK,  
UTILITY: ARMAMENT CARRIER, /SUPPLEMENTAL  
ARMOR, 1-1/4 TON, 4X4, M1043A1 NSN  
2320-01-372-3933 (EIC: BBY) TRUCK, UTILITY:  
ARMAMENT CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4  
TON, 4X4, M1043A2 NSN 2320-01-380-8213 (EIC:  
BB4) TRUCK, UTILITY: ARMAMENT CARRIER,  
W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, W/WINCH,  
M1044 NSN 2320-01-146-7189 TRUCK, UTILITY:  
ARMAMENT CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4  
TON, 4X4, W/WINCH, M1044A1 NSN  
2320-01-371-9581 (EIC: BBS) TRUCK, UTILITY:  
S250 SHELTER CARRIER, 4X4, M1037 NSN  
2320-01-146-7193 (EIC: BBK) TRUCK, UTILITY:  
S250 SHELTER CARRIER, 4X4, W/WINCH, M1042 NSN  
2320-01-146-7187 TRUCK, AMBULANCE, 2-LITTER,  
ARMORED, 4X4, M996 NSN 2310-01-111-2275 (EIC:  
BBB) TRUCK, AMBULANCE, 2-LITTER, ARMORED, 4X4,  
M996A1 NSN 2310-01-372-3935 (EIC: BB2) TRUCK,  
AMBULANCE, 4-LITTER, ARMORED, 4X4, M997 NSN  
2310-01-111-2274 (EIC: BBA) TRUCK, AMBULANCE,  
4-LITTER, ARMORED, 4X4, M997A1 NSN  
2310-01-372-3934 (EIC: BBZ) TRUCK, AMBULANCE,  
4-LITTER, ARMORED, 4X4, M997A2 NSN  
2310-01-380-8225 (EIC: BB8) TRUCK, AMBULANCE,  
2-LITTER, SOFT TOP, 4X4, M1035 NSN

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2310-01-146-7194 TRUCK, AMBULANCE, 2-LITTER, SOFT TOP, 4X4, M1035A1 NSN 2310-01-371-9585 (EIC: BBW) TRUCK, AMBULANCE, 2-LITTER, SOFT TOP, 4X4, M1035A2 NSN 2310-01-380-8290 (EIC: BB9) (PDF)	
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OPERATOR'S MANUAL FOR TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, M998 NSN 2320-01-107-7155 (EIC: BBD) TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, M998A1 NSN 2320-01-371-9577 (EIC: BBN) TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, W/WINCH, M1038 NSN 2320-01-107-7156 (EIC: BBE) TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, W/WINCH, M1038A1 NSN 2320-01-371-9578 (EIC: BBP) TRUCK, UTILITY: HEAVY VARIANT, 4X4, M1097 NSN 2320-01-346-9317 (EIC: BBM) TRUCK, UTILITY: HEAVY VARIANT, 4X4, M1097A1 NSN 2320-01-371-9583 (EIC: BBU) TRUCK, UTILITY: HEAVY VARIANT, 4X4, M1097A2, M1097R1 NSN 2320-01-380-8604 (EIC: BB6) TRUCK, UTILITY: HEAVY VARIANT, 4X4, M1123 NSN 2320-01-455-9593 (EIC: B6G) TRUCK, UTILITY: TOW CARRIER, ARMORED, 1-1/4 TON, 4X4, M966 NSN 2320-01-107-7153 (EIC: BBC) TRUCK, UTILITY: TOW CARRIER, ARMORED, 1-1/4 TON, 4X4, M966A1 NSN 2320-01-372-3932 (EIC: BBX) TRUCK, UTILITY: TOW CARRIER, ARMORED, 1-1/4 TON, 4X4, M1121 NSN 2320-01-456-1282 (EIC: B6H) TRUCK, UTILITY: TOW CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, M1045 NSN 2320-01-146-7191	
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TM 9-2320-280-10

TRUCK, UTILITY: TOW CARRIER, W/SUPPLEMENTAL  
ARMOR, 1-1/4 TON, 4X4, M1045A1 NSN  
2320-01-371-9580 (EIC: BBR) TRUCK, UTILITY:  
TOW CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON,  
4X4, M1045A2 NSN 2320-01-380-8229 (EIC: BB5)  
TRUCK, UTILITY: TOW CARRIER, W/SUPPLEMENTAL  
ARMOR, 1-1/4 TON, 4X4, W/WINCH, M1046 NSN  
2320-01-146-7188 TRUCK, UTILITY: TOW CARRIER,  
W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, W/WINCH,  
M1046A1 NSN 2320-01-371-9582 (EIC: BBT) TRUCK,  
UTILITY: ARMAMENT CARRIER, ARMORED, 1-1/4 TON,  
4X4, M1025 NSN 2320-01-128-9551 (EIC: BBF)  
TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED,  
1-1/4 TON, 4X4, M1025A1 NSN 2320-01-371-9584  
(EIC: BBV) TRUCK, UTILITY: ARMAMENT CARRIER,  
ARMORED, 1-1/4 TON, 4X4, M1025A2, M1025R1 NSN  
2320-01-380-8233 (EIC: BB3) TRUCK, UTILITY:  
ARMAMENT CARRIER, ARMORED, 1-1/4 TON, 4X4,  
W/WINCH, M1026 NSN 2320-01-128-9552 (EIC: BBG)  
TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED,  
1-1/4 TON, 4X4, W/WINCH, M1026A1 NSN  
2320-01-371-9579 (EIC: BBQ) TRUCK, UTILITY:  
ARMAMENT CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4  
TON, 4X4, M1043 NSN 2320-01-146-7190 TRUCK,  
UTILITY: ARMAMENT CARRIER, W/SUPPLEMENTAL  
ARMOR, 1-1/4 TON, 4X4, M1043A1 NSN  
2320-01-372-3933 (EIC: BBY) TRUCK, UTILITY:  
ARMAMENT CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4  
TON, 4X4, M1043A2 NSN 2320-01-380-8213 (EIC:  
BB4) TRUCK, UTILITY: ARMAMENT CARRIER,  
W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, W/WINCH,

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2013

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	<p>M1044 NSN 2320-01-146-7189 TRUCK, UTILITY:          ARMAMENT CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4          TON, 4X4, W/WINCH, M1044A1 NSN          2320-01-371-9581 (EIC: BBS) TRUCK, UTILITY:          S250 SHELTER CARRIER, 4X4, M1037 NSN          2320-01-146-7193 (EIC: BBK) TRUCK, UTILITY:          S250 SHELTER CARRIER, 4X4, W/WINCH, M1042 NSN          2320-01-146-7187 TRUCK, AMBULANCE, 2-LITTER,          ARMORED, 4X4, M996 NSN 2310-01-111-2275 (EIC:          BBB) TRUCK, AMBULANCE, 2-LITTER, ARMORED, 4X4,          M996A1 NSN 2310-01-372-3935 (EIC: BB2) TRUCK,          AMBULANCE, 4-LITTER, ARMORED, 4X4, M997 NSN          2310-01-111-2274 (EIC: BBA) TRUCK, AMBULANCE,          4-LITTER, ARMORED, 4X4, M997A1 NSN          2310-01-372-3934 (EIC: BBZ) TRUCK, AMBULANCE,          4-LITTER, ARMORED, 4X4, M997A2 NSN          2310-01-380-8225 (EIC: BB8) TRUCK, AMBULANCE,          2-LITTER, SOFT TOP, 4X4, M1035 NSN          2310-01-146-7194 TRUCK, AMBULANCE, 2-LITTER,          SOFT TOP, 4X4, M1035A1 NSN 2310-01-371-9585          (EIC: BW) TRUCK, AMBULANCE, 2-LITTER, SOFT          TOP, 4X4, M1035A2 NSN 2310-01-380-8290 (EIC:          BB9) (PDF)</p>	
<p>TM          9-2330-392-13&amp;P</p>	<p>OPERATOR AND FIELD MAINTENANCE MANUAL          INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST          FOR TRAILER, CARGO: 2000 POUNDS, 2-WHEEL M1101          (NSN 2330-01-387-5443) (EIC CBC) M1102          (2330-01-387-5426) (EIC CBB) CHASSIS          (2330-01-387-5424) (EIC CCL) (PDF)</p>	<p>07 Dec          2012</p>
	<p>OPERATORS AND FIELD MAINTENANCE MANUAL</p>	

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<p>TM 11-5810-410-13&amp;P</p>	<p>INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST FOR TRANSFER UNIT, CRYPTOGRAPHIC KEY AN/PYQ-10(C) SIMPLE KEY LOADER (SKL) SKL UAS VERSION 8.0 (NSN 5810-01-517-3587) (EIC: N/A)</p>	<p>15 Aug 2013</p>
<p>TM 11-5895-1611-12&amp;P</p>	<p>OPERATOR'S AND UNIT LEVEL MAINTENANCE MANUAL FOR INTERROGATOR SET AN/TPX-56(V)2 (NSN 5895-01-392-2206) (EIC: IZL) INTERROGATOR SET AN/TPX-56(V)3 (NSN 5895-01-504-4594) (EIC: N/A) INTERROGATOR SET AN/TPX-56(V)4 (NSN 5895-01-586-3140) (EIC: N/A) (PDF)</p>	<p>01 Apr 2011</p>
<p>TM 11-5820-890-10-HR</p>	<p>SINGARS NON-ICOM AND ICOM RADIO SETS AN/PRC-119 (NSN 5820-01-151-9915), (EIC: L2A) AN/PRC-119A (5820-01-267-948 (EIC: L2Q) AN/VRC-87 (5820-01-151-9916), (EIC: L2T) AN/VRC-87A (5820-01-267-9480), (EIC: L22) AN/VRC-87C (5820-01-304-2045), (EIC: GDC) AN/VRC-87D (5820-01-351-5259), (EIC: N/A) AN/VRC-88 (5820-01-151-9917), (EIC: L2U) AN/VRC-88A (5820-01-267-9481), (EIC: L23) AN/VRC-88C (5820-01-304-2044), (EIC: GDD) AN/VRC-88D (5820-01-352-1694), (EIC: N/A) AN/VRC-89 (5820-01-151-9918), (EIC: L2V) AN/VRC-89A (5 (PDF)</p>	<p>01 Aug 2004</p>
<p>TM 11-5820-890-10-6</p>	<p>SINGARS ICOM GROUND RADIOS USED WITH AUTOMATED NET CONTROL DEVICE (ANCD); PRECISION LIGHTWEIGHT GPS RECEIVER (PLGR); HANDHELD REMOTE CONTROL RADIO DEVICE (HRCRD) OPERATORS POCKET GUIDE RADIO SETS MANPACK RADIO</p>	<p>01 Jul 2007</p>

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	(AN/PRC-119A/D) (NSN: N/A) (EIC: N/A) VEHICULAR RADIOS (AN/VRC-87A/D; THRU AN/VRC-92A/D) (NSN: N/A) (EIC: N/A) (PDF)	
TM 11-5820-890-10-7	SINGGARS ICOM GROUND RADIOS USED WITH AUTOMATED NET CONTROL DEVICE (ANCD) AN/CYZ-10 AND PRECISION LIGHTWEIGHT GPS RECEIVER (PLGR) AN/PSN-11 NET CONTROL STATION (NCS) POCKET GUIDE RADIO SETS MANPACK RADIO (AN/PRC-119A) (NSN: N/A) (EIC: N/A) VEHICULAR RADIOS (AN/VRC-87A-C THRU AN/VRC-92A) (NSN: N/A) (EIC: N/A) (PDF)	01 Aug 2007
TM 11-5820-890-10-8	SINGGARS GROUND COMBAT NET RADIO, ICOM MANPACK RADIO, AN/PRC-119A (NSN 5820-01-267-9482) (EIC: L2Q), SHORT RANGE VEHICULAR RADIO AN/VRC-87A (5820-01-267-9480) (EIC: L22), SHORT RANGE VEHICULAR RADIO WITH SINGLE RADIO MOUNT AN/VRC-87C (5820-01-304-2045) (EIC: GDC), SHORT RANGE VEHICULAR RADIO WITH DISMOUNT AN/VRC-88A (5820-01-267-9481) (EIC: L23), S RANGE/LONG RANGE VEHICULAR RADIO AN/VRC-88C (5820-01-304-2044) (EIC: 6DD), SHORT RANGE/LONG RANGE VEHICULAR RADIO AN/VRC-89A (5820-01-267-9479) (EIC: L24), LONG	01 Dec 2007
TM 11-5825-299-10	MANPACK RADIO SET (MP-RS) AIRBORNE RADIO SET AN/ASQ-177D(V)4 (NSN 5820-01-502-4043) (EIC: NA) GROUND RADIO SETS AN/PSQ-6D (NSN 5820-01-502-7234) (EIC:N/A) AN/VSQ-2D(V)1 (NSN 5820-01-502-4040) (EIC: N/A) AN/VSQ-2D(V)2 (NSN 5820-01-502-4041) (EIC: N/A) AN/VSQ-2D(V)4 (NSN 5820-01-502-4042) (EIC:	31 Aug 2011

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	N/A); GRID REFERENCE RADIO SETS AN/GRC-229D (NSN 5895-01-502-4044) (EIC: N/A) (PDF)	
TB 11-5820-1172-10	DAGR OPERATOR'S POCKET GUIDE FOR SATELLITE SIGNALS NAVIGATION SET AN/PSN-13 (NSN 5825-01-516-8038) (EIC: N/A) AN/PSN-13A (NSN 5825-01-526-4783) (EIC:N/A)	01 Mar 2005
TM 11-5820-1172-13	DEFENSE ADVANCED GPS RECEIVER (DAGR) SATELLITE SIGNALS NAVIGATION SET AN/PSN-13 (NSN 5825-01-516-8038) AND AN/PSN-13A (NSN 5825-01-526-4783) (PDF)	01 Mar 2005
TM 9-2320-333-14&P	IETM EM-0294 TM 9-2320-333-14&P, INTERACTIVE TECHNICAL ELECTRONIC TECHNICAL MANUAL FOR OPERATOR, FIELD AND SUSTAINMENT MAINTENANCE AND REPAIR PARTS AND SPECIAL TOOLS LIST FOR LMTV FAMILY OF MEDIUM TACTICAL VEHICLES (FMTV), 2 1/2 TON CARGO W/WINCH, M1078A1P2; 2 1/2 TON CARGO W/O WINCH, M1078A1P2; 2 1/2 TON VAN W/WINCH, M1079A1P2; 2 1/2 TON VAN W/O WINCH, M1079A1P2; AND MTV FAMILY OF MEDIUM TACTICAL VEHICLES, 5 TON CARGO W/WINCH, M1083A1P2; 5 TON CARGO W/O WINCH, M1083A1P2; 5 TON CARGO WITH MHE W/O WINCH, M1084A1P2; 5 TON LWB CARGO W/WINCH, M1085A1P2; 5 TON LWB CARGO W/O WINCH, M1085A1P2; 5 TON LWB CARGO W/MHE W/O WINCH, M1086A1P2; 5 TON EXPANSIBLE VAN W/O WINCH, M1087A1P2; 5 TON TRACTOR W/WINCH, M1088A1P2; 5 TON TRACTOR W/O WINCH, M1088A1P2; 5 TON LHS, M1148A1P2; 10 TON DUMP W/WINCH, M1157A1P2; 10 TON DUMP W/O WINCH, M1157A1P2; 5 TON WRECKER, M1089A1P2. (IETM)	15 Jun 2012

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<p>TM 9-2320-333-10-HR</p>	<p>COVERING CONTENTS OF COMPONENTS AND END ITEM (COEI), BASIC ISSUE ITEMS (BII), AND ADDITIONAL AUTHORIZATION LIST (AAL) FOR M1078A1P2 SERIES, 2-1/2 TON 4X4, LIGHT MEDIUM TACTICAL VEHICLES (LMTV), M1083A1P2 SERIES, 5-TON 6X6, MEDIUM TACTICAL VEHICLES (MTV), AND M1157A1P2 SERIES 10-TON, 6X6, MTV MODEL TRK, CAR, LMTV, M1078A1P2 W/WN (2320-01-549-8611) BH3 TSC W/O WN (2320-010549-8577) BH2 TSD TRK, VAN, LMTV, M1079A1P2 W/WN (2320-01-552-7749) BH5 TSE W/O WN (2320-01-552-7745) BH6 TSF TRK, CAR, MTV M1083A1P2 W/WN (2320-01-549-8565) BUS TSA W/O WM (2320-01-549-8610) BUT TSB TRK, CAR, MTV M1084A1P2 (2320-01-552-7739) BU9 TSG TRK, CAR MTV M1085A1P2 W/WN (2320-01-552-7770) BU4 TSL W/O WN (2320-01-552-7773) BU3 TSM TRK, CAR, MTV M1086A1P2 W/O WN (2320-01-552-7780) BUZ TSV W/O WM (2320-01-552-7781) TRK, EXP VAN, MTV, M1087A1P2 W/O WN (2320-01-552-77812) BUY TSP W/O WN TRK, TRACTOR, MTV, M1088A1P2 W/O WN (2320-01-552-7759) BU7 TSU W/WN (2320-01-5527753) BU8 TSH TRK, WKR,MTV, M1089A1P2 W/WN (2320-01-5527762)BU6 TSJ W/WN TRK, DUMP MTV, M1157A1P2 W/O WNN (2320-01-552-7787) BUW TSR W/WN (2320-01-552-7782) BUX TSQ TRK, LHS LTAS, MTV M1148A1P2 W/O WN (2320-01-557-4546) BUM TSX {TO 36A12-1B/C-1153-21} (PDF)</p>	<p>16 Oct 2009</p>
	<p>OPERATOR'S MANUAL FOR THE M1083A1P2 SERIES 5 TON, 6 X 6 MEDIUM TACTICAL VEHICLES (MTV)</p>	

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<p>TM 9-2320-333-10-1</p>	<p>VOLUME 1 OF 2 TRK, CAR., MTV, M1083A1P2 W/WN 2320-01-549-8565 BUS W/O WN 2320-01-549-8610 BUT TRK, CAR., MTV, M1084A1P2 2320-01-552-7739 BU5 TRK, CAR., LWB, MTV M1085A1P2 W/WN 2320-01-552-7770 BU4 W/O WN 2320-01-552-7773 BU3 TRK, CAR., LWB, MTV M1086A1P2 W/O WN 2320-01-552-7780 BUZ TRK., EX. VAN, MTV, M1087A1P2 2320-01-552-7781 BUY TRK., TRACTOR, MTV, M1088A1P2 W/WN 2320-01-552-7753 BU8 W/O WN 2320-01-552-7759 BU7 TRK, 10 TON DUMP, MTV, M1157A1P2 W/WN 2320-01-552-7782 BUX W/O WN 2320-01-552-7787 BUW (PDF)</p>	<p>20 Jan 2010</p>
<p>TM 9-2320-333-10-2</p>	<p>OPERATOR'S MANUAL FOR THE M1083A1P2 SERIES 5 TON, 6 X 6 MEDIUM TACTICAL VEHICLES (MTV) VOLUME 2 OF 2 TRK, CAR., MTV, M1083A1P2 W/WN 2320-01-549-8565 BUS W/O WN 2320-01-549-8610 BUT TRK, CAR., MTV, M1084A1P2 2320-01-552-7739 BU5 TRK, CAR., LWB, MTV M1085A1P2 W/WN 2320-01-552-7770 BU4 W/O WN 2320-01-552-7773 BU3 TRK, CAR., LWB, MTV M1086A1P2 W/O WN 2320-01-552-7780 BUZ TRK., EX. VAN, MTV, M1087A1P2 2320-01-552-7781 BUY TRK., TRACTOR, MTV, M1088A1P2 W/WN 2320-01-552-7753 BU8 W/O WN 2320-01-552-7759 BU7 TRK, 10 TON DUMP, MTV, M1157A1P2 W/WN 2320-01-552-7782 BUX W/O WN 2320-01-552-7787 BUW (PDF)</p>	<p>20 jan 2010</p>
<p>TM</p>	<p>OPERATOR'S, FIELD LEVEL MANUAL FOR THE M1082 SERIES, 2 1/2 TON LIGHT TACTICAL VEHICLE TRAILER (LMTVT)MODEL 1082, (NSN 2330-01-449-1775) (EIC: CMN) AND THE M1095</p>	<p>15 Dec</p>

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9-2330-394-13&P	SERIES, 5 TON MEDIUM TACTICAL VEHICLE TRAILER (MTVT) MODEL 1095 (NSN 2330-01-449-1776) (EIC:CPK) (PDF)	2010
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### 7.1.1.2.4 TSP

Collective and Individual analysis will determine the need for TSPs and will be developed as a part of the POI/lesson plan/interactive multimedia instruction(IMI) development process.

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**7.1.1.3 TADSS**

The field units require TADSS/ET which are available for operational training. This matrix defines the types of TADSS/ET available for the Improved and Enhanced Sentinel Radar.

Training Devices and Total Quantities

Training Device/Embedded Trainer	Institution FCoE/SCoE	DIV HQ (18)	ADA Regiment/ Brigade Support BN (BSB)	AAMDC (4)	Sub-Total Operational Units	Total Quantity Needed (Oper + Inst) (Est.)
Sentinel Embedded Troop Proficiency Trainer (TPT)	8/2	36	84	0	120	130 199 <sup>1</sup>
Sentinel Training System (STS) <sup>2</sup>	1/0	0	0	0	0	1
Sentinel Conduct of Fire Trainer (SCOFT) Software	1/1	1	1/1	1	4	6

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Sentinel Improved Maintenance Trainer (SIMT) <sup>3</sup>	0/1	0	0	0	0	1
Sentinel Multi-Echelon Training (SMET) software	1/1	1	1	0	2	4
Sentinel Interactive Video Training software (SIVT)	3/1	1	1	1	24	28

Notes:

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1. The AAO is 199; so the final quantity will be the AAO.
2. Equipment requires updating to reflect current fielded system.
3. Sentinel Improved Maintenance Trainer (SIMT) will be the life cycle replacement for the Sentinel Maintenance Trainer (SMT) which is currently fielded.

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**7.1.1.3.1 Training Aids**

No training aids are anticipated for field units.

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**7.1.1.3.2 Training Devices**

The Sentinel Improved Maintenance Trainer (SIMT)

SIMT will provide a single hands-on trainer for Field Maintenance personnel. Leveraging existing SMT architecture while upgrading functionality to facilitate Field Maintenance level training and provide for modular integration with any future system trainers. The SIMT will leverage the Sentinel Multi Echelon Training (SMET) model to provide a virtual simulation of all required software/hardware not physically modeled in the hands on trainer. Sentinel Maintenance Trainer is a hybrid trainer merging the traditional hands on trainer with a virtual simulation of software and hardware not available.

Sentinel Maintenance Trainer (SMT)

The SMT is a 3D "delta" trainer used to establish organic 94M MOS training. An existing FIREFINDER Intermediate Maintenance Trainer (FIMT) is utilized to train common Sentinel/FIREFINDER tasks. The SMT includes an instructor/operator station, four student stations, and a software support center. The student stations simulate the Sentinel's physical characteristics and fault symptoms and provide interactive maintenance and repair exercises using the Sentinel Interactive Electronic Technical Manual (IETM). Interactive video discs train students on remove-and-replace maintenance actions and antenna rotation. The instructor can monitor all training operations and communicate with the students during the training sessions. The SMT is used by initial entry students at the institution and it trains the functions and operations of the system.

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### 7.1.1.3.3 Simulators

#### **Sentinel Training System (STS)**

The STS is an operator trainer that consists of a two-position instructor/operator station, six student stations, an external interface unit, and a software support center. The student stations simulate the radar characteristics, provide realistic, interactive tactical scenarios, and allow for simultaneous simulation of multiple radars in adjacent sectors. Video presentations train students on march order and emplacement (MO&E) tasks and antenna rotation. The stations are Distributed Interactive Simulations (DIS)-compatible and interface with prime FAAD C2I hardware. The software support center provides the capability to maintain and develop exercises and scenarios. The instructor can monitor the students' switch actions and radar control terminal (RCT) displays and can communicate with the students during the training sessions. The STS is used by initial entry students at the institution and it trains the functions and operations listed in the table above.

#### **Sentinel Maintenance Trainer (SMT)**

The SMT is a 3D "delta" trainer used to establish organic 94M MOS training. An existing FIREFINDER Intermediate Maintenance Trainer (FIMT) is utilized to train common Sentinel/FIREFINDER tasks. The SMT includes an instructor/operator station, four student stations, and a software support center. The student stations simulate the Sentinel's physical characteristics and fault symptoms and provide interactive maintenance and repair exercises using the Sentinel Interactive Electronic Technical Manual (IETM). Interactive video discs train students on remove-and-replace maintenance actions and antenna rotation. The instructor can monitor all training operations and communicate with the students during the training sessions. The SMT is used by initial entry students at the institution and it trains the functions and operations listed in the table above.

#### **Sentinel Conduct of Fire Trainer (SCOFT) Software**

SCOFT software is a software application developed to operate within the RT3 hardware. SCOFT is designed to provide the Sentinel operator with the ability to script and generate a training scenario. SCOFT software will be a rehost of embedded training software with additional capabilities. SCOFT will replicate the tactical performance and user interface requirements. SCOFT software updates will coincide with the fielding of any major tactical software updates. SCOFT software will be a requirement for one copy at both all tactical units as well as the institution with the capability to reproduce and distribute as required.

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### **Sentinel Multi-Echelon Training (SMET)**

The Sentinel Multi-Echelon Trainer (SMET) is a Microsoft Windows based software application developed to train Sentinel personnel in the proper troubleshooting techniques for the repair and maintenance of the Sentinel system at the Field Maintenance level. To meet this objective, the S-MET incorporates fully interactive three dimensional "virtual" renderings of the Sentinel system, including: interior and exterior of Antenna Transceiver Group (ATG) and Vehicle/Generator Group. The SMET simulates operation in tactical operations AIRDEF or ABT modes. The P-MET includes items of simulated test equipment include oscilloscopes, power meters, spectrum analyzers, and digital multimeters. It also includes all necessary accessory tools, such as adapter and cables. The SMET hardware platform is a standard PC. The SMET application will operate on the reconfigurable table top trainer hardware platform and can also support training requirements in the field as required. The institution has a current requirement of one SMET software package which has the capability for reproduction and distribution. The software will be a requirement for one copy at both all tactical units as well as the institution with the capability to reproduce and distribute as required.

### **Sentinel Interactive Video Training (SIVT) Software**

The SIVT lessons are especially useful before performing the maintenance task on the tactical equipment. The lessons provide a complete list of required tools and materials to perform the task. They also alert the maintainer to specific hazards they may face while working on the equipment. The maintainer can go through the entire procedure, refreshing prior training and ensuring the fastest and safest maintenance procedure. The software will be a requirement for one copy at both all tactical units as well as the institution with the capability to reproduce and distribute as required.

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**7.1.1.3.4 Simulations**

Replicate the AN/MPQ-64A1/A3, Improved Sentinel in VBS3 for collective training purposes in the crawl/walk stage of collective training in a tactical setting prior to the live environment. Provide modeling information (content and functionality) on the AN/MPQ-64A1/A3, Improved Sentinel to PEO STRI (PM-ACTT) and TCM Gaming to enable proper implementation of the AN/MPQ-64A1, Improved Sentinel functions/capabilities in the applicable gaming simulations.

Refer to paragraph 6.1.1.3.4.

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**7.1.1.3.5 Instrumentation**

Refer to paragraph 6.1.1.3.5.

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**7.1.1.4 Training Facilities and Land**

No new training facilities or land will be required.

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**7.1.1.4.1 Ranges**

Not Applicable

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**7.1.1.4.2 Maneuver Training Areas (MTA)**

No new maneuver training area is required.

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**7.1.1.4.3 Classrooms**

Classroom facilities may be required to augment operational training. Training may be conducted from individual through crew levels. Examples of training are tactical seminars, on-line training courses, and certification training and testing. Embedded trainers on tactical equipment provide excellent training opportunities. Examples of classroom facilities that support operational training are:

- Classroom XXI
- Digital training facilities (DTF)
- Weapons platforms
- Standard Classrooms
- Deployable Classrooms

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### 7.1.1.4.4 CTCs

Usage of existing CTCs will depend on fielded system locations. CTC instrumentation shall be developed to exercise the Sentinel Radar capabilities in a simulated and/or live environment in both the Army and Joint Combat Training Centers. The Sentinel Radar communications will be capable of interfacing with CTC instrumentation to transport data to a central data collection point (Plt/Btry/Bn).

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### 7.1.1.4.5 Logistics Support Areas

Local Training Support Centers (TSC) for serviced areas must allocate storage space for TADSS that are signed out to a using unit for training. This would not apply to any TADSS that are part of a Table of Organization and Equipment (TOE).

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### 7.1.1.4.6 Battle Command Training Centers (BCTC)

The Sentinel Radar communications will be capable of interfacing with Mission Training Complex (MTC) instrumentation to transport data to a central data collection point (Plt/Btry/Bn).

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**7.1.1.5 Training Services**

Refer to para. 6.1.1.5.

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**7.1.1.5.1 Management Support Services**

Refer to para. 6.1.1.5.1.

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### 7.1.1.5.2 Acquisition Support Services

Development of all IMI products and instructors for NET may require contract (or) support. The PM is responsible for NET and associated support.

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### 7.1.1.5.3 General Support Services

Reproduction of IMI media and TSPs, procurement of long-term maintenance and support services for TADSS after initial fielding period will be required.

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### 7.1.2 Architectures and Standards Component

The Sentinel Radar training architecture must integrate the individual, operational and self-development training domains into a near-seamless training environment that must envelope and nurture ADA Soldiers and leaders for their entire career. The Institutional Architecture begins with the NET TSP, which is developed by the DOTD training developers (TD) in conjunction with the Program Manager. The NET TSP contains instruction on performing operator and maintainer tasks on the Sentinel Radar. The NET TSP is handed off to the institution where the DOTD provides the package to their TDers for refinement and development of the training support products. DOTD will use the NET TSP to revise existing POIs. Collective Training products will be developed or updated incorporating TTPs. Doctrine writers will incorporate the developed TTPs in the updates to doctrinal manuals.

The interlinked training domains require a networked system of systems that supports the institution, Joint Training Centers (JTC), Combat Training Centers (CTCs), and unit, including home station and deployed operational theaters. The advantage of integrated and networked LVC training environments is that it allows for the interlinking of the current, stove-piped training domains. The LVC environments must be fully integrated and networked to support ADA full-spectrum training.

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7.1.2.1 Operational View (OV)

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## Sentinel OV-1

OV-1 covers the Sentinel Radar "As-Is" state and in a "To Be" state in Army Integrated Air and Missile Defense System of Systems. It is fielded to much of the AMD.

OV-1 depicts Sentinel in the "As-Is" state, which it is an organic or "To Be" state. Currently Sentinel is fielded directly to only the Mission Management System of the organization.

OV-1 depicts Sentinel through the Integrated Fire Control. Sentinel will still be fielded to organizations as the top OV-1, to disseminate air-picture information to FCN subscribers, when fielded not only to their own node.

Sentinel Combined 13 JUNE 13

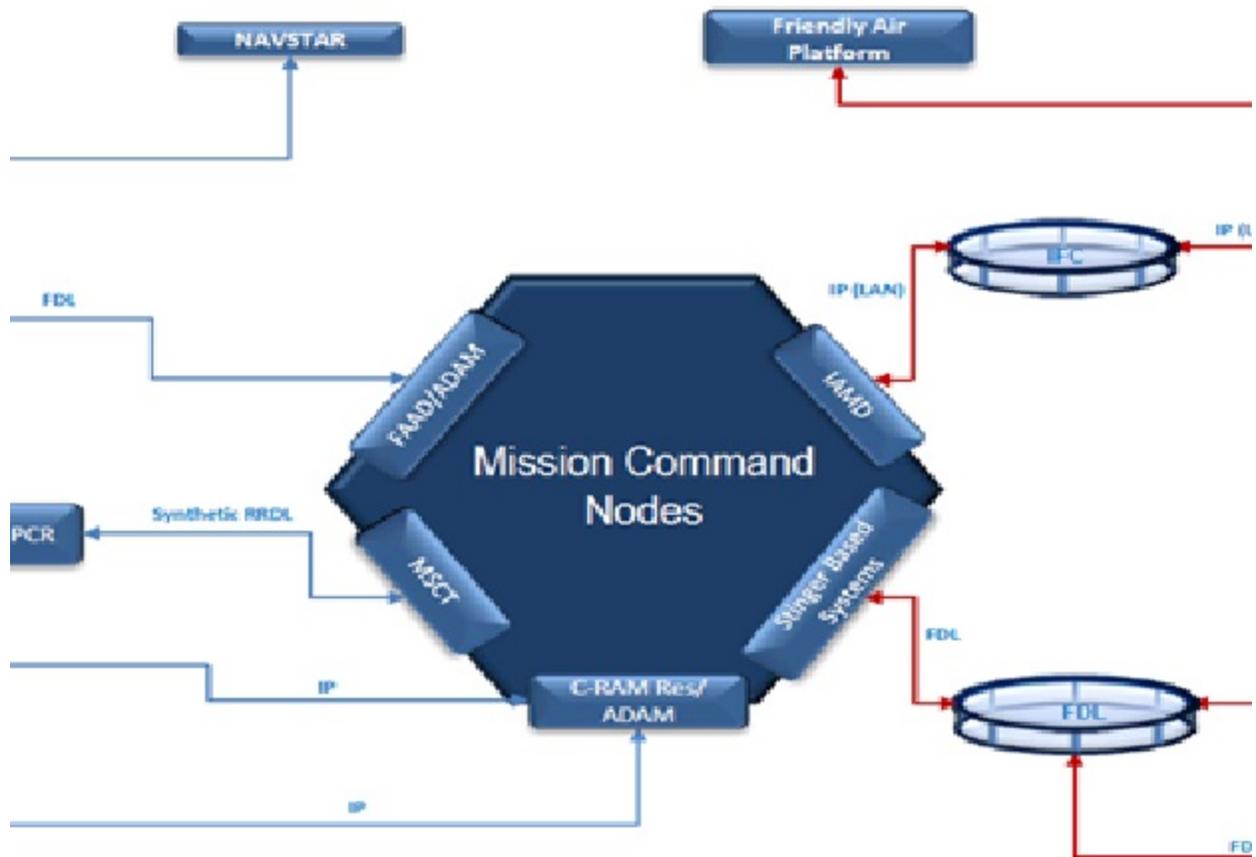


OV1 for OPs

**7.1.2.2 Systems View (SV)**

SV-2 Systems Resource Flow Description

The SV-2 Systems Resource Flow depicts the communications flow between Sentinel systems. It depicts pertinent information about communications systems, communications links and communications networks. The SV-2 shows the communications details of the interfaces that automate aspects of the need-lines represented in the respective OV-2. *Please note that the outside dashed boxes relect any single Sentinel communication capabilities. The boxes are on opposing sides of the diagram to minimize crossing of communication lines.*



	Ports/SW	<b>FDL = FAAD Data Link</b> <b>JDNS = Joint Data Sub-Net</b> <b>ACS = A Defense Common Software</b> <b>EBD = Engineering Block Data</b> <b>EDRF = Engineering Data Recording Facility</b> <b>PCR = Protocol Converter Router</b> <b>RES = Radar Element Subsystem</b> <b>MSCT = Multiple Source Correlator Tracker</b>	<b>RRDL = Remote Radar Data Link</b> <b>FCS = Function Control System</b> <b>CRAM = Counter Radar Air Management</b> <b>FAAD = Forward Air Defense</b> <b>SLAMRAAM = Standoff Launch and Radar Air Management</b> <b>AMRAAM = Air Mission Radar Air Management</b> <b>ADAM = Air Defense Air Management</b>
	Sub-Systems		
	RF Connectivity		
	Physical Connectivity		
	Network		

SV for OPs

**7.1.2.3 Technical View (TV)**

Training developed to support the AN/MPQ-64A1/A3 will adhere to the numerous "rules" governing the development of training materials. Individual tasks will be developed to support the Army Training Information Architecture. Distributed training materials will be SCORM compliant. Materials developed to support future simulations will support High Level Architecture. See Appendix A of the Capability Production Document for all architectures products.

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### 7.1.3 Management, Evaluation, and Resource (MER) Processes Component

The following paragraphs describe the Operational MER process.

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### 7.1.3.1 Management

Where possible the Sentinet Radar will use existing facilities and support infrastructure. The staff training estimate in support of the Sentinel Radar will focus on the most efficient use of existing resources and identify and quantify any expected shortfalls. Training development will focus on producing products that are capable of being used both in the institution and in the operational training domain and focused only on combat critical tasks. Training will incorporate the maximum use of simulations to mitigate cost and risk. Students and instructors will be routinely asked to evaluate training events and products to determine how best to improve the quality and efficiency of instruction and training events to provide the best quality training with the least expenditure of resources. These results must be forwarded to the Center for Army Lessons Learned (CALL) proponent. DTMS will be used by the unit to schedule events, request ammunition, create short and long range training plans and track Soldiers training of critical tasks.

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**7.1.3.1.1 Strategic Planning**

The development and fielding of the Sentinel Radar supports Army and Training Transformation and is consistent with the guidance found in the following documents:

- National Defense strategies
- Joint Vision 2020
- The Army Plan and other Service plans
- Future force documentation
- TRADOC supporting plan to the Army Transformation Campaign Plan (ATCP).

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### 7.1.3.1.2 Concept Development and Experimentation (CD&E)

The AN/MPQ-64 Improved Sentinel air defense radar is the Army's primary intermediate air defense sensor. The Sentinel provides 360 degree detection of low to mid altitude tactical aerial threats, including Unmanned Aerial Systems (UAS), cruise missiles, and fixed and rotary-wing aircraft. Sentinel also provides a 360 degree air picture to support counter-rockets artillery and mortars (C-RAM) operations to rapidly clear the airspace and enable intercept of RAM threats. Sentinel will be included in the Air and Missile Defense (AIAMD) architecture, integrated through interface kits to provide sensor data into the Integrated Fire Control Network. Future Sentinel upgrades will enable the radar to provide direct engagement (fire control quality data) support for future intercept systems, such as the Indirect Fire Protection Capability Increment 2 Intercept (IFPC Inc 2-I).

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**7.1.3.1.3 Research and Studies**

Refer to paragraph 6.1.3.1.3.

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### 7.1.3.1.4 Policy and Guidance

Refer to TRADOC Regulation 350-70, DA Pamphlet 73-1, TRADOC Pamphlet 525-8-2 w/C1 06 Jun 2011, and Army Regulation 350-1.

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**7.1.3.1.5 Requirements Generation**

Refer to paragraph 6.1.3.1.5.

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**7.1.3.1.6 Synchronization**

Refer to paragraph 6.1.3.1.6.

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**7.1.3.1.7 Joint Training Support**

Refer to paragraph 6.1.3.1.7.

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### 7.1.3.2 Evaluation

The following paragraphs describe the Operational Evaluation process.

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### 7.1.3.2.1 Quality Assurance (QA)

Units will receive surveys after being fielded to gather information on the quality of the product and training. Sentinel operators will have the option of submitting comments directly to the Fires Center of Excellence (FCoE), Quality Assurance Office (QAO) via the Fires Knowledge Network (FKN).

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### 7.1.3.2.2 Assessments

Only after a successful Table VII or Table XI, may a unit be eligible for a Table VIII or Table XII. Battery commanders assess their units at Tables VII and XI level prior to attempting Table VIII or XII evaluations. This allows the unit commander to make a full assessment of the battery's proficiency before an external evaluation by either battalion or brigade.

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### 7.1.3.2.3 Customer Feedback

Methodology will be primarily through Training Circular (TC) and Drill evaluation of training operations, after action reviews (AAR), and Lessons Learned.

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### 7.1.3.2.4 Lessons Learned/After-Action Reviews (AARs)

External and internal AARs, participant, and Unit feedback will be consolidated to develop lessons learned, and made available through the Center for Army Lessons Learned (CALL) information system.

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**7.1.3.3 Resource Processes**

Training resources are included as a part of the Unit's operational budget. The following table shows the program affordability as programmed in the FY 13 POM.

( \$M, TY13)	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19	FYDP Total
RDT&E							
Funding	1.5	8.3	11.6	11.0	11.1	12.3	55.8
UFR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Procurement							
Funding	48.0	45.1	43.6	39.0	43.6	22.0	241.3
UFR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sustainment							
Funding	6.7	6.0	5.7	6.7	7.0	6.9	39.0
UFR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Personnel							
Funding	0.0	0.0	0.0	0.0	0.0	0.0	0.0
UFR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MILCON							
Funding	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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UFR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total UFRs	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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### 8.0 Self-Development Training Domain

The self-development training domain recognizes the Army's continuous lifelong learning. Training activities in training based school and in operational units often will not meet every individual's need for content or time. Self-development enables individuals to pursue personal and professional development goals. Leaders help subordinates identify areas where self-development will improve performance of current assignment and areas that will prepare them for future career assignments. The training base provides education and training products that can be used for self-development.

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### 8.1 Self-Development Training Concept and Strategy

The Self Development Domain must be a robust component of the Professional Development Model (PDM) providing every Soldier and Army civilian clear understanding of what success looks like. The PDM can be found at <https://atiam.train.army.mil/soldierPortal/>.

The Sentinel Radar self development strategy will be enabled by embedded TSP. Self development attributes will be:

- Sentinel operators will have access to the TSP via FKN.
- Sentinel Radar TSP and IMIs will be embedded in the system software.
- Sentinel operators will be able to use the TSP to conduct self development training on every system component.
- The MATDEV will develop and provide IMIs for all system user interfaces both operator and maintainer as applicable, at IMI level 4 IAW TP 350-70.
- Embedded Training (ET), is included as a component of TSP, is the foundation for the operational training domain and will be an enabler for the self-development training domain.

### **8.1.1 Product Lines**

Self-development training domain product lines are the integrated, interoperable capabilities that allow for continuing education of soldier and leader. They consist of operational information infrastructures, training products, training facilities and land, and training services. For the Sentinel Radar system the focus will be on training products, the other product lines are already developed or are not considered as part of the soldier and leader self development.

The most commonly used DL delivery techniques are:

- Correspondence Courses-Self-paced training materials that can be used for sustainment of individual training.
- Computer Based Instruction-Refers to course materials presented and controlled by a computer and which use multiple requirements for student responses as a primary means of facilitating learning. It is essentially individualized self-paced or group interactive instruction combined with multi-media presentations.
- Video Tele-training-provides the means to distribute training to any number of students simultaneously.
- Simulation-this is any representation or imitation of reality (abstract) and includes simulating part of a system, the operation of a system, and the environment in which the system will operate.
- Distributed Interactive Simulation-DIS links all types of unit training into the same network permitting wide-scale integration of various simulation systems and live training without regard to geographic limitations.

**8.1.1.1 Training Information Infrastructure**

The Sentinel training infrastructure will require the use of Army e-Learning program which consist of commercial off the shelf (COTS) computer-based and web-based DL courseware with CD/ROM, DVD and networking capabilities able to support Army Distributive Learning (AdL). Department of Defense (DOD) standards such as Army Distributive Learning (ADL), Sharable Content Object Reference Model (SCORM), Joint Technical Architecture-Army (JTA-A), Army Training Information Architecture-Migrated (ATIA-M), and Common Training Instrumentation Architecture-Army (CTIA) will be implemented in the design and development of the embedded and DL products. Sentinel Life Cycle Support will include training, training software and courseware design that will be developed in a reusable and maintainable format, i.e., Defense Information Infrastructure Common Operating Environment (DII-COE) and SCORM compliant. PM CMDS is responsible for the funding of the development and delivery of training products for self development.

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### 8.1.1.1.1 Hardware, Software, and Communications Systems

Interconnected local and global network infrastructures will use AKO, ALMS, and ATN to facilitate the dissemination and delivery of training support information for the Improved Sentinel Radar self development training . The Army Learning Management System (ALMS) is a Web-based information system that delivers training to Soldiers, manages training information, provides training collaboration, scheduling, and career planning capabilities in both resident and non-resident training environments. ALMS assist Army trainers and training managers in conducting and managing the training of Soldiers and DA civilians throughout their Army careers. ALMS is accessed via the Army Training Network (ATN) at <https://atn.army.mil/>. In addition to the training at digital training facilities (DTFs), Army personnel can access training from anywhere they have access to a computer and the Internet with the development of the new ALMS.

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### 8.1.1.1.2 Storage, Retrieval, and Delivery

Digital training products are stored on the Fires Knowledge Network (FKN) through Army Knowledge Online (AKO) that will provide secure capability to access the training products for online access for Soldiers performing self-development studies. USAADAS, FCoE will develop and maintain digital information, scenarios and store the products at the school repository or approved automated development system (TDC). Digital information will be shared through the Central Army Registry (CAR) and other military training repositories as necessary. New repositories will become available as they evolve through the Army Learning Management System (ALMS). The training products to include IMI, will be accessible and able to be delivered/downloaded anytime, anyplace to soldiers through use of portable web accessible devices IAW the Army Learning Concept 2015.

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**8.1.1.1.3 Management Capabilities**

The AKO LMS is an infrastructure platform through which learning content is delivered and managed. It consists of software tools that perform a variety of functions related to online and offline training administration, as well as student and performance management. The LMS will manage both the content and the users, and is flexible enough to expand with growth and maturity of the system and the organization it supports. The LMS provides the capability to manage courseware and content delivery. It works with Learning Content Management Systems (LCMS), using learning objects for reuse and syndication. This management system may also interface with a development environment for rapid upgrades. The LMS tracks student progression through lessons, exercises, and evaluations.

The TRADOC Lifelong Learning Center (LLC) Program is another possible management tool. The LLC is integrated with the Army Distributed Learning Program and functions as a part of the Army Training Information System (ATIS). LLC is "people, processes, technology and facilities that provide capabilities and services to empower schools and centers to rapidly create, modify, and distribute current proponent standardized training and education content to the full spectrum of learners regardless of location."

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### 8.1.1.1.4 Other Enabling Capabilities

An IETM and IMI exportable TSP will be used to augment delivery of interactive products. These electronic manuals and TSP will be archived on the Central Army Registry (CAR).

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**8.1.1.2 Training Products**

The material developer will develop IMI training aids/products for soldier self development. Wherever possible, training products will employ multimedia-based, distributed learning technologies, and training support products will include embedded training (ET), web based training, computer-assisted training, lesson plans (LP), Programs of Instruction (POI), DTT, and IETM. Training products will be sharable and reusable (e.g. SCORM-compliant) for unit training and Distributed Learning (DL).

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### 8.1.1.2.1 Courseware

Courseware for the Sentinel Radar will include interactive courseware, interactive multimedia instruction, and DL Web-based instruction in PDM and CES courses to support self development training.

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**8.1.1.2.2 Courses**

Not Applicable

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**8.1.1.2.3 Training Publications**

All doctrinal and training publications may be in printed and/or electronic format, used for training individuals or units. The term "training publications" includes training literature, both official and unofficial. The training literature is a body of writing published to provide information and training on the training, doctrine, operational doctrine, and tactics, techniques, and procedures (TTPs) adopted for use in training soldiers assigned to Air Defense or Brigade Combat Team units. The following are Training Bulletins and Field Manuals that are required to support the Improved Sentinel Radar:

Sentinel AN/MPQ-64 A1		
Reference	Title	Date
TB 11-7010-269-10	Operator's Manual for Communication Control Set AN/TSQ-182	01 Oct 1995
TB 11-7010-269-10-1	Operator's Manual for Communication Control Set AN/TSQ-182A	15 May 1998
TB 11-7010-305-10	Operator's Manual for Communication Control Sets AN/TSQ-182A, AN/TSQ-182B, AN/TSQ-183B, AN/TSQ-183C, AN/TSQ-183D, AN/TSQ-184C, AN/TSQ-184D, AN/TSQ-184E, and AN/TSQ-184F (Subsystems of FAAD C2I Systems)	15 Dec 2001
TM 5-6115-585-12	Operator and Organizational Maintenance Manual for Generator Set, Diesel Engine Driven, Tactical Skid MTD, 10KW, 1 Phase, 2 Wire, 1Phase, 3 Wire, and 3 Phase, 4 Wire; 120, 120/140 and 120/208 A (DOD Model MEP-003a), Utility Class, 60hz	25 Jul 1977
TM	Operators and Field Maintenance Manual	01 Sep

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11-5810-410-13&P	Including Repair Parts and	2007
TM 11-5820-1172-13	Operator and Maintenance Manual Defense Advanced GPS Receiver (DAGR)	01 Mar 2005
TM 11-5820-890-10-8	Operators Manual for SINCGARS Ground Combat Net Radio, ICOM Manpack Radio, AN/PRC-119A, Short Range Vehicular Radio AN/VRC-87A, Short Range Multiplexer (FHMUX) (item also produced in electronic media and included on EM 0071)	01 Dec 1998
TM 11-5825-291-13	Operations and Maintenance Manual for Satellite Signals Navigation	01 Apr 2001
TM 11-5895-1842-13	Operator and Field Maintenance Manual for Center, Communications Operation AN/TSQ-253 (NSN: 5895-01-547-0392) (ADAM CELL CPP SYSTEM)	15 Apr 2008
TM 11-5895-1842-23P	Field Maintenance Repair Parts and Special Tools List for Center, Communications Operation AN/TSQ-253 (NSN: 5895-01-547-0392)	15 May 2008
TM 9-1430-741-10	Operators Manual for Sentinel, AN/MPQ-64, (IETM)	15 Nov 2007
TM 9-2320-280-10	Operators Manual for TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, M998 (NSN 2320-01-107-7155) (EIC: BBD): M998A1 (2320-01-371-9577) (EIC:BBN); TRUCK UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4	31 Jan 1996
TM 11-5820-890-10-6	SINCGARS ICOM Ground Radios used with Automated NET Control Device (ANCD); Precision Lightweight GPS Receiver (PLGR); Handheld Remote Control Radio Device (HRCRD) Operators Pocket Guide Radio Sets MANPACK Radio	01 Jul 2007

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TM 11-5810-292-13&P	(O) Operators, Unit & Direct Support Maintenance for General Purpose Tape reader KOI-18 (NSN 7025-01-026-9620) Electronic Transfer Device KYK-13 (NSN 5810-01-026-9618), Net Control Device KYX-15/15A	31 May 1989
TM 11-5820-890-10-7	SINCGARS ICOM Ground Radios used with Automated Net Control Device (ANCD) AN/CYZ-10 and Precision Lightweight GPS Receiver (PLGR) AN/PSN-11 Net Control Station (NCS) Pocket Guide Radio Sets MANPACK Radio	01 Aug 2007
TM 9-6115-642-24	Unit, Direct Support and Genral Support Maintenance Manual for Generator Set, Skid Mounted, Tactical Quiet 10KW, 60 and 400 HZ MEP-803A (60HZ) (NSN 6115-01-275-5061) MEP-813A (400HZ) (NSN 6115-01-274-7392)	01 Sep 1993
Sentinel AN/MPQ-64 A3		
TM 9-1430-Sentinel	EM 0096, TM 9-1430-SENTINE; THIS CD CONTAINS THE FOLLOWING PUB LICATIONS: TM 9-1430-741-10; TM 9-1430-741-24&P; TM 4 3-0003-53; TM 43-0002-30; TM 9-1430-741-BD; TB 9-1430-741-20-1; TB 9-1430-741-20-2 (IETM)	01 Apr 2010
TB 9-1430-741-20-1	IETM INSTALLATION OF RADIO SET AN/VSQ-2 IN SENTINEL AN/MPQ-64 NSN 1430-01-420-8077; AN/MPQ-64A1, (NSN 1430-01-536-6089) (IETM)	01 Apr 2010
TM 9-1430-741-BD	BATTLE DAMAGE ASSESSMENT AND REPAIR MANUAL FOR SENTINEL, AN/MPQ-64, (NSN 1430-01-420-8077), AN/MPQ-64A1, (NSN 1430-01-536-6089) (IETM)	01 Apr 2010

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TM 9-1430-741-10	OPERATOR'S MANUAL FOR SENTINEL, AN/MPQ-64, (NSN 1430-01-420-8077), AN/MPQ-64A1, (NSN 1430-01-536-6089) (IETM)	01 Apr 2010
TM 9-1430-741-24&P	ORGANIZATIONAL, DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE MANUAL FOR SENTINEL, AN/MPQ-64, (NSN 1430-01-420-8077), AN/MPQ-64A1, (NSN 1430-01-536-6089) (IETM)	01 Apr 2010
TM 9-1430-740-BD	BATTLE DAMAGE ASSESSMENT AND REPAIR MANUAL FOR SENTINEL, AN/MPQ-64A3, (NSN 1430-01-620-6502) (IETM)	Under Dvlpmnt
TM 9-1430-740-10	OPERATOR'S MANUAL FOR SENTINEL, AN/MPQ-64A3, (NSN 1430-01-620-6502) (IETM)	Under Dvlpmnt
TM 9-1430-740-10	OPERATOR'S MANUAL FOR SENTINEL, AN/MPQ-64A3, (NSN 1430-01-620-6502) (PDF)	Under Dvlpmnt
TM 9-1430-740-23&P	ORGANIZATIONAL AND DIRECT SUPPORT MAINTENANCE MANUAL FOR SENTINEL, AN/MPQ-64A3, (NSN 1430-01-620-6502) (IETM)	Under Dvlpmnt
LO 9-6115-642-12	GENERATOR SET, SKID MOUNTED TACTICAL QUIET 10KW 60 AND 400 HZ 60 HZ NSN: 6115-01-275-5061 PART NUMBER: MEP-803A EIC: VG3 CAGEC: 30554 400 HZ NSN: 6115-274-7392 PART NUMBER: MEP-813A EIC: VN3 CAGEC: 30554 (PDF)	01 Jun 2009
TM 9-6115-642-10	OPERATOR'S MANUAL FOR GENERATOR SET, SKID MOUNTED, TACTICAL QUIET, 10 KW, 60 HZ MEP-803A (NSN 6115-01-275-5061) (EIC VG3) GENERATOR SET, SKID MOUNTED, TACTICAL QUIET, 10 KW, 400 HZ MEP-813A (NSN 6115-01-274-7392) (EIC VN3) (PDF)	15 Sep 2010

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<p>TM 9-6115-750-10</p>	<p>OPERATORS MANUAL FOR GENERATOR SET, SKID MOUNTED (AMMPS) MEP-1040 50/60 HZ (NSN: 6115-01-561-7455) (EIC: N/A) MEP-1041 400 HZ (NSN: 6115-01-561-7466) (EIC: N/A) (PDF)</p>	<p>01 Feb 2011</p>
<p>TM 9-6115-750-24&amp;P</p>	<p>FIELD AND SUSTAINMENT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST FOR GENERATOR SET, SKID MOUNTED 10KW ADVANCED MEDIUM MOBILE POWER SOURCES (AMMPS) MEP-1040, 50/60 HZ (NSN: 6115-01-561-7455) (EIC: MA3) MEP-1041, 400 HZ (NSN: 6115-01-561-7466) (EIC: MA4) (PDF)</p>	<p>31 Dec 2011</p>
<p>TM 9-2320-280-14&amp;P</p>	<p>EM 0254 TM 9-2320-280-14&amp;P FOR HIGH MOBILITY MULTI- PURPOSE VEHICLE (HMMWV) FOV {TO 36A12-1A (SERIES); TM 2320 (SERIES)} (THIS ITEM IS INCLUDED ON EM 0254) (IETM)</p>	<p>29 Jul 2005</p>
	<p>HAND RECEIPT COVERING CONTENTS OF COMPONENTS OF END ITEM (COEI) BASIC ISSUE ITEMS (BII), AND ADDITIONAL AUTHORIZATION LIST (AAL FOR TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, M998 NSN 2320-01-107-7155 (EIC: BBD) TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, M998A1 NSN 2320-01-371-9577 (EIC: BBN) TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, W/WINCH, M1038 NSN 2320-01-107-7156 (EIC: BBE) TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, W/WINCH, M1038A1 NSN 2320-01-371-9578 (EIC: BBP) TRUCK, UTILITY: HEAVY VARIANT, 4X4, M1097 NSN 2320-01-346-9317 (EIC: BBM) TRUCK, UTILITY: HEAVY VARIANT, 4X4, M1097A1 NSN</p>	

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TM 9-2320-280-10-HR	2320-01-371-9583 (EIC: BBU) TRUCK, UTILITY: HEAVY VARIANT, 4X4, M1097A2, M1097R1 NSN 2320-01-380-8604 (EIC: BB6) TRUCK, UTILITY: HEAVY VARIANT, 4X4, M1123 NSN 2320-01-455-9593 (EIC: B6G) TRUCK, UTILITY: TOW CARRIER, ARMORED, 1-1/4 TON, 4X4, M966 NSN 2320-01-107-7153 (EIC: BBC) TRUCK, UTILITY: TOW CARRIER, ARMORED, 1-1/4 TON, 4X4, M966A1 NSN 2320-01-372-3932 (EIC: BBX) TRUCK, UTILITY: TOW CARRIER, ARMORED, 1-1/4 TON, 4X4, M1121 NSN 2320-01-956-1282 (EIC: B6H) TRUCK, UTILITY: TOW CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, M1045 NSN 2320-01-146-7191 TRUCK, UTILITY: TOW CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, M1045A1 NSN 2320-01-371-9580 (EIC: BBR) TRUCK, UTILITY: TOW CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, M1045A2 NSN 2320-01-380-8229 (EIC: BB5) TRUCK, UTILITY: TOW CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, W/WINCH, M1046 NSN 2320-01-146-7188 TRUCK, UTILITY: TOW CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, W/WINCH, M1046A1 NSN 2320-01-371-9582 (EIC: BBT) TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED, 1-1/4 TON, 4X4, M1025 NSN 2320-01-128-9551 (EIC: BBF) TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED, 1-1/4 TON, 4X4, M1025A1 NSN 2320-01-371-9584 (EIC: BBV) TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED, 1-1/4 TON, 4X4, M1025A2, M1025R1 NSN 2320-01-380-8233 (EIC: BB3) TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED, 1-1/4 TON, 4X4,	27 Sep 2013
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W/WINCH, M1026 NSN 2320-01-128-9552 (EIC: BBG)  
TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED,  
1-1/4 TON, 4X4, W/WINCH, M1026A1 NSN  
2320-01-371-9579 (EIC: BBQ) TRUCK, UTILITY:  
ARMAMENT CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4  
TON, 4X4, M1043 NSN 2320-01-146-7190 TRUCK,  
UTILITY: ARMAMENT CARRIER, /SUPPLEMENTAL  
ARMOR, 1-1/4 TON, 4X4, M1043A1 NSN  
2320-01-372-3933 (EIC: BBY) TRUCK, UTILITY:  
ARMAMENT CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4  
TON, 4X4, M1043A2 NSN 2320-01-380-8213 (EIC:  
BB4) TRUCK, UTILITY: ARMAMENT CARRIER,  
W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, W/WINCH,  
M1044 NSN 2320-01-146-7189 TRUCK, UTILITY:  
ARMAMENT CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4  
TON, 4X4, W/WINCH, M1044A1 NSN  
2320-01-371-9581 (EIC: BBS) TRUCK, UTILITY:  
S250 SHELTER CARRIER, 4X4, M1037 NSN  
2320-01-146-7193 (EIC: BBK) TRUCK, UTILITY:  
S250 SHELTER CARRIER, 4X4, W/WINCH, M1042 NSN  
2320-01-146-7187 TRUCK, AMBULANCE, 2-LITTER,  
ARMORED, 4X4, M996 NSN 2310-01-111-2275 (EIC:  
BBB) TRUCK, AMBULANCE, 2-LITTER, ARMORED, 4X4,  
M996A1 NSN 2310-01-372-3935 (EIC: BB2) TRUCK,  
AMBULANCE, 4-LITTER, ARMORED, 4X4, M997 NSN  
2310-01-111-2274 (EIC: BBA) TRUCK, AMBULANCE,  
4-LITTER, ARMORED, 4X4, M997A1 NSN  
2310-01-372-3934 (EIC: BBZ) TRUCK, AMBULANCE,  
4-LITTER, ARMORED, 4X4, M997A2 NSN  
2310-01-380-8225 (EIC: BB8) TRUCK, AMBULANCE,  
2-LITTER, SOFT TOP, 4X4, M1035 NSN

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2310-01-146-7194 TRUCK, AMBULANCE, 2-LITTER, SOFT TOP, 4X4, M1035A1 NSN 2310-01-371-9585 (EIC: BBW) TRUCK, AMBULANCE, 2-LITTER, SOFT TOP, 4X4, M1035A2 NSN 2310-01-380-8290 (EIC: BB9) (PDF)	
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OPERATOR'S MANUAL FOR TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, M998 NSN 2320-01-107-7155 (EIC: BBD) TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, M998A1 NSN 2320-01-371-9577 (EIC: BBN) TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, W/WINCH, M1038 NSN 2320-01-107-7156 (EIC: BBE) TRUCK, UTILITY: CARGO/TROOP CARRIER, 1-1/4 TON, 4X4, W/WINCH, M1038A1 NSN 2320-01-371-9578 (EIC: BBP) TRUCK, UTILITY: HEAVY VARIANT, 4X4, M1097 NSN 2320-01-346-9317 (EIC: BBM) TRUCK, UTILITY: HEAVY VARIANT, 4X4, M1097A1 NSN 2320-01-371-9583 (EIC: BBU) TRUCK, UTILITY: HEAVY VARIANT, 4X4, M1097A2, M1097R1 NSN 2320-01-380-8604 (EIC: BB6) TRUCK, UTILITY: HEAVY VARIANT, 4X4, M1123 NSN 2320-01-455-9593 (EIC: B6G) TRUCK, UTILITY: TOW CARRIER, ARMORED, 1-1/4 TON, 4X4, M966 NSN 2320-01-107-7153 (EIC: BBC) TRUCK, UTILITY: TOW CARRIER, ARMORED, 1-1/4 TON, 4X4, M966A1 NSN 2320-01-372-3932 (EIC: BBX) TRUCK, UTILITY: TOW CARRIER, ARMORED, 1-1/4 TON, 4X4, M1121 NSN 2320-01-456-1282 (EIC: B6H) TRUCK, UTILITY: TOW CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, M1045 NSN 2320-01-146-7191	
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TM 9-2320-280-10

TRUCK, UTILITY: TOW CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, M1045A1 NSN  
2320-01-371-9580 (EIC: BBR) TRUCK, UTILITY: TOW CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, M1045A2 NSN 2320-01-380-8229 (EIC: BB5)  
TRUCK, UTILITY: TOW CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, W/WINCH, M1046 NSN  
2320-01-146-7188 TRUCK, UTILITY: TOW CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, W/WINCH, M1046A1 NSN 2320-01-371-9582 (EIC: BBT) TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED, 1-1/4 TON, 4X4, M1025 NSN 2320-01-128-9551 (EIC: BBF)  
TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED, 1-1/4 TON, 4X4, M1025A1 NSN 2320-01-371-9584 (EIC: BBV) TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED, 1-1/4 TON, 4X4, M1025A2, M1025R1 NSN 2320-01-380-8233 (EIC: BB3) TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED, 1-1/4 TON, 4X4, W/WINCH, M1026 NSN 2320-01-128-9552 (EIC: BBG)  
TRUCK, UTILITY: ARMAMENT CARRIER, ARMORED, 1-1/4 TON, 4X4, W/WINCH, M1026A1 NSN  
2320-01-371-9579 (EIC: BBQ) TRUCK, UTILITY: ARMAMENT CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, M1043 NSN 2320-01-146-7190 TRUCK, UTILITY: ARMAMENT CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, M1043A1 NSN  
2320-01-372-3933 (EIC: BBY) TRUCK, UTILITY: ARMAMENT CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, M1043A2 NSN 2320-01-380-8213 (EIC: BB4) TRUCK, UTILITY: ARMAMENT CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4 TON, 4X4, W/WINCH,

27 Sep  
2013

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	<p>M1044 NSN 2320-01-146-7189 TRUCK, UTILITY:          ARMAMENT CARRIER, W/SUPPLEMENTAL ARMOR, 1-1/4          TON, 4X4, W/WINCH, M1044A1 NSN          2320-01-371-9581 (EIC: BBS) TRUCK, UTILITY:          S250 SHELTER CARRIER, 4X4, M1037 NSN          2320-01-146-7193 (EIC: BBK) TRUCK, UTILITY:          S250 SHELTER CARRIER, 4X4, W/WINCH, M1042 NSN          2320-01-146-7187 TRUCK, AMBULANCE, 2-LITTER,          ARMORED, 4X4, M996 NSN 2310-01-111-2275 (EIC:          BBB) TRUCK, AMBULANCE, 2-LITTER, ARMORED, 4X4,          M996A1 NSN 2310-01-372-3935 (EIC: BB2) TRUCK,          AMBULANCE, 4-LITTER, ARMORED, 4X4, M997 NSN          2310-01-111-2274 (EIC: BBA) TRUCK, AMBULANCE,          4-LITTER, ARMORED, 4X4, M997A1 NSN          2310-01-372-3934 (EIC: BBZ) TRUCK, AMBULANCE,          4-LITTER, ARMORED, 4X4, M997A2 NSN          2310-01-380-8225 (EIC: BB8) TRUCK, AMBULANCE,          2-LITTER, SOFT TOP, 4X4, M1035 NSN          2310-01-146-7194 TRUCK, AMBULANCE, 2-LITTER,          SOFT TOP, 4X4, M1035A1 NSN 2310-01-371-9585          (EIC: BW) TRUCK, AMBULANCE, 2-LITTER, SOFT          TOP, 4X4, M1035A2 NSN 2310-01-380-8290 (EIC:          BB9) (PDF)</p>	
<p>TM          9-2330-392-13&amp;P</p>	<p>OPERATOR AND FIELD MAINTENANCE MANUAL          INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST          FOR TRAILER, CARGO: 2000 POUNDS, 2-WHEEL M1101          (NSN 2330-01-387-5443) (EIC CBC) M1102          (2330-01-387-5426) (EIC CBB) CHASSIS          (2330-01-387-5424) (EIC CCL) (PDF)</p>	<p>07 Dec          2012</p>
	<p>OPERATORS AND FIELD MAINTENANCE MANUAL</p>	

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<p>TM 11-5810-410-13&amp;P</p>	<p>INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST FOR TRANSFER UNIT, CRYPTOGRAPHIC KEY AN/PYQ-10(C) SIMPLE KEY LOADER (SKL) SKL UAS VERSION 8.0 (NSN 5810-01-517-3587) (EIC: N/A)</p>	<p>15 Aug 2013</p>
<p>TM 11-5895-1611-12&amp;P</p>	<p>OPERATOR'S AND UNIT LEVEL MAINTENANCE MANUAL FOR INTERROGATOR SET AN/TPX-56(V)2 (NSN 5895-01-392-2206) (EIC: IZL) INTERROGATOR SET AN/TPX-56(V)3 (NSN 5895-01-504-4594) (EIC: N/A) INTERROGATOR SET AN/TPX-56(V)4 (NSN 5895-01-586-3140) (EIC: N/A) (PDF)</p>	<p>01 Apr 2011</p>
<p>TM 11-5820-890-10-HR</p>	<p>SINGARS NON-ICOM AND ICOM RADIO SETS AN/PRC-119 (NSN 5820-01-151-9915), (EIC: L2A) AN/PRC-119A (5820-01-267-948 (EIC: L2Q) AN/VRC-87 (5820-01-151-9916), (EIC: L2T) AN/VRC-87A (5820-01-267-9480), (EIC: L22) AN/VRC-87C (5820-01-304-2045), (EIC: GDC) AN/VRC-87D (5820-01-351-5259), (EIC: N/A) AN/VRC-88 (5820-01-151-9917), (EIC: L2U) AN/VRC-88A (5820-01-267-9481), (EIC: L23) AN/VRC-88C (5820-01-304-2044), (EIC: GDD) AN/VRC-88D (5820-01-352-1694), (EIC: N/A) AN/VRC-89 (5820-01-151-9918), (EIC: L2V) AN/VRC-89A (5 (PDF)</p>	<p>01 Aug 2004</p>
<p>TM 11-5820-890-10-6</p>	<p>SINGARS ICOM GROUND RADIOS USED WITH AUTOMATED NET CONTROL DEVICE (ANCD); PRECISION LIGHTWEIGHT GPS RECEIVER (PLGR); HANDHELD REMOTE CONTROL RADIO DEVICE (HRCRD) OPERATORS POCKET GUIDE RADIO SETS MANPACK RADIO</p>	<p>01 Jul 2007</p>

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	(AN/PRC-119A/D) (NSN: N/A) (EIC: N/A) VEHICULAR RADIOS (AN/VRC-87A/D; THRU AN/VRC-92A/D) (NSN: N/A) (EIC: N/A) (PDF)	
TM 11-5820-890-10-7	SINGGARS ICOM GROUND RADIOS USED WITH AUTOMATED NET CONTROL DEVICE (ANCD) AN/CYZ-10 AND PRECISION LIGHTWEIGHT GPS RECEIVER (PLGR) AN/PSN-11 NET CONTROL STATION (NCS) POCKET GUIDE RADIO SETS MANPACK RADIO (AN/PRC-119A) (NSN: N/A) (EIC: N/A) VEHICULAR RADIOS (AN/VRC-87A-C THRU AN/VRC-92A) (NSN: N/A) (EIC: N/A) (PDF)	01 Aug 2007
TM 11-5820-890-10-8	SINGGARS GROUND COMBAT NET RADIO, ICOM MANPACK RADIO, AN/PRC-119A (NSN 5820-01-267-9482) (EIC: L2Q), SHORT RANGE VEHICULAR RADIO AN/VRC-87A (5820-01-267-9480) (EIC: L22), SHORT RANGE VEHICULAR RADIO WITH SINGLE RADIO MOUNT AN/VRC-87C (5820-01-304-2045) (EIC: GDC), SHORT RANGE VEHICULAR RADIO WITH DISMOUNT AN/VRC-88A (5820-01-267-9481) (EIC: L23), S RANGE/LONG RANGE VEHICULAR RADIO AN/VRC-88C (5820-01-304-2044) (EIC: 6DD), SHORT RANGE/LONG RANGE VEHICULAR RADIO AN/VRC-89A (5820-01-267-9479) (EIC: L24), LONG	01 Dec 2007
TM 11-5825-299-10	MANPACK RADIO SET (MP-RS) AIRBORNE RADIO SET AN/ASQ-177D(V)4 (NSN 5820-01-502-4043) (EIC: NA) GROUND RADIO SETS AN/PSQ-6D (NSN 5820-01-502-7234) (EIC:N/A) AN/VSQ-2D(V)1 (NSN 5820-01-502-4040) (EIC: N/A) AN/VSQ-2D(V)2 (NSN 5820-01-502-4041) (EIC: N/A) AN/VSQ-2D(V)4 (NSN 5820-01-502-4042) (EIC:	31 Aug 2011

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	N/A); GRID REFERENCE RADIO SETS AN/GRC-229D (NSN 5895-01-502-4044) (EIC: N/A) (PDF)	
TB 11-5820-1172-10	DAGR OPERATOR'S POCKET GUIDE FOR SATELLITE SIGNALS NAVIGATION SET AN/PSN-13 (NSN 5825-01-516-8038) (EIC: N/A) AN/PSN-13A (NSN 5825-01-526-4783) (EIC:N/A)	01 Mar 2005
TM 11-5820-1172-13	DEFENSE ADVANCED GPS RECEIVER (DAGR) SATELLITE SIGNALS NAVIGATION SET AN/PSN-13 (NSN 5825-01-516-8038) AND AN/PSN-13A (NSN 5825-01-526-4783) (PDF)	01 Mar 2005
TM 9-2320-333-14&P	IETM EM-0294 TM 9-2320-333-14&P, INTERACTIVE TECHNICAL ELECTRONIC TECHNICAL MANUAL FOR OPERATOR, FIELD AND SUSTAINMENT MAINTENANCE AND REPAIR PARTS AND SPECIAL TOOLS LIST FOR LMTV FAMILY OF MEDIUM TACTICAL VEHICLES (FMTV), 2 1/2 TON CARGO W/WINCH, M1078A1P2; 2 1/2 TON CARGO W/O WINCH, M1078A1P2; 2 1/2 TON VAN W/WINCH, M1079A1P2; 2 1/2 TON VAN W/O WINCH, M1079A1P2; AND MTV FAMILY OF MEDIUM TACTICAL VEHICLES, 5 TON CARGO W/WINCH, M1083A1P2; 5 TON CARGO W/O WINCH, M1083A1P2; 5 TON CARGO WITH MHE W/O WINCH, M1084A1P2; 5 TON LWB CARGO W/WINCH, M1085A1P2; 5 TON LWB CARGO W/O WINCH, M1085A1P2; 5 TON LWB CARGO W/MHE W/O WINCH, M1086A1P2; 5 TON EXPANSIBLE VAN W/O WINCH, M1087A1P2; 5 TON TRACTOR W/WINCH, M1088A1P2; 5 TON TRACTOR W/O WINCH, M1088A1P2; 5 TON LHS, M1148A1P2; 10 TON DUMP W/WINCH, M1157A1P2; 10 TON DUMP W/O WINCH, M1157A1P2; 5 TON WRECKER, M1089A1P2. (IETM)	15 Jun 2012

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<p>TM 9-2320-333-10-HR</p>	<p>COVERING CONTENTS OF COMPONENTS AND END ITEM (COEI), BASIC ISSUE ITEMS (BII), AND ADDITIONAL AUTHORIZATION LIST (AAL) FOR M1078A1P2 SERIES, 2-1/2 TON 4X4, LIGHT MEDIUM TACTICAL VEHICLES (LMTV), M1083A1P2 SERIES, 5-TON 6X6, MEDIUM TACTICAL VEHICLES (MTV), AND M1157A1P2 SERIES 10-TON, 6X6, MTV MODEL TRK, CAR, LMTV, M1078A1P2 W/WN (2320-01-549-8611) BH3 TSC W/O WN (2320-010549-8577) BH2 TSD TRK, VAN, LMTV, M1079A1P2 W/WN (2320-01-552-7749) BH5 TSE W/O WN (2320-01-552-7745) BH6 TSF TRK, CAR, MTV M1083A1P2 W/WN (2320-01-549-8565) BUS TSA W/O WM (2320-01-549-8610) BUT TSB TRK, CAR, MTV M1084A1P2 (2320-01-552-7739) BU9 TSG TRK, CAR MTV M1085A1P2 W/WN (2320-01-552-7770) BU4 TSL W/O WN (2320-01-552-7773) BU3 TSM TRK, CAR, MTV M1086A1P2 W/O WN (2320-01-552-7780) BUZ TSV W/O WM (2320-01-552-7781) TRK, EXP VAN, MTV, M1087A1P2 W/O WN (2320-01-552-77812) BUY TSP W/O WN TRK, TRACTOR, MTV, M1088A1P2 W/O WN (2320-01-552-7759) BU7 TSU W/WN (2320-01-5527753) BU8 TSH TRK, WKR,MTV, M1089A1P2 W/WN (2320-01-5527762)BU6 TSJ W/WN TRK, DUMP MTV, M1157A1P2 W/O WNN (2320-01-552-7787) BUW TSR W/WN (2320-01-552-7782) BUX TSQ TRK, LHS LTAS, MTV M1148A1P2 W/O WN (2320-01-557-4546) BUM TSX {TO 36A12-1B/C-1153-21} (PDF)</p>	<p>16 Oct 2009</p>
	<p>OPERATOR'S MANUAL FOR THE M1083A1P2 SERIES 5 TON, 6 X 6 MEDIUM TACTICAL VEHICLES (MTV)</p>	

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<p>TM 9-2320-333-10-1</p>	<p>VOLUME 1 OF 2 TRK, CAR., MTV, M1083A1P2 W/WN 2320-01-549-8565 BUS W/O WN 2320-01-549-8610 BUT TRK, CAR., MTV, M1084A1P2 2320-01-552-7739 BU5 TRK, CAR., LWB, MTV M1085A1P2 W/WN 2320-01-552-7770 BU4 W/O WN 2320-01-552-7773 BU3 TRK, CAR., LWB, MTV M1086A1P2 W/O WN 2320-01-552-7780 BUZ TRK., EX. VAN, MTV, M1087A1P2 2320-01-552-7781 BUY TRK., TRACTOR, MTV, M1088A1P2 W/WN 2320-01-552-7753 BU8 W/O WN 2320-01-552-7759 BU7 TRK, 10 TON DUMP, MTV, M1157A1P2 W/WN 2320-01-552-7782 BUX W/O WN 2320-01-552-7787 BUW (PDF)</p>	<p>20 Jan 2010</p>
<p>TM 9-2320-333-10-2</p>	<p>OPERATOR'S MANUAL FOR THE M1083A1P2 SERIES 5 TON, 6 X 6 MEDIUM TACTICAL VEHICLES (MTV) VOLUME 2 OF 2 TRK, CAR., MTV, M1083A1P2 W/WN 2320-01-549-8565 BUS W/O WN 2320-01-549-8610 BUT TRK, CAR., MTV, M1084A1P2 2320-01-552-7739 BU5 TRK, CAR., LWB, MTV M1085A1P2 W/WN 2320-01-552-7770 BU4 W/O WN 2320-01-552-7773 BU3 TRK, CAR., LWB, MTV M1086A1P2 W/O WN 2320-01-552-7780 BUZ TRK., EX. VAN, MTV, M1087A1P2 2320-01-552-7781 BUY TRK., TRACTOR, MTV, M1088A1P2 W/WN 2320-01-552-7753 BU8 W/O WN 2320-01-552-7759 BU7 TRK, 10 TON DUMP, MTV, M1157A1P2 W/WN 2320-01-552-7782 BUX W/O WN 2320-01-552-7787 BUW (PDF)</p>	<p>20 jan 2010</p>
<p>TM</p>	<p>OPERATOR'S, FIELD LEVEL MANUAL FOR THE M1082 SERIES, 2 1/2 TON LIGHT TACTICAL VEHICLE TRAILER (LMTVT)MODEL 1082, (NSN 2330-01-449-1775) (EIC: CMN) AND THE M1095</p>	<p>15 Dec</p>

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9-2330-394-13&P	SERIES, 5 TON MEDIUM TACTICAL VEHICLE TRAILER (MTVT) MODEL 1095 (NSN 2330-01-449-1776) (EIC:CPK) (PDF)	2010
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### 8.1.1.2.4 Training Support Package (TSP)

Collective and Individual analysis will determine the need for TSPs and will be developed as a part of the POI/lesson plan/interactive multimedia instruction(IMI) development process.

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### 8.1.1.3 Training Aids, Devices, Simulators and Simulations (TADSS)

IMI training aids/products developed by the material developer will be employable using any web-enabled computer system with authorized access to the training product. These products should be accessible via the World Wide Web (ATN/CAR), CD-ROM, and LANS/WANS. All IMI products will be developed IAW TRADOC Regulation 350-70, TRADOC Pamphlet 525-8-2 w/C1 06 Jun 2011, the PEO C3T IMI Style Guide and be compliant with Shareable Content Object Reference Model (SCORM) and the Defense Information Infrastructure Common Operating Environment (DII COE).

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**8.1.1.3.1 Training Aids**

There are no Training Aids for self-development training.

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**8.1.1.3.2 Training Devices**

The Improved/Enhanced Sentinel Radar training device will be developed to allow the training of individual operator tasks on a typical personal computer or laptop (i.e., IETM/CBT, IMI and Web based).

The Army e-Learning program, comprised of commercial off-the-shelf computer-based and Web-based DL courseware, is the preferred method for all Army organizations to accomplish workforce training in information technology (IT), information assurance, foreign languages, and selected mandatory training requirements. Army e-Learning courseware supports and is integrated into the operational, institutional, and self-development training domains.

Army schools will include appropriate Army e-Learning resources when developing IT courses or other courses that contain IT subject matter. Alternative sources of instruction, which includes instructor-led classroom training, may be used only when the required instruction is unavailable through Army e-Learning.

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**8.1.1.3.3 Simulators**

There are no simulators required for self-development training.

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**8.1.1.3.4 Simulations**

Not Applicable

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**8.1.1.3.5 Instrumentation**

No instrumentation is available for self-development training.

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**8.1.1.4 Training Facilities and Land**

Not Applicable

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**8.1.1.4.1 Ranges**

Not Applicable

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**8.1.1.4.2 Maneuver Training Areas (MTA)**

No new maneuver training area is required.

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**8.1.1.4.3 Classrooms**

Classroom facilities may be required to augment self-development training. Training may be conducted from individual through crew levels. Examples of training are tactical seminars, on-line training courses, and certification training and testing. Embedded trainers on tactical equipment provide excellent training opportunities. Examples of classroom facilities that support self-development training are:

- Classroom XXI
- Digital training facilities (DTF)
- Weapons platforms
- Standard Classrooms
- Deployable Classrooms

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**8.1.1.4.4 CTCs**

N/A

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**8.1.1.4.5 Logistics Support Areas**

Not Applicable

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8.1.1.4.6 Battle Command Training Centers (BCTC)

N/A

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**8.1.1.5 Training Services**

FCoE (USAADASCH) will provide training support to field the Sentinel Radar elements by providing an online repository of training products and services via Army Knowledge Online (AKO) or similar access-restricted means. The Sentinel Radar on-board communication/networked systems will be able to access these remote distributed repositories for self-development training.

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### 8.1.1.5.1 Management Support Services

Fires CoE, Director of Training will manage courseware and distributed learning products through in-house course managers.

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**8.1.1.5.2 Acquisition Support Services**

There are no acquisition support services anticipated or required for self-development training.

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### 8.1.1.5.3 General Support Services

Reproduction of IMI media and TSPs, procurement of long-term maintenance and support services for TADSS after initial fielding period will be required.

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### 8.1.2 Architectures and Standards Component

The Sentinel Radar training architecture must integrate the individual, operational, and self-development training domains into a near-seamless training environment that must envelope and nurture ADA Soldiers and leaders for their entire career. Soldier training products will be developed, given to the Distributed Learning element for media formatting, and then made available for Self-Development through the use of The Army Distributed Learning Program (TADLP), DL courses and Army e-Learning.

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**8.1.2.1 Operational View (OV)**

Not Applicable

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8.1.2.2 Systems View (SV)

N/A

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8.1.2.3 Technical View (TV)

N/A

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### 8.1.3 Management, Evaluation, and Resource (MER) Processes Component

The following paragraphs describe the self-development MER process.

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**8.1.3.1 Management**

Management processes are the functions required to ensure best business practices are employed for an operationally relevant TSS. Where possible Sentinel will use existing DL facilities and support infrastructure in the Self-Development Training Domain. The staff training estimate in support of Sentinel will focus on the most efficient use of existing resources, identify, and quantify any expected shortfalls. Training SOP development will define products that are capable of being used for self-development training. Training will incorporate the maximum use of DL and simulations to mitigate cost. Students will be routinely asked to evaluate training events and products to determine how best to improve the quality and efficiency of instruction and training events to provide the best quality training with the least expenditure of resources. These results must be forwarded to the Center for Army Lessons Learned (CALL) proponent.

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**8.1.3.1.1 Strategic Planning**

N/A

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### 8.1.3.1.2 Concept Development and Experimentation (CD&E)

The AN/MPQ-64 Improved Sentinel air defense radar is the Army's primary intermediate air defense sensor. The Sentinel provides 360 degree detection of low to mid altitude tactical aerial threats, including Unmanned Aerial Systems (UAS), cruise missiles, and fixed and rotary-wing aircraft. Sentinel also provides a 360 degree air picture to support counter-rockets artillery and mortars (C-RAM) operations to rapidly clear the airspace and enable intercept of RAM threats. Sentinel will be included in the Air and Missile Defense (AIAMD) architecture, integrated through interface kits to provide sensor data into the Integrated Fire Control Network. Future Sentinel upgrades will enable the radar to provide direct engagement (fire control quality data) support for future intercept systems, such as the Indirect Fire Protection Capability Increment 2 Intercept (IFPC Inc 2-I).

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**8.1.3.1.3 Research and Studies**

Refer to paragraph 6.1.3.1.3.

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### 8.1.3.1.4 Policy and Guidance

Refer to TRADOC Regulation 350-70, TRADOC Pamphlet 525-8-2 w/C1 06Jun2011, DA Pamphlet 73-1, and Army Regulation 350-1.

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**8.1.3.1.5 Requirements Generation**

Refer to paragraph 6.1.3.1.5.

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**8.1.3.1.6 Synchronization**

Refer to paragraph 6.1.3.1.6.

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8.1.3.1.7 Joint Training Support

N/A

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### 8.1.3.2 Evaluation

The following paragraphs describe the Operational Evaluation process.

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### 8.1.3.2.1 Quality Assurance (QA)

The Army Knowledge Online (AKO) infrastructure includes approved Learning Management Systems (LMS) that provide an integrated platform for content, delivery, assessment, and management of learning via Web Based Training (WBT).

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### 8.1.3.2.2 Assessments

The Army Knowledge Online (AKO) infrastructure includes approved Learning Management Systems (LMS) that provide an integrated platform for content, delivery, assessment, and management of learning via Web Based Training (WBT).

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**8.1.3.2.3 Customer Feedback**

Methodology will be primarily through student evaluation, Lessons Learned, and after action reviews (AAR). The Army Knowledge Online (AKO) infrastructure includes approved Learning Management Systems (LMS) that provide an integrated platform for content, delivery, assessment, and management of learning via Web Based Training (WBT).

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### 8.1.3.2.4 Lessons Learned/After-Action Reviews (AARs)

External and internal AARs, student and course feedback will be consolidated to develop lessons learned, available through the Center for Army Lessons Learned (CALL) information system.

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**8.1.3.3 Resource Processes**

Training resources for self-development will be available through AKO via the Army Correspondence Course Program (ACCP)/Army Institute for Professional Development (AIPD). No correspondence courses are scheduled for development.

The following table shows the program affordability as programmed in the FY 13 POM.

(\$M, TY13)	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19	FYDP Total
RDT&E							
Funding	1.5	8.3	11.6	11.0	11.1	12.3	55.8
UFR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Procurement							
Funding	48.0	45.1	43.6	39.0	43.6	22.0	241.3
UFR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sustainment							
Funding	6.7	6.0	5.7	6.7	7.0	6.9	39.0
UFR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Personnel							
Funding	0.0	0.0	0.0	0.0	0.0	0.0	0.0
UFR	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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MILCON							
Funding	0.0	0.0	0.0	0.0	0.0	0.0	0.0
UFR	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total UFRs	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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**A Milestone Annex**

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TRAINING DEVELOPMENT MILESTONE SCHEDULE - SHEET A		PAGE OF PAGES	REQUIREMENTS CONTROL SYMBOL
SYSTEM	ACAT II	OFFICE SYMBOL ATSA-D	AS OF DATE 25 OCT 2013
POINTS OF CONTACT	NAME	OFFICE SYMBOL	TELEPHONE
MATERIEL COMMAND	Susan Noojin	SFAE-MSLS-CMDS	256-313-3167
TRADOC PROPONENT	Terry Allred	ATSF-D	580-558-0406
	TCM MAJ (P) Holdsworth	NGOH-ADA-B	202-404-8157
	CD: Eric Ruth	ATSF-FR	580-558-0741
	TD: Willie Chives	ATSF-D	580-558-0368
	ATSC: James Murphy	ATIC-DSM	757-878-0512
SUPPORTING PROPONENTS:			
SCoE	Geraldine Hargrow	ATCL-TDF	804-765-1135
ITEM	DATE	RESPONSIBLE AGENCY/POC	TELEPHONE

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ORD	6 Jun 1995	CDID RDD	ATSF-FR	580-558-0741
SMMP:	11 May 90			
CPD:	Staffed Mar 14	CDID RDD	ATSF-FR	580-558-0741
LCSP:				
TTSP:	N/A	DOTD	ATSF-D	580-558-0368
QQPRI:	12 Feb 90			
BOIP:	12 Feb 90			580-558-0758
NET TSP:	A1 29 Jun 2004 A3 29 Nov 2012	AMCOM	IMMC	256-876-9650
STRAP:	submitted for Approval Apr 14	DOTD	ATFS-D	580-558-0368

COMMENTS:

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<b>TRAINING DEVELOPMENT MILESTONE SCHEDULE - SHEET B</b>				PAGE            OF PAGES				REQUIREMENTS CONTROL SYMBOL								
SYSTEM Improved Sentinel Radar Inc 2				TRADOC SYMBOL USAADAS ATSF-D				AS OF DATE 25 Oct 2013								
TRAINING PACKAGE ELEMENT/PRODUCT    Individual Training																
LEGEND:	MILESTONES BY QUARTER															
	FY12				FY13				FY14				FY15			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
1. Initial Individual Training Plan (ITP) submitted.															X	
2. Initial Critical Task List (ICTL)															X	
3. Course Administrative Data (CAD)																
4. POI submitted															X	
5. Resident Course start																X



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### B References

Listed below are documents that support program initiation and development through JCIDS:

- ORD - Operational Requirements Document (FAAD C3I), DA Approved 12 June 1995
- ORD - Operational Requirements Document (Sentinel), DA Approved 12 June 1995
- STRAP - System Training Plan (FAAD C3I), Approved May 2009

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**C Coordination Annex**

Organization/POC (Date)	Summary of Comments Submitted (A/S/C)			Comments Accepted/ Rejected						Rationale for Non-Acceptance - S, C
				Accepted			Rejected			
	A	S	C	A	S	C	A	S	C	
v2.2.2 Michael K Glowaski 2014/06/05 - 2014/06/15	Document Accepted As Written			0	0	0	0	0	0	-
v2.2.1 Approvals - Willie Chives 2014/04/14 - 2014/04/15	No Comments Submitted			0	0	0	0	0	0	-
v2.2 Army - USASOC  2014/01/09 - 2014/02/08	No Comments Submitted			0	0	0	0	0	0	-
v2.2 Army - USAREUR 2014/01/09 - 2014/02/08	Document Accepted As Written			0	0	0	0	0	0	-
v2.2 Army - USARC G7 (US Army Reserve Cmd) 2014/01/09 - 2014/02/08	No Comments Submitted			0	0	0	0	0	0	-
v2.2 Army - USAMA 2014/01/09 - 2014/02/08	No Comments Submitted			0	0	0	0	0	0	-
v2.2 Army - USAACE - Aviation School 2014/01/09 -	Document Accepted As			0	0	0	0	0	0	-

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2014/02/08	Written								
v2.2 Army - US Joint Forces Command Net-C2 2014/01/09 - 2014/02/08	No Comments Submitted	0	0	0	0	0	0	0	-
v2.2 Army - TRADOC_ARCIC 2014/01/09 - 2014/02/08	No Comments Submitted	0	0	0	0	0	0	0	-
v2.2 Army - TRADOC G-3/5 2014/01/09 - 2014/02/08	No Comments Submitted	0	0	0	0	0	0	0	-
v2.2 Army - TRADOC Command Safety Office 2014/01/09 - 2014/02/08	No Comments Submitted	0	0	0	0	0	0	0	-
v2.2 Army - TCM-Virtual (CS/CSS) 2014/01/09 - 2014/02/08	No Comments Submitted	0	0	0	0	0	0	0	-
v2.2 Army - TCM-SBCT 2014/01/09 - 2014/02/08	Document Accepted As Written	0	0	0	0	0	0	0	-
v2.2 Army - TCM-Live 2014/01/09 - 2014/02/08	No Comments Submitted	0	0	0	0	0	0	0	-
v2.2 Army - TCM-Gaming 2014/01/09 -		1	2	0	1	2	0	0	0

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2014/02/08									
v2.2 Army - TCM-ABCT 2014/01/09 - 2014/02/08	No Comments Submitted	0	0	0	0	0	0	0	-
v2.2 Army - TCM TADLP 2014/01/09 - 2014/02/08	Document Accepted As Written	0	0	0	0	0	0	0	-
v2.2 Army - TCM ITE 2014/01/09 - 2014/02/08	No Comments Submitted	0	0	0	0	0	0	0	-
v2.2 Army - TCM Intel Sensors 2014/01/09 - 2014/02/08	No Comments Submitted	0	0	0	0	0	0	0	-
v2.2 Army - TCM Constructive 2014/01/09 - 2014/02/08	No Comments Submitted	0	0	0	0	0	0	0	-
v2.2 Army - TCM ATIS 2014/01/09 - 2014/02/08	No Comments Submitted	0	0	0	0	0	0	0	-
v2.2 Army - Space & Missile Defense Command 2014/01/09 - 2014/02/08	No Comments Submitted	0	0	0	0	0	0	0	-
v2.2 Army - CYBER CoE - Signal School 2014/01/09 - 2014/02/08	No Comments Submitted	0	0	0	0	0	0	0	-

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v2.2 Army - SIGCoE - OCOS 2014/01/09 - 2014/02/08	No Comments Submitted	0	0	0	0	0	0	0	-
v2.2 Army - SCoE 2014/01/09 - 2014/02/08	No Comments Submitted	0	0	0	0	0	0	0	-
v2.2 Army - PM-UAS 2014/01/09 - 2014/02/08	No Comments Submitted	0	0	0	0	0	0	0	-
v2.2 Army - PM SCIE 2014/01/09 - 2014/02/08	No Comments Submitted	0	0	0	0	0	0	0	-
v2.2 Army - PM PROPHET 2014/01/09 - 2014/02/08	No Comments Submitted	0	0	0	0	0	0	0	-
v2.2 Army - PM Fixed Wing 2014/01/09 - 2014/02/08	No Comments Submitted	0	0	0	0	0	0	0	-
v2.2 Army - PM DCGS-A 2014/01/09 - 2014/02/08	No Comments Submitted	0	0	0	0	0	0	0	-
v2.2 Army - PM Air Warrior 2014/01/09 - 2014/02/08	No Comments Submitted	0	0	0	0	0	0	0	-
v2.2 Army - PEO-STRI Customer Support Group	Document Accepted As	0	0	0	0	0	0	0	-

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2014/01/09 - 2014/02/08	Written									
v2.2 Army - PEO Missiles and Space (IAMD) 2014/01/09 - 2014/02/08	No Comments Submitted			0	0	0	0	0	0	-
v2.2 Army - PEO Aviation 2014/01/09 - 2014/02/08	Document Accepted As Written			0	0	0	0	0	0	-
v2.2 Army - MSCoE - MANSCEN 2014/01/09 - 2014/02/08	31	6	0	29	6	0	2	0	0	
v2.2 Army - MCoE - Infantry & Armor School 2014/01/09 - 2014/02/08	Document Accepted As Written			0	0	0	0	0	0	-
v2.2 Army - MCCoE, DOT-S 2014/01/09 - 2014/02/08	No Comments Submitted			0	0	0	0	0	0	-
v2.2 Army - LD&E 2014/01/09 - 2014/02/08	No Comments Submitted			0	0	0	0	0	0	-
v2.2 Army - IMCOM 2014/01/09 - 2014/02/08	Document Accepted As Written			0	0	0	0	0	0	-
v2.2 Army - ICoE - Mil Intelligence School 2014/01/09 - 2014/02/08	No Comments Submitted			0	0	0	0	0	0	-

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v2.2 Army - Human Resource Command (HRC) 2014/01/09 - 2014/02/08	No Comments Submitted	0	0	0	0	0	0	0	-
v2.2 Army - HQDA G2 - Alternate POC 2014/01/09 - 2014/02/08	No Comments Submitted	0	0	0	0	0	0	0	-
v2.2 Army - HQDA G2 2014/01/09 - 2014/02/08	Document Accepted As Written	0	0	0	0	0	0	0	-
v2.2 Army - HQ INSCOM G3, NWD 2014/01/09 - 2014/02/08	No Comments Submitted	0	0	0	0	0	0	0	-
v2.2 Army - FCoE - Field Artillery 2014/01/09 - 2014/02/08	Document Accepted As Written	0	0	0	0	0	0	0	-
v2.2 Army - DAMO-TRS 2014/01/09 - 2014/02/08	No Comments Submitted	0	0	0	0	0	0	0	-
v2.2 Army - CTCD 2014/01/09 - 2014/02/08	No Comments Submitted	0	0	0	0	0	0	0	-
v2.2 Army - Combined Arms Center 2014/01/09 - 2014/02/08	No Comments Submitted	0	0	0	0	0	0	0	-

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v2.2 Army - CAC-T; Training Management Dir 2014/01/09 - 2014/02/08	13	56	0	11	56	0	2	0	0	
v2.2 Army - Brigade Modernization Cmd (BMC) 2014/01/09 - 2014/02/08	No Comments Submitted			0	0	0	0	0	0	-
v2.2 Army - AVNCoE Aviation Logistics School 2014/01/09 - 2014/02/08	No Comments Submitted			0	0	0	0	0	0	-
v2.2 Army - ATSC TSAID 2014/01/09 - 2014/02/08	No Comments Submitted			0	0	0	0	0	0	-
v2.2 Army - ATSC Fielded Devices 2014/01/09 - 2014/02/08	No Comments Submitted			0	0	0	0	0	0	-
v2.2 Army - ATSC 2014/01/09 - 2014/02/08	0	3	0	0	3	0	0	0	0	
v2.2 Army - ARNG-RMQ-RA 2014/01/09 - 2014/02/08	Document Accepted As Written			0	0	0	0	0	0	-
v2.2 Army - Army National Guard 2014/01/09 - 2014/02/08	No Comments Submitted			0	0	0	0	0	0	-

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v2.2 Army - Army Material Command (AMC), G3 2014/01/09 - 2014/02/08	No Comments Submitted	0	0	0	0	0	0	0	-
v2.2 Army - AMEDD Center & School 2014/01/09 - 2014/02/08	Document Accepted As Written	0	0	0	0	0	0	0	-
v2.1 Peer - SCoE 2013/11/18 - 2013/12/06	No Comments Submitted	0	0	0	0	0	0	0	-
v2.1 Peer - USARSO G3 2013/11/08 - 2013/11/22	No Comments Submitted	0	0	0	0	0	0	0	-
v2.1 Peer - USARSO G2 2013/11/08 - 2013/11/22	No Comments Submitted	0	0	0	0	0	0	0	-
v2.1 Peer - USARCENT G2 2013/11/08 - 2013/11/22	No Comments Submitted	0	0	0	0	0	0	0	-
v2.1 Peer - USARCENT - G1 2013/11/08 - 2013/11/22	No Comments Submitted	0	0	0	0	0	0	0	-
v2.1 Peer - USARC G7 (US Army Reserve Cmd) 2013/11/08 - 2013/11/22	No Comments Submitted	0	0	0	0	0	0	0	-
v2.1 Peer - USAACE - Aviation School									

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2013/11/08 - 2013/11/22	1	0	0	0	0	0	1	0	0	
v2.1 Peer - CYBER CoE - Signal School 2013/11/08 - 2013/11/22	Document Accepted As Written			0	0	0	0	0	0	-
v2.1 Peer - PM-Tactical Vehicles 2013/11/08 - 2013/11/22	No Comments Submitted			0	0	0	0	0	0	-
v2.1 Peer - PEO-STRI Customer Support Group 2013/11/08 - 2013/11/22	Document Accepted As Written			0	0	0	0	0	0	-
v2.1 Peer - MScOE - MANSCEN 2013/11/08 - 2013/11/22	1	0	0	1	0	0	0	0	0	
v2.1 Peer - MCoE - Infantry & Armor School 2013/11/08 - 2013/11/22	Document Accepted As Written			0	0	0	0	0	0	-
v2.1 Peer - ICoE - Mil Intelligence School 2013/11/08 - 2013/11/22	No Comments Submitted			0	0	0	0	0	0	-
v2.1 Peer - FCoE- ADA School 2013/11/08 - 2013/11/22	Document Accepted As Written			0	0	0	0	0	0	-

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v2.1 Peer - FCoE - Field Artillery 2013/11/08 - 2013/11/22	5	3	0	5	3	0	0	0	0	
v2.1 Peer - Brigade Modernization Cmd (BMC) 2013/11/08 - 2013/11/22	No Comments Submitted			0	0	0	0	0	0	-
v2.1 Peer - ATSC 2013/11/08 - 2013/11/22	16	6	6	16	6	6	0	0	0	
v2.1 Peer - ATEC 2013/11/08 - 2013/11/22	No Comments Submitted			0	0	0	0	0	0	-

<b>Key</b>
Completed Review with Comments
Completed Review, No Comments
Active Review Occurring

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REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
HEADQUARTERS, UNITED STATES ARMY FIRES CENTER OF EXCELLENCE AND FORT SILL  
AIR DEFENSE ARTILLERY SCHOOL  
730 SCHIMMELPFENNIG ROAD, SUITE 152  
FORT SILL, OKLAHOMA 73503

ATSA-C

3 June 2014

MEMORANDUM FOR RECORD

SUBJECT: Improved Sentinel Inc 1 System Training Plan

1. References:

a. TRADOC Regulation 71-20, Concept Development, Capabilities Determination, and Capabilities Integration, 28 June 2013.

b. MOI for Training and Transfer of STRAP Approval Authority, 25 April 2012

c. Delegation of System Training Plan (STRAP) Approval Authority, 21 May 2014

2. I approve the Improved Sentinel Inc 1 System Training Plan. A copy of the plan will be posted to the Central Army Registry within 30 days of the approval date.

3. Point of contact is LTC Michael Glowaski, Chief, Air Defense Enlisted Training Division, Directorate of Training Development and Doctrine, DSN 639-6677 or commercial (580) 442-6677. E-mail address is: [michael.k.glowaski.mil@mail.mil](mailto:michael.k.glowaski.mil@mail.mil)

A handwritten signature in black ink, appearing to read "Chris Spillman".

CHRISTOPHER L. SPILLMAN  
COL, AD  
Commandant

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ADA CMDT Approval Memo

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