AN/AVR-2 Laser Detecting Set (version 2.0)

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USAACE - Aviation School

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

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1.0 System Description

The AN/AVR-2 Laser Detecting Set (LDS) Family of Systems is a passive laser detection system. The LDS receives, processes, and displays threat information resulting from aircraft illumination for laser designators, range finders, and beam riding missiles for aircrew situational awareness. The LDS interfaces with the AN/APR-39 Radar Detecting Set (RDS) or platform specific interface to provide audio and visual indications. The LDS consists of sensor units mounted externally on the host platform and an interface unit comparator which examines the laser threat for angle of arrival (AoA), type, and priority for cueing.

2.0 Target Audience

Target Audience for the AN/AVR-2				
Functional and Professional Courses	Operator Training School	Maintainer Training School	Additional Training School	Additional Training School
15- Aviation Officers (General)	X		USAACE	AWSC/SC
151A Aviation Maintenance Technician		X		
15C Aviation All Source Intelligence Officers	X		USAACE	
152D OH-58D Pilot			USAACE	AWSC/SC
152H AH-64D Pilot	X		USAACE	AWSC/SC
153D UH-60 Pilot	X		USAACE	AWSC/SC
153M UH-60M Pilot	X		USAACE	AWSC/SC
154C CH-47D Pilot	X		USAACE	AWSC/SC
154F CH-47F Pilot	X		USAACE	AWSC/SC
155A Fixed Wing Pilot	X		USAACE	AWSC/SC
155E C-12 Pilot	X		USAACE	AWSC/SC
15F Aircraft Electrician		X		
15J OH-58D Armament/Electronic/Avionic Systems Repair				
15K Aircraft Components Repair Supervisor		X		
15N Avionics Mechanic		X		
15R AH-64 Repairer		X		

15S OH-58D Repairer				
15T UH-60 Repairer		X		
15U CH-47 Repairer		X		
15Y AH-64D Armament/Electrical/Avionics Repairer		X		
SQI I Tactical Operations Officer	X		TACOPS	AWSC/SC
SQI C Instructor Pilot	X		IPC	
SQI G Maintenance Test Pilot	X		MTPC	MTPC

NOTE: The divestiture strategy of the OH-58 impacts MOSs 152D, 15J, and 15S. Though these MOSs will no longer be training at the institution, OH-58 operational (unit training) and self-development training will remain in place until such time as all aircraft have been divested.

Legend	
AWSC	Aviation Warfighting Simulation Center
IPC	Instructor Pilot Course
MTPC	Maintenance Test Pilot Course
SC	Simulation Center
USAACE	United States Army Aviation Center of Excellence

3.0 Assumptions

The following list of assumptions underlies the training concept and training strategy. These assumptions were derived from preliminary analysis related to the Materiel Requirements Documents (MRDs) and comparative analyses of similar systems:

a. The Operator and Maintainer Training Support Package (TSP) for system hardware and software will be developed subsequently to allow for testing each iteration or build of the system.

b. Personnel operating, reprogramming, or maintaining the system will have the proper security clearance, but the AN/AVR-2 will not cause an increase in security requirements.

c. Any software changes directed toward operation or maintenance will be user friendly and follow an open system approach.

d. All Technical Manuals (TMs) and Interactive Electronic Technical Manuals (IETMs) which conform to applicable military and/or commercial specifications, will be validated, verified and delivered to the user.

e. The Materiel Developer (MD) will develop and execute LDS New Equipment Training Plan (NETP). The NETP will include NET Training Support Packages (TSPs) that support a train-the-trainer and instructor and key personnel training strategy.

f. All NET and Training Test Support (TTS) TSPs will be developed concurrently with the hardware/software. All NET and TTS TSPs will be validated during Initial Operational Test and Evaluation (IOTE), and in place when system fielding begins.

g. AN/AVR-2 training will encompass all hardware and software specific to the operation, employment, and maintenance of AN/AVR-2.

h. The NET TSP will consist of Lesson Plans (LPs), TMs, IETMs, Graphic Training Aids (GTAs) and Computer Based Instruction Training (CBIT). Training must be developed in accordance with TRADOC Regulation 350-70, TRADOC Pamphlet 525-8-2 WC1 06 June 2011, and appropriate software specifications and must be validated and approved by the government prior to site delivery.

i. Sustainment/self-development training will be developed based on the NET TSP.

j. The system must have the capability of being trained at the unit, in both garrison and field environments.

k. The Analysis, Design, Development, Implementation, and Evaluation (ADDIE) process, documented in the Training Development Capability (TDC), will determine the final training strategy and the appropriate mix of required training materials and the tasks to be training.

l. USAACE, Directorate of Training Doctrine (DOTD) is responsible for integrating training strategies into this STRAP.

m. The Materiel Developer will conduct a Post Fielding Effectiveness Analysis (PFEA) 18 months after initial fielding of the total AN/AVR-2 systems. The materiel developer will also provide changes and new training materiel, hardware, software, and TADSS that are identified as needed to resolve the issues documented in the PTEA and other studies and evaluation.

q. There will not be enough fielded units of AN/AVR-2 to support a 100% fielding to all aircraft in the fleet and DA will institute an ARFORGEN operation cycle to equip and maintain a deployment ready level of these devices.

r. Upon completion of the NET timelines which are funded by the MD, the Displaced Equipment Training (DET) funding will be required for personnel in units who receive this equipment installation upon activation in the ARFORGEN cycle.

s. Threat emitters will be available at home station to enable realistic sustainment training.

t. Units must have access to computers with web browser capability and that are stand alone.

u. All aircraft participating in Training Rotations (TRs) at the Maneuver Combat Training Centers (CTCs) such as JMRC, JRTC, & NTC will be equipped with AN/AVR-2 before deploying to the designated CTC.

4.0 Training Constraints

Constraint Type	Probable Impact	Mitigating Efforts
Budgetary		
	Current budgetary constraints may force a reduction to money applied to NET/DET training teams. This will impact the quality and capability of training teams to reach the field to support installation and ARFORGEN cycling of equipment per the peace time CONOP currently being developed by DA G 3/5/7.	Ensure NET/DET training covers all systems. This includes CMWS, ATIRCM, CIRCM, RFCM, and LDS. Ensure training information is captured in IMI such as CBAT and future developments of the IMI program. Ensure school house IMI training has multi-role capability so it does not train one version of a specific system. Create stand-alone training that can be provided to local SMEs to assist in training organizations thus mitigating travel costs if they become constrained in the future.
Personnel		
		Ensure that maintenance

	Upon completion of new equipment fielding and maintenance support requirements, the responsibility of maintaining this and other ASE systems on the aircraft will shift from contracted SMEs to military personnel. This transition has the potential to create longer wait times for repairs of ASE at the operational level due to lack of troubleshooting training at the institution and in the field.	focused TADSS devices are fielded as soon as possible to support training personnel in troubleshooting procedures. Training personnel on common AN/AVR-2 failures will lessen maintenance availability issues for installed systems and maximize training availability of the AN/AVR-2. Provide updates to IMI and established reach-back websites for ASE initial/sustainment training for crew members and maintainers in the field. This will include common faults and isolation processes which will support training of personnel in the field.
Training Equipment		
	Insufficient numbers of institutional TADSS will result in functionality and availability issues that will impact training	Develop TADSS systems to support maximum throughput of personnel in institutional training courses. Develop and field a

	value. In addition, current institutional TADSS are based solely on the system and therefore lack upgradability when the systems are upgraded or improved.	non-systems based TADSS device that incorporates all ASE systems into a holistic training environment that can simulate actual aircraft operations which can be upgraded and expanded as necessary.
Fidelity of Simulation		
	Lack of fidelity in the simulation of system operation or maintenance could lead to negative habit transfer.	Ensure that training systems replicate theory of operation in the unclassified realm as accurately as possible so as to allow trainers to highlight a system's capabilities and vulnerabilities in classified training prior to simulated use.
Equipment Density		
	Due to the expense of fielding this system, a good portion of the field will not have AN/AVR-2 on their aircraft until they enter the Train phase in the	This system will require a NETT/Mobile Training Team (MTT) to deploy and provide training for units fielded AN/AVR-2. Fielded systems will be upgraded to reflect the AN/AVR-2 capability.

	ARFORGEN cycle or they deploy to an operational theater.	Maintenance training will require some form of hands on as well as IMI based training to sustain knowledge in the field.
Number of Personnel to be Trained		
	AN/AVR-2 will require that a high percentage of a unit's personnel to be trained. As units enter the train/ready phase of the ARFORGEN cycle, there will be a large amount of personnel that are not proficient in maintaining AN/AVR-2.	Ensure that Command emphasis reinforces the importance of AN/AVR-2 training events and Soldiers are held accountable for being trained to operate and maintain the system.
Command Guidance		
	Since AN/AVR-2 will be constantly in refielding, the Commander needs to be aware of the training issues related to the system. NOTE: Due to fiscal constraints, units will be fielded AN/AVR-2 late in their ARFORGEN cycle.	All commanders and key leaders of units receiving AN/AVR-2 should be provided training NLT 90 days ahead of fielding to enable appraisal and evaluation of AN/AVR-2 and to allow formulation and integration into the unit's training program. Ideally, this will be based on the unit's UTM cycle and occur NLT mission analysis and before the commander's dialogue.

a. Manpower/Force Structure- The system shall not require an increase in crew size, maintenance manpower, nor support personnel requirements.

b. Training Equipment- Additional training assessment may be required to determine the need for new training devices, simulators, simulations, training material, and modifications to current simulators and simulations which may be required to support AN/AVR-2 training. The proponent for training development, USAACE, DOTD, will select and prioritize device requirements, development, and fielding of training systems for AN/AVR-2.

c. Human Factors- Risk assessment to identify potential human factors relating to AN/AVR-2 operation will be required and may lead to additional training requirements. Conduct risk analysis to determine system safety requirements (i.e., preventive maintenance to reduce risk of component failure). Use Army Safety Management Information System (ASIMIS-1) to assist in identifying potential component failures. Recommendation: Aviation Branch Safety Officer will conduct risk assessment of overall training Programs of Instruction (POIs) and assign risk assessment codes in accordance with TRADOC Reg 350-70.

d. Soldier Survivability- Incorrect operation or maintenance of AN/AVR-2 could significantly impact Soldier survivability. Training shall ensure that users are knowledgeable of potential hazards and control measures for AN/AVR-2 equipment they may have occasion to use.

e. Personnel resources for AN/AVR-2 training must come from the Active Army and Reserve Component resources. The training equipment, components, and devices must be provided in sufficient quantities and within the appropriate time frames to support operational testing and fielding.

NOTE: The operation and maintenance of training devices and associated software must not require aptitude, education, or training that exceeds the target audience capabilities.

5.0 System Training Concept

The training concept adds AN/AVR-2 to existing aviation units. The training system will support NET/DET, Institutional, Operational, and Self-Development Training and augment existing training for Aircraft Survivability Equipment (ASE). Training will be developed using the ADDIE process and distributed learning (DL) media should be used when analysis supports the application of DL methodology. The Materiel Developer will require the contractor to develop, update, and provide a complete training system (e.g., individual and collective task analysis, institutional training devices, embedded training systems, simulator upgrades, simulations, Instructor and Key Personnel Training (I&KPT), NET, IMI, CTC interoperability,etc.) After the I&KPT completion, the NET TSP will be the foundation for Operator, Maintainer, and Support (OMS) personnel training and integrated into existing institutional courses. Institutional and operational training programs should capitalize on TADSS technology and other devices and support efficient and effective training. Simulators are utilized in both the instructional and operational training domains and will be required to sustain skills taught through NET/DET and institutional training. As a result, all existing and future simulators must be updated to include AN/AVR-2 capabilities. Additionally, operator/maintainer training will require the utilization of computer-based Aircraft Survivability Equipment Training (CBAT) to sustain knowledge of ASE capabilities, vulnerabilities, limitations, and individual tasks. Due to limited fielding of the AN/AVR-2 and the unavailability of actual equipment for initial or sustainment training of maintenance tasks, maintainer training will require that TADSS are available to execute training when actual AN/AVR-2 is not. Collective training for the AN/AVR-2 will involve the use of the Live, Virtual, Constructive, Gaming-Integrated Training Environment (LVCG-ITE) with specific emphasis place on constructive and virtual technologies. The AN/AVR-2 will require a live force-on-force training capability and threat emitters will be available at home station to enable realistic sustainment training. Self-development training will rely heavily on the exploitation of reach back to the institution/MD and the use of distributed learning programs such as CBAT for sustainment of skills.

5.1 New Equipment Training Concept (NET)

NET accomplishes the initial transfer of knowledge on operation, maintenance, and doctrine and tactics training (DTT) associated with fielding of the system from the materiel developer to the tester, the trainer, the supporter, and then the user. The following describes the NET strategy for the AN-AVR-2 LDS:

Fielding to Army Commands (ACOMs) will use the train-the-trainer concept. The Materiel Developer will provide the training to designated unit trainers (operator and maintainer) on the employment and sustainment of the system. After initial fielding and NET, unit personnel will be required to operate/maintain the system using the training provided within the Computer Based Aircraft Survivability Equipment Training (CBAT) modules (CBAT-C, CBAT-O, and CBAT-M) and exportable training material provided by the PEO AVN website (Consolidated Aviation Portal Storage [CAPS]) under the supervision of the unit's designated system training manager/SME. Once the unit has been fielded and received NET, the materiel developer will remain on call and continue to support the system until fielding is completed. Fielding and training to Reserve and National Guard units will be in the same manner and conducted simultaneously as the active Army, at selected locations determined to be the most cost effective and feasible.

Fielding to the training institutions 110th Aviation Brigade and 128th Aviation Brigade will include Instructor and Key Personnel Training (IKPT) required for personnel to conduct training of the system to students. Additional training will include any training deemed necessary to ensure the institutional base has the capability to train all tasks identified within the MOS critical task list and possess a full understanding of the AN/AVR-2 LDS as a complete system. The NET Support Package will include Technical Manuals, Student Guides/Handouts, Lesson Plan(s), Training Media (presentation media), Lessons Learned, Hardware/Software Revision briefs, TADSS revision/impact, and Interactive Multimedia Instruction (IMI) modules. The NET Support Package will be developed to support web-portability on NIPR. The MD will provide revisions/modifications of the NET Support Package to the support institutions and FORSCOM units via web-based communication, distance learning, or NETT.

5.2 Displaced Equipment Training (DET)

Displaced Equipment Training (DET) will be initiated/executed by the MD, upon the establishment and execution of AN/AVR-2 training at the designated institutions and in support of the Army Forces Generation (ARFORGEN)/Global Readiness Force (GRF) guidance from DA 3/5/7. DET, IAW AR 350-1, will be designed to build upon already established operator and maintainer equipment knowledge provided during sustainment training, generating force schools/institutions, and to support current unit sustainment training at the local level. DET will leverage technology based mediums to deliver instruction IAW Army Learning Model TP 525-8-2 wC1 06 June 2011.

5.3 Doctrine and Tactics Training (DTT)

The AN/AVR-2 DTTs require the use of the Live, Virtual, Constructive, and Gaming-Integrated Training Environment (LVCG-ITE) to meet the requirements for the individual aircraft programs of instruction (POIs), Unit Combined Army Training Strategies (CATS), and Readiness Level (RL) Progression.

The current individual training POIs will be augmented by the AN/AVR-2 lessons. Institutional professional development classes and simulated mission scenarios will include the AN/AVR-2 capabilities in both virtual and constructive environments. AN/AVR-2 will require training for proper use of maneuvers during flights. Connectivity with simulated forces, real systems, and virtual systems will provide realistic operational training and mission rehearsal using all levels of simulation. Mission Essential Task List (METL) items can be practiced and evaluated at the units as well as Combat Training Centers (CTCs). The array of simulated threat emitters, combined with electronic ranges and live fire, will produce the needed environment to meet the CATS requirements. The AN/AVR-2 either replaces or augments existing systems and there will be no change in current Aviation doctrine. However, depending on the threat, terrain, time of day, meterological conditions, aircraft, etc., tactics, techniques, and procedures (TTP) may change and must be trained and practiced in the LVCG-ITE.

5.4 Training Test Support Package (TTSP)

The MD and DOTD will coordinate and integrate original equipment manufacturer (OEM) developed materials into the Training Test Support Package (TTSP) which will meet or exceed the requirements outlined in TRADOC Regulation 350-70 and DA Pamphlet 73-1, para 6-61, using the methods described in the Army Learning Model TP 525-8-2 wC1 06 June 2011, prior to each phase of User Testing (UT). The matured TTSP becomes the production TSP which will be the foundation for Institutional, Operational, and Self-Development training. The TTSP will contain the following materials (items with an asterisk are required to be included in the Production Training Support Package):

a. Approved System Training Plan (STRAP)

b. Test Training Certification Plan

c. Training Schedule

d. Trainer Data Requirements

e. Soldier Training Publications or Changes

f. CATS Tasks with changes

g. Target Audience Description

h. Critical Task Lists (CTLs)

i. Crew Drills

*j. Programs of Instruction (POIs) for each MOS affected

*k. Lesson Plans

*l. Student Guides

*m. Test

*n. Flight Training Guides

*o. Training Aids, Devices/Simulators, Embedded Training Components

*p. Interactive Multimedia Instruction (IMI)

NOTE: An asterisk (*) indicates the mandatory components of a TSP.

6.0 Institutional Training Domain

Institutional AN/AVR-2 training courses for operators and maintainers will be taught at USAACE 110th/1st Aviation Brigade, Fort Rucker, AL and 128th Aviation Brigade, Fort Eustis, VA, in accordance with the Army Campaign Plan. Training will be developed per the guidance in Army Regulation (AR) 350-1 Training and Leader Development, TRADOC Regulation 350-70 and the Army Learning Model TP 525-8-2 w/C1 06 June 2011 and designed to be safe, mission focused, derived from the variety of missions expected to be performed, and based on aviation doctrine. Institutional training and instruction will be performance oriented, emphasizing hands-on practical exercises, and will prepare aviation Soldiers and units to achieve and sustain proficiency of individual and collective tasks. Standards are determined from the Mission Essential Task List (METL), the Digital Training Management System (DTMS), Combined Arms Training Strategies (CATS), Drills, Aircrew Training Manuals (ATMs), and Soldier Training Publications (STPs). Training will be designed to support a crawl, walk, run approach within a logical sequential program of instruction to ensure critical skills and tasks are taight and trained to established standards and instill system confidence within the Soldier. The new CATS will include short and long-range strategies for institutional, operational, and self-development training. It is incumbent on the institutions to utilize all available training options/devices (i.e., live, virtual, construtive, gaming) to facilitate an integrated training strategy. Institutional and unit training programs shall capitalize on TADSS technology and other devices that support efficient and effective training.

6.1 Institutional Training Concept and Strategy

The AN/AVR-2 training system will use a hierarchical building block approach to provide task introduction, reinforcement, and evaluation. Training will include provisions for peacetime and mobilization and will minimize facility requirements. The final approved instructional programs will be based on knowledge gained from events such as Task Analysis (TA), Program Analysis and Evaluation (PAE), Leader Development (LD), Initial Operational Test (IOT), Training Effectiveness Analysis (TEA), and Cost and Training Effectiveness Analysis (CTEA) input. Appropriate Institutional and Unit/Sustainment courses of instruction, new Soldier's Manuals (SMs), and Flight and/or Training Guides (FTG/TGs) for applicable MOS/ASI/SQIs and AOCs will be developed as technical data becomes available to the applicable TRADOC schools. Applicable ARTEPs will be revised as appropriate.

The NET TSP will be updated as necessary by the MD upon completion of the IKPT. The updated NET TSP will be the foundation for institutional Operator, Maintainer, and Support (OMS) personnel training. The NET TSP will also be modified as required and integrated into the Officer/Warrant Officer Professional Development courses (Aviation BOLC/CCC/AWOAC/AWSC) and for Maintainer Advanced Individual Training (AIT), Advanced Leader Course (ALC), Senior Leader Course (SLC), and Non-Rated Crewmember Instructor Course (NCIC) as appropriate, to provide leader awareness of the capabilities and limitations of AN/AVR-2.

110th/1st Aviation Brigade, Fort Rucker, AL

The operator training courses shall be prepared at the functional level and shall include classroom presentation using IMI. The instruction will provide the student with a working knowledge of the major assemblies of the AN/AVR-2, sub-assemblies, Line Replaceable Units (LRUs), and Line Replaceable Modules (LRMs). Theory and principles of operation, Built-in Tests, audio/visual cueing, pre/post flight inspection criteria, and technical manuals shall be trained.

128th Aviation Brigade, Joint Base Langley-Eustis, VA

The maintenance training courses shall be prepared at the functional level and shall include classroom presentation using IMI and numerous hands-on-equipment practical exercises. The instruction will provide the

student with a working knowledge of the major assemblies of the AN/AVR-2, sub-assemblies, Line Replaceable Units (LRUs), and Line Replaceable Modules (LRMs). Maintenance concepts, preventive maintenance, equipment check-out, troubleshooting, fault detection and isolation, and appropriate Aviation Unit Maintenance (AVUM) corrective action utilizing the Technical Manual, peculiar Ground Support Equipment (PGSE), Aviation Ground Support Equipment (AGSE), and Test, Measurement, and Diagnostic Equipment (TMDE) shall be trained. Higher skill level courses involving supervision, inspection, advanced diagnostics, and troubleshooting will be taught in the appropriate ALC.

Training Device Requirements: Institutional AN/AVR-2 training equipment/device requirements will be determined by DOTD, Fort Rucker, AL IAW TP 350-38 Policies and Management for Training Aids, Devices, Simulators, and Simulations, para 1-8.

6.1.1 Product Lines

USAACE, Fort Rucker, AL

The AN/AVR-2 will impact the following POIs within Flight School XXI: Initial Entry Rotary Wing Course (IERW), all Aircraft Qualification Courses (AQC), Tactical Operations Officer (TACOPS) Course, Maintenance Test Pilot (MTP) Course, Captains Career Course, Instructor Pilot (IP) Course, and the Pre-Command Course.

MOS/SQI POIs impacted are:

152H AH-64D Pilot

153D UH-60 Pilot

153M UH-60M Pilot

154C CH-47D Pilot

154F CH-47F Pilot

15 Aviation Officers

SQI I Tactical Operations Officer

SQI C Instructor Pilot

SQI G Maintenance Test Pilot

128th Aviation Brigade, Joint Base Langley-Eustis, VA

The AN/AVR-2 will impact the following MOS POIs that reside within the 128th Aviation Brigade:

15F Aircraft Electrician Skill Level 10/30

15K Aircraft Components Repair Supervisor

15N Avionics Mechanic Skill Level 10/30

15R AH-64 Repairer Skill Level 10/30/40

15T UH-60 Repairer Skill Level 10/30/40

15U CH-47 Repairer Skill Level 10/30/40

15Y AH-64D Armament/Electrical/Avionics Repairer Skill Level 10/30/40

151A Aviation Maitenance Technician

6.1.1.1 Training Information Infrastructure

All AN/AVR-2 training hardware, software, and communications systems will conform to Army architectures and standards to enable the development, storage, retrieval, delivery, and management of TSS products and information for use by individuals, units, and institutions world-wide.

6.1.1.1.1 Hardware, Software, and Communications Systems

MD provided AN/AVR-2 training will emphasize distance learning (DL) materials that can be operated on a secure network and/or stand-alone computer system. DL packages will be in the form of electronic portable media and will include any procedural or doctrinal changes and any upgrades or other changes to the training for both NIPR and SIPR dissemination. Additional information provided on the SIPR side will include capabilities, vulnerabilities, and limitations of the system for operator knowledge. The Materiel Developer will create and field the DL packages that involve system-specific upgrades and changes. If DL is not yet embedded on the operational equipment, the units must have access to computers with web browser capability. This will provide a venue for all current and future training packages generated by the Materiel Developer.

Institutional AN/AVR-2 training will emphasize the use of a blended technology approach (simulators, simulations, maintenance devices, etc.) and as such, all hardware, software, and communications systems will be dictated IAW training device design and/or local standard operating procedures.

6.1.1.1.2 Storage, Retrieval, and Delivery

Access and storage of AN/AVR-2 training and information will be made available through one or more of the following locations:

- Training Development Capability (TDC) Database or its replacement
- The Army Learning Management System (ALMS)
- The Central Army Registry (CAR)
- The Digital Training Management System (DTMS)
- The Army Training Network (ATN)

6.1.1.1.3 Management Capabilities

Information and training management capabilities will mirror those of the current ASE training systems. The information systems that allow for the management of digital Training Support System (TSS) products and information on the ASE may include but are not limited to the following: the Digital Training Management System (DTMS), the Army Distributed Learning Program (TADLP), the Army Learning Management System (ALMS), and the Training Support-Materiel Army-wide Tracking System (TS-MATS). The AN/AVR-2 will be part of the Computer Based ASE Training (CBAT) and available 24/7 via appropriate distribution systems and unit training disks.

6.1.1.1.4 Other Enabling Capabilities

Interoperability and data exchange as required by the TSS will exist with the Army Training Integrated Architecture (ATIA), the Common Training Instrumentation Architecture (CTIA), and the LVCG-ITE to support the primary components of the TSS Training Information Infrastructure (TII). Additionally, the capability for common communications and data exchange operating environment integral to Brigade Combat Team Modernization (BCTM) would be incorporated into the system as appropriate.

6.1.1.2 Training Products

Institutional training products and procedures must be developed IAW the latest TRADOC Regulation 350-70, the Army Learning Model TO 525-8-2 06 June 2011, and any 110th/1st/128th Aviation Brigade supplementation. Training products and processes will be documented in the Training Development Capability (TDC) software suite or any future automation tool that supersedes the current TDC system. Documentation in TDC is a requirement in TR 350-70.

Individuals selected to participate in Force Development Testing and Operational Testing will receive training using the materials contained in the (approved by the appropriate proponents) NETTSP/TTSP in accordance with DA PAM 73-1 Test and Evaluation in Support of Systems Acquisition. At the conclusion of the training, prior to the start of user testing, these individuals will be certified based on the adequacy of the training. The DOTD, Fort Rucker, AL, will provide an Operational Test Readiness Statement (OTRS) per DA PAM 71-3 Test and Evaluation Policy and Test Officers Procedures Manual (TOPM) 73-151 to certify training for operators. The 128th Aviation Brigade will verify to the DOTD Fort Rucker, that training is adequate for maintainer and support personnel.

6.1.1.2.1 Courseware

The Materiel Developer will provide an AN/AVR-2 multi-media training support package (TSP) that can be used to support institutional training at 110th/1st/128th Aviation Brigade, operational and unit sustainment training, and self-development training. The MD will also be responsible for upgrading the TSP to reflect engineering changes to AN/AVR-2. The TRADOC developed TTSP package will detail the concept of operations, effects on mission planning, capabilities and limitations of the equipment, and broadcast declarations received by the system.

6.1.1.2.2 Courses

AN/AVR-2 augments existing ASE systems on the aircraft and the subject matter will be placed into existing ASE training lessons. DOTD, Fort Rucker and S-3, 128th Aviation Brigade, as appropriate, will evaluate and validate all OEM and Materiel Developer training courses. Upon completion of the verification and validation procedure, DOTD, Fort Rucker will submit a training approval memorandum to the Director of DOTD for approval of the OEM and/or MD training courses.

Flight School XXI-Operator training will be designed and developed for all aviators, maintenance test pilots, and instructor pilots. The institutional/individual training currently consists of introduction to the ASE including the following: theory/principles of operation, switchology, cueing, and power-up and power-down procedures. ASE and AN/AVR-2 are also presented during simulated constructive and virtual exercises.

Advanced Operator Training- When the operator begins training in his/her advanced aircraft, ASE/AN/AVR-2 training will be presented in the classroom and in simulated flight training. The capabilities, vulnerabilities, and limitations of AN/AVR-2 will be presented during simulated constructive and virtual exercises.

Maintainer Training-MOS specific ASE training for the 15F, 15K, 15N, 15R, 15T,15U, and 15Y and will remain the same with the inclusion of AN/AVR-2 tasks such as maintenance operational checks, troubleshooting, repair and replacement, built-in-tests, interfaces and cueing (audio/visual), peculiar ground support equipment (PGSE), and test, measure, and diagnostic equipment (TMDE). Maintenance instruction will provide the student with a working knowledge of the major assemblies, sub-assemblies, Line Replaceable Units (LRUs), and Line Replaceable Modules (LRMs). The maintenance training courses shall be prepared at the functional level and may include classroom presentation using IMI and numerous hands-on-equipment practical exercises.

Advanced Maintainer Training- Advanced MOS skill level ASE training for the 15F, 15K, 15N, 15R, 15T,15U, and 15Y will remain the same with the inclusion of AN/AVR-2 tasks such as inspection, advanced diagnostics, lessons learned, logistical support, and troubleshooting. The maintenance training courses shall be prepared at the functional level and may include classroom presentation using IMI and numerous hands-on-equipment practical exercises.

Professional Development Courses-Officer and Warrant Officer professional

development is the responsibility of the 110th Aviation Brigade. During these courses, in both constructive and virtual simulation exercises, the capabilities and limitations of the AN/AVR-2 can be addressed during mission planning. The TACOPS professional development course will accurately present AN/AVR-2 functions and the employment of AN/AVR-2 for mission planning and exercises. The reconfigurable Aviation Combined Arms Tactical Trainer (AVCATT) with its tactical and logistic operations center modules will be used to provide repetitive, cost efficient, and realistic task loaded combined arms exercises.

Unit Force-on-Force Exercises-Units can practice the limitations and capabilities and tactical employment of the AN/AVR-2 in live and virtual training environments. During live training, actual countermeasures can be deployed on electronic ranges to train the full capabilities of the AN/AVR-2. Advanced threat emitters will provide the stimulus to the ASE/AN-AVR-2 systems and appropriate countermeasures will be employed. Training and actual countermeasures and decoys will be used for collective training in the live environment.

6.1.1.2.3 Training Publications

The Materiel Developer will develop training products in coordination with DOTD, Fort Rucker. All TMs, user manuals, and Soldier Training Publications (STPs) shall be created prior to NET and institutional training is to be available for download from an AKO or other appropriate site. The AN/AVR-2 TSP will provide a structured training program that supports Soldier/leader and staff training. All task development will be completed using the Training Development Capability (TDC) database. This will facilitate the production of training support products for delivery with TSS and the ability to rapidly update tasks and their instructional products using digital information.

TMs for Operators and Maintainers will be produced to military standard (MIL STD) and undergo a contractor validation and Government verification process to ensure accuracy and completeness. Operator, field, and sustainment levels of maintenance will be called out in the Maintenance and Allocation Charts (MAC) as applicable in the Field and Sustainment Maintenance TMs. All calibration requirements, procedures, and schedules will be identified in operator and maintainer TMs.

6.1.1.2.4 Training Support Package (TSP)

a. Training Support Package- The current ASE TSP will be augmented by the AN/AVR-2 tasks.

b. Collective/Warfighter TSP- The AN/AVR-2 will augment existing collective TSPs. A complete set of training products and materials will be provided to the unit during NET. This material will be added to the unit's existing ASE training program. The maximum use of LVCG-ITE will be used to train and sustain ASE and AN/AVR-2 critical collective tasks.

c. Common or Shared Task TSP- The AN/AVR-2 will be included in the existing TSP for ASE for both operators and maintainers.

d. TADSS TSP- The AN/AVR-2 will be added to existing ASE systems of operators and maintainers. Current constructive, virtual, and live simulations will be updated to include AN/AVR-2. Threat emitters will be developed that will stimulate the AN/AVR-2 and training countermeasures will be used.

e. TSP for collective tasks trained at the unit- For the USAACE the AN/AVR-2 collective tasks will fall under the ATM task "Operate ASE." For the 128th Aviation Brigade, revised TSPs will be required for the AN/AVR-2 developed at the ELO level. The maintainer collective tasks will include AN/AVR-2 in the ASE systems maintenance tasks.

f. TSP for individual tasks trained at the unit- The ASE critical tasks will include the AN/AVR-2 for both maintainer and operator.

g. Institutional TSP- the AN/AVR-2 training materials, TADSS, etc., will be included in existing MOS training courses.

h. Operational TSP- This TSP will be developed for the IOT&E.

i. Self-development TSP- Current Self-Development TSPs for the affected AN/AVR-2 MOSs will be updated/revised as needed.

j. Training Test Support Package- The contractor developed AN/AVR-2 TTSP will be provided to the tester for use in evaluating training for the AN/AVR-2. The TTSP will include the POI, Soldiers Manuals, Trainers Guides, CATS changes, and Training Devices. The TTSP will also include embedded training components, training/actual countermeasures/decoys, threat emitters, technical documentation, and training extension materials.

6.1.1.3 TADSS

TADSS will be required for training both operators and maintainers on the use and maintenance of AN-AVR-2. Further explanation of required TADSS are outlined in paragraphs 6.1.1.3.1.-6.1.1.3.5.

6.1.1.3.1 Training Aids

a. Operator Training Aids- Institutional training aids will include diagrams (both printed and computer modeled) as required to teach basic AN/AVR-2 operation.

b. Maintainer Training Aids- Institutional training aids will include diagrams (both printed and computer modeled) as required to teach basic AN/AVR-2 maintenance.

6.1.1.3.2 Training Devices

Training conducted with ASE training devices can be effectively used to train tasks associated with mission planning, decision making, and the tactical execution of unit missions. This allows the unit leaders to practice and rehearse different missions before deployment. During the AAR, the leader can identify weaknesses and retrain to correct weaknesses in a low cost environment to achieve the desired level of proficiency. The combination of ASE training devices and other live, virtual training will produce a synergistic effect on a unit's tactical proficiency. It will also permit post training and mission rehearsal of tactical operations that cannot be trained in the field because they are either too hazardous, expensive, or lack appropriate training facilities.

a. Operator Devices- Institutional training aids will include mock-ups, static displays, actual equipment, and desktop trainers as required to teach basic AN/AVR-2 operation. Desktop trainers will allow students to practice cockpit procedures that are steps in TRADOC selected critical tasks and must accurately replicate aircraft functionality to preclude negative habit transfer.

b. Maintainer Devices- Institutional training aids will include mock-ups, static displays, actual or simulated equipment, and desktop trainers as required to teach basic AN/AVR-2 operation. Desktop trainers will allows students to practice cockpit procedures that are steps in TRADOC select critical tasks and must accurately replicate functionality to preclude negative habit transfer. Maintenance training devices must simulate the physical and functional fidelity necessary to train TRADOC selected critical tasks to applicable TRADOC standards. The primary platform avionics training devices for each airframe will be upgraded to support AN/AVR-2.

6.1.1.3.3 Simulators

Aviators require simulations that allow them to train as they will operate within a modular force construct, maintain proficiencies, and execute high fidelity aviation mission rehearsals. The key training enabler for this vision is the Integrated Training Environment (ITE) where synthetic virtual, constructive, and gaming simulations and stimulations links with live instrumentation to provide mission command centric rehearsal capabilities at homestation, Combat Training Centers (CTCs), and operations overseas in permissive environments. Pilots need simulators to maintain proficiency in high risk tasks which would certainly include operating their ASE. PM-ASE will coordinate with the PMs for each simulator to initiate upgrades for the inclusion of AN/AVR-2. Examples of Operator Simulators that require modification to include AN/AVR-2 capabilities include, but are not limited to the following:

- AH-64D (Blk I/II) Longbow Crew Trainer (LCT)
- AH-64E (BLK II/III) Longbow Crew Trainer (LCT)
- Longbow Collective Training System
- CH-47F Transportable Flight Proficiency Simulator (TFPS)
- CH-47D Synthetic Flight Training Simulator (SFTS)
- UH-60A/L Synthetic Flight Simulator (SFTS)
- UH-60M Transportable Blackhawk Operational Simulator (T-BOS)
- Flight School XXI Simulators
- Aviation Combined Arms Tactical Trainer (AVCATT)
- CH-47F Cockpit Procedure Trainer
- OH-58D Cockpit Procedure Trainer
- UH-60A/L Cockpit Procedure Trainer
- UH-60M Cockpit Procedure Trainer

Collective simulators must include an interactive and high SAF which models both the ASE and the effect of ASE on enemy systems. Simulators must be geo-specific terrain databases that achieve a "fair-fight" interoperability level of fidelity. Achieving fair-fight interoperability will require correlation of terrain, weather, visualization objects databases, and Modeling and Simulation (M&S) fidelity. M&S fidelity is defined as "two or more simulations may be considered to be in a fair fight when differences in the simulation's performance characteristics have significantly less effect on the outcome of the conflict than actions taken by the simulation participants." The AVCATT and the Reconfigurable Collective Training Device (FSXXI) are the collective training simulators used to train at USAACE.

Maintenance trainers will require modification for training restoring

AN/AVR-2 by aircraft. All maintenance trainers will allow the instructors to insert faults (opens, shorts, etc.) which allow the students to troubleshoot onboard aircraft systems. Maintenance trainers requiring modification to update them to a configuration with AN/AVR-2 include but are not limited to the following:

- L6: AH-64D Airframe & Engine Drive Train System Trainer
- L7: AH-64D Multiplex, Avionics, Visionics, Weapons, & Electronic Systems Trainer
- CH-47F: Chinook Avionics Trainer (CAT)
- CH-47F: Chinook Helicopter Maintenance Trainer (CHMT)
- UH-60: Blackhawk Avionics Trainer-M Model (BHAT-M)
- AN/AVR-2(V) Laser-Detecting Set Trainer

6.1.1.3.4 Simulations

AN/AVR-2 source data covering the full operational capability and the logistic requirements must be provided to the National Simulation Center (NSC) for inclusion in all higher level constructive simulations. Modifications to One Semi-Automated Forces (One SAF) will be necessary to reflect the operational capability of AN/AVR-2.

6.1.1.3.5 Instrumentation

The live devices for AN/AVR-2 training will be required to interface with Army Tactical Engagement Simulation System (Army TESS) Training to monitor and record the position, location, heading, and weapon events. A Smart On-board Data Interface Module (SMODIM) provides each aircraft with a "kill" and "be killed" capability. The SMODIM processes and transmits data for monitoring and pairing of simulated aircraft weapon events.

If the aircraft is engaged, the SMODIM uses data bus signals from tactical sensors to decode and process the Real-Time Causality Assessment (RTCA) and transmit data back to the Mobile Command Center (MCC) ground station. Global Position System (GPS) and telemetry antennas are part of the Army TESS aircraft components. Once engaged, the SMODIM processes the ph/pk for an RTCA outcome and the TTM provides visual cues. The data is then transmitted by the SMODIM to the MCC on the ground through telemetry antenna.

Live AN/AVR-2 training solutions will require a Multiple Integrated Laser Engagement System (MILES) implementation. Any instrumentation systems must interoperate with the Army Battlefield Command (ABCS) and provide data in a format recognized by the LVCG-ITE. Compatibility with the Digital Range Training System (DRTS) and the Training Instrumentation System (TIS) will be required to support Force on Force (FoF) and Force on Target (FoT) venues at home station.

NOTE: SMODIM capabilities vary by aircraft. The OH-58D does not have a fully integrated SMODIM so weapons events are not currently transmitted. OH-58F, CH-47F, and UH-60M will have data buses and be able to provide more SMODIM output for use by hosting architectures (i.e., TIS, DRTS, CTCs). Additionally, SMODIMs are currently only available for UH-60 and CH-47 platforms at the CTCs. Efforts are ongoing to establish a home station training capability and plan; however, there is no home station capability at present.

6.1.1.4 Training Facilities and Land

Institutional training for the AN/AVR-2 will not require additional classroom space. Facility requirements for housing and maintaining AN/AVR-2 are the owning unit's responsibility and no new facilities are anticipated for the maintenance of the AN/AVR-2.

6.1.1.4.1 Ranges

Live fire ranges must include threat emitters or a threat emitter emulation capability that replicates current and emerging laser threats to aviation to enable training task integration in crew qualification and collective gunnery events. Range requirements will be in accordance with the Training Aid being used to execute the training and any additional requirements based on use of the countermeasures dispensed.

6.1.1.4.2 Maneuver Training Areas (MTA)

Not Applicable

6.1.1.4.3 Classrooms

All AN/AVR-2 DL products will be developed to be compatible with the Army Distributed Learning Program (TADLP), Classroom XXI classrooms, Digital Training Facilities (DTFs), and Defense Information Systems Agency (DISA) infrastructure specifications. SIPR connectivity will be required to disseminate and display Classified information regarding AN/AVR-2 capabilities, vulnerabilities, and limitations. Proper procedures for safeguarding this classified information must be in place.

6.1.1.4.4 CTCs

Not Applicable

6.1.1.4.5 Logistics Support Areas

Not Applicable

6.1.1.4.6 Mission Training Complex (MTC)

Not Applicable

6.1.1.5 Training Services

Not Applicable

6.1.2 Architectures and Standards Component

Architectures and standards will provide the means to ensure integration and interoperability across product lines in support of AN/AVR-2. Architectures are the structure of AN/AVR-2 training components, their relationship, and the principles and guidelines governing their design and evolution over time. They will be the framework that describes missions, organizations, and system; specifies interfaces and interrelationships amongst its various parts; and facilitates coordination and synchronization with internal and external interfaces. The AN/AVR-2 training system will be integrated into three types of architecture-organization, functional, and systems-each of which may have operational, technical, and systems views.

6.1.2.1 Operational View (OV)

Not Applicable

6.1.2.2 Systems View (SV)

Not Applicable

6.1.2.3 Technical View (TV)

Not Applicable

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

6.1.3.1 Management

Where possible, training capabilities developed to support AN/AVR-2 will use existing facilities and support infrastructure. Training analyses in support of the AN/AVR-2 will focus on the most efficient use of existing resources and precisely 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 mission critical tasks. Training will incorporate the maximum use of simulators/simulation when available to mitigate cost and risk. While developed predominantly for use in the self-development domain, computer-based ASE training will be designed in such a way that it can also be used to support training in the institutional and operational domains.

To determine how to best improve the quality and efficiency of instruction and training, students and instructors will be routinely asked to evaluate training events and products. This allows USAACE to provide the best quality of training with the least expenditure of resources.

6.1.3.1.1 Strategic Planning

The development and fielding of the AN/AVR-2 supports Army Transformation and Training Transformation and is consistent with the guidance found in:

- National Defense Strategies
- The Army Training Strategy
- Joint Vision 2020
- The Army Plan and other Service Plans
- Future Force Documentation
- TRADOC supporting plan to the Army Transformation Campaign Plan (ATCP)

6.1.3.1.2 Concept Development and Experimentation (CD&E)

6.1.3.1.3 Research and Studies

6.1.3.1.4 Policy and Guidance

The documents listed below apply to the design, procurement, and use of the AN/AVR-2:

TRADOC Regulations 350-70 and 71-20 Concept Development, Experimentation, and Requirements Determination.

6.1.3.1.5 Requirements Generation

This STRAP supports the Required Operational Capabilities (ROC) of 84. Due to the security classification of the ROC, it is not attached. There are no plans to update the ROC of 84.

6.1.3.1.6 Synchronization

The fielding of the AN/AVR-2 will be synchronized with the following as applicable:

- Unit Set Fielding
- Army Transformation Campaign Plan (ATCP)
- Implementation Plan for Transforming DoD Training
- TADSS Distribution plans

6.1.3.1.7 Joint Training Support

6.1.3.2 Evaluation

As part of the evaluation phase of the ADDIE process, Post Fielding Training and Effectiveness Analysis (PFTEA) will be conducted. The purpose of this PFTEA will be to determine how effectively and efficiently AN/AVR-2 training is meeting user training requirements. The findings will be used to provide lessons learned information on the training development effort associated with training systems and/or product improvement.

A PFTEA will be conducted within 18-24 months of fielding the weapon system. Funding requirements will be identified by USAACE and HQ TRADOC to support the PFTEA process.

Institutional, operational, and self-development training (including training devices) will be analyzed in terms of cost and training effectiveness, user perceptions, user proficiency, and positive/negative aspects.

Other assessments tools will be used and include the following: training evaluation and analyses and monthly status reports.

6.1.3.2.1 Quality Assurance (QA)

QA plans will be used in accordance with each installation's QA plan to ensure proper course auditing is complete. After Action Reviews (AARs) will be used to provide feedback on each course's content and instruction. Feedback will assist USAACE and 128th Aviation Brigade, Fort Eustis, VA, in understanding and correcting training deficiencies and will provide information that may affect the next set of equipment and/or students. QA evaluations of institutional courses are typically conducted every 2-3 years.

6.1.3.2.2 Assessments

The Materiel Developer, in conjunction with the proponent, will conduct training assessments, as required, to ensure consistent and valid training materiels and approach are achieved in the training of AN/AVR-2. The assessments are not limited to traditional classroom settings facilitated through NET, DET or institutional training, but also distributed learning (DL). Assessments will be conducted every five (5) years.

6.1.3.2.3 Customer Feedback

The following tools will be used:

Electronic media for surveys, help desks, collaboration, interviews, and questionnaires as applicable. Surveys are administered following each NET or DET training event to collect feedback from the field regarding effectiveness and efficiency of the training. Course critiques are collected at the end of each institutional training course. The results gleaned from these sources will provide lessons learned information in the training development effort associated with training systems and/or product improvement.

6.1.3.2.4 Lessons Learned/After-Action Reviews (AARs)

Training developer will use AARs described above to provide course material, as well as functional use evaluations. Training developers will use Center for Army Lessons Learned (CALL) documentation to analyze lessons learned from the field and will incorporate those lessons into AN/AVR-2 training as needed.

6.1.3.3 Resource

Item Resourced	Prior	FY14 Yrs or $K	FY15 Yrs or $K	FY16 Yrs or $K	FY17 Yrs or $K	FY18 Yrs or $K	FY19 Yrs or $K
Manpower - TD							
Contractor		80K	80K	80K	80K	80K	80K
Civilian		20K	20K	20K	20K	20K	20K
Enlisted		N/A	N/A	N/A	N/A	N/A	N/A
Warrant		N/A	N/A	N/A	N/A	N/A	N/A
Officer		N/A	N/A	N/A	N/A	N/A	N/A
Contract/Spt		N/A	N/A	N/A	N/A	N/A	N/A
Civ Pay		N/A	N/A	N/A	N/A	N/A	N/A
Trvl/Per Diem		10K	10K	10K	10K	10K	10K

Other		100K	100K	100K	100K	100K	100K

NOTE: NET/DET totals may include funding for more than one system. ASE is generally installed as a package and this funding stream is combined with all ASE systems.

Item Resourced	Prior	FY14 Yrs or $K	FY15 Yrs or $K	FY16 Yrs or $K	FY17 Yrs or $K	FY18 Yrs or $K	FY19 Yrs or $K
New Equipment Training							
Contractor		160K	160K	160K	160K	160K	160K
Contract/Spt		N/A	N/A	N/A	N/A	N/A	N/A
Trvl/Per Diem		40K	40K	40K	40K	40K	40K
Classrooms		N/A	N/A	N/A	N/A	N/A	N/A

Equipment		10K	10K	10K	10K	10K	10K
AC/DC Power		N/A	N/A	N/A	N/A	N/A	N/A
Printing		5K	5K	5K	5K	5K	5K
Other		115K	115K	115K	115K	115K	115K

Item Resourced	Prior Yrs or $K	FY14 Yrs or $K	FY15 Yrs or $K	FY16 Yrs or $K	FY17 Yrs or $K	FY18 Yrs or $K	FY19 Yrs or $K
Training Products							
Training Pubs		N/A	N/A	N/A	N/A	N/A	N/A
TSP		20K	20K	20K	20K	20K	20K
IMI		35K	35K	35K	35K	35K	35K

ETM		N/A	N/A	N/A	N/A	N/A	N/A
STP		N/A	N/A	N/A	N/A	N/A	N/A
IETM		N/A	N/A	N/A	N/A	N/A	N/A
ARTEP/MTP		N/A	N/A	N/A	N/A	N/A	N/A
Printing		10K	10K	10K	10K	10K	10K
Distribution		10K	10K	10K	10K	10K	10K
Other		75K	75K	75K	75K	75K	75K

Item Resourced	Prior	FY14 Yrs or $K	FY15 Yrs or $K	FY16 Yrs or $K	FY17 Yrs or $K	FY18 Yrs or $K	FY19 Yrs or $K
TADSS							
Training Aids		N/A	N/A	N/A	N/A	N/A	N/A

Devices		300K	300K	300K	300K	65K	65K
Simulators		17M	100K	900k	100K	100K	100K
Simulations		N/A	N/A	N/A	N/A	N/A	N/A
GTA		N/A	N/A	N/A	N/A	N/A	N/A
Software		N/A	N/A	N/A	N/A	N/A	N/A
Trng Equip*		N/A	N/A	N/A	N/A	N/A	N/A
Equipment		10K	10K	10K	10K	10K	10K
Printing		N/A	N/A	N/A	N/A	N/A	N/A
Shipment		20K	20K	20K	5K	5K	5K
Sustainment		5K	5K	5K	5K	5K	5K
Other		17.4M	435K	1.3M	420K	185K	185K

7.0 Operational Training Domain

The objective of ASE & AN/AVR-2 operational training is unit and individual/crew combat readiness-the development of lethal teams, Soldiers, and leaders. Commanders continue to employ the principles of Army training to train mission-essential tasks at the larger and smaller unit-level. Unit training will be experiential, hands-on, and standards based. The intent will be to provide leaders, units, and Soldiers with a realistic, operationally relevant training environment that replicates conditions requiring decisive action. Commanders will continue to employ the principles of Army training to train mission-essential tasks. Training of unit leaders will be accomplished by teaching and sustaining proficiency in individual and collective leader tasks. Live exercises at home station, local training areas, maneuver CTCs, and deployed training sites will be required to validate proficiency. The commander determines key collective tasks that support the unit's Mission Essential Task List (METL) and are essential to mission accomplishment. Training conditions and standards are based on the appropriate Unit Training Plan (UTP).

Meeting these requirements will require an integrated enhanced Training and Leader Development Model, enabled by the TSS that will link the Soldier and leader to the centers and schools and the CTCs through a Global Joint Training Infrastructure (GJTS) and the Integrated Training Environment (ITE). Units will conduct pre-deployment training at home stations and CTCs. They will also conduct rehearsal en route to the Area of Operations (AOs), while executing the mission in the AO, and during transition. During each phase of training, Soldiers will receive support from schools and centers.

7.1 Operational Training Concept and Strategy

Sustainment training for operators has been a difficult problem when training ASE. The skills and knowledge required to effectively employ ASE require constant reinforcement. Therefore, operational skills need to be reinforced in simulators, which must be kept up to date with the proper ASE systems and software updates to replicate the functions of the ASE against a threat in the unclassified arena. Section 6.1.1.3.2 covers this in more detail because most of the simulators used in the institution are the same as the simulators used for sustainment training. Sustainment training will be the responsibility of the unit commander. Training will be conducted by the leaders (individual through company). TSPs delivered with the AN/AVR-2 include proponent designed scenarios which supports CATS, and can be augmented with locally designed training scenarios to support training.

In addition, operator sustainment training will use CBAT or another IMI program to sustain operator knowledge of ASE capabilities, vulnerabilities, limitations, and individual tasks. This IMI must be maintained for the entire lifecycle of the AN/AVR-2 program while the equipment is fielded to the force.

Sustainment training for Soldiers assigned to maintain AN/AVR-2 may require a different training strategy. Maintenance training of most Army Aviation systems depends on maintenance personnel working on the system while it is installed on the aircraft to maintain their skills. This provides troubleshooting, removal and replacement, and validation of work through maintenance operational checks (MOCs) to complete the loop on training. In other words, maintenance skills depend on working on the aircraft to sustain skill proficiency. By fielding AN/AVR-2 to only a limited number of aircraft during the ARFORGEN process, maintainers in non-fielded organizations will not be able to work on actual aircraft to maintain proficiency in the task of replacing LRUs. Therefore, TADSS are required for units scheduled to receive AN/AVR-2, but do not have equipment. AN/AVR-2 may require a permanent NET/DET team to conduct maintenance training during the ARFORGEN cycle when the equipment is installed on the aircraft to maintain their skills. This NET/DET team will have to carry an AN/AVR-2 TADSS with them when visiting a new unit. This solution comes with a new expense for transportation and the current version of TADSS devices were not developed to support this sort of concept when initially fielded.

Collective Operator, Maintainer, and Support (OMS) skills and proficiency will be trained and sustained through simulation exercises with other combined arms players whenever possible. However, a lack of combined arms

resources and prohibitive Operations Tempo (OPTEMPO) costs, necessitate the need for organizational training using the Live, Virtual, Constructive, Gaming-Integrated Training Environment (LVCG-ITE) with emphasis on constructive and virtual technology. AN/AVR-2 must be included in the current Aviation Combined Arms Tactical Trainer (AVCATT). AN/AVR-2's effect on missiles needs to be reflected in the semi-automated forces used in the LVCG-ITE coordinated with PEO-STRI. AN/AVR-2 will require a live force on force training capability. AN/AVR-2 itself must be capable of being safed in the live force on force model to protect OPFOR Soldiers from being injured by inadvertent countermeasure emissions.

Exportable training support packages, Aircrew Training Manuals, Soldier training publications, DTMS, CATS, interactive multimedia instruction, training aids, desktop/part task trainers, procedural trainers, flight simulators, live force on force devices, and collective simulation capability are the products that will be available for the commander to train and sustain individual and collective skills. Commanding General (CG) USAACE and training developers ensure that sustainment training requirements for the AN/AVR-2 are integrated into the CATS.

7.1.1 Product Lines

The product lines will provide the capabilities that trainers and Soldiers need to conduct training in the institutional, operational, and self-development domains. The current ASE product lines will require upgrades to training aids, devices, simulators, simulations, software, hardware, databases, and TSPs and be delivered by the materiel developer to aviation institutional base and ACOM sites as needed. The ASE training system interfaces with the LVCG-ITE. The objective is to link system and non-system virtual simulations into a fully integrated training capability reducing redundancy and increasing realism.

7.1.1.1 Training Information Infrastructure

7.1.1.1.1 Hardware, Software, and Communications Systems

7.1.1.1.2 Storage, Retrieval, and Delivery

Access and storage of AN/AVR-2 training and information will be made available through one or more of the following locations:

- Training Development Capability (TDC) database or its replacement
- The Army Learning Management System (ALMS)
- The Central Army Registry (CAR)
- The Digital Training Management System (DTMS)
- The Army Training Network (ATN)

7.1.1.1.3 Management Capabilities

7.1.1.1.4 Other Enabling Capabilities

7.1.1.2 Training Products

7.1.1.2.1 Courseware

7.1.1.2.2 Courses

7.1.1.2.3 Training Publications

7.1.1.2.4 TSP

7.1.1.3 TADSS

7.1.1.3.1 Training Aids

7.1.1.3.2 Training Devices

7.1.1.3.3 Simulators

Aviators require simulations that allow them to train as they will operate within a modular force construct, maintain proficiencies, and execute high fidelity aviation mission rehearsals. Key enablers for this vision are a network of common integrated training and operational Live, Virtual, Constructive, Gaming-Integrated Training Environment (LVCG-ITE) mission command centric capabilities at home station, combat training centers, and operations over-seas in permissive environments. Pilots need simulators to maintain proficiency in high risk tasks which would certainly include operating their ASE. PM-ASE will coordinate with the PMs for each simulator to initiate upgrades for the inclusion of AN/AVR-2. Examples of Operator Simulators that require modification to include AN/AVR-2 capabilities include but are not limited to the following:

- AH-64D (Blk I/II) Longbow Crew Trainer (LCT)
- AH-64E (Blk II/III) Longbow Crew Trainer (LCT)
- Longbow Collective Training System
- CH-47F Transportable Flight Proficiency Simulator (TFPS)
- CH-47D Synthetic Flight Training Simulator (SFTS)
- UH-60 A/L Synthetic Flight Training Simulator (SFTS)
- UH-60M Transportable Blackhawk Operational Simulator (T-BOS)

7.1.1.3.4 Simulations

7.1.1.3.5 Instrumentation

7.1.1.4 Training Facilities and Land

Facility requirements for housing and maintaining the AN/AVR-2 are the owning unit's responsibility and no new facilities are anticipated for the maintenance of AN/AVR-2.

7.1.1.4.1 Ranges

Live fire ranges must include threat emitters or a threat emitter emulation capability that replicates current and emerging laser threats to aviation to enable training task integration in crew qualification and collective gunnery events. Range requirements will be in accordance with the Training Aid being used to execute the training and any additional requirements based on use of the countermeasures dispensed.

7.1.1.4.2 Maneuver Training Areas (MTA)

7.1.1.4.3 Classrooms

Any AN/AVR-2 DL products will be developed to be compatible with the Army Distributed Learning Program (TADLP), Classroom XXI classrooms, Digital Training Facilities (DTFs), and Defense Information Systems Agency (DISA) infrastructure specifications. SIPR connectivity will be required to disseminate and display Classified information regarding AN/AVR-2 capabilities, vulnerabilities, and limitations. Proper procedures for safeguarding this classified information must be in place.

7.1.1.4.4 CTCs

CTCs are facilities that provide realistic joint and combined arms training. There are three primary training centers.

- Joint Multi-National Training Center (JMRC)
- Joint Readiness Training Center (JRTC)
- National Training Center (NTC)

Homestation Instrumentation Training System (HITS) supports collective maneuver training for platoon-through-battalion units. HITS allows commanders to train at home station in preparation for CTC rotations.

The AN/AVR-2 will provide interfaces which allow the system to interoperate with the LVCG-ITE. The AN/AVR-2 must interoperate with current systems such as the Multiple Integrated Engagement System (MILES), HITS, and the Combat Training Center-Instrumentation System (CTC-IS), future Army Target Engagement Simulation System (TESS), and Joint Engagement Simulation Systems (ESS).

7.1.1.4.5 Logistics Support Areas

7.1.1.4.6 Mission Command Training Centers (MCTC)

CTCs are facilities that provide realistic joint and combined arms training. There are three primary training centers:

- Joint Multi-National Training Center (JMRC)
- Joint Readiness Training Center (JRTC)
- National Training Center (NTC)

Homestation Instrumentation Training System (HITS) supports collective maneuver training for platoon-through-battalion units. HITS allows commanders to train at home station in preparation for CTC rotations.

The AN/AVR-2 will provide interfaces that allow the system to interoperate with TADSS and with current forces in a synthetic training environment that includes live, virtual, constructive, gaming simulators/simulations. The AN/AVR-2 must interoperate with current systems such as Multiple Integrated Engagement System (MILES), HITS, and the Combat Training Center-Instrumentation System (CTC-IS), future Army Target Engagement Simulation System (TESS), and Joint Engagement Simulation Systems (ESS).

7.1.1.5 Training Services

7.1.1.5.1 Management Support Services

7.1.1.5.2 Acquisition Support Services

7.1.1.5.3 General Support Services

7.1.2 Architectures and Standards Component

7.1.2.1 Operational View (OV)

Not Applicable

7.1.2.2 Systems View (SV)

Not Applicable

7.1.2.3 Technical View (TV)

Not Applicable

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

Where possible, training capabilities developed to support AN/AVR-2 will use existing facilities and support infrastructure. Training analyses in support of AN/AVR-2 will focus on the most efficient use of existing resources and precisely identify and quantify any expected shortfalls. Commanders use a combination of LVCG-ITE to create a realistic training environment, optimize training time, and mitigate live resource shortfalls. While developed predominately for use in the self-development domain, computer-based ASE training will be designed in such a way that it can also be used to support training in the institutional and operational domains.

To determine how to best improve the quality and efficiency of instruction and training, students and instructors will be routinely asked to evaluate training events and products. This allows USAACE to provide the best quality of training with the least expenditure of resources.

7.1.3.1 Management

7.1.3.1.1 Strategic Planning

7.1.3.1.2 Concept Development and Experimentation (CD&E)

7.1.3.1.1.3 Research and Studies

7.1.3.1.4 Policy and Guidance

7.1.3.1.5 Requirements Generation

This STRAP supports the Required Operational Capabilities (ROC) of 84. Due to the security classification of the ROC, it is not attached. There are no plans to update the ROC of 84.

7.1.3.1.6 Synchronization

7.1.3.1.7 Joint Training Support

7.1.3.2 Evaluation

As part of the evaluation phase of the ADDIE process, Post Fielding Training Effectiveness Analysis (PFTEA) will be conducted. The purpose of this PFTEA will be to determine how effectively and efficiently AN/AVR-2 training is meeting user training requirements. The findings will be used to provide lessons learned information on the training development effort associated with training systems and/or product improvement.

7.1.3.2.1 Quality Assurance (QA)

7.1.3.2.2 Assessments

7.1.3.2.3 Customer Feedback

7.1.3.2.4 Lessons Learned/After-Action Reviews (AARs)

7.1.3.3 Resource Processes

Item Resourced	Prior	FY14 Yrs or $K	FY15 Yrs or $K	FY16 Yrs or $K	FY17 Yrs or $K	FY18 Yrs or $K	FY19 Yrs or $K
Manpower - TD							
Contractor		80K	80K	80K	80K	80K	80K
Civilian		20K	20K	20K	20K	20K	20K
Enlisted		N/A	N/A	N/A	N/A	N/A	N/A
Warrant		N/A	N/A	N/A	N/A	N/A	N/A
Officer		N/A	N/A	N/A	N/A	N/A	N/A
Contract/Spt		N/A	N/A	N/A	N/A	N/A	N/A
Civ Pay		N/A	N/A	N/A	N/A	N/A	N/A
Trvl/Per Diem		10K	10K	10K	10K	10K	10K

Other		100K	100K	100K	100K	100K	100K

NOTE: NET/DET totals may include funding for more than one system. ASE is generally installed as a package and this funding stream is combined with all ASE systems.

Item Resourced	Prior	FY14 Yrs or $K	FY15 Yrs or $K	FY16 Yrs or $K	FY17 Yrs or $K	FY18 Yrs or $K	FY19 Yrs or $K
New Equipment Training							
Contractor		160K	160K	160K	160K	160K	160K
Contract/Spt		N/A	N/A	N/A	N/A	N/A	N/A
Trvl/Per Diem		40K	40K	40K	40K	40K	40K
Classrooms		N/A	N/A	N/A	N/A	N/A	N/A
Equipment		10K	10K	10K	10K	10K	10K
AC/DC Power		N/A	N/A	N/A	N/A	N/A	N/A

Printing		5K	5K	5K	5K	5K	5K
Other		115K	115K	115K	115K	115K	115K

Item Resourced	Prior Yrs or $K	FY14 Yrs or $K	FY15 Yrs or $K	FY16 Yrs or $K	FY17 Yrs or $K	FY18 Yrs or $K	FY19 Yrs or $K
Training Products							
Training Pubs		N/A	N/A	N/A	N/A	N/A	N/A
TSP		20K	20K	20K	20K	20K	20K
IMI		35K	35K	35K	35K	35K	35K
ETM		N/A	N/A	N/A	N/A	N/A	N/A

STP		N/A	N/A	N/A	N/A	N/A	N/A
IETM		N/A	N/A	N/A	N/A	N/A	N/A
ARTEP/MTP		N/A	N/A	N/A	N/A	N/A	N/A
Printing		10K	10K	10K	10K	10K	10K
Distribution		10K	10K	10K	10K	10K	10K
Other		75K	75K	75K	75K	75K	75K

Item Resourced	Prior	FY14 Yrs or $K	FY15 Yrs or $K	FY16 Yrs or $K	FY17 Yrs or $K	FY18 Yrs or $K	FY19 Yrs or $K
TADSS							
Training Aids		N/A	N/A	N/A	N/A	N/A	N/A
Devices		300K	300K	300K	300K	65K	65K

Simulators		17M	100K	900k	100K	100K	100K
Simulations		N/A	N/A	N/A	N/A	N/A	N/A
GTA		N/A	N/A	N/A	N/A	N/A	N/A
Software		N/A	N/A	N/A	N/A	N/A	N/A
Trng Equip*		N/A	N/A	N/A	N/A	N/A	N/A
Equipment		10K	10K	10K	10K	10K	10K
Printing		N/A	N/A	N/A	N/A	N/A	N/A
Shipment		20K	20K	20K	5K	5K	5K
Sustainment		5K	5K	5K	5K	5K	5K
Other		17.4M	435K	1.3M	420K	185K	185K

8.0 Self-Development Training Domain

8.1 Self-Development Training Concept and Strategy

This strategy applies to all AN/AVR-2 operators and maintainers. Learning is a lifelong process. Institutional, operational, and self-development training alone cannot provide the insight, intuition, imagination, and judgment needed in combat. This requires commanders at all levels to create an environment that encourages subordinates to establish personal and professional development goals. Further refinement of those interests should occur through personal mentoring by commanders and first line supervisors. Conduct of officer and NCO professional development programs are essential to leader development. Exploiting reach-back, distributed learning (DL), and continuing education technologies support these programs. Current ASE self-development products will be augmented to include AN/AVR-2 and prepared for common databases. DL products will be designed to support reuse within applicable courses and will be accessible on systems worldwide. Training repositories will be reachable from classrooms, remote locations, hardware platforms, and business environments IAW applicable Information Assurance requirements and protocols. Capabilities will exist to support operator, maintainer, commander, leader, and staff development by providing access and connectivity to all levels of Army and joint knowledge systems. Learning management systems will be available that provide the capability to manage career-paths, determine and plan future training requirements, and track training. Learners must have the ability to access, retrieve, and complete secure, networked testing materials and assess areas of strengths and weaknesses.

8.1.1 Product Lines

The ASE product lines provide the capabilities that trainers and Soldiers need to conduct training in the operational and self-development domains. AN/AVR-2 will use the existing ASE product lines that will require upgrades to training aids, devices, simulators, simulations, software, hardware, databases, and TSPs and be delivered by the materiel developer to aviation institutional base and ACOM sites as needed.

8.1.1.1 Training Information Infrastructure

All training products will be developed in compliance with Army Training Information Architecture (ATIA). Web-based courseware will be developed as Sharable Content Object Reference Model (SCORM) compliant and playable in a Microsoft Internet Explorer browser, referred to as IE browser, which can be found on the Army Golden Master page on Army Knowledge Online (AKO). Courseware should also be playable in Distributed Learning System (DLS) Digital Training Facilities (DTFs) and classroom XXIs. Any AN/AVR-2 DL products will be developed to be compatible with the Army Distributed Learning Program (TADLP) and Defense Information Systems Agency (DISA) infrastructure specifications.

8.1.1.1.1 Hardware, Software, and Communications Systems

8.1.1.1.2 Storage, Retrieval, and Delivery

Access and storage of AN/AVR-2 training and information will be made available through one or more of the following locations:

- Training Development Capability (TDC) Database or its replacement
- The Army Learning Management System (ALMS)
- The Central Army Registry (CAR)
- The Digital Training Management System (DTMS)
- The Army Training Network (ATN)

8.1.1.1.3 Management Capabilities

8.1.1.1.4 Other Enabling Capabilities

Interoperability and data exchange as required by the Training Support System (TSS) will exist with the Army Training Integrated Architecture (ATIA), the Common Training Instrumentation Architecture (CTIA), and the LVCG-ITE to support the primary components of the TSS Training Information Infrastructure (TII). Additionally, the capability for common communications and data exchange operating environment integral to Brigade Combat Team Modernization (BCTM) would be incorporated into the system.

8.1.1.2 Training Products

AN/AVR-2 training systems will require that upgrades to software, hardware, databases, and TSPs be delivered by the Materiel Developer to aviation sites as needed for the lifecycle of the system.

8.1.1.2.1 Courseware

The Materiel Developer will provide an AN/AVR-2 multi-media training support package (TSP) that can be used to support institutional training at the 128th Aviation Brigade/USAACE, unit sustainment/operational training, and self-development training. The PM will also be responsible for upgrading the TSP to reflect engineering changes to AN/AVR-2. The TRADOC developed TTSP package will detail the concept of operations, effects on mission planning, capabilities and limitations of the equipment, and broadcast declarations received by the system.

8.1.1.2.2 Courses

8.1.1.2.3 Training Publications

The publications for self-development training will include Army Doctrine Publications (ADPs), Army Doctrine Reference Publications (ADRPs), Field Manuals (FMs), Army Techniques Publications (ATPs), Training Circulars (TCs), Training Manuals (TMs), Technical Bulletin Orders, and Soldier Training Publications (STPs) required to support the ASE training program.

8.1.1.2.4 Training Support Package (TSP)

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

8.1.1.3.1 Training Aids

8.1.1.3.2 Training Devices

8.1.1.3.3 Simulators

8.1.1.3.4 Simulations

8.1.1.3.5 Instrumentation

8.1.1.4 Training Facilities and Land

8.1.1.4.1 Ranges

8.1.1.4.2 Maneuver Training Areas (MTA)

8.1.1.4.3 Classrooms

Current, standard 20-person classroom will be used to AN/AVR-2 training. Since AN/AVR-2 training will be included in current ASE training, existing classrooms will be used.

8.1.1.4.4 CTCs

8.1.1.4.5 Logistics Support Areas

8.1.1.4.6 Mission Command Training Centers (MCTC)

8.1.1.5 Training Services

8.1.1.5.1 Management Support Services

8.1.1.5.2 Acquisition Support Services

8.1.1.5.3 General Support Services

8.1.2 Architectures and Standards Component

Architectures and standards will provide the means to ensure integration and interoperability across product lines to support the AN/AVR-2. Architectures are the structure of AN/AVR-2 training components, their relationship, and the principles and guidelines governing their design and evolution over time. They will be the framework that describes missions, organizations, and systems; specifies interfaces and interrelationships amongst its various parts; facilitates coordination and synchronization with internal and external interfaces. The AN/AVR-2 training system will be integrated into three types of architectures-organization, functional, and systems-each of which may have operational, technical, and systems view.

8.1.2.1 Operational View (OV)

Not Applicable

8.1.2.2 Systems View (SV)

Not Applicable

8.1.2.3 Technical View (TV)

Not Applicable

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

Where possible, training capabilities developed to support AN/AVR-2's self-development training and staff training will use existing facilities and support infrastructure. The staff training estimate in support of the AN/AVR-2 will focus on the most efficient use of existing resources and precisely identify and quantify any expected shortfalls. Training development will focus on producing products that are capable of being used in the institutional, operational, and self-development training domains and focused only on mission critical tasks. Training will incorporate the maximum use of simulators/simulation when available to mitigate cost and risk.

8.1.3.1 Management

8.1.3.1.1 Strategic Planning

8.1.3.1.2 Concept Development and Experimentation (CD&E)

8.1.3.1.3 Research and Studies

8.1.3.1.4 Policy and Guidance

8.1.3.1.5 Requirements Generation

This STRAP supports the Required Operational Capabilities (ROC) of 84. Due to the security classification of the ROC, it is not attached. There are no plans to update the ROC of 84.

8.1.3.1.6 Synchronization

8.1.3.1.7 Joint Training Support

8.1.3.2 Evaluation

A formal evaluation will be conducted after the training system has been in the field for a sufficient time for the sustainment/self-development training program to stabilize. Typically, this would be within 12-24 months after the initial fielded unit is operationally capable, or when problems are reported (e.g., high attrition course rates or ACOM complaints). This evaluation will determine the computer-based Aircraft Survivability Equipment (CBAT) training program's cost and effectiveness for the fielded system. Specific areas in the evaluation process include positive and negative aspects of operator and maintainer training, comparison of actual costs to projected costs for all training and Soldier proficiency, needed improvements to training in terms of cost, time, and effectiveness and Soldiers' perception of training at the service school and at the units.

8.1.3.2.1 Quality Assurance (QA)

8.1.3.2.2 Assessments

8.1.3.2.3 Customer Feedback

8.1.3.2.4 Lessons Learned/After-Action Reviews (AARs)

8.1.3.3 Resource Processes

Item Resourced	Prior	FY14 Yrs or $K	FY15 Yrs or $K	FY16 Yrs or $K	FY17 Yrs or $K	FY18 Yrs or $K	FY19 Yrs or $K
New Equipment Training							
Contractor		160K	160K	160K	160K	160K	160K
Contract/Spt		N/A	N/A	N/A	N/A	N/A	N/A
Trvl/Per Diem		40K	40K	40K	40K	40K	40K
Classrooms		N/A	N/A	N/A	N/A	N/A	N/A
Equipment		10K	10K	10K	10K	10K	10K
AC/DC Power		N/A	N/A	N/A	N/A	N/A	N/A
Printing		5K	5K	5K	5K	5K	5K
Other		115K	115K	115K	115K	115K	115K

NOTE: NET/DET totals may include funding for more than one system. ASE is generally installed as a package and this funding stream is combined with all ASE systems.

Item Resourced	Prior Yrs or $K	FY14 Yrs or $K	FY15 Yrs or $K	FY16 Yrs or $K	FY17 Yrs or $K	FY18 Yrs or $K	FY19 Yrs or $K
Training Products							
Training Pubs		N/A	N/A	N/A	N/A	N/A	N/A
TSP		20K	20K	20K	20K	20K	20K
IMI		35K	35K	35K	35K	35K	35K
ETM		N/A	N/A	N/A	N/A	N/A	N/A
STP		N/A	N/A	N/A	N/A	N/A	N/A
IETM		N/A	N/A	N/A	N/A	N/A	N/A
ARTEP/MTP		N/A	N/A	N/A	N/A	N/A	N/A

Printing		10K	10K	10K	10K	10K	10K
Distribution		10K	10K	10K	10K	10K	10K
Other		75K	75K	75K	75K	75K	75K

Item Resourced	Prior	FY14 Yrs or $K	FY15 Yrs or $K	FY16 Yrs or $K	FY17 Yrs or $K	FY18 Yrs or $K	FY19 Yrs or $K
TADSS							
Training Aids		N/A	N/A	N/A	N/A	N/A	N/A
Devices		300K	300K	300K	300K	65K	65K
Simulators		17M	100K	900k	100K	100K	100K
Simulations		N/A	N/A	N/A	N/A	N/A	N/A

GTA		N/A	N/A	N/A	N/A	N/A	N/A
Software		N/A	N/A	N/A	N/A	N/A	N/A
Trng Equip*		N/A	N/A	N/A	N/A	N/A	N/A
Equipment		10K	10K	10K	10K	10K	10K
Printing		N/A	N/A	N/A	N/A	N/A	N/A
Shipment		20K	20K	20K	5K	5K	5K
Sustainment		5K	5K	5K	5K	5K	5K
Other		17.4M	435K	1.3M	420K	185K	185K

A Milestone Annex

TRAINING DEVELOPMENT MILESTONE SCHEDULE - SHEET A		PAGE OF PAGES	REQUIREMENTS CONTROL SYMBOL
SYSTEM-AN/AVR-2	ACAT	OFFICE SYMBOL ATZQ-TDD-O	AS OF DATE

POINTS OF CONTACT	NAME	OFFICE SYMBOL	TELEPHONE
MATERIEL COMMAND			
TRADOC PROPONENT	United States Army Aviation Center of Excellence (USAACE)		
TCM	CW4 Rob Farmer	ATZQ-CDA	334-255-2701
CD:			
TD:	Amber Montgomery	ATZQ-TDD-O	334-255-0435
ATSC:			
SUPPORTING PROPONENTS:	128th Aviation Brigade		

	Wesley Easley	ATZQ-ALO	757-878-6800
	Steven Tisdale	ATZQ-ALO-S	757-878-4932

ITEM	DATE	RESPONSIBLE AGENCY/POC		TELEPHONE
MNS:				
SMMP:				
MRD:				
ILSMP:				
TTSP:				
QQPRI:				
BOIP:				
NETP:				

COMMENTS:

TRAINING DEVELOPMENT MILESTONE SCHEDULE - SHEET B	PAGE OF PAGES	REQUIREMENTS CONTROL SYMBOL
SYSTEM- AN/AVR-2	TRADOC SYMBOL	AS OF DATE
TRAINING PACKAGE ELEMENT/PRODUCT		

LEGEND:	MILESTONES BY QUARTER															
	FY				FY				FY				FY			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q

NOTE: Identify **TRAINING DEVELOPMENT MILESTONES** . TRADOC FORM 569-1-R-E provides a detailed list of typical training development products required to support system training integration.

COMMENTS:

B References

Memorandum, AMCMP-CATT, 18 May 1995, subject: Combined Arms Tactical Trainer

Capability Production Document (CPD) Aviation Combined Arms Tactical Trainer (AVCATT), 02 December 2011, CARDS #2544

Memorandum, ATZQ-O-MA, 15 March 1984, subject: Required Operational Capability for Aircraft Survivability Equipment

Initial Capabilities Document (ICD) for Aircraft Survivability, 27 June 2011, CARDS #05082

The following is a list of references utilized in the production of this publication:

ADP 1 The Army; 27 September 2012

ADP 7-0 Training Units and Developing Leaders; 23 August 2012

ADRP 7-0 Training Units and Developing Leaders; 23 August 2012

FM 3-04.111 Aviation Brigades; 7 December 2007

FM 3-04.140 CH1 Helicopter Gunnery; 17 April 2006

FM 3-04.513 Aircraft Recovery Operations; 21 July 2008

FM 1-564 Shipboard Operations; 29 June 2007

TC 3-04.93 Aeromedical Training for Flight Personnel; 31 August 2009

TC 3-04.7 Army Aviation Maintenance; 2 February 2010

TC 3-04.72 Aviation Life Support System Management Program; 15 October 2009

TP 525-8-2 W/C1 The Army Learning Model; 06 June 2011

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	
v1.2.2 James E Baker 2014/10/08 - 2014/10/18	Document Accepted As Written			0	0	0	0	0	0	-
v1.2.1 Approvals - Michael P Donohue 2014/10/08 - 2014/10/18	Document Accepted As Written			0	0	0	0	0	0	-
v1.2.1 Approvals - Robert A Story 2014/10/08 - 2014/10/18	Document Accepted As Written			0	0	0	0	0	0	-
v1.2 Army - USAREUR 2014/07/28 - 2014/08/27	Document Accepted As Written			0	0	0	0	0	0	-
v1.2 Army - USAACE - Aviation School 2014/07/28 - 2014/08/27	No Comments Submitted			0	0	0	0	0	0	-
v1.2 Army - TCM-Virtual (CS/CSS) 2014/07/28 - 2014/08/27	No Comments Submitted			0	0	0	0	0	0	-
v1.2 Army - TCM-Live 2014/07/28 -	No Comments Submitted			0	0	0	0	0	0	-

2014/08/27									
v1.2 Army - TCM TADLP 2014/07/28 - 2014/08/27	Document Accepted As Written		0	0	0	0	0	0	-
v1.2 Army - TCM ITE 2014/07/28 - 2014/08/27	0	1	0	0	1	0	0	0	0	
v1.2 Army - PEO-STRI Customer Support Group 2014/07/28 - 2014/08/27	6	3	0	4	3	0	2	0	0	
v1.2 Army - PEO Aviation 2014/07/28 - 2014/08/27	No Comments Submitted		0	0	0	0	0	0	-
v1.2 Army - MCoE - Infantry & Armor School 2014/07/28 - 2014/08/27	Document Accepted As Written		0	0	0	0	0	0	-
v1.2 Army - HQDA G2 - Alternate POC 2014/07/28 - 2014/08/27	Document Accepted As Written		0	0	0	0	0	0	-
v1.2 Army - HQDA G2 2014/07/28 - 2014/08/27	No Comments Submitted		0	0	0	0	0	0	-
v1.2 Army - CAC-T; Training Management Dir 2014/07/28 - 2014/08/27	3	1	0	1	1	0	2	0	0	

v1.2 Army - AVNCoE Aviation Logistics School 2014/07/28 - 2014/08/27	No Comments Submitted			0	0	0	0	0	0	-
v1.2 Army - ATSC Fielded Devices 2014/07/28 - 2014/08/27	No Comments Submitted			0	0	0	0	0	0	-
v1.2 Army - ARNG-RMQ-RA 2014/07/28 - 2014/08/27	Document Accepted As Written			0	0	0	0	0	0	-
v1.2 Army - Army National Guard 2014/07/28 - 2014/08/27	No Comments Submitted			0	0	0	0	0	0	-
v1.1 Peer - USAACE - Aviation School 2014/05/05 - 2014/06/04	No Comments Submitted			0	0	0	0	0	0	-
v1.1 Peer - TRADOC_ARCIC 2014/05/05 - 2014/06/04	No Comments Submitted			0	0	0	0	0	0	-
v1.1 Peer - PEO-STRI Customer Support Group 2014/05/05 - 2014/06/04	1	0	0	1	0	0	0	0	0	
v1.1 Peer - HQDA G3, SPCD 2014/05/05 - 2014/06/04	No Comments Submitted			0	0	0	0	0	0	-
v1.1 Peer - HQDA G2	Document									

2014/05/05 - 2014/06/04	Accepted As Written	0	0	0	0	0	0	-
v1.1 Peer - FORSCOM/TRADOC LNO 2014/05/05 - 2014/06/04	No Comments Submitted	0	0	0	0	0	0	-
v1.1 Peer - FORSCOM G3 2014/05/05 - 2014/06/04	No Comments Submitted	0	0	0	0	0	0	-
v1.1 Peer - FORSCOM G2 2014/05/05 - 2014/06/04	No Comments Submitted	0	0	0	0	0	0	-
v1.1 Peer - BCT CoE - Fort Jackson, SC 2014/05/05 - 2014/06/04	No Comments Submitted	0	0	0	0	0	0	-
v1.1 Peer - AVNCoE Aviation Logistics School 2014/05/05 - 2014/06/04	No Comments Submitted	0	0	0	0	0	0	-
v1.1 Peer - ATSC Fielded Devices 2014/05/05 - 2014/06/04	No Comments Submitted	0	0	0	0	0	0	-

Key
Completed Review with Comments
Completed Review, No Comments
Active Review Occurring

ATZQ-TD

OCT 14 2014

MEMORANDUM FOR RECORD

SUBJECT: Approval of the System Training Plan (STRAP) for the AN/AVR-2 Laser Detecting Set, Version 1.2

1. Reference: System Training Plan Version 1.2, AN/AVR-2 Laser Detecting Set.

2. The STRAP for the AN/AVR-2 Laser Detecting Set is approved. Approved STRAP will be posted to the Central Army Registry (CAR) website. This STRAP can be found at the following web address: http://www.adtdl.army.mil/.

3. The DOTD POC for this action is: Mr. Andrew Lecuyer, 334-255-2584 DSN (558) email: andrew.b.lecuyer.civ@mail.mil, U.S. Army Aviation Center of Excellence, ATTN: ATZQ-TDT-N, Fort Rucker, AL 36362-5202.

JAMES E. BAKER, JR.
Colonel, Aviation
Director of Training and Doctrine

Approval Memorandum for AN_AVR_2 LDS STRAP