

**NAVY TRAINING SYSTEM PLAN**

**FOR THE**

**EP-3E JOINT SIGNAL**

**INTELLIGENCE AVIONICS FAMILY**

**MODERNIZATION**

**N88-NTSP-A-50-0012/I**

**JUNE 2001**

**EP-3E JOINT SIGNAL INTELLIGENCE  
AVIONICS FAMILY MODERNIZATION**

**EXECUTIVE SUMMARY**

The EP-3E Airborne Reconnaissance Integrated Electronics System (ARIES) II provides tactical electronic reconnaissance capability for Battle Group indications and warnings, targeting, suppression of enemy air defenses, and strike sorties. The EP-3E ARIES II Sensor System Improvement Program (SSIP) enhances communications interoperability for the EP-3E ARIES II to provide Signal Intelligence (SIGINT) information to Fleet Commanders and decision-makers.

The Joint SIGINT Avionics Family (JSAF) Modernization (JMOD) Upgrade Program modifies and upgrades the infrastructure of the EP-3E ARIES II SSIP aircraft. JMOD will provide near real-time SIGINT information to decision-makers to meet joint interoperability requirements and to keep pace with evolving electronic threats. Based on initial analysis, JMOD will be operated and maintained by current EP-3E personnel.

JMOD has completed its Critical Design Review and is awaiting the Low Rate Initial Production decision. Initial Operational Capability is tentatively scheduled for early 2002.

The contractor will provide initial training. Patrol Squadron Thirty provides follow-on training for flight engineers and pilots. Naval Air Maintenance Training Unit (NAMTRAU) Jacksonville, Florida, provides EP-3E/P-3C common maintenance training. Naval Flight Officers receive Inter-Service Navigation training at Randolph Air Force Base, Texas; Basic and Advanced Electronic Warfare Officer training at Joint Aviation Electronic Warfare School; and EP-3E ARIES II-specific aircraft operator training at Fleet Aviation Specialized Operational Training Group (FASOTRAGRU) Detachment Whidbey Island, Washington. Enlisted aircrew personnel receive Basic Electronic Warfare and EP-3E specific aircraft operator training at FASOTRAGRU Det Whidbey Island. Organizational level maintenance and intermediate level Mission Avionics Systems (MAS) maintenance training is provided by NAMTRAU Whidbey Island. NAVSECGRU Communications Evaluators and Special Operators will receive EP-3E specific aircraft operator training at FASOTRAGRU Det Whidbey Island. Existing training courses will be modified to reflect the changes required for JMOD.

There is a distinction in the maintenance concept between existing MAS equipment and newly added JMOD equipment. The concept for JMOD equipment is two-level, organizational and depot. A Supportability Analysis is being conducted for new and/or modified JMOD equipment to determine the most cost-effective approach for organizational and depot level maintenance. Squadron personnel will maintain JSAF systems at the organizational level with contractor support when required. Depot level maintenance will be performed either at organic DoD depots or at contractor facilities.

**EP-3E JOINT SIGNAL INTELLIGENCE  
AVIONICS FAMILY MODERNIZATION**

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**EP-3E JOINT SIGNAL INTELLIGENCE  
AVIONICS FAMILY MODERNIZATION**

**LIST OF ACRONYMS**

AE	Aviation Electrician's Mates
AMTCS	Aviation Maintenance Training Continuum System
ARIES	Airborne Reconnaissance Integrated Electronics System
AT	Aviation Electronics Technician
CNO	Chief of Naval Operations
COTS	Commercial Off-The-Shelf
CRA	Cognizant Review Authority
CTI	Cryptologic Technician (Interpretive)
CTR	Cryptologic Technician (Collection)
CTT	Cryptologic Technician (Technical)
DARO	Defense Airborne Reconnaissance Office
DT	Developmental Test
ESM	Electronic Support Measures
FASOTRAGRU	Fleet Aviation Specialized Operational Training Group
FIT	Fleet Introduction Team
IFT	In-Flight Technician
ILSP	Integrated Logistics Support Plan
IOC	Initial Operational Capability
ISS	Interim Supply Support
JMOD	JSAF Modernization
JSAF	Joint Signal Intelligence Avionics Family
LAN	Local Area Networks
LBSS	Low Band Subsystem
MAS	Mission Avionics System
MAST	Mission Avionics Systems Trainer
MATMEP	Maintenance Training Management and Evaluation Program
MPEG	Multiple Platform Emitter Geolocation
MSPT	Mission Static Processor Trainer
MTDA	Maintenance Training Decision Aid

**EP-3E JOINT SIGNAL INTELLIGENCE  
AVIONICS FAMILY MODERNIZATION**

**LIST OF ACRONYMS**

MTIP	Maintenance Training Improvement Program
MTU	Maintenance Training Unit
NACCS	Naval Aircrew Candidate School
NAMP	Naval Aviation Maintenance Program
NAMTRAU	Naval Air Maintenance Training Unit
NATEC	Naval Air Technical Data and Engineering Service Command
NATOPS	Naval Air Training and Operating Procedures Standardization
NAVEDTRA	Naval Education and Training
NAVICP	Navy Inventory Control Points
NAVSECGRU	Navy Security Group
NAWSTP	Naval Aviation Water Survival Program
NEC	Navy Enlisted Classification
NFO	Naval Flight Officer
NTSP	Navy Training System Plan
POE	Projected Operational Environment
PQS	Personnel Qualification Standards
ROC	Required Operational Capability
ROR	Repair of Repairables
SDLM	Standard Depot Level Maintenance
SERE	Survival, Evasion, Resistance, and Escape
SIGINT	Signal Intelligence
SRA	Shop Replaceable Assembly
SSIP	Sensor System Improvement Program
SST	Single Site Training
TD	Training Device
TEMP	Test and Evaluation Master Plan
TTE	Technical Training Equipment
WRA	Weapon Replaceable Assembly

**EP-3E JOINT SIGNAL INTELLIGENCE  
AVIONICS FAMILY MODERNIZATION**

**PREFACE**

This Initial Navy Training System Plan (NTSP) is an early look at the EP-3E Joint Signal Intelligence Avionics Family (JSAF) Modernization program. This is the first iteration of the NTSP for the JSAF Modernization (JMOD) program. This document explores the various employment and support alternatives currently under consideration. Since it is the first NTSP and still relatively early in the acquisition process, some definitive data was unavailable for inclusion in this version. This NTSP is a product of the Training Planning Process Methodology, as outlined in OPNAV Publication P-751-3-9-97.

**PART I - TECHNICAL PROGRAM DATA**

**A. NOMENCLATURE-TITLE-PROGRAM**

**1. Nomenclature-Title-Acronym.** EP-3E Joint Signal Intelligence (SIGINT) Avionics Family (JSAF) Modernization (JMOD)

**2. Program Element.** 0305206F

**B. SECURITY CLASSIFICATION**

**1. System Characteristics**..... Secret

**2. Capabilities**..... Secret

**3. Functions** ..... Secret

**C. MANPOWER, PERSONNEL, AND TRAINING PRINCIPALS**

OPNAV Principal Official (OPO) Program Sponsor ..... CNO (N78)

OPO Resource Sponsor..... CNO (N78)

Developing Agency..... NAVAIRSYSCOM (PMA290E)

Training Agency ..... CINCLANTFLT  
CINCPACFLT  
CNET  
COMNAVRESFOR

Training Support Agency ..... NAVAIRSYSCOM (PMA205)  
COMNAVAIRESFOR

Manpower and Personnel Mission Sponsor ..... CNO (N12)  
BUPERS (PERS-4, PERS-404)

Director of Naval Training..... CNO (N7)

**D. SYSTEM DESCRIPTION**

**1. Operational Uses.** The shore-based EP-3E Airborne Reconnaissance Integrated Electronics System (ARIES) II Aircraft provides the capability to detect and exploit tactically

significant electronic signals and communication Signal Intelligence (SIGINT) information to the appropriate Battle Group Commanders. The EP-3E ARIES II provides tactical electronic reconnaissance capability for Battle Group indications and warnings, targeting, suppression of enemy air defenses, and strike sorties. The primary mission of the EP-3E ARIES II is accomplished by a multiple disciplines team of 24 officer and enlisted aircrew personnel. The EP-3E ARIES II Sensor System Improvement Program (SSIP) enhances communications interoperability for the EP-3E ARIES II and implements Department of Defense guidance to upgrade the ARIES II communications systems and selected mission avionics. The Defense Airborne Reconnaissance Office (DARO) and Chief of Naval Operations (CNO) Ltr 3500 Ser N880C6/5S663336 of 8 Nov 95, reviewed and validated the requirements for these upgrades. SSIP enables the EP-3E to rapidly assess the tactical situation using a variety of onboard sensors and remote data links, manage this multiple source data, perform contact processing and events analysis, and disseminate evaluated tactical data to appropriate Fleet Commanders. The EP-3E ARIES II SSIP subsystems are not intended to counter a specific threat, they add new capabilities to the EP-3E ARIES II to cope with the complex threat signal environment in which it operates, as projected in System Threat Assessment, Naval Technical Intelligence Center TA #014-94, August 1988. The Joint SIGINT Avionics Family (JSAF) Modernization Upgrade Program consists of three block modification upgrades. The JMOD program modifies and upgrades the infrastructure of the EP-3E ARIES II SSIP aircraft. JMOD will provide near real-time SIGINT information to decision-makers to meet joint interoperability requirements and to keep pace with evolving electronic threats.

**2. Foreign Military Sales.** Neither the EP-3E ARIES II or EP-3E ARIES II SSIP Aircraft will be procured by foreign militaries nor any other sources or services.

**E. DEVELOPMENTAL TEST AND OPERATIONAL TEST.** A Test and Evaluation Master Plan (TEMP) will be developed that outlines System Integration Lab (SIL) requirements and aircraft test and evaluation. Developmental Test (DT) and Operational Test and Evaluation (OT&E) are planned for late Fiscal Year (FY) 01.

**F. AIRCRAFT AND/OR EQUIPMENT/SYSTEM/SUBSYSTEM REPLACED.** No weapon system is being replaced. This is insertion of modern technology in the EP-3E Weapon System.

## **G. DESCRIPTION OF NEW DEVELOPMENT**

**1. Functional Description.** The JMOD includes installation, integration and testing of modifications and upgrades to the EP-3E ARIES II SSIP aircraft. The JMOD program focuses on SIGINT data collection, processing, data fusion, improved inter-and intra-communications connectivity, and migration toward a DoD common airborne SIGINT architecture. The object of this effort is to replace obsolete equipment, improve reliability and maintainability, and reduce aircraft weight.



**2. Physical Description.** The JMOD program includes modifications and upgrades to the following subsystems:

- JSAF Low Band Subsystem (LBSS) (new development)
- Story Teller communication upgrades for Airborne Overhead Integrated Task Force (AOITF)/Multiple Platform Emitter Geolocation (MPEG) data.
- Common Processor Core (CPC) and Digital Demodulator (DDM) added to the Story Book System
- Addition of Story Maker platform data fusion
- Electronic Support Measures (ESM) upgrades to add the Story Finder Digital Server.

Other Commercial Off-The-Shelf (COTS) and Non-Developmental Item (NDI) technology upgrades include, but are not necessarily limited to, the following items:

- Flat-panel Display Workstations
- Database Server, Local Area Networks (LAN), and Data Storage Devices
- Data Processors
- Track Manager Correlator
- Intercommunications System
- RF Distribution Units

**3. New Development Introduction.** The JMOD modifications and upgrades will be procured, integrated, and tested in Block Mod phases. JMOD Block Mod 1 will include the items listed in the table below. JMOD Block Mod 2 will be listed as the configuration is established. This Initial NTSP will be updated as future Block Mods are identified.

<b>JMOD SYSTEMS AFFECTED BY MOD 1</b>	
Story Book	<ul style="list-style-type: none"> <li>◦ EPR-208-3</li> <li>◦ Joint Signal Processor with power PC CCA</li> <li>◦ Frequency Extension Receiver</li> <li>◦ DGIF Interface with Story Book</li> </ul>

<b>JMOD SYSTEMS AFFECTED BY MOD 1</b>	
Story Teller	<ul style="list-style-type: none"> <li>◦ EPR-165</li> <li>◦ Multi-Source Correlation System</li> <li>◦ MSCM Interface with Story Finder</li> <li>◦ DGIF Interface with Story Teller</li> <li>◦ MSID</li> <li>◦ RIM</li> </ul>
Story Finder	<ul style="list-style-type: none"> <li>◦ Client/Server</li> <li>◦ Pedestal Electronic Unit (PEU)</li> <li>◦ RF Distribution</li> <li>◦ No MPEG</li> <li>◦ MSCM Interface with Story Finder</li> <li>◦ GCP Interface, with Story Finder</li> <li>◦ RFCU</li> <li>◦ IFCU 160 MHz</li> <li>◦ IFCU 1 GHz</li> <li>◦ SF Server</li> <li>◦ PDF Processor</li> <li>◦ PDF Antenna</li> <li>◦ AN/UYX-3 (SEI processor)</li> <li>◦ ALR-81 ES variant</li> <li>◦ Spinner RFD Enhancement</li> </ul>
Story Classic	<ul style="list-style-type: none"> <li>◦ Frequency Division Multiplexer</li> <li>◦ DGIF Interface with Story Classic</li> </ul>
CCOP VXI/XME	<ul style="list-style-type: none"> <li>◦ Desperado</li> <li>◦ Blackbird</li> </ul>
Infrastructure	<ul style="list-style-type: none"> <li>◦ 100BaseF Ethernet</li> <li>◦ Workstations</li> <li>◦ Servers</li> <li>◦ Switch</li> <li>◦ STAT</li> <li>◦ Local Area Network</li> <li>◦ Audio Distribution</li> <li>◦ Printer</li> <li>◦ RFD</li> </ul>

**4. Significant Interfaces.** There are a significant number of shared systems and Mission Avionics Systems (MAS) that will interface with JMOD. The items listed above are all affected by JMOD.

**5. New Features, Configurations, or Material.** JMOD will use fiber optics vice 100BaseF Ethernet cable and requires the development of the JSAF LBSS.

## H. CONCEPTS

**1. Operational Concept.** The EP-3E ARIES II is operated by a crew of 24 including eight officers and 16 enlisted aircrew. The officers include Pilots, Naval Flight Officers (NFO), and a Naval Aviation Officer. The enlisted aircrew includes Electronic Warfare Operators, Laboratory Operators, Secure Communications Operator, Special Station Operators, In-Flight Technicians (IFT), and Flight Engineers. The EP-3E ARIES II provides tactical surveillance, reconnaissance, strike support, fleet support and warning, and monitoring of electromagnetic signals of interest for intelligence analysis. The EP-3E ARIES II operational concept is consistent with the mission tasking outlined in the VQ (EP-3E) Required Operational Capabilities (ROC) and Projected Operational Environment (POE). The EP-3E ARIES II SSIP JMOD operational concept remains unchanged from the basic EP-3E ARIES II.

**2. Maintenance Concept.** There is a distinction in the maintenance concept between existing MAS equipment and newly added JMOD equipment. The EP-3E ARIES II maintenance concept reflects the three-level plan as promulgated in the Naval Aviation Maintenance Program (NAMP), OPNAVINST 4790.2G, organizational, intermediate, and depot. The SSIP maintenance concept is two-level, organizational to depot. Intermediate level Test Bench Installations (TBI) are used for ARIES II equipment in conjunction with common support equipment for in-depth maintenance.

The concept for JMOD equipment is two-level, organizational and depot. A Supportability Analysis is being conducted for new and modified JMOD equipment to determine the most cost-effective approach for organizational and depot level maintenance. Individual Maintenance Plans will be developed from a combination of SSIP Maintenance Plans and new JMOD subsystem equipment. Squadron personnel will maintain JSAF systems at the organizational level with contractor support when required. Depot level maintenance will be performed either at organic DoD depots or at contractor facilities.

**a. Organizational.** EP-3E ARIES II and EP-3E ARIES II SSIP organizational level maintenance requirements are performed by the operating units on a day-to-day basis in support of their own operations. These actions include inspections, servicing, handling, removal and replacement of Weapon Replaceable Assembly (WRA) and selected Shop Replaceable Assemblies (SRA), major aircraft and engine components, and on-equipment corrective maintenance. The following systems are envisioned to have card replacement at organizational level maintenance and others may be added in the future:

- EPR-208-3
- Story Finder Digitizer/Server
- SEI Processor

**(1) Preventive Maintenance.** Periodic maintenance consists of standard preflight, postflight, calendar, and flight hour corrosion and material inspections per the prescribed Maintenance Requirements Cards.

**(2) Corrective Maintenance.** EP-3E ARIES II organizational level maintenance consists of removal and replacement of faulty aircraft and engine components, WRAs, and selected SRAs, retest to confirm proper system operation, and on-equipment repair. The SMD is used for fault isolation to the WRA for EP-3E ARIES II SSIP equipment. The AN/USM-482 is used to isolate failures in the waveguide RF transmission lines. Repair consists of removal and replacement of faulty WRAs and selected SRAs, and retest to confirm proper system operation. The JMOD upgrade is not expected to change corrective maintenance procedures.

**b. Intermediate.** Intermediate level maintenance will not be required for the JMOD program.

**c. Depot.** Depot level maintenance will be performed either at organic DoD depots or at contractor facilities.

**d. Interim Maintenance.** Interim support for new or modified contractor-furnished avionics equipment is provided by Raytheon Technical Service Company (RTSC), Indianapolis, Indiana, and various other contractors until Navy organic support is fully developed. Nine Naval Air Technical Data and Engineering Service Command (NATEC) representatives provide Navy Engineering and Technical Services to support the EP-3E ARIES II MAS and the ARIES II Aircraft program. The Interim Supply Support (ISS) Plan details interim support required for new or modified avionics equipment. Repair of Repairables (ROR) contracts will be used as interim maintenance support and will be managed by various Navy Inventory Control Points (NAVICP). The ISS Plan was developed to establish organizational responsibilities and functions for the development and acquisition of support resources for the EP-3E ARIES II SSIP until the Material Support Date (MSD), which was achieved in January 1999. NAVICP manages the ROR program using input data from the three fleet and equipment repair activities. RTSC Indianapolis assists NAVICP in the management of the ROR program. No change is anticipated for the JMOD program.

**e. Life-Cycle Maintenance Plan.** The EP-3E Conversion-In-Lieu of Procurement program authorized the conversion of 12 P-3C NUD Aircraft into EP-3E ARIES II Aircraft, extending service life into the early 2000 time frame. Aircraft with a fatigue life index of greater than 100 percent have no Aircraft Service Period Adjustment. Standard Depot Level Maintenance (SDLM) will be required within 20 months of last mid-term inspection or within 40 months of SDLM, whichever is earlier. The JMOD program is not expected to change the life-cycle maintenance plan.

**3. Manning Concept.** The Navy Manpower Analysis Center (NAVMAC) performs manpower analysis and develops the Squadron Manpower Documents. Manpower documents for VQ-1 and VQ-2 were approved by CNO (N-12) on 21 March 1995. Manpower requirements for the EP-3E aircraft are driven by total preventive and corrective maintenance requirements and the ROC/POE as applied to the predecessor system (in this case the EP-3E ARIES II).

The EP-3E ARIES II has unique manpower requirements. Aviation Electronics Technician (AT) enlisted aircrew members in the EP-3E ARIES II community serve dual roles, as both operators and maintenance technicians.

The EP-3E ARIES II SSIP is operated by a crew of 24 including eight officers and 16 enlisted aircrew personnel. This requirement remains unchanged from the basic EP-3E ARIES II. The following operator positions are directly affected by the EP-3E ARIES II SSIP:

- Positions 8, 10, and 11 remain ESM manual search positions. Position 9 becomes the Story Book operator.
- Naval Aviation Officer, position 14, will no longer be “I” branch capable and becomes a Story Teller operator.
- Scientific and Technology Operator, position 20, becomes “I” branch capable.
- NFO positions 12 and 13 become Story Teller operators.

JMOD does not significantly change the responsibilities of the EP-3E ARIES II SSIP crew members. It is anticipated that the IFT will be responsible for the maintenance of the fiber optics LAN and other affected equipment.

**4. Training Concept.** Pilot and Aircrew training for the EP-3E ARIES II is provided by Patrol Squadron Thirty (VP-30), NAS Jacksonville, Florida. Peculiar EP-3E ARIES II aircrew training has historically been provided by VQ-1 and VQ-2, under cognizance of the Commander, Naval Air Force, Pacific and Commander, Naval Air Force, Atlantic following completion of applicable Joint Aviation Electronic Warfare School, and signal recognition curricula at Fleet Aviation Specialized Operational Training Group (FASOTRAGRU) Detachment, Whidbey Island, Washington.

Follow-on training for common EP-3E and P-3C maintenance training is provided by Maintenance Training Unit (MTU) 1011 Naval Air Maintenance Training Unit (NAMTRAU) Jacksonville, Florida, and MTU 1012 NAMTRAU Whidbey Island, Washington. The EP-3E Single Site Training (SST) initiative shifted EP-3E ARIES II specific organizational level maintenance training to MTU 1012 NAMTRAU Whidbey Island in FY97.

The established training concept for most aviation maintenance training divides “A” School courses into two or more segments called *Core* and *Strand*. Many organizational level “C” School courses are also divided into separate *Initial* and *Career* training courses. “A” School *Core* courses include general knowledge and skills training for the particular rating, while “A” School *Strand* courses focus on the more specialized training requirements for that rating

and a specific aircraft or equipment, based on the student’s fleet activity destination. *Strand* training immediately follows *Core* training and is part of the “A” School. Upon completion of *Core* and *Strand* “A” Schools, graduates going to organizational level activities attend the appropriate *Initial* “C” School for additional specific training. *Initial* “C” School training is intended for students in paygrades E-4 and below. *Career* “C” School training is provided to organizational level personnel, E-5 and above, to enhance skills and knowledge within their field. “A” School graduates going to intermediate level activities attend the appropriate intermediate level “C” School. Intermediate level “C” Schools are not separated into *Initial* and *Career* courses.

**a. Initial Training.** Initial training for JMOD on the EP-3E ARIES II SSIP aircraft will be provided by the Contractor. The Contractor will train the Fleet Introduction Team (FIT) and NATEC personnel. The FIT members will train the Developmental and Operational Test personnel.

**b. Follow-on Training**

**(1) Operator.** Follow-on training for common EP-3E and P-3C operators is provided by VP-30, NAS Jacksonville. EP-3E ARIES II SSIP training courses and tracks that will require updating for JMOD are as follows:

<b>Title .....</b>	<b>P-3C Fleet Replacement Pilot (Non-USW) Category I Pipeline</b>
CIN .....	D-2A-1115
Model Manager ..	VP-30
Description .....	This course provides training to the first tour Fleet Replacement Pilot, including: <ul style="list-style-type: none"> <li>◦ Flight training</li> <li>◦ Crew tactics and safety</li> <li>◦ Communications and navigation</li> <li>◦ NATOPS</li> </ul> <p>Upon completion, the student will be able to perform as an EP-3E Pilot in a squadron environment.</p>
Location .....	VP-30, NAS Jacksonville
Length .....	123 days
RFT date .....	Currently available
Skill identifier ....	1311
TTE/TD .....	None
Prerequisites .....	◦ Advanced flight training ◦ Security Clearance - Secret

**Title .....** **P-3C Fleet Replacement Pilot (Non-USW) Category III Pipeline**

CIN ..... D-2A-1116

Model Manager .. VP-30

Description ..... This course provides training to the second tour Fleet Replacement Pilot, including:

- Flight training
- Crew tactics and safety
- Communications and navigation
- NATOPS

Upon completion, the student will be able to perform as an EP-3E Pilot in a squadron environment.

Location ..... VP-30, NAS Jacksonville

Length ..... 94 days

RFT date ..... Currently available

Skill identifier .... 1311

TTE/TD ..... None

Prerequisites ..... ◦ Advanced flight training  
◦ Security Clearance - Secret

**Title .....** **EP-3E Fleet Replacement NFO Category I Pipeline**

CIN ..... E-2D-3000

Model Manager .. FASOTRAGRU Det Whidbey Island

Description ..... This course provides training to the first tour Replacement NFO, including:

- Tactics
- Acoustic and non-acoustic sensor interpretation
- Crew safety and egression
- Radio/radar navigation
- Communication
- NATOPS Procedures

Upon completion, the student will be able to perform as an EP-3E NFO in a squadron environment.

Location ..... FASOTRAGRU Det Whidbey Island  
 Length ..... 37 days  
 RFT date ..... Currently available  
 Skill identifier .... ° 1320  
                                  ° 1321  
 TTE/TD ..... ° EP-3E 10H1B Mission Avionics Systems Trainer  
                                  (MAST)  
                                  ° EP-3E Portable MAST  
 Prerequisites ..... ° C-2D-3817, Joint Aviation Electronic Warfare Officer  
                                  Basic  
                                  ° C-2D-3818, Joint Aviation Electronic Warfare Officer  
                                  Advanced  
                                  ° E-2D-0039, Survival, Evasion, Resistance, and Escape  
                                  (SERE)  
                                  ° P-7C-0039, Basic Leadership Course  
                                  ° C-322-0040, Refresher Aerospace Physiology Maritime  
                                  ° C-9E-1225, Naval Aviation Water Survival Program  
                                  (NAWSTP) R2  
                                  ° Security Clearance - Secret

**Title ..... EP-3E Fleet Replacement NFO Category II Pipeline**

CIN ..... E-2D-3002

Model Manager .. FASOTRAGRU Det Whidbey Island

Description ..... This course provides training to the second tour  
 Replacement NFO, including:

- ° Tactics
- ° Acoustic and non-acoustic sensor interpretation
- ° Crew safety and egression
- ° Radio/radar navigation
- ° Communication
- ° NATOPS Procedures

Upon completion, the student will be able to perform as an EP-3E NFO in a squadron environment.

Location ..... FASOTRAGRU Det Whidbey Island

Length ..... 37 days

RFT date ..... Currently available



Skill identifier ....	<ul style="list-style-type: none"> <li>◦ 1320</li> <li>◦ 1321</li> </ul>
TTE/TD .....	<ul style="list-style-type: none"> <li>◦ EP-3E 10H1B MAST</li> <li>◦ EP-3E Portable MAST</li> </ul>
Prerequisites .....	<ul style="list-style-type: none"> <li>◦ E-2D-3000, EP-3E Replacement NFO Category I Pipeline</li> <li>◦ B-322-0040, Refresher Aerospace Physiology Maritime</li> <li>◦ D-9E-1225, Naval Aviation Water Survival Program (NAWSTP) R2</li> <li>◦ E-2G-3000, Aviation Department Head School</li> <li>◦ Security Clearance - Secret</li> </ul>
<b>Title .....</b>	<b>EP-3E Fleet Replacement NFO Category III Pipeline</b>
CIN .....	E-2D-3003
Model Manager ..	FASOTRAGRU Det Whidbey Island
Description .....	<p>This course provides training to the EP-3E Advanced Replacement NFO, including:</p> <ul style="list-style-type: none"> <li>◦ Tactics</li> <li>◦ Acoustic and non-acoustic sensor interpretation</li> <li>◦ Crew safety and egression</li> <li>◦ Radio/radar navigation</li> <li>◦ Communication</li> <li>◦ NATOPS Procedures</li> </ul> <p>Upon completion, the student will be able to perform as a senior EP-3E NFO in a squadron environment.</p>
Location .....	FASOTRAGRU Det Whidbey Island
Length .....	37 days
RFT date .....	Currently available
Skill identifier ....	<ul style="list-style-type: none"> <li>◦ 1320</li> <li>◦ 1321</li> </ul>
TTE/TD .....	<ul style="list-style-type: none"> <li>◦ EP-3E 10H1B MAST</li> <li>◦ EP-3E Portable MAST</li> </ul>

- Prerequisites ..... ° D-9E-1225, Naval Aviation Water Survival Program (NAWSTP) R2  
 ° B-322-0040, Refresher Aerospace Physiology Maritime  
 ° C-2D-3817, Joint Aviation Electronic Warfare Officer Basic  
 ° C-2D-3818, Joint Aviation Electronic Warfare Officer Advanced  
 ° Security Clearance - Secret

**Title .....** **EP-3E Special Evaluator Category I Pipeline**

CIN ..... E-2D-3004

Model Manager .. FASOTRAGRU Det Whidbey Island

Description ..... The course provides training to the first tour Special Evaluator, including:  
 ° Aircraft safety  
 ° Equipment knowledge  
 ° Mission systems operational procedures  
 ° Data collection and correlation  
 ° Aircrew coordination

Upon completion, the student will be able to perform as an EP-3E Special Evaluator in a squadron environment.

Location ..... FASOTRAGRU Det Whidbey Island

Length ..... 19 days

RFT date ..... Currently available

Skill identifier .... ° 161X  
 ° 644X  
 ° 744X

TTE/TD ..... ° EP-3E 10H1B MAST  
 ° EP-3E Portable MAST

Prerequisites ..... ° E-2D-0039, Survival, Evasion, Resistance, and Escape (SERE)  
 ° D-9E-1225, Naval Aviation Water Survival Program (NAWSTP) R2  
 ° B-322-0040, Refresher Aerospace Physiology Maritime  
 ° Security Clearance - Secret

<b>Title .....</b>	<b>P-3 Replacement Flight Engineer Category II</b>
CIN .....	D-050-1002
Model Manager ..	VP-30
Description .....	<p>The course provides training to the second tour Replacement Flight Engineer, including:</p> <ul style="list-style-type: none"> <li>◦ Normal and emergency procedures</li> <li>◦ Systems performance</li> <li>◦ Weight and balance calculations</li> <li>◦ Preflight and postflight inspections</li> <li>◦ Servicing</li> <li>◦ Survival equipment</li> <li>◦ NATOPS procedures and evaluation</li> </ul> <p>Upon completion, the student will be able to perform as a NATOPS qualified EP-3E Flight Engineer in a squadron environment under limited supervision.</p>
Location .....	VP-30, NAS Jacksonville
Length .....	75 days
RFT date .....	Currently available
Skill identifier ....	None
TTE/TD .....	Simulators and the aircraft are used for training on normal and emergency procedures.
Prerequisites .....	<ul style="list-style-type: none"> <li>◦ Previously qualified P-3 Flight Engineer</li> <li>◦ Security Clearance - Secret</li> </ul>

<b>Title .....</b>	<b>P-3 Fleet Replacement Aircrewman (Flight Engineer) Category I Pipeline</b>
CIN .....	D-050-1010
Model Manager ..	VP-30
Description .....	<p>This course provides training to the first tour Replacement Flight Engineer, including:</p> <ul style="list-style-type: none"> <li>◦ Aircraft systems normal and emergency procedures</li> <li>◦ Performance and weight and balance calculations</li> <li>◦ Preflight, postflight, and servicing</li> <li>◦ Survival equipment</li> <li>◦ NATOPS</li> </ul> <p>Upon completion, the student will be able to perform as a NATOPS qualified EP-3E Flight Engineer in a squadron environment under limited supervision.</p>
Location .....	VP-30, NAS Jacksonville
Length .....	221 days
RFT date .....	Currently available
Skill identifier ....	Various source ratings, NEC 8251
TTE/TD .....	None
Prerequisites .....	<ul style="list-style-type: none"> <li>◦ E-2D-0039, Survival, Evasion, Resistance, and Escape (SERE)</li> <li>◦ D-9E-1225, Naval Aviation Water Survival Program (NAWSTP) R2</li> <li>◦ Q-050-1500, Naval Aircrewman Candidate School</li> <li>◦ B-322-0040, Refresher Aerospace Physiology Maritime</li> </ul>

<b>Title .....</b>	<b>EP-3E Fleet Replacement Aircrewman (Inflight Technician) Category I Pipeline</b>
CIN .....	E-050-3020
Model Manager ..	FASOTRAGRU Det Whidbey Island
Description .....	<p>This course provides training to the first four Replacement Aircrewman In-Flight Technician, including:</p> <ul style="list-style-type: none"> <li>◦ Aircraft safety</li> <li>◦ ESM maintenance</li> <li>◦ Communications and navigation maintenance</li> <li>◦ Special system maintenance</li> <li>◦ Aircrew coordination</li> </ul> <p>Upon completion, the student will be able to perform as an EP-3E In-Flight Technician in a squadron environment under limited supervision.</p>
Location .....	FASOTRAGRU Det Whidbey Island
Length .....	109 days
RFT date .....	Currently available
Skill identifier ....	AT 9401
TTE/TD .....	<ul style="list-style-type: none"> <li>◦ EP-3E 10H1B MAST</li> <li>◦ EP-3E Maintenance Training Decision Aid (MTDA)</li> </ul>
Prerequisites	<ul style="list-style-type: none"> <li>◦ Q-050-1500, Naval Aircrewman Candidate School</li> <li>◦ E-2D-0039, Survival, Evasion, Resistance, and Escape (SERE)</li> <li>◦ B-322-0040, Refresher Aerospace Physiology Maritime</li> <li>◦ Security Clearance - Secret</li> </ul>

**Title .....** **EP-3E Special Operator Category I Pipeline**  
**CIN .....** E-050-3021  
**Model Manager ..** FASOTRAGRU Det Whidbey Island  
**Description .....** This course provides training to the first tour Cryptologic Technician (Collection) (CTR) and Cryptologic Technician (Interpretive) (CTI), including:

- Aircraft safety
- Equipment knowledge
- Operational procedures
- Crew coordination

Upon completion, the student will be able to perform as an EP-3E Special Operator in a squadron environment under limited supervision.

**Location .....** FASOTRAGRU Det Whidbey Island  
**Length .....** 23 days  
**RFT date .....** Currently available  
**Skill identifier ....**

- CTI 8296
- CTR 8296

**TTE/TD .....**

- EP-3E 10H1B MAST
- EP-3E Portable MAST

**Prerequisites .....**

- Q-050-1500, Naval Aircrewman Candidate School
- E-2D-0039, Survival, Evasion, Resistance, and Escape (SERE)
- D-9E-1225, Naval Aviation Water Survival Program (NAWSTP) R2
- B-322-0040, Refresher Aerospace Physiology Maritime

<b>Title .....</b>	<b>EP-3E Fleet Replacement Aircrewman (Electronic Warfare Operator) Category I Pipeline</b>
CIN .....	E-050-3022
Model Manager ..	FASOTRAGRU Det Whidbey Island
Description .....	<p>This course provides training to the first four Replacement Aircrewman Aviation Electrician's Mate (AE) or Aviation Electronics Technician (AT), including:</p> <ul style="list-style-type: none"> <li>◦ Aircraft safety</li> <li>◦ Equipment knowledge</li> <li>◦ Operational procedures</li> <li>◦ Advanced electronic warfare</li> <li>◦ Aircrew coordination</li> </ul> <p>Upon completion, the student will be able to perform as an EP-3E Electronic Warfare Operator in a squadron environment under limited supervision.</p>
Location .....	FASOTRAGRU Det Whidbey Island
Length .....	107 days
RFT date .....	Currently available
Skill identifier ....	<ul style="list-style-type: none"> <li>◦ AE 9403</li> <li>◦ AT 9403</li> </ul>
TTE/TD .....	<ul style="list-style-type: none"> <li>◦ EP-3E 10H1B MAST</li> <li>◦ EP-3E Portable MAST</li> </ul>
Prerequisites .....	<ul style="list-style-type: none"> <li>◦ Q-050-1500, Naval Aircrewman Candidate School</li> <li>◦ E-2D-0039, Survival, Evasion, Resistance, and Escape (SERE)</li> <li>◦ C-233-0120, Aviation Electronic Warfare Operator</li> <li>◦ D-9E-1225, Naval Aviation Water Survival Program (NAWSTP) R2</li> <li>◦ B-322-0040, Refresher Aerospace Physiology Maritime</li> <li>◦ Security Clearance - Secret</li> </ul>

<b>Title .....</b>	<b>EP-3E Fleet Replacement Aircrewman (Electronic Warfare Lab Operator ) Category I Pipeline</b>
CIN .....	E-050-3023
Model Manager ..	FASOTRAGRU Det Whidbey Island
Description .....	<p>This course provides training to the first tour Cryptologic Technician (Technical) (CTT), including:</p> <ul style="list-style-type: none"> <li>◦ Aircraft safety</li> <li>◦ Equipment knowledge</li> <li>◦ Operational procedures</li> <li>◦ Advanced electronic warfare</li> <li>◦ Crew coordination</li> </ul> <p>Upon completion, the student will be able to perform as an EP-3E Electronic Warfare Laboratory Operator in a squadron environment under limited supervision.</p>
Location .....	FASOTRAGRU Det Whidbey Island
Length .....	37 days
RFT date .....	Currently available
Skill identifier ....	CTT 8296
TTE/TD .....	EP-3E Portable MAST
Prerequisites .....	<ul style="list-style-type: none"> <li>◦ Q-050-1500, Naval Aircrewman Candidate School</li> <li>◦ E-2D-0039, Survival, Evasion, Resistance, and Escape (SERE)</li> <li>◦ D-9E-1225, Naval Aviation Water Survival Program (NAWSTP) R2</li> <li>◦ B-322-0040, Refresher Aerospace Physiology Maritime</li> </ul>



<b>Title .....</b>	<b>Aviation Electronics Warfare Operator</b>
CIN .....	E-233-0120
Model Manager ..	FASOTRAGRU Det Whidbey Island
Description .....	<p>This course provides fundamental training to the Aviation Electrician's Mate or Aviation Electronic Technician, including:</p> <ul style="list-style-type: none"> <li>◦ Aircraft safety</li> <li>◦ Equipment knowledge</li> <li>◦ Operational procedures</li> <li>◦ Crew coordination</li> <li>◦ Basic electronic warfare</li> <li>◦ A general overview of technology</li> <li>◦ Electronic Support Measures (ESM), radar fundamentals, and electronic warfare publications</li> </ul> <p>Upon completion, the student will be able to perform as an EP-3E Electronics Warfare Operator in a squadron environment under limited supervision.</p>
Location .....	FASOTRAGRU Det Whidbey Island
Length .....	50 days
RFT date .....	Currently available
Skill identifier ....	<ul style="list-style-type: none"> <li>◦ AE 8284</li> <li>◦ AT 8284</li> </ul>
TTE/TD .....	EP-3E 10H1A MAST
Prerequisites .....	<ul style="list-style-type: none"> <li>◦ Q-050-1500, Naval Aircrewman Candidate School</li> <li>◦ Special Background Investigation must be initiated prior to reporting</li> </ul>

**(2) Maintenance**

**(a) Organizational.** Organizational level maintenance training for aviation maintenance ratings is provided through NAMTRAU courses, which are conducted at MTU 1011 NAMTRAU Jacksonville and MTU 1012 NAMTRAU Whidbey Island. Various NAMTRAUs conduct intermediate level maintenance training.

<b>Title .....</b>	<b>EP-3E ESM Organizational Maintenance Activity Technician</b>
CIN .....	E-102-1139
Model Manager ..	MTU 1012 NAMTRAU Whidbey Island
Description .....	<p>This track provides training to the Aviation Electronics Technician, including an introduction to testing, troubleshooting, and maintenance of EP-3E:</p> <ul style="list-style-type: none"> <li>◦ Test equipment</li> <li>◦ Maintenance Training Decision Aide (MTDA)</li> <li>◦ Digital Communications Management System</li> <li>◦ ESM stations</li> <li>◦ ESM common systems</li> <li>◦ ESM antenna groups</li> <li>◦ Radio frequency distribution systems</li> <li>◦ Receiver-transmitter systems</li> <li>◦ Indicators/analyzers</li> <li>◦ Video distribution</li> <li>◦ Record station</li> </ul> <p>Upon completion, the student will be able to perform organizational maintenance on P-3C ESM systems in a squadron environment under limited supervision.</p>
Location .....	MTU 1012 NAMTRAU Whidbey Island
Length .....	100 days
RFT date .....	Currently available
Skill identifier ....	AT 6640
TTE/TD .....	MTDA
Prerequisites .....	<ul style="list-style-type: none"> <li>◦ C-100-2020, Avionics Common Core Class A1</li> <li>◦ C-100-2018, Avionics Technician O-Level Class A1</li> </ul>

<b>Title .....</b>	<b>EP-3E Electronic Support Measures Organizational Level Maintenance</b>
CIN .....	C-102-3573
Model Manager ..	MTU 1012 NAMTRAU Whidbey Island
Description .....	<p>This track provides training to the Aviation Electronics Technician and designated Naval Aircrewman, including ESM:</p> <ul style="list-style-type: none"> <li>◦ Operation</li> <li>◦ Testing</li> <li>◦ Troubleshooting</li> <li>◦ Repair procedures</li> </ul> <p>Upon completion, the student will be able to perform organizational maintenance on P-3C ESM systems in a squadron environment under limited supervision.</p>
Location .....	MTU 1012 NAMTRAU Whidbey Island
Length .....	54 days
RFT date .....	Currently available
Skill identifier ....	None
TTE/TD .....	MTDA
Prerequisites .....	<ul style="list-style-type: none"> <li>◦ C-100-2018, Avionics Technician O-Level Class A1</li> <li>or</li> <li>◦ Naval Aircrewman</li> </ul>

**Title .....** **EP-3E Special Station Organizational Level Maintenance**

CIN ..... C-102-3576

Model Manager .. MTU 1012 NAMTRAU Whidbey Island

Description ..... This track provides training to the Aviation Electrician's Mate or Aviation Electronics Technician, including the operation, testing, troubleshooting, and repair procedures of EP-3E Special Systems, including:

- Special stations systems
- Radio frequency distribution
- Receiver systems, indicators/analyzers
- Special station common systems

Upon completion, the student will be able to perform organizational maintenance on EP-3E Special Systems in a squadron environment under limited supervision.

Location ..... MTU 1012 NAMTRAU Whidbey Island

Length ..... 5 days

RFT date ..... Currently available

Skill identifier .... None

TTE/TD ..... MTDA

Prerequisites ..... AE or AT rating

**Title .....** **EP-3E Communication/Navigation Organizational Level Maintenance**

CIN ..... C-102-3577

Model Manager .. MTU 1012 NAMTRAU Whidbey Island

Description ..... This track provides training to the Aviation Electronics Technician on the EP-3E Comm/Nav systems, including:

- System introduction
- Operation
- Testing
- Troubleshooting
- Repair procedures

Upon completion, the student will be able to perform organizational maintenance on EP-3E Comm/Nav Systems in a squadron environment under limited supervision.

Location .....	MTU 1012 NAMTRAU Whidbey Island
Length .....	19 days
RFT date .....	Currently available
Skill identifier ....	None
TTE/TD .....	MTDA
Prerequisites .....	<ul style="list-style-type: none"> <li>° C-100-2018, Avionics Technician O-Level Class A1</li> <li>° C-102-3573, EP-3E ESM O-Level Maintenance</li> <li>° C-102-3576, EP-3E Special Station O-Level Maintenance</li> </ul>

**(b) Intermediate.** Follow-on training for common EP-3E and P-3C intermediate level maintenance training is conducted at the various sites listed below. In FY97 the P-3E SST initiative shifted EP-3E ARIES II-specific intermediate level maintenance training to MTU 1012 NAMTRAU Whidbey Island.

<b>Title .....</b>	<b>EP-3E/ES3A Electronic Surveillance Measurement Intermediate Level Maintenance Technician</b>
CIN .....	E-102-1732
Model Manager ..	MTU 1012 NAMTRAU Whidbey Island
Description .....	<p>This course provides training to the Aviation Electronics Technician, including:</p> <ul style="list-style-type: none"> <li>◦ Testing, troubleshooting, circuit analysis, and fault isolation of ESM System</li> <li>◦ Publications, tool control, safety, and ESD</li> <li>◦ Radio Frequency distribution and noise figure</li> <li>◦ AN/URR-74 and AN/URR-78 Receivers</li> <li>◦ AN/ALR-82 Receiver Set</li> <li>◦ AN/ALR-81(V) Receiver Set</li> <li>◦ AN/ALR-44 Receiver System</li> <li>◦ AN/ARR-81 Receiver System</li> <li>◦ OE-320/A Antenna Group</li> <li>◦ Antenna Control C-11958/APS (UTL Box)</li> <li>◦ Video Select Control C-11795/A</li> <li>◦ Pulse Indicator IP-1159A/A</li> <li>◦ Demodulator Group OM-75/A</li> <li>◦ Digital Communications Processor Group OL-390/U</li> <li>◦ Magnetic recording theory and fundamentals</li> <li>◦ AN/USH-33 Recorder-Reproducer</li> <li>◦ Recorder-Reproducer RD-560/USH-34 (USH-34)</li> </ul> <p>Upon completion, the student will be able to perform intermediate maintenance on ESM equipment in a shop environment under limited supervision.</p>
Location .....	MTU 1012 NAMTRAU Whidbey Island
Length .....	58 days
RFT date .....	Currently available
Skill identifier ....	AT 6635
TTE/TD .....	MTDA
Prerequisites .....	<ul style="list-style-type: none"> <li>◦ C-100-2020, Avionics Common Core Class A1</li> <li>◦ C-100-2017, Avionics Technician I-Level Class A1</li> </ul>

<b>Title .....</b>	<b>EP-3 Electronic Support Measures Intermediate Level Maintenance</b>
CIN .....	C-102-3051
Model Manager ..	MTU 1012 NAMTRAU Whidbey Island
Description .....	<p>This course provides training to the Aviation Electronics Technician, including:</p> <ul style="list-style-type: none"> <li>◦ Radio frequency distribution and noise figure</li> <li>◦ Receiver systems</li> <li>◦ Antennas</li> <li>◦ Pulse indicator IP-1159A/A</li> <li>◦ Video select control C-11795/A</li> <li>◦ Demodulator group OM-75/A</li> <li>◦ Digital communications processor group OL-390/U</li> <li>◦ Magnetic recording theory and fundamentals</li> <li>◦ Recorder-reproducer RD-560/USH-34 and AN/USH-33</li> </ul> <p>Upon completion, the student will be able to perform intermediate maintenance on ESM equipment in a shop environment under limited supervision.</p>
Location .....	MTU 1012 NAMTRAU Whidbey Island
Length .....	54 days
RFT date .....	Currently available
Skill identifier ....	None
TTE/TD .....	MTDA
Prerequisites .....	<ul style="list-style-type: none"> <li>◦ AT rating</li> <li>◦ Security Clearance - Secret</li> </ul>

**Title .....** **Electronics Identification Equipment Intermediate Level Maintenance**

**CIN .....** D/E-102-6039

**Model Manager ..** MTU 1011 NAMTRAU Jacksonville

**Description .....** This course provides training to the Aviation Electronics Technician, including:

- Introduction to IFF systems
- AN/APX-100(V) Transponder
- AN/APX-72 Radar Identification System
- TS-1843A/B/APX Transponder Test Set
- AN/APX-76 Air/Air IFF Interrogator Set

Upon completion, the student will be able to perform intermediate maintenance on IFF equipment in a shop environment under limited supervision.

**Locations .....**

- MTU 1011 NAMTRAU Jacksonville
- MTU 1038 NAMTRAU Lemoore, California
- MTU 1007 NAMTRAU Oceana, Virginia

**Length .....** 65 days

**RFT date .....** Currently available

**Skill identifier ....** AT 6609

**TTE/TD .....** Various interrogator and transponder equipment

**Prerequisites .....**

- C-100-2020, Avionics Common Core Class A1
- C-100-2013, Avionics Technician Class A1

**c. Student Profiles**

<b>SKILL IDENTIFIER</b>	<b>PREREQUISITE SKILL AND KNOWLEDGE REQUIREMENTS</b>
AE 8284	<ul style="list-style-type: none"> <li>◦ C-100-2020, Avionics Common Core Class A1</li> <li>◦ C-602-2039, Aviation Electrician's Mate O-Level Strand Class A1</li> <li>◦ Q-050-1500, Naval Aircrewman Candidate School (Non-AW/AW)</li> <li>◦ C-102-3573, EP-3E Electronic Support Measures O-Level Maintenance</li> <li>◦ C-102-3576, EP-3E Special Station O-Level Maintenance</li> <li>◦ C-102-3577, EP-3E Communication/Navigation O-Level Maintenance</li> </ul>



<b>SKILL IDENTIFIER</b>	<b>PREREQUISITE SKILL AND KNOWLEDGE REQUIREMENTS</b>
AE 9403	<ul style="list-style-type: none"> <li>◦ C-100-2020, Avionics Common Core Class A1</li> <li>◦ C-602-2039, Aviation Electrician's Mate O-Level Strand Class A1</li> <li>◦ E-2D-0039, Survival Escape Resistance and Escape</li> <li>◦ B-9E-1225, Naval Aviation Water Survival Program R2</li> <li>◦ B-322-0040, Refresher Aerospace Physiology Maritime Training</li> <li>◦ C-050-1500, Naval Aircrewman Candidate School</li> <li>◦ C-233-0120, Aviation Electronic Warfare Operator</li> <li>◦ C-102-3573, EP-3E Electronic Support Measures O-level Maintenance</li> </ul>
AT 6609, 6635	<ul style="list-style-type: none"> <li>◦ C-100 2020, Avionics Common Core Class A1</li> <li>◦ C-100-2017, Avionics Technician I-Level Class A1</li> </ul>
AT 6640, 8819	<ul style="list-style-type: none"> <li>◦ C-100-2020, Avionics Common Core Class A1</li> <li>◦ C-100-2018, Avionics Technician O-Level Class A1</li> </ul>
AT 8284	<ul style="list-style-type: none"> <li>◦ C-100-2020, Avionics Common Core Class A1</li> <li>◦ C-100-2018, Avionics Technician O-Level Class A1</li> <li>◦ Q-050-1500, Naval Aircrewman Candidate School (Non-AW/AW)</li> <li>◦ C-102-3573, EP-3E Electronic Support Measures O-Level Maintenance</li> <li>◦ C-102-3576, EP-3E Special Station O-Level Maintenance</li> <li>◦ C-102-3577, EP-3E Communication/Navigation O-Level Maintenance</li> </ul>
AT 9401	<ul style="list-style-type: none"> <li>◦ C-100-2020, Avionics Common Core Class A1</li> <li>◦ C-100-2018, Avionics Technician O-Level Class A1</li> <li>◦ E-9E-1225, Naval Aviation Water Survival Program R2</li> <li>◦ E-2D-0039, Survival Escape Resistance and Escape</li> <li>◦ B-322-0040, Refresher Aerospace Physiology I Maritime Training</li> <li>◦ Q-050-1500, Naval Aircrewman Candidate School (Non-AW/AW)</li> <li>◦ NEC 6672 and 8284</li> </ul>
AT 9403	<ul style="list-style-type: none"> <li>◦ C-100-2020, Avionics Common Core Class A1</li> <li>◦ C-100-2018, Avionics Technician O-Level Class A1</li> <li>◦ E-2D-0039, Survival Escape Resistance and Escape</li> <li>◦ B-9E-1225, Naval Aviation Water Survival Program R2</li> <li>◦ B-322-0040, Refresher Aerospace Physiology Maritime Training</li> <li>◦ C-050-1500, Naval Aircrewman Candidate School</li> <li>◦ C-233-0120, Aviation Electronic Warfare Operator</li> <li>◦ C-102-3573, EP-3E Electronic Support Measures O-Level Maintenance</li> </ul>

<b>SKILL IDENTIFIER</b>	<b>PREREQUISITE SKILL AND KNOWLEDGE REQUIREMENTS</b>
CTT 8296 CTI 8296 CTO 8296 CTR 8296	<ul style="list-style-type: none"> <li>◦ A-231-0073, Entry Level Electronic Intelligence (CTT “A” School)</li> <li>◦ C-233-0120, Aviation Electronics Warfare Operator</li> <li>◦ E-2D-0039, Survival Escape Resistance and Escape</li> <li>◦ E-9E-1225, Naval Aviation Water Survival Program R2</li> <li>◦ E-322-0040, Refresher Aerospace Physiology Maritime Training</li> <li>◦ Q-050-1500, Naval Aircrewman Candidate School (Non-AW/AW)</li> <li>◦ NEC 8201</li> </ul>

**d. Training Pipelines.** No new training pipelines are required at this time.

## **I. ONBOARD (IN-SERVICE) TRAINING**

### **1. Proficiency or Other Training Organic to the New Development**

**a. Maintenance Training Improvement Program.** The Maintenance Training Improvement Program (MTIP) is used to establish an effective and efficient training system responsive to fleet training requirements. MTIP is a training management tool that, through diagnostic testing, identifies individual training deficiencies at the organizational and intermediate levels of maintenance. MTIP is the comprehensive testing of one's knowledge. It consists of a bank of test questions managed through automated data processing. The Deputy Chief of Staff for Training assisted in development of MTIP by providing those question banks (software) already developed by the Navy. MTIP was implemented per NAMP, OPNAVINST 4790.2G. MTIP allows increased effectiveness in the application of training resources through identification of skills and knowledge deficiencies at the activity, work center, or individual technician level. Refresher training is concentrated where needed to improve identified skill and knowledge shortfalls. MTIP will be replaced by the Aviation Maintenance Training Continuum System (AMTCS). Current planning is for AMTCS to begin full implementation for fleet deployment on 1 October 2000.

COMNAVAIRPAC has discontinued using MTIP. They are currently using maintenance data products as a source to determine maintenance training deficiencies until AMTCS is implemented.

**b. Aviation Maintenance Training Continuum System.** AMTCS will provide career path training to the Sailor or Marine from their initial service entry to the end of their military career. AMTCS is planned to be an integrated system that will satisfy the training and administrative requirements of both the individual and the organization. The benefits will be manifested in the increased effectiveness of the technicians and the increased efficiencies of the management of the training business process. By capitalizing on technological advances and

integrating systems and processes where appropriate, the right amount of training can be provided at the right time, thus meeting the CNO’s mandated “just-in-time” training approach.

Technology investments enable the development of several state-of-the-art training and administrative tools: Computer-Based Training (CBT) for the technicians in the Fleet in the form of Interactive Courseware (ICW) with Computer Managed Instruction (CMI) and Computer Aided Instruction (CAI) for the schoolhouse.

Included in the AMTCS development effort is the AMTCS - Software Module (ASM) which provides testing [Test and Evaluation (TEV)], recording [Electronic Training Jacket (ETJ)], and a Feedback system. The core functionality of these AMTCS tools are based and designed around the actual maintenance-related tasks the technicians perform, and the tasks are stored and maintained in a Master Task List (MTL) data bank. These tools are procured and fielded with appropriate COTS hardware and software, i.e., Fleet Training Devices (FTD) - Laptops, PCs, Electronic Classrooms (ECR), Learning Resource Centers (LRC), operating software, and network software and hardware.

Upon receipt of direction from OPNAV (N789H), AMTCS is to be implemented and the new tools integrated into the daily training environment of all participating aviation activities and supporting elements. AMTCS will serve as the standard training system for aviation maintenance training within the Navy and Marine Corps, and is planned to supersede the existing MTIP and Maintenance Training Management and Evaluation Program (MATMEP) programs. AMTCS implementation will begin with the F-14, E-2C, and all models F/A-18 aircraft. For more information on AMTCS refer to PMA205-3D3.

**2. Personnel Qualification Standards.** Common P-3C Personnel Qualification Standards (PQS) are used to ensure aircrew proficiency and are listed below. They can be found in the Naval Education and Training (NAVEDTRA) 43100-5K, Catalog of Personnel Qualification Standards. The PQS program for flight crew personnel is managed by the PQS Development Group (Code 34) of the NAVEDTRA Program Management Support Activity, Pensacola, Florida.

NAVEDTRA TITLE	NAVEDTRA NUMBER	MODEL MANAGER
P-3 Aircraft Ground Operator	43433-3B	VP-30
P-3 Flight Engineer/Instructor	43433-13B	VP-30
P-3 Ground Engine Turn Operator	43443-26	VP-30

**3. Other Onboard or In-service Training Packages.** VQ-1 and VQ-2 will use the 10H1B MAST for onboard aircrew proficiency training. VQ-1 and VQ-2 will use the Multi-Static Processor Trainer (MSPT), upgraded to the 10H1F MAST Story Book configuration, for

onboard special signals training. The MSPT will use a two-position computer workstation configuration and serve as a stand-alone PROFORMA signals training device. VQ-1 and VQ-2 will use the Portable MAST for onboard Electronic Warfare Operator proficiency training. Job Qualification Requirements for Navy Security Group (NAVSECGRU) EP-3E Special Operators will be developed by NAVSECGRU, VQ-1, and VQ-2 in conjunction with area Cryptologic Shore Support Activities.

## J. LOGISTICS SUPPORT

### 1. Manufacturer and Contract Number

CONTRACT NUMBER	MANUFACTURER	ADDRESS
Unavailable	Raytheon E-Systems Central Airborne Systems Division	7500 Maehr Road Waco, TX 76705

**2. Program Documentation.** The EP-3E ARIES II Integrated Logistics Support Plan (ILSP), AV-ILSP-033 Revision A, was approved in June 1993 and is currently being updated. It includes the EP-3E ARIES II SSIP. The DARO and CNO letter 3500 Ser N880C6/5S663336 dated November 8, 1995 established and validated the operational requirements for program upgrades. In addition, a Concept Document and Resource Requirements Document were completed for the SSIP in July 1990.

**3. Technical Data Plan.** Development of JMOD-specific technical manuals and source data is predicated on the operation and maintenance requirements of each system identified in the approved Maintenance Plan-Supportability Analysis. JMOD technical manual documentation will be developed or provided in accordance with Technical Manual Contract Requirement (TMCR) procedures. Organizational level maintenance source data will be developed for NATOPS manuals, Crew Station Maintenance Manuals (CSMM), Maintenance Instruction Manuals (MIM), Wiring Data Manuals, IPBs, PMRC, Software Reference Manuals, and other such organizational manuals as required. COTS manuals will be reviewed for adequacy by the contractor and the Cognizant Review Authority (CRA) team during IPRs and redlined to augment developed operations and maintenance manuals. If vendor manuals are determined by the government to be unacceptable, the contractor will recommend alternative methods to capture required information and provide it to the CRA for analysis.

**4. Test Sets, Tools, and Test Equipment.** Support Equipment Recommendation Data lists are being prepared for each item of support equipment required for system maintenance. The requirement data, prepared per the applicable Military Standards, will address fault isolation to the SRA, piece, or part consistent with approved maintenance plans. No new special tools or test equipment are required to support the maintenance of the EP-3E SSIP. Test sets, tools, and

test equipment requirements are also detailed in technical manuals and the approved maintenance plans for those specific systems. Contractor-Furnished Equipment and Government-Furnished Equipment will be requisitioned through the NAVICP as required.

**5. Repair Parts.** All EP-3E spare and repair parts requirements are available, via standard requisition procedures, from NAVICP. Navy Material Support for the EP-3E ARIES II SSIP program was achieved in January 1999.

**6. Human Systems Integration.** Not Applicable (NA)

## **K. SCHEDULES**

**1. Ready For Operational Use Schedule.** Aircraft with JMOD Mod 1 installation are scheduled for operational use in January 2002.

**2. Foreign Military Sales and Other Source Delivery Schedule.** NA

**3. Training Device and Technical Training Equipment Delivery Schedule**

**a. Mission Avionics Systems Trainer.** The MAST is a multi-position aircrew trainer, which makes extensive use of COTS hardware and software. Current MAST configurations include the replacement trainer (10H1A Basic MAST), EP-3E trainer (10H1B MAST), and the Portable MAST.

The 10H1A Basic MAST is designed to provide entry level Electronic Warfare operators with introductory training in signal recognition, signal analysis, search techniques, and team training.

The 10H1B MAST incorporates aircraft operational software to provide EP-3E equipment specific operator training. The 10H1B MAST trainer was installed at FASOTRAGRU Det Whidbey Island in September 1996 and at VQ-2, Naval Station Rota, Spain, in January 1997. Incorporation of SSIP upgrade software into the 10H1B is complete.

Portable MAST trainers were delivered to VQ-1, VQ-2, and FASOTRAGRU Det Whidbey Island in FY99 but require configuration. The Portable MAST is currently being developed as a stand-alone Electronic Warfare Operator/Naval Flight Officer trainer dedicated to signal recognition and analysis.

The 10H1F Mast is under development as a two-station special signal trainer for Story Book SSIP Subsystem.

Requests for further information regarding changes to these schedules should be directed to Program Manager, Air (PMA)205. The Initial Operational Capability (IOC) for MAST with JMOD modification is scheduled for December 2001.

**b. Maintenance Training Decision Aid.** The MTDA is a computer-based avionics systems simulator located at MTU 1012 NAMTRAU Whidbey Island. The MTDA provides training on the DCMS, Computer Set and Displays, AN/ULQ-16, AN/ALR-81, AN/ARR-81, Radio Frequency Distribution, Video Distribution, AN/ALD-9A, AN/ALR-76, and the OM-75/A. IOC for the JMOD MTDA is scheduled for December 2001.

**c. Training Devices.** Existing training devices will be modified to incorporate JMOD requirements.

**L. GOVERNMENT-FURNISHED EQUIPMENT AND CONTRACTOR-FURNISHED EQUIPMENT TRAINING REQUIREMENTS. NA**

**M. RELATED NTSPs AND OTHER APPLICABLE DOCUMENTS**

<b>DOCUMENT OR NTSP TITLE</b>	<b>DOCUMENT OR NTSP NUMBER</b>	<b>PDA CODE</b>	<b>STATUS</b>
EP-3E ARIES II Aircraft Integrated Logistic Support Plan	AV-ILSP-033 REV C	PMA290	Approved Mar 96
EP-3E ARIES II SSIP TEMP	TEMP Number 788	AIR 1.6.2	Draft 8 Dec 95
EP-3E SSIP Mission Avionics Systems Plan	MAS LSA 024 Reports	PMA290EL2/ AIR 3.1.2T	Ongoing
ES-3A Aircraft NTP	A-50-8818B/A	PMA290	Approved Mar 93
P-3C Update III Anti-Surface Warfare Improvement Program NTSP	A-50-8112B/A	PMA205	Approved Jul 98
Report of the P-3/EP-3/ES-3 Maintenance Training Requirements Review	CNO ltr 1500 Ser N889H2/5U665335	N889H2	Approved Mar 95
Report of the VP/EP/ES Aircrew Training Requirements Review	CNO ltr 1500 Ser N889F6/5U665588	N889F6	Approved Mar 95

**APPENDIX A - POINTS OF CONTACT**

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## APPENDIX A - POINTS OF CONTACT

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