



DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
2000 NAVY PENTAGON
WASHINGTON, D.C. 20350-2000

IN REPLY REFER TO
3500
Ser N869/OU654338
20 APR 2000

From: Chief of Naval Operations
To: Commander, Naval Air Systems Command (PMA205-3B1)

Subj: REVIEW OF PROPOSED AIMS MK XII IFF SYSTEM, NAVY
TRAINING SYSTEMS PLAN (NTSP) N86-NTSP-E-7115E

Ref: (a) COMNAVAIRSYSCOM ltr 3502 Ser PMA205-3B1/0699013
of 12 Oct 99
(b) CNO (N7) ltr 1500 Ser N75K/9U637365 of 25 Oct 99
(c) CNO (N12) ltr 3500 Ser N125F/9U00184 of 15 Nov 99

1. In response to reference (a) and in concurrence with references (b) and (c), the subject NTSP has been reviewed and approved.

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APPROVED

NAVY TRAINING SYSTEM PLAN

FOR THE

AIMS MARK XII

IDENTIFICATION FRIEND OR FOE

N86-NTSP-E-30-7115E/A

APRIL 2000

AIMS MK XII IDENTIFICATION FRIEND OR FOE

EXECUTIVE SUMMARY

This Navy Training System Plan (NTSP) identifies the manpower, personnel, and training requirements associated with the AIMS Mark XII Identification Friend or Foe (IFF) system, hereafter referred to as MK XII. The MK XII is a radar beacon system used by surface ships, submarines, aircraft, and ground forces to identify one another and to distinguish themselves from hostile and neutral forces. The MK XII system performs several different functions in support of various missions, such as anti-air warfare, aerial bombardment, naval bombardment, and naval attack. The MK XII also provides identification and altitude information for aircraft, a military and Federal Aviation Administration requirement for peacetime operational use of national airspace, and a Department of Defense requirement to maintain secure military identification.

Although mature, the MK XII continues to evolve as technology advances the capabilities of existing MK XII equipment and improved interface systems develop. A new digital interrogator, AN/UPX-37, is currently under development to replace the existing AN/UPX-25(V) and AN/UPX-27 analog interrogators used in early MK XII systems. The new digital interrogator is in Phase III (Production, Deployment, and Operational Support) of the Weapon System Acquisition Process. Initial Operational Capability for the AN/UPX-37 is scheduled for fourth quarter FY00.

The MK XII is operated by officers and Operations Specialists assigned to the ships Combat Information Center (CIC). There are no operator or watchstation billets specifically dedicated to the MK XII. Electronics Technicians with Navy Enlisted Classification 1572 perform MK XII organizational and intermediate level maintenance. The Space and Naval Warfare System Command Center, San Diego, California, performs depot level maintenance.

No operator courses are taught exclusively for the MK XII system. System operation is taught as a by-product of the primary mission of CIC officer and Operations Specialist training courses. MK XII organizational and intermediate level maintenance training is established at Fleet Training Center, Norfolk, Virginia. In 1997, the AIMS MK XII IFF Systems Maintenance course, A-102-0062, underwent a Surface Warfare Technical Readiness Review. As a result, course content was streamlined and the length reduced from 22 to 16 weeks. With the addition of the digital interrogator, the course length is anticipated to increase to 18 weeks. Phasing out of the AN/UPX-27 analog interrogators will result in an undetermined decrease in course length.

Since the MK XII is a mature system, all manpower requirements are established. No change to existing manpower is required by incorporation of the new AN/UPX-37 digital interrogator.

AIMS MK XII IDENTIFICATION FRIEND OR FOE

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AIMS MK XII IDENTIFICATION FRIEND OR FOE

LIST OF ACRONYMS

2M	Microminiature
3M	Maintenance and Material Management
AC	Air Traffic Controller
AIMS	A - Air Traffic Control Radar Beacon System (ATCRBS) I - Identification Friend or Foe (IFF) M - MK XII Identification System S - Systems (indicating many configurations)
ATCRBS	Air Traffic Control Radar Beacon System
CATCC	Carrier Air Traffic Control Center
CFY	Current Fiscal Year
CIC	Combat Information Center
CIFF	Central Identification Friend or Foe
CINCLANTFLT	Commander in Chief, Atlantic Fleet
CINCPACFLT	Commander in Chief, Pacific Fleet
CNET	Chief, Naval Education and Training
CNO	Chief of Naval Operations
CONUS	Continental United States
DAIR	Direct Altitude Identification Readout
DT&E	Developmental Test and Evaluation
EM	Electronic Module
ET	Electronic Technician
FMS	Foreign Military Sales
FTC	Fleet Training Center
FY	Fiscal Year
GPETE	General Purpose Electronic Test Equipment
IFF	Identification Friend or Foe
IPB	Illustrated Parts Breakdown
ISLS	Interrogation Side Lobe Suppression
NA	Not Applicable
NAVAIRSYSCOM	Naval Air Systems Command

AIMS MK XII IDENTIFICATION FRIEND OR FOE

LIST OF ACRONYMS

NAVPERSCOM	Navy Personnel Command
NEC	Navy Enlisted Classification
NTDS	Navy Tactical Data System
NTSP	Navy Training System Plan
OPEVAL	Operational Evaluation
OPNAV	Office of the Chief of Naval Operations
OPO	OPNAV Principal Official
OT&E	Operational Test and Evaluation
OS	Operations Specialist
PCB	Printed Circuit Board
PMA	Project Manager, Air
PMS	Preventive Maintenance System
PPI	Planned Position Indicator
PQS	Personnel Qualifications Standard
RF	Radio Frequency
RFT	Ready For Training
SIF	Selective Identification Feature
SPETE	Special Purpose Electronic Test Equipment
TBD	To Be Determined
TD	Training Device
TTE	Technical Training Equipment
TECHEVAL	Technical Evaluation
UIC	Unit Identification Code
USNS	United States Naval Ship

AIMS MK XII IDENTIFICATION FRIEND OR FOE

PREFACE

This Approved Navy Training System Plan (NTSP) for the AIMS Mark XII Identification Friend or Foe (IFF) system, hereafter referred to as the MK XII, is an update to the Mark XII Draft NTSP dated October 1999. It was prepared per guidelines established by OPNAVINST 1500.76 and the Navy Training Requirements Document Manual, OPNAV P-751-3-9-97. This NTSP incorporates changes submitted by Naval Air Systems Command (PMA205-3B1); Naval Air Systems Command (PMA2134); Naval Air Systems Command (AIR 3.1.4B); Naval Air Warfare Center, Aircraft Division St. Inigoes (4.5.8.2.4); Commanding Officer, Navy Manpower Analysis Center; Commander in Chief, Pacific Fleet (N77); Commander, Naval Air Force, U.S. Pacific Fleet (N422F); and Fleet Training Center, Norfolk, Virginia. This NTSP addresses the phase-in of a new Digital Interrogator Set, updates the training concept, points of contact list, milestones, and logistics support requirements.

PART I - TECHNICAL PROGRAM DATA

A. NOMENCLATURE-TITLE-PROGRAM

1. Nomenclature-Title-Acronym. AIMS Mark XII Identification Friend or Foe (IFF).
The acronym "AIMS" was derived as follows:

- A - Air Traffic Control Radar Beacon System (ATCRBS)
- I - Identification Friend or Foe (IFF)
- M - MK XII Identification System
- S - Systems (indicating many configurations)

2. Program Element. 64211N

B. SECURITY CLASSIFICATION

- 1. System Characteristics** Confidential
- 2. Capabilities** Confidential
- 3. Functions**..... Unclassified

C. MANPOWER, PERSONNEL, AND TRAINING PRINCIPALS

- OPNAV Principal Official (OPO) Program Sponsor..... CNO (N62G)
- OPO Resource Sponsor CNO (N62G)
- Developing Agency..... NAVAIRSYSCOM (PMA213)
- Training Agency CINCLANTFLT (N721)
CINCPACFLT (N70)
CNET (ETE32)
- Training Support Agency..... NAVAIRSYSCOM (PMA205)
- Manpower and Personnel Mission Sponsor CNO (N12)
NAVPERSCOM (PERS-4, PERS-406D)
- Director of Naval Training CNO (N7)

D. SYSTEM DESCRIPTION

1. Operational Uses. The MK XII System is a radar beacon system used by surface ships, submarines, aircraft, and ground forces to identify one another and to distinguish themselves from hostile and neutral forces. The MK XII System performs several different functions in support of various missions, such as anti-air warfare, aerial bombardment, naval bombardment, and naval attack. In addition, the MK XII provides identification and altitude information for aircraft.

2. Foreign Military Sales. Other countries currently procure various types and quantities of MK XII components. Additional information concerning MK XII Foreign Military Sales (FMS) is available through Naval Air Systems Command (NAVAIRSYSCOM) PMA213.

E. DEVELOPMENTAL TEST AND OPERATIONAL TEST. The Chief of Naval Material approved the MK XII for fleet use in March 1971. This approval was based on the successful Technical Evaluations (TECHEVALs) and Operational Evaluations (OPEVALs) of individual system components. As updated and modified components were incorporated into the MK XII System, acceptance tests were performed as necessary. No additional TECHEVALs or OPEVALs were conducted on these components since they did not meet requirement thresholds.

Developmental Test and Evaluation (DT&E) and Operational Test and Evaluation (OT&E) was performed on the new AN/UPX-37 digital interrogator. DT&E has been completed. OT&E was completed on the USS George Washington (CVN-73) in September 1999.

F. AIRCRAFT AND/OR EQUIPMENT/SYSTEM/SUBSYSTEM REPLACED. The MK XII replaced the MK X Selective Identification Feature (SIF) System. The MK XII is functionally compatible with the MK X SIF.

G. DESCRIPTION OF NEW DEVELOPMENT

1. Functional Description. The MK XII System operates on the challenge-response principle. The system has five interrogation modes that can be used alone or in combination, allowing for several operational functions. The system also serves as secondary radar to assist in tracking friendly forces, especially when radar return is obscured by clutter. Secondary radar is also required for air traffic control use when the target is out of range of the primary radar. Specific modes are:

- Mode 1 - used as directed by field commands with 32 response codes available.
- Mode 2 - used for platform identification by specific airframe or ship with 4,096 response codes available.
- Mode 3/A - used for air traffic control identification inside the Continental United States (CONUS) and is assigned by the operational command outside of CONUS, (4,096 response codes are available).

- Mode 4 - provides secure identification of friendly platforms and is classified.
- Mode C - provides barometric pressure altitude of aircraft in 100 foot increments, from minus 1000 feet to +126,700 feet above sea level.

The MK XII is composed of an interrogator (challenge) subsystem and a transponder (reply) subsystem. The interrogator subsystem permits a radar operator to interrogate other platforms and to interpret this data as specific identification of friendly radar targets. The interrogator subsystem may be either a "black" IFF or a "slaved" IFF. Black IFF is a "stand alone" interrogator subsystem not associated with any radar system; only IFF returns can be displayed. With slaved IFF, the interrogator is synchronized with a radar set. The operator can display IFF only, radar only, or both.

The transponder subsystem accepts a challenge from other platforms and provides the necessary coded replies as identification. The transponder subsystems used aboard ships are aircraft transponder sets adapted for shipboard use. Most large surface ships are equipped with one transponder and one or more interrogators. Smaller surface ships are transponder-only equipped. The MK XII was designed to prevent the transponder from responding to self-interrogation. Components of each subsystem are described below.

a. Interrogator Subsystem. The Interrogator Subsystem "questions" weapons system platforms by transmitting an encoded signal to evoke a response for identification. The interrogator subsystem is comprised of:

(1) AN/UPX-25(V) Interrogator Set. The AN/UPX-25(V) Interrogator Set is an electrical equipment cabinet that integrates the individual components of an interrogator system into a single enclosure.

(2) Interrogator. The Interrogator consists of a transmitter and receiver capable of interrogating MK X SIF and MK XII IFF transponders by receiving Radio Frequency (RF) replies. The interrogator processes these replies into proper video signals that are then applied to decoders and indicators. The interrogator sets include the AN/UPX-27. The new AN/UPX-37 digital interrogator will contain both AN/UPX-25(V) and AN/UPX-27 functionality and will replace all AN/UPX-27 interrogator systems.

The AN/UPX-29(V) Central IFF (CIFF) System is an enhanced IFF system that provides all of the AIMS features, but performs these functions as a stand-alone system. This system will be employed aboard AEGIS and LHD-1 class ships. The AN/UPX-29(V) is not included in this NTSP. Refer to the AN/UPX-29(V) Interrogator System Navy Training Plan (NTP), E-30-7815C/A dated 01 April 1996, for further information.

(3) Directional Antenna. The Directional Antenna is capable of generating sum and difference patterns for Interrogation Side Lobe Suppression (ISLS) capability. The AS-2188/U, AS-2189/U, or AS-2787/UPX Directional Antenna is mounted "piggy-back" to the search radar antenna or is slaved to the antenna when mounted on a separate pedestal.

(4) AS-177()/UPX Omnidirectional Antenna. The AS-177/UPX, AS-177A/UPX, and AS-177B/UPX Omnidirectional Antennas provide side lobe suppression when used with the interrogator, via the AN/UPA-61 RF Switching Group.

(5) AN/UPA-57 Antenna Pedestal Group. The AN/UPA-57 Antenna Pedestal Group is required to support and position an IFF antenna when not attached to the radar antenna. This is accomplished by either synchronism to a remote command (slave) input, synchronism to manual command input, or independently at an adjustable continuous rate. The AN/UPA-57 consists of a pedestal assembly, control unit, manual antenna positioning control, and mast switch.

(6) AN/UPA-61 Radio Frequency Switching Group. The AN/UPA-61 RF Switching Group provides automatic ISLS RF switching capability that enables a ship's antenna to function alternately as a directional and side lobe suppression antenna in an IFF system. It can also alternate between a directional antenna and an omnidirectional antenna. The AN/UPA-61 consists of an electronic switch assembly and control monitor assembly.

(7) Pulse Generators. The SG-841/UPX Pulse Generator samples the trigger of the associated radar and ensures the IFF video appears at the correct time. The SG-1066/UPX Pulse Generator is a video retimer that stores, processes, and retimes Mode 4 video signals.

(8) SN-501/UPX Video Synchronizer. The SN-501/UPX Video Synchronizer permits optimum operation of the IFF regardless of the many variations in radar timing that may occur. It is capable of interfacing two separate radar systems with one IFF interrogating subsystem when using a common radar antenna system.

(9) MX-8758A/UPX Interference Blankers. The MX-8758/UPX and MX-8758A/UPX Interference Blankers are single channel defruiters that eliminate random non-synchronous signals. These signals appear as unsynchronized replies, or momentary clutter on the radar display, and are referred to as "fruit."

(10) AN/UPA-59() Decoder Groups. The AN/UPA-59A(V), and AN/UPA-59B are automatic decoding systems that operate in conjunction with interrogators. Each decoder group processes pulse-coded replies received by the interrogator system and provides video outputs to the Planned Position Indicator (PPI), or Naval Tactical Data System (NTDS) display console and on direct readouts. There are several configurations of the AN/UPA-59(). These decoder groups basically consist of an alarm monitor, intratarget data indicator, and video decoder.

(11) C-8430/UPX Master Identification Friend or Foe Control Monitor. Each interrogator sub-system requires one C-8430/UPX Master IFF Control Monitor to provide controls, indicators, and alarms to the operations supervisor. The C-8430/UPX is located in the Combat Information Center (CIC).

(12) KIR-1C/TSEC Crypto Computer. The KIR-1C/TSEC Crypto Computers use the MT-4667/U computer base to provide Mode 4 crypto coding for the AN/UPX-27 interrogators and crypto decoding of Mode 4 transponder replies.

(13) KIK-18()/TSEC, KYK-13, KOI-18-01 Crypto Code Keys. The KIK-18/TSEC and KIK-18A/TSEC Crypto Code Key sets the individual cryptographic codes for the KIR-1()/TSEC and KIT-1()/TSEC (see transponder system below). For the KIR-1C and KIT-1C, the KYK-13 and KOI-18-01 are paper code keys that set the codes.

b. Transponder Subsystem. When interrogated, the Transponder Subsystem automatically replies by transmitting an encoded signal. The transponder subsystems use aircraft transponder sets adapted for shipboard use. The following components are included in the transponder subsystem.

(1) AN/UPX-28(V) Transponder Set. The AN/UPX-28(V) Transponder Set is an electrical equipment cabinet that integrates the transponder and its ancillary equipment into a single enclosure.

(2) Transponder. The RT859A/APX-72 Transponder is used aboard ships as a receiver-transmitter which, when properly challenged, automatically processes and transmits coded replies. The AN/APX-72 is capable of responding to a single mode, a combination of modes, or all five modes. The Common Digital Transponder, which will replace the AN/APX-72, is an enhanced transponder with all the capabilities of its predecessor. As the Common Digital Transponder development matures it will be incorporated in future revisions of this NTSP.

(3) AS-177()/UPX Omnidirectional Antenna. The AS-177/UPX, AS-177A/UPX, and AS-177B/UPX Omnidirectional Antennas receives IFF interrogations for processing by the transponder and then radiates subsequent replies. The omnidirectional antenna also operates for systems tests.

(4) PP-6099()/APX-72 Power Supply Converter. The PP-6099()/APX-72 Power Supply Converter is required to convert 115 VAC to 28 VDC for the shipboard operation of the AN/APX-72 Transponder Set. Several versions are available for the specific type of transponder.

(5) C-6280()/APX-72 Transponder Control Unit. The C-6280()/APX-72 Transponder Control Unit is required to provide controls, indicators, and alarms for the transponder system. The controls on the front panel are used to determine the status of the transponder, the reply codes for Modes 1 and 3, and which interrogations require a reply.

(6) CY-6816/APX-72 Control Enclosure. The CY-6816/APX-72 Control Enclosure adapts the C-6280()/APX-72 Transponder Control Unit to shipboard use.

(7) TS-1843()/APX Transponder Test Set. The TS-1843()/APX Transponder Test Set is an in-line test set that evaluates performance characteristics of the transponder system and provides indications on a "Go" or "No Go" basis.

(8) KIT-1C/TSEC Crypto Computer. The KIT-1C/TSEC Crypto Computer decodes interrogations and produces the appropriate coded replies.

(9) KIK-18()/TSEC, KYK-13, and KOI-18-01 Crypto Code Keys. As mentioned above, under the Interrogator System, one Crypto Code Key is supplied per AIMS installation to set individual crypto codes. Some AIMS installations are transponder-only, in which case the key will be supplied for the KIT-1C/TSEC Crypto Computer only.

(10) TD-937()/SPX Electronic Gate. The TD-937()/SPX Electronic (or Suppression) Gate suppresses the transponder when a ship's own interrogators, or other local source, is transmitting challenges. This prevents the transponder from replying to any interrogators or radar transmissions from its own emissions. Transponder-only ships do not normally include the TD-937()/SPX.

2. Physical Description. Physical description information is listed in the following table.

NOMENCLATURE/EQUIPMENT	DIMENSIONS H x W x D (inches)	WEIGHT (pounds)
AN/UPX-25 Interrogator Set	63 x 23 x 26.4	500.0
AN/UPX-27 Interrogator Set	19 x 16 x 11	60.0
AN/UPX-37 Digital Interrogator Set	19 x 16 x 11	65.0
AS-2188/U Antenna	19 x 111.375 x 20.5	74.0
AS-2189/U Antenna	74 x 18.5 x 19	55.0
AS-2787/U Antenna	18.6 x 111.8 x 9	61.0
AS-1065/UPX Antenna Assembly	19.5 x 110.5 x 39.328	83.0
AN/UPA-57 Antenna Pedestal: AB-1206/UPA-57 Pedestal	26 x 21 x 19	175.0
C-9373/UPA-57 Ctrl Pwr Supply	14 x 19 x 27.2	131.0
C-9374/UPA-57 Ctrl Positioning	4.5 x 7.75 x 7	6.0
SA-1942/UPA-57 Mast Switch	4.75 x 3.25 x 4.6	2.3
AN/UPA-61 RF Switching Group: C-8834/UPA-61 Control Monitor	7 x 17 x 9	20.0
SA-1807/UPA-61 Elect. Switch	6.25 x 11.5 x 2.75	4.4
SG-841/UPX Pulse Generator	5 x 10.5 x 12	13.0
SG-1066/UPX Pulse Generator	5 x 10.5 x 13.4	13.0

NOMENCLATURE/EQUIPMENT	DIMENSIONS H x W x D (inches)	WEIGHT (pounds)
SN-501/UPX Video Synchronizer	4.9 x 13.7 x 16.75	26.0
MX-8758A/UPX Interference Blanker	5 x 17 x 16.88	25.0
UPA-59(V) Decoder Group: KY-761(P)/UPA-59A(V) VideoDecoder	12 x 5.94 x 19	29.0
KY-761A(P)/UPA-59(V) Video Decoder	12 x 5.94 x 19	29.0
BZ-173A/UPA-59 Alarm Monitor	6.6 x 4.7 x 4	3.0
C-8430/UPX Control Monitor	8 x 10 x 8	8.5
KIR-1C/TSEC Crypto Computer	6.8 x 5.8 x 8.6	11.0
KIK-18/TSEC Crypto Code Key	1.8 x 4.5 x 21.6	3.0
AN/UPX-28 Transponder Set	15 x 14.5 x 19	99.0
AN/APX-72 Transponder System	6 x 7 x 13.5	15.0
AN/APX-100 Transponder System	5.375 x 5.375 x 10.25	10.0
AS-177A/UPX Antenna	20.125 x 6.5 x 6.5	7.0
AS-177B/UPX Antenna	20.125 x 6.5 x 6.5	7.0
PP-6099/APX-72 Power Supply	6 x 6.625 x 11.675	18.0
PP-6099A/APX-72 Power Supply	6 x 6.625 x 11.675	18.0
PP-6099B/APX-72 Power Supply	6 x 6.625 x 11.675	18.0
C-6280A(P)/APX Transponder Control Unit	5.75 x 5.25 x 3.09	2.75
CY-6816/APX-72 Control Case	10 x 8 x 8	5.5
TS-1843A/APX In-Line Transponder Test Set	3 x 3.047 x 7.859	2.2
TS-1843B/APX In-Line Transponder Test Set	3.28 x 3.25 x 7.8	2.9

NOMENCLATURE/EQUIPMENT	DIMENSIONS H x W x D (inches)	WEIGHT (pounds)
KIT-1C/TSEC Crypto Computer	6.8 x 5.8 x 8.6	12.0
TD-937/SPX Electronic Gate	6.5 x 5.5 x 13	10.4
TD-937A/SPX Electronic Gate	6 x 5 x 12.8	8.4
TD-937B/SPX Electronic Gate	6 x 5 x 12.5	11.5

3. New Development Introduction. The MK XII was retrofitted into those ships that previously employed the MK X. The MK XII was installed during the production of new acquisitions subsequent to the MK X. The new AN/UPX-37 Digital Interrogator will replace the existing AN/UPX-27 on a one for one basis by retrofitting each system.

4. Significant Interfaces. In addition to the various shipboard radars, whose trigger format and video processing techniques affect radar-IFF relationships, the MK XII electrically interfaces with other systems and equipment which have an impact on overall radar-IFF system performance. These interfaces include video amplifiers, radar and data distribution switchboards, electronic countermeasure blankers, radar azimuth converters, and PPI displays or NTDS consoles. On NTDS ships, the IFF systems also interconnect, through data distribution switchboards, with a video signal simulator used as training equipment and a beacon video processor that interfaces IFF data with the NTDS.

For air traffic control operations, the IFF interfaces with the AN/TPX-42A (V)8, 12, 13, and 14 Amphibious Air Traffic Control (AATC) and Carrier Air Traffic Control Center (CATCC) Direct Altitude Identification Readout (DAIR) Interrogator Set. Other system interfaces include ship's gyro, Radar Environmental Simulation System, and Target Acquisition System radar.

Functional interfaces of the Navy's AIMS include the Air Force's and Army's AIMS and the Federal Aviation Administration's ATCRBS. The MK XII also interfaces with its predecessor, the MK X SIF.

5. New Features, Configurations, or Material. Not Applicable (NA)

H. CONCEPTS

1. Operational Concept. Operator duties for the MK XII consist of energizing and de-energizing the equipment, selecting modes, challenging and interpreting replies, and selecting mode functions at the remote set control. Officers and Operations Specialists (OSs) assigned to the CIC and Air Traffic Controllers (ACs) perform these actions during air traffic control operations. The addition of the AN/UPX-37 will be transparent to the operator. Surface ships are capable of operating their MK XII systems on a continuous basis. Basic operational uses of the MK XII are:

- Anti-Air Warfare using Modes 1, 2, 3/A, and 4 to provide complete identification of airborne platforms.
- Air Control using Modes 2, 3/A, and C to provide necessary data for control of friendly aircraft.
- Air Traffic Control using Modes 2 and 3/A for aircraft departure and approach control of carrier aircraft.
- Surface Identification using Modes 1, 2, 3/A, and 4 for complete identification of friendly surface platforms.
- Additionally, transponders aboard aircraft can provide special purpose responses to the shipboard interrogator's operator with special audible and visible warnings. These special purpose replies include different emergency codes indicating an aircraft in trouble, or a communications failure and a special reply for position identification manually activated by the aircraft commander upon verbal request.

2. Maintenance Concept. The maintenance concept for the MK XII has evolved from its early days. Then, MK XII equipment was repaired at the organizational level by removing and replacing defective piece parts on plug-in assemblies and Printed Circuit Boards (PCB). The evolved organizational level maintenance concept in the fleet today is to repair MK XII equipment to the card level by removing and replacing the PCBs and Electronic Modules (EM). Piece part repair of PCBs and EMs is accomplished at the intermediate level of maintenance, via Microminiature (2M) Repair shops. General direction and guidance regarding the maintenance concept for the MK XII is provided by the Issue of Ships Maintenance and Material Management (3M) Manual, OPNAVINST 4790.4 (series). The 3M Manual prescribes the three level maintenance concept: organizational, intermediate, and depot.

a. Organizational. Organizational level maintenance is performed by Electronics Technicians (ETs) with Navy Enlisted Classification (NEC) 1572 and consists of preventive and corrective maintenance to the PCB and EM level.

(1) Preventive Maintenance. Preventive maintenance includes built-in test (BIT) operational readiness tests, periodic inspections, and scheduled maintenance. Preventive maintenance is performed per Maintenance Requirement Cards that are part of the Planned Maintenance System.

(2) Corrective Maintenance. Corrective maintenance includes troubleshooting, measuring, aligning, and repairing by removing and replacing defective PCBs and EMs.

b. Intermediate. Intermediate maintenance activities, ashore and afloat, perform maintenance actions beyond the capabilities of the organizational activities. These actions are performed by ETs with NEC 1572 and include fault verification, fault isolation using Automatic Test Equipment, and repair of MK XII equipment to the PCB and EM piece part level. These actions are performed by 2M repair shops afloat and Fleet Technical Support Centers ashore.

Technical assistance and advisory services for the MK XII are provided by the Naval Air Warfare Center, Aircraft Division, Patuxent River, St. Inigoes, Maryland, Detachment, IFF Systems Branch.

c. Depot. All repairable assemblies beyond the capabilities of intermediate level maintenance are forwarded to the Space and Naval Warfare Systems Command Systems Center, San Diego, California, for repair and restoration. Depot level maintenance on the KIR-1C/TSEC and KIT-1C/TSEC is performed at designated crypto repair facilities.

d. Interim Maintenance. NA

e. Life-Cycle Maintenance Plan. There is no singular depot level maintenance plan encompassing the many pieces of equipment that make up the different configurations of the MK XII systems. However, all failed repairable MK XII components beyond the capability of intermediate level repair are forwarded to designated depot level repair sites.

3. Manning Concept. Operator manpower requirements for the MK XII are determined by the CIC and air operation requirements for each class ship. There are no operator or watchstation billets specifically dedicated to the MK XII System. Maintenance manpower requirements are driven by the total maintenance workload for a specific configuration aboard a specific ship. The billet structure currently supporting the MK XII will not change as a result of this NTSP.

4. Training Concept. The overall objective of the MK XII training program is to provide a ready supply of trained maintenance technicians to the fleet. MK XII training is established at Fleet Training Center (FTC) Norfolk, Virginia. In 1997, the AIMS MK XII IFF Systems Maintenance course, A-102-0062, underwent a Surface Warfare Technical Readiness Review and the Training Course Control Document was revised. As a result, the course content was streamlined and the length reduced from 22 to 16 weeks. The revised course was Ready For Training (RFT) in July 1997. With the addition of the digital interrogator, the course length is anticipated to increase to 18 weeks. Phasing out of the AN/UPX-27 analog interrogators will result in an undetermined decrease in course length. The MK XII Maintenance course with AN/UPX-37 information included is scheduled to be RFT in April 2001.

a. Initial Training. Initial training for the original MK XII equipment was completed over two decades ago. As new equipment and new versions of equipment that differed significantly from those superseded were developed, initial operator and maintenance training was provided to instructors to ensure technical integrity of follow-on training.

The contractor will provide initial AN/UPX-37 Digital Interrogator operator and maintenance training to government DT&E, OT&E, and the initial cadre of fleet personnel. Initial training will be conducted in two sessions combining DT&E, OT&E, and Cadre fleet personnel requirements. Initial training for session one was completed April 16, 1999. Initial training for session two is scheduled to begin during first quarter FY00.

(1) Initial Training Session One

Title	AN/UPX-37 Digital Interrogator DT&E and OT&E Initial Training
Description	To provide DT&E and OT&E personnel with the operation and maintenance training required to perform DT&E and OT&E of the AN/UPX-37 Digital Interrogator.
Location	Marconi Aerospace Inc. ASD, Greenlawn, NY
Length	5 days
RFT Date	Completed April 16, 1999
Students.....	Government personnel who will perform the DT&E and OT&E, and FTC Norfolk Instructors.
TTE/TD	The actual AN/UPX-37 Digital Interrogator was used as Technical Training Equipment (TTE). No Training Devices (TDs) were required.
Prerequisites	Instructors: ET, E-5 or above, with NECs 1572 and 9502

(2) Initial Training Session Two

Title	AN/UPX-37 Digital Interrogator Instructor Initial Training
Description	To provide FTC Norfolk instructors with the training required to teach the AN/UPX-37 Digital Interrogator maintenance course.
Locations	Marconi Aerospace Inc. ASD, Greenlawn, NY
Length	5days
RFT Date	First quarter FY00
Students.....	FTC Norfolk instructors and ISEA St Inigoes technical personnel.
TTE/TD.....	The actual AN/UPX-37 Digital Interrogator will be used as the TTE. No TDs will be required.
Prerequisites	Instructors: ET, E-5 or above with NECs 1572 and 9502

b. Follow-on Training

(1) **Operator.** There is no operator course taught exclusively for the MK XII system. Operation of the MK XII is taught as a by-product of the primary mission of CIC officer, and OS training courses.

(2) Maintenance

Title **AIMS MK XII IFF System Maintenance**
CIN A-102-0062
Model Manager .. FTC Norfolk
Description Provides ETs with the skills and knowledge necessary to maintain MK XII IFF Systems and Mode 4 equipment.
Location FTC Norfolk
Length 16 weeks
RFT date Currently available (April 2001 with AN/UPX-37)
Skill identifier NEC 1572
TTE/TD Refer to Parts IV.A.1 for TTE. TD is NA.
Prerequisite..... A-100-0140, Electronics Technician Strand A School

c. Student Profiles

SKILL IDENTIFIER	PREREQUISITE SKILL AND KNOWLEDGE REQUIREMENTS
ET	A-100-0138, Electronics Technician Core A School A-100-0139, Advanced Electronics Technical Core A-100-0140, Electronics Technician Strand A School

d. Training Pipelines. No new training pipeline will be developed for the MK XII. The existing stand-alone maintenance course will be updated to include AN/UPX-37 digital interrogator information resulting in an anticipated course length increase to 18 weeks. Phasing out of the AN/UPX-27 analog interrogators will result in an undetermined decrease in course length.

I. ON-BOARD (IN-SERVICE) TRAINING

1. Proficiency or Other Training Organic to the New Development. Operators use the Programmed Instruction Handbook for Decoder Group I2123-AN/UPA-59A(V)2, EE230-FC-PIH-010, the Programmed Instruction Handbook for Decoder Group AN/UPA-59(V)2, and the Shipboard AIMS Mark XII IFF Systems Operators Manual,. There is no proficiency or other training for MK XII maintenance since NEC ET 1572 cannot be earned through On-the-Job Training. This NEC can be awarded only after successful completion of the training course, A-102-0062.

- a. **Maintenance Training Improvement Program.** NA
- b. **Aviation Maintenance In-Service Training.** NA
- c. **Aviation Maintenance Training Continuum System.** NA

2. Personnel Qualification Standards. Personnel Qualification Standards (PQS) material has been developed for the MK XII operator training and is contained in the NAVEDTRA 10061 (series). There is no PQS for MK XII maintenance.

3. Other On-Board or In-Service Training Packages. Each class of ship has an individualized CIC operator training package specifically tailored to that ship's projected operating environment.

J. LOGISTICS SUPPORT

1. Manufacturer and Contract Numbers. The following contract is for procurement of the new AN/UPX-37 Digital Interrogator. There are no other outstanding contracts for MK XII equipment.

CONTRACT NUMBER	MANUFACTURER	ADDRESS
N00019-98-C-0156	GEC-Marconi Hazeltine	450 Pulaski Road Green Lawn, NY 11740-1606

2. Program Documentation. The Operational Logistics Support Summary, ATCE-OLSS-007, revised April 1991, was replaced by the User's Logistics Support Summary, ATC-ULSS-007 of 19 March 1996. An Acquisition Logistics Support Plan for the AN/UPX-37 Digital Interrogator, ATC-ALSP-010, was distributed in June 1998.

3. Technical Data Plan. All currently required technical manuals and PMS are available for the MK XII System. Contractor developed operation and maintenance manuals with Illustrated Parts Breakdown and Maintenance Requirement Cards for the AN/UPX-37 will be delivered for use during the Supportability Test and Evaluation, scheduled for completion during first quarter FY00. Refer to Part IV.B.3 of this NTSP for a detailed list of technical manuals required to support maintenance training.

4. Test Sets, Tools, and Test Equipment. All Special Purpose test sets, special tools, special test equipment, and software required for operational and training activities are in place. Refer to Part IV.A.1 of this NTSP for a detailed listing of test sets, tools, and test equipment required to support maintenance training. No new test sets, special tools, or test equipment will be required to support the AN/UPX-37 Digital Interrogator.

5. Repair Parts. The Naval Inventory Control Point (NAVICP), Mechanicsburg, Pennsylvania, has the overall supply support responsibility for provisioning all spare and repair

parts for the interrogator system of the MK XII program. The NAVICP, Philadelphia, Pennsylvania, has overall supply support responsibility for provisioning all spare and repair parts for the transponder system of the MK XII program. The material objective for the MK XII System is to apply standard Navy supply support and provisioning policies that provide timely and economical life-cycle support.

6. Human Systems Integration. Established human engineering principles and practices have been and will continue to be used in development of the MK XII System. These principles will guide the design and development of system functions and features. The design will be directed toward developing and improving effective human performance during MK XII operation and maintenance while making economical demands on personnel, skills, training, and costs. As a minimum the design will include:

- Physical measures to preclude interchange of units or components of the same or similar form that are not functionally interchangeable.
- Physical measures to preclude improper mounting of units or components.
- Measures (e.g. coding) to facilitate identification and interchange of interchangeable units or components.
- Physical measures to facilitate scheduled and unscheduled maintenance.

K. SCHEDULES

1. Installation and Delivery Schedules. The shipboard installations of the MK XII IFF System in various configurations have been completed. Since its inception, changes to original equipment have been made through new and improved replacement components. Updating the MK XII System is an ongoing endeavor through the Field Change Modification Program. Fleet-wide, between 200 and 350 modifications take place each year, depending on the availability of ships and funds. However, there is no master schedule covering these activities. Modifications are affected through the coordinated efforts of Type Commanders, Space and Warfare Systems Command, Naval Sea Systems Command, and the Naval Air Systems Command, as appropriate. Installation of the AN/UPX-37 Digital Interrogator is scheduled to begin in fourth quarter FY00. A firm contract delivery schedule for the AN/UPX-37 is not currently available, but will be included in future updates of this NTSP.

2. Ready For Operational Use Schedule. The MK XII was first fleet operational in 1971. The Ready For Operational Use date for the AN/UPX-37 will coincide with the Initial Operational Capability date scheduled for the fourth quarter FY00.

3. Time Required to Install at Operational Sites. The time required to install new and modified MK XII equipment varies by type of equipment and site of installation.

4. Foreign Military Sales and Other Source Delivery Schedule. Delivery schedules for FMS are available through NAVAIRSYSCOM, PMA213.

5. Training Device and Technical Training Equipment Delivery Schedule. FTC Norfolk is reporting a material deficiency in current inventory of certain TD, TTE, Curricula Materials, and Training Aids. Refer to section IV.A.1 for a detailed list of TD and TTE required to support current MK XII maintenance training and identified equipment shortages. Refer to section IV.B.2 for a detailed list of Curricula Materials and Training Aids required to support current MK XII maintenance training and identified Training Aid shortages. TSA is in progress of validating and addressing FTC Norfolk equipment shortages. Any changes to the TTE requirements will be reflected in future updates to this NTSP.

These course hardware deficiencies are currently impacting FTC training readiness. TTE shortages prevent running two classes simultaneously as the course was designed. Current training readiness levels allow for up to three classes to be run concurrently, but labs are now limited to no more than one class at a time. Training Aid shortages inhibit remedial training and hinder complete student comprehension of troubleshooting techniques in system maintenance. Implementation of AN/UPX-37 related TD, TTE, and Training Aids will not preempt FTC requirements to maintain AN/UPX-27 training capability since MK XII maintenance training is made available to foreign allied navies through FMS.

When the AN/UPX-37 is added to the MK XII maintenance course, there will be a requirement for 17 AN/UPX-37 digital interrogators to be used as TTE, along with three sets of nine AN/UPX-37 pre-faulted modules to be used as Training Aids. The initial nine AN/UPX-37 digital interrogators will be delivered in October 2000, with the remaining eight to be delivered concurrent with fleet attrition of the AN/UPX-27 analog interrogator system.

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

M. RELATED NTSPs AND OTHER APPLICABLE DOCUMENTS

DOCUMENT OR NTSP TITLE	DOCUMENT OR NTSP NUMBER	PDA CODE	STATUS
MK XII IFF User's Guide	EE230-TT-GYD-010/ E120	NAWCAD	Approved Aug 85
AN/TPX-42 A (V)5 DAIR/, (V)10 RATCF DAIR	E-50-7005F/A	PMA213	Approved Jan 94
MK XII IFF Interface Information Guide	NA 16-60MKXII-IFM-1	NA	Approved Sep 86
AN/TPX-42A(V)8,12, 13 Shipboard DAIR	E-50-8502B/D	PMA213	Preliminary Draft May 99

DOCUMENT OR NTSP TITLE	DOCUMENT OR NTSP NUMBER	PDA CODE	STATUS
AN/UPX-29(V) Interrogator System	E-30-7815C/A	PMA213	Approved Apr 96
User's Logistics Support Summary for the Shipboard MK XII IFF	ATC-ULSS-007	NAWCAD	Approved Mar 96
Acquisition Logistics Support Plan for the AN/UPX-37 Digital Interrogator	ATC-ALSP-010	AIR 3.1.4B	Approved Jun 98

PART II - BILLET AND PERSONNEL REQUIREMENTS

The following elements are not affected by the AIMS MK XII Identification Friend or Foe and, therefore, are not included in Part II of this NTSP:

II.A. Billet Requirements

II.A.2.a. Operational and Fleet Support Activity Deactivation Schedule

II.A.2.b. Billets to be Deleted in Operational and Fleet Support Activities

II.A.2.c. Total Billets to be Deleted in Operational and Fleet Support Activities

II.A. BILLET REQUIREMENTS

II.A.1.a. OPERATIONAL AND FLEET SUPPORT ACTIVITY ACTIVATION SCHEDULE

SOURCE: Total Force Manpower Management System

DATE: 9/9/98

ACTIVITY, UIC		PFYs	CFY00	FY01	FY02	FY03	FY04
OPERATIONAL ACTIVITIES - NAVY							
USNS Butte (T-AE27)	42843	1	0	0	0	0	0
USNS Flint (T-AE32)	93536	1	0	0	0	0	0
USNS Kiska (T-AE35)	39538	1	0	0	0	0	0
USNS Mount Baker (T-AE34)	39537	1	0	0	0	0	0
USNS Mount Hood (T-AE29)	42844	1	0	0	0	0	0
USS Arctic (AOE8)	21907	1	0	0	0	0	0
USS Arther W Radford (DD968)	20588	1	0	0	0	0	0
USS Ashland (LSD48)	21531	1	0	0	0	0	0
USS Aubery Fitch (FFG34)	21059	1	0	0	0	0	0
USS Austin (LPD4)	07175	1	0	0	0	0	0
USS Boone(FFG28)	21053	1	0	0	0	0	0
USS Briscoe (DD977)	20603	1	0	0	0	0	0
USS Caron (DD970)	20590	1	0	0	0	0	0
USS Carr (FFG52)	21233	1	0	0	0	0	0
USS Carter Hall (LSD50)	21880	1	0	0	0	0	0
USS Clark (FFG11)	20964	1	0	0	0	0	0
USS Compte De Grasse (DD974)	20600	1	0	0	0	0	0
USS Conolly (DD979)	20611	1	0	0	0	0	0
USS Detroit (AOE4)	20120	1	0	0	0	0	0
USS Dewert (FFG45)	21197	1	0	0	0	0	0
USS Deyo (DD989)	20836	1	0	0	0	0	0
USS Doyle (FFG39)	21106	1	0	0	0	0	0
USS Dwight D Eisenhower (CVN69)	03369	1	0	0	0	0	0
USS Elrod (FFG55)	21236	1	0	0	0	0	0
USS Enterprise (CVN65)	03365	1	0	0	0	0	0
USS Estocin (FFG15)	20968	1	0	0	0	0	0
USS Fahrion (FFG22)	20975	1	0	0	0	0	0
USS George Washington (CVN73)	21412	1	0	0	0	0	0
USS Guam (LPH9)	07178	1	0	0	0	0	0
USS Gunston Hall (LSD44)	21422	1	0	0	0	0	0
USS Halyburton (FFG40)	21107	1	0	0	0	0	0
USS Harry S Truman (CVN75)	21853	1	0	0	0	0	0
USS Hawes (FFG53)	21234	1	0	0	0	0	0
USS Hayler (DD997)	21416	1	0	0	0	0	0
USS Inchon (MCS12)	20009	1	0	0	0	0	0
USS John C Stennis (CVN74)	21847	1	0	0	0	0	0
USS John F Kennedy (CV67)	03367	1	0	0	0	0	0
USS John Hancock (DD981)	20613	1	0	0	0	0	0
USS John L Hall (FFG32)	21057	1	0	0	0	0	0
USS John Rodgers (DD983)	20615	1	0	0	0	0	0
USS Kalamazoo (AOR6)	20125	1	0	0	0	0	0
USS Kauffman (FFG59)	21390	1	0	0	0	0	0

II.A.1.a. OPERATIONAL AND FLEET SUPPORT ACTIVITY ACTIVATION SCHEDULE

SOURCE: Total Force Manpower Management System

DATE: 9/9/98

ACTIVITY, UIC		PYs	CFY00	FY01	FY02	FY03	FY04
USS Kidd (DDG993)	21436	1	0	0	0	0	0
USS Klankring (FFG42)	21109	1	0	0	0	0	0
USS La Salle (AFG3)	07172	1	0	0	0	0	0
USS Mcinerney (FFG8)	21032	1	0	0	0	0	0
USS Mississippi (CGN40)	20624	1	0	0	0	0	0
USS Moosbrugger (DD980)	20612	1	0	0	0	0	0
USS MT Whitney (LCC20)	20001	1	0	0	0	0	0
USS Nashville (LPD13)	07196	1	0	0	0	0	0
USS Nassau(LHA4)	20725	1	0	0	0	0	0
USS Nicholas (FFG47)	21199	1	0	0	0	0	0
USS Nicholson (DD982)	20614	1	0	0	0	0	0
USS Oakhill (LSD51)	21958	1	0	0	0	0	0
USS Obannon (DD987)	20834	1	0	0	0	0	0
USS Pensacola (LSD38)	20013	1	0	0	0	0	0
USS Peterson (DD969)	20589	1	0	0	0	0	0
USS Ponce (LPD15)	07201	1	0	0	0	0	0
USS Portland (LSD37)	20012	1	0	0	0	0	0
USS Robert G Bradley (FFG49)	21201	1	0	0	0	0	0
USS Saipan (LHA2)	20632	1	0	0	0	0	0
USS Samuel B Roberts (FFG58)	21352	1	0	0	0	0	0
USS Samuel E Morison (FFG13)	20966	1	0	0	0	0	0
USS Santa Barbara (AE28)	20111	1	0	0	0	0	0
USS Scott (DDG995)	21438	1	0	0	0	0	0
USS Seattle (AOE3)	05848	1	0	0	0	0	0
USS Shreveport (LPD12)	07195	1	0	0	0	0	0
USS Simpson (FFG56)	21350	1	0	0	0	0	0
USS South Carolina (CGN37)	20669	1	0	0	0	0	0
USS Spruance (DD963)	20574	1	0	0	0	0	0
USS Stark (FFG31)	21056	1	0	0	0	0	0
USS Stephen W Groves (FFG29)	21054	1	0	0	0	0	0
USS Stump (DD978)	20604	1	0	0	0	0	0
USS Supply (AOE6)	21839	1	0	0	0	0	0
USS Taylor (FFG50)	21231	1	0	0	0	0	0
USS Theodore Roosevelt (CVN71)	21247	1	0	0	0	0	0
USS Thorn (DD988)	20835	1	0	0	0	0	0
USS Tortuga (LSD46)	21562	1	0	0	0	0	0
USS Trenton (LPD14)	07200	1	0	0	0	0	0
USS Underwood (FFG36)	21103	1	0	0	0	0	0
USS Whidbey Island (LSD41)	21218	1	0	0	0	0	0
USNS Capable (T-AGOS16)	49889	1	0	0	0	0	0
USNS Indomitable (T-AGOS7)	42488	1	0	0	0	0	0
USNS Santa Barbara (T-AE28)	43054	1	0	0	0	0	0
USNS Shasta 9T-AE33)	43055	1	0	0	0	0	0
USNS Stalwart (T-AGOS1)	42428	1	0	0	0	0	0
USS Abraham Lincoln (CVN72)	21297	1	0	0	0	0	0
USS Achorage (LSD36)	07203	1	0	0	0	0	0
USS Arkansas (CGN41)	20807	1	0	0	0	0	0

II.A.1.a. OPERATIONAL AND FLEET SUPPORT ACTIVITY ACTIVATION SCHEDULE

SOURCE: Total Force Manpower Management System

DATE: 9/9/98

ACTIVITY, UIC		PYs	CFY00	FY01	FY02	FY03	FY04
USS Belleau Wood (LHA3)	20633	1	0	0	0	0	0
USS Blue Ridge (LCC19)	05840	1	0	0	0	0	0
USS California (CGN36)	20541	1	0	0	0	0	0
USS Callaghan (DDG994)	21437	1	0	0	0	0	0
USS Camden (AOE2)	05833	1	0	0	0	0	0
USS Carl Vinson (CVN70)	20993	1	0	0	0	0	0
USS Chandler (DDG996)	21439	1	0	0	0	0	0
USS Cleveland (LPD7)	07181	1	0	0	0	0	0
USS Comstock (LSD45)	21452	1	0	0	0	0	0
USS Constellation (CV64)	03364	1	0	0	0	0	0
USS Coronado (AGF11)	07194	1	0	0	0	0	0
USS Crommelin (FFG37)	21104	1	0	0	0	0	0
USS Curtis (FFG38)	21105	1	0	0	0	0	0
USS Cussing (DD985)	20617	1	0	0	0	0	0
USS David R Ray (DD971)	20591	1	0	0	0	0	0
USS Denver (LPD9)	07183	1	0	0	0	0	0
USS Dubuque (LPD8)	07182	1	0	0	0	0	0
USS Duluth (LPD6)	07177	1	0	0	0	0	0
USS Elliot (DD967)	20587	1	0	0	0	0	0
USS Fife (DD991)	20838	1	0	0	0	0	0
USS Fletcher (DD992)	20839	1	0	0	0	0	0
USS Ford (FFG54)	21235	1	0	0	0	0	0
USS Fort Fisher (LSD40)	20015	1	0	0	0	0	0
USS Fort McHenry (LSD43)	21400	1	0	0	0	0	0
USS George Philip (FFG12)	20965	1	0	0	0	0	0
USS Germantown (LSD42)	21639	1	0	0	0	0	0
USS Gray (FFG51)	21232	1	0	0	0	0	0
USS Harpers Ferry (LSD49)	21853	1	0	0	0	0	0
USS Harry W Hill (DD986)	20833	1	0	0	0	0	0
USS Hewitt (DD966)	20586	1	0	0	0	0	0
USS Independence (CV62)	03362	1	0	0	0	0	0
USS Ingersoll (DD990)	20837	1	0	0	0	0	0
USS Ingraham (FFG61)	21430	1	0	0	0	0	0
USS Jarrett (FFG33)	21058	1	0	0	0	0	0
USS John A Moore (FFG19)	20972	1	0	0	0	0	0
USS John Young (DD973)	20599	1	0	0	0	0	0
USS Juneau (LPD10)	07184	1	0	0	0	0	0
USS Kinkaid (DD965)	20576	1	0	0	0	0	0
USS Kitty Hawk (CV63)	03363	1	0	0	0	0	0
USS Leftwich (DD984)	20616	1	0	0	0	0	0
USS Lewis B Puller (FFG23)	20976	1	0	0	0	0	0
USS Mc Clusky (FFG41)	21108	1	0	0	0	0	0
USS Merrill (DD976)	20602	1	0	0	0	0	0
USS Mount Hood (AE29)	20112	1	0	0	0	0	0
USS Mount Vernon (LSD39)	20014	1	0	0	0	0	0
USS New Orleans (LPH11)	07202	1	0	0	0	0	0
USS Nimitz (CV68)	03368	1	0	0	0	0	0

II.A.1.a. OPERATIONAL AND FLEET SUPPORT ACTIVITY ACTIVATION SCHEDULE

SOURCE: Total Force Manpower Management System

DATE: 9/9/98

ACTIVITY, UIC		PFYs	CFY00	FY01	FY02	FY03	FY04
USS O'Brien (DD975)	20601	1	0	0	0	0	0
USS Ogden (LPD5)	07176	1	0	0	0	0	0
USS Oldendorf (DD972)	20598	1	0	0	0	0	0
USS Paul F Foster (DD964)	20575	1	0	0	0	0	0
USS Pearl Harbor (LSD52)	21959	1	0	0	0	0	0
USS Peleliu (LHA5)	20748	1	0	0	0	0	0
USS Rainier (AOE7)	21872	1	0	0	0	0	0
USS Reid (FFG30)	21055	1	0	0	0	0	0
USS Rentz (FFG46)	21198	1	0	0	0	0	0
USS Rodney M Davis (FFG60)	21391	1	0	0	0	0	0
USS Ruben James (FFG67)	21351	1	0	0	0	0	0
USS Rushmore (LSD47)	21530	1	0	0	0	0	0
USS Sacramento (AOE1)	05832	1	0	0	0	0	0
USS Sides (FFG14)	20967	1	0	0	0	0	0
USS Tarawa (LHA1)	20550	1	0	0	0	0	0
USS Thach (FFG43)	21110	1	0	0	0	0	0
USS Vandegrift (FFG48)	21200	1	0	0	0	0	0
USS Wadsworth (FFG9)	21033	1	0	0	0	0	0
TOTAL:		154	0	0	0	0	0
FLEET SUPPORT ACTIVITIES - NAVY							
AS33 Maintenance Support Component	45251	1	0	0	0	0	0
COMAFLOATTRAGRULANT CSTG DT MPT	52862	1	0	0	0	0	0
FACSFAC VACAPES Oceana, Va.	42239	1	0	0	0	0	0
FTSCLANT Det Groton, Conn.	0034A	1	0	0	0	0	0
FTSCLANT Det Mayport, Fla.	0038A	1	0	0	0	0	0
FTSCLANT Norfolk, Va.	65912	1	0	0	0	0	0
SIMA Earle Colts Neck, N.J.	47080	1	0	0	0	0	0
SIMA Pascagoula, Miss.	47318	1	0	0	0	0	0
Trident Refit Facility, Kings Bay, Ga.	44466	1	0	0	0	0	0
AS40 Maintenance Support Component	45255	1	0	0	0	0	0
AS41 Maintenance Support Component	68780	1	0	0	0	0	0
Fleet Combat Training Center Pacific	61665	1	0	0	0	0	0
FTSC Pacific Det Yokosuka, Japan	55305	1	0	0	0	0	0
FTSC Pacific, Det Sasebo, Japan	39450	1	0	0	0	0	0
FTSCPAC Det Everette, Wash.	55232	1	0	0	0	0	0
NAVIMFAC Pearl Harbor, Hawaii	39290	1	0	0	0	0	0
SIMA Everett, Wash.	49769	1	0	0	0	0	0
SIMA San Diego, Calif.	65918	1	0	0	0	0	0
SRF Yokosuka, Japan	62758	1	0	0	0	0	0
TOTAL:		19	0	0	0	0	0

II.A.1.b. BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
OPERATIONAL ACTIVITIES - NAVY					
USNS Butte (T-AE27), 42843					
ACDU	0	1	ET3	1572	1471
ACTIVITY TOTAL:	0	1			
USNS Flint (T-AE32), 93536					
ACDU	0	1	ET3	1572	1471
ACTIVITY TOTAL:	0	1			
USNS Kiska (T-AE35), 39538					
ACDU	0	1	ET3	1572	1471
ACTIVITY TOTAL:	0	1			
USNS Mount Baker (T-AE34), 39537					
ACDU	0	1	ET3	1572	1471
ACTIVITY TOTAL:	0	1			
USNS Mount Hood (T-AE29), 42844					
ACDU	0	1	ET3	1572	1471
ACTIVITY TOTAL:	0	1			
USS Arctic (AOE8), 21907					
ACDU	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			
USS Arther W Radford (DD968), 20588					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Ashland (LSD48), 21531					
ACDU	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			
USS Aubery Fitch (FFG34), 21059					
ACDU	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			

II.A.1.b. BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
USS Austin (LPD4), 07175					
ACDU	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			
USS Boone(FFG28), 21053					
TAR	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			
USS Briscoe (DD977), 20603					
ACDU	0	1	ET3	1572	
ACTIVITY TOTAL:	0	1			
USS Caron (DD970), 20590					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Carr (FFG52), 21233					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Carter Hall (LSD50), 21880					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Clark (FFG11), 20964					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Compte De Grasse (DD974), 20600					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Conolly (DD979), 20611					
ACDU	0	1	ET3	1572	
ACTIVITY TOTAL:	0	1			
USS Detroit (AOE4), 20120					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			

II.A.1.b. BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
USS Dewert (FFG45), 21197					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Deyo (DD989), 20836					
ACDU	0	1	ET3	1572	
ACTIVITY TOTAL:	0	1			
USS Doyle (FFG39), 21106					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Dwight D Eisenhower (CVN69), 03369					
ACDU	0	1	ET2	1572	
	0	2	ET3	1572	
ACTIVITY TOTAL:	0	3			
USS Elrod (FFG55), 21236					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Enterprise (CVN65), 03365					
ACDU	0	1	ET2	1572	
	0	1	ET3	1572	
TAR	0	1	ET3	1572	
ACTIVITY TOTAL:	0	3			
USS Estocin (FFG15), 20968					
TAR	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Fahrion (FFG22), 20975					
TAR	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS George Washington (CVN73), 21412					
ACDU	0	1	ET2	1572	
	0	2	ET3	1572	
ACTIVITY TOTAL:	0	3			

II.A.1.b. BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
USS Guam (LPH9), 07178					
ACDU	0	1	ET2	1572	
ACTIVITY TOTAL:	0	1			
USS Gunston Hall (LSD44), 21422					
ACDU	0	1	ET2	1572	1677
ACTIVITY TOTAL:	0	1			
USS Halyburton (FFG40), 21107					
ACDU	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			
USS Harry S Truman (CVN75), 21853					
ACDU	0	1	ET2	1572	
	0	2	ET3	1572	
ACTIVITY TOTAL:	0	3			
USS Hawes (FFG53), 21234					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Hayler (DD997), 21416					
ACDU	0	1	ET3	1572	
ACTIVITY TOTAL:	0	1			
USS Inchon (MCS12), 20009					
ACDU	0	1	ET2	1572	1677
	0	1	ET2	1572	9526
ACTIVITY TOTAL:	0	2			
USS John C Stennis (CVN74), 21847					
ACDU	0	1	ET2	1572	
	0	2	ET3	1572	
ACTIVITY TOTAL:	0	3			
USS John F Kennedy (CV67), 03367					
ACDU	0	1	ET2	1572	
	0	2	ET3	1572	
ACTIVITY TOTAL:	0	3			

II.A.1.b. BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
USS John Hancock (DD981), 20613					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS John L Hall (FFG32), 21057					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS John Rodgers (DD983), 20615					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Kalamazoo (AOR6), 20125					
ACDU	0	1	ET2	1572	9526
ACTIVITY TOTAL:	0	1			
USS Kauffman (FFG59), 21390					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Kidd (DDG993), 21436					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Klankring (FFG42), 21109					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS La Salle (AFG3), 07172					
ACDU	0	1	ET2	1572	1677
ACTIVITY TOTAL:	0	1			
USS Mcinerney (FFG8), 21032					
TAR	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Mississippi (CGN40), 20624					
ACDU	0	1	ET2	1572	1416
ACTIVITY TOTAL:	0	1			

II.A.1.b. BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
USS Moosbrugger (DD980), 20612					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS MT Whitney (LCC20), 20001					
ACDU	0	1	ET2	1572	1589
	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	2			
USS Nashville (LPD13), 07196					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Nassau(LHA4), 20725					
ACDU	0	1	ET2	1572	
	0	1	ET3	1572	
ACTIVITY TOTAL:	0	2			
USS Nicholas (FFG47), 21199					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Nicholson (DD982), 20614					
ACDU	0	1	ET3	1572	
ACTIVITY TOTAL:	0	1			
USS Oakhill (LSD51), 21958					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Obannon (DD987), 20834					
ACDU	0	1	ET3	1572	
ACTIVITY TOTAL:	0	1			
USS Pensacola (LSD38), 20013					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Peterson (DD969), 20589					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			

II.A.1.b. BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
USS Ponce (LPD15), 07201					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Portland (LSD37), 20012					
ACDU	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			
USS Robert G Bradley (FFG49), 21201					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Saipan (LHA2), 20632					
ACDU	0	1	ET2	1572	9527
	0	1	ET3	1572	
ACTIVITY TOTAL:	0	2			
USS Samuel B Roberts (FFG58), 21352					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Samuel E Morison (FFG13), 20966					
TAR	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Santa Barbara (AE28), 20111					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Scott (DDG995), 21438					
ACDU	0	1	ET3	1572	
ACTIVITY TOTAL:	0	1			
USS Seattle (AOE3), 05848					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Shreveport (LPD12), 07195					
ACDU	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			

II.A.1.b. BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
USS Simpson (FFG56), 21350					
ACDU	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			
USS South Carolina (CGN37), 20669					
ACDU	0	1	ET2	1572	1416
ACTIVITY TOTAL:	0	1			
USS Spruance (DD963), 20574					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Stark (FFG31), 21056					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Stephen W Groves (FFG29), 21054					
TAR	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			
USS Stump (DD978), 20604					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Supply (AOE6), 21839					
ACDU	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			
USS Taylor (FFG50), 21231					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Theodore Roosevelt (CVN71), 21247					
ACDU	0	1	ET2	1572	
	0	2	ET3	1572	
ACTIVITY TOTAL:	0	3			
USS Thorn (DD988), 20835					
ACDU	0	1	ET3	1572	
ACTIVITY TOTAL:	0	1			

II.A.1.b. BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
USS Tortuga (LSD46), 21562					
ACDU	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			
USS Trenton (LPD14), 07200					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Underwood (FFG36), 21103					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Whidbey Island (LSD41), 21218					
ACDU	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			
USNS Capable (T-AGOS16), 49889					
ACDU	0	1	ET2	1511	1572
ACTIVITY TOTAL:	0	1			
USNS Indomitable (T-AGOS7), 42488					
ACDU	0	1	ET2	1510	1572
ACTIVITY TOTAL:	0	1			
USNS Santa Barbara (T-AE28), 43054					
ACDU	0	1	ET3	1572	1471
ACTIVITY TOTAL:	0	1			
USNS Shasta 9T-AE33), 43055					
ACDU	0	1	ET3	1572	1471
ACTIVITY TOTAL:	0	1			
USNS Stalwart (T-AGOS1), 42428					
ACDU	0	1	ET2	1503	1572
ACTIVITY TOTAL:	0	1			
USS Abraham Lincoln (CVN72), 21297					
ACDU	0	1	ET2	1572	
	0	2	ET3	1572	
ACTIVITY TOTAL:	0	3			

II.A.1.b. BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
USS Achorage (LSD36), 07203					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Arkansas (CGN41), 20807					
ACDU	0	1	ET2	1572	1677
ACTIVITY TOTAL:	0	1			
USS Belleau Wood (LHA3), 20633					
ACDU	0	1	ET2	1572	9527
	0	1	ET3	1572	
ACTIVITY TOTAL:	0	2			
USS Blue Ridge (LCC19), 05840					
ACDU	0	1	ET2	1572	1589
	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	2			
USS California (CGN36), 20541					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Callaghan (DDG994), 21437					
ACDU	0	1	ET3	1572	
ACTIVITY TOTAL:	0	1			
USS Camden (AOE2), 05833					
ACDU	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			
USS Carl Vinson (CVN70), 20993					
ACDU	0	1	ET2	1572	
	0	2	ET3	1572	
ACTIVITY TOTAL:	0	3			
USS Chandler (DDG996), 21439					
ACDU	0	1	ET3	1572	
ACTIVITY TOTAL:	0	1			
USS Cleveland (LPD7), 07181					
ACDU	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			

II.A.1.b. BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
USS Comstock (LSD45), 21452					
ACDU	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			
USS Constellation (CV64), 03364					
ACDU	0	1	ET2	1572	
	0	2	ET3	1572	
ACTIVITY TOTAL:	0	3			
USS Coronado (AGF11), 07194					
ACDU	0	1	ET2	1572	
ACTIVITY TOTAL:	0	1			
USS Crommelin (FFG37), 21104					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Curtis (FFG38), 21105					
TAR	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			
USS Cussing (DD985), 20617					
ACDU	0	1	ET3	1572	
ACTIVITY TOTAL:	0	1			
USS David R Ray (DD971), 20591					
ACDU	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			
USS Denver (LPD9), 07183					
ACDU	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			
USS Dubuque (LPD8), 07182					
ACDU	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			
USS Duluth (LPD6), 07177					
ACDU	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			

II.A.1.b. BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
USS Elliot (DD967), 20587					
ACDU	0	1	ET3	1572	
ACTIVITY TOTAL:	0	1			
USS Fife (DD991), 20838					
ACDU	0	1	ET2	1572	1677
ACTIVITY TOTAL:	0	1			
USS Fletcher (DD992), 20839					
ACDU	0	1	ET3	1572	
ACTIVITY TOTAL:	0	1			
USS Ford (FFG54), 21235					
ACDU	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			
USS Fort Fisher (LSD40), 20015					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Fort McHenry (LSD43), 21400					
ACDU	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			
USS George Philip (FFG12), 20965					
TAR	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Germantown (LSD42), 21639					
ACDU	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			
USS Gray (FFG51), 21232					
ACDU	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			
USS Harpers Ferry (LSD49), 21853					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Harry W Hill (DD986), 20833					
ACDU	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			

II.A.1.b. BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
USS Hewitt (DD966), 20586					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Independence (CV62), 03362					
ACDU	0	1	ET2	1572	
	0	2	ET3	1572	
ACTIVITY TOTAL:	0	3			
USS Ingersoll (DD990), 20837					
ACDU	0	1	ET3	1572	
ACTIVITY TOTAL:	0	1			
USS Ingraham (FFG61), 21430					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Jarrett (FFG33), 21058					
ACDU	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			
USS John A Moore (FFG19), 20972					
TAR	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS John Young (DD973), 20599					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Juneau (LPD10), 07184					
ACDU	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			
USS Kinkaid (DD965), 20576					
ACDU	0	1	ET3	1572	
ACTIVITY TOTAL:	0	1			
USS Kitty Hawk (CV63), 03363					
ACDU	0	1	ET2	1572	
	0	2	ET3	1572	
ACTIVITY TOTAL:	0	3			

II.A.1.b. BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
USS Leftwich (DD984), 20616					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Lewis B Puller (FFG23), 20976					
TAR	0	1	ET2	1572	1677
ACTIVITY TOTAL:	0	1			
USS McClusky (FFG41), 21108					
TAR	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			
USS Merrill (DD976), 20602					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Mount Hood (AE29), 20112					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Mount Vernon (LSD39), 20014					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS New Orleans (LPH11), 07202					
ACDU	0	1	ET2	1572	
ACTIVITY TOTAL:	0	1			
USS Nimitz (CV68), 03368					
ACDU	0	1	ET2	1572	
	0	2	ET3	1572	
ACTIVITY TOTAL:	0	3			
USS Obrien (DD975), 20601					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Ogden (LPD5), 07176					
ACDU	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			

II.A.1.b. BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
USS Oldendorf (DD972), 20598					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Paul F Foster (DD964), 20575					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Pearl Harbor (LSD52), 21959					
ACDU	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			
USS Peleliu (LHA5), 20748					
ACDU	0	1	ET2	1572	9527
	0	1	ET3	1572	
ACTIVITY TOTAL:	0	2			
USS Rainier (AOE7), 21872					
ACDU	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			
USS Reid (FFG30), 21055					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Rentz (FFG46), 21198					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Rodney M Davis (FFG60), 21391					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Ruben James (FFG67), 21351					
ACDU	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			
USS Rushmore (LSD47), 21530					
ACDU	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			

II.A.1.b. BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
USS Sacramento (AOE1), 05832					
ACDU	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
USS Sides (FFG14), 20967					
TAR	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			
USS Tarawa (LHA1), 20550					
ACDU	0	1	ET2	1572	9527
	0	1	ET3	1572	
ACTIVITY TOTAL:	0	2			
USS Thach (FFG43), 21110					
ACDU	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			
USS Vandegrift (FFG48), 21200					
ACDU	0	1	ET3	1572	1677
ACTIVITY TOTAL:	0	1			
USS Wadsworth (FFG9), 21033					
TAR	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	1			
FLEET SUPPORT ACTIVITIES - NAVY					
AS33 Maintenance Support Component, 45251					
ACDU	0	2	ET2	1572	
	0	2	ET3	1572	
ACTIVITY TOTAL:	0	4			
COMAFLOATRAGRULANT CSTG DT MPT, 52862					
ACDU	0	2	ETC	1572	
ACTIVITY TOTAL:	0	2			
FACSFAC VACAPES Oceana, Va., 42239					
ACDU	0	1	ET1	1572	
ACTIVITY TOTAL:	0	1			
FTSCLANT Det Groton, Conn., 0034A					
ACDU	0	1	ETC	1572	1503
ACTIVITY TOTAL:	0	1			

II.A.1.b. BILLETTS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

ACTIVITY, UIC, PHASING INCREMENT	BILLETTS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
FTSCLANT Det Mayport, Fla., 0038A					
ACDU	0	1	ETC	1572	1473
	0	1	ETC	1572	1491
ACTIVITY TOTAL:	0	2			
FTSCLANT Norfolk, Va., 65912					
ACDU	0	1	ETC	1572	1516
ACTIVITY TOTAL:	0	1			
SIMA Earle Colts Neck, N.J., 47080					
ACDU	0	1	ET1	1572	
	0	1	ET3	1572	1416
ACTIVITY TOTAL:	0	2			
SIMA Pascagoula, Miss., 47318					
ACDU	0	2	ET2	1572	1491
	0	1	ET3	1572	1491
ACTIVITY TOTAL:	0	3			
Trident Refit Facility, Kings Bay, Ga., 44466					
ACDU	0	1	ET2	1572	
ACTIVITY TOTAL:	0	1			
AS40 Maintenance Support Component, 45255					
ACDU	0	1	ET2	1572	
	0	1	ET3	1572	1491
ACTIVITY TOTAL:	0	2			
AS41 Maintenance Support Component, 68780					
ACDU	0	1	ET1	1572	
	0	1	ET3	1572	
ACTIVITY TOTAL:	0	2			
Fleet Combat Training Center Pacific, 61665					
ACDU	0	2	ET2	1572	
	0	2	ET3	1572	
ACTIVITY TOTAL:	0	4			
FTSC Pacific Det Yokouska, Japan, 55305					
ACDU	0	1	ETC	1511	1572
ACTIVITY TOTAL:	0	1			

II.A.1.b. BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
FTSC Pacific, Det Sasebo, Japan, 39450					
ACDU	0	1	ETCS	1511	1572
ACTIVITY TOTAL:	0	1			
FTSCPAC Det Everett, Wash., 55232					
ACDU	0	1	ETC	1572	1471
ACTIVITY TOTAL:	0	1			
NAVIMFAC Pearl Harbor, Hawaii, 39290					
ACDU	0	4	ET2	1572	
	0	2	ET2	1572	9526
ACTIVITY TOTAL:	0	6			
SIMA Everett, Wash., 49769					
ACDU	0	1	ET1	1572	
ACTIVITY TOTAL:	0	1			
SIMA San Diego, Calif., 65918					
ACDU	0	1	ET1	1572	9527
	0	1	ET2	1572	9527
ACTIVITY TOTAL:	0	2			
SRF Yokosuka, Japan, 62758					
ACDU	0	1	ET1	1572	
ACTIVITY TOTAL:	0	1			

II.A.1.c. TOTAL BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

DESIG/ RATING	PNEC/SNEC PMOS/SMOS		PFYs		CFY00		FY01		FY02		FY03		FY04	
			OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
NAVY OPERATIONAL ACTIVITIES - ACDU														
ET2	1503	1572		1	0		0		0		0		0	
ET2	1510	1572		1	0		0		0		0		0	
ET2	1511	1572		1	0		0		0		0		0	
ET2	1572			17	0		0		0		0		0	
ET2	1572	1416		2	0		0		0		0		0	
ET2	1572	1589		2	0		0		0		0		0	
ET2	1572	1677		5	0		0		0		0		0	
ET2	1572	9526		2	0		0		0		0		0	
ET2	1572	9527		4	0		0		0		0		0	
ET3	1572			45	0		0		0		0		0	
ET3	1572	1416		53	0		0		0		0		0	
ET3	1572	1471		7	0		0		0		0		0	
ET3	1572	1677		34	0		0		0		0		0	
NAVY OPERATIONAL ACTIVITIES - TAR														
ET2	1572	1677		1	0		0		0		0		0	
ET3	1572			1	0		0		0		0		0	
ET3	1572	1416		7	0		0		0		0		0	
ET3	1572	1677		5	0		0		0		0		0	
NAVY FLEET SUPPORT ACTIVITIES - ACDU														
ETCS	1511	1572		1	0		0		0		0		0	
ETC	1511	1572		1	0		0		0		0		0	
ETC	1572			2	0		0		0		0		0	
ETC	1572	1471		1	0		0		0		0		0	
ETC	1572	1473		1	0		0		0		0		0	
ETC	1572	1491		1	0		0		0		0		0	
ETC	1572	1503		1	0		0		0		0		0	
ETC	1572	1516		1	0		0		0		0		0	
ET1	1572			5	0		0		0		0		0	
ET1	1572	9527		1	0		0		0		0		0	
ET2	1572			10	0		0		0		0		0	
ET2	1572	1491		2	0		0		0		0		0	
ET2	1572	9526		2	0		0		0		0		0	
ET2	1572	9527		1	0		0		0		0		0	
ET3	1572			5	0		0		0		0		0	
ET3	1572	1416		1	0		0		0		0		0	
ET3	1572	1491		2	0		0		0		0		0	

II.A.1.c. TOTAL BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

DESIG/ RATING	PNEC/SNEC PMOS/SMOS	PFYs		CFY00		FY01		FY02		FY03		FY04	
		OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
SUMMARY TOTALS:													
NAVY OPERATIONAL ACTIVITIES - ACDU		174		0		0		0		0		0	
NAVY OPERATIONAL ACTIVITIES - TAR		14		0		0		0		0		0	
NAVY FLEET SUPPORT ACTIVITIES - ACDU		38		0		0		0		0		0	
GRAND TOTALS:													
NAVY - ACDU			212	0		0		0		0		0	
NAVY - TAR			14	0		0		0		0		0	

II.A.3. TRAINING ACTIVITIES INSTRUCTOR AND SUPPORT BILLET REQUIREMENTS

DESIG/ RATING	PNEC/SNEC PMOS/SMOS		PFYs		CFY00		FY01		FY02		FY03		FY04	
			OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL

TRAINING ACTIVITY, LOCATION, UIC: Fleet Training Center, Norfolk, Va., 61797

INSTRUCTOR BILLETS

ACDU														
ETC	1572	9502	0	2	0	2	0	2	0	2	0	2	0	2
ET1	1572	9502	0	6	0	6	0	6	0	6	0	6	0	6
ET2	1572	9502	0	7	0	7	0	7	0	7	0	7	0	7

SUPPORT BILLETS

ACDU														
ET2	1572	9502	0	1	0	1	0	1	0	1	0	1	0	1
TOTAL:			0	16	0	16	0	16	0	16	0	16	0	16

Note: The Instructor Billets requirements are based on a 22-week course and may vary upon final course requirements.

II.A.4. CHARGEABLE STUDENT BILLET REQUIREMENTS

DESIG/ LOCATION, UIC	PNEC/SNEC USMC	PFYs		CFY00		FY01		FY02		FY03		FY04	
		OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
Fleet Training Center, Norfolk, Va., 61797													
	NAVY		24.3		24.3		24.3		24.3		24.3		24.3
SUMMARY TOTALS:													
	NAVY		24.3		24.3		24.3		24.3		24.3		24.3
GRAND TOTALS:													
			24.3		24.3		24.3		24.3		24.3		24.3

II.A.5. ANNUAL INCREMENTAL AND CUMULATIVE BILLETS

DESIG/ RATING	PNEC/SNEC		PFYs BASE	CFY00		FY01		FY02		FY03		FY04	
	PMOS	SMOS		+/-	CUM	+/-	CUM	+/-	CUM	+/-	CUM	+/-	CUM
a. OFFICER - USN			NA										
b. ENLISTED - USN													
Operational Billets ACDU and TAR													
ET2	1503	1572	1	0	1	0	1	0	1	0	1	0	1
ET2	1510	1572	1	0	1	0	1	0	1	0	1	0	1
ET2	1511	1572	1	0	1	0	1	0	1	0	1	0	1
ET2	1572		17	0	17	0	17	0	17	0	17	0	17
ET2	1572	1416	2	0	2	0	2	0	2	0	2	0	2
ET2	1572	1589	2	0	2	0	2	0	2	0	2	0	2
ET2	1572	1677	6	0	6	0	6	0	6	0	6	0	6
ET2	1572	9526	2	0	2	0	2	0	2	0	2	0	2
ET2	1572	9527	4	0	4	0	4	0	4	0	4	0	4
ET3	1572		46	0	46	0	46	0	46	0	46	0	46
ET3	1572	1416	60	0	60	0	60	0	60	0	60	0	60
ET3	1572	1471	7	0	7	0	7	0	7	0	7	0	7
ET3	1572	1677	39	0	39	0	39	0	39	0	39	0	39
Fleet Support Billets ACDU and TAR													
ETCS	1511	1572	1	0	1	0	1	0	1	0	1	0	1
ETC	1511	1572	1	0	1	0	1	0	1	0	1	0	1
ETC	1572		2	0	2	0	2	0	2	0	2	0	2
ETC	1572	1471	1	0	1	0	1	0	1	0	1	0	1
ETC	1572	1473	1	0	1	0	1	0	1	0	1	0	1
ETC	1572	1491	1	0	1	0	1	0	1	0	1	0	1
ETC	1572	1503	1	0	1	0	1	0	1	0	1	0	1
ETC	1572	1516	1	0	1	0	1	0	1	0	1	0	1
ET1	1572		5	0	5	0	5	0	5	0	5	0	5
ET1	1572	9527	1	0	1	0	1	0	1	0	1	0	1
ET2	1572		10	0	10	0	10	0	10	0	10	0	10
ET2	1572	1491	2	0	2	0	2	0	2	0	2	0	2
ET2	1572	9526	2	0	2	0	2	0	2	0	2	0	2
ET2	1572	9527	1	0	1	0	1	0	1	0	1	0	1
ET3	1572		5	0	5	0	5	0	5	0	5	0	5
ET3	1572	1416	1	0	1	0	1	0	1	0	1	0	1
ET3	1572	1491	2	0	2	0	2	0	2	0	2	0	2
Staff Billets ACDU and TAR													
ETC	1572	9502	2	0	2	0	2	0	2	0	2	0	2
ET1	1572	9502	6	0	6	0	6	0	6	0	2	0	6
ET2	1572	9502	8	0	8	0	8	0	8	0	8	0	8
Chargeable Student Billets ACDU and TAR													
			24	0	24	0	24	0	24	0	24	0	24

II.A.5. ANNUAL INCREMENTAL AND CUMULATIVE BILLETS

DESIG/ RATING	PNEC/SNEC PMOS SMOS	PFYs BASE	CFY00		FY01		FY02		FY03		FY04	
			+/-	CUM	+/-	CUM	+/-	CUM	+/-	CUM	+/-	CUM

TOTAL USN ENLISTED BILLETS:

Operational		188	0	188	0	188	0	188	0	188	0	188
Fleet Support		38	0	38	0	38	0	38	0	38	0	38
Staff		16	0	16	0	16	0	16	0	16	0	16
Chargeable Student		24	0	24	0	24	0	24	0	24	0	24

c. OFFICER - USMC NA

d. ENLISTED - USMC NA

II.B. PERSONNEL REQUIREMENTS

II.B.1. ANNUAL TRAINING INPUT REQUIREMENTS

CIN, COURSE TITLE: A-102-0062, AIMS MK XII IFF System Maintenance

COURSE LENGTH: 16.0 Weeks

TOUR LENGTH: 36 Months

ATTRITION FACTOR: Navy: 10%

BACKOUT FACTOR: 0.32

TRAINING ACTIVITY	SOURCE	ACDU/TAR SELRES	CFY00		FY01		FY02		FY03		FY04	
			OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
Fleet Training Center, Norfolk, Va.												
	NAVY	ACDU		80		80		80		80		80
		TAR		5		5		5		5		5
		TOTAL:		85		85		85		85		85

PART III - TRAINING REQUIREMENTS

The following elements are not affected by the AIMS MK XII Identification Friend or Foe and, therefore, are not included in Part III of this NTSP:

III.A.2. Follow-on Training

III.A.2.b. Planned Courses

III.A.2.c. Unique Courses

III.A.3. Existing Training Phased Out

III.A.1. INITIAL TRAINING REQUIREMENTS

COURSE TITLE: AN/UPX-37 Digital Interrogator DT&E and OT&E Initial Training
COURSE DEVELOPER: Contractor
COURSE INSTRUCTOR: Contractor
COURSE LENGTH: 5 Days
ACTIVITY DESTINATIONS: FTC Norfolk
 DT&E Team

LOCATION, UIC	BEGIN DATE	STUDENTS			
		OFF	ENL	CIV	
Marconi Aerospace Inc. ASD, Greenlawn, N.Y., NA	12 Apr 99	0	4 .02	5	Input AOB Chargeable

COURSE TITLE: AN/UPX-37 Digital Interrogator Instructor Training
COURSE DEVELOPER: Contractor
COURSE INSTRUCTOR: Contractor
COURSE LENGTH: 5 Days
ACTIVITY DESTINATIONS: FTC Norfolk
 OT&E Team

LOCATION, UIC	BEGIN DATE	STUDENTS			
		OFF	ENL	CIV	
Marconi Aerospace Inc. ASD, Greenlawn, N.Y., NA	1 st Qtr. FY00	0	3 .02	2	Input AOB Chargeable

III.A.2. FOLLOW-ON TRAINING

III.A.2.a. EXISTING COURSES

CIN, COURSE TITLE: A-102-0062, AIMS MK XII IFF System Maintenance

TRAINING ACTIVITY: Fleet Training Center

LOCATION, UIC: Norfolk, Va., 61797

SOURCE: NAVY **STUDENT CATEGORY:** ACDU - TAR

CFY00		FY01		FY02		FY03		FY04		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	85		85		85		85		85	ATIR
	77		77		77		77		77	Output
	24.3		24.3		24.3		24.3		24.3	AOB
	24.3		24.3		24.3		24.3		24.3	Chargeable

PART IV - TRAINING LOGISTICS SUPPORT REQUIREMENTS

The following elements are not affected by the AIMS MK XII Identification Friend or Foe and, therefore, are not included in Part IV of this NTSP:

IV.A Training Hardware

IV.A.2. Training Devices

IV.C. Facility Requirements

IV.C.1. Facility Requirements Summary (Space/Support) by Activity

IV.C.2. Facility Requirements Detailed by Activity and Course

IV.C.3. Facility Project Summary by Program

IV.A. TRAINING HARDWARE

IV.A.1. TTE / GPTE / SPTE / ST / GPETE / SPETE

CIN, COURSE TITLE: A-102-0062, AIMS MK XII IFF System Maintenance

TRAINING ACTIVITY: Fleet Training Center

LOCATION, UIC: Norfolk, Virginia, 61797

ITEM NO.	EQUIPMENT / TYPE OR RANGE OF REPAIR PARTS	QTY REQD	DATE REQD	GFE CFE	STATUS
TTE					
0001	Signal Generator, SG-841/UPX	19	Jan 97	GFE	Onboard
0002	Control Monitor Unit, C-8430/UPX	17	Jan 97	GFE	Onboard
0003	Electronic Switch, SA-1807/UPA-61	17	Jan 97	GFE	Onboard
0004	Control Monitor, C-8430/UPX	17	Jan 97	GFE	Onboard
0005	Interrogator Mode 4 Computer, KIR-1()/TSEC	18	Jan 97	GFE	Onboard
0006	Transponder Mode 4 Computer, KIT-1()/TSEC	18	Jan 97	GFE	Onboard
0007	Base Mount, MT-4667/U	34	Jan 97	GFE	Onboard
0008	Code Tape Reader, KOI-18/TSEC	2	Jan 97	GFE	Onboard
0009	Code Changer, KYK-13/TSEC	2	Jan 97	GFE	Onboard
0010	Data Transfer Device, AN/CYZ-10	2	Jan 97	GFE	Onboard
0011	Alarm Monitor, BZ-173/UPA-59	17	Jan 97	GFE	Onboard
0012	Receiver-Transmitter, RT859A/APX-72	17	Jan 97	GFE	Onboard
0013	Transponder Control Set, C-6280A/APX-72	17	Jan 97	GFE	Onboard
0014	Control Case, CY-6816/APX-72	17	Jan 97	GFE	Onboard
0015	Electronic Gate, TD-937B/APX-72	17	Jan 97	GFE	Onboard
0016	Mount, MT-3513()/APX	17	Jan 97	GFE	Onboard
0017	Mount, MT-3809/APX-72	17	Jan 97	GFE	Onboard
0018	Interrogator Set, AN/UPX-27	17	Jan 97	GFE	*See Note
0019	Interference Blanker, MX-8758A/UPX	17	Jan 97	GFE	Onboard
0020	Video Synchronizer, SN-501/UPX	17	Jan 97	GFE	*See Note
0021	Decoder Group, AN/UPN-59A (V2)	2	Jan 97	GFE	Onboard
0022	Decoder Group, AN/UPA-59B (V2)	17	Jan 97	GFE	Onboard
0023	Radar Trainer, AN/SPS-T3	2	Jan 97	GFE	Onboard
0024	Signal Distribution Switchboard, SB-1505	2	Jan 97	GFE	Onboard
0025	Trigger Amplifier, AM-1913D/UP	8	Jan 97	GFE	Onboard

IV.A.1. TTE / GPTE / SPTE / ST / GPETE / SPETE

ITEM NO.	EQUIPMENT / TYPE OR RANGE OF REPAIR PARTS	QTY REQD	DATE REQD	GFE CFE	STATUS
0026	Video Amplifier, AM-1914	12	Jan 97	GFE	Onboard
0027	Indicator Group, AN/SPA-25	16	Jan 97	GFE	Onboard
0028	Antenna, AS-177B/UPX	2	Jan 97	GFE	Onboard
0029	Antenna, AS-2188/U	1	Jan 97	GFE	Onboard
0030	AN/UPX-37 Digital Interrogator	9	Oct 00	GFE	Pending
GPETE					
0001	Oscilloscope, COS-6100M	16	Jan 97	GFE	Onboard
0002	Oscilloscope, 2246	2	Jan 97	GFE	Onboard
0003	Electronic Counter, AQI-5328/096	2	Jan 97	GFE	Onboard
0004	Digital Multimeter, 77/AN	16	Jan 97	GFE	Onboard
0005	Volt OHM Meter, Simpson 260	2	Jan 97	GFE	Onboard
0006	Power Measuring Set, AN/USM-177B	2	Jan 97	GFE	Onboard
0007	Megger, MINI 500	1	Jan 97	GFE	Onboard
0008	Pulse Generator, SG-816/U	1	Jan 97	GFE	Onboard
0009	DC Differential Voltmeter, Ungrounded, AN/USM-381	2	Jan 97	GFE	Onboard
0010	Crystal Detector, CAQI-423A	2	Jan 97	GFE	Onboard
0011	Digital Multimeter, 8000A/BU	2	Jan 97	GFE	Onboard
0012	Pulse Generator, SG-1066	17	Jan 97	GFE	Onboard
SPETE					
0001	Radar Test Set, AN/USM-155	20	Jul 98	GFE	Onboard
0002	Pulse Generator, SG-1066	17	Jan 97	GFE	Onboard
0003	Transponder Test Set, TS-1843B/APX-72	17	Jan 97	GFE	Onboard
*Note: FTC Norfolk is reflecting a material deficiency in current inventory of the following items of TTE / GPTE / SPTE / ST / GPETE / SPETE:					
0018	Interrogator Set, AN/UPX-27	17	Jan 97	GFE	14 Onboard
Deficiency will not be resolved when AN/UPX-37 Interrogator Sets are delivered in October 2000 since FTC will be required to teach both systems concurrently.					
0020	Video Synchronizer, SN-501/UPX	17	Jan 97	GFE	8 Onboard

IV.B. COURSEWARE REQUIREMENTS

IV.B.1. TRAINING SERVICES

COURSE / TYPE OF TRAINING	SCHOOL LOCATION, UIC	NO. OF PERSONNEL	MAN WEEKS REQUIRED	DATE BEGIN
AN/UPX-37 Digital Interrogator Initial Training, Session I	Marconi Aerospace Inc. ASD, Greenlawn, NY	9	1	Complete
AN/UPX-37 Digital Interrogator Initial Training, Session II	Marconi Aerospace Inc. ASD, Greenlawn, NY	3	1	FY00

IV.B.2. CURRICULA MATERIALS AND TRAINING AIDS

CIN, COURSE TITLE: A-102-0062, AIMS MK XII IFF System Maintenance

TRAINING ACTIVITY: Fleet Training Center

LOCATION, UIC: Norfolk, Virginia, 61797

TYPES OF MATERIAL OR AID	QTY REQD	DATE REQD	STATUS
Computer AV Projector, LITEPRO 720	2	Jan 97	*See Note
Knowledge Test Administrator's Guide	2	Jan 97	Onboard
Knowledge Test Bank	2	Jan 97	Onboard
Lesson Plan	3	Jan 97	Onboard
Pentium Computer with 17" monitor	2	Jan 97	Onboard
Performance Test Administrator's Guide	2	Jan 97	Onboard
Pre-Faulted AN/UPA-59A (V)2 Module 1A3	3	Jan 97	Onboard
Pre-Faulted AN/UPA-59A (V)2 Module 1A4	2	Jan 97	Onboard
Pre-Faulted AN/UPA-59A (V)2 Module 1A5	2	Jan 97	Onboard
Pre-Faulted AN/UPA-59A (V)2 Module 1A6	3	Jan 97	Onboard
Pre-Faulted AN/UPA-59A (V)2 Module 1A7	2	Jan 97	Onboard
Pre-Faulted AN/UPA-59A (V)2 Module 1A7	2	Jan 97	Onboard
Pre-Faulted AN/UPA-59A (V)2 Module 2A1	1	Jan 97	*See Note
Pre-Faulted AN/UPA-59A (V)2 Module 2A2	1	Jan 97	Onboard
Pre-Faulted AN/UPA-59A (V)2 Module 2A3	1	Jan 97	Onboard
Pre-Faulted AN/UPA-59A (V)2 Module 2A4	1	Jan 97	Onboard
Pre-Faulted AN/UPA-59B (V)2 Module 1A4	2	Jan 97	*See Note
Pre-Faulted AN/UPA-59B (V)2 Module 1A7	2	Jan 97	*See Note
Pre-Faulted AN/UPA-59B (V)2 Module 2A1	1	Jan 97	Onboard
Pre-Faulted AN/UPA-61 Module 1A2A1	1	Jan 97	Onboard
Pre-Faulted AN/UPA-61 Module 1A2A2	1	Jan 97	Onboard
Pre-Faulted AN/UPX-27 Module 1A1A10	2	Jan 97	Onboard
Pre-Faulted AN/UPX-27 Module 1A1A11	1	Jan 97	*See Note
Pre-Faulted AN/UPX-27 Module 1A1A12	3	Jan 97	Onboard
Pre-Faulted AN/UPX-27 Module 1A1A13	1	Jan 97	Onboard
Pre-Faulted AN/UPX-27 Module 1A1A14	1	Jan 97	Onboard
Pre-Faulted AN/UPX-27 Module 1A1A15	2	Jan 97	Onboard
Pre-Faulted AN/UPX-27 Module 1A1A7	2	Jan 97	*See Note
Pre-Faulted AN/UPX-27 Module 1A1A8	2	Jan 97	Onboard
Pre-Faulted Module set for the AN/UPX-37 Digital Interrogator	3	Oct 00	Pending
Pre-Faulted MX-8758A/UPX Module 1A1A3	3	Jan 97	Onboard
Pre-Faulted MX-8758A/UPX Module 1A1A4	2	Jan 97	Onboard
Pre-Faulted MX-8758A/UPX Module 1A1A5	2	Jan 97	Onboard
Pre-Faulted MX-8758A/UPX Module 1A1A6	1	Jan 97	*See Note
Pre-Faulted MX-8758A/UPX Module 1A1A7	4	Jan 97	Onboard
Pre-Faulted MX-8758A/UPX Module 1A1A9	4	Jan 97	Onboard
Pre-Faulted RT-859A/APX-72 Module A1	1	Jan 97	Onboard
Pre-Faulted RT-859A/APX-72 Module A2	2	Jan 97	Onboard
Pre-Faulted RT-859A/APX-72 Module A3	3	Jan 97	Onboard
Pre-Faulted RT-859A/APX-72 Module A4	1	Jan 97	Onboard
Pre-Faulted RT-859A/APX-72 Module A5	2	Jan 97	*See Note
Pre-Faulted RT-859A/APX-72 Module A6	3	Jan 97	Onboard
Pre-Faulted SG-1066/UPX Module 1A1A1	6	Jan 97	Onboard
Pre-Faulted SG-1066/UPX Module 1A1A2	2	Jan 97	*See Note
Pre-Faulted SG-841/UPX Module 1A1A1	1	Jan 97	Onboard
Pre-Faulted SG-841/UPX Module 1A1A2	1	Jan 97	Onboard

Pre-Faulted SG-841/UPX Module 1A1A3

1

Jan 97 Onboard

IV.B.2. CURRICULA MATERIALS AND TRAINING AIDS

TYPES OF MATERIAL OR AID	QTY REQD	DATE REQD	STATUS
Pre-Faulted SG-841/UPX Module 1A1A4	2	Jan 97	Onboard
Pre-Faulted SN-501/UPX Module A3	2	Jan 97	Onboard
Pre-Faulted SN-501/UPX Module A4	2	Jan 97	Onboard
Pre-Faulted SN-501/UPX Module A5	2	Jan 97	Onboard
Pre-Faulted SN-501/UPX Module A6	2	Jan 97	Onboard
Trainee Guide	17	Jan 97	Onboard
Trainee Guide Answer Key	2	Jan 97	Onboard
VHS Video Cassette Player	1	Jan 97	Onboard
Video Cassette "Introduction to AIMS MK XII IFF"	1	Jan 97	Onboard
Video Cassette "Introduction to the AN/UPM-155 Radar Test Set"	1	Jan 97	Onboard

***Note:** FTC Norfolk is reflecting a material deficiency in current inventory of the following items of Curricula Materials and Training Aids:

Computer AV Projector, LITEPRO 720	2	Jan 97	1 Onboard
Pre-Faulted AN/UPA-59A (V)2 Module 2A1	1	Jan 97	0 Onboard
Pre-Faulted AN/UPA-59B (V)2 Module 1A4	2	Jan 97	0 Onboard
Pre-Faulted AN/UPA-59B (V)2 Module 1A7	2	Jan 97	0 Onboard
* Pre-Faulted AN/UPX-27 Module 1A1A11	1	Jan 97	0 Onboard
* Pre-Faulted AN/UPX-27 Module 1A1A7	2	Jan 97	0 Onboard
Pre-Faulted MX-8758A/UPX Module 1A1A6	1	Jan 97	0 Onboard
Pre-Faulted RT-859A/APX-72 Module A5	2	Jan 97	1 Onboard
Pre-Faulted SG-1066/UPX Module 1A1A2	2	Jan 97	0 Onboard

* Deficiencies will not be resolved upon delivery of AN/UPX-37 Pre-Faulted Modules in October 2000, and will remain deficient until attrition of AN/UPX-27 Analog Interrogator is complete.

IV.B.3. TECHNICAL MANUALS

CIN, COURSE TITLE: A-102-0062, AIMS MK XII IFF System Maintenance

TRAINING ACTIVITY: Fleet Training Center

LOCATION, UIC: Norfolk, Virginia, 61797

TECHNICAL MANUAL NUMBER / TITLE	MEDIUM	QTY REQD	DATE REQD	STATUS
0816-LP-091-4540 RT-859/APX-72 and RT-859A/APX-72 Maintenance	Hard copy	40	Jan 97	Onboard
0816-LP-091-4541 RT-859/APX-72 and RT-859A/APX72 IPB	Hard copy	40	Jan 97	Onboard
NA 16-35C6280-1 Rev 1 C-6280 (P) /APX Control Maintenance	Hard copy	40	Jan 97	Onboard
NA 16-35TS1843-1 TS-1843A/APX Test Set Operation and Maintenance	Hard copy	40	Jan 97	Onboard
NA 16-35TS1843-2 TS-1843B/APX Test Set Operation and Maintenance	Hard copy	40	Jan 97	Onboard
SE 230-AA-OP1-010 C-8430/UPX Control Monitor Operating Instruction Chart	Hard copy	40	Jan 97	Onboard
EE-230CJ-OM1-010 AN/UPA-59A and AN/UPA59B Decoder Group Maintenance	Hard copy	40	Jan 97	Onboard
EE-230-FA-OM1-010 AN/UPA-61 Switching Group Maintenance	Hard copy	40	Jan 97	Onboard
EE-010-OA-OP1-010 PP-6099B/APX-72 Power Supply Maintenance	Hard copy	40	Jan 97	Onboard
NA 16-60SN501-1 SN-501/UPX Video Synchronizer Maintenance	Hard copy	40	Jan 97	Onboard
EE-690-DF-INM-010 MX-8758A/UPX Interference Blanker Maintenance	Hard copy	40	Jan 97	Onboard
EE-230-FC-PIH-010 AN/UPA-59A (V)2 and AN/UPA-59B (V)2 Decoder Group Programmed Instruction Book	Hard copy	40	Jan 97	Onboard
EE-230-BK-IMMO-010 CY-7557/UPX-28 Transponder Test Set Operation and Maintenance	Hard copy	40	Jan 97	Onboard
EE-216-GP-OM1-010 CY-6816/APX and CY-6816A/APX Control Case Maintenance	Hard copy	40	Jan 97	Onboard
EE-230-BT-OM1-010 AN/UPX-28 (V) Operation and Maintenance	Hard copy	40	Jan 97	Onboard
0967-LP-377-1010 AS-177A/UPX Antenna Assembly Instruction Book	Hard copy	40	Jan 97	Onboard

IV.B.3. TECHNICAL MANUALS

TECHNICAL MANUAL NUMBER / TITLE	MEDIUM	QTY REQD	DATE REQD	STATUS
SE-230-AA-OP1-010 C-8430/UPX Control Monitor Maintenance	Hard copy	40	Jan 97	Onboard
0967-LP-390-8030 Maintenance Manual for the AIMS MK XII IFF System	Hard copy	40	Jan 97	Onboard
0967-LP-390-8040 Operator's Manual for the AIMS MK XII IFF System	Hard copy	40	Jan 97	Onboard
EE-112-CD-FCB-002/2114-AS-2188A AS-2188/U Antenna Maintenance	Hard copy	40	Jan 97	Onboard
0967-LP-427-0010 TD-937A/SPX Electronic Gate Maintenance	Hard copy	4	Jan 97	Onboard
0967-LP-434-9010 AS-177B/UPX Antenna Maintenance	Hard copy	40	Jan 97	Onboard
EE-230-EA-OM1-010 Installation, Maintenance and Operation for the AS-2189/U IFF Antenna	Hard copy	40	Jan 97	Onboard
0967-LP-450-4010 AS-2787/UPX Antenna Operator Instruction Chart	Hard copy	40	Jan 97	Onboard
NA 16-60UPX25-1 AN-UPX-25 Interrogator Set Maintenance	Hard copy	40	Jan 97	Onboard
0967-LP-542-5010 AN/UPX-27 Interrogator Set Maintenance	Hard copy	40	Jan 97	Onboard
0967-LP-958-8010 AS-1065/UPX Antenna Maintenance	Hard copy	2	Jan 97	Onboard
N0002400003 Electronics Installation and Maintenance Book	Hard copy	2	Jan 97	Onboard
SE000-01-IMB-010 Electronics Installation and Maintenance Book	Hard copy	2	Jan 97	Onboard
0969-LP-130-5010 SG-841/UPX Pulse Generator Maintenance	Hard copy	40	Jan 97	Onboard
0969-LP-166-3010 SG-1066/UPX Pulse Generator Technical Manual	Hard copy	40	Jan 97	Onboard
NA 16-60MKXII-IFM-1 MK XII IFF Interface Information Guide	Hard copy	40	Jan 97	Onboard
EE230-TT-GYD-010 MK XII IFF User's Guide	Hard copy	40	Jan 97	Onboard
EE230-WA-OMI-010 AS-3430/SPX Antenna Maintenance	Hard copy	40	Jan 97	Onboard

IV.B.3. TECHNICAL MANUALS

TECHNICAL MANUAL NUMBER / TITLE	MEDIUM	QTY REQD	DATE REQD	STATUS
NAVAIR 16-30UPM155-2 AN/UPM155 Radar Test Set, Maintenance Instructions	Hard copy	2	Jan 97	Onboard
NAVAIR-16-30UPM155-1 AN/UPM155 Radar Test Set, Operating Instructions	Hard copy	40	Jan 97	Onboard
NAVSHIPS 92903 (A) Radar Signal Distribution Switchboard Maintenance	Hard copy	2	Jan 97	Onboard
Not Yet Assigned Operations Manual for the AN/UPX-37 Digital Interrogator	Hard copy	40	Oct 00	Pending
Not Yet Assigned Maintenance Manual with IPB for the AN/UPX-37 Digital Interrogator	Hard copy	40	Oct 00	Pending
SE280-CB-MMA-010 AN/SPS-T3B and AN/SPC T3C Maintenance Volume 1	Hard copy	2	Jan 97	Onboard
SE280-CB-MMA-020 AN/SPS-T3B and AN/SPS-T3C Maintenance Volume 2	Hard copy	2	Jan 97	Onboard

PART V - MPT MILESTONES

COG CODE	MPT MILESTONES	DATE	STATUS
CNM	Approved MK XII for fleet use	Mar 1971	Completed
TSA	Developed Proposed MK XII NTSP	Oct 1991	Completed
CNO	Approved MK XII NTSP	Apr 1992	Completed
TSA	Established revised MK XII maintenance training at FTC Norfolk	Jun 1997	Completed
PDA	Awarded contract for new AN/UPX-37 Digital Interrogator	Jul 1998	Completed
PDA	Conducted DT&E	Feb 1999	Completed
TSA	Developed Draft NTSP (Update)	May 1999	Completed
PDA	Conducted OT&E	Sep 1999	Completed
TSA	Developed Proposed NTSP (Update)	Oct 1999	Completed
CNO	Approved MK XII NTSP (Update)	Apr 2000	Completed
PDA	Begin AN/UPX-37 Shipboard Installation	4 th Qtr FY00	Pending
PDA	Establish IOC for the AN/UPX-37 Digital Interrogator	4 th Qtr FY00	Pending
PDA	Deliver AN/UPX-37 TD/TTE/TA to FTC Norfolk	Oct 2000	Pending
PDA	Achieve Material Support Date	Mar 2001	Pending
TSA	Establish maintenance training for the AN/UPX-37 Digital Interrogator at FTC Norfolk	Apr 2001	Pending

PART VI - DECISION ITEMS/ACTION REQUIRED

DECISION ITEM OR
ACTION REQUIRED

COMMAND ACTION

DUE DATE

STATUS

None

PART VII – POINTS OF CONTACT

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