NAVY TRAINING SYSTEM PLAN

FOR THE

AIMS MARK XII
IDENTIFICATION FRIEND OR FOE

N86-NTSP-E-30-7115F/P

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AIMS MARK XII IDENTIFICATION FRIEND OR FOE

EXECUTIVE SUMMARY

This Navy Training System Plan (NTSP) identifies the manpower, personnel, and training requirements associated with the AIMS MK XII Identification Friend or Foe (IFF) system, hereafter referred to as the 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. This NTSP addresses only the shipboard application of the MKXII.

Although mature, the MK XII continues to evolve as technology advances the capabilities of existing MK XII equipment and improved interface systems develop. The existing analog AN/UPX-25(V) and AN/UPX-27 Interrogators are being replaced by the AN/UPX-37 Digital Interrogator. The AN/UPX-37 Digital Interrogator is in the Operations and Support Phase of the Defense Acquisition System. Initial Operational Capability (IOC), Navy Support Date (NSD), and Material Support Date (MSD) for the AN/UPX-37 were achieved in December 2000. Additionally, existing analog AN/UPX-28, AN/APX-64, AN/APX-72, and AN/APX-100 Transponder Sets are being replaced by the new Common IFF Digital Transponder (CXP). The CXP is a Commercial Off-The-Shelf, Non-Developmental, Acquisition Category IV (T) program that will reach Acquisition Milestone III Decision (Production or Fielding/Deployment Approval Manufacturing Development) in fourth quarter Fiscal Year 04. IOC, NSD, and MSD for CXP are scheduled for March 2004.

The MK XII is operated by Officers and Operations Specialists assigned to the ship's Combat Information Center (CIC). There are no operator or watchstation billets specifically dedicated to the MK XII. Electronics Technicians (ET) 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. The CXP will be maintained at the organizational and depot level.

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 the Fleet Training Center (FTC), Norfolk, Virginia. CXP organizational level maintenance training will be added to the existing MK XII maintenance course at FTC Norfolk. Since the MK XII is a mature system, all manpower requirements are established. No change to existing manpower is required by incorporation of the AN/UPX-37 Digital Interrogator or the CXP.

AIMS MARK XII IDENTIFICATION FRIEND OR FOE

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LIST OF ACRONYMS

2M	Microminiature
3M	Maintenance and Material Management
AATCC	Amphibious Air Traffic Control Center
AC	Alternating Current
ACDU	Active Duty
ADS-B	Automatic Dependent Surveillance-Broadcast
AIMS	A - Air Traffic Control Radar Beacon System (ATCRBS)
	I - Identification Friend or Foe (IFF)
	M - MK XII
	S - Systems (indicating many configurations)
ALSP	Acquisition Logistics Support Plan
AOB	Average Onboard
ATCRBS	Air Traffic Control Radar Beacon System
ATIR	Annual Training Input Requirement
BIT	Built-In Test
CATCC	Carrier Air Traffic Control Center
CFY	Current Fiscal Year
CIC	Combat Information Center
CICU	Combat Information Center Upgrade
CIFF	Central Identification Friend or Foe
CIN	Course Identification Number
CNO	Chief of Naval Operations
COMLANTFLT	Commander Atlantic Fleet
COMPACFLT	Commander Pacific Fleet
CONUS	Continental United States
CVN	Aircraft Carrier Nuclear
CXP	Common IFF Digital Transponder
DAIR	Direct Altitude Identification Readout
DT&E	Developmental Test and Evaluation
EM	Electronic Module
EMCON	Electronic Emission Control
ET	Electronics Technician
FMS	Foreign Military Sales

AIMS MARK XII IDENTIFICATION FRIEND OR FOE

LIST OF ACRONYMS

FTC	Fleet Training Center
FY	Fiscal Year
GPETE	General Purpose Electronic Test Equipment
IFF	Identification Friend or Foe
IOC	Initial Operating Capability
ISLS	Interrogation Side Lobe Suppression
JROC	Joint Required Operational Capability
LPD	Amphibious Transport Dock Ship
MSD	Material Support Date
NA	Not Applicable
NAVAIR	Naval Air Systems Command
NAVICP	Navy Inventory Control Point
NAVPERSCOM	Navy Personnel Command
NAWCAD	Naval Air Warfare Center Aircraft Division
NEC	Navy Enlisted Classification
NETC	Naval Education and Training Command
NSD	Navy Support Date
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
PDA	Principal Development Activity
PFY	Prior Fiscal Year
PMA	Program Manager, Air
PPI	Planned Position Indicator
PQS	Personnel Qualifications Standard

AIMS MARK XII IDENTIFICATION FRIEND OR FOE

LIST OF ACRONYMS

RF	Radio Frequency
RFT	Ready For Training
SIF	Selective Identification Feature
SPETE	Special Purpose Electronic Test Equipment
TAR	Training and Administration of the Naval Reserve
TD	Training Device
TTE	Technical Training Equipment
TECHEVAL	Technical Evaluation
TSA	Training Support Agency
UIC	Unit Identification Code
USS	United States Ship
VAC	Volts Alternating Current

AIMS MARK XII IDENTIFICATION FRIEND OR FOE

PREFACE

This Proposed Navy Training System Plan (NTSP) for the AIMS (see below for AIMS acronym) Mark XII Identification Friend or Foe (IFF) system, hereafter referred to as the MK XII, is an update to the Draft AIMS Mark XII IFF NTSP, E-30-7115E/D, dated March 2002. This NTSP complies with guidelines set forth in the Navy Training Requirements Documentation Manual OPNAV Publication P-751-1-9-97.

The AIMS acronym was derived from:

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

This document incorporates comments from Naval Education and Training Command (NETC) and NAVAIR Codes 3.1.4.1 and 4.5.9.4. The comments are all general in nature.

PART I - TECHNICAL PROGRAM DATA

A. NOMENCLATURE-TITLE-PROGRAM

1. **Nomenclature-Title-Acronym.** AIMS Mark XII IFF

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 (N612)

OPO Resource Sponsor..... CNO (N612)

Developing Agency ..... NAVAIR (PMA213)

Training Agency ..... COMLANTFLT
COMPACFLT
NETC

Training Support Agency..... NAVAIR (PMA205)

Manpower and Personnel Mission Sponsor..... CNO (N12)
NAVPERSCOM (PERS-4, PERS-406D)

Director of Naval Training ..... CNO (N00T)

D. SYSTEM DESCRIPTION

1. Operational Uses. 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 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 aircraft identification and altitude information. 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.

Existing IFF transponder and interrogator equipment used by the Navy are beyond their designed service life and suffer from poor reliability and parts obsolescence. Outdated technology adversely affects reliability, maintainability, and availability. The existing analog systems are increasingly difficult to calibrate and maintain, and repair parts are increasingly difficult to procure, resulting in an unacceptable level of mission readiness. Without upgrading these systems, the Navy's IFF capability will become antiquated and inefficient, with ever increasing maintenance and support costs. The need for this upgrade is documented as a part of the Joint Required Operational Capability (JROC) Mission Need Statement for Combat Identification (JROC Memo 027-92 of 13 Apr 92). The majority of fielded IFF transponders, including most of the AN/APX-100 (V) Transponders in tri-service use, do not have Mode S or growth capabilities to upgrade to Mode S. Therefore, the requirement exists to upgrade existing systems to achieve equal or better performance in conjunction with increased reliability, maintainability, and availability.

The CXP is a receiver-transmitter that provides automatic IFF of air or surface vehicles. It provides identification and surveillance reporting in response to challenges from interrogator-equipped airborne or seaborne platforms. The CXP also provides aircraft altitude reporting and tracking data necessary for civil and military air traffic control. The new CXP will continue to provide all functions of the legacy systems with the addition of Mode S Level III that includes Downlink of Aircraft Parameters and interoperation with Traffic Alert and Collision Avoidance System I/II Change 7.0. The CXP will also support future growth to a new secure IFF wave form, MK XII Mode 5, as well as Automatic Dependent Surveillance - Broadcast (ADS-B) receive capability.

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 (NAVAIR), Program Manager, Air (PMA) 213.

E. DEVELOPMENTAL TEST AND OPERATIONAL TEST. The Chief of Naval Material approved the MK XII for Fleet use in March 1971. The approval was based on the successful Technical Evaluations (TECHEVAL) and Operational Evaluations (OPEVAL) of individual system components. As updated and modified components were incorporated into the MK XII, acceptance tests were performed as necessary.

Developmental Test and Evaluation and (DT&E) on the AN/UPX-37 Digital Interrogator was completed at NAVAIR St. Inigoes, Maryland, in May 1999. Operational Test and Evaluation (OT&E) was completed onboard the United States Ship (USS) George Washington, Aircraft Carrier Nuclear (CVN) 73, in September 1999.

DT&E of the CXP was completed in third quarter FY03. OT&E of the CXP commenced in first quarter FY04 aboard the Amphibious Dock Landing Ship USS Whidbey Island (LSD 41) and is scheduled to be completed in November 2003. OT&E is being performed by, Commander Operational Test and Evaluation Force personnel.

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. The AN/UPX-37 Digital Interrogator replaced the analog AN/UPX-25(V) and AN/UPX-27 Interrogators. The CXP will replace the analog AN/UPX-28, AN/APX-64, AN/APX-72, and AN/APX-100 Transponder Sets.

G. DESCRIPTION OF NEW DEVELOPMENT

1. Functional Description. The MK XII 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 of operation are:

- Mode 1 - used as directed by field commands with 32 response codes available
- Mode 2 - used for platform identification by a 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 assigned by the operational command outside of CONUS, with 4,096 response codes available

- Mode 4 - provides secure identification of friendly platforms and is classified
- Mode C - provides barometric pressure altitude of aircraft in 100-foot increments up 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. A Black IFF is a "stand-alone" interrogator subsystem not associated with any radar system; only IFF returns can be displayed. With a 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" weapon system platforms by transmitting an encoded signal to evoke a response for identification. The interrogator subsystem is comprised of:

(1) 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-25(V), AN/UPX-27, and AN/UPX-37. The new AN/UPX-37 Digital Interrogator contains both AN/UPX-25(V) and AN/UPX-27 functionality and is replacing all AN/UPX-25(V) and 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 is employed aboard AEGIS and amphibious assault class ships. The AN/UPX-29(V) is not included in this NTSP. For further information refer to the AN/UPX-29(V) Interrogator System NTSP, E-30-7815B/D, dated February 2002.

(2) 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-4328/UPX Directional Antenna is mounted "piggy-back" to the search radar antenna or is slaved to the antenna when mounted on a separate pedestal.

(3) 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.

(4) 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.

(5) 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 omni-directional antenna. The AN/UPA-61 consists of an electronic switch assembly and control monitor assembly.

(6) 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.

(7) 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.

(8) MX-8758( )/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."

(9) 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, intra-target data indicator, and video decoder.

(10) C-8430/UPX Master Identification Friend or Foe Control Monitor. Each interrogator subsystem 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).

(11) 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 encrypted decoding of Mode 4 transponder replies.

(12) KIK-18( )/TSEC, KYK-13, KOI-18-01 Cryptographic Code Keys. The KIK-18/TSEC and KIK-18A/TSEC Cryptographic Code Key sets the individual cryptographic codes for the KIR-1( )/ TSEC and KIT-1( )/TSEC. 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.

(a) 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.

(b) AS-177( )/UPX Omnidirectional Antenna. The AS-177/UPX, AS-177A/UPX, and AS-177B/UPX Omnidirectional Antennas receive IFF interrogations for processing by the transponder and then radiate subsequent replies. The omni-directional antenna also operates in conjunction with the AN/UPM-155 Test Set for systems tests.

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

(d) 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.

(e) 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.

(f) 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.

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

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

(i) 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 sources, are 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) AN/APX-117(V) Common IFF Digital Transponder System. The AN/APX-117(V) CXP System operates on the challenge-response principle. The system responds to interrogation. The transponder is used as part of a secondary radar system. The CXP will operate within the existing frequency spectrum for IFF operations. The AN/APX-117(V) System is intended primarily for shore use accepting 115 Volts Alternating Current (VAC) Input.

(a) RT-1835/APX-117(V) Transponder Set. The RT-1835/APX-117(V) Transponder Set is used aboard ships as a receiver-transmitter which, when properly challenged, automatically processes and transmits coded replies.

(b) C12664/APX Transmitter Control Unit. The C12664/APX Transmitter Control Unit is used 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 and the reply codes, and to select modes.

(c) MT-7238/APX Electrical Equipment Mounting Base. The MT-7221/APX Electrical Equipment Mounting Base provides a mount for shipboard and shore station installation of Receiver Transmitter RT-1838(C)/APX 117(V).

(d) AS-177( )/UPX Omnidirectional Antenna. The AS-177/UPX, AS-177A/UPX, and AS-177B/UPX Omnidirectional Antennas receive IFF interrogations for processing by the transponder and then radiate subsequent replies. The omni-directional antenna may also be used in conjunction with the AN/UPM-155 Test Set for systems tests.

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

(f) J-6615/APX Interconnecting Box. The J-6615/APX Interconnecting Box provides the interface between the RT-1838/APX-117(V) and other ancillary equipment. This includes readily accessible interconnects for suppression signals and interfaces for KIT-IC/TSEC and C-12665. Jacks for Ethernet and RS-232 are also provided.

(g) CY-8882/APX Electronic Communications Equipment Case. The CY-8882/APX Electronic Communications Equipment Case provides a means of installation of Radar Transmitter Control C-12665/APX. It is "connectorized" with some flexibility for installation activity to mount as best fit. J1 provides power and control signals, while J2 provides MUTE interface for ship's Electronic Emission Control (EMCON) equipment.

(3) AN/APX-118(V) Common IFF Digital Transponder System. The AN/APX-118(V) CXP System operates identically to the AN/APX-117(V) CXP System. The only difference between the two systems is that the AN/APX-118(V) CXP System contains built-in cryptographic capability and does not use a KIT-1C/TSEC Cryptographic Computer.

(a) RT-1836(C)/APX-118(V) Transponder Set. The RT-1836(C)/APN-118(V) Transponder Set is used aboard ships as a receiver-transmitter which, when properly challenged, decodes interrogations and produces the appropriate coded replies.

(b) C12664/APX Transponder Control Unit. The C12664/APX Transponder Control Unit is used 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 and the reply codes, and to select modes.

(c) MT-17238/APX Electrical Equipment Mounting Base. The MT-17238/APX Electrical Equipment Mounting Base provides a lockable mount for shipboard and shore station installations of Receiver Transmitter RT-1836(C)/APX-118(V) in order to comply with COMSEC requirements. This mount is necessary due to the use of an embedded cryptographic computer.

(d) AS-177( )/UPX Omnidirectional Antenna The AS-177/UPX, AS-177A/UPX, and AS-177B/UPX Omnidirectional Antennas receive IFF interrogations for processing by the transponder and then radiate subsequent replies. The omni-directional antenna may also be used in conjunction with the AN/UPM-155 Test Set for systems tests.

(e) CY-882/APX Electronic Communications Equipment Case. The CY-882/APX Electronic Communications Equipment Case provides a means of installation of Radar Transmitter Control C-12664/APX. It is "connectorized" with some flexibility for

installation activity to mount as best fit. J1 provides power and control signals, while J2 provides MUTE interface for ship's EMCON equipment.

(f) J-6616/APX Interconnecting Box. The J-6616/APX Interconnecting Box provides the interface between the RT-1838/APX-117(V) and other ancillary equipment and converts ships' 115 VAC to 28 Volts Direct Current for equipment usage. It provides readily accessible interconnects for suppression signals and interfaces for KIT-1C/TSEC and C-12665. Jacks for Ethernet and RS-232 are also provided

2. Physical Description

NOMENCLATURE/EQUIPMENT	DIMENSIONS H x W x D (inches)	WEIGHT (pounds)
AN/UPX-25 Interrogator Set	15 x 14.5 x 19	99.0
AN/UPX-27 Interrogator Set	19 x 16 x 11	60.0
AN/UPX-37 Digital Interrogator Set	19 x 16 x 11	55.0
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-4328/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 Power Supply	14 x 19 x 27.2	131.0
C-9374/UPA-57 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
SN-501/UPX Video Synchronizer	4.9 x 13.7 x 16.75	26.0

NOMENCLATURE/EQUIPMENT	DIMENSIONS H x W x D (inches)	WEIGHT (pounds)
MX-8758/UPX Interference Blanker	5 x 17 x 16.88	25.0
UPA-59(V) Decoder Group: KY-761(P)/UPA-59A(V) Video KY-761A(P)/UPA-59(V) Video	 12 x 5.94 x 19 12 x 5.94 x 19	 29.0 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-1A/TSEC Cryptographic Computer	6.8 x 5.8 x 8.6	11.0
KIK-18/TSEC Cryptographic 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
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
KIT-1C/TSEC Crypto Computer	6.8 x 5.8 x 8.6	12.0

NOMENCLATURE/EQUIPMENT	DIMENSIONS H x W x D (inches)	WEIGHT (pounds)
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
AN/APX-117(V) CXP	5.375 x 5.375 x 10.2	10.0
APX-117(V) Transponder	6 x 7 x 13.5	15.0
C12664/APX Transponder Control Unit	5.75 x 5.25 x 3.09	2.75
MT-7221/APX Equipment Mount	1.6 x 6 x 8.56	2.0
Equipment Mount for the RT-1836(C)/APX Transponder Set.	1.6 x 6 x 8.56	2.0
APX-118(V) Transponder	6 x 7 x 13.5	15.0
MT-7238/APX Electrical Equipment Mounting Base	2.75 x 6 x 12.25	2.5
CY-8882/APX Electronic Communications Equipment Case	10 x 8 x 6.25	7.5
J-6615/APX Interconnecting Box	10 x 14 x 4	12.5
J-6616/APX Interconnecting Box	10 x 14 x 4	12.5

3. New Development Introduction. The MK XII was retrofitted into ships that previously employed the MK X. The MK XII was installed during the production of new acquisitions subsequent to the MK X. The AN/UPX-37 Digital Interrogator is replacing the 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 that 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 equipped 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) Carrier Air Traffic Control Center (CATCC) and Amphibious Air Traffic Control Center (AATCC) 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. There is no new technology associated with the MK XII. However, the new AN/UPX-37 Interrogator and CXP Transponder systems will use digital vice analog technology for transmitting and receiving IFF data. Two additional changes to the MK XII are in the research and development process:

- A new MK XIIA Mode 5 capability that will replace the existing Mode 4
- A Combat Information Center Upgrade (CICU) that will replace the existing AN/UPA-59 Decoder/Remote Control Indicator

When the MK XIIA Mode 5 and CICU programs have been formalized and more information becomes available, the information will be included in updates to this NTSP. For additional information concerning the MK XIIA Mode 5 and CICU programs, refer to the MK XII In-Service Engineering Activity, NAVAIR St. Inigoes, Code 4.5.9.4.

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 (OS) assigned to the CIC and Air Traffic Controllers (AC) perform these actions during air traffic control operations. Surface ships are capable of operating their MK XII systems on a continuous basis.

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 organizational level maintenance concept in the Fleet today has evolved 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 Ships Maintenance and Material Management (3M)

Manual, Office of the Chief of Naval Operations Instruction 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 (ET) 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. PM is performed in accordance with Maintenance Index Pages (MIP), MIP-4552/002, and the Maintenance Requirements Cards (MRC) that are a part of the Planned Maintenance System (PMS). ET and OS personnel perform AIMS MK XII PM.

PREVENTIVE MAINTENANCE HOURS	
SYSTEM	**MAN-HOURS**
AIMS MK XII with AN/APX-72 or AN/UPX-28(V) with AN/UPM-155 Radar Test Set 4552	10.2
AIMS MK XII with AN/UPX-25, 27, 37 with AN/UPM-155 Radar Test Set 4551	7.4

(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 NAVAIR St. Inigoes IFF Systems Branch. No intermediate level maintenance is planned for the CXP.

c. Depot. All repairable assemblies beyond the capabilities of intermediate level maintenance, with the exception of the CXP and its components, 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 cryptographic repair facilities. Depot level maintenance of the CXP will be performed by BAE Systems at its Greenlawn, New York, facility.

d. Interim Maintenance. Prior to the Navy Support Date (NSD) anticipated for March 2004, interim maintenance of the CXP is being provided by the NAVAIR In-Service Engineering Activity, St. Inigoes, Maryland.

e. Life Cycle Maintenance Plan. There is no single depot level maintenance plan encompassing the many pieces of equipment that make up the different configurations of the MK XII. However, all failed repairable MK XII components beyond the capability of intermediate level repair (organizational level for the CXP) are forwarded to designated depot level repair sites as identified in the appropriate plan.

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 watch station billets specifically dedicated to the MK XII. 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. Initial training has been completed. MK XII follow-on maintenance training is established at Fleet Training Center (FTC) Norfolk, Virginia.

There is no operator course taught exclusively for the MK XII. Operation of the MK XII is taught as a by-product of the primary mission of CIC Officer and OS training courses.

The MK XII maintenance course with AN/UPX-37 information will be Ready For Training (RFT) in April 2003. The addition of the AN/UPX-37 information to the MK XII course curriculum increased the course length by ten days.

The MK XII maintenance course will be updated to include CXP information. A target RFT date of July 2004 has been established. The course length may increase until the legacy system training is phased out.

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 operation and maintenance training was provided to instructors to ensure technical integrity of follow-on training.

The contractor provided initial AN/UPX-37 Digital Interrogator operation and maintenance training to government DT&E, OT&E, and the initial cadre of fleet personnel. Initial training for DT&E personnel was completed in April 1999. Initial training for OT&E and cadre fleet personnel was completed in May 2000.

The contractor provided initial CXP operator and maintenance training to government DT&E, OT&E, and the initial cadre of fleet and instructor personnel. All initial training has been completed for the CXP.

b. Follow-on Training

Title	**AIMS MK XII IFF System Maintenance**
CIN	A-102-0062
Model Manager....	FTC Norfolk
Description.....	This course provides training to the Electronics Technician, including: ° AN/UPX-37 Digital Interrogator ° AS-2188/U, AS2189/U, and AS-4328/UPX Directional Antennas ° AS-177A/UPX and AS-177B/UPX Omnidirectional Antenna ° AN/UPA-57 Antenna Pedestal Group ° AN/UPA-61 RF Switching Group ° SG-841/UPX Pulse Generator ° SN-501/UPX Video Synchronizer ° MX-8758/UPX Interface Blanker ° AN/UPA-59 Decoder Group ° C-8430/UPX Master IFF Control ° KIR-1C/TSEC Crypto Computer ° KIK-18/TSEC, KYK-13, and KOI-18-01 Crypto Code Keys ° AN/APX-117/(V) CXP System ° AN/APX-118/(V) CXP System ° APX-117(V) Transponder ° APX-118(V) Transponder ° C-12664/APX Transponder Control ° MT-7221/APX Mount ° AN/UPX/28 Transponder Set ° PP-6099/APX-72 Transponder ° TD-937/SPX Electronic Gate Upon completion, the student will be able to perform organizational or intermediate level maintenance on the AIMS MK II in a shop environment under limited supervision.

Delivery Method..	Total Hours of Instruction by Delivery Method: ° 267 Hours of Group-Paced Instructor-Led Lecture ° 449 Hours of Group-Paced Instructor-Led Laboratory Media: Classroom Instruction, Text, Video, PowerPoint Presentations, TTE Instructional Strategies by Hour: ° Group-Paced Instructor-Led - 716 Total Hours of Instruction Evaluation Strategies: ° Tests and a Comprehensive Final Examination: Fill-In the Blank, Multiple Choice, Short Answer ° Evaluation of Performance on Troubleshooting Problems Level of Interactivity: Level 2 Level of Learning: Level 4
Location.....	FTC Norfolk
Length.....	115 days
RFT date	Currently available; July 2004 with CXP included
Skill identifier.....	ET 1572
TTE/TD.....	Refer to element IV.A.1 for TTE. TD is Not Applicable.
Prerequisites.....	° A-100-0138, Electronics Technician Core A School ° A-100-0139, Advanced Electronics Technical Core ° A-100-0140, Electronics Technician Strand A School

Course *A-102-0062, AIMS MK XII IFF System Maintenance*, will be taught via platform instruction. Any future development of CBT, CAI, and ICW training material will be Sharable Content Object Reference Model (SCORM) conformant.

There is no specific operator training for AIMS MK XII IFF system. Operator training is provided by individual class ships in their respective CIC training courses and is reflected in applicable CIC watch station PQS. NAVAIR PM, ISEA, Technical Manager, and Logistics Managers provide training assets and supporting technical and training documentation when required to CIC training sites for inclusion into their individual training courses. Refer to ship class NTSPs for operator MTP requirements.

Courses are kept current through close coordination between the PM, ISEA, SSA, Technical Manager, Training Systems Manager, Training Activity, and Logistics Manager.

Fleet feedback and maintenance figures are analyzed to ensure that length/depth of training coincides with failure data. If necessary, changes will be recommended to the training activity for implementation through the training chain of command as required.

In accordance with NAVAIRINST 4130.1C, the ECP process allows for the upgrade of the operational system and the training system, and while taking into consideration the affect on the human. All new engineering changes take into account the human-machine interface for operators, maintainers, and support personnel, and any effect the ECP may have on MPT. The ECP process identifies operator and maintenance training requirements that includes effects on TTE, curriculum, and technical documentation and establishes the best method of implementation. Additionally, in accordance with OPNAVINST 1500.67, Surface Warfare Training Requirements Reviews (SWTRR) have been conducted on a three year periodicity to provide quality control of surface training to ensure effectiveness and appropriateness of rating, Navy Enlisted Classification (NEC), and pipeline training.

c. Student Profiles

SKILL IDENTIFIER	PREREQUISITE SKILL AND KNOWLEDGE REQUIREMENTS
ET 1572	° 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. Not Applicable

I. ONBOARD (IN-SERVICE) TRAINING

1. Proficiency or Other Training Organic to the New Development. Operators use the Program Instruction Handbook for Decoder Group AN/UPA-59A(V)2, NAVELEX 0967-LP-465-5010, and the MK XII IFF Interface Information Guide NA 16-60MKXII-IFM-1 to supplement proficiency training. There is no proficiency or other training for MK XII maintenance since NEC ET 1572 can only be earned by successful completion of training course *A-102-0062, AIMS MK XII IFF System Maintenance*.

a. Maintenance Training Improvement Program. NA

b. 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 Naval Education and Training Publication 10061 (series). There is no PQS for MK XII maintenance.

3. Other Onboard 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 contracts are for procurement of the AN/UPX-37 Digital Interrogator and the CXP. There are no other outstanding contracts for MK XII equipment.

CONTRACT NUMBER	MANUFACTURER	ADDRESS
N00019-01-C-0271 AN/UPX-37 N00019-00-C-0298 CXP	BAE Systems	One Hazeltine Way Greenlawn, NY 11740

2. Program Documentation. The following program documentation is available:

- Joint Required Operational Capability (JROC) Mission Need Statement for Combat Identification, JROC Memo 027-92 of 13 April 1992.
- Operational Logistics Support Summary, ATCE-OLSS-007, revised April 1991; replaced by User's Logistics Support Summary, ATC-ULSS-007 of 19 March 1996
- MK XII IFF Interface Information Guide, NA 16-60MKXII-IFM-1, updated in March 2001
- Acquisition Logistics Support Plan (ALSP) for the AN/UPX-37 Digital Interrogator, ATC-ALSP-010, approved in February 2002
- ALSP for the CXP, ATC-ALSP-31-07, approved in April 2002

3. Technical Data Plan. All required technical manuals are available for the MK XII. Operation and maintenance manuals with Illustrated Parts Breakdown and Maintenance Requirement Cards for the AN/UPX-37 and the CXP are being delivered to each activity during

installation. Refer to element 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 element 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 are required to support the AN/UPX-37 Digital Interrogator or the CXP.

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 existing transponder system of the MK XII program. Repair parts for the CXP will be procured through a Performance Based Logistics program monitored and administrated by NAVICP Mechanicsburg. The material objective for the MK XII is to apply standard Navy supply support and provisioning policies that provide timely and economical life cycle support.

6. Human Systems Integration. The AIMS MK XII IFF legacy system has been operational since the 1960s. There is no information available through this Command to verify that the initial design process included Human Performance parameters, although the individual HSI domains were undoubtedly subject to analysis to some extent.

There are several engineering upgrades (AN/UPX-37, AN/APX-118(V), MK XII Mode 5 and Mode S) being initiated by NAVAIR PMA213, to improve the reliability and maintainability and allow for future growth of the aging MK XII IFF system. Upgrades will utilize an open system architecture design and will be acquired as a non-development items (NDI) resolving reliability and maintainability deficiencies and parts obsolescence issues with significant savings in Fleet support costs.

All new system upgrades will address the human-machine interface for operators, maintainers, and support personnel. The design processes conform to standard human engineering practices as defined in the existing human factors engineering design standards. These principles guide the design and development of future 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, future designs 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 preventive and corrective maintenance

This system has no habitability impact. Manpower issues are covered in Part II and III of this document.

In its current state of design, the AIMS MK XII contains no explosive, radioactive, or carcinogenic materials. Toxic materials are present in small amounts and in forms that present no hazard during any phase of system ownership, including disposal. If the components were to be incinerated, limited amounts of corrosive vapors would be generated by the decomposition of wire insulation. This is common to all electronic equipment meeting the requirements to operate in the specified environments. Environmental and Occupational Safety and Health requirements meet federal, state, and local standards, regulations, and directives and are enforced by respective agencies, as applicable.

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 is an ongoing endeavor through the Field Change Modification Program. Approximately 45 modifications take place each year Fleet-wide, 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 NAVAIR, as appropriate. Installation of the AN/UPX-37 Digital Interrogator began in December 2000 and is scheduled for completion in 2009. The contractor will deliver 610 AN/UPX-37 Digital Interrogators a year through 2009. Installation and delivery schedules for the CXP are currently under development. When this information becomes available it will be added to updates of this NTSP.

2. Ready For Operational Use Schedule. The MK XII was fleet operational in 1971. The AN/UPX-37 and CXP are Ready For Operational Use upon completion of installation and certification.

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 NAVAIR, PMA213.

5. Training Device and Technical Training Equipment Delivery Schedule. All Technical Training Equipment (TTE) required to support MK XII maintenance training, with the exception of the CXP, is currently in place. CXP TTE is scheduled for installation in second

quarter FY04 and will include assets that are representative of planned Fleet installations. No Training Devices (TD) are required.

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
Navy Training Systems Plan for the AN/UPX-29(V) Interrogator System	E-30-7815B/A	PMA213	Approved Sept 03
Navy Training Systems Plan for the Common IFF Digital Transponder Program	A-50-0014/I	PMA213	Initial Aug 00

PART II - BILLET AND PERSONNEL REQUIREMENTS

II.A. BILLET REQUIREMENTS

SOURCE OF MANPOWER: Total Force Manpower Management System **DATE:** December 2002
SOURCE OF SCHEDULE: NAVAIR St. Inigoes **DATE:** November 2002

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

ACTIVITY, UIC		PFYs	CFY03	FY04	FY05	FY06	FY07
OPERATIONAL ACTIVITIES - USN							
AFG 3 USS La Salle	07172	1	0	0	0	0	0
AOE 3 USS Seattle	05848	1	0	0	0	0	0
AOE 4 USS Detroit	20120	1	0	0	0	0	0
AS 39 USS Emory S. Land	45254	1	0	0	0	0	0
AS 40 USS Cable	45255	1	0	0	0	0	0
AS 41 USS McKee	68780	1	0	0	0	0	0
CV 67 USS John F. Kennedy	03367	1	0	0	0	0	0
CVN 65 USS Enterprise	03365	1	0	0	0	0	0
CVN 69 USS Dwight D. Eisenhower	03369	1	0	0	0	0	0
CVN 71 USS Theodore Roosevelt	21247	1	0	0	0	0	0
CVN 73 USS George Washington	21412	1	0	0	0	0	0
CVN 75 USS Harry S. Truman	21853	1	0	0	0	0	0
CVN 76 USS Ronald Reagan	22178	1	0	0	0	0	0
DD 963 USS Spruance	20574	1	0	0	0	0	0
DD 968 USS Arthur W. Radford	20588	1	0	0	0	0	0
DD 977 USS Briscoe	20603	1	0	0	0	0	0
DD 978 USS Stump	20604	1	0	0	0	0	0
DD 987 USS Obannon	20834	1	0	0	0	0	0
DD 988 USS Thorn	20835	1	0	0	0	0	0
DD 989 USS Deyo	20836	1	0	0	0	0	0
DD 997 USS Hayler	21416	1	0	0	0	0	0
FFG 28 USS Boone	21053	1	0	0	0	0	0
FFG 29 USS Stephen W. Groves	21054	1	0	0	0	0	0
FFG 32 USS John L. Hall	21057	1	0	0	0	0	0
FFG 39 USS Doyle	21106	1	0	0	0	0	0
FFG 40 USS Halyburton	21107	1	0	0	0	0	0
FFG 42 USS Klakring	21109	1	0	0	0	0	0
FFG 45 USS Dewert	21197	1	0	0	0	0	0
FFG 47 USS Nicholas	21199	1	0	0	0	0	0
FFG 49 USS Robert G. Bradley	21201	1	0	0	0	0	0
FFG 50 USS Taylor	21231	1	0	0	0	0	0
FFG 52 USS Carr	21233	1	0	0	0	0	0
FFG 53 USS Hawes	21234	1	0	0	0	0	0
FFG 55 USS Elrod	21236	1	0	0	0	0	0
FFG 56 USS Simpson	21350	1	0	0	0	0	0
FFG 58 USS Samuel B. Roberts	21252	1	0	0	0	0	0
FFG 59 USS Kauffman	21390	1	0	0	0	0	0
FFG 8 USS McInerney	21032	1	0	0	0	0	0
LCC 20 USS Mount Whitney	20001	1	0	0	0	0	0

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

ACTIVITY, UIC		PFYs	CFY03	FY04	FY05	FY06	FY07
LHA 2 USS Saipan	20632	1	0	0	0	0	0
LHA 4 USS Nassau	20725	1	0	0	0	0	0
LPD 12 USS Shreveport	07195	1	0	0	0	0	0
LPD 13 USS Nashville	07196	1	0	0	0	0	0
LPD 14 USS Trenton	07200	1	0	0	0	0	0
LPD 15 USS Ponce	07201	1	0	0	0	0	0
LPD 4 USS Austin	07175	1	0	0	0	0	0
LPD 5 USS Ogden	07176	1	0	0	0	0	0
LSD 37 USS Portland	20012	1	0	0	0	0	0
LSD 39 USS Mount Vernon	20014	1	0	0	0	0	0
LSD 44 USS Gunston Hall	21422	1	0	0	0	0	0
LSD 46 USS Tortuga	21562	1	0	0	0	0	0
LSD 48 USS Ashland	21531	1	0	0	0	0	0
LSD 50 USS Carter Hall	21880	1	0	0	0	0	0
LSD 51 USS Oak Hill	21958	1	0	0	0	0	0
T-AE 29 USNS Mount Hood	42844	1	0	0	0	0	0
T-AE 34 USNS Mount Baker	39537	1	0	0	0	0	0
T-AH 20 USNS Comfort	46246	1	0	0	0	0	0
AFG 11 USS Coronado	07194	1	0	0	0	0	0
AOE 10 USS Bridge	21979	1	0	0	0	0	0
AOE 7 USS Rainier	21872	1	0	0	0	0	0
CV 63 USS Kitty Hawk	03363	1	0	0	0	0	0
CV 64 USS Constellation	03364	1	0	0	0	0	0
CVN 70 USS Carl Vinson	20993	1	0	0	0	0	0
CVN 72 USS Abraham Lincoln	21297	1	0	0	0	0	0
CVN 74 USS John C. Stennis	21847	1	0	0	0	0	0
DD 964 USS Paul F. Foster	20575	1	0	0	0	0	0
DD 972 USS Oldendorf	20598	1	0	0	0	0	0
DD 992 USS Fletcher	20839	1	0	0	0	0	0
FFG 15 USS Estocin	20968	1	0	0	0	0	0
FFG 33 USS Jarrett	21058	1	0	0	0	0	0
FFG 37 USS Crommelin	21104	1	0	0	0	0	0
FFG 38 USS Curts	21105	1	0	0	0	0	0
FFG 41 USS McClusky	21108	1	0	0	0	0	0
FFG 43 USS Thatch	21110	1	0	0	0	0	0
FFG 46 USS Rentz	21198	1	0	0	0	0	0
FFG 48 USS Vandegrift	21200	1	0	0	0	0	0
FFG 51 USS Gary	21232	1	0	0	0	0	0
FFG 54 USS Ford	21235	1	0	0	0	0	0
FFG 57 USS Ruben James	21351	1	0	0	0	0	0
FFG 60 USS Rodney M. Davis	21391	1	0	0	0	0	0
FFG 61 USS Ingraham	21430	1	0	0	0	0	0
LCC 19 USS Blue Ridge	05840	1	0	0	0	0	0
LHA 1 USS Tarawa	20550	1	0	0	0	0	0
LHA 5 USS Peleliu	20748	1	0	0	0	0	0
LPD 8 USS Dubuque	07182	1	0	0	0	0	0
LPD 9 USS Denver	07183	1	0	0	0	0	0
LSD 41 USS Whidbey Island	21218	1	0	0	0	0	0
LSD 42 USS Germantown	21639	1	0	0	0	0	0

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

ACTIVITY, UIC		PFYs	CFY03	FY04	FY05	FY06	FY07
LSD 43 USS Fort McHenry	21400	1	0	0	0	0	0
LSD 45 USS Comstock	21452	1	0	0	0	0	0
LSD 47 USS Rushmore	21530	1	0	0	0	0	0
LSD 49 USS Harpers Ferry	21852	1	0	0	0	0	0
LSD 52 USS Pearl Harbor	21959	1	0	0	0	0	0
T-AE 27 USNS Butte	42843	1	0	0	0	0	0
TOTAL:		**93**	0	0	0	0	0
FLEET SUPPORT ACTIVITIES - USN							
COMAFLOATRAGRU Mayport	30734	1	0	0	0	0	0
FACSFAC Jacksonville	53895	1	0	0	0	0	0
FACSFAC Oceana	42239	1	0	0	0	0	0
FCDIT Norfolk	43594	1	0	0	0	0	0
Fleet Combat Training Center Atlantic Norfolk	00281	1	0	0	0	0	0
Fleet Training Center Norfolk	61797	1	0	0	0	0	0
FTSCLANT DET Mayport	0038A	1	0	0	0	0	0
FTSCLANT Norfolk	65912	1	0	0	0	0	0
NAWCAD St. Inigoes	64485	1	0	0	0	0	0
SIMA Mayport	32779	1	0	0	0	0	0
SIMA Norfolk	32770	1	0	0	0	0	0
SIMA Pascagoula	47318	1	0	0	0	0	0
Special Boat Unit 20 Norfolk	42223	1	0	0	0	0	0
Special Boat Unit 22 Stennis Space	52857	1	0	0	0	0	0
Assault Craft Unit 5 Shore Component	46587	1	0	0	0	0	0
FACSFAC San Clemente Island	35623	1	0	0	0	0	0
Fleet Combat Training Center Pacific San Diego	61665	1	0	0	0	0	0
FTSCPAC DET Everett	55232	1	0	0	0	0	0
FTSCPAC DET Pearl Harbor	55302	1	0	0	0	0	0
FTSCPAC DET Sasebo, Japan	39450	1	0	0	0	0	0
FTSCPAC San Diego	55304	1	0	0	0	0	0
Military Sealift Command Office San Diego	43435	1	0	0	0	0	0
Navy Ship Yard Pearl Harbor	32253	1	0	0	0	0	0
SIMA Ingleside	47316	1	0	0	0	0	0
SIMA San Diego	65918	1	0	0	0	0	0
Special Boat Unit 12 San Diego	39696	1	0	0	0	0	0
TOTAL:		26	0	0	0	0	0

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

ACTIVITY, UIC, PHASING INCREMENT	BILLETS OFF	BILLETS ENL	DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
OPERATIONAL ACTIVITIES - USN					
AFG 3 USS La Salle, 07172					
ACDU	0	1	ET2	1572	
ACTIVITY TOTAL:	0	1			
AOE 3 USS Seattle, 05848					
ACDU	0	1	ET3	1572	
ACTIVITY TOTAL:	0	1			
AOE 4 USS Detroit, 20120					
ACDU	0	1	ET3	1572	
ACTIVITY TOTAL:	0	1			
AS 39 USS Emory S. Land, 45254					
ACDU	0	1	ET2	1572	
	0	1	ET3	1572	
ACTIVITY TOTAL:	0	2			
AS 40 USS Cable, 45255					
ACDU	0	1	ET2	1572	
	0	1	ET3	1572	
ACTIVITY TOTAL:	0	2			
AS 41 USS McKee, 68780					
ACDU	0	1	ET2	1572	
	0	1	ET3	1572	
ACTIVITY TOTAL:	0	2			
CV 67 USS John F. Kennedy, 03367					
ACDU	0	1	ET2	1572	
	0	2	ET3	1572	
ACTIVITY TOTAL:	0	3			
CVN 65 USS Enterprise, 03365					
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 OFF	BILLETS ENL	DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
CVN 69 USS Dwight D. Eisenhower, 03369					
ACDU	0	1	ET2	1572	
	0	2	ET3	1572	
ACTIVITY TOTAL:	0	3			
CVN 71 USS Theodore Roosevelt, 21247					
ACDU	0	1	ET2	1572	
	0	2	ET3	1572	
ACTIVITY TOTAL:	0	3			
CVN 73 USS George Washington, 21412					
ACDU	0	1	ET2	1572	
	0	2	ET3	1572	
ACTIVITY TOTAL:	0	3			
CVN 75 USS Harry S. Truman, 21853					
ACDU	0	1	ET2	1572	
	0	2	ET3	1572	
ACTIVITY TOTAL:	0	3			
CVN 76 USS Ronald Reagan, 22178					
ACDU	0	1	ET2	1572	
	0	2	ET3	1572	
ACTIVITY TOTAL:	0	3			
DD 963 USS Spruance, 20574					
ACDU	0	1	ET3	1572	1471
	0	1	ET3	1572	
ACTIVITY TOTAL:	0	2			
DD 968 USS Arthur W. Radford, 20588					
ACDU	0	1	ET3	1572	1471
	0	1	ET3	1572	
ACTIVITY TOTAL:	0	2			
DD 977 USS Briscoe, 20603					
ACDU	0	1	ET3	1572	1471
	0	1	ET3	1572	
ACTIVITY TOTAL:	0	2			

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

ACTIVITY, UIC, PHASING INCREMENT	BILLETS OFF	BILLETS ENL	DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
DD 978 USS Stump, 20604					
ACDU	0	1	ET3	1572	1471
	0	1	ET3	1572	
ACTIVITY TOTAL:	0	2			
DD 987 USS Obannon, 20834					
ACDU	0	1	ET2	1572	1471
	0	1	ET2	1572	
ACTIVITY TOTAL:	0	2			
DD 988 USS Thorn, 20835					
ACDU	0	1	ET2	1572	1471
	0	1	ET3	1572	
ACTIVITY TOTAL:	0	2			
DD 989 USS Deyo, 20836					
ACDU	0	1	ET2	1572	1471
	0	1	ET3	1572	
ACTIVITY TOTAL:	0	2			
DD 997 USS Hayler, 21416					
ACDU	0	1	ET3	1572	
ACTIVITY TOTAL:	0	1			
FFG 28 USS Boone, 21053					
TAR	0	1	ET3	1572	1591
ACTIVITY TOTAL:	0	1			
FFG 29 USS Stephen W. Groves, 21054					
TAR	0	1	ET3	1572	1591
ACTIVITY TOTAL:	0	1			
FFG 32 USS John L. Hall, 21057					
ACDU	0	1	ET3	1572	1678
ACTIVITY TOTAL:	0	1			
FFG 36 USS Underwood, 21103					
ACDU	0	1	ET3	1572	1678
ACTIVITY TOTAL:	0	1			

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

ACTIVITY, UIC, PHASING INCREMENT	BILLETS OFF	BILLETS ENL	DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
FFG 39 USS Doyle, 21106					
TAR	0	1	ET3	1572	1591
ACTIVITY TOTAL:	0	1			
FFG 40 USS Halyburton, 21107					
TAR	0	1	ET3	1572	1678
ACTIVITY TOTAL:	0	1			
FFG 42 USS Klakring, 21109					
ACDU	0	1	ET3	1572	1591
ACTIVITY TOTAL:	0	1			
FFG 45 USS Dewert, 21197					
ACDU	0	1	ET3	1572	1678
ACTIVITY TOTAL:	0	1			
FFG 47 USS Nicholas, 21199					
ACDU	0	1	ET3	1572	1591
ACTIVITY TOTAL:	0	1			
FFG 49 USS Robert G. Bradley, 21201					
ACDU	0	1	ET3	1572	1678
ACTIVITY TOTAL:	0	1			
FFG 50 USS Taylor, 21231					
ACDU	0	1	ET3	1572	1591
ACTIVITY TOTAL:	0	1			
FFG 52 USS Carr, 21233					
ACDU	0	1	ET3	1572	1678
ACTIVITY TOTAL:	0	1			
FFG 53 USS Hawes, 21234					
ACDU	0	1	ET3	1572	1678
ACTIVITY TOTAL:	0	1			
FFG 55 USS Elrod, 21236					
ACDU	0	1	ET3	1572	1591
ACTIVITY TOTAL:	0	1			

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

ACTIVITY, UIC, PHASING INCREMENT	BILLETS OFF	BILLETS ENL	DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
FFG 56 USS Simpson, 21350					
ACDU	0	1	ET3	1572	1591
ACTIVITY TOTAL:	0	1			
FFG 58 USS Samuel B. Roberts, 21252					
ACDU	0	1	ET3	1572	1678
ACTIVITY TOTAL:	0	1			
FFG 59 USS Kauffman, 21390					
ACDU	0	1	ET3	1572	1678
ACTIVITY TOTAL:	0	1			
FFG 8 USS McInerney, 21032					
ACDU	0	1	ET3	1572	1591
ACTIVITY TOTAL:	0	1			
LCC 20 USS Mount Whitney, 20001					
ACDU	0	1	ET2	1572	1589
	0	1	ET3	1572	
ACTIVITY TOTAL:	0	2			
LHA 2 USS Saipan, 20632					
ACDU	0	1	ET2	1572	
	0	1	ET3	1572	9527
ACTIVITY TOTAL:	0	2			
LHA 4 USS Nassau, 20725					
ACDU	0	1	ET2	1572	
	0	1	ET3	1572	9527
ACTIVITY TOTAL:	0	2			
LPD 12 USS Shreveport, 07195					
ACDU	0	1	ET3	1572	1471
ACTIVITY TOTAL:	0	1			
LPD 13 USS Nashville, 07196					
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 OFF	BILLETS ENL	DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
LPD 14 USS Trenton, 07200					
ACDU	0	1	ET3	1572	
ACTIVITY TOTAL:	0	1			
LPD 15 USS Ponce, 07201					
ACDU	0	1	ET3	1572	1471
ACTIVITY TOTAL:	0	1			
LPD 4 USS Austin, 07175					
ACDU	0	1	ET3	1572	
ACTIVITY TOTAL:	0	1			
LPD 5 USS Ogden, 07176					
ACDU	0	1	ET3	1572	
ACTIVITY TOTAL:	0	1			
LSD 37 USS Portland, 20012					
ACDU	0	2	ET3	1572	1678
ACTIVITY TOTAL:	0	2			
LSD 39 USS Mount Vernon, 20014					
ACDU	0	2	ET3	1572	1678
ACTIVITY TOTAL:	0	2			
LSD 44 USS Gunston Hall, 21422					
ACDU	0	2	ET3	1572	1678
ACTIVITY TOTAL:	0	2			
LSD 46 USS Tortuga, 21562					
ACDU	0	1	ET3	1572	1678
ACTIVITY TOTAL:	0	1			
LSD 48 USS Ashland, 21531					
ACDU	0	1	ET3	1572	1678
ACTIVITY TOTAL:	0	1			
LSD 50 USS Carter Hall, 21880					
ACDU	0	1	ET3	1572	1678
ACTIVITY TOTAL:	0	1			

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

ACTIVITY, UIC, PHASING INCREMENT	BILLETS OFF	BILLETS ENL	DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
LSD 51 USS Oak Hill, 21958					
ACDU	0	1	ET3	1572	1678
ACTIVITY TOTAL:	0	1			
T-AE 29 USNS Mount Hood, 42844					
ACDU	0	1	ET3	1572	1471
ACTIVITY TOTAL:	0	1			
T-AE 34 USNS Mount Baker, 39537					
ACDU	0	1	ET3	1572	1471
ACTIVITY TOTAL:	0	1			
T-AH 20 USNS Comfort, 46246					
ACDU	0	1	ET2	1572	
ACTIVITY TOTAL:	0	1			
AFG 11 USS Coronado, 07194					
ACDU	0	1	ET2	1572	
ACTIVITY TOTAL:	0	1			
AOE 10 USS Bridge, 21979					
ACDU	0	1	ET3	1572	1471
ACTIVITY TOTAL:	0	1			
AOE 7 USS Rainier, 21872					
ACDU	0	1	ET3	1572	1471
ACTIVITY TOTAL:	0	1			
CV 63 USS Kitty Hawk, 03363					
ACDU	0	1	ET2	1572	
	0	2	ET3	1572	
ACTIVITY TOTAL:	0	3			
CV 64 USS Constellation, 03364					
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 OFF	BILLETS ENL	DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
CVN 70 USS Carl Vinson, 20993					
ACDU	0	1	ET2	1572	
	0	2	ET3	1572	
ACTIVITY TOTAL:	0	3			
CVN 72 USS Abraham Lincoln, 21297					
ACDU	0	1	ET2	1572	
	0	2	ET3	1572	
ACTIVITY TOTAL:	0	3			
CVN 74 USS John C. Stennis, 21847					
ACDU	0	1	ET2	1572	
	0	2	ET3	1572	
ACTIVITY TOTAL:	0	3			
DD 964 USS Paul F. Foster, 20575					
ACDU	0	1	ET3	1572	1678
ACTIVITY TOTAL:	0	1			
DD 972 USS Oldendorf, 20598					
ACDU	0	1	ET3	1572	1424
ACTIVITY TOTAL:	0	1			
DD 992 USS Fletcher, 20839					
ACDU	0	1	ET2	1572	1471
	0	1	ET3	1572	1591
ACTIVITY TOTAL:	0	2			
FFG 15 USS Estocin, 20968					
TAR	0	1	ET3	1572	1678
ACTIVITY TOTAL:	0	1			
FFG 33 USS Jarrett, 21058					
ACDU	0	1	ET3	1572	1591
ACTIVITY TOTAL:	0	1			
FFG 37 USS Crommelin, 21104					
ACDU	0	1	ET3	1572	1591
ACTIVITY TOTAL:	0	1			

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

ACTIVITY, UIC, PHASING INCREMENT	BILLETS OFF	BILLETS ENL	DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
FFG 38 USS Curts, 21105					
ACDU	0	1	ET3	1572	1591
ACTIVITY TOTAL:	0	1			
FFG 41 USS McClusky, 21108					
ACDU	0	1	ET3	1572	1678
ACTIVITY TOTAL:	0	1			
FFG 43 USS Thatch, 21110					
ACDU	0	1	ET3	1572	1591
ACTIVITY TOTAL:	0	1			
FFG 46 USS Rentz, 21198					
ACDU	0	1	ET3	1572	1591
ACTIVITY TOTAL:	0	1			
FFG 48 USS Vandegrift, 21200					
ACDU	0	1	ET3	1572	1591
ACTIVITY TOTAL:	0	1			
FFG 51 USS Gary, 21232					
ACDU	0	1	ET3	1572	1678
ACTIVITY TOTAL:	0	1			
FFG 54 USS Ford, 21235					
ACDU	0	1	ET3	1572	1591
ACTIVITY TOTAL:	0	1			
FFG 57 USS Ruben James, 21351					
ACDU	0	1	ET3	1572	1678
ACTIVITY TOTAL:	0	1			
FFG 60 USS Rodney M. Davis, 21391					
ACDU	0	1	ET3	1572	1591
ACTIVITY TOTAL:	0	1			
FFG 61 USS Ingraham, 21430					
ACDU	0	1	ET3	1572	1591
ACTIVITY TOTAL:	0	1			

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

ACTIVITY, UIC, PHASING INCREMENT	BILLETS OFF	BILLETS ENL	DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
LCC 19 USS Blue Ridge, 05840					
ACDU	0	1	ET2	1572	
	0	2	ET3	1572	
ACTIVITY TOTAL:	0	3			
LHA 1 USS Tarawa, 20550					
ACDU	0	1	ET2	1572	
	0	1	ET3	1572	9527
ACTIVITY TOTAL:	0	2			
LHA 5 USS Peleliu, 20748					
ACDU	0	1	ET2	1572	
	0	1	ET3	1572	9527
ACTIVITY TOTAL:	0	2			
LPD 8 USS Dubuque, 07182					
ACDU	0	1	ET3	1572	
ACTIVITY TOTAL:	0	1			
LPD 9 USS Denver, 07183					
ACDU	0	1	ET3	1572	
ACTIVITY TOTAL:	0	1			
LSD 41 USS Whidbey Island, 21218					
ACDU	0	2	ET3	1572	1678
ACTIVITY TOTAL:	0	2			
LSD 42 USS Germantown, 21639					
ACDU	0	2	ET3	1572	1678
ACTIVITY TOTAL:	0	2			
LSD 43 USS Fort McHenry, 21400					
ACDU	0	2	ET3	1572	1678
ACTIVITY TOTAL:	0	2			
LSD 45 USS Comstock, 21452					
ACDU	0	2	ET3	1572	1678
ACTIVITY TOTAL:	0	2			

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

ACTIVITY, UIC, PHASING INCREMENT	BILLETS OFF	BILLETS ENL	DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
LSD 47 USS Rushmore, 21530					
ACDU	0	2	ET3	1572	1678
ACTIVITY TOTAL:	0	2			
LSD 49 USS Harpers Ferry, 21852					
ACDU	0	2	ET3	1572	1678
ACTIVITY TOTAL:	0	2			
LSD 52 USS Pearl Harbor, 21959					
ACDU	0	2	ET3	1572	1678
ACTIVITY TOTAL:	0	2			
T-AE 27 USNS Butte, 42843					
ACDU	0	1	ET3	1572	1471
ACTIVITY TOTAL:	0	1			
FLEET SUPPORT ACTIVITIES - USN					
COMAFLOATRAGRU Mayport, 30734					
ACDU	0	2	ETC	1572	
ACTIVITY TOTAL:	0	2			
FACSFAC Jacksonville, 53895					
ACDU	0	1	ET2	1572	
ACTIVITY TOTAL:	0	1			
FACSFAC Oceana, 42239					
ACDU	0	1	ET2	1572	
ACTIVITY TOTAL:	0	1			
FCDIT Norfolk, 43594					
ACDU	0	1	ETC	1572	1516
ACTIVITY TOTAL:	0	1			
Fleet Combat Training Center Atlantic Norfolk, 00281					
ACDU	0	1	ET1	1572	
	0	1	ET3	1572	
ACTIVITY TOTAL:	0	2			

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

ACTIVITY, UIC, PHASING INCREMENT	BILLETS OFF	BILLETS ENL	DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
Fleet Training Center Norfolk, 61797					
ACDU	0	1	ETC	1572	9502
	0	6	ET1	1572	9502
	0	7	ET2	1572	9502
ACTIVITY TOTAL:	0	14			
FTSCLANT DET Mayport, 0038A					
ACDU	0	1	ETC	1572	1510
	0	1	ETC	1572	1571
ACTIVITY TOTAL:	0	2			
FTSCLANT Norfolk, 65912					
ACDU	0	1	ETC	1572	1511
	0	1	ET1	1511	1572
ACTIVITY TOTAL:	0	2			
NAWCAD St. Inigoes, 64485					
ACDU	0	2	ET2	1572	
ACTIVITY TOTAL:	0	2			
SIMA Mayport, 32779					
ACDU	0	1	ET1	1572	
ACTIVITY TOTAL:	0	1			
SIMA Norfolk, 32770					
ACDU	0	1	ET2	1572	
ACTIVITY TOTAL:	0	1			
SIMA Pascagoula, 47318					
TAR	0	1	ET1	1572	1491
ACTIVITY TOTAL:	0	1			
Special Boat Unit 20 Norfolk, 42223					
ACDU	0	1	ET1	1572	
	0	4	ET2	1572	
ACTIVITY TOTAL:	0	5			
Special Boat Unit 22 Stennis Space, 52857					
ACDU	0	1	ET1	1572	
	0	1	ET2	1572	
ACTIVITY TOTAL:	0	2			

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

ACTIVITY, UIC, PHASING INCREMENT	BILLETS OFF	BILLETS ENL	DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
Assault Craft Unit 5 Shore Component, 46587					
ACDU	0	1	ET1	1572	9502
	0	1	ET2	1572	9526
ACTIVITY TOTAL:	0	2			
FACSFAC San Clemente Island, 35623					
ACDU	0	1	ETC	1572	1570
	0	1	ET3	1572	1425
ACTIVITY TOTAL:	0	2			
Fleet Combat Training Center Pacific San Diego, 61665					
ACDU	0	2	ET2	1572	
	0	2	ET3	1572	
ACTIVITY TOTAL:	0	4			
FTSCPAC DET Everett, 55232					
ACDU	0	1	ETC	1572	1471
	0	1	ETC	1572	9604
ACTIVITY TOTAL:	0	2			
FTSCPAC DET Pearl Harbor, 55302					
ACDU	0	1	ETC	1511	1572
ACTIVITY TOTAL:	0	1			
FTSCPAC DET Sasebo, Japan, 39450					
ACDU	0	1	ETCS	1511	1572
ACTIVITY TOTAL:	0	1			
FTSCPAC San Diego, 55304					
ACDU	0	1	ETC	1572	
ACTIVITY TOTAL:	0	1			
Military Sealift Command Office San Diego, 43435					
ACDU	0	1	ET2	1572	
ACTIVITY TOTAL:	0	1			
Navy Ship Yard Pearl Harbor, 32253					
ACDU	0	2	ET2	1572	9526
ACTIVITY TOTAL:	0	2			

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

ACTIVITY, UIC, PHASING INCREMENT	BILLETS OFF	BILLETS ENL	DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
SIMA Ingleside, 47316					
TAR	0	1	ET2	1572	9526
	0	1	ET2	1572	9527
ACTIVITY TOTAL:	0	2			
SIMA San Diego, 65918					
ACDU	0	1	ET1	1572	9527
	0	1	ET2	1572	9527
ACTIVITY TOTAL:	0	2			
Special Boat Unit 12 San Diego, 39696					
ACDU	0	1	ETC	1572	
	0	1	ET1	5352	1572
	0	1	ET2	1572	
ACTIVITY TOTAL:	0	3			

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

DESIG/ RATING	PNEC/SNEC PMOS/SMOS		PFYs OFF	PFYs ENL	CFY03 OFF	CFY03 ENL	FY04 OFF	FY04 ENL	FY05 OFF	FY05 ENL	FY06 OFF	FY06 ENL	FY07 OFF	FY07 ENL
USN OPERATIONAL ACTIVITIES - ACDU														
ET2	1572			20		0		0		0		0		0
ET2	1572	1471		4		0		0		0		0		0
ET3	1572			50		0		0		0		0		0
ET3	1572	1424		1		0		0		0		0		0
ET3	1572	1468		38		0		0		0		0		0
ET3	1572	1471		10		0		0		0		0		0
ET3	1572	1489		1		0		0		0		0		0
ET3	1572	1591		19		0		0		0		0		0
ET3	1572	1678		37		0		0		0		0		0
ET3	1572	9527		3		0		0		0		0		0
USN OPERATIONAL ACTIVITIES - TAR														
ET3	1572	1678		1		0		0		0		0		0
USN FLEET SUPPORT ACTIVITIES - ACDU														
ETCS	1511	1572		1		0		0		0		0		0
ETC	1511	1572		1		0		0		0		0		0
ETC	1572			3		0		0		0		0		0
ETC	1572	1471		1		0		0		0		0		0
ETC	1572	1510		1		0		0		0		0		0
ETC	1572	1570		1		0		0		0		0		0
ETC	1572	1571		1		0		0		0		0		0
ETC	1572	9502		8		0		0		0		0		0
ETC	1572	9604		1		0		0		0		0		0
ET1	1511	1572		1		0		0		0		0		0
ET1	1572			4		0		0		0		0		0
ET1	1572	9502		7		0		0		0		0		0
ET1	1572	9527		1		0		0		0		0		0
ET1	5352	1572		1		0		0		0		0		0
ET2	1572			13		0		0		0		0		0
ET2	1572	9502		7		0		0		0		0		0
ET2	1572	9526		4		0		0		0		0		0
ET2	1572	9527		2		0		0		0		0		0
ET3	1572			1		0		0		0		0		0
ET3	1572	1425		1		0		0		0		0		0
USN FLEET SUPPORT ACTIVITIES - TAR														
ET1	1572	1491		1		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 OFF	PFYs ENL	CFY03 OFF	CFY03 ENL	FY04 OFF	FY04 ENL	FY05 OFF	FY05 ENL	FY06 OFF	FY06 ENL	FY07 OFF	FY07 ENL
SUMMARY TOTALS:													
USN OPERATIONAL ACTIVITIES - ACDU			183		0		0		0		0		0
USN OPERATIONAL ACTIVITIES - TAR			1		0		0		0		0		0
USN FLEET SUPPORT ACTIVITIES - ACDU			60		0		0		0		0		0
USN FLEET SUPPORT ACTIVITIES - TAR			1		0		0		0		0		0
GRAND TOTALS:													
USN - ACDU			243		0		0		0		0		0
USN - TAR			2		0		0		0		0		0

II.A.2.a. OPERATIONAL AND FLEET SUPPORT ACTIVITY DEACTIVATION SCHEDULE

SOURCE OF MANPOWER: Total Force Manpower Management System **DATE:** December 2002
SOURCE OF SCHEDULE: NAVAIR St. Inigoes **DATE:** November 2002

ACTIVITY, UIC		PFYs	CFY03	FY04	FY05	FY06	FY07
OPERATIONAL ACTIVITIES - USN							
CV 64 USS Constellation	03364	0	1	0	0	0	0
TOTAL:		0	1	0	0	0	0

II.A.2.b. BILLETS TO BE DELETED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

ACTIVITY, UIC, PHASING INCREMENT	BILLETS OFF	BILLETS ENL	DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
OPERATIONAL ACTIVITIES - USN					
CV 64 USS Constellation, 03364, FY03 Increment					
ACDU	0	1	ET2	1572	
	0	2	ET3	1572	
ACTIVITY TOTAL:	0	3			

II.A.2.c. TOTAL BILLETS TO BE DELETED IN OPERATIONAL AND FLEET SUPPORT ACTIVITIES

DESIG/ RATING	PNEC/SNEC PMOS/SMOS	PFYs OFF	PFYs ENL	CFY03 OFF	CFY03 ENL	FY04 OFF	FY04 ENL	FY05 OFF	FY05 ENL	FY06 OFF	FY06 ENL	FY07 OFF	FY07 ENL
USN OPERATIONAL ACTIVITIES - ACDU													
ET2	1572		1		-1		0		0		0		0
ET3	1572		2		-2		0		0		0		0
SUMMARY TOTALS:													
USN OPERATIONAL ACTIVITIES - ACDU			3		-3		0		0		0		0
GRAND TOTALS:													
USN - ACDU			3		-3		0		0		0		0

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

DESIG RATING	PNEC/SNEC PMOS/SMOS	PFYs OFF	PFYs ENL	CFY03 OFF	CFY03 ENL	FY04 OFF	FY04 ENL	FY05 OFF	FY05 ENL	FY06 OFF	FY06 ENL	FY07 OFF	FY07 ENL
TRAINING ACTIVITY, LOCATION, UIC: Fleet Training Center, Norfolk, 61797													
INSTRUCTOR BILLETS													
USN													
ETC	1572 9502	0	1	0	1	0	1	0	1	0	1	0	1
ET1	1572 9502	0	5	0	5	0	5	0	5	0	5	0	5
ET2	1572 9502	0	5	0	5	0	5	0	5	0	5	0	5
SUPPORT BILLETS													
USN													
ET1	1572 9502	0	1	0	1	0	1	0	1	0	1	0	1
ET2	1572 9502	0	2	0	2	0	2	0	2	0	2	0	2
TOTAL:		0	14	0	14	0	14	0	14	0	14	0	14

II.A.4. CHARGEABLE STUDENT BILLET REQUIREMENTS

ACTIVITY, LOCATION, UIC	USN/ USMC	PFYs		CFY03		FY04		FY05		FY06		FY07	
		OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
Fleet Training Center, Norfolk, 61797													
	USN	0.0	23.4	0.0	23.1	0.0	23.1	0.0	23.1	0.0	23.1	0.0	23.1
SUMMARY TOTALS:													
	USN	0.0	23.4	0.0	23.1	0.0	23.1	0.0	23.1	0.0	23.1	0.0	23.1
GRAND TOTALS:													
		0.0	23.4	0.0	23.1	0.0	23.1	0.0	23.1	0.0	23.1	0.0	23.1

II.A.5. ANNUAL INCREMENTAL AND CUMULATIVE BILLETS

DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS	BILLET BASE	CFY03 +/-	CFY03 CUM	FY04 +/-	FY04 CUM	FY05 +/-	FY05 CUM	FY06 +/-	FY06 CUM	FY07 +/-	FY07 CUM
a. OFFICER - USN	Not Applicable												
b. ENLISTED - USN													
Operational Billets ACDU and TAR													
ET2	1572		20	-1	19	0	16	0	19	0	19	0	19
ET2	1572	1471	4	0	4	0	4	0	4	0	4	0	4
ET3	1572		50	-2	48	0	48	0	48	0	48	0	48
ET3	1572	1424	1	0	1	0	1	0	1	0	1	0	1
ET3	1572	1468	38	0	38	0	38	0	38	0	38	0	38
ET3	1572	1471	10	0	10	0	10	0	10	0	10	0	10
ET3	1572	1489	1	0	1	0	1	0	1	0	1	0	1
ET3	1572	1591	19	0	19	0	19	0	19	0	19	0	19
ET3	1572	1678	38	0	38	0	38	0	38	0	38	0	38
ET3	1572	9527	3	0	3	0	3	0	3	0	3	0	3
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		3	0	3	0	3	0	3	0	3	0	3
ETC	1572	1471	1	0	1	0	1	0	1	0	1	0	1
ETC	1572	1510	1	0	1	0	1	0	1	0	1	0	1
ETC	1572	1570	1	0	1	0	1	0	1	0	1	0	1
ETC	1572	1571	1	0	1	0	1	0	1	0	1	0	1
ETC	1572	9502	8	0	8	0	8	0	8	0	8	0	8
ETC	1572	9604	1	0	1	0	1	0	1	0	1	0	1
ET1	1511	1572	1	0	1	0	1	0	1	0	1	0	1
ET1	1572		4	0	4	0	4	0	4	0	4	0	4
ET1	1572	1491	1	0	1	0	1	0	1	0	1	0	1
ET1	1572	9527	1	0	1	0	1	0	1	0	1	0	1
ET1	5352	1572	1	0	1	0	1	0	1	0	1	0	1
ET2	1572		13	0	13	0	13	0	13	0	13	0	13
ET2	1572	9526	4	0	4	0	4	0	4	0	4	0	4
ET2	1572	9527	2	0	2	0	2	0	2	0	2	0	2
ET3	1572		1	0	1	0	1	0	1	0	1	0	1
ET3	1572	1425	1	0	1	0	1	0	1	0	1	0	1
Staff Billets ACDU and TAR													
ETC	1572	9502	1	0	1	0	1	0	1	0	1	0	1
ET1	1572	9502	6	0	6	0	6	0	6	0	6	0	6
ET2	1572	9502	7	0	7	0	7	0	7	0	7	0	7

II.A.5. ANNUAL INCREMENTAL AND CUMULATIVE BILLETS

DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS	BILLET BASE	CFY03 +/-	CFY03 CUM	FY04 +/-	FY04 CUM	FY05 +/-	FY05 CUM	FY06 +/-	FY06 CUM	FY07 +/-	FY07 CUM
Chargeable Student Billets ACDU and TAR			23	0	23	0	23	0	23	0	23	0	23
TOTAL USN ENLISTED BILLETS:													
Operational			183	-3	180	0	180	0	180	0	180	0	180
Fleet Support			61	0	61	0	61	0	61	0	61	0	61
Staff			14	0	14	0	14	0	14	0	14	0	14
Chargeable Student			23	0	23	0	23	0	23	0	23	0	23

c. OFFICER - USMC Not Applicable

d. ENLISTED - USMC Not Applicable

II.B. ANNUAL TRAINING INPUT REQUIREMENTS

CIN, COURSE TITLE: A-102-0062, AIMS MK XII IFF System Maintenance
COURSE LENGTH: 16.0 Weeks **NAVY TOUR LENGTH:** 36 Months
ATTRITION FACTOR: Navy: 10% **BACKOUT FACTOR:** 0.32

TRAINING		ACDU/TAR	CFY03		FY04		FY05		FY06		FY07	
ACTIVITY	SOURCE	SELRES	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
Fleet Training Center, Norfolk												
	USN	ACDU		78		78		77		77		77
		TAR		4		4		4		4		4
		TOTAL:		82		82		81		81		81

PART III - TRAINING REQUIREMENTS

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

III.A.1. Initial Training Requirements

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.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, 61797

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

CFY03		FY04		FY05		FY06		FY07		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	82		82		81		81		81	ATIR
	74		74		73		73		73	Output
	23.4		23.1		23.1		23.1		23.1	AOB
	23.4		23.1		23.1		23.1		23.1	Chargeable

PART IV - TRAINING LOGISTICS SUPPORT REQUIREMENTS

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

IV.A. Training Hardware

IV.A.2. Training Devices

IV.B.1. Training Services

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, 61797

ITEM NO.	EQUIPMENT / TYPE OR RANGE OF REPAIR PARTS	QTY REQD	DATE REQD	GFE CFE	STATUS
TTE					
001	Signal Generator, SG-841/UPX	19	Jun 00	GFE	Onboard
002	Control Monitor Unit, C-8430/UPX	17	Jun 00	GFE	Onboard
003	Electronic Switch, SA-1807/UPA-61	17	Jun 00	GFE	Onboard
004	Control Monitor, C-8430/UPX	17	Jun 00	GFE	Onboard
005	Interrogator Mode 4 Computer, KIR-1()TSEC	18	Jun 00	GFE	Onboard
006	Transponder Mode 4 Computer, KIT1()/TSEC	18	Jun 00	GFE	Onboard
007	Base Mount, MT-4667/U	34	Jun 00	GFE	Onboard
008	Code Tape Reader, KOI-18/TSEC	2	Jun 00	GFE	Onboard
009	Code Changer, KYK-13/TSEC	2	Jun 00	GFE	Onboard
010	Data Transfer Device, AN/CYZ-10	2	Jun 00	GFE	Onboard
011	Alarm Monitor, BZ-173/UPA-59	17	Jun 00	GFE	Onboard
012	Receiver-Transmitter, RT859A/APX-72	17	Jun 00	GFE	Onboard
013	Transponder Control Set, C-6280A/APX-72	17	Jun 00	GFE	Onboard
014	Control Case, CY-6816/APX-72	17	Jun 00	GFE	Onboard
015	Electronic Gate, TD-937B/APX-72	17	Jun 00	GFE	Onboard
016	Mount, MT-3513()/APX	17	Jun 00	GFE	Onboard
017	Mount, MT-3809/APX-72	17	Jun 00	GFE	Onboard
018	Interrogator Set, AN/UPX-27	17	Jun 00	GFE	Onboard
019	Interference Blanker, MX-8758A/UPX	17	Jun 00	GFE	Onboard
020	Video Synchronizer, SN-501/UPX	17	Jun 00	GFE	Onboard
021	Decoder Group, AN/UPA-59A (V2)	2	Jun 00	GFE	Onboard
022	Decoder Group. AN/UPA-59B (V)2	17	Jun 00	GFE	Onboard
023	Radar Trainer, AN/SPS-T3	2	Jun 00	GFE	Onboard

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

024	Signal Distribution Switchboard, SB-1505	2	Jun 00	GFE	Onboard
025	Trigger Amplifier, AM-1913D/UP	8	Jun 00	GFE	Onboard
026	Video Amplifier, AM-1914	12	Jun 00	GFE	Onboard
027	Indicator Group, AN/SPA-25	16	Jun 00	GFE	Onboard
028	Antenna, AS-177B/UPX	2	Jun 00	GFE	Onboard
029	Antenna, AS-2188/U	1	Jun 00	GFE	Onboard
030	Digital Interrogator, AN/UPX-37	9	Jun 00	GFE	Onboard
052	Pulse Generator, SG-1066/UPX	17	Jun 00	GFE	Onboard
062	Transponder Test Set, TS-1843B/APX-72	17	Jun 00	GFE	Onboard
GPETE					
041	Oscilloscope, COS-6100M	16	Jun 00	GFE	Onboard
042	Oscilloscope, 2246	2	Jun 00	GFE	Onboard
043	Electronic Counter, AQI-5328/096	2	Jun 00	GFE	Onboard
044	Digital Multimeter, 77/AN	16	Jun 00	GFE	Onboard
045	Volt Ohm Meter, Simpson 260	2	Jun 00	GFE	Onboard
046	Power Measuring Set, AN/USM-177B	2	Jun 00	GFE	Onboard
047	Megger, MINI500	1	Jun 00	GFE	Onboard
048	Pulse Generator, SG-816/U	1	Jun 00	GFE	Onboard
049	Direct Current Differential Voltmeter, AN/USM-381	2	Jun 00	GFE	Onboard
050	Crystal Detector, CAQI-423A	2	Jun 00	GFE	Onboard
051	Digital Multimeter, 8000A/BU	2	Jun 00	GFE	Onboard
SPETE					
060	Radar Test Set, AN/UPM-155	20	Jun 00	GFE	Onboard

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, 61797

TYPES OF MATERIAL OR AID	QTY REQD	DATE REQD	STATUS
Computer Projector, Litepro 720	2	Jun 00	Onboard
Instructor Guide	2	Jun 00	Onboard
Knowledge Test Administrator's Guide	2	Jun 00	Onboard
Knowledge Test Bank	2	Jun 00	Onboard
Lesson Plan	2	Jun 00	Onboard
Pentium Computer with 17" Monitor	2	Jun 00	Onboard
Pre-Faulted AN/UPA-59A(V)2 Modules	set of 18	Jun 00	Onboard
Pre-Faulted AN/UPA-59B(V)2 Modules	set of 5	Jun 00	Onboard
Pre-Faulted AN/UPA-61 Modules	set of 2	Jun 00	Onboard
Pre-Faulted AN/UPX-27 Modules	set of 14	Jun 00	Onboard
Pre-Faulted AN/UPX-37 Modules	set of 3	Jun 00	Onboard
Pre-Faulted MX-8758A/UPX Modules	set of 16	Jun 00	Onboard
Pre-Faulted RT-859A/APX-72 Modules	set of 12	Jun 00	Onboard
Pre-Faulted SG-1006/UPX Modules	set of 8	Jun 00	Onboard
Pre-Faulted SG-841/UPX Modules	set of 4	Jun 00	Onboard
Pre-Faulted SN-501/UPX Modules	set of 8	Jun 00	Onboard
Student Guide	20	Jun 00	Onboard
Student Guide Answer Key	20	Jun 00	Onboard
Video Cassette "Introduction to AIMS MK XII IFF"	1	Jun 00	Onboard
Video Cassette "Introduction to the AN/UPM-155 Radar Test Set"	1	Jun 00	Onboard
Video Cassette Recorder	1	Jun 00	Onboard

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, 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	Jun 00	Onboard
0816-LP-091-4541 RT-859/APX-72 and RT-859A/APX-72 Illustrated Parts Breakdown	Hard copy	40	Jun 00	Onboard
0967-LP-377-1010 AS-177A/UPX Antenna Assembly Instruction Book	Hard copy	40	Jun 00	Onboard
0967-LP-390-8030 AIMS MK XII IFF System Maintenance	Hard copy	40	Jun 00	Onboard
0967-LP-390-8040 AIMS MK XII IFF System Operators Manual	Hard copy	40	Jun 00	Onboard
0967-LP-427-0010 TD-937A/SPX Electronic Gate Maintenance	Hard copy	40	Jun 00	Onboard
0967-LP-434-9010 AS-177B/UPX Antenna Maintenance	Hard copy	40	Jun 00	Onboard
0967-LP-450-4010 AS-2787/UPX Antenna Operator Chart	Hard copy	40	Jun 00	Onboard
0967-LP-542-5010 AN/UPX-27 Interrogator Set Maintenance	Hard copy	40	Jun 00	Onboard
0967-LP-958-8010 AS-1065/UPX Antenna Maintenance	Hard copy	40	Jun 00	Onboard
0969-LP-130-5010 SG-841/UPX Pulse Generator Maintenance	Hard copy	40	Jun 00	Onboard
0969-LP-166-3010 SG-1066/UPX Pulse Generator Maintenance	Hard copy	40	Jun 00	Onboard
EE-010-OA-OP1-010 PP-6099B/APX-72 Power Supply Maintenance	Hard copy	40	Jun 00	Onboard
EE-112-D-FCB-002/2114-AS-2188A AS-2188/U Antenna Maintenance	Hard copy	40	Jun 00	Onboard
EE-216-GP-OMI-010 CY-6816/APX and CY-6816A/APX Control Case Maintenance	Hard copy	40	Jun 00	Onboard

IV.B.3. TECHNICAL MANUALS

EE-220-TT-GYD-010 MK XII IFF User's Guide	Hard copy	40	Jun 00	Onboard
EE-230-BK-IMMO-010 CY-7557/UPX-28 Transponder Test Set Operation and Maintenance	Hard copy	40	Jun 00	Onboard
EE-230-BT-OMI-010 AN/UPX-29(V) Operation and Maintenance	Hard copy	40	Jun 00	Onboard
EE-230-CJ-OMI-010 AN/UPA-59A and AN/UPA-59B Decoder Group Maintenance	Hard copy	40	Jun 00	Onboard
EE-230-EA-OMI-010 AS-2189/U IFF Antenna Operation and Maintenance	Hard copy	40	Jun 00	Onboard
EE-230-FA-OMI-010 AN/UPA-61 Switching Group Maintenance	Hard copy	40	Jun 00	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	Jun 00	Onboard
EE-230-WA-OMI-010 AS-3430/SPX Antenna Maintenance	Hard copy	40	Jun 00	Onboard
EE-690-DF-INM-010 MX-8758A/UPX Interface Blanker Maintenance	Hard copy	40	Jun 00	Onboard
N0002400003 Electronics Installation and Maintenance Book	Hard copy	2	Jun 00	Onboard
NA 16-30UPM155-1 AN/UPM155 Radar Test Set Operating Instructions	Hard copy	40	Jun 00	Onboard
NA 16-35C6280-1 Revision 1 C-6280(P)/APX Control Maintenance	Hard copy	40	Jun 00	Onboard
NA 16-35TS1843-1 TS-1843A/APX Test Set Operation and Maintenance	Hard copy	40	Jun 00	Onboard
NA 16-35TS1843-2 TS-1843B/APX Test Set Operation and Maintenance	Hard copy	40	Jun 00	Onboard
NA 16-60MKXII-FM-1 MK XII IFF Interface User's Guide	Hard copy	40	Jun 00	Onboard
NA 16-60SN501-1 SN-501/UPX Video Synchronizer Maintenance	Hard copy	40	Jun 00	Onboard
NA 16-60UPX25-1 AN/UPX-25 Interrogator Set Maintenance	Hard copy	40	Jun 00	Onboard

IV.B.3. TECHNICAL MANUALS

NA 1630UPM155-2 AN/UPM155 Radar Test Set Maintenance	Hard copy	2	Jun 00	Onboard
NAVSHIPS 92903(A) Radar Signal Distribution Switchboard Maintenance	Hard copy	2	Jun 00	Onboard
SE 230-AA-OP1-010 C-8430/UPX Control Monitor Maintenance	Hard copy	40	Jun 00	Onboard
SE-000-01-IMB-010 Electronics Installation and Maintenance Book	Hard copy	2	Jun 00	Onboard
SE280-CB-MMA-010 AN/SPS-T3B and AN/SPC T3C Maintenance	Hard copy	2	Jun 00	Onboard
IB 4942 Technical Manual, Operation and Maintenance Instructions, Organizational Level Common IFF Digital Transponder Set (Shipboard)	Hard copy	2	Nov 02	Onboard

PART V - MPT MILESTONES

COG CODE	MPT MILESTONES	DATE	STATUS
CNO	Approved AIMS MK XII for Fleet Use	May 71	Completed
TSA	Established Revised AIMS MK XII Maintenance Training at FTC Norfolk	Jun 97	Completed
PDA	Awarded Contract for New AN/UPX-37 Digital Interrogator	Jul 98	Completed
PDA	Completed AN/UPX-37 Digital Interrogator DT&E	May 99	Completed
PDA	Completed AN/UPX-37 Digital Interrogator OT&E	Sep 99	Completed
CNO	Approved AIMS MK XII NTSP	Apr 00	Completed
TSA	Delivered AN/UPX-37 Digital Interrogator TTE to FTC Norfolk	Jun 00	Completed
PDA	Began First Fleet Installation of AN/UPX-37 Digital Interrogator	Oct 00	Completed
PDA	Achieved AN/UPX-37 Digital Interrogator Initial Operating Capability	Dec 00	Completed
PDA	Achieved AN/UPX-37 Digital Interrogator Material Support Date	Dec 00	Completed
PDA	Achieved AN/UPX-37 Digital Interrogator Navy Support Date	Dec 00	Completed
TSA	Developed Draft NTSP (Update)	Mar 02	Completed
TSA	Began Follow-on AN/UPX-37 Maintenance Training at FTC Norfolk	Apr 03	Completed
TSA	Developed Proposed NTSP	Nov 03	Completed
PDA	Begin CXP Deliveries to the Fleet	Jul 04	Pending
PDA	Begin Installation of CXP Onboard Host Platforms	Jul 04	Pending
PDA	Deliver Prototype Hardware	Sep 04	Pending
PDA	Prepare Formal Engineering Change Proposals	Sep 04	Pending
PDA	Build Mode 5 Kits	Oct 05	Pending
PDA	Begin DT (TECHEVAL) for Mode 5	Oct 06	Pending
PDA	Begin OT (OPEVAL) for Mode 5	Feb 07	Pending
PDA	Begin Full-Rate Production and Fleet Introduction for Mode 5	Sep 07	Pending

PART VI - DECISION ITEMS / ACTION REQUIRED

DECISION ITEM OR ACTION REQUIRED	COMMAND ACTION	DUE DATE	STATUS
No actions pending			

PART VII - POINTS OF CONTACT

NAME / FUNCTION / ACTIVITY, CODE / INTERNET EMAIL	TELEPHONE NUMBERS
CAPT John Chase Deputy Aviation Maintenance Programs CNO, N781B john.chase@navy.mil	**COMM:** (703) 604-7747 **DSN:** 664-7747 **FAX:** (703) 604-6972
CDR Joe Shaw Surface Warfare Training Requirements CNO, N789T2 joe.shaw@navy.mil	**COMM:** (703) 604-7635 **DSN:** 664-7635 **FAX:** (703) 604-6939
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