# NAVY TRAINING SYSTEM PLAN

# FOR THE

# H-60 ARMED HELICOPTER PROGRAM

N88-NTSP-A-50-9805/A

**MARCH 2002** 

#### **EXECUTIVE SUMMARY**

The H-60 Armed Helicopter Program incorporates several systems into the HH-60H and selected SH-60B Helicopters to improve their warfare capabilities. These systems increase situational awareness, enhance aircraft survivability, and provide a threat suppression capability. The H-60 Armed Helicopter Program provides day and night targeting for missile tracking of designated hostile targets using the AN/AAS-44(V) Infrared Laser Detecting-Ranging Tracking Set. Additional systems provide Hellfire Missile launching capabilities and small arms capabilities utilizing the GAU-16/A and GAU-17/A Machine Guns. The H-60 Armed Helicopter Program successfully passed Milestone C of the Defense Acquisition System in April 2000.

The majority of H-60 Armed Helicopter components are manufactured by Lockheed-Martin Federal Systems. The Forward Looking Infrared (FLIR) system is manufactured by Texas Instruments Defense Systems/Electronics Group. Retrofit kits designed and currently in use are identified as the Rapid Deployment Kit (RDK). The Rapid Deployment Program began with the SH-60B by Lockheed-Martin Federal Systems in August 1996 and with the HH-60H by Hughes Technical Services, Incorporated in January 1997. Naval Reserve Helicopter Combat Support Special Squadrons Four and Five (HCS-4 and HCS-5) are the only activities scheduled to receive the GAU-17/A Machine Gun.

Engineering Change Proposal (ECP)-267 Forward Looking Infrared (FLIR) Contingency Kit (FCK) was the first system to be fielded that would eventually become part of the H-60 Armed Helo program. The heart of the FCK is the AN/AAS-44 (V) Infrared Laser Detecting-Ranging-Tracking Set. The AN/AAS-44 (V) is also the heart of the HH-60H Armed Helo (ECP-1109) and the SH-60B Armed Helo (ECP-1155).

Maintenance of the H-60 Armed Helicopter is performed at the organizational level by Aviation Electronics Technicians (AT) and Aviation Ordnanceman (AO) with Navy Enlisted Classification (NEC) 8376, 8876, or 8378 for the SH-60B Helicopter and Aviation Ordnanceman, and Aviation Electronics Technician, NECs 8378 and 8878 for the HH-60H Helicopter. Minor intermediate level maintenance is required to support the H-60 Armed Helicopter Program. The contractors (Lockheed-Martin Federal Systems and Texas Instruments Defense/Electronics Group) are providing interim maintenance until depot level maintenance is established.

Follow-on operator training for the SH-60B is currently being conducted by Fleet Readiness Squadrons (FRS) HSL-40, Naval Station (NS) Mayport, Florida, and HSL-41, Naval Air Station (NAS) North Island, California. Follow-on operator training for HH-60H aircrew personnel is provided by HS-10, NAS North Island, and Weapons Training Unit, NAS Jacksonville, Florida. Follow-on maintenance training to support the SH-60B is provided by Maintenance Training Unit (MTU) 1022 Naval Air Maintenance Training Unit (NAMTRAU)

North Island, California, and MTU 1066 Naval Air Maintenance Training Group Detachment (NAMTRAGRU DET) Mayport, Florida. Follow-on maintenance training to support HH-60H and SH-60B AOs is provided by MTU 1005 NAMTRAU Jacksonville, Florida, and MTU 1022 NAMTRAU North Island. Conventional Weapons Load training for the SH-60B and HH-60H is provided by MTUs 1022 NAMTRAU North Island, 1005 NAMTRAU Jacksonville, and 1066 NAMTRAGRU DET Mayport. Follow-on training for GAU-16/A Machine Gun operator and maintenance personnel is provided by HSL-40, NS Mayport, and HSL-41, NAS North Island. Follow-on training for GAU-17/A Machine Gun operator and maintenance personnel is provided by Naval Air Maintenance Training Marine Unit (NAMTRA MARUNIT) Camp Pendleton, California, on an as needed basis.

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## H-60 ARMED HELICOPTER PROGRAM

# LIST OF ACRONYMS

ACRT AE AFC AM AMTCS AO AT ATO BIT BSC	Armament Controller-Receiver-Transmitter Aviation Electrician's Mate Airframes Change Aircraft Mount Aviation Maintenance Training Continuum System Aviation Ordnanceman Aviation Electronics Technician Airborne Tactical Officer Built-In Test
CATM CIN CINCLANTFLT CINCPACFLT CNET CNO COMNAVAIRESFOR	Boresight Collimator Captive Air Training Missile Course Identification Number Commander in Chief, Atlantic Fleet Commander in Chief, Pacific Fleet Chief of Naval Education and Training Chief of Naval Operations Commander, Naval Air Reserve Force
DATM	Dummy Air Training Missile
DT	Developmental Test
ECP EU	Engineering Change Proposal Electronics Unit
ECP	Engineering Change Proposal
ECP EU FCK FHS FLIR FLIR/LRD FMS FRS	Engineering Change Proposal Electronics Unit FLIR Contingency Kit FLIR Hellfire System Forward Looking Infrared Forward Looking Infrared/Laser Range Designator Foreign Military Sales Fleet Readiness Squadron

## H-60 ARMED HELICOPTER PROGRAM

# LIST OF ACRONYMS

HCS	Helicopter Combat Support Special Squadron
HL	Hellfire Launcher
HS	Helicopter Antisubmarine Squadron
HSL	Helicopter Squadron Light
ILDRTS	Infrared Laser Detecting-Ranging Tracking Set
IR	Infrared
LOS	Line-of-Sight
LRD	Laser Range/Designator
LSSO	Laser System Safety Officer
MPT	Manpower, Personnel, and Training
MSD	Material Support Date
MTIP	Maintenance Training Improvement Program
MTU	Maintenance Training Unit
NA NAMTRA MARUNIT NAMTRAGRU DET NAMTRAGRU HQ NAMTRAU NAS NATEC NAVAIRSYSCOM NAWCAD NAWCADIND NEC NRWATS NS NTSP	Not Applicable Naval Air Maintenance Training Marine Unit Naval Air Maintenance Training Group Detachment Naval Air Maintenance Training Group Headquarters Naval Air Maintenance Training Unit Naval Air Station Naval Air Station Naval Air Technical Data and Engineering Service Command Naval Air Systems Command Naval Air Warfare Center Aircraft Division Naval Air Warfare Center Aircraft Division Naval Air Warfare Center Aircraft Division Indianapolis Navy Enlisted Classification Naval Rotary Wing Aircraft Test Squadron Naval Station Navy Training System Plan
OJT	On-the-Job Training
OPNAV	Office of the Chief of Naval Operations
OPNAVINST	Office of the Chief of Naval Operations Instruction
OPO	OPNAV Principal Official
OT	Operational Test

## H-60 ARMED HELICOPTER PROGRAM

## LIST OF ACRONYMS

PDA	Principal Development Activity
PMA	Program Manager, Air
PQS	Personnel Qualification Standards
RD	Rapid Deployment
RFT	Ready For Training
SDC	Signal Data Converter
SO	Sensor Operator
SPETE	Special Purpose Electronic Test Equipment
SPTE	Special Purpose Test Equipment
TD	Training Device
TTE	Technical Training Equipment
TU	Turret Unit
WRA	Weapon Replaceable Assembly
WTU	Weapons Training Unit

#### PREFACE

This Approved Navy Training System Plan (NTSP) has been prepared to document the current Manpower, Personnel, and Training (MPT) requirements for the H-60 Armed Helicopter Program, and to update the Draft NTSP, N88 NTSP-A-50-9805/D, dated April 2001. It has been updated to comply with guidelines set forth in the Navy Training Requirements Documentation Manual, Office of the Chief of Naval Operations (OPNAV) Publication P-751-1-9-97. This NTSP contains information pertaining to:

- <sup>o</sup> Engineering Change Proposal (ECP)-267 Forward Looking Infrared (FLIR) Contingency Kit (FCK)
- <sup>o</sup> ECP-1109 (now Airframes Change (AFC)-132) HH-60H FLIR/Hellfire System (FHS)
- ° ECP-1155 (now AFC-171) SH-60B installations FLIR/Hellfire System (FHS)

This NTSP addresses the helicopters capabilities using the GAU-16/A and GAU-17/A Machine Guns in the SH-60B and HH-60H Helicopters. It also reflects to the Aviation Ordnanceman (AO) manning in the SH-60B activities, a change in Navy Enlisted Classification (NEC) codes, and updated courses due to the consolidation of the SH-60B, SH-60F, and HH-60H Helicopter training.

This NTSP also incorporates general comments on the April 2001 Draft version from Chief of Naval Education and Training and minor corrections from Naval Air Systems Command Program Manager, Air (PMA) 205.

#### PART I - TECHNICAL PROGRAM DATA

## A. NOMENCLATURE-TITLE-PROGRAM

- 1. Nomenclature-Title-Acronym. H-60 Armed Helicopter Program
- **2. Program Element.** 0204243

#### **B. SECURITY CLASSIFICATION**

1. System Characteristics	Unclassified
2. Capabilities	Unclassified
3. Functions	Unclassified

## C. MANPOWER, PERSONNEL, AND TRAINING PRINCIPALS

OPNAV Principal Official (OPO) Program Sponsor CNO (N780E3)
OPO Resource Sponsor CNO (N780E3)
Developing Agency NAVAIRSYSCOM (PMA299)
Training Agency CINCLANTFLT CINCPACFLT CNET COMNAVAIRESFOR
Training Support Agency NAVAIRSYSCOM (PMA205) COMNAVAIRESFOR
Manpower and Personnel Mission Sponsor
Director of Naval Training CNO (N795)
Commander, Reserve Program Manager COMNAVAIRESFOR (N7211)

#### **D. SYSTEM DESCRIPTION**

**1. Operational Uses.** The H-60 Armed Helicopter Program (from this point forward in this NTSP referred to as "Armed Helo") provides the H-60 aircrew with increased situational awareness, discretionary defensive strike capability against multiple targets, enhanced night navigation, autonomous as well as cooperative target acquisition and designation, and enhanced survivability. The Armed Helo consists of the Hellfire Missile launching capabilities, the AN/AAS-44(V) Infrared Laser Detecting-Ranging Tracking Set (ILDRTS), and small arms capability utilizing the GAU-16/A and GAU-17/A Machine Guns.

Currently, there are seventeen HH-60H Helicopters with GAU-17/A Machine Guns. Helicopter Combat Support Special Squadron (HCS)-4 and HCS-5 are the only commands that received the GAU-17/A Machine Guns. The SH-60B "Block 0" Helicopters have all the Armed Helo capabilities except the Hellfire Missile system.

**2. Foreign Military Sales.** Foreign Military Sales (FMS) are planned. For information on FMS refer to PMA299.

**E. DEVELOPMENTAL TEST AND OPERATIONAL TEST.** The following Developmental Tests (DT) and Operational Tests (OT) were completed for the Armed Helo System installed on the SH-60B and HH-60H Helicopters.

DT and OT for AFC-171 (which was ECP-1155) incorporating the GAU-16/A Machine Gun and the H-60 FHS into SH-60B Block I was conducted in two phases. Phase one was encouraged by the Chief of Naval Operations (CNO) to be the earliest implementation of AFC-171 to eight SH-60B Block I aircraft, known as the SH-60B "Rapid Deployment" (RD) Helicopter. Phase one DT and OT was completed by Naval Rotary Wing Aircraft Test Squadron (NRWATS) Naval Air Warfare Center Aircraft Division (NAWCAD) Patuxent River, Maryland, in second quarter Fiscal Year (FY) 97. Phase two completed incorporation of AFC-171. This is known as "Core B". Core B includes enhanced capabilities not installed on the SH-60B RD FHS. Phase two DT was conducted in fourth quarter FY98 and OT was conducted in first quarter FY99.

DT and OT for AFC-132 (which was ECP-1109) incorporating the H-60 FHS into the HH-60H Helicopters was conducted by NRWATS and VX-1 at Naval Air Station (NAS) Patuxent River, Maryland.

ECP-267 incorporated the AN/AAS-44(V) Forward Infrared/Laser Range Designator (FLIR/LRD) (as called in the ECP documentation) and the GAU-16/A Machine Gun into the SH-60B Helicopter. NRWATS completed DT for the FLIR/LRD System in fourth quarter FY97. VX-1 completed OT for the FLIR/LRD System in fourth quarter FY97. DT for the GAU-16/A Machine Gun was conducted by NRWATS and OT for the GAU-16/A Machine Gun was conducted by VX-1.

DT and OT for GAU-17/A Machine Guns was completed during introduction to the Marine Corps UH-1 Helicopter. DT for the GAU-17/A Machine Guns was conducted by NRWATS in

May 1993. VX-1 conducted OT for the GAU-17/A Machine Guns in August 1993. DT was completed on the AGM-114K Hellfire Missile captive carry and release in FY94. OT requirements were waived for the AGM-114K Hellfire Missile.

**F. AIRCRAFT AND/OR EQUIPMENT/SYSTEM/SUBSYSTEM REPLACED.** The Armed Helo will not replace any systems or equipment currently installed in the SH-60B or HH-60H Helicopters.

#### G. DESCRIPTION OF NEW DEVELOPMENT

**1. Functional Description.** The Armed Helo consists of the FLIR/LRD System, the Hellfire Missile System, and either the GAU-16/A or GAU-17/A Machine Guns. The FLIR/LRD System provides a video driver capability for displaying thermal images in day, night, and adverse weather conditions. The FLIR/LRD System also stores status on a Multi-Function Display and provides guidance to the Pilot for placing the Hellfire Missiles on target. The HH-60H and the SH-60B Helicopters are the only aircraft receiving Armed Helo at this time.

AFC-171 is installed in the SH-60B Block I Helicopter and consists of the following items: fixed provision cable harness, power distribution unit, nose mount bracket, (-11) Multiplexer-Demultiplexer, Armament Controller-Receiver-Transmitter (ACRT), Signal Data Converter (SDC), M299 Hellfire Launcher (HL), left-hand extended pylon, BRU-14/A Bomb Rack, cable harness, AN/AAS-44(V) FLIR/LRD system, nose mount platform, and GAU-16/A Machine Gun.

AFC-132 is installed in the HH-60H Helicopter. AFC-132 consists of components identical to AFC-171 except for aircraft system wire routing to match its intended helicopter, and AFC-132 does not contain the (-11) Multiplexer-Demultiplexer and the GAU-16/A Machine Gun.

ECP-267 is installed on the SH-60B Block 0 and Block I Helicopters. It contains the same components as AFC-171 with the exception of the ACRT, Power Converter Unit, aircraft wiring, and Hellfire Missile system.

The Armed Helo contains the following components:

a. AN/AAS-44(V) Forward Looking Infrared/Laser Range Designator. The AN/AAS-44(V) FLIR/LRD converts long wavelength Infrared (IR) radiation from a scene into a real-time video signal for processing on an operator's display. It provides additional video data outputs for data link and Video Cassette Recorder interfaces. The AN/AAS-44(V) FLIR/LRD provides pointing information regarding its optical Line-of-Sight (LOS) relative to its mounting surface. It directs its LOS to pointing angles determined by input commands from the operator via the avionics system.

(1) **Turret Unit.** The Turret Unit (TU) RT-1735-44(V) houses the IR receiver, the LRD, sensor optics, pointing and stabilization gimbals, associated circuitry, and

environmental control equipment. The TU is mounted on the starboard pylon of the SH-60B Helicopter in the FCK configuration. The TU is mounted on the nose of the SH-60B and HH-60H Helicopters in the FHS configuration.

(2) Electronics Unit. The Electronics Unit (EU) C-2393/AAS-44(V) houses the AN/AAS-44(V) FLIR power supplies, video processing circuitry, AN/AAS-44(V) FLIR mode control circuitry, and AN/AAS-44(V) FLIR-to-avionics system interface circuitry. The EU receives a discrete LRD trigger and turret positioning control signals from the ACRT/CD-139/A and controls the operation of the TU. The EU will be mounted internally in the SH-60B and HH-60H Helicopters.

(3) Hand Control Unit. The Hand Control Unit (HCU) C-12394/AAS-44(V) contains various switches and transducers, which provide the means for the Sensor Operator (SO) and Airborne Tactical Officer (ATO) in the SH-60B Helicopter and the Left Seat Pilot in the HH-60H Helicopter to interface with and operate the FLIR/LRD as well as launch Hellfire Missiles. The HCU allows direct control of various Armed Helo functions and a means to configure Armed Helo through display menus.

(4) Boresight Collimator. The Boresight Collimator (BSC) SU-192/ AAS-44(V) is a passive optical module which facilitates the alignment of the LOS of the IR receiver and the laser transmitter in the TU.

**b.** Aircraft Mount. The Aircraft Mount (AM) provides a means to adapt the TU to the helicopter. SH-60B Helicopters, with FCK only, have the TU AM installed on the starboard side bomb rack. The HH-60H and SH-60B Helicopters, with the FHS installed, use a nose AM configuration.

**c. M299 Hellfire Launcher.** The M299 HL provides the electronic and mechanical interface between the Hellfire Missiles and the helicopter avionics. The M299 HL is a MIL-STD-1760 compatible, jettisonable mission store, four-rail configuration capable of carrying and launching from one to four Hellfire Missiles.

**d.** Armament Controller-Receiver-Transmitter. The ACRT CD-139/A provides for integration of the Armed Helo into the aircraft avionics. The ACRT provides bus control of the stores management bus, provides weapons processing for the M299 HL, and provides for integration of the AN/AAS-44(V) FLIR/LRD system segment and the HL segment. The ACRT also provides video processing capability including symbology generation.

e. Signal Data Converter. The Signal Data Converter SDC CV-4326/A provides power to the stores stations. The SDC is controlled by the ACRT.

**f. GAU-16/A Weapon System.** The GAU-16/A Weapon System consists of a .50 caliber aircraft machine gun, a MK 94 MOD 1 Gun Mount, mounting hardware, and an AN/PEQ-2 Laser.

(1) GAU-16/A Machine Gun. The GAU-16/A Machine Gun is crew operated and is compatible with the SH-60B, SH-60F, and HH-60H Helicopters. The GAU-16/A Machine Gun has a firing rate of 750-850 rounds per minute and is belt-fed from a standard 100-round ammunition canister.

(2) MK 94 MOD 1 Gun Mount. The MK 94 MOD 1 Gun Mount is designed with shock absorbers that significantly reduce recoil loads transmitted to the helicopter. It supports the machine gun, provides elevation, depression, and azimuth movement of the weapon, and houses the standard 100-round ammunition canister.

(3) **AN/PEQ-3 Laser.** The AN/PEQ-3 Laser is equipped with an aiming laser and an illumination beam. The beams are only visible with night vision equipment.

**g. GAU-17/A Machine Gun.** The GAU-17/A Aircraft Machine Gun is a 7.62mm externally powered, six-barrel, air-cooled, multipurpose weapon capable of firing at a rate of 2,000 or 4,000 rounds per minute. Two GAU-17/A Machine Guns are installed on each of the HH-60H Helicopters flown by HCS-4 and HCS-5.

UNIT	WEIGHT (POUNDS)	HEIGHT (INCHES)	LENGTH (INCHES)	WIDTH (INCHES)
TU	135.00	18.60	17.50	17.50
EU	49.00	9.24	14.20	13.52
HCU	2.00	6.55	4.85	3.75
BSC	10.00	9.00	14.00	9.00
BSC AM	11.00	1.50	12.00	8.00
AM FCK	16.50	6.00	22.25	20.00
AM Nose	49.00	6.65	25.00	17.50
HL	145.00	21.50	57.50	20.00
ACRT	17.00	7.70	10.25	7.50
SDC	27.00	105.00	10.00	8.00
GAU-16/A	65.00	9.83	56.41	7.84
Gun Mount	95.00	27.00	50.22	60.78
GAU-17/A	41.00	7.00	33.00	10.00

2. Physical Description. The Armed Helo equipment physical dimensions are as follows:

**3. New Development Introduction.** The Armed Helo was introduced into existing helicopters as a retrofit through the following:

- ° ECP-267, FCK
- ° AFC-132, HH-60H FHS
- ° AFC-171, SH-60B FHS/GAU-16/A Machine Gun

**4. Significant Interfaces.** The Armed Helo interfaces with the aircraft avionics system through the two MIL-STD-1553 data buses.

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

#### **H. CONCEPTS**

**1. Operational Concept.** In-flight, the SH-60B ATO is the only Crewmember to have the capability of firing the Hellfire Missile. The HH-60H Helicopter Left Seat Pilot is the only Crewmember onboard to have the capability of operating the FHS. The SH-60B SO, from the Aviation Warfare Systems Operator (AW) rating, and HH-60H Aircrewman operate the GAU-16/A Machine Gun. HH-60H Helicopters with GAU-17/A Machine Guns installed are operated by the Copilot only.

**2. Maintenance Concept.** Maintenance of the Armed Helo is carried out using a two level concept, organizational level to contractor depot level. Organizational maintenance is performed by Navy personnel in accordance with the maintenance procedures outlined in the Naval Aviation Maintenance Program, OPNAVINST 4790.2 (series). Depot level maintenance is currently being performed by the equipment manufacturers until funding becomes available to award a depot level maintenance support contract for the Armed Helo components and systems.

**a. Organizational.** Organizational level maintenance functions for the Armed Helo are limited to system troubleshooting using Built-In Test (BIT) and removal and replacement of the defective Weapon Replaceable Assembly (WRA). Organizational level maintenance is performed by Aviation Electronics Technician (AT) personnel holding NEC 8376 or 8876 and AO personnel holding the NEC 8378. SH-60B organizational maintenance personnel hold NEC 8378 or 8878. HH-60H organizational maintenance personnel hold SH-60F/H Organizational Maintenance Technician NECs 8378 or 8878.

(1) **Preventive Maintenance.** Preventive maintenance procedures at the organizational level consist of periodic inspection and treatment for corrosion control.

(2) Corrective Maintenance. Corrective maintenance at the organizational level consists of troubleshooting using BIT and removal and replacement of the defective WRA.

**b. Intermediate.** Intermediate maintenance on the Armed Helo is limited to minor repair of detachable cable assemblies and minor repair to the GAU-16/A Machine Gun oil

buffer body performed by Aviation Electrician's Mate (AE) and AO personnel, respectively, attached to Intermediate Maintenance Activities.

**c. Depot.** When funding becomes available, depot level maintenance will be performed by various contractors. Until that time, each respective equipment manufacturer provides interim maintenance support. However, limited depot level maintenance of the GAU-16/A Machine Gun is provided by Naval Surface Warfare Center Detachment Crane, Indiana.

**d. Interim Maintenance.** The individual equipment manufacturers provide interim maintenance until the depot support is established.

e. Life Cycle Maintenance Plan. Once depot level maintenance is established, a Life Cycle Maintenance Plan will be developed integrating the Armed Helo equipment life cycle maintenance with the H-60 Helicopters.

**3. Manning Concept.** The Armed Helo is operated by the aircraft Flight Crew and maintained by personnel from the AT and AO ratings. The current maintenance NECs are shown in the tables below. SH-60B and HH-60H Helicopter AO personnel earn only NEC 8378. AT personnel earn NEC 8876 or 8376 for the SH-60B and NEC 8878 or 8378 for the HH-60H. This change is a result of consolidating the SH-60B, SH-60F, and HH-60H Helicopter training. Current squadron manpower requirements are available in individual Activity Manpower Documents and the SH-60F and SH-60B NTSPs listed in paragraph M. of this document.

CURRENT SH-60B HELICOPTER TRAINING TRACK/NEC LISTING				
RATING	INITIAL	NEC	CAREER	NEC
AT	D/E-102-0820	8876	D/E-102-0825	8376
AO	NA	NA	D/E-646-0840	8378

CURRENT HH-60H HELICOPTER TRAINING TRACK/NEC LISTING				
RATING	INITIAL	NEC	CAREER	NEC
AT	D/E-102-0823	8878	D/E-102-0822	8378
AO	NA	NA	D/E-646-0840	8378

With the advent of forward firing air-to-ground munitions on the H-60 Helicopter, AOs are essential to ensure safe and effective weapons employment by H-60 squadrons. The AO manpower adjustments have been approved and are reflected in the Total Force Manpower Management System. The workload for the Armed Helo has increased in the existing SH-60B Anti-Submarine Squadron LAMPS Helicopter. The SH-60B Armed Helo squadron's AO billets have changed from four AOs to one AO1 per shore duty activity and zero AOs to six AO2s per sea duty activity. HH-60H Helicopter squadrons do not work from a detachment concept; therefore, there is no billet change required for the HH-60H Helicopter squadrons.

**4. Training Concept.** The intent of the Armed Helo training concept is to provide proficient operator and maintenance personnel at the organizational level. Armed Helo operator training for SH-60B Helicopter aircrew personnel is provided by two Fleet Readiness Squadrons (FRS), Helicopter Squadron Light (HSL)-40, Naval Station (NS) Mayport, Florida; and HSL-41, NAS North Island, California. Armed Helo operator training for HH-60H aircrew personnel is provided by the FRS, Helicopter Antisubmarine Squadron (HS)-10, NAS North Island, California; and Weapons Training Unit (WTU), NAS Jacksonville, Florida.

Armed Helo maintenance training to support the SH-60B Helicopter is provided by Maintenance Training Unit (MTU) 1022 Naval Air Maintenance Training Unit (NAMTRAU) North Island, California; and MTU 1066 Naval Air Maintenance Training Group Detachment (NAMTRAGRU DET) Mayport, Florida. MTU 1022 NAMTRAU North Island and MTU 1066 NAMTRAGRU DET Mayport HSL Annex are currently training students to receive NECs 8376, 8876, 8378, and 8878, with the exception of the AO rating. MTU 1066 and 1022 HSL Annex did not receive formal initial training for the SH-60B Armed Helo. They received only on-site On-the-Job Training (OJT). Armed Helo maintenance training to support the HH-60H Helicopter is provided by MTU 1005 NAMTRAU Jacksonville, Florida; and MTU 1022 NAMTRAU North Island.

The final H-60 Armed Helo Training Package was forwarded to Naval Air Maintenance Training Group Headquarters (NAMTRAGRU HQ), Pensacola, Florida, in April 2000. This information was forwarded to NAMTRAU North Island and NAMTRAU Jacksonville for inclusion in SH-60B and HH-60H training courses. These courses are currently Ready For Training (RFT).

Naval Reserve (HCS-4 and HCS-5) training requirements for the GAU-17/A Machine Guns are taught on an as needed basis. Personnel received training at Naval Air Maintenance Training Marine Unit (NAMTRA MARUNIT) Camp Pendleton, California. Training consisted of course *C-646-3360, UH-1N Defensive Armament Subsystem Organizational Maintenance*. These two squadrons are the only planned recipients of the GAU-17/A Machine Guns.

The established training concept for most aviation maintenance training divides "A" School courses into two or more segments called *Core* and *Strand*. Many organizational level "C" School courses are also divided into separate *Initial* and *Career* training courses. "A" School *Core* courses include general knowledge and skills training for the particular rating, while "A" School *Strand* courses focus on the more specialized training requirements for that rating and a specific aircraft or equipment, based on the student's fleet activity destination. *Strand* training immediately follows *Core* training and is part of the "A" School. Upon completion of *Core* and *Strand* "A" Schools, graduates going to organizational level activities attend the appropriate *Initial* "C" School for additional specific training. *Initial* "C" School training is intended for students in paygrades E-4 and below. *Career* "C" School training is provided to organizational level personnel, E-5 and above, to enhance skills and knowledge within their field. "A" School graduates going to intermediate level activities attend the appropriate intermediate level "C" School. Intermediate level "C" Schools are not separated into *Initial* and *Career* courses.

**a. Initial Training.** Initial training for SH-60B FCK DT personnel was provided by Naval Warfare Center Aircraft Division Indianapolis (NAWCADIND) in September 1996. SH-60B FCK OT initial training for Naval Aviation Engineering Service Unit (now the Naval Air Technical Data and Engineering Service Command) and instructor personnel consisted of a twoday course provided by NAWCADIND in October 1996.

Initial training for GAU-16/A Machine Gun DT and OT was provided by Hughes Technical Services, Incorporated in January 1997. Initial operator training for the SH-60B RDK DT and OT was provided by Hughes Technical Services, Incorporated in March 1997. Initial maintenance training for the SH-60B RDK DT and OT was provided by Lloyd-Lemont Design in second quarter FY97. Initial SH-60B RDK instructor training was taught by Hughes Technical Services Incorporated in April 1997.

HH-60H DT and OT training was provided by Hughes Technical Services, Incorporated during second quarter FY98. No additional initial training is required.

**b.** Follow-on Training. Armed Helo training information has been integrated into SH-60B and SH-60F/HH-60H differences training courses. Logistics Services International of Jacksonville, Florida, provided courseware to the FRS, WTU, and NAMTRAGRU HQ in April 2000. This information was forwarded to NAMTRAU North Island and Jacksonville for inclusion in SH-60B and HH-60H training courses. These courses were RFT with this information in third quarter FY01.

Current planning is for the Training Devices and Training Aids to be available in third quarter FY03. When further information becomes available it will be included in updates to the SH-60B and HH-60H NTSPs. The Armed Helo caused no change in student throughput or chargeable student billets. RFT dates indicate the date when Armed Helo information was incorporated into these courses.

(1) **Operator.** Armed Helo operator training was incorporated into the appropriate aircrew training at the FRS and WTU. Follow-on operator training for SH-60B RD Aircrew is currently being taught by FRSs HSL-40, NS Mayport, and HSL-41, NAS North Island. Follow-on operator training for SH-60B Core B aircrew, which began in first quarter FY01, is being provided by FRSs HSL-40, NS Mayport, and HSL-41, NAS North Island. Follow-on operator training for HH-60H Aircrew, which began in first quarter FY01, is being

provided by FRS HS-10, NAS North Island, and WTU, NAS Jacksonville. The following table lists the applicable operator training courses.

COURSE NUMBER	COURSE TITLE	RFT DATE	TRACK NUMBER
D/E-2C-0520	Helicopter Instrument Ground School	1st Qtr FY01	D/E-2C-0821 D/E-2C-0822 D/E-2C-0823 D/E-2C-0824 D/E-2C-0825 E-2C-0520 E-2C-0802 E-2C-0804 E-2C-0805
D/E-2C-2501	SH-60B Fleet Replacement Pilot Category 1 Syllabus	1st Qtr FY01	D/E-2C-0821 E-2C-0825
D/E-2C-2502	SH-60B Fleet Replacement Pilot Category 3 Syllabus	1st Qtr FY01	D/E-2C-0822
D/E-2C-2503	SH-60B Fleet Replacement Pilot Category 2 Syllabus	1st Qtr FY01	D/E-2C-0823
D/E-2C-2504	SH-60B Fleet Replacement Pilot Category 4 Syllabus	1st Qtr FY01	D/E-2C-0824
D/E-050-2501	SH-60B Fleet Replacement Aircrewman Category 1 Syllabus	1st Qtr FY01	D/E-050-2510
D/E-050-2502	SH-60B Fleet Replacement Aircrewman Category 3 Syllabus	1st Qtr FY01	D/E-050-2511
E-2C-0810	SH-60F Fleet Replacement Pilot Category 1 Syllabus	1st Qtr FY01	E-2C-0800
E-2C-0811	SH-60F Fleet Replacement Pilot Category 2 Syllabus	1st Qtr FY01	E-2C-0802
E-2C-0812	SH-60F Fleet Replacement Pilot Category 3 Syllabus	1st Qtr FY01	E-2C-0803
E-2C-0813	SH-60F Fleet Replacement Pilot Category 4 Syllabus	1st Qtr FY01	E-2C-0804

COURSE NUMBER	COURSE TITLE	RFT DATE	TRACK NUMBER
E-2C-0814	SH-60F Fleet Replacement Pilot Category 5 Syllabus	1st Qtr FY01	E-2C-0805
E-050-0802	SH-60F Fleet Replacement Aircrewman Category 1 Syllabus	2nd Qtr FY01	E-050-0831
E-050-0806	SH-60F Fleet Replacement Aircrewman Category 3 Syllabus	2nd Qtr FY01	E-050-0834

(2) Maintenance. Interim follow-on maintenance training to support the Armed Helo on the SH-60B RDK Helicopter was provided by Naval Air Technical Data and Engineering Service Command (NATEC). Follow-on maintenance training to support the Armed Helo on the SH-60B Core B Helicopter is provided by MTU 1022 NAMTRAU HSL Annex North Island, and MTU 1066 NAMTRAGRU DET Mayport. Follow-on maintenance training to support the HH-60H Helicopter is provided by MTU 1005 NAMTRAU Jacksonville and MTU 1022 NAMTRAU North Island

Armed Helo AT and AO maintenance training to support the SH-60B and HH-60H Helicopters was integrated into the following courses. The addition of this information posed a minimal impact to the overall course.

RATING	COURSE NUMBER	COURSE TITLE	TRACK NUMBER	RFT DATE
AT	C-102-9406B	SH-60B LAMPS MKIII Weapon System Technician Initial Organizational Maintenance	D/E-102-0820	2nd Qtr FY01
AT	C-102-9409	SH-60B LAMPS MKIII Weapon System Technician Career Organizational Maintenance	D/E-102-0825	2nd Qtr FY01
AT	C-102-9407A	SH-60F/H Electronics/Systems Career	D/E-102-0822	2nd Qtr FY01
AT	C-102-9408A	SH-60F/H Electronics/Systems Initial	D/E-102-0823	2nd Qtr FY01

RATING	COURSE NUMBER	COURSE TITLE	TRACK NUMBER	RFT DATE
AO	C-646-9407A	H-60 Armament and Related Systems Organizational Maintenance	D/E-646-0840	2nd Qtr FY01

Note: There is no initial AO course.

All aircraft communities require organizational level maintenance technicians working on the Armed Helo to attend a Laser Safety Fundamentals course. Other activities only require that key individuals, such as the Laser System Safety Officer (LSSO), attend this type of course. For the H-60 community, each wing must qualify at least one Category II LSSO by taking the two-day Naval Occupational Safety, Health, and Environmental Training Center LSSO Category II course *A-493-0067*, *Laser System Safety Officer (Category 2*). The Category II LSSO is responsible for calculating safe operating distances and the training of Category I LSSOs. The Category I LSSOs attend the eight-day LSSO Category I course, *A-493-0038*, *Laser System Safety Officer (Category 1)*. Course schedules may be obtained from CNETNOTE 5100.

Title	SH-60F/HH-60H Electronics Systems (Initial) Organizational Maintenance	
CIN	D/E-102-0823	
Model Manager	MTU 1022 NAMTRAU North Island	
Description	This track provides the first tour Aviation Electronics Technician with aircraft familiarization and an introduction to:	
	° Publications	
	° Ground Safety Precautions	
	<sup>°</sup> Tactical Data Management System	
	<sup>°</sup> Communication Systems	
	<sup>°</sup> Navigation Systems	
	° Mission Sensor Systems	
	° Connector and Wiring Harness Repair Procedures	
	<sup>°</sup> Electronic Protection System	
	° Laser Safety Program	
	Upon completion, the student will be able to perform as an entry level SH-60F/HH-60H Electronics Systems Organizational Maintenance Technician in a squadron environment under direct supervision.	

Locations	° MTU 1005 NAMTRAU Jacksonville ° MTU 1022 NAMTRAU North Island	
Length	57 days	
RFT date	TBD	
Skill identifier	AT 8878	
TTE/TD	Avionics Maintenance Trainer	
Prerequisite	C-100-2018, Avionics Technician O Level Class A1	
Title	SH-60B (LAMPS MKIII) System Organizational Initial Maintenance Technician	
CIN	D/E-102-0820	
Model Manager	MTU 1022 NAMTRAU North Island	
Description	This track provides the first tour Aviation Electronics Technician with an introduction to:	
	<ul> <li>Software Programs</li> <li>Avionics Operational Program Testing</li> <li>Avionics Maintenance Test Program</li> <li>Spectrum Analyzer Diagnostic Program Testing</li> <li>Laser Safety Program</li> <li>Principles of Optics and Lasers</li> <li>Publications</li> <li>Ground Safety Precautions</li> <li>Troubleshooting Concepts</li> <li>Weapon Systems Maintenance and Troubleshooting</li> <li>Survivability Maintenance and Troubleshooting</li> </ul>	
	Upon completion, the student will be able to perform as an entry level SH-60B (LAMPS MKIII) System Organizational Maintenance Technician in a squadron environment under direct supervision.	
Locations	° MTU 1022 NAMTRAU North Island ° MTU 1066 NAMTRAGRU Det Mayport	
Length	73 days	
RFT date	Currently available	
Skill identifier	AT 8876	
TTE/TD	Avionics Maintenance Trainer	

Prerequisite	C-100-2018, Avionics Technician O Level Class A1
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Title	SH-60F/HH-60H Electronic Systems (Career) Organizational Maintenance	
CIN	D/E-102-0822	
Model Manager	MTU 1022 NAMTRAU North Island	
Description	This track provides the second tour Aviation Electronics Technician with an introduction to:	
	° Advanced MIL-STD-1553B Data Bus Theory ° Navigation Equipment	
	° Communication Equipment	
	° Mission Equipment Group	
	° Publications	
	° Troubleshooting Concepts	
	Upon completion, the student will be able to perform as an SH-60F/HH-60H Electronic Systems Organizational Maintenance Technician in a squadron environment under limited supervision.	
Locations	° MTU 1005 NAMTRAU Jacksonville ° MTU 1022 NAMTRAU North Island	
Length	25 days	
RFT date	Currently available	
Skill identifier	AT 8378	
TTE/TD	Avionics Maintenance Trainer	
Prerequisite	D/E-102-0823, SH-60F/HH-60H Initial Electronics Systems Organizational Maintenance	

Title	SH-60B LAMPS MKIII Systems Organizational (Career) Maintenance Technician
CIN	D/E-102-0825
Model Manager	MTU 1022 NAMTRAU North Island
Description	This track provides the second tour Aviation Electronics Technician with an introduction to: <sup>o</sup> Advanced Theoretical Troubleshooting <sup>o</sup> LAMPS Helicopter and Ship Integration <sup>o</sup> Navigation Equipment <sup>o</sup> Communication Equipment <sup>o</sup> Mission Equipment Group <sup>o</sup> Weapons <sup>o</sup> Publications <sup>o</sup> SH-60B LAMPS MK III Electronic Configuration Upon completion, the student will be able to perform as an SH-60B LAMPS MKIII Systems Organizational
	Maintenance Technician in a squadron environment under limited supervision.
Locations	° MTU 1066 NAMTRAGRU Det Mayport ° MTU 1022 NAMTRAU North Island
Length	16 days
RFT date	Currently available
Skill identifier	AT 8376
TTE/TD	Avionics Maintenance Trainer
Prerequisite	D/E-102-0820, SH-60B (LAMPS MKIII) System Organizational Initial Maintenance Technician

Title	H-60 Armament and Related Systems Organizational Maintenance
CIN	D/E-646-0840
Model Manager	MTU 1022 NAMTRAU North Island
Description	This track provides the first or second tour Aviation Ordnanceman with detailed operation, testing, and troubleshooting of the H-60 Armament and Related Systems including:
	<ul> <li><sup>o</sup> Machine Gun Systems</li> <li><sup>o</sup> Sonobuoy Launch System</li> <li><sup>o</sup> Countermeasures Dispensing System</li> <li><sup>o</sup> Laser Safety Program</li> <li><sup>o</sup> Torpedo Systems Maintenance and Troubleshooting</li> <li><sup>o</sup> Jettison Systems Maintenance and Troubleshooting</li> <li><sup>o</sup> Hellfire Systems Maintenance and Troubleshooting</li> <li><sup>u</sup> Hellfire Systems Maintenance and Troubleshooting</li> </ul>
Locations	<ul> <li>° MTU 1005 NAMTRAU Jacksonville</li> <li>° MTU 1022 NAMTRAU North Island</li> </ul>
Length	57 days
RFT date	Currently available
Skill identifier	AO 8378
TTE/TD	<ul> <li><sup>o</sup> Hellfire Captive Air Training Missile (CATM)</li> <li><sup>o</sup> Dummy Air Training Missile (DATM)</li> <li><sup>o</sup> Ordnance Maintenance Trainer (after modification)</li> </ul>
Prerequisites	<ul> <li>° C-646-2011, Aviation Ordnanceman Common Core Class A1</li> <li>° C-646-2012, Aviation Ordnanceman Airwing Strand Class A1</li> </ul>

# c. Student Profiles

SKILL	PREREQUISITE
IDENTIFIER	SKILL AND KNOWLEDGE REQUIREMENTS
1311, 1312	° Designated Helicopter Pilot

SKILL IDENTIFIER	PREREQUISITE SKILL AND KNOWLEDGE REQUIREMENTS
AT 8376	<ul> <li>° C-100-2020, Avionics Common Core Class A1</li> <li>° C-100-2018, Avionics Technician O Level Class A1</li> <li>° D/E-102-0820, SH-60B (LAMPS MKIII) System Organizational Initial Maintenance Technician</li> </ul>
AT 8378	<ul> <li>° C-100-2020, Avionics Common Core Class A1</li> <li>° C-100-2018, Avionics Technician O Level Class A1</li> <li>° D/E-102-0823, SH-60F/HH-60H Initial Electronics Systems Organizational Maintenance</li> </ul>
AT 8876	° C-100-2020, Avionics Common Core Class A1 ° C-100-2018, Avionics Technician O Level Class A1
AT 8878	° C-100-2020, Avionics Common Core Class A1 ° C-100-2018, Avionics Technician O Level Class A1
AO 8378	<ul> <li>° C-646-2011, Aviation Ordnanceman Common Core Class A1</li> <li>° C-646-2012, Aviation Ordnanceman Airwing Strand Class A1</li> </ul>
AW 7873	<ul> <li>° C-210-2010, Aviation Warfare System Operator Class A1</li> <li>° Q-050-1500, Naval Aircrewman Candidate School</li> </ul>
AW 7876	<ul> <li>° C-210-2010, Aviation Warfare System Operator Class A1</li> <li>° C-210-2011, Airborne Acoustic Mission</li> <li>° Q-050-1500, Naval Aircrewman Candidate School</li> </ul>

**d.** New Training Pipelines and Training Track Changes. No new pipelines or training tracks were required to support the addition of the Armed Helo into the SH-60B or HH-60H. Modifications to SH-60B and SH-60F Pilot and Aircrew training, as well as AT and AO maintenance training tracks were made to include the Armed Helo data. The courses that required modification are listed below.

ТКАСК	CIN, COURSE TITLE
D/E-2C-0821, SH-60B Fleet Replacement Pilot Category 1 Pipeline	<ul> <li><sup>o</sup> D/E-2C-2501, SH-60B Fleet Replacement Pilot Category 1 Syllabus</li> <li><sup>o</sup> D/E-2C-0520, Helicopter Instrument Ground School</li> </ul>

TRACK	CIN, COURSE TITLE
D/E-2C-0822, SH-60B Fleet Replacement Pilot Category 2 Pipeline	<ul> <li><sup>o</sup> D/E-2C-2502, SH-60B Fleet Replacement Pilot Category 2 Syllabus</li> <li><sup>o</sup> D/E-2C-0520, Helicopter Instrument Ground School</li> </ul>
D/E-2C-0823, SH-60B Fleet Replacement Pilot Category 3 Pipeline	<ul> <li><sup>o</sup> D/E-2C-2503, SH-60B Fleet Replacement Pilot Category 3 Syllabus</li> <li><sup>o</sup> D/E-2C-0520, Helicopter Instrument Ground School</li> </ul>
D/E-2C-0824, SH-60B Fleet Replacement Pilot Category 4 Pipeline	<ul> <li><sup>o</sup> D/E-2C-2504, SH-60B Fleet Replacement Pilot Category 4 Syllabus</li> <li><sup>o</sup> D/E-2C-0520, Helicopter Instrument Ground School</li> </ul>
E-2C-0825, SH-60B Fleet Replacement Pilot Category 5 Pipeline	<ul> <li><sup>o</sup> D/E-2C-2501, SH-60B Fleet Replacement Pilot Category 1 Syllabus</li> <li><sup>o</sup> D/E-2C-0520, Helicopter Instrument Ground School</li> </ul>
D/E-050-2510, SH-60B Fleet Replacement Aircrewman Category 1 Pipeline	<ul> <li><sup>o</sup> D/E-050-2501, SH-60B Fleet Replacement Aircrew Category 1 Syllabus</li> <li><sup>o</sup> D/E-050-2507, M-60D/M-240 Machine Gun Aerial Gunnery</li> </ul>
D/E-050-2511, SH-60B Fleet Replacement Aircrewman Category 2 Pipeline	<ul> <li><sup>o</sup> D/E-050-2502, SH-60B Fleet Replacement Aircrew Category 2 Syllabus</li> <li><sup>o</sup> D/E-050-2507, M-60D/M-240 Machine Gun Aerial Gunnery</li> </ul>
E-2C-0800, SH-60F Fleet Replacement Pilot Category 1 Pipeline	<ul> <li>° E-2C-0810, SH-60F Fleet Replacement Pilot Category 1 Syllabus</li> <li>° D/E-2C-0520, Helicopter Instrument Ground School</li> </ul>
E-2C-0802, SH-60F Fleet Replacement Pilot Category 2 Pipeline	<ul> <li>° E-2C-0811, SH-60F Fleet Replacement Pilot Category 2 Syllabus</li> <li>° D/E-2C-0520, Helicopter Instrument Ground School</li> </ul>
E-2C-0804, SH-60F Fleet Replacement Utility Pilot Category 4 Pipeline	<ul> <li>° E-2C-0813, SH-60F Fleet Replacement Utility Pilot Category 4 Syllabus</li> <li>° D/E-2C-0520, Helicopter Instrument Ground School</li> </ul>

TRACK	CIN, COURSE TITLE
E-2C-0805, SH-60F Fleet Replacement Pilot Category 5 Pipeline	<ul> <li>° E-2C-0814, SH-60F Fleet Replacement Pilot Category 5 Syllabus</li> <li>° D/E-2C-0520, Helicopter Instrument Ground School</li> </ul>
D/E-050-0831, SH-60F Fleet Replacement	° D/E-050-0802, SH-60F Fleet Replacement
Aircrewman Category 1 Pipeline	Aircrew Category 1 Syllabus
D/E-050-0834, H-60F Fleet Replacement	° D/E-050-0806, SH-60F Fleet Replacement
Aircrewman Category 2 Pipeline	Aircrew Category 2 Syllabus
D/E-646-0840, H-60 Armament and Related	<ul> <li>° C-646-9407A, H-60 Armament and Related</li></ul>
Systems Organizational Maintenance	System Organizational Maintenance <li>° C-602-4410A, SH-60 Connector Repair</li>
D/E-102-0820, SH-60B (LAMPS MKIII) System Organizational Initial Maintenance Technician	<ul> <li>° C-102-9406B, SH-60B LAMPS MKIII</li> <li>Weapon Systems Technician (Initial)</li> <li>Organizational Maintenance</li> <li>° C-602-4410A, SH-60 Connector Repair</li> </ul>
D/E-102-0822, SH-60F/HH-60H Career	° C-102-9407A, SH-60F/HH Electronics
Electronics System Organizational Maintenance	Systems Career
D/E-102-0823, SH-60F/HH-60H Initial	<ul> <li>° C-102-9408A, SH-60F/HH-60H Electronics</li></ul>
Electronics System Organizational Maintenance	Systems Initial <li>° C-602-3770A Laser Safety</li> <li>° C-602-4410A SH-60 Connector Repair</li>
D/E-102-0825, SH-60B (LAMPS MKIII) System Organizational Career Maintenance Technician	° D/E-102-0820, SH-60B Electronics System (Initial) Maintenance

# I. ONBOARD (IN-SERVICE) TRAINING

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

**a. Maintenance Training Improvement Program.** The Maintenance Training Improvement Program (MTIP) is a training management tool that, through diagnostic testing, identifies individual training deficiencies at both the organizational and intermediate levels of maintenance. MTIP was implemented per OPNAVINST 4790.2 (series). MTIP is being replaced by Aviation Maintenance Training Continuum System (AMTCS).

**b.** Aviation Maintenance Training Continuum System. AMTCS will provide career path training to the Sailor or Marine from their initial service entry to the end of their military career. AMTCS is planned to be an integrated system that will satisfy the training and administrative

requirements of both the individual and the organization. The benefits will be manifested in the increased effectiveness of the technicians and the increased efficiencies of the management of the training business process. Capitalizing on technological advances and integrating systems and processes where appropriate, the right amount of training can be provided at the right time, thus meeting the CNO's mandated "just-in-time" training approach.

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

Included in the AMTCS development effort is the Aviation Maintenance Training Continuum System - Software Module that provides testing (Test and Evaluation), recording (Electronic Training Jacket), and a Feedback system. The core functionality of these AMTCS tools are based and designed around the actual maintenance-related tasks the technicians perform, and the tasks are stored and maintained in a Master Task List data bank. These tools are procured and fielded with appropriate Commercial Off The Shelf hardware and software, i.e., Fleet Training Devices -Laptops, PCs, Electronic Classrooms, Learning Resource Centers, operating software, and network software and hardware.

Upon receipt of direction from OPNAV (N889H), AMTCS is to be implemented and the new tools integrated into the daily training environment of all participating aviation activities and supporting elements. AMTCS will serve as the standard training system for aviation maintenance training within the Navy and Marine Corps, and is planned to supersede the existing MTIP and Maintenance Training Management and Evaluation Program programs. Current planning is for AMTCS to begin full implementation for fleet deployment in FY02. For AMTCS implementation information refer to PMA205-3D3.

**2. Personnel Qualification Standards.** SH-60B and HH-60H Aircrew Personnel Qualification Standards (PQS) requirements were updated to include the Armed Helo operation standards. The PQS is managed by the PQS Development Group of the Naval Education and Training Program Management Support Activity, Pensacola, Florida.

# 3. Other Onboard or In-Service Training Packages. NA

# J. LOGISTICS SUPPORT

#### 1. Manufacturer and Contract Numbers

CONTRACT NUMBER	MANUFACTURER	ADDRESS
N00019-91-G-0158	Lockheed-Martin Federal Integrators	1801 State Route 17C Owego, NY 13827

CONTRACT NUMBER	MANUFACTURER	ADDRESS
N00019-94-G-0049	Texas Instruments Defense and Electronics Group	2501 West University Drive McKinney, TX 75069

**2. Program Documentation.** The Acquisition Logistics Support Plan is dated June 1998 and the User's Logistics Support Summary for the Armed Helo was completed in October 1999.

**3. Technical Data Plan.** An organizational level Armed Helo Repair Manual and Illustrated Parts Breakdown has been developed by Lockheed-Martin Federal Systems and submitted in Work Package format for organic printing. Lockheed-Martin Federal Systems is responsible for submitting the required changes to the aircraft Flight Manuals. H-60 Armed Helo technical publications are overdue. SH-60B Armed Helo technical publication changes have not been received from the contractor, but are funded. HH-60H Armed Helo technical publication changes have been made.

**4. Test Sets, Tools, and Test Equipment.** The following charts list training equipment and support equipment required to support the H-60 Armed Helo.

PART NUMBER	MANUFACTURER NUMBER	NAVY STOCK NUMBER	NOMENCLATURE
13007376	18876	6920-01-133-4438	Hellfire Dummy Air Training Missile (DATM)
13007355	18876	6920-01-234-0929	M-36E1 Hellfire Captive Air Training Missile (CATM)
13155079	18876	8140-01-159-7487	CNU-448 /E Container

## TRAINING EQUIPMENT HARDWARE ITEMS

#### SUPPORT EQUIPMENT ITEMS

PART NUMBER	MANUFACTURER NUMBER	NOMENCLATURE
3359AS1000	30003	AN/USQ-131 Memory Loader Verifier Set

PART NUMBER	MANUFACTURER NUMBER	NOMENCLATURE
3520AS100	30003	Test Set, Weapons Control, Aircraft AN/AWM-101
3154215-1	96214	SU-192/AAS-44(V) Boresight Collimator
315435-1	96214	MX-11595/AAS-44 (V) Aircraft Maintenance Fixture
70080-20152-014	78286	Boresight Adapter Plate

**5. Repair Parts.** Repair parts are currently available through Naval Inventory Control Point, Mechanicsburg, Pennsylvania. The Material Support Date (MSD) was reached in July 2000.

**6. Human Systems Integration.** The Human Systems Integration (HSI) Plan establishes the basis for effective integration of Human Factors Engineering, Manpower, Personnel, Training, Health Hazards, and Safety considerations into the H-60 Armed Helicopter Program acquisition as outlined in Department of Defense (DoD) Instruction 5000.2R. For information on HSI refer to PMA299.

# **K. SCHEDULES**

#### 1. Schedule of Events

**a. Installation and Delivery Schedules.** Armed Helo deliveries began in fourth quarter FY97 and proceeded as follows:

ACTIVITY	FY97	FY98	FY99	FY00	FY01	TOTAL
SH-60B	8	0	6	37	36	87
HH-60H	0	26	13	0	0	39

**INSTALLATION SCHEDULE (SYSTEMS)** 

**b. Ready For Operational Use Schedule.** The Armed Helo is ready for use upon installation and operational checkout.

**c. Time Required to Install at Operational Sites.** The Armed Helo changes take approximately six hours to install in each helicopter by a Contractor Field Modification Team.

**d. Foreign Military Sales and Other Source Delivery Schedule.** FMS are planned. For information on FMS refer to PMA299.

e. Training Device and Delivery Schedule. Installed Armed Helo systems are used for aircrew training. Armed Helo installation into each squadron's Airborne Multi-Purpose Electronic Warfare Training System will began in third quarter FY03. Modifications to the Ordnance Trainers at MTU 1005 NAMTRAU Jacksonville, MTU 1022 NAMTRAU North Island, and Avionics Maintenance Trainers at MTU 1005 NAMTRAU Jacksonville, MTU 1022 NAMTRAU North Island, and 1066 NAMTRAGRU DET Mayport will be completed in third quarter FY03.

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

DOCUMENT OR NTSP TITLE	DOCUMENT OR NTSP NUMBER	PDA CODE	STATUS
Hellfire PSP	MS-067	AIR 3.1.1	Approved May 91
HH-60H Combat SAR-SW Support Helicopter	A-50-8714B/A	4B/A PMA299	
Hellfire ILSP	MS-067	AIR-290	Approved 2 Nov 82 Rev C, Aug 94
SH-60F Carrier Inner-Zone ASW Helicopter	A-50-8508D/A	PMA299	Approved Aug 00
SH-60B Light Airborne Multi- Purpose System (LAMPS) MKIII	A-50-7702D/A	PMA299	Approved Feb 93
AN/AAS-44(V) Integrated Support Plan	FLIR0007	PMA299	Approved Feb 95

## M. RELATED NTSPs AND OTHER APPLICABLE DOCUMENTS

DOCUMENT OR NTSP TITLE	DOCUMENT OR NTSP NUMBER	PDA CODE	STATUS
AN/AAS-44 Forward Looking Infrared System MPT Concept Document	NA	PMA299	Approved Dec 95
AH-1W Aircraft	A-50-8520D/A	PMA205-2C	Approved Mar 96
H-60 Electronic Equipment Installation Kit	AFC No. 132	AIR 4.1.2	May 99
SH-60B Electronic Equipment Installation Kit	AFC No. 171	AIR 4.1.2	NA
H-60 Armed Helicopter Acquisition Logistics Support Plan	NA	AIR 3.1.2	Approved Jun 98
SH-60B Armed Helicopter System User Logistic Support Summary	H-60-B-SE-ULSS-000	AIR 3.1.2	Approved Mar 00
AGM-114B/K Hellfire Missile System	A-50-8311B/D	PMA242	Draft Nov 99

#### PART II - BILLET AND PERSONNEL REQUIREMENTS

The following elements are not affected by the H-60 Armed Helicopter Program 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

**Note:** The manpower in this part only includes the Aviation Ordnance rating. For information on Aircrew and Aviation Electronics Technicians manning and student throughputs refer to the Aircraft NTSPs listed in Part I, paragraph M. of this NTSP.

#### PART II - BILLET AND PERSONNEL REQUIREMENTS

#### **II.A. BILLET REQUIREMENTS**

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

SOURCE: Total Force Manpower Management System

**DATE:** 03/01/00

ACTIVITY, UIC		PFYs	CFY01	FY02	FY03	FY04	FY05
OPERATIONAL ACTIVITIES - NAVY							
HCS-4 NAS Norfolk	53811	1	0	0	0	0	0
HCS-4 Sea Component NAS Norfolk	47568	1	0	0	0	0	0
HS-11 NAS Jacksonville	09954	1	0	0	0	0	0
HS-15 NAS Jacksonville	09205	1	0	0	0	0	0
HS-3 NAS Jacksonville	09163	1	0	0	0	0	0
HS-5 NAS Jacksonville	09488	1	0	0	0	0	0
HS-7 NAS Jacksonville	09988	1	0	0	0	0	0
HS-75 NAS Jacksonville	09031	1	0	0	0	0	0
HSL-42 NS Mayport	53913	1	0	0	0	0	0
HSL-44 NS Mayport	53975	1	0	0	0	0	0
HSL-46 NS Mayport	53916	1	0	0	0	0	0
HSL-48 NS Mayport	53918	1	0	0	0	0	0
VX-1 NAS Patuxent River	55600	1	0	0	0	0	0
HCS-5 NAS Point Mugu	53812	1	0	0	0	0	0
HCS-5 Sea Component NAS Point Mugu	47409	1	0	0	0	0	0
HS-10 NAS North Island	09299	1	0	0	0	0	0
HS-14 NAF Atsugi	09209	1	0	0	0	0	0
HS-2 NAS North Island	09372	1	0	0	0	0	0
HS-4 NAS North Island	09164	1	0	0	0	0	0
HS-6 NAS North Island	09950	1	0	0	0	0	0
HS-8 NAS North Island	09951	1	0	0	0	0	0
HSL-37 NAS North Island	53815	1	0	0	0	0	0
HSL-43 NAS North Island	53914	1	0	0	0	0	0
HSL-45 NAS North Island	53915	1	0	0	0	0	0
HSL-47 NAS North Island	53917	1	0	0	0	0	0
HSL-49 NAS North Island	53919	1	0	0	0	0	0
HSL-51 NAF Atsugi	48550	1	0	0	0	0	0
TOTAL:		27	0	0	0	0	0
FLEET SUPPORT ACTIVITIES - NAVY							
Helicopter Antisubmarine Wing Atlantic	52956	1	0	0	0	0	0
Naval Rotary Wing NAS Patuxent River	39784	1	0	0	0	0	0
SH-60 Fleet Introduction Team NAS North Island	48097	1	0	0	0	0	0
Attack Wing US Pacific Fleet NAS Whidbey Island		1	0	0	0	0	0
SWAT School NAS North Island	47721	1	0	0	0	0	0
Helicopter Antisubmarine Light Wing Atlantic	55212	1	0	0	0	0	0
Helicopter Antisubmarine Light Wing Pacific	55630	1	0	0	0	0	0
Helicopter Antisubmarine Wing Pacific	55636	1	0	0	0	0	0
TOTAL:		8	0	0	0	0	0

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

ACTIVITY, UIC, PHASING INCREMENT	BILL OFF	ets Enl	DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
OPERATIONAL ACTIVITIES - NAVY					
HCS-4 NAS Norfolk, 53811 TAR	0	1	AO1	8378	0812
ACTIVITY	0	1			
HCS-4 Sea Component NAS Norfolk, 47568 TAR	0 0	1 1	AO2 AO2	8378 8378	0812
SELRES	0 0	2 4	AO2 AOAN	8378 8378	
ACTIVITY	0	8			
HS-11 NAS Jacksonville, 09954 ACDU	0 0 0 0	2 2 2 3	AO1 AO2 AO3 AOAN	8378 8378 8378 8378	
ACTIVITY	0	9			
HS-15 NAS Jacksonville, 09205 ACDU	0 0 0 0	2 2 2 3	AO1 AO2 AO3 AOAN	8378 8378 8378 8378	
ACTIVITY	0	9			
HS-3 NAS Jacksonville, 09163 ACDU	0 0 0 0	2 2 2 3	AO1 AO2 AO3 AOAN	8378 8378 8378 8378 8378	
ACTIVITY	0	9			
HS-5 NAS Jacksonville, 09488 ACDU	0 0 0 0	2 2 2 3	AO1 AO2 AO3 AOAN	8378 8378 8378 8378	
ACTIVITY	0	9			

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

ACTIVITY, UIC, PHASING INCREMENT	BILL OFF	.ets enl	DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
HS-7 NAS Jacksonville, 09988 ACDU	0 0 0 0	2 2 2 3	AO1 AO2 AO3 AOAN	8378 8378 8378 8378	
ACTIVITY	0	9			
HS-75 NAS Jacksonville, 09031 SELRES	0 0 0 0	1 1 1 2	AO1 AO2 AO3 AOAN	8378 8378 8378 8378 8378	
ACTIVITY	0	5			
HSL-42 NS Mayport, 53913 ACDU	0 0	1 6	AO1 AO2	8378 8378	
ACTIVITY	0	7			
HSL-44 NS Mayport, 53975 ACDU	0 0	1 6	AO1 AO2	8378 8378	
ACTIVITY	0	7			
HSL-46 NS Mayport, 53916 ACDU	0 0	1 6	AO1 AO2	8378 8378	
ACTIVITY	0	7			
HSL-48 NS Mayport, 53918 ACDU	0 0	1 6	AO1 AO2	8378 8378	
ACTIVITY	0	7			
VX-1 NAS Patuxent River, 55600 ACDU	0 0 0	1 1 1	AO1 AO2 AOAN	8378 8378 8378	
ACTIVITY	0	3			

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

ACTIVITY, UIC, PHASING INCREMENT	BILL OFF	.ets enl	DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
HCS-5 NAS Point Mugu, 53812					
TAR	0	1	A01	8378	0812
ACTIVITY	0	1			
HCS-5 Sea Component NAS Point Mugu, 47409 TAR	0 0	1 1	AO2 AO2	8378 8378	0812
SELRES	0 0	2 4	AO2 AOAN	8378 8378	
ACTIVITY	0	8			
HS-10 NAS North Island, 09299 ACDU	0 0 0 0	1 3 3 4 4	AOC AO1 AO2 AO3 AOAN	8378 8378 8378 8378 8378 8378	
ACTIVITY	0	15			
HS-14 NAF Atsugi, 09209 ACDU	0 0 0 0	2 2 2 3	AO1 AO2 AO3 AOAN	8378 8378 8378 8378	
ACTIVITY	0	9			
HS-2 NAS North Island, 09372 ACDU	0 0 0 0	2 2 2 3	AO1 AO2 AO3 AOAN	8378 8378 8378 8378	
ACTIVITY	0	9			
HS-4 NAS North Island, 09164 ACDU	0 0 0 0	2 2 2 3	AO1 AO2 AO3 AOAN	8378 8378 8378 8378	
ACTIVITY	0	9			

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

ACTIVITY, UIC, PHASING INCREMENT	BILL OFF	.ets enl	DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
HS-6 NAS North Island, 09950 ACDU	0 0 0 0	2 2 2 3	AO1 AO2 AO3 AOAN	8378 8378 8378 8378	
ACTIVITY	0	9			
HS-8 NAS North Island, 09951 ACDU	0 0 0 0	2 2 2 3	AO1 AO2 AO3 AOAN	8378 8378 8378 8378 8378	
ACTIVITY	0	9			
HSL-37 NAS North Island, 53815 ACDU	0 0	1 6	A01 A02	8378 8378	
ACTIVITY	0	7			
HSL-43 NAS North Island, 53914 ACDU	0 0	1 6	AO1 AO2	8378 8378	
ACTIVITY	0	7			
HSL-45 NAS North Island, 53915 ACDU	0 0	1 6	AO1 AO2	8378 8378	
ACTIVITY	0	7			
HSL-47 NAS North Island, 53917 ACDU	0 0	1 6	AO1 AO2	8378 8378	
ACTIVITY	0	7			
HSL-49 NAS North Island, 53919 ACDU	0 0	1 6	AO1 AO2	8378 8378	
ACTIVITY	0	7			

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

ACTIVITY, UIC, PHASING INCREMENT	BILL OFF	.ets enl	DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
HSL-51 NAF Atsugi, 48550 ACDU	0 0	1 6	AO1 AO2	8378 8378	
ACTIVITY	0	7			
FLEET SUPPORT ACTIVITIES - NAVY					
Helicopter Antisubmarine Wing Atlantic NAS Jacksonvil ACDU	<b>le, 5295</b> 0 0	<b>5</b> 1	AOC	8378	
ACTIVITY	0	1			
Naval Rotary Wing NAS Patuxent River, 39784 ACDU	0	1	AO2	8378	
ACTIVITY	0	1			
SH-60 Fleet Introduction Team NAS Jacksonville, 48097 ACDU	0	1	AO1	8378	9502
ACTIVITY	0	1			
Attack Wing US Pacific Fleet NAS Whidbey Island, 55628 ACDU	<b>B</b> 0	1	AOC	8378	
ACTIVITY	0	1			
SWAT School NAS North Island, 47721 ACDU	0	1	AO1	8378	9502
ACTIVITY	0	1			
Helicopter Antisubmarine Light Wing Atlantic, 55212 ACDU	0	1	AOC		
ACTIVITY	0	1			
Helicopter Antisubmarine Light Wing Pacific NAS North ACDU	Island, S	5 <b>5630</b> 1	AOCS		
ACTIVITY	0	1			
Helicopter Antisubmarine Wing Pacific NAS North Island ACDU	<b>d, 55636</b> 0 0	1 1	AOC AO1	8378 8378	
ACTIVITY	0	2			

	II.A.1.c.	TOTAL BILLETS REQUIRED FO	OR OPERATIONAL AND	FLEET SUPPORT ACTIVITIES
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DESIG/ RATING	PNEC/SNEC PMOS/SMOS	PFYs OFF ENL	CFY01 OFF ENL	FY02 OFF ENL	FY03 OFF ENL	FY04 OFF ENL	FY05 OFF ENL
NAVY OPEF AOC AO1	RATIONAL ACTIV 8378 8378	ITIES - ACDU 1 34	0 0	0 0	0 0	0 0	0 0
AO2 AO3 AOAN	8378 8378 8378	84 24 35	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
	RATIONAL ACTIV						
AO1 AO2	8378 812 8378	2 2	0 0	0 0	0	0 0	0 0
AO2	8378 812	2	0	0	0	0	0
	RATIONAL ACTIV						
AO1 AO2	8378 8378	1 5	0 0	0 0	0	0 0	0 0
AO2 AO3	8378	1	0	0	0	0	0
AOAN	8378	10	0	0	0	0	0
	T SUPPORT ACT				0		0
AOCS AOC	8378	1	0 0	0 0	0	0 0	0 0
AOC AO1	8378 9502	3	0	0	0	0	0
AO2	8378	1	0	0	0	0	0
SUMMARY	TOTALS:						
NAVY OPE	RATIONAL ACTIV	ITIES - ACDU 178	0	0	0	0	0
NAVY OPE	RATIONAL ACTIV	ITIES - TAR 6	0	0	0	0	0
NAVY OPE	RATIONAL ACTIV	ITIES - SELRES 17	0	0	0	0	0
NAVY FLEE	T SUPPORT ACT	IVITIES - ACDU 9	0	0	0	0	0
GRAND TO	TALS:						
NAVY - AC	CDU	187	0	0	0	0	0
NAVY - TA	R	6	0	0	0	0	0
NAVY - SE	ILRES	17	0	0	0	0	0

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

DESIG RATING		C/SNEC S/SMOS	PFYs OFF EN	L	CFY01 OFF E		FY02 OFF E		FY03 OFF I		FY( OFF		FY OFF	05 ENL
TRAINING A	CTIVIT	Y, LOCAT	ION, UIC:	HS-	10, NAS N	lorth Is	land, 092	99						
INSTRUCTO	R BILL	ETS												
ACDU AO1	8378	9502	0	3	0	3	0	3	0	3	0	3	0	3
TOTAL:			0	3	0	3	0	3	0	3	0	3	0	3
TRAINING A	CTIVIT	Y, LOCAT	ION, UIC:	HSL	-40, NAS	North I	Island, 53	913						
INSTRUCTO	R BILL	ETS												
ACDU AO1	8378	9502	0	2	0	2	0	2	0	2	0	2	0	2
TOTAL:			0	2	0	2	0	2	0	2	0	2	0	2
TRAINING A	CTIVIT	Y, LOCAT	ION, UIC:	HSL	-41, NAS	North I	Island, 55	138						
INSTRUCTO	R BILL	ETS												
ACDU AO1	8378	9502	0	3	0	3	0	3	0	3	0	3	0	3
TOTAL:			0	3	0	3	0	3	0	3	0	3	0	3
TRAINING A	CTIVIT	Y, LOCAT	ION, UIC:	MTL	J 1005 NA	MTRA	U Jackso	nville, d	66051					
INSTRUCTO	R BILL	ETS												
ACDU AOC AO1	8378 8378	9502 9502	0 0	1 1	0 0	1 1	0 0	1 1	0 0	1 1	0 0	1 1	0 0	1 1
TOTAL:			0	2	0	2	0	2	0	2	0	2	0	2

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

DESIG Rating		C/SNEC S/SMOS	PFYs OFF EN	IL	CFY OFF		FY02 OFF E		FY03 OFF E		FY( OFF	04 ENL	FY OFF	05 ENL
TRAINING	ACTIVIT	Y, LOCATI	ON, UIC:	MTU	1022 N	AMTRA	U North I	sland, 6	66065					
INSTRUCTO	or Bill	ETS												
ACDU AO1	8378	9502	0	4	0	4	0	4	0	4	0	4	0	4
TOTAL:			0	4	0	4	0	4	0	4	0	4	0	4
TRAINING /			on, uic:	MTU	I 1066 N	IAMTRA	GRU Det	Маурс	ort, 66069					
ACDU AOC AO1 APO1	8378 8378 8378	9502 9502 9502	0 0 0	1 1 1	0 0 0	1 1 1	0 0 0	1 1 1	0 0 0	1 1 1	0 0 0	1 1 1	0 0 0	1 1 1
TOTAL:			0	3	0	3	0	3	0	3	0	3	0	3

## II.A.4. CHARGEABLE STUDENT BILLET REQUIREMENTS

ACTIVITY, Location, UIC	USN/ USMC	PFYs OFF ENL	CFY01 OFF ENL	FY02 OFF ENL	FY03 OFF ENL	FY04 OFF ENL	FY05 OFF ENL
MTU 1005 NAMTI	RAU Jacksonv NAVY	ville, 66051 2.2	2.2	2.2	2.2	2.2	2.2
MTU 1066 NAMT	RAGRU Det M NAVY	layport, 66069 1.1	1.1	1.1	1.1	1.1	1.1
MTU 1022 NAMT	RAU North Isla NAVY	and, 66065 4.3	4.3	4.3	4.3	4.3	4.3
SUMMARY TOTA	ALS:						
	NAVY	7.6	7.6	7.6	7.6	7.6	7.6
GRAND TOTALS	:						
		7.6	7.6	7.6	7.6	7.6	7.6

## II.A.5. ANNUAL INCREMENTAL AND CUMULATIVE BILLETS

desig/ Rating	PNEC/ PMOS	SNEC/ SMOS	BILLET BASE	CFY +/-	01 CUM	FY0 +/-	)2 CUM	FY0 +/-	)3 CUM	FY( +/-	)4 CUM	FY( +/-	05 CUM
a. OFFICE	ER - USN		Not Applica	able									
b. ENLIST	red - USN	N											
Operation		ACDU and											
AOC AO1	8378 8378		1 34	0	1 34	0	1 34	0	1 34	0	1 34	0	1 24
A01 A01	8378	812	34 2	0 0	34 2	0 0	34 2	0 0	34 2	0 0	34 2	0 0	34 2
AO1 AO2	8378	012	86	0	86	0	86	0	86	0	86	0	86
AO2	8378	812	2	0	2	0	2	0	2	0	2	0	2
AO3	8378		24	0	24	0	24	0	24	0	24	0	24
AOAN	8378		35	0	35	0	35	0	35	0	35	0	35
Fleet Sup		s ACDU a											
AOC	8378		2	0	2	0	2	0	2	0	2	0	2
AO1	8378	9502	2	0	2	0	2	0	2	0	2	0	2
AO2	8378		1	0	1	0	1	0	1	0	1	0	1
Staff Billet			0		0	0	0		0		0		0
AOC	8378	9502	2	0	2	0	2	0	2	0	2	0	2
AO1 APO1	8378 8378	9502 9502	14 1	0 0	14 1	0 0	14 1	0 0	14 1	0 0	14 1	0 0	14 1
AFUI	0370	9002	I	0	I	0	I	0	I	0	I	0	I
Chargeab	le Student	t Billets A	CDU and TA		0	0	0	0	0		0		0
			8	0	8	0	8	0	8	0	8	0	8
SELRES	Billets												
AO1	8378		1	0	1	0	1	0	1	0	1	0	1
AO2	8378		5	0	5	0	5	0	5	0	5	0	5
AO3	8378		1	0	1	0	1	0	1	0	1	0	1
AOAN	8378		10	0	10	0	10	0	10	0	10	0	10
TOTAL U	SN ENLIS	STED BIL	LETS:										
Operation	al		184	0	184	0	184	0	184	0	184	0	184
Fleet Sup	port		5	0	5	0	5	0	5	0	5	0	5
Staff			17	0	17	0	17	0	17	0	17	0	17
Chargeab	le Student	t	8	0	8	0	8	0	8	0	8	0	8
SELRES			17	0	17	0	17	0	17	0	17	0	17
c. OFFICI	ER - USM	С	Not Applica	able									
d. ENLIST	red - USN	MC	Not Applica	able									

#### **II.B. PERSONNEL REQUIREMENTS**

## **II.B.1. ANNUAL TRAINING INPUT REQUIREMENTS**

TAR

SELRES

TOTAL:

	46-0840, H-60 Arm Weeks ⁄y: 10%	ament	and Rela	NA	stems Or /Y TOUF CKOUT F	RLENG	<b>GTH</b> : 36	Months			
TRAINING	ACDU/TAR		Y01	-	Y02	-	Y03	FY		FY	
ACTIVITY SOURCE MTU 1005 NAMTRAU Jack	SELRES	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
NAVY	ACDU		22		22		22		22		22
	TAR		1		1		1		1		1
	SELRES		1		2		1		2		1
	46-0840, H-60 Arm Weeks ⁄y: 10%	ament	and Rela	NA	stems Or /Y TOUF CKOUT F	R <sup>°</sup> LENG	<b>STH:</b> 36	Months			
TRAINING	ACDU/TAR	CF	Y01	F	Y02	F	Y03	FY	04	FY	05
ACTIVITY SOURCE	SELRES	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
MTU 1022 NAMTRAU Nort NAVY	h Island ACDU		28		28		28		28		28

#### PART III - TRAINING REQUIREMENTS

The following elements are not affected by the Armed Helicopter 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:	D-646-0840, H-60 Armament and Related Systems Organizational Maintenance
TRAINING ACTIVITY:	MTU 1005 NAMTRAU
LOCATION, UIC:	NAS Jacksonville, 66051

SUURCE: NAVY SIUDENI CATEGORY: ACDU - TA	SOURCE:	NAVY	STUDENT CATEGORY:	ACDU - TAR
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CF	Y01	F۱	Y02	F	Y03	F	Y04	FY	05	
OFF	ENL									
	15		15		15		15		15	ATIR
	14		14		14		14		14	Output
	2.2		2.2		2.2		2.2		2.2	AOB
	2.2		2.2		2.2		2.2		2.2	Chargeable

SOURCE: NAVY STUDENT CATEGORY: SELRES

CF۱	/01	F۱	/02	F	Y03	F	Y04	FY	05	
OFF	ENL									
	0		1		0		1		0	ATIR
	0		1		0		1		0	Output
	0.0		0.2		0.0		0.2		0.0	AOB
	0.0		0.0		0.0		0.0		0.0	Chargeable

CIN, COURSE TITLE:E-646-0840, H-60 Armament and Related Systems Organizational MaintenanceTRAINING ACTIVITY:MTU 1022 NAMTRAULOCATION, UIC:NAS North Island, 66065

SOURCE: NAVY STUDENT CATEGORY: ACDU - TAR

CF	Y01	F١	Y02	F	Y03	F	Y04	FY	05	
OFF	ENL									
	11		11		11		11		11	ATIR
	10		10		10		10		10	Output
	1.6		1.6		1.6		1.6		1.6	AOB
	1.6		1.6		1.6		1.6		1.6	Chargeable

SOURCE: NAVY

STUDENT CATEGORY: SELRES

CFY01		FY02	FY03	FY04	FY05	
OFF E	NL OFF	ENL	OFF ENL	OFF ENL	OFF ENL	
	1	1	1	1	1	ATIR
	1	1	1	1	1	Output
	0.2	0.2	0.2	0.2	0.2	AOB
	0.0	0.0	0.0	0.0	0.0	Chargeable

**Note:** The H-60 Armed Helicopter Training listed above is for SH-60B and HH-60H personnel. The HH-60H has accounted for some of these students in the HH-60H NTSP, which was approved in January 1994 and planned for update in FY02. The SH-60B has accounted for all of these students in the SH-60B Draft NTSP of August 2001.

## PART IV - TRAINING LOGISTICS SUPPORT REQUIREMENTS

The following elements are not affected by the Armed Helicopter and, therefore, are not included in Part IV of this NTSP:

- 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

#### PART IV - TRAINING LOGISTICS SUPPORT REQUIREMENTS

#### **IV.A. TRAINING HARDWARE**

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

CIN, COURSE TITLE: E-2C-0810, SH-60F Fleet Replacement Pilot Category 1 Syllabus (Track E-2C-0800) TRAINING ACTIVITY: HS-10 LOCATION, UIC: NAS North Island, 09299 ITEM EQUIPMENT / QTY DATE GFE TYPE OR RANGE OF REPAIR REQD REOD CFE **STATUS** NO. TTE 100 Hellfire Captive Air Training Missile (CATM) GFE Onboard Aug 98 4 102 Hellfire Container, Shipping and Storage (CNU-448/E) Aug 98 GFE Onboard 4 CIN, COURSE TITLE: D-2C-2501, SH-60B Fleet Replacement Pilot Category 1 Syllabus (Track D-2C-0821) TRAINING ACTIVITY: HSL-40 LOCATION, UIC: NAS North Island, 53913 ITEM EQUIPMENT / ΟΤΥ DATE GFE TYPE OR RANGE OF REPAIR REOD NO. REOD CFE **STATUS** TTE 100 Hellfire Captive Air Training Missile (CATM) 4 Aug 98 GFE Onboard 102 Hellfire Container, Shipping and Storage (CNU-448/E) Aug 98 GFE Onboard 4 CIN, COURSE TITLE: E-2C-2501, SH-60B Fleet Replacement Pilot Category 1 Syllabus (Track E-2C-0821) TRAINING ACTIVITY: HSL-41 LOCATION, UIC: NAS North Island, 55138 GFE ITEM EQUIPMENT / QTY DATE TYPE OR RANGE OF REPAIR REQD REQD CFE **STATUS** NO. TTE 100 Hellfire Captive Air Training Missile (CATM) Aug 98 GFE Onboard 4 102 Hellfire Container, Shipping and Storage (CNU-448/E) 4 Aug 98 GFE Onboard CIN, COURSE TITLE: C-646-9407, H-60 Armament and Related System Organizational Maintenance (Track D-646-0840) TRAINING ACTIVITY: MTU 1005 NAMTRAU LOCATION, UIC: NAS Jacksonville, 66051 ITEM EQUIPMENT / OTY DATE GFE NO. TYPE OR RANGE OF REPAIR REQD REQD CFE STATUS TTE GFE Onboard 100 Hellfire Captive Air Training Missile (CATM) Aug 98 4 101 Hellfire Dummy Air Training Missile (DATM) Aug 98 GFE Onboard 4 102 Hellfire Container, Shipping and Storage (CNU-448/E) 8 Aug 98 GFE Onboard

#### **IV.A. TRAINING HARDWARE**

CIN, COURSE TITLE: C-646-9407, H-60 Armament and Related System Organizational Maintenance (Track E-646-0840) TRAINING ACTIVITY: MTU 1022 NAMTRAU LOCATION, UIC: NAS North Island, 66065

item No.	EQUIPMENT / TYPE OR RANGE OF REPAIR	QTY REQD	date Reqd	GFE CFE	STATUS
<b>TTE</b> 100	Hellfire Captive Air Training Missile (CATM)	4	Aug 98	GFE	Onboard
101	Hellfire Dummy Air Training Missile (DATM)	4	Aug 98	GFE	Onboard
102	Hellfire Container, Shipping and Storage (CNU-448/E)	8	Aug 98	GFE	Onboard

**Note:** The four CATMs and the four CNUs assigned to HS-10 are actually maintained by the Weapons Training Unit at NAS Jacksonville.

**Note:** The final H-60 Armed Helo training package was forwarded to NAMTRAGRU HQ in April 2000. This information was forwarded to NAMTRAU North Island and NAMTRAU Jacksonville for inclusion in SH-60B and HH-60H training courses. These courses were RFT with this information in third quarter FY01. When it becomes available, information for TTE, GPTE, SPTE, ST, GPETE, and SPETE will be included in updates to the SH-60B and HH-60H NTSPs.

#### **IV.A.2. TRAINING DEVICES**

**Note**: Modifications to the Ordnance Trainers at MTU 1005 and 1022 (POM 04 issue) and Avionics Maintenance Trainers at MTU 1005, 1022, and 1066 will be required to enhance maintenance training. Current planning is for these trainers to be modified in third quarter FY03.

**Note:** The following Operator Training Devices are covered in the SH-60B and HH-60H NTSPs and will be modified to included H-60 Armed Helo in third quarter FY03.

DEVICE: DESCRIPTION: MANUFACTURER: CONTRACT NUMBER: TEE STATUS:	The T/O simulato commur includes system f Lockhee N00019-	Tactical/Operational Flight Trainer The T/OFT is an exact replica of the MH-60S cockpit on a non-motion base. The T/OFT flight simulator supports Pilot, Copilot/ATO and SO tactics, navigation, equipment malfunction, communications, aircrew coordination, and emergency procedures training. The visual system includes a day-night image generator, databases, and night vision device compatibility. Full weapon system functionality is provided with the cockpit providing full tactile sensations. Lockheed Martin Corporation N00019-98-C-0012 Pending					
TRAINING ACTIVITY: LOCATION, UIC:	HSL-41 NAS No	rth Island, 55	138				
		QTY REQD	DATE REQD	RFT DATE	STATUS	COURSES SUPPORTED	
		1	Sep 01	Dec 01	Pending	E-2C-0821 E-2C-0822 E-2C-0823 E-2C-0824 E-2C-0825 E-050-2510 E-050-2511	
TRAINING ACTIVITY: LOCATION, UIC:	HSL-40 NS May	port, 53913					
		QTY REQD	DATE REQD	RFT DATE	STATUS	COURSES SUPPORTED	
		1	Jan 02	Feb 02	Pending	D-2C-0821 D-2C-0822 D-2C-0823 D-2C-0824 D-050-2510 D-050-2511	

# IV.A.2. TRAINING DEVICES

DEVICE: DESCRIPTION:	Weapon Systems Trainer Common Visual System Upgrade (WST/CVS) The Weapon System Trainer consists of an Operational Flight Trainer (OFT) and a Sensor Operator Trainer (SOT). The OFT consists of a Pilot and Copilot position (along with an Instructor station) in an exact replica of the SH-60F cockpit on a motion base. The WST CVS is a modification to the existing Weapon Systems Trainers installed at NAS North Island and NAS Jacksonville to support the Armed Helo mission. It incorporates the same day/night visual system from the SH-60B T/OFT onto the SH-60F motion platforms to provide full day-night visual simulation, FLIR, Hellfire simulation, and Night Vision Goggle simulation. Modular panels are installed to allow rapid reconfiguration from the SH-60F (no Armed Helo) capability to the HH-60H (Armed Helo) configuration. The WST CVS supports Pilot, Copilot, and SO tactics, navigation, equipment malfunction, communications, aircrew coordination, and emergency procedures training. Full weapon system functionality is provided with the cockpit providing full tactile sensations. One WST CVS is installed per coast to support FRS training and fleet proficiency training requirements.
	CVS is installed per coast to support FRS training and fleet proficiency training requirements. Options are available to retrofit the remaining two SH-60F WSTs upon receipt of funding.

MANUFACTURER:	Lockheed Martin Corporation/BAE Systems
CONTRACT NUMBER:	N00019-98-C-0012
TEE STATUS:	Pending
TRAINING ACTIVITY:	HS-10
LOCATION, UIC:	NAS North Island, 09299

QTY REQD	date Reqd	RFT DATE	STATUS	COURSES SUPPORTED
1	Feb 02	Feb 02	Pending	E-2C-0800 E-2C-0802 E-2C-0803 E-2C-0804 E-2C-0805 E-050-0831 E-050-0834

TRAINING ACTIVITY: COMHSWINGLANT LOCATION, UIC:

NAS Jacksonville, 09954

QTY	date	RFT	STATUS	COURSES
REQD	Reqd	DATE		SUPPORTED
1	Feb 02	Feb 02	Pending	E-2C-0802 E-2C-0803 E-2C-0804 E-2C-0805 E-050-0831 E-050-0834

### IV.B.2. CURRICULA MATERIALS AND TRAINING AIDS

CIN, COURSE TITLE TRAINING ACTIVITY LOCATION, UIC:	: E-2C-0810, SH-60F Fleet Replacement Pilot Category 1 Syllabus : HS-10 NAS North Island, 09299	s (Track E-2)	C-0800)	
TYPES OF MATERIA H-60 Armed Helo Sou	L OR AID	<b>QTY REQD</b> 1	DATE REQD Apr 00	STATUS Onboard
cin, course title: Training activity Location, uic:	<ul> <li>D-2C-2501, SH-60B Fleet Replacement Pilot Category 1 Syllabus</li> <li>HSL-40 NAS North Island, 53913</li> </ul>	s (Track D-2	C-0821)	
TYPES OF MATERIA H-60 Armed Helo Sou		<b>QTY REQD</b> 1	DATE REQD Apr 00	STATUS Onboard
CIN, COURSE TITLE TRAINING ACTIVITY LOCATION, UIC:	<ul> <li>E-2C-2501, SH-60B Fleet Replacement Pilot Category 1 Syllabus</li> <li>HSL-41</li> <li>NAS North Island, 55138</li> </ul>	s (Track E-2	C-0821)	
TYPES OF MATERIA H-60 Armed Helo Sou	L OR AID	<b>QTY REQD</b> 1	DATE REQD Apr 00	STATUS Onboard
CIN, COURSE TITLE TRAINING ACTIVITY LOCATION, UIC:	: E-050-0802, SH-60F Fleet Replacement Aircrewman Category 1 : HS-10 NAS North Island, 09299	Syllabus (Tr	ack E-050-0	0831)
TYPES OF MATERIA H-60 Armed Helo Sou	L OR AID	QTY REQD 1	DATE REQD Apr 00	STATUS Onboard
TYPES OF MATERIA H-60 Armed Helo Sou CIN, COURSE TITLE TRAINING ACTIVITY	L OR AID rce Data : D-050-2501, SH-60B Fleet Replacement Aircrewman Category 1 : HSL-40	<b>REQD</b> 1	<b>REQD</b> Apr 00	Onboard
TYPES OF MATERIA H-60 Armed Helo Sou CIN, COURSE TITLE	L OR AID rce Data : D-050-2501, SH-60B Fleet Replacement Aircrewman Category 1 : HSL-40 NAS North Island, 53913 L OR AID	<b>REQD</b> 1	<b>REQD</b> Apr 00	Onboard
TYPES OF MATERIA H-60 Armed Helo Sou CIN, COURSE TITLE TRAINING ACTIVITY LOCATION, UIC: TYPES OF MATERIA H-60 Armed Helo Sou	L OR AID rce Data : D-050-2501, SH-60B Fleet Replacement Aircrewman Category 1 : HSL-40 NAS North Island, 53913 L OR AID rce Data : E-050-2501, SH-60B Fleet Replacement Aircrewman Category 1	REQD 1 Syllabus (Tr QTY REQD 1	REQD Apr 00 rack D-050- DATE REQD Apr 00	Onboard 2510) STATUS Onboard
TYPES OF MATERIA H-60 Armed Helo Sou CIN, COURSE TITLE TRAINING ACTIVITY LOCATION, UIC: TYPES OF MATERIA H-60 Armed Helo Sou CIN, COURSE TITLE TRAINING ACTIVITY	L OR AID rce Data : D-050-2501, SH-60B Fleet Replacement Aircrewman Category 1 : HSL-40 NAS North Island, 53913 L OR AID rce Data : E-050-2501, SH-60B Fleet Replacement Aircrewman Category 1 : HSL-41 NAS North Island, 55138 L OR AID	REQD 1 Syllabus (Tr QTY REQD 1	REQD Apr 00 rack D-050- DATE REQD Apr 00	Onboard 2510) STATUS Onboard
TYPES OF MATERIA H-60 Armed Helo Sou CIN, COURSE TITLE: TRAINING ACTIVITY LOCATION, UIC: TYPES OF MATERIA H-60 Armed Helo Sou CIN, COURSE TITLE: TRAINING ACTIVITY LOCATION, UIC: TYPES OF MATERIA H-60 Armed Helo Sou CIN, COURSE TITLE:	L OR AID rce Data : D-050-2501, SH-60B Fleet Replacement Aircrewman Category 1 : HSL-40 NAS North Island, 53913 L OR AID rce Data : E-050-2501, SH-60B Fleet Replacement Aircrewman Category 1 : HSL-41 NAS North Island, 55138 L OR AID	REQD 1 Syllabus (Tr QTY REQD 1 Syllabus (Tr QTY REQD 1	REQD Apr 00 rack D-050- DATE REQD Apr 00 rack E-050-2 DATE REQD Apr 00	Onboard 2510) STATUS Onboard 2510) STATUS Onboard

## IV.B.2. CURRICULA MATERIALS AND TRAINING AIDS

CIN, COURSE TITLE: C-646-9407, H-60 Armament and Related System Organizational Maintenance (Track E-102-0822) TRAINING ACTIVITY: MTU 1022 NAMTRAU LOCATION, UIC: NAS North Island, 66065

	QTY	DATE	
TYPES OF MATERIAL OR AID	REQD	REQD	STATUS
H-60 Armed Helo Source Data	1	Apr 00	Onboard

## **IV.B.3. TECHNICAL MANUALS**

**Note:** When it becomes available, more specific information on Technical Publications will be included in updates to the SH-60B and HH-60H NTSPs.

PART V	- MPT MIL	ESTONES
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COG CODE	MPT MILESTONES	DATE	STATUS
PDA	Conducted Analysis of MPT Requirements	Jan 96	Completed
PDA	Conducted SH-60B Block 0 ECP-267 Developmental Test	Feb 97	Completed
PDA	Conducted SH-60B Block 0 ECP-267 Operational Test	Feb 97	Completed
PDA	Conducted GAU-16/A Machine Gun Developmental Test	Apr 97	Completed
PDA	Conducted SH-60B Rapid Deployment Developmental Test	Apr 97	Completed
PDA	Conducted GAU-16/A Machine Gun Operational Test	May 97	Completed
PDA	Conducted SH-60B Rapid Deployment Operational Test	May 97	Completed
TSA	Conducted HH-60H Training for Developmental Test	May 97	Completed
ТА	Conducted Follow-On Training for SH-60B Rapid Deployment	Jun 97	Completed
TSA	Installed Navy Technical Training Equipment	Jun 97	Completed
TSA	Conducted HH-60H Training for Operational Test	Aug 97	Completed
PDA	Distributed Draft NTSP for Review	Feb 98	Completed
PDA	Conducted HH-60H Developmental and Operational Testing	Mar 98	Completed
PDA	Promulgated Approved NTSP	Jun 98	Completed
TSA	Conducted SH-60B Core B Developmental Training	Aug 98	Completed
TSA	Conducted SH-60B Core B Operational Training	Dec 98	Completed
TSA	Completed Source Data Material for Changes to Courses and Delivered to NAMTRAGRU HQ	Apr 00	Completed
TSA	Delivered Source Data Material for Course Changes to NAMTRAUs	Apr 00	Completed
NAVICP	Achieved MSD	Jul 00	Completed
TSA	Began Armed Helo Training with All Required Courseware Available	Sep 01	Completed
PDA	Achieved Navy Support Date	Jul 01	Completed
TSA	Submit proposed NTSP to OPNAV for Approval	Dec 01	Completed
TSA	Modify Training Devices and Technical Training Equipment to Support Armed Helo Training	FY03	Pending

#### PART VI - DECISION ITEMS / ACTION REQUIRED

DECISION ITEM OR ACTION REQUIRED	COMMAND ACTION	DUE DATE	STATUS
Validate and incorporate changes to SH-60B Armed Helicopter Technical Publications	NATEC	Pending	Pending
Validate and incorporate changes to HH-60H Armed Helicopter Technical Publications	NATEC	Pending	Pending

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