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From: Chief of Naval Operations

TS3846A/ASM-608 (V) INERTIAL MEASUREMENT UNIT TEST SET III, N88-NTSP-A-50-8116B/A

(a) OPNAVINST 1500.76

1. Subject NTSP is approved and forwarded per reference (a).

2. Subsequent NTSP review will examine both the effectiveness and efficiency of training outlined in this document.

3. OPNAV point of contact is AZC (AW) M. S. Dean (N889H7), DSN 664-7714, Comm: (703) 604-7714.

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APPROVED

NAVY TRAINING SYSTEM PLAN

FOR THE

TS-3846A/ASM-608(V) INERTIAL MEASUREMENT UNIT TEST SET III

N88-NTSP-A-50-8116B/A

MARCH 2000

TS-3846A/ASM-608(V) INERTIAL MEASUREMENT UNIT TEST SET III

EXECUTIVE SUMMARY

The TS-3846A/ASM-608(V) Inertial Measurement Unit Test Set (IMUTS) III was first introduced to the fleet in March 1997 onboard the USS Nimitz (CVN-68). To date, 91 IMUTS III systems have been installed at various United States Navy Aircraft Intermediate Maintenance Departments (AIMDs) both ashore and afloat and United States Marine Corps Marine Aviation Logistics Squadrons (MALSs). IMUTS III was introduced into the fleet through retrofit of the IMUTS II equipment. Engineering Change Proposal 92-002 updated IMUTS II benches into IMUTS III benches. In the remainder of Fiscal Year 00, the final five IMUTS III units will be installed. The IMUTS III system is in Phase III (Production, Deployment, and Operational Support) of the acquisition process.

IMUTS III system manpower requirements are based on three working shifts for AIMDs ashore, and two working shifts for AIMDs afloat and MALS. The IMUTS III system is operated and maintained by Navy Aviation Electrician's Mate personnel with Navy Enlisted Classification 7197, and Marine Corps personnel with Military Occupational Specialty 6464. No increase in manpower was required with the introduction of the IMUTS III.

IMUTS III follow-on training became available in July 1997 at Maintenance Training Unit (MTU) 3010, Naval Air Station Oceana, Virginia, and at MTU 3011, Marine Corps Air Station Miramar, California.

TS-3846A/ASM-608(V) INERTIAL MEASUREMENT UNIT TEST SET III

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LIST OF ACRONYMS

AC	Alternating Current
ACDU	Active Duty
A/D	Analog to Digital
AE	Aviation Electrician's Mate
AFB	Air Force Base
AIMD	Aircraft Intermediate Maintenance Department
AMTCS	Aviation Maintenance Training Continuum System
CAINS	Carrier Aircraft Inertial Navigation System
CBT	Computer-Based Training
CD-ROM	Compact Disc-Read Only Memory
CETS	Contractor Engineering Technical Services
CFE	Contractor Furnished Equipment
CIN	Course Identification Number
CINCLANTFLT	Commander In Chief Atlantic Fleet
CINCPACFLT	Commander In Chief Pacific Fleet
CMC	Commandant of the Marine Corps
CNET	Chief of Naval Education and Training
CNO	Chief of Naval Operations
COMNAVAIRESFOR	Commander Naval Air Reserve Forces
COMNAVRESFOR	Commander Naval Reserve Forces
CPU	Central Processing Unit
CV	Aircraft Carrier
CVN	Aircraft Carrier, Nuclear
DC	Direct Current
ECP	Engineering Change Proposal
EVSA	Equipment Verification Standard Assembly
FMS	Foreign Military Sales
FY	Fiscal Year
GPIB	General Purpose Interface Bus
Hz	Hertz
ID	Interface Device

TS-3846A/ASM-608(V) INERTIAL MEASUREMENT UNIT TEST SET III

LIST OF ACRONYMS

ILSP	Integrated Logistics Support Plan
IMA	Intermediate Maintenance Activity
IMU	Inertial Measurement Unit
IMUTS	Inertial Measurement Unit Test Set
INU	Inertial Navigation Unit
IPB	Illustrated Parts Breakdown
JRB	Joint Reserve Base
MALS	Marine Aviation Logistic Squadron
MAM	Maintenance Assist Module
MATMEP	Maintenance Training Management and Evaluation Program
MB	Megabyte
MCAS	Marine Corps Air Station
MF	Mobile Facility
MOS	Military Occupational Specialty
MRC	Maintenance Requirement Cards
MSD	Material Support Date
MTBF	Mean Time Between Failures
MTIP	Maintenance Training Improvement Program
MTPSI	Master Test Program Set Index
MTU	Maintenance Training Unit
NA	Not Applicable
NADEP	Naval Aviation Depot
NAMP	Naval Aviation Maintenance Program
NAMTG	Naval Air Maintenance Training Group
NAMTRAGRU DET	Naval Air Maintenance Training Group Detachment
NAS	Naval Air Station
NATEC	Naval Air Technical Data and Engineering Service Command
NAVAIR	Naval Air
NAVAIRSYSCOM	Naval Air Systems Command
NAVPERSCOM	Naval Personnel Command
NEC	Navy Enlisted Classification
NETS	Navy Engineering Technical Services
NTSP	Navy Training System Plan
OPNAV	Office of the Chief of Naval Operations

TS-3846A/ASM-608(V) INERTIAL MEASUREMENT UNIT TEST SET III

LIST OF ACRONYMS

OPNAVINST	Office of the Chief of Naval Operations Instruction
OPO	OPNAV Principal Official
PCU	Power Component Unit
PDA	Principal Development Activity
PMA	Program Manager, Air
P/N	Part Number
PSICP	Program Support Inventory Control Point
RAIMD	Reserve Aircraft Intermediate Maintenance Department
RFT	Ready For Training
SEC	Support Equipment Change
SELRES	Selected Reserve
SINS	Ship's Inertial Navigation System
SRA	Shop Replaceable Assembly
SVGA	Super Video Graphics Array
TAR	Training and Administration of the Naval Reserve
TD	Training Device
TFS	Total Force Structure
TMMT	Technical Manual Management Team
TPS	Test Program Set
TSA	Training Support Activity
TSM	Test Station Medium
TSMB	Test Set Module Block
TTE	Technical Training Equipment
ULSS	User's Logistics Support Summary
USMC	United States Marine Corps
USN	United States Navy
USS	United States Ship
UUT	Unit Under Test
VAC	Volts Alternating Current
VDC	Volts Direct Current

TS-3846A/ASM-608(V) INERTIAL MEASUREMENT UNIT TEST SET III

LIST OF ACRONYMS

WRA	Weapon Replaceable Assembly
ZIF	Zero Insertion Force

TS-3846A/ASM-608(V) INERTIAL MEASUREMENT UNIT TEST SET III

PREFACE

This Approved Navy Training System Plan (NTSP) for the Inertial Measurement Unit Test Set (IMUTS) III has been updated to comply with guidelines set forth in the Navy Training Requirements Documentation Manual, OPNAV Publication P-751-1-9-97. This NTSP is an update to the Draft Navy Training System Plan N88-NTSP A-50-8116B/D dated August 1999.

The transition from IMUTS II to IMUTS III is almost complete. All current IMUTS III information, including manpower, training, training support equipment, schedules, and points of contact, are included in this NTSP.

PART I - TECHNICAL PROGRAM DATA

A. NOMENCLATURE-TITLE-PROGRAM

1. Nomenclature-Title-Acronym. TS-3846A/ASM-608(V), Inertial Measurement Unit Test Set (IMUTS) III

2. Program Element. 24161N

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 (N885)

OPO Resource Sponsor..... CNO (N885)

Developing Agency..... NAVAIRSYSCOM (PMA260)

Training Agency ..... CINCLANTFLT
CINCPACFLT
CNET
COMNAVRESFOR

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

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

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

Marine Corps Combat Development Command
Manpower Management ..... TFS Division

D. SYSTEM DESCRIPTION

1. Operational Uses. The TS-3846A/ASM-608(V) IMUTS III, from here on to be referred to as the IMUTS system, has the capability to self-check and to test and diagnose Carrier Aircraft Inertial Navigation System (CAINS) and CAINS II Weapon Replaceable Assemblies (WRAs). These WRAs include the CAINS Inertial Measurement Unit (IMU) CN-1263/ASN-92(V), CAINS IA Inertial Navigation Unit (INU) CN-1561/ASN-130A, and the CAINS II INU CN-1649 ASN-139 in support of the following aircraft: A-6E, AV-8B, E-2C, EA-6B, ES-3A, F-14A/B/D, F/A-18A/B/C/D/E/F, and the S-3A/B. The IMUTS system is positioned at Aircraft Intermediate Maintenance Departments (AIMDs), Naval Aviation Depots (NADEPs), Mobile Facility (MF) vans, Foreign Military Sales (FMS) sites, Marine Aviation Logistics Squadrons (MALS), and selected contractor facilities.

2. Foreign Military Sales. The IMUTS system is a candidate for FMS and has already been provided to some of our allies. For information on FMS refer to Program Manager, Air (PMA) 260.

E. DEVELOPMENTAL TEST AND OPERATIONAL TEST.

Developmental Testing for the IMUTS system was successfully completed in Fiscal Year (FY)96. No Operational Test was required.

F. AIRCRAFT AND/OR EQUIPMENT/SYSTEM/SUBSYSTEM REPLACED.

Engineering Change Proposal (ECP) #92-002 modifies the IMUTS system, upgrading it from IMUTS II Part Number (P/N) 262200-2 to IMUTS III P/N 262200-3. Support Equipment Change (SEC) 5258 is the Technical Directive to implement the modification.

G. DESCRIPTION OF NEW DEVELOPMENT

1. Functional Description. The basic IMUTS system has the capability to self-check and to test and diagnose WRAs to their faulty Shop Replaceable Assemblies (SRAs). The IMUTS system operation and program execution is under control of the computer assembly installed in the IMUTS system. The Unit Under Test (UUT) application programs are stored on hard disk and executed in the computer. Test instructions are transmitted from the computer to the various modules in the IMUTS system via the computer bus network. Responses from test instructions are transmitted back to the computer via the same bus network. The computer executes interface control commands and selects the Test Station Modules (TSMs) required to apply test stimuli and process UUT response data. TSMs interface with the computer assembly via the computer bus. The UUT is mounted on a holding fixture on the IMUTS system and tested via the associated Interface Device (ID). The operator control interface with the computer is provided by means of a Super Video Graphics Array (SVGA) monitor, keyboard, and printer. The major IMUTS system assemblies are the Console, Holding Fixture, and Hex Extenders. The Console consists of the following (see Figure I-1):

IMUTS III Console Arrangement

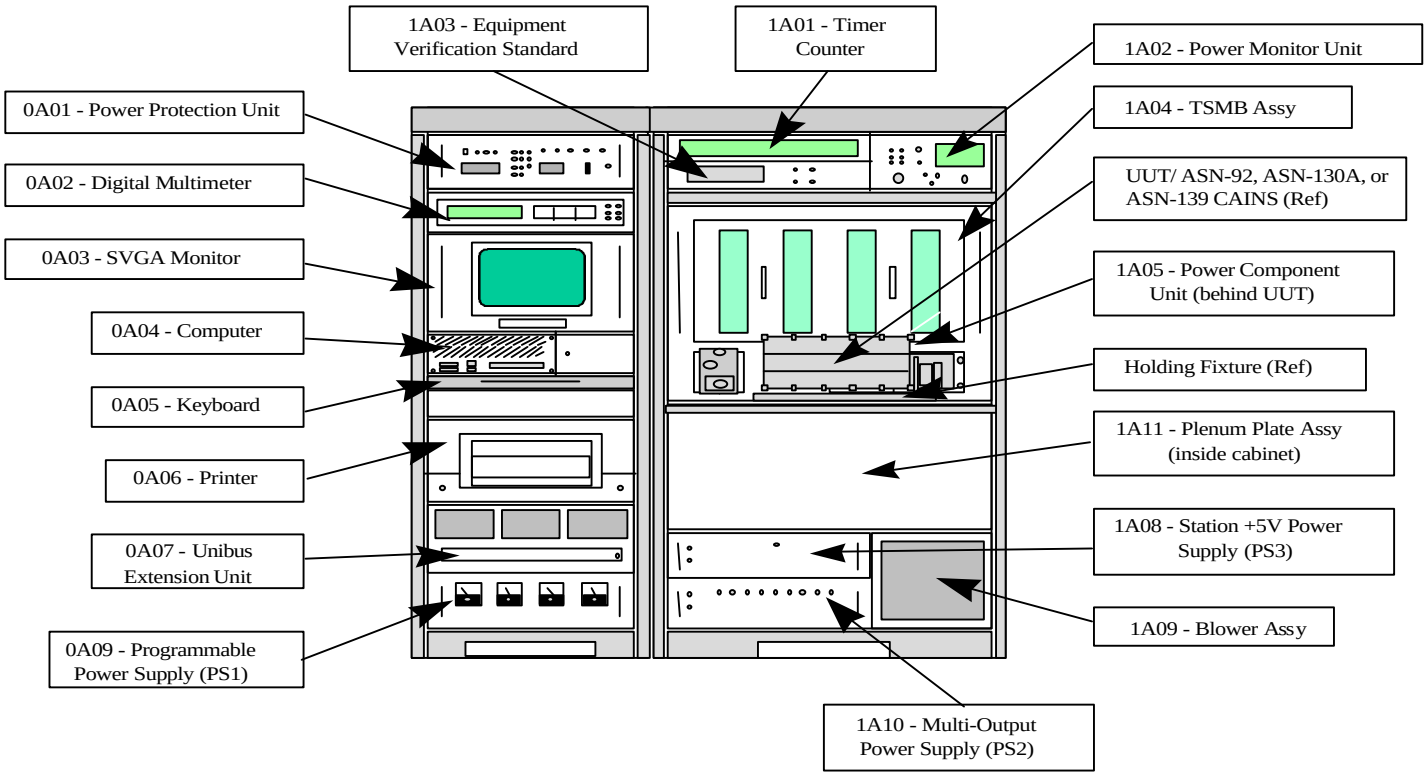

Figure I-1.

a. Digital Multimeter Assembly. The programmable Digital Multimeter provides a continuous readout of Direct Current (DC), Alternating Current (AC), and resistance measurements. In the automatic mode of operation, the multimeter is controlled by the computer via the bus. Information is put on the bus by the multimeter for comparison to required values by the computer. In the manual mode of operation, the station maintenance technician may use the multimeter to assist in diagnosing problems with the IMUTS system.

b. Unibus Extension Unit. The Unibus Extension Unit communicates with the computer assembly, houses the Unibus Adapter Module, Output Controller, Bus Buffer Interface, and the Ship's Inertial Navigation System (SINS) Interface.

c. Timer/Counter. The Timer/Counter provides universal counter measurement modes, computation capabilities, keyboard entry, 9-digit display, annunciators, and manual and automatic trigger level settings.

d. Programmable Power Supply. This Astro-Geo-Marine Power Supply consists of two sections and provides 0 to +40 Volts Direct Current (VDC), 15 amperes, and 0 to –40 VDC, 5 amperes.

e. Station +5VDC Power Supply. This Astro-Geo-Marine Power Supply provides a regulated 5 VDC output with a full load rating of 100 amperes to operate certain

functions of the Test Set Module Block (TSMB) Assembly. Current limiting and overvoltage circuitry protect the power supply from electrical irregularities. The power supply contains two heat sinks: a transistor heat sink and a diode heat sink. Thermal detectors in each heat sink open at 100 degrees Celsius and shut down the power supply in the event of overheat conditions. Normal cooling is provided by one fan contained within the power supply.

f. Multi-Output Power Supply. This Astro-Geo-Marine DC Power Supply consists of six sections and provides ±15 VDC at 4 amperes, ±35 VDC at 6 amperes, ±10 VDC at 1 ampere, ±20VDC at 1 ampere, and ±28 VDC at 10 amperes. Current limiting and overvoltage circuitry protects the power supply from excess current drain or overvoltage conditions. Thermal switches sense any overtemperature conditions and shut down the power supply. Two fans that operate from the line voltage provide cooling.

g. Super Video Graphics Array. The SVGA Monitor displays information called up or composed by the keyboard and the results of software controlled tests. The kind of information called up will be the discrete program steps of the test programs. Should a fault be detected within the UUT, this will be displayed together with recommended corrective measures.

h. Keyboard. The Keyboard allows the operator to communicate with the computer.

i. Printer. The Okidata OL600e is a laser quality printer with 300 dots per inch resolution, 6 pages per minute speed, and a standard bi-directional parallel port Centronics cable. It has 100 sheet input capability, a toner cartridge life of 2,000 pages, and an image drum life of 20,000 pages. There are 35 Intellifont and 10 True Type Scaleable Fonts, plus a United States Postal Service Postnet Barcode Font. All operations are available from the front of the unit such as inputting paper, retrieving output paper, and removing and installing cartridges and drums.

j. Power Protection Unit. The Power Protection Unit (PPU) contains a 115 VAC (Volts Alternating Current) to 24 VAC step-down transformer, two voltage surge protectors, four voltage sensors, and three contained relays in a slide-mounted chassis. Circuit breakers, control switches, and indicator lights are mounted on the front panel of the chassis, while connectors and one switch are mounted on the rear panel.

k. Power Monitor Unit. The Power Monitor Unit (PMU) monitors the magnitude of 400 and 60 Hertz (Hz) voltage and frequency supplied to the IMUTS system. Provisions are made for displaying these parameters on a front panel *"Voltage and Frequency"* meter. The operator may select the input to be read using the *"Display Select"* rotary switch. The 400Hz incoming voltage and frequency are monitored for proper phase rotation and if the proper rotation is present, the *"Phase Sequence Correct*" indicator will be illuminated.

l. Equipment Verification Standard Assembly. The Equipment Verification Standard Assembly (EVSA) permits the IMUTS system operator to make precision on-site verification of the accuracy of the counter and the multimeter while installed in the IMUTS system, resulting in no need to periodically remove the items for calibration. The EVSA provides precision outputs to the counter and multimeter via hardware. The outputs to be generated are

selected via the front panel controls. The accuracy of the counter and multimeter are determined by the accuracy with which precision inputs are read.

m. Power Component Unit. The Power Component Unit (PCU) provides 115 VAC, 400 Hz, 3-phase, ±28 VDC programmable power and 26 VAC reference phase power to the UUT. The PCU also provides 115 VAC, 400 Hz, A-phase power to the console assembly air valve. Additionally, the PCU monitors power to the UUT and status compared via the Analog-to Digital (A/D) converter in the processor unit. Front panel test points are provided for monitoring the IMUTS system AC and DC voltages.

n. Computer Assembly. The Computer Assembly contains a passive back plane with a mounted Central Processing Unit (CPU) Module which contains a 16 Megabyte (MB) Random Access Memory (RAM), Video Module, Unibus Controller Module, A/D Converter, 1553 Interface Module, Institute of Electrical and Electronics Engineers (IEEE) 488 Interface Module/General Purpose Interface Bus (GPIB), Simple Computer System Interface (SCSI)/ Compact Disc-Read Only Memory (CD-ROM) Controller Module, 3.5-inch MB Floppy Drive, Hard Drive, Four-Speed CD-ROM Drive, 400 Watt Power Supply, Computer Chassis, Monitor Power Cable, and a Computer Power Cable.

o. Test Set Module Block Assembly. The TSMB Assembly develops UUT stimuli under computer control and monitors UUT responses. The UUT requires and outputs both analog and digital data while the computer provides and recognizes only digital data. The TSMB Assembly is primarily a relay switching network and signal conditioning system to permit proper communication between the computer and the UUT. The TSMB Assembly contains the Zero Insertion Force (ZIF) connector.

p. Plenum Plate Assembly. The Plenum Plate Assembly directs cooling air from the Blower Assembly to the UUT.

q. Blower Assembly. The Blower Assembly provides air to the UUT and the Console Assembly.

r. Holding Fixture Assembly. The Holding Fixture Assembly is affixed to the IMUTS system work surface assembly to attach the UUTs in a manner consistent with that specified in MIL-N-81604. The fixture provides a surface stable in all axes to ±1.0 arc-minute relative to the surface to which the test fixture is affixed. At installation time, the work surface to which the fixture is affixed must be leveled to within one degree with respect to local vertical. Each UUT ID is provided with mechanical locking devices relative to the work surface such that the device remains fixed in place after ZIF mating has occurred.

s. Hex Extenders. The Hex Extenders are used to extend cards in the TSMB or Unibus Unit for the purpose of troubleshooting during station maintenance.

2. Physical Description. The IMUTS system consists of a console assembly with the following dimensions:

Height.....	76	inches
Depth.....	43	inches
Width.....	59	inches
Weight.....	1,560	pounds
Floor load	200	pounds per square foot (maximum)

3. New Development Introduction. The IMUTS system was introduced through retrofit of the IMUTS II. The IMUTS II was updated via ECP 92-002 and SEC 5258. Upon completion of the ECP the unit was designated the IMUTS III system.

4. Significant Interfaces. The IMUTS system interfaces with the SINS. Interfaces for the IMUTS system remain the same as for the IMUTS II. There are no new interface requirements for the IMUTS system.

5. New Features, Configurations, or Material. The IMUTS system requires a Floppy Disk of Start-up Software (P/N DS262200-802) and a Software Kit (CD262200-402) which contains a CD-ROM of software. Revised Software Kit (CD262200-403) is scheduled for release in November 1999.

H. CONCEPTS

1. Operational Concept. The daily usage for the IMUTS system is 20 hours per day. The expected service life is 30 years. The maintenance cycle is 2,400 hours and the Mean Time Between Failures (MTBF) is 450 hours. The IMUTS system is operated by United States Navy (USN) Aviation Electrician's Mate (AE) personnel with Navy Enlisted Classification (NEC) 7197, and United States Marine Corps (USMC) personnel with Military Occupational Specialty (MOS) 6464. The IMUTS system is not used at the organizational level of maintenance.

2. Maintenance Concept. The Naval Aviation Maintenance Program (NAMP), OPNAVINST 4790.2 series, provides general direction and guidance concerning the maintenance concept for the IMUTS system. The NAMP prescribes three levels of maintenance: organizational, intermediate, and depot.

a. Organizational. Not Applicable (NA)

b. Intermediate. Intermediate level maintenance personnel consist of USN AE personnel with NEC 7197 and USMC personnel with MOS 6464. Intermediate level maintenance personnel perform both Preventive and Corrective Maintenance as listed below.

(1) Preventive. Intermediate level maintenance personnel perform Preventive Maintenance per Part III of the IMUTS system Maintenance Plan (M70097037) and appropriate maintenance manuals and Maintenance Requirement Cards (MRCs). Site calibration personnel calibrate items assigned as intermediate level responsibility per NAVAIR 17-35MTL-2.

Preventive Maintenance consists of cleaning and inspecting all vents and air filters, cleaning and lubricating, and performing a self-check program which is run daily or when the IMUTS system is started after a down period.

(2) Corrective. Intermediate level maintenance personnel fault-isolate the IMUTS system to a major assembly and repair the IMUTS system by repair or replacement of major assemblies. Fault-isolation is accomplished using Maintenance Assist Modules (MAMs), Hex Extenders, self-test or self-check program, and additional support equipment. Corrosion Control is performed per NAVAIR 16-1-540 and any physical damage is repaired. Corrective Maintenance consists of using both self-test and diagnostic program disks to fault-isolate to the SRA level.

c. Depot. Depot level personnel perform both Preventive and Corrective Maintenance as listed below.

(1) Preventive. Depot level personnel calibrate the IMUTS system as specified in NAVAIR 17-35MTL-1.

(2) Corrective. NADEP North Island personnel repair or condemn items beyond the capability of maintenance at the intermediate level or items Source, Maintenance, and Recoverability (SM&R) coded for depot repair only.

d. Interim Maintenance. Interim maintenance was not required for the IMUTS system as there was sufficient training provided by the installation team and that was deemed sufficient for the IMUTS system technicians.

e. Life-Cycle Maintenance Plan. There is no Life Cycle Maintenance Plan for the IMUTS system. In the event of a major problem, a Depot Field Repair Team including Litton representatives will complete on-site repair.

3. Manning Concept. The IMUTS system manpower requirements are based on three working shifts for AIMDs ashore, two working shifts for AIMDs afloat and MALSs. The IMUTS system is operated and maintained by USN personnel with NEC 7197, ASM-608 Inertial Measurement Unit Test Set Maintenance Technician, and USMC personnel with MOS 6464, Aircraft Inertial Navigation System Technician, Intermediate Maintenance Activity (IMA).

4. Training Concept. The goal of the IMUTS system training concept is to provide qualified intermediate level USN AEs with NEC 7197 to AIMDs ashore and afloat, and to provide qualified USMC personnel with MOS 6464 to MALSs in the United States and overseas. Training is provided by Maintenance Training Units (MTUs) 3010 and 3011 at Naval Air Station (NAS) Oceana and Marine Corps Air Station (MCAS) Miramar, respectively. Each MTU has two complete IMUTS systems used for Technical Training Equipment (TTE).

For reserve program units, Training and Administration of the Naval Reserve (TAR) personnel receive their training through attending the MTU training, while Selected Reserve (SELRES) personnel may earn intermediate level maintenance qualifications by attending formal training at the MTUs, providing quotas, funding, and students are available to attend the training.

Specific guidelines are contained in NAVPERS 18068F Volume II, Chapter IV, Navy Enlisted Classifications.

The established training concept for most aviation maintenance training divides "A" School courses into two or more segments called Core and Strand. The "C" School courses are also divided into separate Initial and Career training courses which are not required for intermediate level training at this time. "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" School, graduates attend the appropriate "C" School for additional specific training. "C" School training is provided for personnel to enhance skills and knowledge within their field.

a. Initial Training. Initial Training for the IMUTS system was completed in FY97. No additional Initial Training is required.

b. Follow-on Training. Follow-on training is provided by MTU 3010, Naval Air Maintenance Training Group Detachment (NAMTRAGRU DET) NAS Oceana for personnel assigned to the east coast and by MTU 3011 NAMTRAGRU DET MCAS Miramar for personnel assigned to the west coast. MTU 3010 and 3011 provide training for both USN and USMC personnel. Training is currently on-line at both MTU 3010 and 3011. In January 1999, the course length of C-198-3060, AN/ASM-608(V) Inertial Measurement Unit Test Set Operator/Maintainer Intermediate Maintenance, was reduced from 47 days to 40 days. C-198-3060 is the heart of training track D/E-150-6010, AN/ASM-608(V) Inertial Measurement Unit Test Set (IMUTS) Operation/Maintenance, which is the track required for USN and USMC personnel to receive NEC 7197 or MOS 6464.

Title	**AN/ASM-608(V) Inertial Measurement Unit Test Set (IMUTS) Operation/Maintenance**
CIN	C-198-3060 (of tracks D/E-150-6010)
Model Manager ..	NAMTRAGRU DET Miramar
Description	This training track provides the basic and special skills for performance as an intermediate level IMUTS Operator/Maintainer.
Locations	MTU 3010 NAMTRAGRU DET NAS Oceana MTU 3011 NAMTRAGRU DET MCAS Miramar
Length	51 days
RFT date	Currently available, and includes IMUTS III system information (since July 1997)
Skill identifier	NEC 7197, MOS 6464
TTE/TD	The TS-3846A/ASM-608(V) is used as TTE.

Prerequisites ..... C-100-2020, Avionics Common Core Class A1
C-100-2017, Avionics Technician I Level Class A1 (USMC)
C-602-2042, Aviation Electricians Mate I Level (USN)

c. Student Profiles

SKILL IDENTIFIER	PREREQUISITE SKILL AND KNOWLEDGE REQUIREMENTS
AE 7197	° C-100-2020, Avionics Common Core Class A1 ° C-602-2039, Aviation Electrician's Mate O Level Strand Class A1 ° C-602-2042, Aviation Electrician's Mate Intermediate Maintenance Level Strand Class A1 (planned to be on-line in October-November 2000, and will be the prerequisite vice C-602-2039)
MOS 6464	° C-100-2020, Avionics Common Core Class A1 ° C-100-2017, Avionics Technician I Level Class A1

d. Training Pipelines. No new training tracks are required for the IMUTS system. D-150-6010 and E-150-6010 are currently on-line with the IMUTS III system information included as of July 1997. There are currently no other major modifications planned.

I. ONBOARD (IN-SERVICE) TRAINING.

1. Proficiency or Other Training Organic to the New Development. Proficiency training will be conducted to provide onboard personnel with improved knowledge and understanding of the IMUTS III system. Senior enlisted personnel, along with Contractor Engineering Technical Services (CETS) and Naval Engineering Technical Services (NETS) personnel, will provide onboard training where and when it is required.

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

Training Continuum System (AMTCS). Currently planning is for AMTCS to begin initial implementation in third quarter FY00.

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

b. Aviation Maintenance Training Continuum System (AMTCS). AMTCS provides the Sailor/Marine career path training from their initial service entry to the end of their military career. AMTCS is an integrated system which satisfies the training/administrative requirements of both the individual and the organization; the benefits are manifested in the increased effectiveness of the technicians and the increased efficiencies of the management of the training business process. By capitalizing on technological advances and integrating systems and processes where appropriate, the right amount of training can be provided at the right time, thus meeting the CNO's mandated "just-in-time" training approach.

AMTCS provides a cost effective training continuum as an integrated system, which satisfies the training/administrative requirements of both the individual technician Sailor/Marine and the organization. Technology investments enabled the design/development of several state-of-the-art training/administrative tools: Computer-Based Training (CBT) for the technicians in the Fleet in the form of Interactive Courseware (ICW) with Computer Managed Instruction (CMI) and Computer Aided Instruction (CAI) for the schoolhouse.

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

2. Personnel Qualification Standards. NA

3. Other Onboard or In-Service Training Packages. Marine Corps onboard training is based on the current series of MCO P4790.12, Individual Training Standards System and Maintenance Training Management and Evaluation Program (MATMEP). This program is designed to meet Marine Corps, as well as Navy OPNAVINST 4790.2 series, maintenance training requirements. It is a performance-based, standardized, level-progressive, documentable, training management and evaluation program. It identifies and prioritizes task inventories by

MOS through a front-end analysis process that identifies task, skill, and knowledge requirements of each MOS. MTIP questions coupled to MATMEP tasks will help identify training deficiencies that can be enhanced with refresher training. (MATMEP is planned to be replaced by AMTCS.)

J. LOGISTICS SUPPORT

1. Manufacturer and Contract Number

CONTRACT NUMBER	MANUFACTURER	ADDRESS
N00019-91-G-0126	Litton Guidance and Control Systems Division	2211 West North Temple Salt Lake City, UT 84116-2993

2. Program Documentation. Program documentation includes the IMUTS III Maintenance Plan, M70097037, dated 15 January 1998, and the IMUTS III User's Logistics Support Summary (ULSS), U70097037, dated 15 January 1998. No Integrated Logistics Support Plan (ILSP) was specifically done for the IMUTS III system although there is an ILSP (PGSE-1027:AB) that was approved in 1980 and updated in 1987 for IMUTS II.

3. Technical Data Plan. Technical Manuals are required to operate and maintain the IMUTS system and are determined by the Technical Manual Management Team (TMMT). The function of the TMMT is to establish and define technical documentation requirements for the programs, provide a focal point of management skills and responsibilities, and to ensure maximum coordination of data management efforts. Technical Manuals required by MTU 3010 and MTU 3011 are listed in Section IV.B.3 of this NTSP.

4. Test Sets, Tools, and Test Equipment. The IMUTS system requires Test Program Sets (TPSs) to operate. The TPS includes the System Software, Self-Maintenance Software, UUT Software, Test Program Disk (TPD), Test Program Instruction (TPI), Master Test Program Set Index (MTPSI), and the ID required to test a UUT.

MAMs are WRAs and SRAs that are used as a tool to fault isolate a system or test set when an ambiguity test group exists in a TPS. The ULSS lists 22 MAMs.

For information on Test Sets, Tools, and Test Equipment required for training refer to section IV.A.1 of this NTSP.

5. Repair Parts. The Material Support Date (MSD) is the date on which the Navy assumes responsibility for all spares and repair parts for an end item. The MSD for the IMUTS system was January 2000. Naval Inventory Control Point (NAVICP) Mechanicsburg, Pennsylvania, is the Program Support Inventory Control Point (PSICP) for the IMUTS system and is responsible for procurement, management, and distribution of outfitting requirements, and the replenishment of in-use assets with the exception of the TPSs.

6. Human Systems Integration. NA

7. Contractor Engineering Technical Services. CETS are used for maintenance and for training Navy and Marine Corps personnel. Services of CETS and NETS personnel are provided through the Naval Air Technical Data and Engineering Service Command (NATEC) at the direction of the Type Commander (TYCOM). The following CETS and NETS requirements were obtained from NATEC.

SUPPORTED ACTIVITY	NETS BILLETS	CETS BILLETS
MALS MCAS Cherry Point	1	0
MALS MCAS Iwakuni	1	0
AIMD NAS Lemoore	1	0
AIMD NAS Norfolk	0	1
AIMD NAS Oceana	2	0
Reserve AIMD (RAIMD) Joint Reserve Base (JRB) Fort Worth	1	0
RAIMD Andrews Air Force Base (AFB)	0	1

Note: All CETS and NETS billets are not always filled.

K. SCHEDULES

1. Installation and Delivery Schedules. IMUTS system deliveries began in March 1997 and will continue through FY00. Through October 1999, there have been 93 IMUTS systems installed and for the remainder of FY00, there will be three additional IMUTS systems installed as noted in the table below. This installation schedule was provided by NADEP North Island and is valid as of October 1999.

INSTALLATION SCHEDULE

ACTIVITY	INSTALLATION DATES
CVN 68 USS Nimitz	Mar 97, Jul 97
Litton Guidance and Control Systems, Norfolk	May 97, (2) Dec 97, Jul 98
NADEP North Island	Jun 97, Feb 98
MTU 3011 NAMTG Miramar	Jul 97, Sep 97
Litton (CAINS) San Diego	Jul 97, Aug 98, Oct 98
MTU 3010 NAMTG Oceana	Jul 97, Oct 97

ACTIVITY	INSTALLATION DATES
MALS 11 MCAS Miramar	Jul 97, (2) Aug 97, Oct 98, Nov 98, Dec 98
AIMD NAS Oceana	Jul 97, Aug 97, Feb 98, (2) Mar 98
AIMD NAS North Island	(2) Aug 97, Apr 98, Oct 98
Litton (GCS) Salt Lake City	Aug 97
AIMD NAS Norfolk	Aug 97, Feb 98
CVN 70 USS Carl Vinson	(2) Aug 97
CVN 65 USS Enterprise	Aug 97, Sep 97
AIMD NAS Whidbey Island	(3) Sep 97
CVN 74 USS John C. Stennis	(2) Sep 97
CVN 69 USS Dwight D. Eisenhower	(2) Sep 97
AIMD NAS Atsugi	Oct 97
CV 62 USS Independence	(2) Oct 97
CV 63 USS Kitty Hawk	(2) Oct 97
MALS 12 MCAS Iwakuni	(2) Oct 97, Nov 97
AIMD NAS Lemoore	(3) Oct 97
AIMD NAS Cecil Field	Oct 97, (3) Nov 97
CV 64 USS Constellation	(2) Nov 97
CVN 72 USS Abraham Lincoln	Jan 98, Feb 98
MALS 14 MCAS Cherry Point	(4) Feb 98
AIMD NAS Patuxent River	Feb 98
MALS 13 MCAS Yuma	(3) Feb 98
MALS 31 MCAS Beaufort	(3) Mar 98
AIMD NAS Point Mugu	Mar 98
RAIMD JRB Fort Worth	(2) Apr 98
MALS 41 JRB Fort Worth	Apr 98
CVN 71 USS Theodore Roosevelt	(2) Apr 98
RAIMD NAS New Orleans	Apr 98
AIMD NAS Fallon	(2) May 98
RAIMD Andrews AFB	May 98

ACTIVITY	INSTALLATION DATES
Northrop-Grumman Aircraft, Florida	Jun 98
CV 67 USS John F. Kennedy	Jun 98, Jul 98
EMMMF1 Aviano	Jul 98
EMMMF2 Aviano	Jul 98
CVN 73 USS George Washington	Apr 99
CVN 75 USS Harry S. Truman	(2) Oct 99
NADEP North Island	(1) FY00
Litton, CAINS, Norfolk	(1) FY00
Litton GCS, Salt Lake City	(1) FY00

2. Ready For Operational Use Schedule. All IMUTS systems are Ready For Operational Use after installation and checkout. The installation dates listed above are after installation and checkout.

3. Time Required to Install at Operational Sites. Installation of the IMUTS system requires approximately one week after the site has been prepared. Installation time including preparation varies by site.

4. Foreign Military Sales and Other Source Delivery Schedule. The IMUTS system is a candidate for FMS and has already been provided to some of our allies. For information on FMS refer to PMA260.

5. Training Device and Technical Training Equipment Delivery Schedule. Each of the MTUs has upgraded two complete IMUTS systems. MTU 3010 at NAS Oceana and MTU 3011 at MCAS Miramar upgraded their first IMUTS system in July 1997. MTU 3011 upgraded their second IMUTS system in September 1997 and MTU 3010 upgraded their second IMUTS system in October 1997. At this point all IMUTS system upgrades for training have been installed.

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
AV-8B Harrier II Weapon System	A-50-8210D/D	PMA257	Preliminary Draft Mar 99
E-2C Aircraft	A-50-8716D/A	PMA231	Approved Mar 98
EA-6B Improved Capability Modification II & III	A-50-7904D/D	PMA234	Preliminary Draft Sep 98
ES-3A Aircraft	A-50-8818C/D	PMA290	Preliminary Draft Jul 98
F-14A, F-14B, and F-14D Aircraft	A-50-8511B/P	PMA253	Proposed Aug 99
F/A-18 Weapon System	A-50-7703F/A	PMA265	Approved Jan 95
S-3B Aircraft	A-50-8310D/D	PMA244	Preliminary Draft Jul 99
IMUTS III ULSS	U70097037	PMA260	Approved Jan 98
IMUTS III Maintenance Plan	M70097037	PMA260	Approved Jan 98

PART II - BILLET AND PERSONNEL REQUIREMENTS

The following elements are not affected by the IMUTS III system and, therefore, are not included in Part II of this NTSP:

II.A. Billet Requirements

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

II.A. BILLET REQUIREMENTS

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

SOURCE: NADEP North Island **DATE:** 3/1/99

ACTIVITY, UIC		PFYs	CFY00	FY01	FY02	FY03	FY04
OPERATIONAL ACTIVITIES - NAVY							
NAVAIRES NAS Norfolk	63102	1	0	0	0	0	0
VAQ-209 (Andrews AFB)	53870	1	0	0	0	0	0
VAW-78 (NAS Norfolk)	09102	1	0	0	0	0	0
VFA-203 Detachment (NAS New Orleans)	31633	1	0	0	0	0	0
VFA-204 (NAS New Orleans)	09032	1	0	0	0	0	0
VF-201 (JRB Fort Worth)	09309	1	0	0	0	0	0
VMFAT-101 (MCAS Miramar)	52817	1	0	0	0	0	0
TOTAL:		7	0	0	0	0	0
OPERATIONAL ACTIVITIES - USMC							
VMAQ-1 MCAS Cherry Point	41345	1	0	0	0	0	0
VMAQ-2 MCAS Cherry Point	42362	1	0	0	0	0	0
VMAQ-3 MCAS Cherry Point	42363	1	0	0	0	0	0
VMAQ-4 MCAS Cherry Point	55166	1	0	0	0	0	0
VMFA-251 MCAS Beaufort	09241	1	0	0	0	0	0
VMFA-312 MCAS Beaufort	09253	1	0	0	0	0	0
VMAT-203 MCAS Cherry Point	09821	1	0	0	0	0	0
VMFA-314 MCAS Miramar	09230	1	0	0	0	0	0
VMFA-323 MCAS Miramar	09235	1	0	0	0	0	0
VMFAT-101 MCAS Miramar	52817	1	0	0	0	0	0
TOTAL:		10	0	0	0	0	0
FLEET SUPPORT ACTIVITIES - NAVY							
Sea OPDET NAS Jacksonville	46965	1	0	0	0	0	0
A/C OPDET NAS Oceana	35672	1	0	0	0	0	0
AIMD NAS Cecil Field	44315	1	0	0	0	0	0
AIMD NAS Jacksonville	44319	1	0	0	0	0	0
AIMD NAS Norfolk	44325	1	0	0	0	0	0
AIMD Oceana	44327	1	0	0	0	0	0
CV 67 USS John F. Kennedy	03367	1	0	0	0	0	0
CVN 75 USS Harry S. Truman	21853	1	0	0	0	0	0
CVN 65 USS Enterprise	03365	1	0	0	0	0	0
CVN 68 USS Nimitz	03368	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
NAVAIRWPNSTA Point Mugu	45113	1	0	0	0	0	0
NAVTEST WINGSLANT	39782	1	0	0	0	0	0
Norfolk A/C OPDET	35676	1	0	0	0	0	0
OPDET NAVAIRWARCENAD Pax River	35679	1	0	0	0	0	0

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

SOURCE: NADEP North Island **DATE:** 3/1/99

ACTIVITY, UIC		PFYs	CFY00	FY01	FY02	FY03	FY04
RAIMD NAF Washington D.C.	44492	1	0	0	0	0	0
RAIMD NAS Atlanta	44486	1	0	0	0	0	0
RAIMD NAS New Orleans	44490	1	0	0	0	0	0
Sea OPDET NAS Cecil Field	46961	1	0	0	0	0	0
Sea OPDET NAS Norfolk	46966	1	0	0	0	0	0
Sea OPDET NAS North Island	46968	1	0	0	0	0	0
Sea OPDET NAS Oceana	46963	1	0	0	0	0	0
AIMD NAS Fallon	44317	1	0	0	0	0	0
AIMD NAS Lemoore	44321	1	0	0	0	0	0
AIMD NAS North Island	44326	1	0	0	0	0	0
AIMD NAS Whidbey Island	44329	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
CVN 76 USS Ronald Reagan	22178	0	0	0	1	0	0
RAIMD NAS JRB Fort Worth	44487	1	0	0	0	0	0
Sea OPDET MCAS Miramar	46962	1	0	0	0	0	0
Sea OPDET NAS Lemoore	46964	1	0	0	0	0	0
Sea OPDET NAS Whidbey Island	46967	1	0	0	0	0	0
Van OPDET NAS Whidbey Island	31179	1	0	0	0	0	0
TOTAL:		38	0	0	1	0	0
FLEET SUPPORT ACTIVITIES - USMC							
MALS-14 MCAS Cherry Point	09114	1	0	0	0	0	0
MALS-31 MCAS Beaufort	09131	1	0	0	0	0	0
MALS-11 MCAS Miramar	09111	1	0	0	0	0	0
MALS-12 MCAS Iwakuni	09112	1	0	0	0	0	0
MALS-13 MCAS Yuma	57082	1	0	0	0	0	0
MALS-41 MCAS Dallas	67239	1	0	0	0	0	0
MALS-46 MCAS El Toro	67244	1	0	0	0	0	0
TOTAL:		7	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 - NAVY					
NAVAIRES NAS Norfolk, 63102					
TAR	0	1	AE2	7197	
ACTIVITY TOTAL:	0	1			
VAQ-209 (Andrews AFB), 53870					
ACDU	0	1	AE3	7197	
ACTIVITY TOTAL:	0	1			
VAW-78 (NAS Norfolk), 09102					
TAR	0	1	AE3	7197	
ACTIVITY TOTAL:	0	1			
VFA-203 Detachment (NAS New Orleans), 31633					
TAR	0	1	AE2	7197	
ACTIVITY TOTAL:	0	1			
VFA-204 (NAS New Orleans), 09032					
TAR	0	1	AE2	7197	
ACTIVITY TOTAL:	0	1			
VF-201 (JRB Fort Worth), 09309					
SELRES	0	1	AE3	7197	
ACTIVITY TOTAL:	0	1			
VMFAT-101 (MCAS Miramar), 52817					
ACDU	0	1	AE3	7197	
ACTIVITY TOTAL:	0	1			
OPERATIONAL ACTIVITIES - USMC					
VMAQ-1 MCAS Cherry Point, 41345					
USMC	0	1	LCPL	6464	
ACTIVITY TOTAL:	0	1			
VMAQ-2 MCAS Cherry Point, 42362					
USMC	0	1	LCPL	6464	
ACTIVITY TOTAL:	0	1			
VMAQ-3 MCAS Cherry Point, 42363					
USMC	0	1	LCPL	6464	
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
VMAQ-4 MCAS Cherry Point, 55166					
USMC	0	1	LCPL	6464	
ACTIVITY TOTAL:	0	1			
VMFA-251 MCAS Beaufort, 09241					
USMC	0	1	CPL	6464	
ACTIVITY TOTAL:	0	1			
VMFA-312 MCAS Beaufort, 09253					
USMC	0	1	CPL	6464	
ACTIVITY TOTAL:	0	1			
VMAT-203 MCAS Cherry Point, 09821					
USMC	0	3	LCPL	6464	
	0	1	SGT	6464	
ACTIVITY TOTAL:	0	4			
VMFA-314 MCAS Miramar, 09230					
USMC	0	1	CPL	6464	
ACTIVITY TOTAL:	0	1			
VMFA-323 MCAS Miramar, 09235					
USMC	0	1	CPL	6464	
ACTIVITY TOTAL:	0	1			
VMFAT-101 MCAS Miramar, 52817					
USMC	0	2	CPL	6464	
	0	1	SGT	6464	
ACTIVITY TOTAL:	0	3			
FLEET SUPPORT ACTIVITIES - NAVY					
Sea OPDET NAS Jacksonville, 46965					
ACDU	0	5	AE2	7197	
ACTIVITY TOTAL:	0	5			
A/C OPDET NAS Oceana, 35672					
ACDU	0	1	AE3	7197	
ACTIVITY TOTAL:	0	1			
AIMD NAS Cecil Field, 44315					
ACDU	0	1	AE1	7197	
	0	1	AE2	7197	
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
AIMD NAS Jacksonville, 44319					
ACDU	0	1	AE1	7197	
	0	2	AE2	7197	
	0	2	AE3	7197	
ACTIVITY TOTAL:	0	5			
AIMD NAS Norfolk, 44325					
ACDU	0	2	AE2	7197	
	0	2	AE3	7197	
SELRES	0	1	AE2	7197	
ACTIVITY TOTAL:	0	5			
AIMD Oceana, 44327					
ACDU	0	2	AE1	7197	
	0	8	AE2	7197	
	0	6	AE3	7197	
ACTIVITY TOTAL:	0	16			
CV 67 USS John F. Kennedy, 03367					
ACDU	0	1	AE1	7197	
	0	1	AE2	7197	
SELRES	0	1	AE2	7197	
ACTIVITY TOTAL:	0	3			
CVN 75 USS Harry S. Truman, 21853					
ACDU	0	2	AE1	7197	
ACTIVITY TOTAL:	0	2			
CVN 65 USS Enterprise, 03365					
ACDU	0	1	AE1	7197	
	0	1	AE2	7197	
ACTIVITY TOTAL:	0	2			
CVN 68 USS Nimitz, 03368					
ACDU	0	1	AE1	7197	
	0	1	AE2	7197	
ACTIVITY TOTAL:	0	2			
CVN 69 USS Dwight D. Eisenhower, 03369					
ACDU	0	1	AE1	7197	
	0	1	AE2	7197	
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
CVN 71 USS Theodore Roosevelt, 21247					
ACDU	0	1	AE1	7197	
	0	1	AE3	7197	
ACTIVITY TOTAL:	0	2			
CVN 73 USS George Washington, 21412					
ACDU	0	1	AE1	7197	
SELRES	0	1	AE2	7197	
ACTIVITY TOTAL:	0	2			
NAVAIRWPNSTA Point Mugu, 45113					
ACDU	0	1	AE2	7197	
	0	1	AE3	7197	
ACTIVITY TOTAL:	0	2			
NAVTEST WINGSLANT, 39782					
ACDU	0	1	AE1	7197	
	0	1	AE3	7197	
ACTIVITY TOTAL:	0	2			
Norfolk A/C OPDET, 35676					
ACDU	0	1	AE2	7197	
ACTIVITY TOTAL:	0	1			
OPDET NAVAIRWARCENAD Pax River, 35679					
ACDU	0	1	AE2	7197	
ACTIVITY TOTAL:	0	1			
RAIMD NAF Washington D.C., 44492					
ACDU	0	1	AE3	7197	
TAR	0	1	AE2	7197	
	0	1	AE3	7197	
ACTIVITY TOTAL:	0	3			
RAIMD NAS Atlanta, 44486					
TAR	0	1	AE1	7197	
	0	1	AE2	7197	
SELRES	0	1	AE3	7197	
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
RAIMD NAS New Orleans, 44490					
TAR	0	1	AE1	7197	
	0	2	AE3	7197	
ACTIVITY TOTAL:	0	3			
Sea OPDET NAS Cecil Field, 46961					
ACDU	0	5	AE3	7197	
ACTIVITY TOTAL:	0	5			
Sea OPDET NAS Norfolk, 46966					
ACDU	0	5	AE3	7197	
ACTIVITY TOTAL:	0	5			
Sea OPDET NAS North Island, 46968					
ACDU	0	4	AE2	7197	
ACTIVITY TOTAL:	0	4			
Sea OPDET NAS Oceana, 46963					
ACDU	0	1	AE2	7197	
	0	8	AE3	7197	
ACTIVITY TOTAL:	0	9			
AIMD NAS Fallon, 44317					
ACDU	0	1	AE1	7197	
	0	1	AE2	7197	
	0	2	AE3	7197	
ACTIVITY TOTAL:	0	4			
AIMD NAS Lemoore, 44321					
ACDU	0	1	AE1	7197	
	0	1	AE2	7197	
	0	3	AE3	7197	
ACTIVITY TOTAL:	0	5			
AIMD NAS North Island, 44326					
ACDU	0	1	AE1	7197	
	0	4	AE2	7197	
	0	6	AE3	7197	
ACTIVITY TOTAL:	0	11			
AIMD NAS Whidbey Island, 44329					
ACDU	0	1	AE2	7197	
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
CV 63 USS Kitty Hawk, 03363					
ACDU	0	1	AE1	7197	
	0	2	AE2	7197	
	0	4	AE3	7197	
ACTIVITY TOTAL:	0	7			
CV 64 USS Constellation, 03364					
ACDU	0	1	AE2	7197	
	0	1	AE3	7197	
ACTIVITY TOTAL:	0	2			
CVN 70 USS Carl Vinson, 20993					
ACDU	0	1	AE1	7197	
	0	1	AE2	7197	
ACTIVITY TOTAL:	0	2			
CVN 72 USS Abraham Lincoln, 21297					
ACDU	0	1	AE1	7197	
	0	1	AE2	7197	
ACTIVITY TOTAL:	0	2			
CVN 74 USS John C. Stennis, 21847					
ACDU	0	1	AE1	7197	
	0	1	AE2	7197	
ACTIVITY TOTAL:	0	2			
CVN 76 USS Ronald Reagan, 22178, FY02					
ACDU	0	1	AE1	7197	
	0	1	AE2	7197	
ACTIVITY TOTAL:	0	2			
RAIMD NAS JRB Fort Worth, 44487					
TAR	0	2	AE1	7197	
	0	4	AE3	7197	
SELRES	0	1	AE3	7197	
ACTIVITY TOTAL:	0	7			
Sea OPDET MCAS Miramar, 46962					
ACDU	0	4	AE3	7197	
ACTIVITY TOTAL:	0	4			
Sea OPDET NAS Lemoore, 46964					
ACDU	0	4	AE3	7197	
ACTIVITY TOTAL:	0	4			

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
Sea OPDET NAS Whidbey Island, 46967					
ACDU	0	9	AE3	7197	
ACTIVITY TOTAL:	0	9			
Van OPDET NAS Whidbey Island, 31179					
ACDU	0	5	AE3	7197	
ACTIVITY TOTAL:	0	5			
FLEET SUPPORT ACTIVITIES - USMC					
MALS-14 MCAS Cherry Point, 09114					
USMC	0	1	CPL	6464	
	0	3	LCPL	6464	
	0	1	SGT	6464	
ACTIVITY TOTAL:	0	5			
MALS-31 MCAS Beaufort, 09131					
USMC	0	1	CPL	6464	
	0	3	LCPL	6464	
	0	1	SGT	6464	
ACTIVITY TOTAL:	0	5			
MALS-11 MCAS Miramar, 09111					
USMC	0	1	CPL	6464	
	0	3	LCPL	6464	
	0	1	SGT	6464	
ACTIVITY TOTAL:	0	5			
MALS-12 MCAS Iwakuni, 09112					
USMC	0	1	CPL	6464	
	0	3	LCPL	6464	
	0	1	SGT	6464	
ACTIVITY TOTAL:	0	5			
MALS-13 MCAS Yuma, 57082					
USMC	0	1	CPL	6464	
	0	3	LCPL	6464	
	0	1	SGT	6464	
ACTIVITY TOTAL:	0	5			
MALS-41 MCAS Dallas, 67239					
USMC	0	1	CPL	6464	
	0	3	LCPL	6464	
	0	1	SGT	6464	
ACTIVITY TOTAL:	0	5			

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
MALS-46 MCAS El Toro, 67244					
USMC	0	1	CPL	6464	
	0	3	LCPL	6464	
	0	1	SGT	6464	
ACTIVITY TOTAL:	0	5			

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

DESIG/ RATING	PNEC/SNEC PMOS/SMOS	PFYs OFF	PFYs ENL	CFY00 OFF	CFY00 ENL	FY01 OFF	FY01 ENL	FY02 OFF	FY02 ENL	FY03 OFF	FY03 ENL	FY04 OFF	FY04 ENL
NAVY OPERATIONAL ACTIVITIES - ACDU													
AE3	7197		2		0		0		0		0		0
NAVY OPERATIONAL ACTIVITIES - TAR													
AE2	7197		3		0		0		0		0		0
AE3	7197		1		0		0		0		0		0
NAVY OPERATIONAL ACTIVITIES - SELRES													
AE3	7197		1		0		0		0		0		0
USMC OPERATIONAL ACTIVITIES - USMC													
CPL	6464		6		0		0		0		0		0
LCPL	6464		7		0		0		0		0		0
SGT	6464		2		0		0		0		0		0
NAVY FLEET SUPPORT ACTIVITIES - ACDU													
AE1	7197		20		0		0		1		0		0
AE2	7197		43		0		0		1		0		0
AE3	7197		71		0		0		0		0		0
NAVY FLEET SUPPORT ACTIVITIES - TAR													
AE1	7197		4		0		0		0		0		0
AE2	7197		2		0		0		0		0		0
AE3	7197		7		0		0		0		0		0
NAVY FLEET SUPPORT ACTIVITIES - SELRES													
AE2	7197		3		0		0		0		0		0
AE3	7197		2		0		0		0		0		0
USMC FLEET SUPPORT ACTIVITIES - USMC													
CPL	6464		7		0		0		0		0		0
LCPL	6464		21		0		0		0		0		0
SGT	6464		7		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	CFY00 OFF	CFY00 ENL	FY01 OFF	FY01 ENL	FY02 OFF	FY02 ENL	FY03 OFF	FY03 ENL	FY04 OFF	FY04 ENL
SUMMARY TOTALS:													
NAVY OPERATIONAL ACTIVITIES - ACDU													
	2			0		0		0		0		0	
NAVY OPERATIONAL ACTIVITIES - TAR													
	4			0		0		0		0		0	
NAVY OPERATIONAL ACTIVITIES - SELRES													
	1			0		0		0		0		0	
USMC OPERATIONAL ACTIVITIES - USMC													
	15			0		0		0		0		0	
NAVY FLEET SUPPORT ACTIVITIES - ACDU													
	134			0		0		2		0		0	
NAVY FLEET SUPPORT ACTIVITIES - TAR													
	13			0		0		0		0		0	
NAVY FLEET SUPPORT ACTIVITIES - SELRES													
	5			0		0		0		0		0	
USMC FLEET SUPPORT ACTIVITIES - USMC													
	35			0		0		0		0		0	
GRAND TOTALS:													
NAVY - ACDU													
	136			0		0		2		0		0	
NAVY - TAR													
	17			0		0		0		0		0	
NAVY - SELRES													
	6			0		0		0		0		0	
USMC - USMC													
	50			0		0		0		0		0	

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

SOURCE: PMA205 **DATE:** 1/1/98

ACTIVITY, UIC	PFYs	CFY00	FY01	FY02	FY03	FY04
FLEET SUPPORT ACTIVITIES - NAVY						
CVN-64 USS Constellation, 03364	0	0	0	1	0	0
TOTAL:	0	0	0	1	0	0

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

DESIG	PNEC/SNEC	PFYs		CFY00		FY01		FY02		FY03		FY04	
RATING	PMOS/SMOS	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
NAVY FLEET SUPPORT ACTIVITIES - ACDU													
AE	7197	0	2	0	0	0	0	0	-2	0	0	0	0

SUMMARY TOTALS

NAVY FLEET SUPPORT ACTIVITIES - ACDU												
0	2	0	0	0	0	0	-2	0	0	0	0

GRAND TOTALS

NAVY - ACDU											
0	2	0	0	0	0	0	-2	0	0	0	0

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

DESIG RATING	PNEC/SNEC PMOS/SMOS	PFYs OFF	PFYs ENL	CFY00 OFF	CFY00 ENL	FY01 OFF	FY01 ENL	FY02 OFF	FY02 ENL	FY03 OFF	FY03 ENL	FY04 OFF	FY04 ENL
TRAINING ACTIVITY, LOCATION, UIC: MTU 3010 NAMTG Oceana, Virginia, 66045													
INSTRUCTOR BILLETS													
ACDU													
AE1	7197	0	2	0	2	0	2	0	2	0	2	0	2
AE2	7197	0	1	0	1	0	1	0	1	0	1	0	1
TOTAL:		0	3	0	3	0	3	0	3	0	3	0	3
TRAINING ACTIVITY, LOCATION, UIC: MTU 3011 NAMTG Miramar, California, 66064													
INSTRUCTOR BILLETS													
ACDU													
AE1	7197	0	2	0	2	0	2	0	2	0	2	0	2
AE2	7197	0	1	0	1	0	1	0	1	0	1	0	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	PFYs ENL	CFY00 OFF	CFY00 ENL	FY01 OFF	FY01 ENL	FY02 OFF	FY02 ENL	FY03 OFF	FY03 ENL	FY04 OFF	FY04 ENL
MTU 3010 NAMTG Oceana, Virginia, 66045													
	NAVY		2.8		2.8		2.8		2.8		2.8		2.8
	USMC		0.5		0.5		0.5		0.5		0.5		0.5
MTU 3011 NAMTG Miramar, California, 66064													
	NAVY		2.4		2.4		2.4		2.4		2.4		2.4
	USMC		1.0		1.0		1.0		1.0		1.0		1.0
SUMMARY TOTALS:													
	NAVY		5.2		5.2		5.2		5.2		5.2		5.2
	USMC		1.5		1.5		1.5		1.5		1.5		1.5
GRAND TOTALS:													
			6.7		6.7		6.7		6.7		6.7		6.7

II.A.5. ANNUAL INCREMENTAL AND CUMULATIVE BILLETS

DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS	BILLET BASE	CFY00 +/-	CFY00 CUM	FY01 +/-	FY01 CUM	FY02 +/-	FY02 CUM	FY03 +/-	FY03 CUM	FY04 +/-	FY04 CUM
a. OFFICER - USN	Not Applicable												
b. ENLISTED - USN													
Operational Billets ACDU and TAR													
AE2	7197		3	0	3	0	3	0	3	0	3	0	3
AE3	7197		3	0	3	0	3	0	3	0	3	0	3
Fleet Support Billets ACDU and TAR													
AE1	7197		24	0	24	0	24	0	24	0	24	0	24
AE2	7197		45	0	45	0	45	0	45	0	45	0	45
AE3	7197		78	0	78	0	78	0	78	0	78	0	78
Staff Billets ACDU and TAR													
AE1	7197		4	0	4	0	4	0	4	0	4	0	4
AE2	7197		2	0	2	0	2	0	2	0	2	0	2
Chargeable Student Billets ACDU and TAR													
			5	0	5	0	5	0	5	0	5	0	5
SELRES Billets													
AE2	7197		3	0	3	0	3	0	3	0	3	0	3
AE3	7197		3	0	3	0	3	0	3	0	3	0	3
TOTAL USN ENLISTED BILLETS:													
Operational			6	0	6	0	6	0	6	0	6	0	6
Fleet Support			147	0	147	0	147	0	147	0	147	0	147
Staff			6	0	6	0	6	0	6	0	6	0	6
Chargeable Student			5	0	5	0	5	0	5	0	5	0	5
SELRES			6	0	6	0	6	0	6	0	6	0	6
c. OFFICER - USMC	Not Applicable												
d. ENLISTED - USMC													
Operational Billets USMC and AR													
CPL	6464		6	0	6	0	6	0	6	0	6	0	6
LCPL	6464		7	0	7	0	7	0	7	0	7	0	7
SGT	6464		2	0	2	0	2	0	2	0	2	0	2

II.A.5. ANNUAL INCREMENTAL AND CUMULATIVE BILLETS

DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS	BILLET BASE	CFY00 +/-	CFY00 CUM	FY01 +/-	FY01 CUM	FY02 +/-	FY02 CUM	FY03 +/-	FY03 CUM	FY04 +/-	FY04 CUM
Fleet Support Billets USMC and AR													
CPL	6464		7	0	7	0	7	0	7	0	7	0	7
LCPL	6464		21	0	21	0	21	0	21	0	21	0	21
SGT	6464		7	0	7	0	7	0	7	0	7	0	7
Chargeable Student Billets USMC and AR													
			2	0	2	0	2	0	2	0	2	0	2
TOTAL USMC ENLISTED BILLETS:													
Operational			15	0	15	0	15	0	15	0	15	0	15
Fleet Support			35	0	35	0	35	0	35	0	35	0	35
Chargeable Student			2	0	2	0	2	0	2	0	2	0	2

II.B. PERSONNEL REQUIREMENTS

II.B.1. ANNUAL TRAINING INPUT REQUIREMENTS

CIN, COURSE TITLE: D-150-6010, AN/ASM-608 Inertial Measurement Unit Test Set (IMUTS) Operation/Maintenance
COURSE LENGTH: 6.4 Weeks **TOUR LENGTH:** Navy: 36 Months
ATTRITION FACTOR: Navy: 0% **BACKOUT FACTOR:** 0.13

TRAINING		ACDU/TAR	CFY00		FY01		FY02		FY03		FY04	
ACTIVITY	SOURCE	SELRES	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
MTU 3010 NAMTG Oceana, Virginia												
	NAVY	ACDU		22		22		22		22		22
		TAR		3		3		3		3		3
		SELRES		1		0		0		1		0
	USMC	USMC		4		4		4		4		4
		TOTAL:		30		29		29		30		29

CIN, COURSE TITLE: E-150-6010, AN/ASM-608 Inertial Measurement Unit Test Set (IMUTS) Operation/Maintenance
COURSE LENGTH: 6.4 Weeks **TOUR LENGTH:** Navy: 36 Months
ATTRITION FACTOR: Navy: 0% **BACKOUT FACTOR:** 0.13

TRAINING		ACDU/TAR	CFY00		FY01		FY02		FY03		FY04	
ACTIVITY	SOURCE	SELRES	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
MTU 3011 NAMTG Miramar, California												
	NAVY	ACDU		19		19		19		19		19
		TAR		2		2		2		2		2
		SELRES		0		0		1		0		0
	USMC	USMC		8		8		8		8		8
		TOTAL:		29		29		30		29		29

PART III - TRAINING REQUIREMENTS

The following elements are not affected by the IMUTS III system and, therefore, are not included in Part III of this NTSP:

III.A.1 Initial Training Requirement

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

PART III – TRAINING REQUIREMENTS

III.A.2. FOLLOW-ON TRAINING

III.A.2.a. EXISTING COURSES

CIN, COURSE TITLE: D-150-6010, AN/ASM-608 Inertial Measurement Unit Test Set (IMUTS) Operation/Maintenance
TRAINING ACTIVITY: MTU 3010
LOCATION, UIC: NAMTRAGRU DET Oceana, 66045

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

CFY00		FY01		FY02		FY03		FY04		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	25		25		25		25		25	ATIR
	22		22		22		22		22	Output
	2.8		2.8		2.8		2.8		2.8	AOB
	2.8		2.8		2.8		2.8		2.8	Chargeable

SOURCE: NAVY **STUDENT CATEGORY:** SELRES

CFY00		FY01		FY02		FY03		FY04		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	1		0		0		1		0	ATIR
	1		0		0		1		0	Output
	0.1		0.0		0.0		0.1		0.0	AOB
	0.0		0.0		0.0		0.0		0.0	Chargeable

SOURCE: USMC **STUDENT CATEGORY:** USMC - AR

CFY00		FY01		FY02		FY03		FY04		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	4		4		4		4		4	ATIR
	4		4		4		4		4	Output
	0.5		0.5		0.5		0.5		0.5	AOB
	0.5		0.5		0.5		0.5		0.5	Chargeable

III.A.2.a. EXISTING COURSES

CIN, COURSE TITLE: E-150-6010, AN/ASM-608 Inertial Measurement Unit Test Set (IMUTS) Operation/Maintenance
TRAINING ACTIVITY: MTU 3011
LOCATION, UIC: NAMTRAGRU DET Miramar, 66064

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

CFY00		FY01		FY02		FY03		FY04		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	21		21		21		21		21	ATIR
	19		19		19		19		19	Output
	2.4		2.4		2.4		2.4		2.4	AOB
	2.4		2.4		2.4		2.4		2.4	Chargeable

SOURCE: NAVY **STUDENT CATEGORY:** SELRES

CFY00		FY01		FY02		FY03		FY04		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	0		0		1		0		0	ATIR
	0		0		1		0		0	Output
	0.0		0.0		0.1		0.0		0.0	AOB
	0.0		0.0		0.0		0.0		0.0	Chargeable

SOURCE: USMC **STUDENT CATEGORY:** USMC - AR

CFY00		FY01		FY02		FY03		FY04		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	8		8		8		8		8	ATIR
	8		8		8		8		8	Output
	1.0		1.0		1.0		1.0		1.0	AOB
	1.0		1.0		1.0		1.0		1.0	Chargeable

PART IV - TRAINING LOGISTICS SUPPORT REQUIREMENTS

The following elements are not affected by the IMUTS III system 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

PART IV - TRAINING LOGISTICS SUPPORT REQUIREMENTS

IV.A. TRAINING HARDWARE

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

CIN, COURSE TITLE: C-198-3060, AN/ASM-608(V) Inertial Measurement Unit Test Set Operator/Maintainer Intermediate Maintenance (Track D-150-6010)
TRAINING ACTIVITY: MTU 3010
LOCATION, UIC: NAMTRAGRU DET Oceana, 66045

ITEM NO.	EQUIPMENT / TYPE OR RANGE OF REPAIR PARTS	QTY REQD	DATE REQD	GFE CFE	STATUS
TTE					
0002	Inertial Measuring Unit (P/N 680100-20)	2	Jul 97	CFE	Onboard
0003	Inertial Navigation Unit (P/N 879010-2)	2	Jul 97	CFE	Onboard
0038	Inertial Navigation Unit (P/N 886401-1)	2	Jul 97	CFE	Onboard
0039	Computer (P/N 284710-1)	1	Jul 97	CFE	Onboard
0040	Display Monitor (P/N 225959C)	1	Jul 97	CFE	Onboard
0041	Screw Assembly (P/N SFSW10F8CPS25GY)	1	Jul 97	CFE	Onboard
0042	Iron Bird (P/N 692101-50)	1	Jul 97	CFE	Onboard
0043	Circuit Card Assembly-Discrete Input/Output (P/N 262330-1)	3	Jul 97	CFE	Onboard
0044	Circuit Card Assembly-Signal Data Converter Interface (P/N 264875-2)	3	Jul 97	CFE	Onboard
0045	Circuit Card Assembly-Programmable Termination (P/N 264870-1)	3	Jul 97	CFE	Onboard
0046	Circuit Card Assembly-Relay Type II (P/N 02-182)	4	Jul 97	CFE	Onboard
0047	Circuit Card Assembly-Memory Interface (P/N 264855-3)	3	Jul 97	CFE	Onboard
0048	Circuit Card Assembly-No-Go Monitor (P/N 264860-3)	3	Jul 97	CFE	Onboard
0049	Circuit Card Assembly-Delta Function (P/N 264840-4)	3	Jul 97	CFE	Onboard
0050	Circuit Card Assembly-Synchro Resolver (P/N 262470-3)	3	Jul 97	CFE	Onboard
0051	Circuit Card Assembly-Output Controller (P/N 264865-3)	3	Jul 97	CFE	Onboard
0052	Circuit Card Assembly-SINS Interface (P/N 264825-4)	3	Jul 97	CFE	Onboard
0053	Circuit Card Assembly-Bus Buffer (P/N 2771709-1)	3	Jul 97	CFE	Onboard
0054	Circuit Card Assembly-Power Control (P/N 264850-4)	2	Jul 97	CFE	Onboard
0055	Circuit Card Assembly-Resolver/Digital Input 2 Speed (P/N 264835-3)	2	Jul 97	CFE	Onboard
0056	Circuit Card Assembly-Signal Data Converter Buffer (P/N 264830-1)	3	Jul 97	CFE	Onboard

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

ITEM NO.	EQUIPMENT / TYPE OR RANGE OF REPAIR PARTS	QTY REQD	DATE REQD	GFE CFE	STATUS
0057	Inertial Measuring Unit (P/N 680100-20)	2	Jul 97	CFE	Onboard
0058	Inertial Navigation Unit (P/N 879010-2)	2	Jul 97	CFE	Onboard
0059	Circuit Card Assembly-SIN Buffer (P/N 264845-5)	1	Jul 97	CFE	Onboard
0060	Circuit Card Assembly-Two Speed Resolver (P/N 264835-3)	1	Jul 97	CFE	Onboard
0061	Circuit Card Assembly-Power Control (P/N 264850-4)	1	Jul 97	CFE	Onboard
0062	Interface Device (P/N 284730-1)	2	Jul 97	CFE	Onboard
0063	Interface Device (P/N 262360-2)	2	Jul 97	CFE	Onboard
0064	Interface Device (P/N 281566-1)	2	Jul 97	CFE	Onboard
0082	IMUTS III Test Station Assembly (P/N 262200-3)	2	Jul 97	CFE	Onboard
SPTE					
0080	Platform Fill Station (P/N 251810-4)	1	Jul 97	CFE	Onboard
0101	Hex Extender (P/N 924019-11)	4	Jul 97	CFE	Onboard
0113	Flange Support (P/N T-209807)	2	Jul 97	CFE	Onboard
0114	Extractor Set (P/N T-20964)	2	Jul 97	CFE	Onboard
0115	Lifter Tool (P/N T-207943)	2	Jul 97	CFE	Onboard
0116	Support Fixture (P/N T-20968)	2	Jul 97	CFE	Onboard
0117	Gimbal Alignment Fixture (P/N 150322)	2	Jul 97	CFE	Onboard
0119	Alignment Fixture (P/N T-209663)	2	Jul 97	CFE	Onboard
0211	Torque Wrench (P/N QTSP135)	1	Jul 97	CFE	Onboard
0228	Torque Wrench (P/N QJR217C)	1	Jul 97	CFE	Onboard
0235	Tool Set (P/N A/E-1)	1	Jul 97	CFE	Onboard
0236	Tool Set (P/N A/E-2)	1	Jul 97	CFE	Onboard
0301	Roll-Away Tool Box (P/N 9-65025)	2	Jul 97	CFE	Onboard
0071	Main Frame Oscilloscope (P/N 7704A)	1	Jul 97	GFE	Onboard
0083	Multimeter (P/N 77BN)	1	Jul 97	GFE	Onboard

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

CIN, COURSE TITLE: C-198-3060, AN/ASM-608(V) Inertial Measurement Unit Test Set Operator/Maintainer Intermediate Maintenance (Track E-150-6010)
TRAINING ACTIVITY: MTU 3011
LOCATION, UIC: NAMTRAGRU DET Miramar, 66064

ITEM NO.	EQUIPMENT / TYPE OR RANGE OF REPAIR PARTS	QTY REQD	DATE REQD	GFE CFE	STATUS
TTE					
0002	Inertial Measuring Unit (P/N 680100-20)	2	Jul 97	CFE	Onboard
0003	Inertial Navigation Unit (P/N 879010-2)	2	Jul 97	CFE	Onboard
0038	Inertial Navigation Unit (P/N 886401-1)	2	Jul 97	CFE	Onboard
0039	Computer (P/N 284710-1)	1	Jul 97	CFE	Onboard
0040	Display Monitor (P/N 225959C)	1	Jul 97	CFE	Onboard
0041	Screw Assembly (P/N SFSW10F8CPS25GY)	1	Jul 97	CFE	Onboard
0042	Iron Bird (P/N 692101-50)	1	Jul 97	CFE	Onboard
0043	Circuit Card Assembly-Discrete Input/Output (P/N 262330-1)	3	Jul 97	CFE	Onboard
0044	Circuit Card Assembly-Signal Data Converter Interface (P/N 264875-2)	3	Jul 97	CFE	Onboard
0045	Circuit Card Assembly-Programmable Termination (P/N 264870-1)	3	Jul 97	CFE	Onboard
0046	Circuit Card Assembly-Relay Type II (P/N 02-182)	4	Jul 97	CFE	Onboard
0047	Circuit Card Assembly-Memory Interface (P/N 264855-3)	3	Jul 97	CFE	Onboard
0048	Circuit Card Assembly-No-Go Monitor (P/N 264860-3)	3	Jul 97	CFE	Onboard
0049	Circuit Card Assembly-Delta Function (P/N 264840-4)	3	Jul 97	CFE	Onboard
0050	Circuit Card Assembly-Synchro Resolver (P/N 262470-3)	3	Jul 97	CFE	Onboard
0051	Circuit Card Assembly-Output Controller (P/N 264865-3)	3	Jul 97	CFE	Onboard
0052	Circuit Card Assembly-SINS Interface (P/N 264825-4)	3	Jul 97	CFE	Onboard
0053	Circuit Card Assembly-Bus Buffer (P/N 2771709-1)	3	Jul 97	CFE	Onboard
0054	Circuit Card Assembly-Power Control (P/N 264850-4)	2	Jul 97	CFE	Onboard
0055	Circuit Card Assembly-Resolver/Digital Input 2 Speed (P/N 264835-3)	2	Jul 97	CFE	Onboard
0056	Circuit Card Assembly-Signal Data Converter Buffer (P/N 264830-1)	3	Jul 07	CFE	Onboard
0057	Inertial Measuring Unit (P/N 680100-20)	2	Jul 97	CFE	Onboard
0058	Inertial Navigation Unit (P/N 879010-2)	2	Jul 97	CFE	Onboard
0059	Circuit Card Assembly-SIN Buffer (P/N 264845-5)	1	Jul 97	CFE	Onboard

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

ITEM NO.	EQUIPMENT / TYPE OR RANGE OF REPAIR PARTS	QTY REQD	DATE REQD	GFE CFE	STATUS
0060	Circuit Card Assembly-Two Speed Resolver (P/N 264835-3)	1	Jul 97	CFE	Onboard
0061	Circuit Card Assembly-Power Control (P/N 264850-4)	1	Jul 97	CFE	Onboard
0062	Interface Device (P/N 284730-1)	2	Jul 97	CFE	Onboard
0063	Interface Device (P/N 262360-2)	2	Jul 97	CFE	Onboard
0064	Interface Device (P/N 281566-1)	2	Jul 97	CFE	Onboard
0082	IMUTS III Test Station Assembly (P/N 262200-3)	2	Jul 97	CFE	Onboard
SPTE					
0080	Platform Fill Station (P/N 251810-4)	2	Jul 97	CFE	Onboard
0101	Hex Extender (P/N 924019-11)	4	Jul 97	CFE	Onboard
0113	Flange Support (P/N T-209807)	2	Jul 97	CFE	Onboard
0114	Extractor Set (P/N T-20964)	2	Jul 97	CFE	Onboard
0115	Lifter Tool (P/N T-207943)	2	Jul 97	CFE	Onboard
0116	Support Fixture (P/N T-20968)	2	Jul 97	CFE	Onboard
0117	Gimbal Alignment Fixture (P/N 150322)	2	Jul 97	CFE	Onboard
0119	Alignment Fixture (P/N T-209663)	2	Jul 97	CFE	Onboard
0211	Torque Wrench (P/N QTSP135)	1	Jul 97	CFE	Onboard
0228	Torque Wrench (P/N QJR217C)	1	Jul 97	CFE	Onboard
0235	Tool Set (P/N A/E-1)	1	Jul 97	CFE	Onboard
0236	Tool Set (P/N A/E-2)	1	Jul 97	CFE	Onboard
0301	Roll-Away Tool Box (P/N 9-65025)	2	Jul 97	CFE	Onboard
0071	Main Frame Oscilloscope (P/N 7704A)	1	Jul 97	GFE	Onboard
0083	Multimeter (P/N 77BN)	1	Jul 97	GFE	Onboard

IV.B.2. CURRICULA MATERIALS AND TRAINING AIDS

CIN, COURSE TITLE: C-198-3060, AN/ASM-608(V) Inertial Measurement Unit Test Set Operator/Maintainer Intermediate Maintenance (Track D-150-6010)
TRAINING ACTIVITY: MTU 3010
LOCATION, UIC: NAMTRAGRU DET Oceana, 66045

TYPES OF MATERIAL OR AID	QTY REQD	DATE REQD	STATUS
AN/ASM-608(V) Transparencies (Each set consists of 21 Transparencies)	3 sets	Jul 97	Onboard
Panasonic Recorder Player (P/N AG-1300P)	1	Jul 97	Onboard
Projection Screen (P/N 4H1D)	1	Jul 97	Onboard
Projector (P/N 213HCDU)	1	Jul 97	Onboard
Television Receiver (P/N AV-2080S)	1	Jul 97	Onboard
Videotape 803784DN Electro-Static Discharge, The Invisible Threat	3	Jul 97	Onboard
Videotape V-1030-1 Fundamentals of Inertial Navigation Part I	3	Jul 97	Onboard
Videotape V-1041 Introduction to Inertial Navigation	3	Jul 97	Onboard
Videotape V-1030-2 Fundamentals of Inertial Navigation Part II	3	Jul 97	Onboard
Wall Chart AN.ASN-130A Functional Block Diagram	3	Jul 97	Onboard
Wall Chart AN/ASN-92 Functional Block Diagram	3	Jul 97	Onboard

CIN, COURSE TITLE: C-198-3060, AN/ASM-608(V) Inertial Measurement Unit Test Set Operator/Maintainer Intermediate Maintenance (Track E-150-6010)
TRAINING ACTIVITY: MTU 3011
LOCATION, UIC: NAMTRAGRU DET Miramar, 66064

TYPES OF MATERIAL OR AID	QTY REQD	DATE REQD	STATUS
AN/ASM-608(V) Transparencies (Each set consists of 21 Transparencies)	3 sets	Jul 97	Onboard
Panasonic Recorder Player (P/N AG-1300P)	1	Jul 97	Onboard
Projection Screen (P/N 4H1D)	1	Jul 97	Onboard
Projector (P/N 213HCDU)	1	Jul 97	Onboard
Television Receiver (P/N AV-2080S)	1	Jul 97	Onboard
Videotape 803784DN Electro-Static Discharge, The Invisible Threat	3	Jul 97	Onboard
Videotape V-1030-1 Fundamentals of Inertial Navigation Part I	3	Jul 97	Onboard
Videotape V-1041 Introduction to Inertial Navigation	3	Jul 97	Onboard
Videotape V-1030-2 Fundamentals of Inertial Navigation Part II	3	Jul 97	Onboard
Wall Chart AN.ASN-130A Functional Block Diagram	3	Jul 97	Onboard
Wall Chart AN/ASN-92 Functional Block Diagram	3	Jul 97	Onboard

IV.B.3. TECHNICAL MANUALS

CIN, COURSE TITLE: C-198-3060, AN/ASM-608(V) Inertial Measurement Unit Test Set Operator/Maintainer Intermediate Maintenance (Tracks D/E-150-6010)

TRAINING ACTIVITIES: MTU 3010 MTU 3011

LOCATION, UIC: NAMTRAGRU DET Oceana, 66045 NAMTRAGRU DET Miramar, 66064

TECHNICAL MANUAL NUMBER / TITLE	MEDIUM	QTY REQD	DATE REQD	STATUS
A1-220AC-730-000 Intermediate Maintenance with IPB, Inertial Navigation Unit CN-1561-130A	Hard copy	6	Jul 97	Onboard
Litton Document Number 404144 An Introduction to Inertial Navigation, Litton Guidance and Control Systems	Hard copy	6	Jul 97	Onboard
Litton Document Number 404317 Automatic Test Equipment Computer Bus Theory of Operation, Litton Guidance and Control Systems	Hard copy	6	Jul 97	Onboard
Litton Document Number 404747 Digital Fundamentals, Litton Guidance and Control Systems	Hard copy	6	Jul 97	Onboard
Litton Document Number 404795 CAINS AN/ASN-92 IMU, Litton Guidance and Control Systems	Hard copy	6	Jul 97	Onboard
Litton Document Number 405118 AN/ASN-130A Prime Equipment Manual, Litton Guidance and Control Systems	Hard copy	6	Jul 97	Onboard
Litton Document Number 405149 Fundamentals of Inertial Navigation, Litton Guidance and Control Systems	Hard copy	6	Jul 97	Onboard
Litton Document Number 406909 CAINS II Familiarization, Litton Guidance and Control Systems	Hard copy	6	Jul 97	Onboard
Litton Document Number 407221 AN/ASN-139 Ring Laser Gyro INU, Litton Guidance and Control Systems	Hard copy	6	Jul 97	Onboard
NA 01-1A-23 Standard Maintenance Practices Electronics Assembly Repair	Hard copy	6	Jul 97	Onboard
NA 05-35KAA-49 Intermediate Maintenance with IPB, IMU CN-1263/ASN-92 and IMU Mount MT-4100/ASN-92	Hard copy	6	Jul 97	Onboard
NA 16-1-8.2.4 Aeronautical Support Equipment Index, Work Unit Code Manual	Hard copy	6	Jul 97	Onboard
NA 17-15CAB-72-10 Depot Maintenance with IPB, Power Supply PS-2, Part Number PS-363	Hard copy	6	Jul 97	Onboard

IV.B.3. TECHNICAL MANUALS

TECHNICAL MANUAL NUMBER / TITLE	MEDIUM	QTY REQD	DATE REQD	STATUS
NA 17-15CAB-72-11 Depot Maintenance with IPB, Power Supply PS-1, Part Number PS-361	Hard copy	6	Jul 97	Onboard
NA 17-15CAB-72-15 Intermediate Maintenance with IPB, Power Protection Unit, Part Number 281130-1	Hard copy	6	Jul 97	Onboard
NA 17-15CAB-72-3 Intermediate Maintenance with IPB, Power Monitor Unit, Part Number 262290-4	Hard copy	6	Jul 97	Onboard
NA 17-15CAB-72-4 Intermediate Maintenance with IPB, Test Station Module Block Assembly, Part Number 262210-15	Hard copy	6	Jul 97	Onboard
NA 17-15CAB-72-5 Intermediate Maintenance with IPB, Power Component Unit, Part Number 262285-2	Hard copy	6	Jul 97	Onboard
NA 17-15CAB-72-7 Intermediate Maintenance with IPB, Self-Check Assembly, Part Number 262370-3	Hard copy	6	Jul 97	Onboard
NA 17-15CAB-72-8 Intermediate Maintenance with IPB, IMU Interconnecting Device Assembly, Part Number 262360-2	Hard copy	6	Jul 97	Onboard
NA 17-15CAB-72-9 Depot Maintenance with IPB, Power Supply PS-3, Part Number PS-362-1	Hard copy	6	Jul 97	Onboard
NA 17-15CAB-73 Intermediate Maintenance with IPB, Inertial Measurement Unit Test Set TS-3846A/ASM-608(V), Part Number 262200-3	Hard copy	6	Jul 97	Onboard
NA 17-600-133-6-2 Periodic Maintenance Requirement Manual, Inertial Measurement Unit Test Set (IMUTS III) TS-3846A/ASM-608(V)	Hard copy	6	Jul 97	Onboard
OPNAVINST 4790.2 (Series) Naval Aviation Maintenance Program	Hard copy	6	Jul 97	Onboard
Test Program Inst. AC6085-6 CAINS Test Program Instruction for Inertial Measuring Unit CN-1263/AN/ASN-92	Hard copy	6	Nov 99	Pending
Test Program Inst. 281567 Revision F CAINS IA Test Program Instruction for Inertial Navigation Unit CN-1561/AN/ASN-130A	Hard copy	6	Nov 99	Pending

IV.B.3. TECHNICAL MANUALS

TECHNICAL MANUAL NUMBER / TITLE	MEDIUM	QTY REQD	DATE REQD	STATUS
Test Program Inst. 281567 Revision F CAINS II Test Program Instruction for Inertial Navigation Unit CN-1649/AN/ASN-139	Hard copy	6	Nov 99	Pending
Test Program Inst. AC6082-5 Self Check Program Instruction for Inertial Measuring Unit Test Set-III TS-3846A/ASM-608(V)	Hard copy	6	Nov 99	Pending

PART V - MPT MILESTONES

COG CODE	MPT MILESTONES	DATE	STATUS
PDA	Analyzed manpower, personnel, and training requirements	Feb 82	Completed
TA	Began Follow-on Training	May 85	Completed
PDA	Approved NTP for IMUTS II	May 88	Completed
PDA	Completed Developmental Testing	FY96	Completed
TSA	Began Initial Training	FY96	Completed
PDA	Began deliveries of IMUTS III	Mar 97	Completed
TA	Began Follow-on Training for IMUTS III	Jul 97	Completed
TSA	Delivered IMUTS III system to MTU 3010 (first unit)	Jul 97	Completed
TSA	Delivered IMUTS III system to MTU 3011(first unit)	Jul 97	Completed
TSA	Delivered IMUTS III system to MTU 3011 (second unit)	Sep 97	Completed
TSA	Delivered IMUTS III system to MTU 3010 (second unit)	Oct 97	Completed
PDA	Approved Maintenance Plan for IMUTS III	Jan 98	Completed
PDA	Approved User's Logistic Support Summary for IMUTS III	Jan 98	Completed
TA	Reduced course length by one week for IMUTS III	Jan 99	Completed
TSA	Developed Draft NTSP for IMUTS III	Aug 99	Completed
TSA	Distributed Draft NTSP for IMUTS III to Fleet for Review	Sep 99	Completed
TSA	Developed Proposed NTSP for IMUTS III	Nov 99	Completed
PDA	Complete deliveries of IMUTS III to the Fleet	FY00	Pending
PDA	Attained Material Support for IMUTS III system	Jan 00	Attained

PART VI ACTION ITEMS/ACTION REQUIRED

DECISION ITEM OR ACTION REQUIRED	COMMAND ACTION	DUE DATE	STATUS
None			

PART VII - POINTS OF CONTACT

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