

**DRAFT**

**NAVY TRAINING SYSTEM PLAN**

**FOR THE**

**MARINE AIR TRAFFIC CONTROL**

**AND LANDING SYSTEM**

**N88-NTSP-A-50-9804/D**

**NOVEMBER 1999**

## MARINE AIR TRAFFIC CONTROL AND LANDING SYSTEM

### EXECUTIVE SUMMARY

The Marine Air Traffic Control and Landing System (MATCALs) is a fully automated, all-weather, expeditionary terminal Air Traffic Control (ATC) System that provides tactical ATC services at forward operating bases, expeditionary airfields, and existing airfields. MATCALs provides arrival, departure, and en route surveillance control, automated precision approach and landing control for suitably equipped aircraft, and Ground Controlled Approach to accommodate other aircraft. It provides the ability to expeditiously move combat aircraft throughout the Amphibious Operational Area, allowing more time for mission response and task accomplishments. MATCALs and its associated equipment are in Phase III (Production, Deployment, and Operational Support) of the Weapon System Acquisition Process.

The AN/TSQ-216 Remote Landing Site Tower (RLST) will be introduced as a new production item, replacing the AN/TRC-195 Control Central Tower, beginning in Fiscal Year (FY) 00, and will achieve Initial Operating Capability in June 2000. The AN/ARC-210(V) Electronic Protection (EP) Radio System will be introduced as a new production item replacing the AN/GRC-171(V) and AN/GRC-211 Radio Sets in the AN/TSQ-131 Control and Communications Subsystem Radar Facility and the AN/TSQ-120B ATCC Tower, beginning in FY00, with an estimated completion date of FY06. The AN/TPN-22 Precision Approach Radar (PAR) is being upgraded with a solid-state modulator. The upgrade began in June 1999, and has an estimated completion date of FY00.

The maintenance concept for MATCALs is based on two levels, organizational and depot. The ATC Detachment is subdivided into four echelons of organizational maintenance, which includes functions normally accomplished by an intermediate maintenance activity. First and second echelons include preventive and corrective maintenance. Third and fourth echelons consist primarily of corrective maintenance. Depot level maintenance is performed on assemblies, subassemblies, and end items requiring overhaul or modification.

Formal initial training for MATCALs and its associated equipment, including the AN/TSQ-216 RLST and the AN/ARC-210(V) EP Radio System has been completed. Follow-on training courses are established at the Naval Air Technical Training Center Pensacola, Florida. The AN/ARC-210(V) EP Radio System and the AN/TPN-22 PAR upgrade will be integrated into existing MATCALs operator and maintenance courses. The AN/TSQ-216 RLST will be integrated into existing MATCALs operator courses, and a new course will be developed for maintenance, with an estimated course length of 28 days and a Ready For Training date of FY00.

MATCALs manpower has been established in the Marine Air Control Squadron Table of Organization. Marine Corps personnel with Military Occupational Specialties (MOSs) 7220, 7252, 7253, 7254, 7257 and 7291 operate MATCALs, and Marine Corps personnel with MOSs

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1142, 1341, 1161, 5911, 5952, 5953, 5954, and 6492 maintain MATCALs. The addition of the AN/TSQ-216 RLST, the AN/ARC-210(V) EP Radio System, and the AN/TPN-22 PAR solid-state modulator upgrade will not effect manpower requirements for MATCALs.

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**LIST OF ACRONYMS**

ADC	Arrival and Departure Control
AERG	Auxiliary Equipment Repair Group
AM	Amplitude Modulation
ASPARCS	Air Surveillance and Precision Approach Radar Control System
ASR	Airport Surveillance Radar
ATC	Air Traffic Control
ATCC	Air Traffic Control Central
ATCS	Air Traffic Control Subsystem
ATIS	Automatic Terminal Information Service
BIT	Built-In Test
BITE	Built-In Test Equipment
CACD	Collins Avionics and Communications Division
CC	Control Central
CCS	Control and Communication Subsystem
CERG	Communications Equipment Repair Group
CIN	Course Identification Number
CINCLANTFLT	Commander in Chief, Atlantic Fleet
CINCPACFLT	Commander in Chief, Pacific Fleet
CMC	Commandant Marine Corps
CNET	Commander Naval Education and Training
CNO	Chief of Naval Operations
DT	Developmental Test
ECU	Environmental Control Unit
EMRG	Electronic Module Repair Group
EP	Electronic Protection
FC	Final Control
FM	Frequency Modulation
FMS	Foreign Military Sales
FY	Fiscal Year
HF	High Frequency
HMMWV	Highly Mobile Multi-purpose Wheeled Vehicle

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**LIST OF ACRONYMS**

Hz	Hertz
IFR	Instrument Flight Rules
ILSP	Integrated Logistics Support Plan
ISEA	In-Service Engineering Agency
MACCS	Marine Air Command and Control Systems
MACS	Marine Air Control Squadron
MATC	Marine Air Traffic Control
MATCALCALS	Marine Air Traffic Control and Landing System
MATMEP	Maintenance Training Management and Evaluation Program
MCCDC	Marine Corps Combat Development Command
MHz	Megahertz
MIP	Maintenance Index Page
MOS	Military Occupational Specialty
MRAALS	Marine Remote Area Approach and Landing System
MRC	Maintenance Requirements Card
MRG	Maintenance Repair Group
MSD	Material Support Date
NA	Not Applicable
NATTC	Naval Air Technical Training Center
NAVAIRSYSCOM	Naval Air Systems Command
NAVICP	Naval Inventory Control Point
NAVPERSCOM	Naval Personnel Command
NAWCAD	Naval Air Warfare Center Aircraft Division
NTSP	Navy Training System Plan
OCG	Operations Central Group
OJT	On-the-Job Training
OLSS	Operational Logistics Support Summary
OPNAVINST	Office of the Chief of Naval Operations Instruction
OPO	OPNAV Principal Official
ORD	Operational Requirements Document
OT	Operational Test
PAR	Precision Approach Radar
PDS	Processor Display Set

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**LIST OF ACRONYMS**

PMA	Program Manager, Air
RERG	Radar Equipment Repair Group
RFT	Ready For Training
RLST	Remote Landing Site Tower
SPAWAR	Space and Naval Warfare Systems Command
SPAWARSYSCEN	Space and Warfare Systems Center
SSR	Secondary Surveillance Radar
STG	Storage Transport Group
TACAN	Tactical Control and Navigation
TD	Training Device
TFS	Total Force Structure
TG	Terminal Group
TR	Training
TTE	Technical Training Equipment
UHF	Ultra High Frequency
VFR	Visual Flight Rules
VHF	Very High Frequency

## **MARINE AIR TRAFFIC CONTROL AND LANDING SYSTEM**

### **PREFACE**

The previous Marine Air Traffic Control Landing Systems and Equipment Navy Training Plan, E-50-8313A/G, was approved 20 March 1996. This Draft Navy Training System Plan (NTSP) has been re-titled and renumbered as the Marine Air Traffic Control And Landing System, N88-NTSP-Z-50-9804/D. This NTSP has been updated to comply with guidelines set forth in the Navy Training Requirements Documentation Manual, OPNAV P-751-1-9-97.

Two significant events have taken place since the last document approval. The more critical of the two was program responsibility shift from Commander, Space and Naval Warfare Systems Command, to Commander, Naval Air Systems Command (NAVAIRSYSCOM). The second was relocation of the Marine Air Traffic Control and Maintenance Schools from Naval Air Technical Training Center (NATTC), Millington, Tennessee, to NATTC Pensacola, Florida.

MATCALs manpower requirements have been updated to include Air Traffic Control (ATC) personnel requiring training from locations other than Marine Air Control Squadrons (MACS).

The new Primary Military Occupational Specialty (MOS) 7257 (Air Traffic Controller), has been established and was implemented in October 1999. MOS 7252 (Tower Air Traffic Controller), MOS 7253 (Radar Air Traffic Controller), and MOS 7254 (Radar Approach Controller) have been recategorized as skill designator MOSs.

Installation schedules have been added or updated for the new production AN/TSQ-216 Remote Landing Site Tower (RLST), the AN/TPN-22 Precision Approach Radar (PAR) solid-state modulator upgrade, and the AN/ARC-210(V) Electronic Protection (EP) Radio System.

The AN/TSQ-216 RLST is replacing the AN/TRC-95 Control Central (CC) Tower beginning in Fiscal Year (FY) 00, with an estimated completion date of FY01. The AN/ARC-210(V) EP Radio System is replacing the AN/GRC-171(V) and AN/GRC-211 Radio Sets in the AN/TSQ-131 Control and Communications Subsystem (CCS) radar facility and the AN/TSQ-120B Air Traffic Control Central (ATCC) Tower beginning in FY00, with an estimated completion in FY06.

Of significance will be the introduction of the Air Surveillance and Precision Approach Radar Control System (ASPARCS) with Initial Operating Capability in FY04 and Full Operational Capabilities in FY09. This lightweight, highly mobile, ATC system with advanced aircraft technologies is projected to replace MATCALs as it reaches its service life limits. An Operational Requirements Document (ORD), Serial # 518-88-99 dated 17 May 1999, has been developed and a Preliminary Draft NTSP for ASPARCS was initiated in July 1999.

**PART I - TECHNICAL PROGRAM DATA**

**A. NOMENCLATURE-TITLE-PROGRAM**

**1. Nomenclature-Title-Acronym.** Marine Air Traffic Control and Landing System (MATCALs)

**2. Program Element**

**a. MATCALs**

Hardware ..... 0202696N

Training ..... PD084771X

**b. AN/TSQ-216 RLST.** 0604504N

**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 (N885F3)

Marine Corps Program Sponsor ..... CMC (APC-5)

Developing Agency ..... NAVAIRSYSCOM (PMA213)

Training Agency ..... CINCLANTFLT (N721)

CINCPACFLT (N343)

CNET (T25114)

MCCDC (C462)

Manpower and Personnel Mission Sponsor ..... CNO (N12)

NAVPERSCOM (PERS-4)

CMC (ASM-1)

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

Director of Naval Training .....	CNO (N75B)
Marine Corps Force Structure.....	CMC (ASM1) MCCDC (C53)

**D. SYSTEM DESCRIPTION**

**1. Operational Uses.** MATCALs is a fully automated, all-weather, expeditionary terminal ATC system used by MACS to rapidly establish communications, take-off, landing, and other ATC services required for Visual Flight Rules (VFR) and Instrument Flight Rules control of aircraft at remote area landing sites.

MATCALs integrates with other Marine Air Command and Control Systems (MACCS) and federal agencies, such as the Federal Aviation Agency. It provides the ability to expeditiously move combat aircraft throughout the Amphibious Operational Area without regard to the effects of weather. ATC and landing automation reduce air traffic handling and management time, allowing more time for mission response and task accomplishment. Thus, it supports an increase to aircraft sortie rates and directly contributes to extending an aircraft's time-on-target. The system provides for integration of the ATC and landing systems into the total MACCS interfacing by means of automated transfer.

**2. Foreign Military Sales.** Two AN/TPN-30A Marine Remote Area Approach and Landing Systems (MRAALS) have been procured by the government of Japan. There have been no additional Foreign Military Sales (FMS) of MATCALs or its subsystems to any other Military Force at this time. Information concerning FMS of MATCALs may be obtained from the Deputy Program Manager, Air (PMA) 2134, Naval Air Systems Command (NAVAIRSYSCOM).

**E. DEVELOPMENTAL TEST AND OPERATIONAL TEST.** Developmental Test (DT) and Operational Test (OT) for MATCALs were completed in FY85. DT for the AN/TSQ-216 RLST was completed in February 1998 and OT was completed in June 1998; DT and OT were conducted at Marine Corps Auxiliary Landing Field, Bogue Field, North Carolina.

**F. AIRCRAFT AND/OR EQUIPMENT/SYSTEM/SUBSYSTEM REPLACED.** The AN/ARC-210(V) EP Radio System is replacing the AN/GRC-171(V) and AN/GRC-211 Radio Sets in the AN/TSQ-131 CCS Radar Facility and the AN/TSQ-120B ATCC Tower, beginning in FY00, with an estimated completion date of FY06.

The AN/TSQ-216 RLST is replacing the AN/TRC-95 CC Tower beginning in FY00, with an estimated completion date of FY01

Future plans call for the replacement of MATCALs with new production ASPARCS. This lightweight, highly mobile, ATC system with advanced aircraft technologies will replace MATCALs as it reaches its service life limits. Information concerning replacement schedule of MATCALs may be obtained from PMA2134, NAVAIRSYSCOM.

## G. DESCRIPTION OF NEW DEVELOPMENT

**1. Functional Description.** MATCALs has three primary subsystems: (1) the AN/TSQ-131(V) Control and Communications Subsystem (CCS) with Communications Control Group, radios, computer software, multi-mode displays, and peripherals; (2) the Air Traffic Control Subsystem (ATCS) consisting of AN/TPS-73 Airport Surveillance Radar (ASR) and various peripheral equipment; and (3) the All-Weather Landing Subsystem consisting of the AN/TPN-22 PAR, the AN/UYK-44 Computer, and peripheral equipment. Other related systems include the AN/TSQ-120A/B ATCC Towers, the AN/TSQ-216 RLST, the AN/TPN-30A MRAALS, and other related support items that contribute to the safe and expeditious flow of air traffic at expeditionary airfields and remote landing sites.

**a. AN/TSQ-131(V) Control and Communications Subsystem.** The AN/TSQ-131(V) CCS is a transportable ATC radar facility. It houses two sets of four radar operator positions for the AN/UYQ-34(V)2 Processor Display Set (PDS), a supervisor position, and the required equipment for data processing, voice communications, and data communications. The AN/TSQ-131(V) CCS integrates data received from the AN/TPS-73 ASR, the AN/TPN-22 PAR, other Marine ATC (MATC) systems, including AN/TSQ-120A/B ATCC Towers, AN/TRN-44 Tactical Control and Navigation (TACAN) Sets, AN/TPN-30A MRAALS, and external ATC agencies into a unified ATC System. Voice communications provide coverage of the following nets: Ultra High Frequency (UHF), Very High Frequency (VHF), and High Frequency (HF), and Amplitude Modulation (AM) and Frequency Modulation (FM) radio bands. Components of the AN/TSQ-131(V) CCS include:

- AN/UYQ-34(V)2 .....Processor Display Set
- TD-1089/UYQ-4 .....Modem
- AN/UYQ-41 .....Digitizer-Switching Set
- AN/UYQ-42 .....Control-Distribution Set
- HD-1099/TSQ .....Environmental Control Unit
- RO-572/TSQ-131(V)1 .....Line Printer Data Processing
- AN/GMQ-31 .....Wind Measuring Set
- AN/GRC-171(V)1/2 .....UHF Radio Sets \*
- AN/GRC-211 .....VHF Radio Set \*
- AN/URC-94(V)2 .....HF (AM)/VHF (FM) Radio Set
- MEP-006A/MEP-806A .....Generator Sets
- AN/GSH-60 .....Recorder-Reproducer Set
- AN/USH-26(V) .....Signal Data Recorder-Reproducer Set
- AN/USQ-94 .....Bus Access Set

\* AN/GRC-171(V) and AN/GRC-211 Radio Sets in the AN/TSQ-131 CCS Radar Facility and the AN/TSQ-120B ATCC Tower will be replaced by the AN/ARC-210(V) EP Radio System.

**b. Air Traffic Control Subsystem.** The ATCS is a transportable, tactical ASR subsystem for MATCALs. It provides AN/TPS-73 ASR, Secondary Surveillance Radar (SSR), and Autotracker functions to the Radar Controllers assigned to the ATC Detachment of the MACS. During operations, the ATCS is unmanned. It is controlled from the AN/TSQ-131(V)

CCS through the ATCS remote control panel. The ATCS design includes numerous redundant functions to ensure continued independent operation in case of failure of one system. The ATCS features end-to-end on-line performance monitoring, self-alignment capability during operation, fully integrated Built-In Test and Built-In Test Equipment (BIT/BITE), and on-line repair capability of the fail-soft ASR transmitter.

**(1) AN/TPS-73 Airport Surveillance Radar.** The AN/TPS-73 ASR is an S-band non-linear frequency modulated system. It contains a solid-state transmitter that generates a 10.3 and a 100-microsecond pulse. The transmitted pulses can be any of 20 different frequencies in the 2,705 megahertz (MHz) to 2,895 MHz range in ten-MHz steps. It uses a digital receiver to decode and interpret radar returns. The AN/TPS-73 ASR can detect one square-meter targets at ranges from 0.5 to 60 nautical miles and altitudes to 60,000 feet above ground level. The AN/TPS-73 ASR receives beacon plot and video data from the SSR, performs radar-to-beacon correlation and synchronization, and forwards this data to the Autotracker.

**(2) Secondary Surveillance Radar.** The SSR is an L-band monopulse beacon with a Mode 4 capability for Identification Friend or Foe. The SSR can detect targets at ranges up to 120 nautical miles. Each of the two SSRs contains two solid-state transmitters that independently power the sum and omni-beams of the monopulse antenna. Three logarithmic receivers provide signals that are processed and sent to the AN/TPS-73 ASR for synchronization with the AN/UYQ-34(V)2 PDS.

**(3) Autotracker.** The Autotracker accepts AN/TPS-73 ASR and SSR synchronized video data from the AN/TPS-73 ASR. It detects and tracks up to 600 air targets, correlates AN/TPS-73 ASR and SSR targets, and develops digital track data. The serial data bus of the MATCALs is used to transmit this data to the AN/TSQ-131(V) CCS for use by controllers. Additional components of the ATCS include:

- AN/UYQ-34(V)2..... Processor Display Set
- C-11515/UYQ-41 ..... Operator Control Unit
- HD-1099/TSQ ..... Environmental Control Unit
- MEP-006A ..... Generator Set
- AN/USQ-94..... Bus Access Set

**c. AN/TPN-22 Precision Approach Radar.** The AN/TPN-22 PAR is a transportable, computerized, pencil-beam, three dimension, track-while-search, precision approach radar system used to execute multi-mode, automatic, precision approach and landing of tactical aircraft. The AN/TPN-22 PAR uses phase and frequency scanning techniques in an electronically-steered beam antenna array to provide data at a high rate for detection and automatic tracking of up to six aircraft simultaneously in the approach and landing airspace. The frequency range is 9,000 to 9,200 MHz. The AN/TPN-22 PAR has 46 degrees coverage in azimuth, 8 degrees (-1 to +7) angular coverage in elevation, and 750 feet to 10 nautical miles coverage in range. The AN/TPN-22 PAR operates as an integral data acquisition and processing computer subsystem in concert with the AN/TSQ-131(V) CCS and AN/TPS-73 ASR for simultaneous manual, semi-automatic, and automatic aircraft approach and landing operations.

The AN/TPN-22 PAR is being upgraded with a solid-state modulator beginning in June 1999, with an estimated completion date of FY00. Components of the AN/TPN-22 PAR include:

- AN/UYQ-34(V)2..... Processor Display Set
- C-11515/UYQ-41 ..... Operator Control Unit
- AN/UYK-20X(V)..... General Purpose Data Processor
- AN/USH-26(V) ..... Signal Data Recorder-Reproducer Set
- MEP-006A ..... Generator Set
- HD-1099/TSQ ..... Environmental Control Unit
- AN/USQ-94..... Bus Access Set

**d. AN/TSQ-120A Air Traffic Control Central.** The AN/TSQ-120A ATCC is a transportable ATC tower facility, which provides 360 degrees of visual observation of aircraft within a designated control zone, both on the ground and in the air, and visual control over ground vehicles in the vicinity of the runway(s). Control is accomplished through use of radio communications and visual aids. Aircraft operations are coordinated with remote facilities and agencies by use of telephone and intercommunication control systems. The AN/TSQ-120A ATCC Tower consists of:

**(1) OK-312/TSQ-120A Operations Central Group.** The OK-312/TSQ-120A Operations Central Group (OCG) is a tower cab that provides 360 degrees of visibility for controller observation. There are three operator positions for control of radio transmitting and receiving operations, and for telephone communications. Other controls and indicating equipment, such as overhead speakers, crash alarm, fire detector, wind direction velocity indicators, environmental control, and intercom are readily available to all three operating positions. There are provisions for installing and using the C-10363/URN Control Indicator, the C-8534/TRA-45 TACAN Remote Control Indicator, and the C-10194/TPN-30 Control Indicator or C-10195/TPN-30 Remote Control as required by the MACS. Radio equipment in the OK-312/TSQ-120A OCG Tower Cab includes:

- C-10618/TSQ-120A ..... Receiver-Transmitter
- C-7999/GRC-171(V) ..... UHF Radios - 2 each
- C-8314/GRC-211..... VHF Radio - 1 each

**(2) OW-81A/TSQ-120A Terminal Group.** The OW-81A/TSQ-120A Terminal Group (TG) contains radios, telephone equipment, recorders, intercom, and signal and power distribution systems that provide required communications information to the operating positions in the tower cab. In addition, a maintenance console and workbench are provided for maintenance personnel to simultaneously select voice communications on any or all of the system radios, select voice communications on any one of the ten system telephone lines, and monitor audio input/output signals to the radios.

**(a) Radio Equipment.** Radio equipment in the OW-81A/TSQ-120A TG includes:

- SA-2257/TSQ-120... Switching Matrix

- J-3638/TSQ-120 ..... Interface Unit
- AN/GRC-171(V) ..... UHF Radio Sets - 5 each
- AN/GRC-211 ..... VHF Radio Sets - 3 each
- AN/URC-94(V)2 ..... HF (AM)/VHF (FM) Radios - 2 each
- AN/VRC-82(V)2 ..... Radio Set
- No nomenclature ..... Audio Patch Panel

**(b) OA-7621(V)/FSA-52(V) Landline Selector Group.** The OA-7621(V)/FSA-52(V) Landline Selector Group is a communication control system used to operate multi-channel landline communications in conjunction with radio communications. It provides six ring-down signaling lines, two voice call-up signaling lines, and two selective signaling lines.

**(c) Recording Equipment**

- AN/GSH-60 ..... Recorder-Reproducer
- CDD-1000 ..... Digital Deck Automatic Terminal Information Service (ATIS) Recorder

**(d) Antennas**

- TACO D-2118 ..... UHF-VHF Antenna - 3 each
- AS-1729/VRC ..... VHF Antenna - 2 each
- AT-1011/U ..... HF Antenna - 2 each
- ..... Crash Net Antenna

**(3) AB-1236/TSQ-120 Tower.** The AB-1236/TSQ-120 Tower is a portable, field-erected structure that supports the OK-312/TSQ-120A OCG Tower Cab at an elevation of eight, 16, or 24 feet above the ground. An inclined stairway with handrails, rising around the tower perimeter and leading to a platform at the top level, is provided for personnel access to the OK-312/TSQ-120A OCG Tower Cab. The design of the tower allows it to surround the OK-312/TSQ-120A OCG Tower Cab at ground level, providing clear access for raising and lowering the OK-312/TSQ-120A OCG Tower Cab.

**(4) OA-8883/TSQ-120 Storage-Transport Group.** The OA-8883/TSQ-120 Storage Transport Group (STG) provides storage and transport for those components external to the OK-312/TSQ-120A OCG Tower Cab and OW-81A/TSQ-120A TG that do not pack-out in either shelter. The OA-8883/TSQ-120 STG consists of a transport pallet and a tower container box for the AB-1236/TSQ-120 Tower.

**e. AN/TSQ-120B Air Traffic Control Central.** The AN/TSQ-120B ATCC Tower provides the same essential services as the AN/TSQ-120A ATCC Tower. However, some operational, embarkation, and reliability enhancements have been incorporated. This includes secure voice capability incorporated with the AN/UYQ-41 Digitizer Switching Set and racks for TSEC/KY-58 and TSEC/KY-75 Speech Security Equipment. The OW-81/TSQ-120A TG shelter is replaced with a standard sized shelter (8-feet wide, 8-feet deep, and 10-feet high). The Equipment Storage Pallet (part of the OA-8883/TSQ-120 STG) is deleted. Component

equipment previously stored on the pallet is packed-out in one of the two shelters, and in the tower scaffolding box for embarkation.

**f. AN/TRC-195 Control Central.** The AN/TRC-195 CC provides a limited tower capability for remote site operations. It contains four 20 Hertz (Hz) telephone lines, two UHF, one VHF-AM, one HF/VHF-FM, and one crash net radio, and a wind measuring set powered by a single MEP-003 Generator or equivalent power source. AN/TRC-195 CC Tower full operating power requirement is 3.0 kilowatts, the emergency operating power requirement is 1.5 kilowatts. The AN/TRC-195 CC Tower communication systems are capable of encrypted transmitting and receiving. The unit is transportable by forklift (no mobilizer), and is usually loaded into and employed from the back of a Highly Mobile Multi-purpose Wheeled Vehicle (HMMWV). However, the AN/TRC-195 CC Tower can be loaded on a variety of vehicles. The radios (except for the AN/VRC-82 Radio), speech security equipment, and wind measuring set are provided from other MATC systems to enable full operational capability. The 28-volt power supply is provided with each system. The assembled unit has a nylon top and four mast assemblies. The system includes the following MATCALS equipment:

- AN/GRC-171(V) ..... UHF Radio Sets - 2 each
- AN/GRC-211 ..... VHF Radio Set
- AN/URC-94..... HF (AM)/VHF (FM) Radio Set
- AN/VRC-82..... Radio Set
- AN/GMQ-31..... Wind Measuring Set
- TSEC/KY-58 ..... Crypto, for UHF, VHF, and VHF/FM bands - 3 each
- TSEC/KY-75 ..... Crypto, for HF band
- Trio Labs ..... 28 volt power supply

\* The AN/TRC-195 CC Tower is being replaced by the AN/TSQ-216 RLST beginning in FY00, with an estimated completion date of FY01

**g. AN/TSQ-216 Remote Landing Site Tower.** The AN/TSQ-216 RLST will be introduced through new production, replacing the AN/TRC-195 CC Tower, beginning in FY00, with an estimated completion date of FY01. The AN/TSQ-216 RLST has been developed as an interim tower, to be used when the AN/TSQ-120A/B ATCC Towers are unavailable. It provides for a rapid emplacement and expeditious establishment and withdrawal of communications and related capabilities required for VFR services. Its communications systems provide coverage of the following nets: UHF, VHF, and AM radio bands; tactical command, combat information and detection, air defense alert or communication coordination HF nets; and VHF-FM base defense and crash nets. The AN/TSQ-216 RLST is transported on a Heavy HMMWV and consists of a mounted shelter and trailer.

**h. AN/TRN-44 Tactical Control and Navigation Set.** The AN/TRN-44 TACAN is a transportable, dual-channel navigational aid which provides TACAN-equipped aircraft with range, bearing, and station identification information effectively within a 200 nautical miles radius. It is used for both en route navigation guidance and as an instrument approach aid. It has 126 operating channels in X mode and 126 operating channels in Y mode; transmitting and

receiving in the frequency range of 962 MHz to 1,213 MHz. It can provide distance information for as many as 100 aircraft and provides an infinite number of aircraft with azimuth information and station identification. The AN/TRN-44 TACAN can be remotely controlled and monitored, and incorporates an external one degree monitor. The shelter is air conditioned and heated for environmental control. The AN/TRN-44 TACAN requires primary power of 120/208 volts, 60 Hz, 3 phase, 4 wire. Power consumption is 18.7 kilowatts.

**i. AN/TPN-30A Marine Remote Area Approach and Landing Set.** The AN/TPN-30A MRAALS is a two-person transportable, all-weather landing system which transmits azimuth, elevation angle, and range data to specially equipped aircraft. The airborne system translates the data and provides glideslope, localizer, range, and range rate information to the pilot's indicators. The AN/TPN-30A MRAALS transmits azimuth, distance, and elevation data in the K-Band frequency range, 15.412 to 15.688 gigahertz, and Distance Measuring Equipment and Station Identification data in the L-band frequency range of 962 to 1,213 MHz, as well as 15 Hz TACAN bearing data to provide 360 degrees of bearing information.

The AN/TPN-30A MRAALS can be set up in one of two configurations, co-located or split site. The co-located configuration is employed at landing zones and uses one AN/TPN-30A MRAALS to provide azimuth, elevation, distance, and station identification data. The split site configuration is employed at airfields and airports and uses two AN/TPN-30A MRAALS; one at the end of the runway (aligned with the runway centerline) to provide azimuth data, and one parallel to the runway (parallel to the designated touchdown point) to provide elevation and range data. In the co-located configuration, the AN/TPN-30A MRAALS can be remotely controlled (up to 1000 feet) using field wire by the C-10195/TPN-30 Remote Control. The C-10194/TPN-30 Control Indicator may be operated remotely by cable and provides status information. In the split site configuration, the C-10194/TPN-30 remotely controls and provides status of the two AN/TPN-30A MRAALS, which are synchronized with field wire.

**j. AN/TSM-170 Maintenance Repair Group.** The AN/TSM-170 Maintenance Repair Group (MRG) consists of four shelters, which contain workbenches, test equipment, cabinets, tools, and other equipment necessary for section maintenance of MATC equipment. All shelters allow some degree of flexibility to accommodate changed maintenance demands based on mission and equipment configuration.

**(a) OA-9141/TSM-170 Auxiliary Equipment Repair Group.** The OA-914/TSM-170 Auxiliary Equipment Repair Group (AERG) provides the work space necessary for the maintenance of the environmental control units (ECU), diesel generator sets, and other designated support equipment.

**(b) OA-9142/TSM-170 Communications Equipment Repair Group.** The OA-9142/TSM-170 Communications Equipment Repair Group (CERG) provides workspace and parts storage for the maintenance of all MATC communications equipment.

**(c) OA-9143/TSM-170 Radar Equipment Repair Group.** The OA-9143/TSM-170 Radar Equipment Repair Group (RERG) provides workspace and parts storage

for the repair of the AN/UYQ-34(V)2 PDS, its associated hardware, and other radar component equipment.

**(d) OA-9144/TSM-170 Electronic Module Repair Group.** The OA-9144/TSM-170 Electronic Module Repair Group (EMRG) provides micro-miniature repair capabilities for the maintenance of printed circuit boards. It also contains space for maintenance management functions including the maintenance data system computer.

**2. Physical Description.** The physical dimensions of the systems that make up MATCALs are:

<b>EQUIPMENT/ SUBSYSTEM</b>	<b>HEIGHT (INCHES)</b>	<b>WIDTH (INCHES)</b>	<b>LENGTH (INCHES)</b>	<b>WEIGHT (POUNDS)</b>
AN/TSQ-131(V)	96	96	240	15,000
AN/TPS-73				
• Shelter	96	96	120	14,800
• Pallet	17.5	48	73	1068
AN/TPN-22				
• OY-75/TPN-22	100	96	118	7,660
• AS-3471/TPN-22	72	96	144	5,732
AN/TSQ-120A/B				
• AB-1236/TSQ-120 (Storage Container)	61	42	153	3,100
• OK-312/TSQ-120A	90	90	90	2,660
• OW-81B/TSQ-120A	84	96	118	6,500
AN/TRC-195	52	52	75	1,620
AN/TRN-44				
• S-659/TRN-44	84	96	151	5,350
• AB-1302/GRN	28	50	111	1,400
• AS-3184/URN	71	76	140	1,150
AN/TPN-30A	45	48	36	130
OA-9141/TSM-170	96	96	240	13,500
OA-9142/TSM-170	96	96	240	13,500
OA-9143/TSM-170	96	96	240	13,500
OA-9144/TSM-170	96	96	240	13,500
HD-1099/TSQ	33.25	47	61	530
MEP-015A	18.5	20.4	27.4	121

<b>EQUIPMENT/ SUBSYSTEM</b>	<b>HEIGHT (INCHES)</b>	<b>WIDTH (INCHES)</b>	<b>LENGTH (INCHES)</b>	<b>WEIGHT (POUNDS)</b>
MEP-006A				
• Skid Mounted	72	36	87	4,500
• with Mobilizer M-353	72	92	188	7,220
MEP-806A				
• Skid Mounted	59	35.7	87	3,556
• with Mobilizer M-353	72	92	100	6,279
AN/TSQ-216				
• Expandable Shelter	104	85	186	1,958
• Trailer Assembly	91	86	133	3,600

**3. New Development Introduction.** MATCALs was introduced through new production in FY86.

The AN/TSQ-216 RLST is being introduced through new production. An initial RLST was delivered to Naval Air Technical Training Center (NATTC) Pensacola, Florida, in October 1999, and the remaining towers are scheduled to begin delivery in FY00, with an estimated completion date of FY01. The replacement of the AN/TRC-195 CC Tower will begin in FY00, with an estimated completion date of FY01.

The AN/ARC-210(V) EP Radio System will be introduced through new production. The replacement of the AN/GRC-171(V) and AN/GRC-211 Radio Sets in the AN/TSQ-131 CCS Radar Facility and the AN/TSQ-120B ATCC Tower will begin in FY00, with an estimated completion in FY06

The AN/TPN-22 PAR solid-state modulator upgrade is being introduced through modernization retrofit. The upgrade began in June 1999, and with an estimated completion in FY00.

**4. Significant Interfaces.** When set up, MATCALs and its related equipment uses telephone lines, electrical wiring, radio networks, and remote control signals to interface with its various components, aircraft, and other ATC agencies.

**5. New Features, Configurations, or Material.** The automation of ATC and all-weather landing control capabilities at expeditionary airfields provides ATC Detachments with greater versatility in identification, monitoring, and control of departures, arrivals, and landing of aircraft. Improvements to the ATC Detachment's equipment increased the capacity and sortie rate for aircraft. New systems and component equipment use state-of-the-art technology to provide improved reliability and maintainability. Systems are software integrated over a Serial Data Bus, and Processor-Display Sets are equipped with a Touch Sensor Screen person-machine interface. Equipment performance monitoring, alignment, and BIT/BITE have been integrated into the design of the systems to aid and improve maintainability and increase availability.

## H. CONCEPTS

**1. Operational Concept.** MATCALs is operated by MACS personnel to provide ATC capabilities throughout an Amphibious Operational Area without regard to the effects of weather. This reduces air traffic handling and management time, allowing more time for mission response and task accomplishment. Marine Corps ATC Officers with MOS 7220, Senior Air Traffic Controllers with MOS 7291, Air Traffic Controllers with MOS 7257, Tower Air Traffic Controllers with MOS 7252, and Radar Air Traffic Controllers with MOSs 7253 and 7254 operate MATCALs.

**2. Maintenance Concept.** MATCALs maintenance is based on maintenance concepts outlined in the Naval Aviation Maintenance Program, Office of the Chief of Naval Operations Instruction (OPNAVINST) 4790.2G. Maintenance supervision, coordination, and administration is accomplished by the ATC Systems Maintenance Officer (MOS 5950), ATC Systems Maintenance Chief (MOS 5950), and Utilities Chief (MOS 1169). Marine Corps personnel with MOSs 1142, 1341, 1611, 5952, 5953, 5954, and 6492 perform maintenance. (Refer to the Manning Concept below for additional information on these MOSs.)

**a. Organizational.** Organizational maintenance is the responsibility of and is performed by the using activity on their assigned equipment. The ATC Detachment is subdivided into four echelons of organizational maintenance, which includes functions normally accomplished by an intermediate maintenance activity. First and second echelons include preventive and corrective maintenance. Third and fourth echelons consist primarily of corrective maintenance.

**(1) First Echelon.** First echelon maintenance consists of basic operating procedures, planned maintenance, assisting in equipment installation, and replacement of parts not normally requiring technical skills.

**(2) Second Echelon.** Second echelon maintenance consists of inspecting, planned maintenance, testing, adjusting, aligning, diagnosing malfunctions, isolating malfunctions to the faulty assembly, module, or subassembly, removing and replacing the faulty parts, verifying the fault has been corrected, and assisting in equipment installation.

**(3) Third Echelon.** Third echelon maintenance consists of installing equipment, planned maintenance, testing, adjusting, aligning, diagnosing malfunctions, isolating malfunctions to the faulty part, removing and replacing the faulty part, and verifying the fault has been corrected.

**(4) Fourth Echelon.** Fourth echelon maintenance consists of providing technical assistance to deployed detachments, repairing subassemblies, modules, assemblies, units, groups, components, sets, subsystems, systems, and equipment, determining disposition of repairable items, and emergency manufacturing of non-available parts.

**b. Intermediate.** Not Applicable (NA)

**c. Depot.** Depot level maintenance is performed on material requiring overhaul, restoration, manufacture of parts and modification, or complete rebuild of parts for assemblies, subassemblies and end items. For ATC Detachments, support of software maintenance corrections, reproduction, and enhancements is also considered a depot level maintenance function. The In-Service Engineering Agency (ISEA) for MATCALs is the Space and Naval Warfare Systems Command (SPAWAR) Systems Center, San Diego, (SSC SD) California. Naval Air Warfare Center Aircraft Division (NAWCAD), St. Inigoes, Maryland and SSC SD perform depot level maintenance for software. Depot level maintenance on hardware and equipment is performed by SSD SD. The Navy Support Date for the AN/TSQ-216 RLST is scheduled for June 2000.

**d. Interim Maintenance.** NA

**e. Life-Cycle Maintenance Plan.** NA

**3. Manning Concept.** Marine Corps personnel with specific MOSs in ATC maintain and operate MATCALs and its associated equipment. The addition of the AN/TSQ-216 RLST to MATCALs will not affect quantitative and qualitative manpower requirements.

**a. Operational Manning.** There are five MOSs for various positions in the operation of the MATCALs. These include:

- MOS 7220, Air Traffic Control Officer
- MOS 7252, Air Traffic Controller - Tower
- MOS 7253, Air Traffic Controller - Radar
- MOS 7254, Radar Approach Controller
- MOS 7257, Air Traffic Controller
- MOS 7291, Senior Air Traffic Controller

**b. Maintenance Manning.** Supervision, coordination, and administration of maintenance is accomplished by the ATC Systems Maintenance Officer, MOS 5950, ATC Systems Maintenance Chief, MOS 5959, and Utilities Chief, MOS 1169. Maintenance technicians with the following MOSs are responsible for the maintenance of equipment as depicted below:

MOS	TITLE	DESCRIPTION
1142	The Electrical Equipment Repair Specialist	Performs maintenance on the MEP-006A Generator Set, Mobilizers, Power Distribution Boxes and Converters, and OA-9141/TSM-170 AERG
1341	Engineer Equipment Mechanic	
1161	Refrigeration Mechanic	Performs maintenance on the HD-1099/TSQ ECU
5911	Microminiature Circuit Repair Specialist	Performs maintenance on the Printed Circuit Boards

5952	ATC Navigational Aids Technician	Performs maintenance on the AN/TRN-44 TACAN, AN/TPN-30A MRAALS, MEP-015A Generator Set, and OA-9144/TSM-170 EMRG
5953	ATC Radar Technician	Performs maintenance on the AN/TSQ-131(V) CCS and its radar components, AN/TPS-73 ASR, AN/TPN-22 PAR, Generator Sets, OA-9143/TSM-170 RERG, and OA-9144/TSM-170 EMRG
5954	ATC Communications Technician	Performs maintenance on the AN/TSQ-131(V) communications components, AN/TSQ-120A/B ATCC Towers, AN/TRC-195 CC Tower, AN/TSQ-216, OA-9142/TSM-170 CERG, and OA-9144/TSM-170 EMRG
6492	Aviation Precision Measurement Equipment/Automatic Test Equipment Calibration and Repair Technician	Performs calibration and maintenance on the AN/TPS-73 ASR, AN/TPN-22 PAR, and AN/UYQ-34(V)2 PDS

**4. Training Concept.** Formal training courses are established at NATTC Pensacola. Personnel selected by Headquarters, Marine Corps for MOSs 59XX, MATC maintenance personnel, and 72XX, Marine Air Traffic Controllers, are trained in these courses to maintain and operate MATCALS and its associated equipment.

Personnel from the Marine Forces Reserve Air Traffic Control Detachments are provided a limited number of student billets in both the controller and maintenance courses. See Part II.B.1 for reserve personnel training input requirements.

**a. Initial Training.** Formal initial training of the AN/TPN-22 PAR, with a replacement solid-state modulator, for radar technicians, radar instructors, and civilian personnel from the MATC community was conducted at Sierra Nevada Corporation, Sparks, Nevada, in September 1998.

Formal initial training of the AN/TSQ-216 RLST for communications technicians, communications instructors, and civilian personnel was conducted at Sierra Nevada Corporation facilities in February 1997.

Formal initial training of the AN/ARC-210(V) EP Radio System for communications technicians, communications instructors, and civilian personnel was conducted at Collins Avionics and Communications Division (CACD) of Rockwell International, Cedar Rapids, Iowa, in April 1994.

**b. Follow-on Training**

**(1) Air Traffic Controller Training.** Air Traffic Controller training is conducted at NATTC Pensacola. Basic Air Traffic Controller trainees receive instruction in the Air Traffic Controller A1 Course, C-222-2010. Officers and enlisted personnel receive 14 weeks of training. The trainees receive the basic skills and knowledge required to perform routine duties in the control and handling of aircraft in a tower or radar environment.

Upon successful completion of the Air Traffic Controller A1 Course, Basic Air Traffic Controller trainees (MOS 7251) receive instruction on the operation of MATCALs equipment. Marine controllers attend this course in lieu of the Navy carrier familiarization course at the end of the Air Traffic Controller Course. The MATCALs Operator (Basic) Course, C-222-2021, is two days in length and provides MATC personnel with familiarization training on the MATCALs following entry level schooling. This course was modified to include familiarization with the AN/TSQ-216 RLST.

Trainees are then assigned to an ATC Facility (or a MACS for reservists assigned to the 4th Marine Aircraft Wing). At their assigned duty station, enlisted personnel, receive further training on Radar Final Control and Radar Flight Data or Ground Control and Tower Flight Data. Once qualified, trainees are then awarded their Primary MOS 7257, Air Traffic Controller. Additional training is then required to become qualified for MOS 7252, Air Traffic Controller-Tower, or MOS 7253, Air Traffic Controller-Radar, and officers become qualified for MOS 7220, Air Traffic Control Officer. Selected Air Traffic Controllers return to NATTC Pensacola for training in Advanced Radar ATC, C-222-2022. This phase of training provides students with the skill and knowledge to perform at a basic level as a Radar Approach Controller at all operating positions at a Radar Approach Control Facility and become qualified for MOS 7254.

Additional advanced training for senior MATC personnel is the MATCALs Advanced Operator Course, C-2G-2018, which provides comprehensive training on the employment and operation of MATCALs. Students receive instruction on the operation, capabilities, and limitations of the MATCALs. Students are also instructed on developing and designing United States Standard Terminal Instrument Procedures. This course is being modified to include training on the AN/TSQ-216 RLST.

The following courses have been established specifically for MATCALs operator training:

<b>Title .....</b>	<b>MATCALs Operator</b>
<b>CIN .....</b>	C-222-2021
<b>Model Manager ..</b>	NATTC Pensacola
<b>Description .....</b>	This course provides MATC personnel with familiarization training on the MATCALs following entry level schooling.
<b>Location .....</b>	NATTC Pensacola

Length ..... 2 days  
 RFT date ..... Currently available  
 Skill identifier ..... None  
 TTE/TD ..... Various MATCALs subsystems and equipment  
 Prerequisite ..... C-222-2010, Air Traffic Controller Class A1

**Title ..... MATCALs Advanced Operator Course**

CIN ..... C-2G-2018  
 Model Manager .. NATTC Pensacola  
 Description ..... This course provides comprehensive training on the employment and operation of MATCALs. Senior MATC personnel receive instruction on the operation, capabilities, and limitations of the MATCALs. Students are also instructed on developing and designing United States Standard Terminal Instrument Procedures.

Location ..... NATTC Pensacola  
 Length ..... 26 days  
 RFT date ..... Currently available  
 Skill identifier ..... None  
 TTE/TD ..... Various MATCALs subsystems and equipment  
 Prerequisites ..... C-222-2021, MATCALs Operator, E-5 and above

**(2) Maintenance Training.** MATC maintenance training is conducted at NATTC Pensacola. Students must complete a series of prerequisite training prior to attending the MATC maintenance courses: C-100-2020, Avionics Common Core Class A1; C-100-2019, Marine Air Traffic Control Basic Technician Class A1; and C-103-2026, Miniature Component Repair Class M3 courses. After successful completion of these courses, trainees attend one of the three technician pipelines. Marines may return to NATTC Pensacola to receive initial or refresher training in a segment of the pipeline they had not previously attended, providing sufficient student seats are available.

Upcoming changes to MATCALs training will include the AN/ARC-210(V) EP Radio System, the AN/TSQ-216 RLST, and the AN/TPN-22 PAR solid-state modulator modification. The AN/ARC-210(V) EP Radio System will be incorporated into an existing course in the MATC Communications Technician Pipeline, C-103-2090, in FY00. The AN/ARC-210(V) EP Radio System information will add four days to the pipeline. A new course will be developed for the AN/TSQ-216 RLST including new radios, communications interface,

and other VFR ATC-related equipment. This course will be Ready For Training (RFT) in FY00 with a projected course length of 28 days. In addition, the solid-state modulator information for the AN/TPN-22 PAR will be included in the MATC Radar Technician Pipeline, C-103-2080, in FY00, and the new course will be 14 days long. Additional information will be included in updates to this NTSP as new course curricula are developed and implemented.

**Title .....** **MATC Navigational Aids Technician Pipeline**  
**CIN .....** C-103-2100  
**Model Manager ..** NATTC Pensacola  
**Description .....** This pipeline provides general knowledge and skills to perform preventive and corrective maintenance on the MATC navigational aids. This pipeline consists of three courses including C-103-2072, MATC Technician Common Core Course; C-103-2102, AN/TPN-30A MRAALS; and C-103-2101, AN/TRN-44 TACAN.  
**Location .....** NATTC Pensacola  
**Length .....** 155 days  
**RFT date .....** Currently available  
**Skill identifier .....** MOS 5952  
**TTE/TD .....** AN/TRN-44 TACAN, AN/TPN-30A MRAALS  
**Prerequisites .....** C-100-2020, Avionics Common Core Class A1  
 C-100-2019, Marine Air Traffic Control Basic Technician Class A1  
 C-103-2026, Miniature Component Repair Class M3

**Title .....** **MATC Radar Technician Pipeline**  
**CIN .....** C-103-2080  
**Model Manager ..** NATTC Pensacola  
**Description .....** This pipeline provides general knowledge and skills to perform preventive and corrective maintenance on the MATC radar equipment. This pipeline consists of four courses including the C-103-2072, MATC Technician Common Core Course; C-103-2081, AN/TPN-22 PAR; C-103-2084, AN/TPS-73 ASR; and C-103-2083, AN/UYQ-34(V)2 PDS.  
**Location .....** NATTC Pensacola  
**Length .....** 213 days

RFT date ..... Currently available  
 Skill identifier ..... MOS 5953  
 TTE/TD ..... AN/TPN-22 PAR, AN/TPS-73 ASR, AN/UYQ-34(V)2  
 PDS  
 Prerequisites ..... C-100-2020, Avionics Common Core Class A1  
 C-100-2019, Marine Air Traffic Control Basic Technician  
 Class A1  
 C-103-2026, Miniature Component Repair Class M3

**Title ..... MATC Communications Technician Pipeline**

CIN ..... C-103-2090  
 Model Manager .. NATTC Pensacola  
 Description ..... This pipeline provides general knowledge and skills to  
 perform preventive and corrective maintenance on the  
 MATC communications equipment. This pipeline consists  
 of four courses including C-103-2072, MATC Technician  
 Common Core Course; C-103-2091, MATCALs Radios  
 Maintenance Course; C-103-2092, AN/TSQ-120A/B  
 ATCC Towers; and C-103-2093, AN/TSQ-131(V) CCS.  
 Location ..... NATTC Pensacola  
 Length ..... 137 days  
 RFT date ..... Currently available  
 Skill identifier ..... MOS 5954  
 TTE/TD ..... AN/GRC-171(V), AN/GRC-211, and AN/URC-94(V)2  
 Radio Sets, AN/TSQ-120A/B ATCC Tower equipment,  
 AN/TSQ-131(V) CCS  
 Prerequisites ..... C-100-2020, Avionics Common Core Class A1  
 C-100-2019, Marine Air Traffic Control Basic Technician  
 Class A1  
 C-103-2026, Miniature Component Repair Class M3

**Title ..... MATCALs Maintenance Management and System  
 Analysis Pipeline**

CIN ..... C-103-2110  
 Model Manager .. NATTC Pensacola

Description ..... This pipeline provides career MATC technicians, maintenance officers, ATC officers, and maintenance chiefs with advanced technical training to improve their skills and abilities in the performance of maintenance management, maintenance training, and supervision of an expeditionary air traffic control detachment. C-103-2111, MATCALs Maintenance Management course, provides instruction on maintenance management concepts, documentation, supply functions, and Federal Aviation Administration flight check certification procedures as they apply to all MATC systems. C-103-2112, MATCALs System Analysis course, provides detailed technical instruction on MATC systems analysis, system troubleshooting techniques, and embarkation procedures.

Location ..... NATTC Pensacola

Length ..... 39 days

RFT date ..... Currently available

Skill identifier ..... None

TTE/TD ..... NA

Prerequisites ..... C-100-2013, Avionics Technician Class A1  
MOS 5950, 5952, 5953, 5954, or 5959; Paygrades E-6 through E-8, and W-1 and W-2  
Or  
MOS 5902 or 7220, Paygrades O-1 through O-3

**c. Student Profiles**

<b>SKILL IDENTIFIER</b>	<b>PREREQUISITE SKILL AND KNOWLEDGE REQUIREMENTS</b>
7220, 7252, 7253 7257	° C-222-2010, Air Traffic Controller Class A1
7254	° C-222-2010, Air Traffic Controller Class A1 ° C-222-2022, Advanced Radar Air Traffic Control
5952, 5953, 5954	° C-100-2020, Avionics Common Core Class A1 ° C-100-2019, MATC Basic Technician Class A1 ° C-103-2026, Miniature Component Repair Class M3

**d. Training Pipelines.** All Marine air traffic controller and ATC maintenance training, including MATCALs, is conducted at NATTC Pensacola.

## **I. ON-BOARD (IN-SERVICE) TRAINING**

**1. Proficiency or Other Training Organic to the New Development.** On-board training at the MACS consists of controller qualification and proficiency training and maintenance technical training programs. These systematic training programs are conducted by senior squadron personnel to ensure a high state of operational readiness of the squadron. This is accomplished by maintaining and improving the efficiency and technical expertise of MACS controllers and maintenance personnel within their MOSs. This training consists of classroom instruction and “hands-on” practical application with the supervision of qualified personnel. In addition, individual On-the-Job Training (OJT) can be accomplished with the use of audio-visual aids, technical manuals, and Planned Maintenance System documentation. The Marine Wing Communications Squadron, Marine Air Control Group, or qualified squadron personnel provide training on operational use for communications security equipment.

**(a) Air Traffic Controllers.** The AN/UYQ-34(V)2 PDS, which is part of the AN/TSQ-131(V) CCS, contains a Training (TR) mode for Air Traffic Controllers that provides scenarios closely resembling those of the Arrival and Departure Control (ADC) and Final Control (FC) displays. In addition, the TR mode provides the capability to generate, control, and display simulated radar sensor data. The TR function may be performed on any of the eight operator console positions in the AN/TSQ-131(V) CCS. Some types of simulation require the availability of the AN/TPN-22 PAR.

The TR mode consists of four sub-modes, which differ by the type of controller operations to be simulated (ADC or FC) and the role of the controller in the training situations (instructor or trainee). Instructor sub-modes provide the capability to generate simulated radar targets and to control them so that their behavior can be made to resemble a live radar target. The trainee sub-modes provide the same display and entry capabilities as the corresponding operator modes (ADC or FC) and allows the controller to exercise those capabilities on the simulated targets.

**(b) In-the-Field Controller.** An annual In-the-Field Controller Training Program is presented by NAWCAD at selected ATC Detachment sites. This course provides familiarization training on the MATCALs to personnel who are new to the field, or who have been stationed away from the ATC Detachments.

**(c) Marine Air Traffic Controller Maintenance.** SPAWARSYSCEN is responsible for developing and providing audio-visual cassettes for maintenance training on the MATC systems and equipment. SPAWARSYSCEN coordinates with NATTC Pensacola and the MACSs to determine the content of audio-visual cassettes required for OJT on MATC systems and equipment.

**(d) On-Site Maintenance.** SPAWARSYSCEN, as the ISEA for MATC systems and equipment, will provide on-site maintenance instruction for ATC Detachment personnel, if required.

**(e) Annual Training Schedule.** The quarterly MATC newsletter, published by SPAWARSYSCEN, provides the annual training schedule for MATC maintenance and seat availability for Fleet Marine Force refresher training, as well as initial training for new systems.

**2. Personnel Qualification Standards.** NA

**3. Other On-Board or In-Service Training Packages.** Marine Corps on-board training is based on the current series of MCO P4790.12, Individual Training Standards System and Marine 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. MATMEP tasks help identify training deficiencies that can be addressed with refresher training.

MATMEP is under consideration for terminating its use in the MATCALs program. Since On-Board Training packages already are in use, no replacement In-Service Training program has been identified to replace MATMEP at this time. Future updates to this NTSP will include any decisions concerning Marine Corps In-Service Training.

**J. LOGISTICS SUPPORT**

**1. Manufacturer and Contract Numbers.** The AN/TSQ-216 RLST production contract has been awarded to Sierra Nevada Corporation, contract number N00039-95-C-0023.

EQUIPMENT/SYSTEM/ SUBSYSTEM	CONTRACT NUMBER	MANUFACTURER
AN/TSM-170 Maintenance Repair Group:  OA-9141/TSM-170  OA-9142/TSM-170  OA-9143/TSM-170	  N63274-81-PO-0445 N63274-81-PO-0444  N63274-84-PW-W-0309  N63274-84-PO-Y-0310	  Auxiliary Equipment Repair Group, McClellan Air Force Base  Communications Equipment Repair Group, NEEACT Philippines  Radar Equipment Repair Group, NEEACT

<b>EQUIPMENT/SYSTEM/ SUBSYSTEM</b>	<b>CONTRACT NUMBER</b>	<b>MANUFACTURER</b>
OA-9144/TSM-170	N00039-87-AFO-ELEX	Philippines Electronic Module Repair Group, Sacramento Army Depot, California
MEP-006A Generator Set	Army Contracts	Various Manufacturers
MEP-015A Generator Set	Army Contracts	Various Manufacturers
MEP-806A Generator Set	Army Contracts	Various Manufacturers
ML-8000 Intercommunication Station	GSA 6S00K94AGS0506	Tone Commander Systems
AN/UYQ-34(V)2 PDS	N00038-81-C-0275	Loral
AN/UYK-20X(V)	N00039-73-D-0432	Loral
AN/TPN-22 PAR	N00039-75-C-0021 N00039-90-C-0195	ITT Gilfillan
AN/TPN-30A MRAALS	N00039-75-C-2070 N00228-79-C-2033	Singer-Kearfott (GEC-Marconi)
AN/URN-25	N00039-80-C-0436	Gould Incorporated
AN/TSQ-131(V) CCS	N00039-82-C-0312	Loral
AN/USQ-94 Bus Access Set	N00039-82-C-0312	Loral
AN/UYQ-41 Digitizer Switching Set	N00039-82-C-0312	Loral
AN/UYQ-42 Control- Distribution Set	N00039-82-C-0312	Loral
C-11515/UYQ-41 Operator Control Unit	N00039-82-C-0312	Loral
AN/TRN-44 TACAN	N00039-82-PO-EW-012	SPAWARSYSCEN
AN/TPS-73 ASR	N00039-86-C-0452 N00039-92-C-0101	Loral

<b>EQUIPMENT/SYSTEM/ SUBSYSTEM</b>	<b>CONTRACT NUMBER</b>	<b>MANUFACTURER</b>
RO-572/TSQ-131(V) Line Printer Data	N00039-89-C-0312	Data Products New England
AN/TPN-30A MRAALS Aircraft Approach Control Transmitting Set	N00039-90-C-0183	Sierra Nevada Corporation
AN/TPN-22 PAR (with replacement Frequency Synthesizer)	N00039-91-C-0102	Research and Development Laboratories
AN/TPN-22 PAR (with Solid State Modulator)	N00039-93-C-0096	Sierra Nevada Corporation
AN/TSQ-216 RLST (Research and Development)	N00039-95-C-0023	Sierra Nevada Corporation
AN/GSH-60 Recorder- Reproducer Set	N00123-87-C-4058	Dictaphone
AN/TRC-195 CC Tower	N00123-90-D-0301	SPAWARSYSCEN
AN/TSQ-120B ATCC Tower	N00123-90-D-0301	SPAWARSYSCEN
AN/ARC-210(V) EP Radio System	N00019-91-C0237	CACD of Rockwell International
TD-1089/UYQ-4	N00228-75-C-2221	Collins Radio Group
OE-258/URN	N00228-75-C-4547	RANTEC Division, Emerson Electric Company
AN/TSQ-120A ATCC Tower	N00228-76-C-4052	Craig Systems Corporation
AN/URC-94(V)2 Radio Set	N00228-82-C-7299	Harris Corporation
OA-7621/FSA-52	N00612-70-C-0026	DENRO Labs
CDD-1000 Digital Deck ATIS Recorder	N63274-83-F-0094	COMEX

<b>EQUIPMENT/SYSTEM/ SUBSYSTEM</b>	<b>CONTRACT NUMBER</b>	<b>MANUFACTURER</b>
AN/GMQ-31 Wind Measuring Set	N66134-74-C-1409 N63274-77-C-0183 GS-005-04395	Belfort Instrument company
HD-1099/TQS ECU	NA	SPAWARSYSCEN
AN/VRC-82(V)2 Radio Set	NAVICP Contracts	General Electric
AN/USH-26(V) Signal Data Recorder-Reproducer	NAVSEA Contracts	Quantrex Division, North Atlantic Industries, Inc.
AN/GRC-171(V) Radio Sets	USAF Contracts	Collins Radio Group
AN/GRC-211 Radio Set	USAF Contracts	Collins Radio Group

**2. Program Documentation.** The MATC Systems and Equipment Operational Logistics Support System (OLSS), SPAWAR P4110.566B, is dated October 1993. This document is currently being updated as the MATCALs User Logistics Support Summary, and will be re-numbered as a NAVAIRSYSCOM document. Additional documents, including Integrated Logistic Support Plans (ILSPs), for individual equipment, systems, and subsystems include:

<b>EQUIPMENT/SYSTEM/ SUBSYSTEM</b>	<b>DOCUMENTATION</b>
AN/ARC-210(V) EP Radio System	ILSP: AVILSP-322
AN/GMQ-31 Wind Measuring Set	OLSS: SPAWAR P4110.566B
AN/GRC-171(V) Radio Set	OLSS: SPAWAR P4110.566B
AN/GRC-211 Radio Set	OLSS: SPAWAR P4110.566B
AN/GSH-60 Recorder-Reproducer Set	OLSS: SPAWAR P4110.566B
AN/TPN-22 PAR	OLSS: SPAWAR P4110.566B
AN/TPN-22 PAR (with replacement Frequency Synthesizer)	OLSS: SPAWAR P4110.566B
AN/TPN-22 PAR (with Solid State Modulator)	OLSS: SPAWAR P4110.566B
AN/TPN-30A MRAALS	OLSS: SPAWAR P4110.566B

<b>EQUIPMENT/SYSTEM/ SUBSYSTEM</b>	<b>DOCUMENTATION</b>
AN/TPN-30A MRAALS Aircraft Approach Control Transmitting Set	OLSS: SPAWAR P4110.566B
AN/TPS-73 ASR	ILSP: SPAWAR P4100.600
AN/TRC-195 CC Tower	OLSS: SPAWAR P4110.566B
AN/TRN-44 TACAN	OLSS: SPAWAR P4110.566B
AN/TSM-170 MRG: OA-9141/TSM-170 AERG OA-9142/TSM-170 CERG OA-9143/TSM-170 RERG OA-9144/TSM-170 EMRG	OLSS: SPAWAR P4110.566B
AN/TSQ-120A ATCC Tower	OLSS: SPAWAR P4110.566B
AN/TSQ-120B ATCC Tower	OLSS: SPAWAR P4110.566B
AN/TSQ-131(V) CCS	OLSS: SPAWAR P4110.566B
AN/TSQ-216 RLST	ILSP: ATC-ILSP-009
AN/URC-94(V)2 Radio Set	OLSS: SPAWAR P4110.566B
AN/URN-25	OLSS: SPAWAR P4110.566B
AN/USH-26(V) Signal Data Recorder-Reproducer	OLSS: SPAWAR P4110.566B
AN/USQ-94 Bus Access Set	OLSS: SPAWAR P4110.566B
AN/UYK-20X(V)	OLSS: SPAWAR P4110.566B
AN/UYQ-34(V)2 PDS	OLSS: SPAWAR P4110.566B
AN/UYQ-41 Digitizer Switching Set	OLSS: SPAWAR P4110.566B
AN/UYQ-42 Control-Distribution Set	OLSS: SPAWAR P4110.566B
AN/VRC-82(V)2 Radio Set	OLSS: SPAWAR P4110.566B
C-11515/UYQ-41 Operator Control Unit	OLSS: SPAWAR P4110.566B
CDD-1000 Digital Deck ATIS Recorder	OLSS: SPAWAR P4110.566B

EQUIPMENT/SYSTEM/ SUBSYSTEM	DOCUMENTATION
HD-1099/TQS ECU	OLSS: SPAWAR P4110.566B
MEP-006A Generator Set	Logistics Joint Operating Procedures for Mobile Electric Power, AR 700-101, AFR 400-50, and DSAR 4120.7
MEP-015A Generator Set	Logistics Joint Operating Procedures for Mobile Electric Power, AR 700-101, AFR 400-50, and DSAR 4120.7 ILSP: NAVELEX P4100.383
MEP-806A Generator Set	Logistics Joint Operating Procedures for Mobile Electric Power, AR 700-101, AFR 400-50, and DSAR 4120.7
ML-8000 Intercommunication Station	OLSS: SPAWAR P4110.566B
OA-7621/FSA-52	OLSS: SPAWAR P4110.566B
OE-258/URN	OLSS: SPAWAR P4110.566B
RO-572/TSQ-131(V) Line Printer Data	OLSS: SPAWAR P4110.566B
TD-1089/UYQ-4	OLSS: SPAWAR P4110.566B

**3. Technical Data Plan.** All technical manuals, Maintenance Requirements Cards (MRC), and Maintenance Index Pages (MIP) for each equipment, system, and subsystem of the MATCALs have been developed and are periodically updated as required. MATCALs operator and maintenance manuals, MRC, and MIP are available through normal channels. Technical manuals for the AN/ARC-210(V) EP Radio System are currently available and will be used for the planned MATCALs application. The AN/TPN-22 PAR technical manuals will be updated with information on the solid-state modulator prior to fleet installations. New technical manuals are required for the AN/TSQ-216 RLST and will be available through normal channels during fleet introduction. Refer to Part IV.B.3 for the technical data required for training purposes.

#### **4. Test Sets, Tools, and Test Equipment**

**a. HD-1099/TSQ Environmental Control Unit.** Special Support Equipment includes the Robinair 13106 Charging Station and the Robinair 17500B Refrigerant Recovery and Recycling Station.

**b. AN/TPS-73 Airport Surveillance Radar.** Special requirements for the AN/TPS-73 ASR include the Tool Kit, 14203-86061, and the Accessory Kit, 14203-86062. Automatic Test Equipment includes the GenRad 2225-9011 Portable Service Processor and the Driver Expansion Module.

**c. AN/UYK-20X(V) General Purpose Data Processor.** Special tools are provided in the Maintenance Kit, MK-1724/UYK-20(V).

**d. AN/TSQ-120A Air Traffic Control Central.** Special tools include the Wire Wrap-Unwrap Tool Set for the FSA-52, 25512-255C502, and Combination Drill and Breaker, PIONJAR 120. Special Purpose Electronic Test Equipment required is the Electronic Circuit Plug-In Test Set, TS-3598/FSA-52(V).

**e. AN/TSQ-120B Air Traffic Control Central.** Special tools include the Combination Drill and Breaker, PIONJAR 120.

**f. AN/TRN-44 TACAN.** Special tools include the Combination Drill and Breaker, PIONJAR 120.

**5. Repair Parts.** As a mature program, most of MATCALs repair parts are in stock and under the control of Naval Inventory Control Point (NAVICP). NAVICP assumed supply support of MATCALs parts and spares on the Material Support Dates (MSDs) of each subsystem and equipment. Currently, the following subsystems and equipment will achieve MSD as stated below.

**a. AN/TSQ-216 Remote Landing Site Tower.** Interim repair parts will be provided by NAVAIRSYSCOM until MSD is achieved in June 2000. The AN/TSQ-216 RLST will be supported through NAVICP after MSD.

**b. AN/TPN-30A Marine Remote Area Approach and Landing System.** The 15 Hz TACAN Modification portion of the AN/TPN-30A MRAALS will be supported by NAVICP, MSD August 1999.

#### **6. Human Systems Integration. NA**

### **K. SCHEDULES**

**1. Installation and Delivery Schedules.** Most of MATCALs subsystems and equipment has been delivered to the MACS.

**MATCAL EQUIPMENT / SYSTEMS / SUBSYSTEMS PER ATC DETACHMENT**

<b>E/S/S</b>	<b>QUANTITY</b>
AN/TSQ-131(V)	2
AN/TPS-73	1
AN/TPN-22	1
AN/TSQ-120A/B	1
AN/TRC-195	1
AN/TSQ-216	1
AN/TRN-44	1
AN/TPN-30/A	5
AN/TSM-170:	
• OA-9141/TSM-170	1
• OA-9142/TSM-170	1
• OA-9143/TSM-170	1
• OA-9144/TSM-170	1

An initial AN/TSQ-216 RLST was delivered to NATTC Pensacola in October 1999, and the remaining towers are scheduled to begin delivery in FY00, with estimated completion in FY01. The projected delivery schedule for the AN/TSQ-216 RLST is as follows:

<b>LOCATION</b>	<b>1999</b>		<b>2000</b>				<b>2001</b>			
	<b>QTR 3</b>	<b>QTR 4</b>	<b>QTR 1</b>	<b>QTR 2</b>	<b>QTR 3</b>	<b>QTR 4</b>	<b>QTR 1</b>	<b>QTR 2</b>	<b>QTR 3</b>	<b>QTR 4</b>
NATTC Pensacola	1		1							
SPAWARSYSCEN										1
MACS-2C				1						
MACS-2D				1						
MACS-1A				1						
MACS-1B					1					
MACS-4A							1			

LOCATION	1999		2000				2001			
	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4	QTR 1	QTR 2	QTR 3	QTR 4
MACS-4B							1			
MACS-2A								1		
MACS-2B								1		
MACS-1C									1	
MACS-1D									1	

Delivery of the AN/TPN-22 PAR Solid-State Modulator began in June 1999, with estimated completion in FY00. The projected installation schedule for the AN/TPN-22 PAR Solid State Modulator upgrade is as follows:

LOCATION	1999							2000		
	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR
MACS-1B	1									
NATTC Pensacola			2							
MACS-4B			1							
MACS-2A			1							
MACS-1A				1						
MACS-2B					1					
MACS-4A					1					
NAWCAD					1					
MACS-1C						1				
MACS-1D						1				
MACS-2C								1		

LOCATION	1999							2000		
	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR
MACS-2D								1		
MACS-24A									1	
MACS-24B										1
SSC SD (FLOAT)										1

The AN/ARC-210(V) EP Radio System will replace the AN/GRC-171(V) and AN/GRC-211 Radio Sets in the AN/TSQ-131 CCS Radar Facility and the AN/TSQ-120B ATCC Tower beginning in FY00, with an estimated completion in FY06. A delivery schedule for each site has not been determined yet. Additional information will be included in updates to this NTSP when an installation delivery is developed.

**2. Ready For Operational Use Schedule. NA**

**3. Time Required to Install at Operational Sites**

**a. NATTC Pensacola.** Time required to install equipment at NATTC Pensacola for training is depicted below. Installation and checkout will be coordinated by SPAWARSYSCEN.

AN/TPN-22 PAR Solid-State Modulator..... One week  
AN/TSQ-216 RLST ..... One week

**b. MACS Detachments.** The AN/TSQ-216 RLST does not require installation; delivery will be accompanied by an advisory team from SPAWARSYSCEN to provide OJT. The AN/TPN-22 PAR Solid-State Modulator will require one week to install with a team from SPAWARSYSCEN and the assistance of MACS personnel.

**4. Foreign Military Sales and Other Source Delivery Schedule.** Two AN/TPN-30A MRAALS have been procured by the government of Japan. There have been no additional FMS of MATCALs or its subsystems to any other Military Force at this time. Information concerning FMS of MATCALs may be obtained from PMA213.

**5. Training Device and Technical Training Equipment Delivery Schedule.** All items of Technical Training Equipment (TTE) for MATCALs training were delivered to NATTC Pensacola when training moved from NATTC Millington, with the following exceptions. The AN/TPN-30A MRAALS TTE was delivered to NATTC Pensacola in February 1998. One AN/TSQ-216 RLST was delivered in March 1999 for use as TTE, and a second AN/TSQ-216 RLST is scheduled to be delivered in May 2000. In addition, one AN/TPN-22 PAR solid-state

modulator upgrade was installed in June 1999, and a second AN/TPN-22 PAR solid-state modulator upgrade was installed in August 1999.

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

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

<b>DOCUMENT OR NTSP TITLE</b>	<b>DOCUMENT OR NTSP NUMBER</b>	<b>PDA CODE</b>	<b>STATUS</b>
AN/ARC-210(V) Electronic Protection Radio System	N88-NTSP-A-50-9012B/D	PMA209	Preliminary Draft Mar 98
AN/TPX-42A(V)8, (V)12, and (V)13	E-50-8502/A	PMA213	Draft Aug 99
AN/APX-100(V) Transponder Set	A-50-8305B/P	PMA209	Draft Sep 99
AIMS MARK XII Identification Friend or Foe (IFF)	E-30-7115E/D	PMA213	Proposed May 99

## **PART II - BILLET AND PERSONNEL REQUIREMENTS**

The following elements are not affected by the MATCALs 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**

**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 (TFMMS)

**DATE:** 4/1/99

<b>ACTIVITY, UIC</b>	<b>PFYs</b>	<b>CFY00</b>	<b>FY01</b>	<b>FY02</b>	<b>FY03</b>	<b>FY04</b>
<b>FLEET SUPPORT ACTIVITIES - USMC</b>						
COMCAB, Cherry Point	67358	1	0	0	0	0
H&HS MCAF, Quantico	00262	1	0	0	0	0
H&HS MCAS, Beaufort	60169	1	0	0	0	0
H&HS MCAS, Cherry Point	00146	1	0	0	0	0
H&HS MCAS, New River	62573	1	0	0	0	0
MACS-2 HQ, Cherry Point	09554	1	0	0	0	0
MACS-2, ATC Det-A, Beaufort	09274	1	0	0	0	0
MACS-2, ATC Det-B, New River	09554	1	0	0	0	0
MACS-2, ATC Det-C, Cherry Point	57080	1	0	0	0	0
MACS-2, ATC Det-D, Bouge Field	53980	1	0	0	0	0
MACS-24 HQ, Dam Neck	08854	1	0	0	0	0
MACS-24, Det-B, Willow Grove	09504	1	0	0	0	0
MAD, Patuxent River	67356	1	0	0	0	0
MATCS-48, Glenview	67835	1	0	0	0	0
MC Pers Dept of Navy Non-Dept	00000	1	0	0	0	0
MTACS-28, Cherry Point	57080	1	0	0	0	0
COMCAB, Miramar	67428	1	0	0	0	0
H&HS MCAS, Camp Pendleton	67604	1	0	0	0	0
H&HS MCAS, Futenma	63026	1	0	0	0	0
H&HS MCAS, Iwakuni	62613	1	0	0	0	0
H&HS MCAS, Miramar	31200	1	0	0	0	0
H&HS MCAS, Yuma	62974	1	0	0	0	0
MACS-1 HQ, Yuma	09541	1	0	0	0	0
MACS-1, ATC Det-A, Pendleton	31053	1	0	0	0	0
MACS-1, ATC Det-B, Miramar	46623	1	0	0	0	0
MACS-1, ATC Det-C, Yuma	31055	1	0	0	0	0
MACS-1, ATC Det-D, Twenty Nine Palms	31053	1	0	0	0	0
MACS-23 HQ, Aurora	67834	1	0	0	0	0
MACS-24, ATC Det-A, Fort Worth	55175	1	0	0	0	0
MACS-4 HQ, Futenma	08848	1	0	0	0	0
MACS-4, ATC Det-A, Iwakuni	09249	1	0	0	0	0
MACS-4, ATC Det-B, Futenma	62613	1	0	0	0	0
MATCS-38, Miramar	46623	1	0	0	0	0
MAWTS-1, Yuma	55167	1	0	0	0	0
MCAF, Kaneohe Bay	00318	1	0	0	0	0
MCAGCC, Twenty Nine Palms	67399	1	0	0	0	0
MTACS-18, Futenma	57079	1	0	0	0	0
<b>TOTAL:</b>		<b>37</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Note: This is not a MATCALs delivery schedule. The above activities are activities manned with Marine Corps personnel holding ATC MOSs. The training courses for attainment of ATC MOSs will include MATCALs training.

The following Billet and Personnel Requirements do not reflect the addition or consolidation of the new Primary MOS 7257, or the recategorization of MOSs 7252/7253/7254. These updates will be included in future NTSPs as Marine Table of Organizations become updated. These changes will not increase or decrease manpower requirements for MATCALs.

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

ACTIVITY, UIC, PHASING INCREMENT	BILLETTS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
FLEET SUPPORT ACTIVITIES - USMC					
<b>COMCAB, Cherry Point, 67358</b>					
USMC	0	2	MSGT	7291	
	0	2	SSGT	7291	
<b>ACTIVITY TOTAL:</b>	<b>0</b>	<b>4</b>			
<b>H&amp;HS MCAF, Quantico, 00262</b>					
USMC	1	0	CWO3	5950	
	1	0	LT	7220	
	0	1	CPL	5953	5956
	0	1	CPL	5954	
	0	2	CPL	7252	
	0	4	CPL	7253	
	0	1	GYSGT	7291	
	0	2	LCPL	5953	5956
	0	3	LCPL	5954	
	0	5	LCPL	7252	
	0	5	LCPL	7253	
	0	1	SGT	5954	
	0	2	SGT	7252	
	0	2	SGT	7253	
	0	2	SSGT	7291	
<b>ACTIVITY TOTAL:</b>	<b>2</b>	<b>31</b>			
<b>H&amp;HS MCAS, Beaufort, 60169</b>					
USMC	1	0	CAPT	7220	
	1	0	CWO3	5950	
	1	0	LT	7220	
	0	1	CPL	5952	
	0	1	CPL	5953	5956
	0	1	CPL	5954	
	0	3	CPL	7252	
	0	2	CPL	7253	
	0	1	GYSGT	5953	5956
	0	2	GYSGT	7291	
	0	4	LCPL	5953	5956
	0	2	LCPL	5954	
	0	5	LCPL	7252	
	0	8	LCPL	7253	
	0	1	MSGT	7291	
	0	1	SGT	5952	
	0	2	SGT	7252	
	0	2	SGT	7253	
	0	1	SSGT	5953	5956
	0	1	SSGT	5954	
	0	4	SSGT	7291	

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

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
<b>H&amp;HS MCAS, Beaufort, 60169, FY00 Increment</b>					
USMC	0	1	CPL	7252	
<b>ACTIVITY TOTAL:</b>	<b>3</b>	<b>43</b>			
<b>H&amp;HS MCAS, Cherry Point, 00146</b>					
USMC	0	1	CPL	5952	
	0	1	CPL	5953	5956
	0	1	CPL	5954	
	0	2	CPL	7252	
	0	4	CPL	7253	
	0	2	GYSGT	7291	
	0	1	LCPL	5952	
	0	2	LCPL	5953	
	0	3	LCPL	5954	
	0	3	LCPL	7252	
	0	5	LCPL	7253	
	0	1	MSGT	7291	
	0	1	SGT	5953	5956
	0	2	SGT	7252	
	0	2	SGT	7253	
	0	3	SGT	7253	7254
	0	1	SSGT	5952	
	0	1	SSGT	5953	
	0	1	SSGT	5954	
	0	8	SSGT	7291	
<b>ACTIVITY TOTAL:</b>	<b>0</b>	<b>45</b>			
<b>H&amp;HS MCAS, New River, 62573</b>					
USMC	1	0	CAPT	7220	
	0	1	CPL	5952	
	0	1	CPL	5953	
	0	1	CPL	5954	
	0	3	CPL	7252	
	0	1	CPL	7253	
	0	3	GYSGT	7291	
	0	2	LCPL	5952	
	0	3	LCPL	5953	
	0	2	LCPL	5954	
	0	5	LCPL	7252	
	0	5	LCPL	7253	
	0	1	SGT	5952	
	0	1	SGT	5953	
	0	1	SGT	5954	
	0	2	SGT	7252	
	0	2	SGT	7253	
	0	1	SSGT	5953	
	0	6	SSGT	7291	
<b>ACTIVITY TOTAL:</b>	<b>1</b>	<b>41</b>			

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

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
MACS-2 HQ, Cherry Point, 09554					
USMC	1	0	CAPT	7220	
	0	1	MGYSGT	7291	
	0	1	MSGT	7291	
	0	1	SGT	5953	
ACTIVITY TOTAL:	1	3			
MACS-2, ATC Det-A, Beaufort, 09274					
USMC	1	0	CAPT	7220	
	1	0	CWO2	5950	
	2	0	LT	7220	
	0	1	CPL	1142	9954
	0	1	CPL	1161	
	0	1	CPL	0121	
	0	1	CPL	3051	
	0	1	CPL	5952	
	0	2	CPL	5953	
	0	2	CPL	5954	
	0	1	CPL	6046	
	0	1	CPL	6492	
	0	2	CPL	7252	
	0	2	CPL	7253	
	0	1	GYSGT	1169	
	0	1	GYSGT	5952	
	0	1	GYSGT	5953	
	0	1	GYSGT	5954	
	0	2	GYSGT	7291	
	0	1	LCPL	0121	
	0	1	LCPL	1341	
	0	3	LCPL	5952	
	0	4	LCPL	5953	
	0	4	LCPL	5954	
	0	1	LCPL	6672	
	0	7	LCPL	7252	
	0	11	LCPL	7253	
	0	1	MSGT	5959	
	0	1	MSGT	7291	
	0	1	SGT	1341	
	0	1	SGT	3043	
	0	1	SGT	5952	
	0	1	SGT	5953	
	0	1	SGT	5954	
	0	1	SGT	6672	
	0	2	SGT	7252	
	0	3	SGT	7253	7254
	0	1	SSGT	5952	
	0	1	SSGT	5953	
	0	1	SSGT	5954	

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

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
USMC	0	3	SSGT	7291	
<b>ACTIVITY TOTAL:</b>	<b>4</b>	<b>72</b>			
<b>MACS-2, ATC Det-B, New River, 09554</b>					
USMC	1	0	CAPT	7220	
	1	0	CWO2	5950	
	2	0	LT	7220	
	0	1	CPL	1142	9954
	0	1	CPL	1161	
	0	1	CPL	0121	
	0	1	CPL	3051	
	0	1	CPL	5952	
	0	2	CPL	5953	
	0	2	CPL	5954	
	0	1	CPL	6046	
	0	1	CPL	6492	
	0	2	CPL	7252	
	0	2	CPL	7253	
	0	1	GYSGT	1169	
	0	1	GYSGT	5952	
	0	1	GYSGT	5953	
	0	1	GYSGT	5954	
	0	2	GYSGT	7291	
	0	1	LCPL	0121	
	0	1	LCPL	1341	
	0	3	LCPL	5952	
	0	4	LCPL	5953	
	0	4	LCPL	5954	
	0	1	LCPL	6672	
	0	7	LCPL	7252	
	0	11	LCPL	7253	
	0	1	MSGT	5959	
	0	1	MSGT	7291	
	0	1	SGT	1341	
	0	1	SGT	3043	
	0	1	SGT	5952	
	0	1	SGT	5953	
	0	1	SGT	5954	
	0	1	SGT	6672	
	0	2	SGT	7252	
	0	3	SGT	7253	7254
	0	1	SSGT	5952	
	0	1	SSGT	5953	
	0	1	SSGT	5954	
	0	3	SSGT	7291	
<b>ACTIVITY TOTAL:</b>	<b>4</b>	<b>72</b>			

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

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
MACS-2, ATC Det-C, Cherry Point, 57080					
USMC	1	0	CAPT	7220	
	1	0	CWO2	5950	
	2	0	LT	7220	
	0	1	CPL	1142	9954
	0	1	CPL	1161	
	0	1	CPL	0121	
	0	1	CPL	3051	
	0	1	CPL	5952	
	0	2	CPL	5953	
	0	2	CPL	5954	
	0	1	CPL	6046	
	0	1	CPL	6492	
	0	2	CPL	7252	
	0	2	CPL	7253	
	0	1	GYSGT	1169	
	0	1	GYSGT	5952	
	0	1	GYSGT	5953	
	0	1	GYSGT	5954	
	0	2	GYSGT	7291	
	0	1	LCPL	0121	
	0	1	LCPL	1341	
	0	3	LCPL	5952	
	0	4	LCPL	5953	
	0	4	LCPL	5954	
	0	1	LCPL	6672	
	0	7	LCPL	7252	
	0	11	LCPL	7253	
	0	1	MSGT	5959	
	0	1	MSGT	7291	
	0	1	SGT	1341	
	0	1	SGT	3043	
	0	1	SGT	5952	
	0	1	SGT	5953	
	0	1	SGT	5954	
	0	1	SGT	6672	
	0	2	SGT	7252	
	0	3	SGT	7253	7254
	0	1	SSGT	5952	
	0	1	SSGT	5953	
	0	1	SSGT	5954	
	0	3	SSGT	7291	
<b>ACTIVITY TOTAL:</b>	<b>4</b>	<b>72</b>			
MACS-2, ATC Det-D, Bouge Field, 53980					
USMC	1	0	CAPT	7220	
	1	0	CWO2	5950	
	2	0	LT	7220	
	0	1	CPL	1142	9954

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

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
USMC	0	1	CPL	1161	
	0	1	CPL	0121	
	0	1	CPL	3051	
	0	1	CPL	5952	
	0	2	CPL	5953	
	0	2	CPL	5954	
	0	1	CPL	6046	
	0	1	CPL	6492	
	0	2	CPL	7252	
	0	2	CPL	7253	
	0	1	GYSGT	1169	
	0	1	GYSGT	5952	
	0	1	GYSGT	5953	
	0	1	GYSGT	5954	
	0	2	GYSGT	7291	
	0	1	LCPL	0121	
	0	1	LCPL	1341	
	0	3	LCPL	5952	
	0	4	LCPL	5953	
	0	4	LCPL	5954	
	0	1	LCPL	6672	
	0	7	LCPL	7252	
	0	11	LCPL	7253	
	0	1	MSGT	5959	
	0	1	MSGT	7291	
	0	1	SGT	1341	
	0	1	SGT	3043	
	0	1	SGT	5952	
	0	1	SGT	5953	
	0	1	SGT	5954	
	0	1	SGT	6672	
	0	2	SGT	7252	
	0	3	SGT	7253	7254
0	1	SSGT	5952		
0	1	SSGT	5953		
0	1	SSGT	5954		
0	3	SSGT	7291		
<b>ACTIVITY TOTAL:</b>	<b>4</b>	<b>72</b>			
<b>MACS-24 HQ, Dam Neck, 08854</b>					
AR	1	0	CAPT	7220	7277
SMCR	0	1	GYSGT	7291	
	0	1	LCPL	5953	
	0	1	MGYSGT	7291	
	0	1	SGT	5953	
<b>ACTIVITY TOTAL:</b>	<b>1</b>	<b>4</b>			

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

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
<b>MACS-24, Det-B, Willow Grove, 09504</b>					
USMC	1	0	LT	7220	
	0	1	GYSGT	5952	
	0	1	GYSGT	5953	
	0	1	GYSGT	5954	
	0	1	GYSGT	7291	
	0	1	SGT	5952	
	0	1	SGT	5953	
	0	1	SGT	5954	
	0	1	SSGT	5953	
	0	1	SSGT	5954	
	0	1	SSGT	7291	
SMCR	1	0	CAPT	7220	
	1	0	CWO2	5950	
	1	0	LT	7220	
	0	1	CPL	5952	
	0	2	CPL	5953	
	0	2	CPL	5954	
	0	2	CPL	7252	
	0	2	CPL	7253	
	0	1	GYSGT	7291	
	0	3	LCPL	5952	
	0	4	LCPL	5953	
	0	4	LCPL	5954	
	0	7	LCPL	7252	
	0	11	LCPL	7253	
	0	1	MSGT	7291	
	0	2	SGT	7252	
	0	3	SGT	7253	7254
	0	1	SSGT	5952	
	0	2	SSGT	7291	
<b>ACTIVITY TOTAL:</b>	4	58			
<b>MAD, Patuxent River, 67356</b>					
USMC	0	1	GYSGT	5953	
<b>ACTIVITY TOTAL:</b>	0	1			
<b>MATCS-48, Glenview, 67835</b>					
SMCR	1	0	CAPT	7220	
<b>ACTIVITY TOTAL:</b>	1	0			
<b>MC Pers Dept of Navy Non-Dept, 00000</b>					
USMC	1	0	CWO5	5950	
<b>ACTIVITY TOTAL:</b>	1	0			

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

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
<b>MTACS-28, Cherry Point, 57080</b>					
USMC	1	0	CAPT	7220	
<b>ACTIVITY TOTAL:</b>	<b>1</b>	<b>0</b>			
<b>COMCAB, Miramar, 67428</b>					
USMC	0	2	MSGT	7291	
	0	2	SSGT	7291	
<b>ACTIVITY TOTAL:</b>	<b>0</b>	<b>4</b>			
<b>H&amp;HS MCAS, Camp Pendleton, 67604</b>					
USMC	1	0	CAPT	7220	
	1	0	CWO4	5950	
	1	0	LT	7220	
	0	1	CPL	5952	
	0	2	CPL	5953	5957
	0	2	CPL	5954	
	0	3	CPL	7252	
	0	9	CPL	7253	
	0	1	GYSGT	5953	
	0	2	GYSGT	7291	
	0	1	LCPL	5952	
	0	5	LCPL	5953	5957
	0	4	LCPL	5954	
	0	5	LCPL	7252	
	0	1	MSGT	7291	
	0	2	SGT	5953	5957
	0	1	SGT	7252	
	0	4	SGT	7253	
	0	1	SSGT	5954	
	0	4	SSGT	7291	
<b>ACTIVITY TOTAL:</b>	<b>3</b>	<b>48</b>			
<b>H&amp;HS MCAS, Futenma, 63026</b>					
USMC	3	0	LT	7220	
	0	2	CPL	5952	
	0	2	CPL	5953	
	0	1	CPL	5954	
	0	4	CPL	7252	
	0	7	CPL	7253	
	0	1	LCPL	5952	
	0	3	LCPL	5953	
	0	1	LCPL	5954	
	0	8	LCPL	7252	
	0	8	LCPL	7253	
	0	1	MSGT	7291	
	0	1	SGT	5953	
	0	1	SGT	5954	9954

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

ACTIVITY, UIC, PHASING INCREMENT	BILLETTS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
<b>H&amp;HS MCAS, Futenma, 63026, FY02 Increment</b>					
USMC	0	4	SGT	7252	
	0	3	SGT	7253	
	0	1	SSGT	5954	
	0	3	SSGT	7291	
	0	1	CPL	7253	
	0	4	LCPL	7253	
	0	1	SGT	7253	
<b>ACTIVITY TOTAL:</b>	<b>3</b>	<b>57</b>			
<b>H&amp;HS MCAS, Iwakuni, 62613</b>					
USMC	1	0	CAPT	7220	
	0	1	CPL	5953	
	0	1	CPL	5954	
	0	4	CPL	7252	
	0	3	CPL	7253	
	0	1	GYSGT	5952	
	0	2	GYSGT	7291	
	0	2	LCPL	5953	
	0	1	LCPL	5954	
	0	4	LCPL	7253	
	0	1	MSGT	7291	
	0	1	SGT	5953	
	0	1	SGT	5954	
	0	1	SGT	7252	
	0	1	SGT	7253	
	0	1	SSGT	5953	
	0	6	SSGT	7291	
<b>ACTIVITY TOTAL:</b>	<b>1</b>	<b>31</b>			
<b>H&amp;HS MCAS, Miramar, 31200</b>					
USMC	1	0	LT	7220	
	0	2	CPL	5952	
	0	2	CPL	5953	5957
	0	3	CPL	5954	
	0	9	CPL	7252	
	0	1	CPL	7253	
	0	2	GYSGT	7291	
	0	1	LCPL	5952	
	0	1	LCPL	5953	5957
	0	2	LCPL	5954	
	0	7	LCPL	7252	
	0	6	LCPL	7253	
	0	1	MSGT	7291	
	0	1	SGT	5952	
	0	2	SGT	5953	5957
	0	1	SGT	5954	
	0	4	SGT	7252	

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

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
	0	2	SGT	7253	
	0	1	SSGT	5952	
	0	1	SSGT	5953	5957
	0	1	SSGT	5954	
	0	6	SSGT	7291	
<b>ACTIVITY TOTAL:</b>	<b>1</b>	<b>56</b>			
<b>H&amp;HS MCAS, Yuma, 62974</b>					
USMC	0	1	CPL	5952	
	0	3	CPL	5953	5956
	0	3	CPL	5954	
	0	3	CPL	7252	
	0	5	CPL	7253	
	0	1	GYSGT	5954	
	0	2	GYSGT	7291	
	0	4	LCPL	5953	5956
	0	3	LCPL	5954	
	0	6	LCPL	7252	
	0	13	LCPL	7253	
	0	1	MSGT	7291	
	0	1	SGT	5953	5956
	0	2	SGT	5954	
	0	3	SGT	7252	
	0	5	SGT	7253	
	0	5	SGT	7253	7254
	0	1	SSGT	5953	5956
	0	11	SSGT	7291	
<b>ACTIVITY TOTAL:</b>	<b>0</b>	<b>73</b>			
<b>MACS-1 HQ, Yuma, 09541</b>					
USMC	1	0	CAPT	7220	
	0	1	MGYSGT	7291	
	0	1	MSGT	7291	
	0	1	SGT	5953	
<b>ACTIVITY TOTAL:</b>	<b>1</b>	<b>3</b>			
<b>MACS-1, ATC Det-A, Pendleton, 31053</b>					
USMC	1	0	CAPT	7220	
	1	0	CWO2	5950	
	2	0	LT	7220	
	0	1	CPL	1142	9954
	0	1	CPL	1161	
	0	1	CPL	0121	
	0	1	CPL	3051	
	0	1	CPL	5952	
	0	2	CPL	5953	
	0	2	CPL	5954	

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

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
USMC	0	1	CPL	6046	
	0	1	CPL	6492	
	0	2	CPL	7252	
	0	2	CPL	7253	
	0	1	GYSGT	1169	
	0	1	GYSGT	5952	
	0	1	GYSGT	5953	
	0	1	GYSGT	5954	
	0	2	GYSGT	7291	
	0	1	LCPL	0121	
	0	1	LCPL	1341	
	0	3	LCPL	5952	
	0	4	LCPL	5953	
	0	4	LCPL	5954	
	0	1	LCPL	6672	
	0	7	LCPL	7252	
	0	11	LCPL	7253	
	0	1	MSGT	5959	
	0	1	MSGT	7291	
	0	1	SGT	1341	
	0	1	SGT	3043	
	0	1	SGT	5952	
	0	1	SGT	5953	
	0	1	SGT	5954	
	0	1	SGT	6672	
	0	2	SGT	7252	
	0	3	SGT	7253	7254
	0	1	SSGT	5952	
	0	1	SSGT	5953	
	0	1	SSGT	5954	
	0	3	SSGT	7291	
	<b>ACTIVITY TOTAL:</b>	<b>4</b>	<b>72</b>		
<b>MACS-1, ATC Det-B, Miramar, 46623</b>					
USMC	1	0	CAPT	7220	
	1	0	CWO2	5950	
	2	0	LT	7220	
	0	1	CPL	1142	9954
	0	1	CPL	1161	
	0	1	CPL	0121	
	0	1	CPL	3051	
	0	1	CPL	5952	
	0	2	CPL	5953	
	0	2	CPL	5954	
	0	1	CPL	6046	
	0	1	CPL	6492	
	0	2	CPL	7252	
	0	2	CPL	7253	

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

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
USMC	0	1	GYSGT	1169	
	0	1	GYSGT	5952	
	0	1	GYSGT	5953	
	0	1	GYSGT	5954	
	0	2	GYSGT	7291	
	0	1	LCPL	0121	
	0	1	LCPL	1341	
	0	3	LCPL	5952	
	0	4	LCPL	5953	
	0	4	LCPL	5954	
	0	1	LCPL	6672	
	0	7	LCPL	7252	
	0	11	LCPL	7253	
	0	1	MSGT	5959	
	0	1	MSGT	7291	
	0	1	SGT	1341	
	0	1	SGT	3043	
	0	1	SGT	5952	
	0	1	SGT	5953	
	0	1	SGT	5954	
	0	1	SGT	6672	
	0	2	SGT	7252	
	0	3	SGT	7253	7254
	0	1	SSGT	5952	
	0	1	SSGT	5953	
	0	1	SSGT	5954	
	0	3	SSGT	7291	
<b>ACTIVITY TOTAL:</b>	<b>4</b>	<b>72</b>			
<b>MACS-1, ATC Det-C, Yuma, 31055</b>					
USMC	1	0	CAPT	7220	
	1	0	CWO2	5950	
	2	0	LT	7220	
	0	1	CPL	1142	9954
	0	1	CPL	1161	
	0	1	CPL	0121	
	0	1	CPL	3051	
	0	1	CPL	5952	
	0	2	CPL	5953	
	0	2	CPL	5954	
	0	1	CPL	6046	
	0	1	CPL	6492	
	0	2	CPL	7252	
	0	2	CPL	7253	
	0	1	GYSGT	1169	
	0	1	GYSGT	5952	
	0	1	GYSGT	5953	
	0	1	GYSGT	5954	

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

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
USMC	0	2	GYSGT	7291	
	0	1	LCPL	0121	
	0	1	LCPL	1341	
	0	3	LCPL	5952	
	0	4	LCPL	5953	
	0	4	LCPL	5954	
	0	1	LCPL	6672	
	0	7	LCPL	7252	
	0	11	LCPL	7253	
	0	1	MSGT	5959	
	0	1	MSGT	7291	
	0	1	SGT	1341	
	0	1	SGT	3043	
	0	1	SGT	5952	
	0	1	SGT	5953	
	0	1	SGT	5954	
	0	1	SGT	6672	
	0	2	SGT	7252	
	0	3	SGT	7253	7254
	0	1	SSGT	5952	
0	1	SSGT	5953		
0	1	SSGT	5954		
0	3	SSGT	7291		
<b>ACTIVITY TOTAL:</b>	<b>4</b>	<b>72</b>			
<b>MACS-1, ATC Det-D, Twenty Nine Palms, 31053</b>					
USMC	1	0	CAPT	7220	
	1	0	CWO2	5950	
	2	0	LT	7220	
	0	1	CPL	1142	9954
	0	1	CPL	1161	
	0	1	CPL	0121	
	0	1	CPL	3051	
	0	1	CPL	5952	
	0	2	CPL	5953	
	0	2	CPL	5954	
	0	1	CPL	6046	
	0	1	CPL	6492	
	0	2	CPL	7252	
	0	2	CPL	7253	
	0	1	GYSGT	1169	
	0	1	GYSGT	5952	
	0	1	GYSGT	5953	
	0	1	GYSGT	5954	
	0	2	GYSGT	7291	
	0	1	LCPL	0121	
0	1	LCPL	1341		
0	3	LCPL	5952		

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

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS	
	OFF	ENL				
USMC	0	4	LCPL	5953		
	0	4	LCPL	5954		
	0	1	LCPL	6672		
	0	7	LCPL	7252		
	0	11	LCPL	7253		
	0	1	MSGT	5959		
	0	1	MSGT	7291		
	0	1	SGT	1341		
	0	1	SGT	3043		
	0	1	SGT	5952		
	0	1	SGT	5953		
	0	1	SGT	5954		
	0	1	SGT	6672		
	0	2	SGT	7252		
	0	3	SGT	7253	7254	
	0	1	SSGT	5952		
	0	1	SSGT	5953		
	0	1	SSGT	5954		
	0	3	SSGT	7291		
	<b>ACTIVITY TOTAL:</b>	<b>4</b>	<b>72</b>			
<b>MACS-23 HQ, Aurora, 67834</b>						
SMCR	1	0	CAPT	7220	7277	
	0	1	GYSGT	7291		
	0	1	LCPL	5953		
	0	1	MGYSGT	7291		
	0	1	SGT	5953		
<b>ACTIVITY TOTAL:</b>	<b>1</b>	<b>4</b>				
<b>MACS-24, ATC Det-A, Fort Worth, 55175</b>						
USMC	1	0	LT	7220		
	0	1	GYSGT	5952		
	0	1	GYSGT	5953		
	0	1	GYSGT	5954		
	0	1	GYSGT	7291		
	0	1	LCPL	5954		
	0	1	SGT	5952		
	0	1	SGT	5953		
	0	1	SGT	5954		
	0	1	SGT	7252		
	0	1	SSGT	5953		
	0	1	SSGT	7291		
	SMCR	1	0	CAPT	7220	
		1	0	CWO2	5950	
1		0	LT	7220		
0		1	CPL	5952		

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

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
SMCR	0	2	CPL	5953	
	0	2	CPL	5954	
	0	2	CPL	7252	
	0	2	CPL	7253	
	0	1	GYSGT	7291	
	0	3	LCPL	5952	
	0	4	LCPL	5953	
	0	3	LCPL	5954	
	0	7	LCPL	7252	
	0	11	LCPL	7253	
	0	1	MSGT	7291	
	0	1	SGT	7252	
	0	3	SGT	7253	7254
	0	1	SSGT	5952	
	0	1	SSGT	5954	
	0	2	SSGT	7291	
<b>ACTIVITY TOTAL:</b>	<b>4</b>	<b>58</b>			
<b>MACS-4 HQ, Futenma, 08848</b>					
USMC	1	0	CAPT	7220	7277
	0	1	GYSGT	7291	
	0	1	LCPL	5953	
	0	1	MGYSGT	7291	
	0	1	SGT	5953	
<b>ACTIVITY TOTAL:</b>	<b>1</b>	<b>4</b>			
<b>MACS-4, ATC Det-A, Iwakuni, 09249</b>					
USMC	1	0	CAPT	7220	
	1	0	CWO2	5950	
	2	0	LT	7220	
	0	1	CPL	1142	9954
	0	1	CPL	1161	
	0	1	CPL	0121	
	0	1	CPL	3051	
	0	1	CPL	5952	
	0	2	CPL	5953	
	0	2	CPL	5954	
	0	1	CPL	6046	
	0	1	CPL	6492	
	0	2	CPL	7252	
	0	2	CPL	7253	
	0	1	GYSGT	1169	
	0	1	GYSGT	5952	
	0	1	GYSGT	5953	
	0	1	GYSGT	5954	
	0	2	GYSGT	7291	
	0	1	LCPL	0121	

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

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
USMC	0	1	LCPL	1341	
	0	3	LCPL	5952	
	0	4	LCPL	5953	
	0	4	LCPL	5954	
	0	1	LCPL	6672	
	0	7	LCPL	7252	
	0	11	LCPL	7253	
	0	1	MSGT	5959	
	0	1	MSGT	7291	
	0	1	SGT	1341	
	0	1	SGT	3043	
	0	1	SGT	5952	
	0	1	SGT	5953	
	0	1	SGT	5954	
	0	1	SGT	6672	
	0	2	SGT	7252	
	0	3	SGT	7253	7254
	0	1	SSGT	5952	
	0	1	SSGT	5953	
	0	1	SSGT	5954	
0	3	SSGT	7291		
<b>ACTIVITY TOTAL:</b>	<b>4</b>	<b>72</b>			
<b>MACS-4, ATC Det-B, Futenma, 62613</b>					
USMC	1	0	CAPT	7220	
	1	0	CWO2	5950	
	2	0	LT	7220	
	0	1	CPL	1142	9954
	0	1	CPL	1161	
	0	1	CPL	0121	
	0	1	CPL	3051	
	0	1	CPL	5952	
	0	2	CPL	5953	
	0	2	CPL	5954	
	0	1	CPL	6046	
	0	1	CPL	6492	
	0	2	CPL	7252	
	0	2	CPL	7253	
	0	1	GYSGT	1169	
	0	1	GYSGT	5952	
	0	1	GYSGT	5953	
	0	1	GYSGT	5954	
	0	2	GYSGT	7291	
	0	1	LCPL	0121	
	0	1	LCPL	1341	
	0	3	LCPL	5952	
	0	4	LCPL	5953	

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

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
USMC	0	4	LCPL	5954	
	0	1	LCPL	6672	
	0	7	LCPL	7252	
	0	11	LCPL	7253	
	0	1	MSGT	5959	
	0	1	MSGT	7291	
	0	1	SGT	1341	
	0	1	SGT	3043	
	0	1	SGT	5952	
	0	1	SGT	5953	
	0	1	SGT	5954	
	0	1	SGT	6672	
	0	2	SGT	7252	
	0	3	SGT	7253	7254
	0	1	SSGT	5952	
	0	1	SSGT	5953	
	0	1	SSGT	5954	
0	3	SSGT	7291		
<b>ACTIVITY TOTAL:</b>	<b>4</b>	<b>72</b>			
<b>MATCS-38, Miramar, 46623</b>					
USMC	1	0	CAPT	7220	
<b>ACTIVITY TOTAL:</b>	<b>1</b>	<b>0</b>			
<b>MAWTS-1, Yuma, 55167</b>					
USMC	1	0	CAPT	7220	
	0	1	MSGT	7291	9962
<b>ACTIVITY TOTAL:</b>	<b>1</b>	<b>1</b>			
<b>MCAF, Kaneohe Bay, 00318</b>					
USMC	1	0	CWO3	5950	
	0	1	CPL	5952	
	0	1	CPL	5953	
	0	4	CPL	5954	
	0	2	CPL	7252	
	0	1	GYSGT	5954	
	0	1	LCPL	5952	
	0	2	LCPL	5953	
	0	5	LCPL	5954	
	0	1	SGT	5954	
	0	1	SSGT	5953	
<b>MCAF, Kaneohe Bay, 00318, FY02 Increment</b>					
USMC	0	3	LCPL	5953	
<b>ACTIVITY TOTAL:</b>	<b>1</b>	<b>22</b>			

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

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
<b>MCAGCC, Twenty Nine Palms, 67399</b>					
USMC	0	1	CPL	5954	
	0	1	LCPL	5954	
<b>ACTIVITY TOTAL:</b>	<b>0</b>	<b>2</b>			
<b>MTACS-18, Futenma, 57079</b>					
USMC	1	0	CAPT	7220	
<b>ACTIVITY TOTAL:</b>	<b>1</b>	<b>0</b>			

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

DESIG/ RATING	PNEC/SNEC PMOS/SMOS	PFYs		CFY00		FY01		FY02		FY03		FY04	
		OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
USMC FLEET SUPPORT ACTIVITIES - USMC													
CAPT	7220		20		0		0		0		0		0
CAPT	7220	7277	1		0		0		0		0		0
CWO2	5950		10		0		0		0		0		0
CWO3	5950		3		0		0		0		0		0
CWO4	5950		1		0		0		0		0		0
CWO5	5950		1		0		0		0		0		0
LT	7220		29		0		0		0		0		0
CPL	1142	9954		10		0		0		0		0	0
CPL	1161			10		0		0		0		0	0
CPL	0121			10		0		0		0		0	0
CPL	3051			10		0		0		0		0	0
CPL	5952			20		0		0		0		0	0
CPL	5953			25		0		0		0		0	0
CPL	5953	5956		6		0		0		0		0	0
CPL	5953	5957		4		0		0		0		0	0
CPL	5954			39		0		0		0		0	0
CPL	6046			10		0		0		0		0	0
CPL	6492			10		0		0		0		0	0
CPL	7252			55		1		0		0		0	0
CPL	7253			56		0		0		1		0	0
GYSGT	1169			10		0		0		0		0	0
GYSGT	5952			13		0		0		0		0	0
GYSGT	5953			14		0		0		0		0	0
GYSGT	5953	5956		1		0		0		0		0	0
GYSGT	5954			14		0		0		0		0	0
GYSGT	7291			39		0		0		0		0	0
LCPL	0121			10		0		0		0		0	0
LCPL	1341			10		0		0		0		0	0
LCPL	5952			37		0		0		0		0	0
LCPL	5953			53		0		0		3		0	0
LCPL	5953	5956		10		0		0		0		0	0
LCPL	5953	5957		6		0		0		0		0	0
LCPL	5954			68		0		0		0		0	0
LCPL	6672			10		0		0		0		0	0
LCPL	7252			114		0		0		0		0	0
LCPL	7253			164		0		0		4		0	0
MGYSGT	7291			3		0		0		0		0	0
MSGT	5959			10		0		0		0		0	0
MSGT	7291			23		0		0		0		0	0
MSGT	7291	9962		1		0		0		0		0	0
SGT	1341			10		0		0		0		0	0
SGT	3043			10		0		0		0		0	0
SGT	5952			15		0		0		0		0	0
SGT	5953			18		0		0		0		0	0
SGT	5953	5956		2		0		0		0		0	0
SGT	5953	5957		4		0		0		0		0	0
SGT	5954			19		0		0		0		0	0

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

DESIG/ RATING	PNEC/SNEC PMOS/SMOS		PFYs		CFY00		FY01		FY02		FY03		FY04	
			OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
SGT	5954	9954		1		0		0		0		0		0
SGT	6672			10		0		0		0		0		0
SGT	7252			42		0		0		0		0		0
SGT	7253			23		0		0		1		0		0
SGT	7253	7254		38		0		0		0		0		0
SSGT	5952			12		0		0		0		0		0
SSGT	5953			16		0		0		0		0		0
SSGT	5953	5956		2		0		0		0		0		0
SSGT	5953	5957		1		0		0		0		0		0
SSGT	5954			16		0		0		0		0		0
SSGT	7291			86		0		0		0		0		0
USMC FLEET SUPPORT ACTIVITIES - AR														
CAPT	7220	7277		1		0		0		0		0		0
USMC FLEET SUPPORT ACTIVITIES - SMCR														
CAPT	7220			3		0		0		0		0		0
CAPT	7220	7277		1		0		0		0		0		0
CWO2	5950			2		0		0		0		0		0
LT	7220			2		0		0		0		0		0
CPL	5952			2		0		0		0		0		0
CPL	5953			4		0		0		0		0		0
CPL	5954			4		0		0		0		0		0
CPL	7252			4		0		0		0		0		0
CPL	7253			4		0		0		0		0		0
GYSGT	7291			4		0		0		0		0		0
LCPL	5952			6		0		0		0		0		0
LCPL	5953			10		0		0		0		0		0
LCPL	5954			7		0		0		0		0		0
LCPL	7252			14		0		0		0		0		0
LCPL	7253			22		0		0		0		0		0
MGYSGT	7291			2		0		0		0		0		0
MSGT	7291			2		0		0		0		0		0
SGT	5953			2		0		0		0		0		0
SGT	7252			3		0		0		0		0		0
SGT	7253	7254		6		0		0		0		0		0
SSGT	5952			2		0		0		0		0		0
SSGT	5954			1		0		0		0		0		0
SSGT	7291			4		0		0		0		0		0
<b>SUMMARY TOTALS:</b>														
USMC FLEET SUPPORT ACTIVITIES - USMC														
			65	1200		0	1	0	0	0	9	0	0	0
USMC FLEET SUPPORT ACTIVITIES - AR														
			1			0		0		0		0		0
USMC FLEET SUPPORT ACTIVITIES - SMCR														
			8	103		0	0	0	0	0	0	0	0	0

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

DESIG/ RATING	PNEC/SNEC PMOS/SMOS	PFYs		CFY00		FY01		FY02		FY03		FY04	
		OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
<b>GRAND TOTALS:</b>													
USMC - USMC		65	1200	0	1	0	0	0	9	0	0	0	0
USMC - AR		1		0		0		0		0		0	
USMC - SMCR		8	103	0	0	0	0	0	0	0	0	0	0

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

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
FLEET SUPPORT ACTIVITIES - USMC					
<b>H&amp;HS MCAS, Beaufort, 60169, FY00 Increment</b>					
USMC	0	1	SGT	7252	
<b>ACTIVITY TOTAL:</b>	0	1			
<b>H&amp;HS MCAS, Futenma, 63026, FY02 Increment</b>					
USMC	0	1	CPL	7252	
	0	4	LCPL	7252	
	0	1	SGT	7252	
<b>ACTIVITY TOTAL:</b>	0	6			
<b>H&amp;HS MCAS, Yuma, 62974, FY00 Increment</b>					
USMC	0	3	SGT	7252	
<b>ACTIVITY TOTAL:</b>	0	3			
<b>MCAF, Kaneohe Bay, 00318, FY02 Increment</b>					
USMC	0	1	CPL	5953	
<b>ACTIVITY TOTAL:</b>	0	1			

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

DESIG/ RATING	PNEC/SNEC PMOS/SMOS	PFYs		CFY00		FY01		FY02		FY03		FY04	
		OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
USMC FLEET SUPPORT ACTIVITIES - USMC													
CPL	5953		1		0		0		-1		0		0
CPL	7252		4		0		0		-1		0		0
LCPL	7252		8		0		0		-4		0		0
SGT	7252		9		-4		0		-1		0		0
<b>SUMMARY TOTALS:</b>													
USMC FLEET SUPPORT ACTIVITIES - USMC													
			22		-4		0		-7		0		0
<b>GRAND TOTALS:</b>													
USMC - USMC													
			22		-4		0		-7		0		0

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

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

TRAINING ACTIVITY, LOCATION, UIC: MATSG Pensacola, NATTC Pensacola, 39831

**INSTRUCTOR BILLETS**

USMC

CPL	5953	0	4	0	4	0	4	0	4	0	4	0	4
GYSGT	5953	0	1	0	1	0	1	0	1	0	1	0	1
GYSGT	5954	0	1	0	1	0	1	0	1	0	1	0	1
GYSGT	7291	0	4	0	4	0	4	0	4	0	4	0	4
MSGT	7291	0	1	0	1	0	1	0	1	0	1	0	1
SGT	5952	0	5	0	5	0	5	0	5	0	5	0	5
SGT	5953	0	7	0	7	0	7	0	7	0	7	0	7
SGT	5954	0	5	0	5	0	5	0	5	0	5	0	5
SGT	7252	0	2	0	2	0	2	0	2	0	2	0	2
SGT	7253	0	5	0	5	0	5	0	5	0	5	0	5
SSGT	5952	0	4	0	4	0	4	0	4	0	4	0	4
SSGT	5953	0	4	0	4	0	4	0	4	0	4	0	4
SSGT	5954	0	5	0	5	0	5	0	5	0	5	0	5
SSGT	7291	0	11	0	11	0	11	0	11	0	11	0	11

**SUPPORT BILLETS**

USMC

CAPT	7220	1	0	1	0	1	0	1	0	1	0	1	0
CPL	5952	0	1	0	1	0	1	0	1	0	1	0	1
CPL	5953	0	1	0	1	0	1	0	1	0	1	0	1
CPL	5954	0	1	0	1	0	1	0	1	0	1	0	1
CWO3	5950	1	0	1	0	1	0	1	0	1	0	1	0
GYSGT	7291	0	1	0	1	0	1	0	1	0	1	0	1
LCPL	5952	0	2	0	2	0	2	0	2	0	2	0	2
LCPL	5953	0	4	0	4	0	4	0	4	0	4	0	4
LCPL	5954	0	1	0	1	0	1	0	1	0	1	0	1
SGT	5953	0	1	0	1	0	1	0	1	0	1	0	1
SSGT	5953	0	1	0	1	0	1	0	1	0	1	0	1
SSGT	5954	0	1	0	1	0	1	0	1	0	1	0	1
SSGT	7291	0	1	0	1	0	1	0	1	0	1	0	1
<b>TOTAL:</b>		<b>2</b>	<b>74</b>										

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

ACTIVITY, LOCATION, UIC	USN/ USMC	PFYs		CFY00		FY01		FY02		FY03		FY04	
		OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
MATSG Pensacola, NATTC Pensacola, 39831	USMC	2.7	62.3	2.7	62.3	2.7	62.8	2.7	62.8	2.7	62.8	2.7	62.8
<b>SUMMARY TOTALS:</b>													
	USMC	2.7	62.3	2.7	62.3	2.7	62.8	2.7	62.8	2.7	62.8	2.7	62.8
<b>GRAND TOTALS:</b>													
		2.7	62.3	2.7	62.3	2.7	62.8	2.7	62.8	2.7	62.8	2.7	62.8

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

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

a. OFFICER - USN Not Applicable

b. ENLISTED - USN Not Applicable

**c. OFFICER - USMC**

Fleet Support Billets USMC and AR

CAPT	7220		20	0	20	0	20	0	20	0	20	0	20
CAPT	7220	7277	2	0	2	0	2	0	2	0	2	0	2
CWO2	5950		10	0	10	0	10	0	10	0	10	0	10
CWO3	5950		3	0	3	0	3	0	3	0	3	0	3
CWO4	5950		1	0	1	0	1	0	1	0	1	0	1
CWO5	5950		1	0	1	0	1	0	1	0	1	0	1
LT	7220		29	0	29	0	29	0	29	0	29	0	29

Staff Billets USMC and AR

CAPT	7220		1	0	1	0	1	0	1	0	1	0	1
CWO3	5950		1	0	1	0	1	0	1	0	1	0	1

Chargeable Student Billets USMC and AR

			0	3	3	0	3	0	3	0	3	0	3
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SMCR Billets

CAPT	7220		3	0	3	0	3	0	3	0	3	0	3
CAPT	7220	7277	1	0	1	0	1	0	1	0	1	0	1
CWO2	5950		2	0	2	0	2	0	2	0	2	0	2
LT	7220		2	0	2	0	2	0	2	0	2	0	2

**TOTAL USMC OFFICER BILLETS:**

Fleet Support			66	0	66	0	66	0	66	0	66	0	66
Staff			2	0	2	0	2	0	2	0	2	0	2
Chargeable Student			0	3	3	0	3	0	3	0	3	0	3
SMCR			8	0	8	0	8	0	8	0	8	0	8

**d. ENLISTED - USMC**

Fleet Support Billets USMC and AR

CPL	1142	9954	10	0	10	0	10	0	10	0	10	0	10
CPL	1161		10	0	10	0	10	0	10	0	10	0	10
CPL	0121		10	0	10	0	10	0	10	0	10	0	10
CPL	3051		10	0	10	0	10	0	10	0	10	0	10
CPL	5952		20	0	20	0	20	0	20	0	20	0	20
CPL	5953		25	0	25	0	25	-1	24	0	24	0	24
CPL	5953	5956	6	0	6	0	6	0	6	0	6	0	6
CPL	5953	5957	4	0	4	0	4	0	4	0	4	0	4
CPL	5954		39	0	39	0	39	0	39	0	39	0	39
CPL	6046		10	0	10	0	10	0	10	0	10	0	10

II.A.5. ANNUAL INCREMENTAL AND CUMULATIVE BILLETS

DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS	BILLET BASE	CFY00		FY01		FY02		FY03		FY04	
				+/-	CUM	+/-	CUM	+/-	CUM	+/-	CUM	+/-	CUM
CPL	6492		10	0	10	0	10	0	10	0	10	0	10
CPL	7252		55	0	55	1	56	-1	55	0	55	0	55
CPL	7253		56	0	56	0	56	1	57	0	57	0	57
GYSGT	1169		10	0	10	0	10	0	10	0	10	0	10
GYSGT	5952		13	0	13	0	13	0	13	0	13	0	13
GYSGT	5953		14	0	14	0	14	0	14	0	14	0	14
GYSGT	5953	5956	1	0	1	0	1	0	1	0	1	0	1
GYSGT	5954		14	0	14	0	14	0	14	0	14	0	14
GYSGT	7291		39	0	39	0	39	0	39	0	39	0	39
LCPL	0121		10	0	10	0	10	0	10	0	10	0	10
LCPL	1341		10	0	10	0	10	0	10	0	10	0	10
LCPL	5952		37	0	37	0	37	0	37	0	37	0	37
LCPL	5953		53	0	53	0	53	3	56	0	56	0	56
LCPL	5953	5956	10	0	10	0	10	0	10	0	10	0	10
LCPL	5953	5957	6	0	6	0	6	0	6	0	6	0	6
LCPL	5954		68	0	68	0	68	0	68	0	68	0	68
LCPL	6672		10	0	10	0	10	0	10	0	10	0	10
LCPL	7252		114	0	114	0	114	-4	110	0	110	0	110
LCPL	7253		164	0	164	0	164	4	168	0	168	0	168
MGYSGT	7291		3	0	3	0	3	0	3	0	3	0	3
MSGT	5959		10	0	10	0	10	0	10	0	10	0	10
MSGT	7291		23	0	23	0	23	0	23	0	23	0	23
MSGT	7291	9962	1	0	1	0	1	0	1	0	1	0	1
SGT	1341		10	0	10	0	10	0	10	0	10	0	10
SGT	3043		10	0	10	0	10	0	10	0	10	0	10
SGT	5952		15	0	15	0	15	0	15	0	15	0	15
SGT	5953		18	0	18	0	18	0	18	0	18	0	18
SGT	5953	5956	2	0	2	0	2	0	2	0	2	0	2
SGT	5953	5957	4	0	4	0	4	0	4	0	4	0	4
SGT	5954		19	0	19	0	19	0	19	0	19	0	19
SGT	5954	9954	1	0	1	0	1	0	1	0	1	0	1
SGT	6672		10	0	10	0	10	0	10	0	10	0	10
SGT	7252		42	-4	38	0	38	-1	37	0	37	0	37
SGT	7253		23	0	23	0	23	1	24	0	24	0	24
SGT	7253	7254	38	0	38	0	38	0	38	0	38	0	38
SSGT	5952		12	0	12	0	12	0	12	0	12	0	12
SSGT	5953		16	0	16	0	16	0	16	0	16	0	16
SSGT	5953	5956	2	0	2	0	2	0	2	0	2	0	2
SSGT	5953	5957	1	0	1	0	1	0	1	0	1	0	1
SSGT	5954		16	0	16	0	16	0	16	0	16	0	16
SSGT	7291		86	0	86	0	86	0	86	0	86	0	86
Staff Billets USMC and AR													
CPL	5952		1	0	1	0	1	0	1	0	1	0	1
CPL	5953		5	0	5	0	5	0	5	0	5	0	5
CPL	5954		1	0	1	0	1	0	1	0	1	0	1
GYSGT	5953		1	0	1	0	1	0	1	0	1	0	1
GYSGT	5954		1	0	1	0	1	0	1	0	1	0	1

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

DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS	BILLET BASE	CFY00		FY01		FY02		FY03		FY04	
				+/-	CUM	+/-	CUM	+/-	CUM	+/-	CUM	+/-	CUM
GYSGT	7291		5	0	5	0	5	0	5	0	5	0	5
LCPL	5952		2	0	2	0	2	0	2	0	2	0	2
LCPL	5953		4	0	4	0	4	0	4	0	4	0	4
LCPL	5954		1	0	1	0	1	0	1	0	1	0	1
MSGT	7291		1	0	1	0	1	0	1	0	1	0	1
SGT	5952		5	0	5	0	5	0	5	0	5	0	5
SGT	5953		8	0	8	0	8	0	8	0	8	0	8
SGT	5954		5	0	5	0	5	0	5	0	5	0	5
SGT	7252		2	0	2	0	2	0	2	0	2	0	2
SGT	7253		5	0	5	0	5	0	5	0	5	0	5
SSGT	5952		4	0	4	0	4	0	4	0	4	0	4
SSGT	5953		5	0	5	0	5	0	5	0	5	0	5
SSGT	5954		6	0	6	0	6	0	6	0	6	0	6
SSGT	7291		12	0	12	0	12	0	12	0	12	0	12
Chargeable Student Billets USMC and AR													
			0	62	62	0	62	1	63	0	63	0	63
SMCR Billets													
CPL	5952		2	0	2	0	2	0	2	0	2	0	2
CPL	5953		4	0	4	0	4	0	4	0	4	0	4
CPL	5954		4	0	4	0	4	0	4	0	4	0	4
CPL	7252		4	0	4	0	4	0	4	0	4	0	4
CPL	7253		4	0	4	0	4	0	4	0	4	0	4
GYSGT	7291		4	0	4	0	4	0	4	0	4	0	4
LCPL	5952		6	0	6	0	6	0	6	0	6	0	6
LCPL	5953		10	0	10	0	10	0	10	0	10	0	10
LCPL	5954		7	0	7	0	7	0	7	0	7	0	7
LCPL	7252		14	0	14	0	14	0	14	0	14	0	14
LCPL	7253		22	0	22	0	22	0	22	0	22	0	22
MGYSGT	7291		2	0	2	0	2	0	2	0	2	0	2
MSGT	7291		2	0	2	0	2	0	2	0	2	0	2
SGT	5953		2	0	2	0	2	0	2	0	2	0	2
SGT	7252		3	0	3	0	3	0	3	0	3	0	3
SGT	7253	7254	6	0	6	0	6	0	6	0	6	0	6
SSGT	5952		2	0	2	0	2	0	2	0	2	0	2
SSGT	5954		1	0	1	0	1	0	1	0	1	0	1
SSGT	7291		4	0	4	0	4	0	4	0	4	0	4
<b>TOTAL USMC ENLISTED BILLETS:</b>													
Fleet Support			1200	-4	1196	0	1196	2	1198	0	1198	0	1198
Staff			74	0	74	0	74	0	74	0	74	0	74
Chargeable Student			62	0	62	1	63	0	63	0	63	0	63
SMCR			103	0	103	0	103	0	103	0	103	0	103

**II.B. PERSONNEL REQUIREMENTS**

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

**CIN, COURSE TITLE:** C-103-2080 MATC Radar Technician Pipeline

**COURSE LENGTH:** 30.6 Weeks

**TOUR LENGTH:** 48 Months

**ATTRITION FACTOR:** Marine: 0%

**BACKOUT FACTOR:** 0.61

TRAINING ACTIVITY	SOURCE	ACDU/TAR SELRES	CFY00		FY01		FY02		FY03		FY04	
			OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
MATSG Pensacola, NATTC	Pensacola											
	USMC	USMC		46		47		47		47		47
		SMCR		2		2		2		2		2
		TOTAL:		48		49		49		49		49

**CIN, COURSE TITLE:** C-103-2090, MATC Communications Technician Pipeline

**COURSE LENGTH:** 19.8 Weeks

**TOUR LENGTH:** 48 Months

**ATTRITION FACTOR:** Marine: 0%

**BACKOUT FACTOR:** 0.40

TRAINING ACTIVITY	SOURCE	ACDU/TAR SELRES	CFY00		FY01		FY02		FY03		FY04	
			OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
MATSG Pensacola, NATTC	Pensacola											
	USMC	USMC		43		43		43		43		43
		SMCR		1		1		1		1		1
		TOTAL:		44		44		44		44		44

**CIN, COURSE TITLE:** C-103-2100, MATC Navigational Aids Technician Pipeline

**COURSE LENGTH:** 22.2 Weeks

**TOUR LENGTH:** 48 Months

**ATTRITION FACTOR:** Marine: 0%

**BACKOUT FACTOR:** 0.44

TRAINING ACTIVITY	SOURCE	ACDU/TAR SELRES	CFY00		FY01		FY02		FY03		FY04	
			OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
MATSG Pensacola, NATTC	Pensacola											
	USMC	USMC		27		27		27		27		27
		SMCR		1		1		1		1		1
		TOTAL:		28		28		28		28		28

**CIN, COURSE TITLE:** C-103-2110, MATCALs Maintenance Management and System Analysis Pipeline

**COURSE LENGTH:** 5.8 Weeks

**TOUR LENGTH:** 48 Months

**ATTRITION FACTOR:** Marine: 0%

**BACKOUT FACTOR:** 0.12

TRAINING ACTIVITY	SOURCE	ACDU/TAR SELRES	CFY00		FY01		FY02		FY03		FY04	
			OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
MATSG Pensacola, NATTC	Pensacola											
	USMC	USMC	17	27	17	27	17	27	17	27	17	27
		SMCR	1	0	1	0	1	1	1	0	1	0
		TOTAL:	18	27	18	27	18	28	18	27	18	27

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

**CIN, COURSE TITLE:** C-2G-2018, MATCALs Advanced Operator Course

**COURSE LENGTH:** 4.0 Weeks

**TOUR LENGTH:** 48 Months

**ATTRITION FACTOR:** Marine: 0%

**BACKOUT FACTOR:** 0.08

TRAINING ACTIVITY	SOURCE	ACDU/TAR SELRES	CFY00		FY01		FY02		FY03		FY04	
			OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
MATSG	Pensacola, NATTC	Pensacola										
	USMC	USMC	13	70	13	69	13	69	13	69	13	69
		SMCR	1	2	1	2	1	2	1	2	1	2
		TOTAL:	14	72	14	71	14	71	14	71	14	71

## PART III - TRAINING REQUIREMENTS

The following elements are not affected by the MATCALs 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:** C-103-2080, MATC Radar Technician Pipeline  
**TRAINING ACTIVITY:** MATSG Pensacola  
**LOCATION, UIC:** NATTC Pensacola, 39831

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

CFY00		FY01		FY02		FY03		FY04		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	46		47		47		47		47	ATIR
	46		47		47		47		47	Output
	26.8		27.4		27.4		27.4		27.4	AOB
	26.8		27.4		27.4		27.4		27.4	Chargeable

**SOURCE:** USMC      **STUDENT CATEGORY:** SMCR

CFY00		FY01		FY02		FY03		FY04		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	2		2		2		2		2	ATIR
	2		2		2		2		2	Output
	1.2		1.2		1.2		1.2		1.2	AOB
	0.0		0.0		0.0		0.0		0.0	Chargeable

**CIN, COURSE TITLE:** C-103-2090, MATC Communications Technician Pipeline  
**TRAINING ACTIVITY:** MATSG Pensacola  
**LOCATION, UIC:** NATTC Pensacola, 39831

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

CFY00		FY01		FY02		FY03		FY04		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	43		43		43		43		43	ATIR
	43		43		43		43		43	Output
	16.1		16.1		16.1		16.1		16.1	AOB
	16.1		16.1		16.1		16.1		16.1	Chargeable

**SOURCE:** USMC      **STUDENT CATEGORY:** SMCR

CFY00		FY01		FY02		FY03		FY04		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	1		1		1		1		1	ATIR
	1		1		1		1		1	Output
	0.4		0.4		0.4		0.4		0.4	AOB
	0.0		0.0		0.0		0.0		0.0	Chargeable

**III.A.2.a. EXISTING COURSES**

**CIN, COURSE TITLE:** C-103-2100, MATC Navigational Aids Technician Pipeline

**TRAINING ACTIVITY:** MATSG Pensacola

**LOCATION, UIC:** NATTC Pensacola, 39831

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

CFY00		FY01		FY02		FY03		FY04		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	27		27		27		27		27	ATIR
	27		27		27		27		27	Output
	11.5		11.5		11.5		11.5		11.5	AOB
	11.5		11.5		11.5		11.5		11.5	Chargeable

**SOURCE:** USMC      **STUDENT CATEGORY:** SMCR

CFY00		FY01		FY02		FY03		FY04		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	1		1		1		1		1	ATIR
	1		1		1		1		1	Output
	0.4		0.4		0.4		0.4		0.4	AOB
	0.0		0.0		0.0		0.0		0.0	Chargeable

**CIN, COURSE TITLE:** C-103-2110, MATCALs Maintenance Management and System Analysis Pipeline

**TRAINING ACTIVITY:** MATSG Pensacola

**LOCATION, UIC:** NATTC Pensacola, 39831

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

CFY00		FY01		FY02		FY03		FY04		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
17	27	17	27	17	27	17	27	17	27	ATIR
17	27	17	27	17	27	17	27	17	27	Output
1.8	2.9	1.8	2.9	1.8	2.9	1.8	2.9	1.8	2.9	AOB
1.8	2.9	1.8	2.9	1.8	2.9	1.8	2.9	1.8	2.9	Chargeable

**SOURCE:** USMC      **STUDENT CATEGORY:** SMCR

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

**III.A.2.a. EXISTING COURSES**

**CIN, COURSE TITLE:** C-2G-2018, MATCALC Advanced Operator Course

**TRAINING ACTIVITY:** MATSG Pensacola

**LOCATION, UIC:** NATTC Pensacola, 39831

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

CFY00		FY01		FY02		FY03		FY04		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
13	70	13	69	13	69	13	69	13	69	ATIR
13	70	13	69	13	69	13	69	13	69	Output
0.9	5.0	0.9	4.9	0.9	4.9	0.9	4.9	0.9	4.9	AOB
0.9	5.0	0.9	4.9	0.9	4.9	0.9	4.9	0.9	4.9	Chargeable

**SOURCE:** USMC      **STUDENT CATEGORY:** SMCR

CFY00		FY01		FY02		FY03		FY04		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
1	2	1	2	1	2	1	2	1	2	ATIR
1	2	1	2	1	2	1	2	1	2	Output
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	AOB
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Chargeable

## **PART IV - TRAINING LOGISTICS SUPPORT REQUIREMENTS**

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

IV.A. Training Hardware

IV.A.2. Training Devices

IV.C. Facility Requirements

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

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

IV.C.3. Facility Project Summary by Program

**IV.A. TRAINING HARDWARE**

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

**CIN, COURSE TITLE:** C-103-2081, AN/TPN-22 Maintenance (Track C-103-2080)

**TRAINING ACTIVITY:** NATTC Pensacola

**LOCATION, UIC:** NAS Pensacola, 60393

<b>ITEM NO.</b>	<b>EQUIPMENT / TYPE OR RANGE OF REPAIR PARTS</b>	<b>QTY REQD</b>	<b>DATE REQD</b>	<b>GFE CFE</b>	<b>STATUS</b>
<b>TTE</b>					
005	AN/TPN-22	2	Oct 80	GFE	Onboard
006	AN/TPN-22 Solid-State Modulator	2	Apr 99	GFE	Onboard
007	AN/UYK-20X(V)	2	Oct 80	GFE	Onboard
008	AN/USH-26	2	Oct 80	GFE	Onboard
020	AN/UYQ-41	2	Oct 80	GFE	Onboard

**CIN, COURSE TITLE:** C-103-2083, AN/UYQ-34(V) Maintenance (Track C-103-2080)

**TRAINING ACTIVITY:** NATTC Pensacola

**LOCATION, UIC:** NAS Pensacola, 60393

<b>ITEM NO.</b>	<b>EQUIPMENT / TYPE OR RANGE OF REPAIR PARTS</b>	<b>QTY REQD</b>	<b>DATE REQD</b>	<b>GFE CFE</b>	<b>STATUS</b>
<b>TTE</b>					
009	AN/UYQ-34(V)2	8	Oct 80	GFE	Onboard

**CIN, COURSE TITLE:** C-103-2084, AN/TPS-73 Maintenance (Track C-103-2080)

**TRAINING ACTIVITY:** NATTC Pensacola

**LOCATION, UIC:** NAS Pensacola, 60393

<b>ITEM NO.</b>	<b>EQUIPMENT / TYPE OR RANGE OF REPAIR PARTS</b>	<b>QTY REQD</b>	<b>DATE REQD</b>	<b>GFE CFE</b>	<b>STATUS</b>
<b>TTE</b>					
004	AN/TPS-73	2	Oct 90	GFE	Onboard

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

**CIN, COURSE TITLE:** C-103-2091, MATCAL S Radio Maintenance (Track C-103-2090)

**TRAINING ACTIVITY:** NATTC Pensacola

**LOCATION, UIC:** NAS Pensacola, 60393

<b>ITEM NO.</b>	<b>EQUIPMENT / TYPE OR RANGE OF REPAIR PARTS</b>	<b>QTY REQD</b>	<b>DATE REQD</b>	<b>GFE CFE</b>	<b>STATUS</b>
<b>TTE</b>					
015	RT-1230(V)1/URC-94(V)	4	Oct 80	GFE	Onboard
016	AN/VRC-82(V)2	7	Oct 80	GFE	Onboard
017	RT-1272/GRC-171(V)2	4	Oct 80	GFE	Onboard
018	RT-1369/GRC-211	4	Oct 80	GFE	Onboard
019	AN/ARC-210	4	Jan 00	GFE	Pending

**CIN, COURSE TITLE:** C-103-2092, AN/TSQ-120 Maintenance (Track C-103-2090)

**TRAINING ACTIVITY:** NATTC Pensacola

**LOCATION, UIC:** NAS Pensacola, 60393

<b>ITEM NO.</b>	<b>EQUIPMENT / TYPE OR RANGE OF REPAIR PARTS</b>	<b>QTY REQD</b>	<b>DATE REQD</b>	<b>GFE CFE</b>	<b>STATUS</b>
<b>TTE</b>					
011	AN/TSQ-120A	2	Oct 80	GFE	Onboard
012	AN/TSQ-120B	1	Jan 97	GFE	Onboard
013	AN/VRC-82	2	Oct 80	GFE	Onboard
014	OA-9142/TSM-170	1	Oct 80	GFE	Onboard

**CIN, COURSE TITLE:** C-103-2093, AN/TSQ-131 Maintenance (Track C-103-2090)

**TRAINING ACTIVITY:** NATTC Pensacola

**LOCATION, UIC:** NAS Pensacola, 60393

<b>ITEM NO.</b>	<b>EQUIPMENT / TYPE OR RANGE OF REPAIR PARTS</b>	<b>QTY REQD</b>	<b>DATE REQD</b>	<b>GFE CFE</b>	<b>STATUS</b>
<b>TTE</b>					
010	AN/TSQ-131(V)	4	Oct 80	GFE	Onboard

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

**CIN, COURSE TITLE:** C-103-2094, AN/TSQ-216 RLST Maintenance (Track C-103-2090)

**TRAINING ACTIVITY:** NATTC Pensacola

**LOCATION, UIC:** NAS Pensacola, 60393

ITEM NO.	EQUIPMENT / TYPE OR RANGE OF REPAIR PARTS	QTY REQD	DATE REQD	GFE CFE	STATUS
<b>TTE</b>					
021	AN/TSQ-216 RLST	1	FY00	GFE	Pending
		1	FY01	GFE	Pending

**CIN, COURSE TITLE:** C-103-2101, AN/TRN-44 Maintenance (Track C-103-2100)

**TRAINING ACTIVITY:** NATTC Pensacola

**LOCATION, UIC:** NAS Pensacola, 60393

ITEM NO.	EQUIPMENT / TYPE OR RANGE OF REPAIR PARTS	QTY REQD	DATE REQD	GFE CFE	STATUS
<b>TTE</b>					
001	AN/TRN-44	2	Oct 84	GFE	Onboard

**CIN, COURSE TITLE:** C-103-2102, AN/TPN-30 Maintenance (Track C-103-2100)

**TRAINING ACTIVITY:** NATTC Pensacola

**LOCATION, UIC:** NAS Pensacola, 60393

ITEM NO.	EQUIPMENT / TYPE OR RANGE OF REPAIR PARTS	QTY REQD	DATE REQD	GFE CFE	STATUS
<b>TTE</b>					
003	AN/TPN-30A	4	Mar 96	GFE	Onboard

#### IV.B. COURSEWARE REQUIREMENTS

##### IV.B.1. TRAINING SERVICES

COURSE / TYPE OF TRAINING	SCHOOL LOCATION	NO. OF PERSONNEL	MAN WEEKS REQUIRED	DATE BEGIN
AN/TPN-22 Solid-State Modulator Modification	Sparks, Nevada	1	1	Sep 98
AN/TSQ-216 RLST	Sparks, Nevada	2	6	Feb 97

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

**CIN, COURSE TITLE:** C-103-2081, AN/TPN-22 Maintenance (Track C-103-2080)

**TRAINING ACTIVITY:** NATTC Pensacola

**LOCATION, UIC:** NAS Pensacola, 60393

TYPES OF MATERIAL OR AID	QTY	DATE	STATUS
	REQD	REQD	
Instructor Guides	2	Oct 80	Onboard
Slides/Transparencies	1 set	Oct 80	Onboard
Student Achievement Tests	10	Oct 80	Onboard
Student Guides	10	Oct 80	Onboard
Wall Charts	1 set	Oct 80	Onboard

**CIN, COURSE TITLE:** C-103-2083, AN/UYQ-34(V) Maintenance (Track C-103-2080)

**TRAINING ACTIVITY:** NATTC Pensacola

**LOCATION, UIC:** NAS Pensacola, 60393

TYPES OF MATERIAL OR AID	QTY	DATE	STATUS
	REQD	REQD	
Instructor Guides	2	Oct 80	Onboard
Slides/Transparencies	1 set	Oct 80	Onboard
Student Achievement Tests	10	Oct 80	Onboard
Student Guides	10	Oct 80	Onboard
Wall Charts	1 set	Oct 80	Onboard

**CIN, COURSE TITLE:** C-103-2084, AN/TPS-73 Maintenance (Track C-103-2080)

**TRAINING ACTIVITY:** NATTC Pensacola

**LOCATION, UIC:** NAS Pensacola, 60393

TYPES OF MATERIAL OR AID	QTY	DATE	STATUS
	REQD	REQD	
Instructor Guides	2	Oct 80	Onboard
Slides/Transparencies	1 set	Oct 80	Onboard
Student Achievement Tests	10	Oct 80	Onboard
Student Guides	10	Oct 80	Onboard
Wall Charts	1 set	Oct 80	Onboard

**CIN, COURSE TITLE:** C-103-2091, MATCALCS Radio Maintenance (Track C-103-2090)

**TRAINING ACTIVITY:** NATTC Pensacola

**LOCATION, UIC:** NAS Pensacola, 60393

TYPES OF MATERIAL OR AID	QTY	DATE	STATUS
	REQD	REQD	
Instructor Guides	2	Oct 80	Onboard
Slides/Transparencies	1 set	Oct 80	Onboard
Student Achievement Tests	10	Oct 80	Onboard
Student Guides	10	Oct 80	Onboard
Wall Charts	1 set	Oct 80	Onboard

**CIN, COURSE TITLE:** C-103-2092, AN/TSQ-120 Maintenance (Track C-103-2090)

**TRAINING ACTIVITY:** NATTC Pensacola

**LOCATION, UIC:** NAS Pensacola, 60393

TYPES OF MATERIAL OR AID	QTY	DATE	STATUS
	REQD	REQD	
Instructor Guides	2	Oct 80	Onboard
Slides/Transparencies	1 set	Oct 80	Onboard
Student Achievement Tests	10	Oct 80	Onboard

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

Student Guides	10	Oct 80	Onboard
Wall Charts	1 set	Oct 80	Onboard

**CIN, COURSE TITLE:** C-103-2093, AN/TSQ-131 Maintenance (Track C-103-2090)

**TRAINING ACTIVITY:** NATTC Pensacola

**LOCATION, UIC:** NAS Pensacola, 60393

TYPES OF MATERIAL OR AID	QTY REQD	DATE REQD	STATUS
Instructor Guides	2	Oct 80	Onboard
Slides/Transparencies	1 set	Oct 80	Onboard
Student Achievement Tests	10	Oct 80	Onboard
Student Guides	10	Oct 80	Onboard
Wall Charts	1 set	Oct 80	Onboard

**CIN, COURSE TITLE:** C-103-XXXX, AN/TSQ-216 RLST Maintenance (Track C-103-2090)

**TRAINING ACTIVITY:** NATTC Pensacola

**LOCATION, UIC:** NAS Pensacola, 60393

TYPES OF MATERIAL OR AID	QTY REQD	DATE REQD	STATUS
Instructor Guides	2	Jan 00	Pending
Slides/Transparencies	1 set	Jan 00	Pending
Student Achievement Tests	10	Jan 00	Pending
Student Guides	10	Jan 00	Pending
Wall Charts	1 set	Jan 00	Pending

**CIN, COURSE TITLE:** C-103-2101, AN/TRN-44 Maintenance (Track C-103-2100)

**TRAINING ACTIVITY:** NATTC Pensacola

**LOCATION, UIC:** NAS Pensacola, 60393

TYPES OF MATERIAL OR AID	QTY REQD	DATE REQD	STATUS
Instructor Guides	2	Oct 80	Onboard
Slides/Transparencies	1 set	Oct 80	Onboard
Student Achievement Tests	10	Oct 80	Onboard
Student Guides	10	Oct 80	Onboard
Wall Charts	1 set	Oct 80	Onboard

**CIN, COURSE TITLE:** C-103-2102, AN/TPN-30 Maintenance (Track C-103-2100)

**TRAINING ACTIVITY:** NATTC Pensacola

**LOCATION, UIC:** NAS Pensacola, 60393

TYPES OF MATERIAL OR AID	QTY REQD	DATE REQD	STATUS
Instructor Guides	2	Oct 80	Onboard
Slides/Transparencies	1 set	Oct 80	Onboard
Student Achievement Tests	10	Oct 80	Onboard
Student Guides	10	Oct 80	Onboard
Wall Charts	1 set	Oct 80	Onboard

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

**CIN, COURSE TITLE:** C-103-2111, MATCALs Maintenance Management (Track C-103-2110)

**TRAINING ACTIVITY:** NATTC Pensacola

**LOCATION, UIC:** NAS Pensacola, 60393

TYPES OF MATERIAL OR AID	QTY	DATE	STATUS
	REQD	REQD	
486DX-33 Computer with SVGA Monitor, CD-ROM, Printer, and Mouse	4 each	Mar 94	Onboard
Instructor Guides	2	Oct 80	Onboard
Software: Windows 3.1, FED LOG, PMS, MAF 6.0	4 each	Mar 94	Onboard
Student Achievement Tests	10	Oct 80	Onboard
Student Guides	10	Oct 80	Onboard

**CIN, COURSE TITLE:** C-103-2112, MATCALs System Analysis (Track C-103-2110)

**TRAINING ACTIVITY:** NATTC Pensacola

**LOCATION, UIC:** NAS Pensacola, 60393

TYPES OF MATERIAL OR AID	QTY	DATE	STATUS
	REQD	REQD	
Instructor Guides	2	Oct 80	Onboard
Student Achievement Tests	10	Oct 80	Onboard
Student Guides	10	Oct 80	Onboard

**CIN, COURSE TITLE:** C-222-2021, MATCALs Operator Course

**TRAINING ACTIVITY:** NATTC Pensacola

**LOCATION, UIC:** NAS Pensacola, 60393

TYPES OF MATERIAL OR AID	QTY	DATE	STATUS
	REQD	REQD	
Instructor Guides	2	Oct 80	Onboard
Student Achievement Tests	10	Oct 80	Onboard
Student Guides	10	Oct 80	Onboard

**CIN, COURSE TITLE:** C-2G-2018, MATCALs Advanced Operator Course

**TRAINING ACTIVITY:** NATTC Pensacola

**LOCATION, UIC:** NAS Pensacola, 60393

TYPES OF MATERIAL OR AID	QTY	DATE	STATUS
	REQD	REQD	
Instructor Guides	2	Oct 80	Onboard
Student Achievement Tests	10	Oct 80	Onboard
Student Guides	10	Oct 80	Onboard

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

**CIN, COURSE TITLE:** C-103-2081, AN/TPN-22 Maintenance (Track C-103-2080)

**TRAINING ACTIVITY:** NATTC Pensacola

**LOCATION, UIC:** NAS Pensacola, 60393

<b>TECHNICAL MANUAL NUMBER / TITLE</b>	<b>MEDIUM</b>	<b>QTY REQD</b>	<b>DATE REQD</b>	<b>STATUS</b>
ED510-AB-OMI-010/PD70-HD1099 HD-1099/TSQ Operation and Maintenance	Hard copy	10	Oct 80	Onboard
EE216-AC-DOP-010 AN/TPN-22 Overhaul and Repair Manual	Hard copy	24	Oct 80	Onboard
EE216-AC-DOP-020 AN/TPN-22 Overhaul and Repair Manual	Hard copy	24	Oct 80	Onboard
EE216-AC-DOP-030 AN/TPN-22 Overhaul and Repair Manual	Hard copy	24	Oct 80	Onboard
EE216-AC-OMI-010/TPN-22 AN/TPN-22 Operation and Maintenance	Hard copy	24	Oct 80	Onboard
EE216-AC-OMI-030/TPN-22 AN/TPN-22 Operation and Maintenance	Hard copy	24	Oct 80	Onboard
EE216-AC-OMI-050/TPN-22 AN/TPN-22 Operation and Maintenance	Hard copy	24	Oct 80	Onboard
EE216-AC-OMI-062/TPN-22 AN/TPN-22 Operation and Maintenance	Hard copy	24	Oct 80	Onboard
EE216-AC-OMI-070/TPN-22 AN/TPN-22 Operation and Maintenance	Hard copy	24	Oct 80	Onboard
EE216-AC-SOM-010/TPN-22 AN/TPN-22 Operation and Maintenance	Hard copy	24	Oct 80	Onboard
EE216-AC-WLM-010/TPN-22 AN/TPN-22 Wire List Manual	Hard copy	24	Oct 80	Onboard
EE216-AC-WLM-020/TPN-22 AN/TPN-22 Wire List Manual	Hard copy	24	Oct 80	Onboard
EE216-AC-WLM-030/TPN-22 AN/TPN-22 Wire List Manual	Hard copy	24	Oct 80	Onboard
NE0967-LP-598-1010 AN/UYSK-20X(V) Operation and Maintenance	Hard copy	10	Oct 80	Onboard
NE0967-LP-598-1020 AN/UYSK-20X(V) Reference Data	Hard copy	10	Oct 80	Onboard

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

NE0967-LP-598-1030 AN/UYK-20X(V) Equipment Diagrams	Hard copy	10	Oct 80	Onboard
NE0967-LP-598-1040 AN/UYK-20X(V) Diagnostic Programs	Hard copy	10	Oct 80	Onboard
NE0967-LP-598-1050 AN/UYK-20X(V) Diagnostic Program Listing, Basic Tests	Hard copy	10	Oct 80	Onboard
NE0967-LP-598-1060 AN/UYK-20X(V) Diagnostic Program Listing, Special I/O Tests	Hard copy	10	Oct 80	Onboard
NE0967-LP-598-5010 AN/USH-26 Operation and Maintenance	Hard copy	10	Oct 80	Onboard
NE0967-LP-598-5020 AN/USH-26 Illustrations	Hard copy	10	Oct 80	Onboard
NE0967-LP-598-5030 AN/USH-26 Programmer's Operators Manual	Hard copy	10	Oct 80	Onboard

**CIN, COURSE TITLE:** C-103-2083, AN/UYQ-34(V) Maintenance (Track C-103-2080)

**TRAINING ACTIVITY:** NATTC Pensacola

**LOCATION, UIC:** NAS Pensacola, 60393

<b>TECHNICAL MANUAL NUMBER / TITLE</b>	<b>MEDIUM</b>	<b>QTY REQD</b>	<b>DATE REQD</b>	<b>STATUS</b>
EE250-BC-OMI-010/W154 AN/UYQ-34(V)2 Operation and Maintenance Type II	Hard copy	10	Oct 80	Onboard
EE250-BC-OMI-020/W154 AN/UYQ-34(V)2 Operation and Maintenance Type II	Hard copy	10	Oct 80	Onboard
EE250-BC-OMI-030/W154 AN/UYQ-34(V)2 Operation and Maintenance Type II	Hard copy	10	Oct 80	Onboard
EE250-BC-OMI-040/W154 AN/UYQ-34(V)2 Operation and Maintenance Type II	Hard copy	10	Oct 80	Onboard
EE250-BC-OMI-050/W154 AN/UYQ-34(V)2 Operation and Maintenance Type II	Hard copy	10	Oct 80	Onboard
EE250-BC-OMI-060/W154 AN/UYQ-34(V)2 Operation and Maintenance Type II	Hard copy	10	Oct 80	Onboard

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

**CIN, COURSE TITLE:** C-103-2084, AN/TPS-73 Maintenance (Track C-103-2080)

**TRAINING ACTIVITY:** NATTC Pensacola

**LOCATION, UIC:** NAS Pensacola, 60393

<b>TECHNICAL MANUAL NUMBER / TITLE</b>	<b>MEDIUM</b>	<b>QTY REQD</b>	<b>DATE REQD</b>	<b>STATUS</b>
EE200-AB-MAN-010/TPS-73 AN/TPS-73 Operation and Maintenance	Hard copy	10	Oct 80	Onboard
EE200-AB-MAN-020/TPS-73 AN/TPS-73 Operation and Maintenance	Hard copy	10	Oct 80	Onboard
EE200-AB-MAN-030/TPS-73 AN/TPS-73 Operation and Maintenance	Hard copy	10	Oct 80	Onboard
EE200-AB-MAN-040/TPS-73 AN/TPS-73 Operation and Maintenance	Hard copy	10	Oct 80	Onboard
EE200-AB-MAN-050/TPS-73 AN/TPS-73 Operation and Maintenance	Hard copy	10	Oct 80	Onboard
EE200-AB-MAN-060/TPS-73 AN/TPS-73 Operation and Maintenance	Hard copy	10	Oct 80	Onboard
EE200-AB-MAN-070/TPS-73 AN/TPS-73 Operation and Maintenance	Hard copy	10	Oct 80	Onboard
EE200-AB-MAN-080/TPS-73 AN/TPS-73 Operation and Maintenance	Hard copy	10	Oct 80	Onboard
EE200-AB-MAN-090/TPS-73 AN/TPS-73 Operation and Maintenance	Hard copy	10	Oct 80	Onboard
EE200-AB-MAN-100/TPS-73 AN/TPS-73 Operation and Maintenance	Hard copy	10	Oct 80	Onboard
EE200-AB-MAN-110/TPS-73 AN/TPS-73 Operation and Maintenance	Hard copy	10	Oct 80	Onboard
EE200-AB-MAN-120/TPS-73 AN/TPS-73 Operation and Maintenance	Hard copy	10	Oct 80	Onboard
EE200-AB-MAN-130/TPS-73 AN/TPS-73 Operation and Maintenance	Hard copy	10	Oct 80	Onboard
EE200-AB-MAN-140/TPS-73 AN/TPS-73 Operation and Maintenance	Hard copy	10	Oct 80	Onboard
EE200-AB-MAN-150/TPS-73 AN/TPS-73 Operation and Maintenance	Hard copy	10	Oct 80	Onboard



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

**CIN, COURSE TITLE:** C-103-2093, AN/TSQ-131 Maintenance (Track C-103-2090)  
**TRAINING ACTIVITY:** NATTC Pensacola  
**LOCATION, UIC:** NAS Pensacola, 60393

TECHNICAL MANUAL NUMBER / TITLE	MEDIUM	QTY REQD	DATE REQD	STATUS
DNE 24000763-000 RO-572/TSQ-131(V) Systems Operator Manual (Commercial)	Hard copy	10	Oct 80	Onboard
DNE 24000764-000 RO-572/TSQ-131(V) Systems Operator Manual (Commercial)	Hard copy	10	Oct 80	Onboard
ED510-AB-OMI-010/PD70-HD1099 HD-1099/TSQ Operation and Maintenance	Hard copy	1	Oct 80	Onboard
No Number AN/UYQ-42 Operation and Maintenance (Commercial)	Hard copy	10	Oct 80	Onboard
No Number AN/TSQ-131(V) Operation and Maintenance, Type III System	Hard copy	10	Oct 80	Onboard
NE0967-LP-547-7010 AN/GMQ-31 Operation and Maintenance	Hard copy	10	Oct 80	Onboard

**CIN, COURSE TITLE:** C-103-XXXX, AN/TSQ-216 RLST Maintenance (Track C-103-2090)  
**TRAINING ACTIVITY:** NATTC Pensacola  
**LOCATION, UIC:** NAS Pensacola, 60393

TECHNICAL MANUAL NUMBER / TITLE	MEDIUM	QTY REQD	DATE REQD	STATUS
TBD AN/TSQ-216 RLST Operation and Maintenance	Hard copy	10	Jan 00	Pending

**CIN, COURSE TITLE:** C-103-2101, AN/TRN-44 Maintenance (Track C-103-2100)  
**TRAINING ACTIVITY:** NATTC Pensacola  
**LOCATION, UIC:** NAS Pensacola, 60393

TECHNICAL MANUAL NUMBER / TITLE	MEDIUM	QTY REQD	DATE REQD	STATUS
EE172-AB-OMI-010/5201 AN/URN-25 Operation and Maintenance	Hard copy	10	Oct 80	Onboard
EE172-AB-OMI-010/W154 AN/TRN-44 Operation and Maintenance Type III System	Hard copy	10	Oct 80	Onboard
EE172-AB-OMI-021/5201 AN/URN-25 Operation and Maintenance	Hard copy	10	Oct 80	Onboard
EE172-AB-OMI-022/5201 AN/URN-25 Operation and Maintenance	Hard copy	10	Oct 80	Onboard

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

EE172-AB-OMI-022/5201 AN/URN-25 Operation and Maintenance	Hard copy	10	Oct 80	Onboard
EE172-AB-OMI-030/5201 AN/URN-25 Operation and Maintenance	Hard copy	10	Oct 80	Onboard
EE172-GA-OMI-010/W154 AN/TRN-44 Operation and Maintenance Type III System	Hard copy	10	Oct 80	Onboard
NE0967-LP-626-9010 OE-258/URN Operation and Maintenance	Hard copy	10	Oct 80	Onboard

**CIN, COURSE TITLE:** C-103-2102, AN/TPN-30 Maintenance (Track C-103-2100)  
**TRAINING ACTIVITY:** NATTC Pensacola  
**LOCATION, UIC:** NAS Pensacola, 60393

TECHNICAL MANUAL NUMBER / TITLE	MEDIUM	QTY REQD	DATE REQD	STATUS
EE216-BC-OMI-010/E154 AN/TPN-30 Operation and Maintenance	Hard copy	10	Oct 80	Onboard

**CIN, COURSE TITLE:** C-103-2111, MATCALs Maintenance Management (Track C-103-2110)  
**TRAINING ACTIVITY:** NATTC Pensacola  
**LOCATION, UIC:** NAS Pensacola, 60393

TECHNICAL MANUAL NUMBER / TITLE	MEDIUM	QTY REQD	DATE REQD	STATUS
FMFM 5-1 Marine Aviation Manual	Hard copy	4	Mar 94	Onboard
MCO 3120.6 Embarkation Procedures	Hard copy	4	Mar 94	Onboard
MIL-STD-1364H Standard General Purpose Electronic Test Equipment	Hard copy	4	Mar 94	Onboard
No Number Index of Navy Managed Repairable Items	Hard copy	4	Mar 94	Onboard
NAVSEA 0967-LP-000-XXX Electronic Installation and Maintenance Books Series	Hard copy	1	Mar 94	Onboard
NAVSEA P4790.4 (series) 3M Manual (PMS Only)	Hard copy	4	Mar 94	Onboard
NAVSUP PUB 2002 Navy Stock List of Publications and Forms	Hard copy	4	Mar 94	Onboard
NAVSUP PUB 4000 Introduction to Federal Supply Catalog and Related Publications	Hard copy	4	Mar 94	Onboard

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

NAVSUP PUB 409 MILSTRIP/MILSTRAP Desk Guide	Hard copy	4	Mar 94	Onboard
NAVSUP PUB 4500 Consolidated Hazardous Item List Storage and Handling	Hard copy	4	Mar 94	Onboard
NAVSUP PUB 567 Automated SNAP I Supply Procedures Logistics and Inventory Management	Hard copy	4	Mar 94	Onboard
NWP-10-1-10 Casualty Reporting Manual	Hard copy	4	Mar 94	Onboard
OPNAVINST 3721.1 Air Traffic Control Facilities Manual	Hard copy	4	Mar 94	Onboard
SECNAVINST 5216.5 Naval Correspondence Manual	Hard copy	4	Mar 94	Onboard
SPAWAR 0101, XXX Naval Shore Electronics Criteria Series	Hard copy	1	Mar 94	Onboard
SPAWAR-Vallejo 14203-0131139 Maintenance Management System	Hard copy	4	Mar 94	Onboard
SPAWARINST 4700.9 FMF ATC System and Equipment Maintenance and Logistics Support Policies and Procedures	Hard copy	4	Mar 94	Onboard
SPAWARINST P4110.566A FMF ATC Operational Logistics Support Summary	Hard copy	4	Mar 94	Onboard
<b>CIN, COURSE TITLE:</b> C-2G-2018, MATCALs Advanced Operator Course				
<b>TRAINING ACTIVITY:</b> NATTC Pensacola				
<b>LOCATION, UIC:</b> NAS Pensacola, 60393				
<b>TECHNICAL MANUAL NUMBER / TITLE</b>	<b>MEDIUM</b>	<b>QTY REQD</b>	<b>DATE REQD</b>	<b>STATUS</b>
Not Applicable MATCALs System Operator Manual	Hard copy	10	Feb 95	Onboard
NAVAIR 00-80T-114 NATOPS Air Traffic Control Facilities Manual	Hard copy	10	Feb 95	Onboard
OPNAVINST 3722.16 Terminal Instrument Procedures	Hard copy	10	Feb 95	Onboard
OPNAVINST 5100.23 Navy Occupational (NAVOSH) Program Manual	Hard copy	1	Feb 95	Onboard

**PART V - MPT MILESTONES**

<b>COG CODE</b>	<b>MPT MILESTONES</b>	<b>DATE</b>	<b>STATUS</b>
OPO	Approve and promulgate NTSP	FY83	Completed
TSA	Begin initial training on the AN/TSQ-216 RLST	Feb 97	Completed
TSA	Conduct training services on the AN/TSQ-216 RLST	FY97	Completed
OPTEVFOR	Conduct OPEVAL on the AN/TSQ-216 RLST	FY98	Completed
TSA	Distribute Draft NTSP for review	Sep 98	Completed
TSA	Deliver first TTE for the AN/TSQ-216 RLST	Oct 99	Completed
TSA	Install first TTE for the AN/TSQ-216 RLST	Oct 99	Completed
TSA	Deliver second TTE for the AN/TSQ-216 RLST	FY00	Pending
TSA	Install second TTE for the AN/TSQ-216 RLST	FY00	Pending
TSA	Distribute updated Draft NTSP for review	Oct 99	Completed
OPO	Chair NTSP Conference	FY00	If required
DA	Achieve NSD on the AN/TSQ-216 RLST	Jun 00	Pending
OPO	Approve NTSP	Feb 00	Pending
TSA	Begin follow-on training on the AN/TSQ-216 RLST	FY00	Pending
TSA	Deliver curricula materials for the AN/TSQ-216 RLST	FY00	Pending
DA	Fleet introduction for AN/TSQ-216 RLST	FY00	Pending

PART VI - DECISION ITEMS / ACTION REQUIRED

DECISION ITEM OR  
ACTION REQUIRED

COMMAND ACTION    DUE DATE    STATUS

None.

PART VII - POINTS OF CONTACT

NAME / FUNCTION / ACTIVITY, CODE / INTERNET EMAIL	TELEPHONE NUMBERS
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