

NAVY TRAINING SYSTEM PLAN
FOR THE
RQ-2B PIONEER
UNMANNED AERIAL VEHICLE SYSTEM



N78-NTSP-A-50-8622D/A

AUGUST 2004

RQ-2B UNMANNED AERIAL VEHICLE SYSTEM**EXECUTIVE SUMMARY**

The RQ-2B Pioneer Unmanned Aerial Vehicle (UAV) System is a joint Navy and Marine Corps program currently in the Operations and Support Phase of the Defense Acquisition System Process. The “R” is the Department of Defense designation for reconnaissance; “Q” means unmanned aircraft system. The “2” refers to it being the second of a series of purpose-built unmanned reconnaissance aircraft systems or UAVs.

A key transformational initiative in support of [Sea Power 21](#), UAVs possess broad capabilities and are powerful force multipliers. They provide Battle Group Commanders with enhanced situation awareness, improved tactical and persistent Intelligence, Surveillance, and Reconnaissance (ISR), and a shorter “kill chain.” The Pioneer system is one of multiple solutions existing within a “family” concept and exploits “off-the-shelf” equipment.

Pioneer is deployed by a Marine Air Ground Task Force (MAGTF) to provide real-time tactical intelligence services. Pioneer’s sensors support Reconnaissance, Surveillance, and Target Acquisition (RSTA), Naval Gun-Fire Support (NGFS), and Battle Damage Assessment (BDA). Pioneer units also conduct proficiency and mobilization training, tactics and operational concept development, force structure deployment planning, and support of MAGTF, Amphibious Ready Group (ARG), and Carrier Air Wing (CVW) training exercises. Pioneer units also conduct proficiency and mobilization training, tactics and operational concept development, force structure deployment planning, and support of MAGTF, Amphibious Ready Group (ARG), and Carrier Air Wing (CVW) training exercises.

Pioneer maintenance is based on the three level maintenance concept identified in the Naval Aviation Maintenance Program, [OPNAVINST 4790.2 \(series\)](#). Organizational level maintenance is performed by Navy personnel with Navy Enlisted Classification (NEC) 8361 and Marine Corps personnel with Military Occupational Specialties (MOS) 6314, 6214, 6072, or 6531. Navy and Marine Corps personnel assigned to Aircraft Intermediate Maintenance Departments (AIMD) and Marine Aviation Logistics Squadrons (MALS) perform limited intermediate level maintenance. Depot level maintenance is performed at contractor facilities.

The program is managed by utilizing the Integrated Product Team (IPT) organizational structure where government agencies and various contractors work together, as a unified team, to execute the program. The government team consists of the Navy’s [Unmanned Aerial Vehicle Program Office \(PMA-263\)](#), [Naval Aviation Training Systems \(PMA205\)](#), the [Naval Air Warfare Center Aircraft Division](#), [Fleet Composite Squadron Six \(VC-6\)](#), and [others](#).

Navy Pioneer UAVs are operated by Fleet Composite Squadron Six (VC-6), Detachment Patuxent River, Maryland, which supports one detachment. Marine Corps Pioneer UAVs are operated by two Marine UAV Squadrons (VMU):

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- VMU-1, Marine Air Ground Task Force Training Command (MAGTFTC)
Twenty-nine Palms, California
- VMU-2, Marine Corps Air Station (MCAS) Cherry Point, North Carolina.

Six operator watch stations are associated with the Pioneer UAV System. Four are located in or near the Ground Control Station (GCS):

- Mission Commander (Officer, 13XX/MOS 7315)
- External Pilot (EP) (NEC 8362/MOS 7316)
- Payload Operator (PO) (NEC 8364)
- Internal Pilot (IP) (NEC 8363)
- Internal Operator (IO) (MOS 7314)

The fifth and sixth stations involve the IP and EP at the Portable Control Station (PCS). Watch stations are manned as required, during operational and training missions. Five additional maintenance watch stations are the Crew Chief, two-man start crew, fire/safety observer, and a technician, who perform pre-flight, launch, recovery, and post flight functions.

CNO \N78\ administrative message, DTG R 112007Z APR 02 ZYB PSN 144403M16, with subject line titled NAVAL UNMANNED AERIAL VEHICLE (UAV) STRATEGY stated in part that:

“The Pioneer system with its limited capabilities, no longer fully supports the Navy's foreseeable tactical requirements and the Navy intends to cease all Navy Pioneer operations at conclusion of FY02 subject to any pending real world requirements. A small contingent of personnel will remain at VC-6 to support special UAV projects while existing Pioneer assets belonging to Navy will be phased out and transferred to Marine Corps units.”

As a result VC-6 discontinued training for and deployment in support of shipboard operations on LPD class amphibious ships.

The Pioneer UAV System training concept provides for organizational level maintenance training based on OPNAVINST 4790.2 (series), and operator training based on the Pioneer (RQ-2B) Naval Air Training and Operating Procedures Standardization (NATOPS) Flight Manual. Training for both operator and maintenance personnel is provided at Center for Naval Aviation Technical Training Detachment (CNATT DET), Maintenance Training Unit (MTU) 6001, Milton, Florida.

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LIST OF ACRONYMS

AE	Aviation Electrician's Mate
AGL	Above Ground Level
AIMD	Aircraft Intermediate Maintenance Department
AM	Aviation Structural Mechanic
AMIST	Aviation Maintenance In-Service Training
AMTCS	Aviation Maintenance Training Continuum System
AOI	Area of Interest
APML	Assistant Program Manager, Logistics
ARG	Amphibious Ready Group
AS ¹	Aviation Support Equipment Technician
AS ²	Airborne Subsystem (UCARS)
AT	Aviation Electronics Technician
AUL	Authorized Users List
AV	Air Vehicle
AVT	Automatic Video Tracker
AZ	Aviation Administrationman
BDA	Bomb Damage Assessment
BPU	Barometric Pressure Unit
C2	Control and Communications
CAI	Computer-Aided Instruction
CARS	Common Automatic Recovery System
CBT	Computer-Based Training
CCD	Charge Coupled Device
CIN	Course Identification Number
CNATT	Center for Naval Aviation Technical Training
CNATT DET	Center for Naval Aviation Technical Training Detachment
CNO	Chief of Naval Operations
COMLANTFLT	Commander, U.S. Atlantic Fleet
COMPACFLT	Commander, U.S. Pacific Fleet
CPA	Central Processing Assembly
CVW	Carrier Air Wing
DET	Detachment
DORT	Daily Operational Readiness Test
DUTC	Defense Unmanned Aerial Vehicle Training Center

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LIST OF ACRONYMS

ECP	Engineering Change Proposal
ELOS	Electronic Line of Sight
EO	Electro-Optical
EP	External Pilot
EPSim	External Pilot Simulator
FAST	Fleet Assistance Support Team
FMS	Foreign Military Sales
FLIR	Forward Looking Infrared
FTS	Full Time Support
FY	Fiscal Year
GCS	Ground Control Station
GCSO	Ground Control Station Operator
GDT	Ground Data Terminal
GFE	Government Furnished Equipment
GPS	Global Positioning System
HMMWV	High-Mobility Multipurpose Wheeled Vehicle
HPC	Human Performance Center
HSI	Human Systems Integration
IAI	Israel Aircraft Industries
IEEE	Institute of Electrical and Electronics Engineers
IFF	Identification Friend or Foe
ILSP	Integrated Logistics Support Plan
IMI	Interactive Multimedia Instruction
IMRL	Individual Material Readiness List
INS	Inertial Navigation System
IO	Internal Operator
IP	Internal Pilot
IPT	Integrated Product Team
IR	Infrared
IS	Intelligence Specialist
ISR	Intelligence, Surveillance, and Reconnaissance
JPO	Joint Program Office

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LIST OF ACRONYMS

LAT	Latitude
LL	Low Lead
LON	Longitude
LPD	Amphibious Transport Dock
LRU	Lowest Replaceable Unit
MAGTF	Marine Air Ground Task Force
MAGTFTC	Marine Air Ground Task Force Training Center
MALS	Marine Aviation Logistics Squadron
MANMED	Manual of the Medical Department
MATMEP	Marine Training Management Evaluation Program
MC	Mission Commander
MCAS	Marine Corps Air Station
MCCDC	Marine Corps Combat Development Command
MCO	Marine Corps Order
MIAG	Modular Integrated Avionics Group
MKD	Moked, IAI Tamam Division
MMF	Mobile Maintenance Facility
MOS	Military Occupational Specialty
MPT	Manpower, Personnel, and Training
MRC	Maintenance Requirement Card
MSDS	Material Safety Data Sheet
MSL	Mean Sea Level
MTIP	Maintenance Training Improvement Program
MTU	Maintenance Training Unit
MWIR	Medium Wave Infrared
NA	Not Applicable
NAMP	Naval Air Maintenance Program
NAS	Naval Air Station
NATOPS	Naval Air Training and Operating Procedures Standardization
NAVAIR	Naval Air Systems Command
NAVOSH	Navy Occupational Safety and Health
NAVPERSCOM	Navy Personnel Command
NAWCAD	Naval Air Warfare Center Aircraft Division
NAWCWD	Naval Air Warfare Center Weapons Division
NCTS	Navy Civilian Technical Services
NEC	Navy Enlisted Classification

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LIST OF ACRONYMS

NETC	Navy Education and Training Command
NGFS	Naval Gun Fire Support
NIMA	National Imaging and Mapping Agency
nm	nautical mile
NOBC	Navy Officer Billet Code
NTRDM	Navy Training Requirements Documentation Manual
NTSP	Navy Training System Plan
OLF	Out Lying Field
OLSP	Operational Logistics Support Plan
OPNAV	Office of the Chief of Naval Operations
OPO	OPNAV Principal Official
OSHME	Occupational Safety and Health Management Evaluation
PCS	Portable Control Station
PDMS	Pioneer Digital Map System
PEO(W)	Program Executive Officer, Strike Weapons and Cruise Missiles
PGCS	Portable Ground Control Station
PGDT	Portable Ground Data Terminal
PIP	Pioneer Improvement Program
PMA	Program Manager, Air
PO	Payload Operator
POL	Petroleum, Oil, and Lubricants
POP	Plug-in Optronics Payload
PUI	Pioneer UAV Incorporated
RATO	Rocket Assisted Take-off
RF	Radio Frequency
RFT	Ready For Training
RGU	Rate Gyro Unit
RPV	Remotely Piloted Vehicle
RRL	Resource Requirement List
RRS	Remote Receiving Station
RS	Recovery Subsystem (UCARS)
RSTA	Reconnaissance, Surveillance, and Target Acquisition
SCORM	Sharable Content Object Reference Model

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LIST OF ACRONYMS

SE	Support Equipment
SNC	Sierra Nevada Corporation
SRA	Shop Replaceable Assembly
SR-RPV	Short Range-Remotely Piloted Vehicle
SPARS	Shipboard Pioneer Arrested Recovery System
T&E	Test and Evaluation
TCU	Tracking and Communications Unit
TD	Training Device
TE	Training Equipment
TFS	Total Force Structure
TRPPM	Training Planning Process Methodology
TS	Track Subsystem (UCARS)
TSAS	Track Subsystem Alignment Set
TTE	Technical Training Equipment
TUA	Tracking Unit Assembly
TV	Television
UAV	Unmanned Aerial Vehicle
UCARS	UAV Common Automatic Recovery System
UHF	Ultra-High Frequency
UTM	Universal Transverse Mercator
VC	Fleet Composite Squadron
VDC	Volts, Direct Current
VGU	Vertical Gyro Unit
VME	Versa Module Eurocard (IEEE 1014)
VMU	Marine Unmanned Aerial Vehicle Squadron
VRS	Video Retransmission System

RQ-2B UNMANNED AERIAL VEHICLE SYSTEM**PREFACE**

This Approved Pioneer UAV System Navy Training System Plan (NTSP) is an update of the Pioneer UAV System Navy Training Plan (NTP), A-50-8622D/P of May 2004. This NTSP incorporates, where feasible, Human Systems Integration documentation in accordance with Department of Defense Instruction - Operation of the Defense Acquisition System, DODI 5000.2 (series).

Manpower and personnel changes have resulted in the number of detachments at VC-6 Detachment (DET) Patuxent River, Maryland, being decreased first from six to two, and then further reduced to a single detachment. Marine Corps squadron manning has not changed. Multiple Engineering Change Proposals (ECP) have been instituted since the last iteration of this document, and include the 12DS Dual Electro-Optical (EO)/Infrared (IR) Camera; Plug-in Optronic Payload (POP) 200 Dual EO/IR Camera; Modular Integrated Avionics Group (MIAG); Pioneer Digital Map System (PDMS); and Version 14 (V.14) Software upgrade.

Fleet comments and recommendations on the Draft NTSP of November 2003 were solicited in naval message DTG 021403Z DEC 03. Responses were received from the following commands and activities:

- Director of Naval Education and Training (N00T)
- Director, Total Force Programming and Manpower Division (N12)
- Fleet Composite Squadron Six (VC-6) Detachment, Patuxent River, Maryland
- NAVAIR PMA205-F2D

Subsequent to general fleet review, comments on the Proposed NTSP were submitted by OPNAV, N782 and by PMA-263.

Note: The appearance of external hyperlinks in this document does not constitute endorsement by the United States Department of Defense, the United States Department of the Navy, or by NAVAIR.

PART I - TECHNICAL PROGRAM DATA

A. NOMENCLATURE-TITLE-PROGRAM

- 1. **Nomenclature-Title-Acronym.** RQ-2B Pioneer Unmanned Aerial Vehicle (UAV) System
- 2. **Program Element.** 63621N and 63635M

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 (N78)
- OPO Resource Sponsor..... CNO (N782)
- Marine Corps Program Sponsor MCCDC (ASM1)
- Developing Agency NAVAIR (PMA263)
- Training Agency CNATT (FID N5)
COMLANTFLT
COMPACFLT
CNATRA
- Training Support Agency..... NAVAIR (PMA205)
- Manpower and Personnel Mission Sponsor..... CNO (N12)
NAVPERSCOM (PERS-4, PERS-404)
- Director of Naval Training and Education CNO (N00T)
- Marine Corps Force Structure..... MCCDC (TFS Division)

D. SYSTEM DESCRIPTION

1. **Operational Uses.** The RQ-2B Pioneer UAV System is deployed by the Marine Air Ground Task Force (MAGTF) to provide real-time intelligence imagery in support of maritime, amphibious, and ground battle operations. Pioneer payloads provide Commanders with

day/night mission capability for reconnaissance, surveillance, target acquisition data, artillery and gunfire adjustment support, battle damage assessment, search and rescue, and drug interdiction support. These missions are associated with the Pioneer's battlefield, amphibious, and maritime tasking requirements.

Secondary missions include proficiency and mobilization training; tactics and operational concept development; support and force structure deployment planning; follow-on system development; payload and system improvement testing; and support of MAGTF. The Pioneer UAV System is capable of operation from conventional airfields, unimproved airfields (with smooth, Foreign Object Damage free surface), and previously also on six modified L-class ships: [USS Austin \(LPD 4\)](#), [USS Cleveland \(LPD 7\)](#), [USS Denver \(LPD 9\)](#), [USS Duluth \(LPD 6\)](#), [USS Ponce \(LPD 15\)](#), and [USS Shreveport \(LPD 12\)](#). Alternative launch methods include pneumatic launch (Marine Corps only) ashore, and Rocket Assisted Take-off (RATO) ashore (and also previously afloat). Recovery methods include conventional and arrested landings ashore, Unmanned Common Automatic Recovery System (UCARS), and (previously, aboard ships) Shipboard Pioneer Arrestment and Recovery System (SPARS) net recoveries.

At sea, the Navy has previously deployed Pioneer on four battleships ([USS Iowa \(BB 61\)](#), [USS New Jersey BB-62](#), [USS Missouri \(BB 63\)](#), and [USS Wisconsin \(BB 64\)](#)), and the six amphibious LPD ships mentioned above, in support of worldwide operations in Africa, Northern Europe, the North Atlantic, the Western Pacific, Korea, the Mediterranean, and in the Arabian Gulf. The Marine Corps has successfully integrated Pioneer support with Weapons and Tactics exercises, Kernel Blitz exercises, and U.S. Customs Service operations supporting drug interdiction missions. More recently, Pioneers have been deployed ashore in the Middle East.

The Pioneer Unmanned Aerial Vehicle (UAV) surpassed its 25,000 flight hour milestone on April 3, 2003 in combat during Operation Iraqi Freedom. Two Marine units, [VMU-1](#) and [VMU-2](#), operating eight Pioneers each, deployed first in Kuwait and then moved into Iraq. Pioneer sorties last about four and a half to five hours, with a replacement Air Vehicle (AV) launched for each landing, assuring continuous coverage for the ground forces. In addition to surveillance, Pioneers are used to verify intelligence from less timely sources, to call in air strikes, and to search for and find targets. New to the Pioneer for these operations is a suite of sensors that includes color daylight television feed and an improved Forward-Looking Infrared (FLIR) picture. With the color daylight feed, analysts can easily distinguish a target from a decoy. The FLIR improves infrared (IR) imagery for more effective nighttime operations. At the time of this writing, the RQ-2B continues to provide an important service to Allied Forces in Iraq as attested to in a [3 June 2003 news story from Al Kut, Iraq](#), and another [24 June 2003 news story from Ali Al Salem, Iraq](#).

a. Background. In the 1980s, U.S. military operations in Grenada, Lebanon, and Libya identified a need for an on-call, inexpensive, unmanned, over-the-horizon targeting, reconnaissance, and battle damage assessment (BDA) capability for local Commanders. As a result, in July 1985, the Secretary of the Navy directed the expeditious acquisition of UAV systems for fleet operations using non-developmental technology. A competitive fly-off was conducted and two Pioneer systems were procured in December 1985 for testing during 1986. Initial system delivery was made in July 1986 and subsequently deployed on the battleship [USS](#)

[Iowa \(BB 61\)](#) in December 1986. During 1987, three additional systems were delivered to the Marine Corps where they were operationally deployed on board LHA-type vessels as well as with several land-based units. The system became a genuine Joint Service program in 1990 when the U.S. Army fielded their Pioneer system.

Pioneer's operational history includes 17 years of service and its unprecedented success during Operations Desert Shield/Desert Storm. Army, Navy, and Marine Corps Commanders lauded Pioneer's operational effectiveness, as six operational units from three services flew over 300 combat missions. The documented success of Pioneer in supporting combat operations and providing the Battlefield Commander critical intelligence information established the utility and importance of UAVs in combat. Pioneer was highly praised as the "single most valuable intelligence collector in the Marine Expeditionary Force". Navy Pioneer UAVs were extremely successful in target selection, spotting naval gunfire, and battle damage assessment (BDA) when USS Iowa's 16-inch guns destroyed enemy targets and softened defenses along the Kuwaiti coastline [this paragraph was adapted in part, along with the following anecdote, from an [online Navy Fact File](#)].

b. Desert Shield/Desert Storm Anecdote. The surrender of Iraqi troops to an unmanned aerial vehicle did actually happen. All of the UAV units at various times had individuals or groups attempt to signal the Pioneer, possibly to indicate willingness to surrender. However, the most famous incident occurred when [USS Missouri \(BB 63\)](#), using her Pioneer to spot 16-inch gunfire, devastated the defenses of Faylaka Island off the coast near Kuwait City. Shortly thereafter, while still over the horizon and invisible to the defenders, the [USS Wisconsin \(BB 64\)](#) sent her Pioneer over the island at low altitude. When the UAV came over the island, the defenders heard the obnoxious sound of the two-cycle engine since the AV was intentionally flown low to let the Iraqis know that they were being targeted. Recognizing that with the "vulture" overhead, there would soon be more of those 2,000-pound Naval gunfire rounds landing on their positions with the same accuracy, the Iraqis made the right choice and, using handkerchiefs, undershirts, and bed sheets, they signaled their desire to surrender. Imagine the consternation of the Pioneer Aircrew, who called the Commanding Officer of the Wisconsin and asked plaintively, "Sir, they want to surrender; what should I do with them?"

In October 2000, in recognition of this historic incident, an intact, flyable Pioneer, (Air Vehicle 159) was donated by the Navy to the [Smithsonian National Air and Space Museum](#). A second donated Pioneer [was placed upon the USS Wisconsin](#) at the [Nauticus National Maritime Center](#) in Norfolk, Virginia. There is now one on the USS Missouri also. Additional research materials are easily available on the internet, including the following examples:

- [US Navy Fact File on Pioneer UAV](#)
- [UAV Forum](#)
- [Pioneer UAV, Inc.](#)
- [PMA263 Pioneer UAV](#)

2. Foreign Military Sales. Foreign Military Sales (FMS) does not apply to the Pioneer UAV program.

E. DEVELOPMENTAL TEST AND OPERATIONAL TEST. The [Naval Air Warfare Center Aircraft Division \(NAWCAD\) Patuxent River](#), Maryland, and Fleet Assistance Support Team (FAST), which was then located at Point Mugu, California, completed Technical Evaluation and Developmental Testing-IIA of the Pioneer UAV System in November 1987. Operational Evaluation and Operational Testing-II were completed by [Fleet Composite Squadron Six \(VC-6\)](#) aboard [USS Iowa \(BB 61\)](#) in October 1989. At the time, there were no findings that significantly impacted Manpower, Personnel, and Training (MPT).

Follow-on test and evaluation made the year 1999 a successful but hectic and transitional year for Pioneer UAV Test and Evaluation (T&E). The focus of testing was on the new software and the significant hardware improvements that are based on it, including the UAV Common Automatic Recovery System (UCARS), the Modular Integrated Avionics Package (MIAG), the PCS Autotrack System, the Pioneer Digital Map System (PDMS), and the MK125 Mod II RATO Rocket Motor and launch equipment. Due to the 60% draw down in personnel and equipment experienced by VC-6 in 1999, VMU-1 sent three detachments of personnel from Twentynine Palms, California, to Webster Field, St. Inigoes, Maryland, to conduct [Pioneer testing in 2000](#). VC-6 continued to assist with T&E during these VMU-1 evolutions, and VMU-2 also contributed logistical support.

F. AIRCRAFT AND/OR EQUIPMENT/SYSTEM/SUBSYSTEM REPLACED. The AV was produced in four configurations, Option I, Option II, Option II+ with Central Processing Assembly (CPA), and Option II+ with Modular Integrated Avionics Group (MIAG). Only Option II+ with MIAG remains in the inventory, and is identified as Pioneer model RQ-2B. The Option II+ is essentially an Option II with a reshaped composite fuselage and multi-frequency capability, a redesigned engine shroud to improve engine cooling efficiency, and a modified wing strap assembly to accommodate the new fuselage, diplexer, small engine trap assembly, multi-frequency video and telemetry transmitter, frequency select cable, and a Global Positioning System (GPS) capability. System equipment replacements include:

1. Modular Integrated Avionics Group. In June 1996, a contract was awarded by the UAV-Joint Program Office (JPO) for the integration of their common digital flight computer, the MIAG, into the Pioneer AV. This single box replaces both the legacy analog flight computer onboard Pioneer as well as many of the distributed sensor components. The MIAG is a digital avionics system and consolidates the functions of an Inertial Navigation System (INS), autopilot, air data computer, GPS, payload control system, and mission control system into one digital unit. The MIAG replaces the CPA, Vertical Gyro Unit (VGU), Rate Gyro Unit (RGU), Airspeed Transducer Unit (ATU), Barometric Pressure Unit (BPU), GPS Receiver, Flux Valve Assembly, and Engine Rpm and Cut Control, Engine Thermal Couple (ETC). Not only does this digital flight computer allow for easy future modifications to Pioneer, but also it substantially increases the reliability of the system. Initial testing was completed in February 2000 and final testing was completed in May 2000.

2. Versatron 12DS Payload. The 12DS dual EO/IR sensor package is manufactured by [Versatron](#) (a subsidiary of [General Dynamics Ordnance and Tactical Systems \(GD-OTS\)](#), a business unit with the Combat Systems Group of [General Dynamics](#)). It has replaced the

previous separate Pioneer payloads, Moked (MKD)-200A (Day TV) and the MKD-400C (FLIR), through attrition. The Moked devices are manufactured by the [Tamam Division](#) of [Israel Aircraft Industries \(IAI\)](#).

3. Pioneer Digital Map System. The Pioneer Digital Map System (PDMS) is used to perform mission planning and to track the Pioneer AV during flight. National Imaging and Mapping Agency (NIMA) map data is uploaded to the system for each Area of Interest (AOI). Graphics are added by the operator to illustrate borders, waypoints, or specific targets.

PDMS is a computer-based system designed to replace the mechanical pen-and-chart system formerly installed in the Pioneer Ground Control Station (GCS). PDMS depicts the Pioneer UAV's position on a digital, TPC-like display, and also displays a "camera footprint" on the map over the geographical sector at which the Pioneer payload camera is pointed. PDMS thus enhances situational awareness for not only the Mission Commander and Internal Pilot, but also the Payload Operator.

4. Plug-in Optronic Payload (POP) 200. Like its predecessor MKD-200 and 400 payload models, the POP-200 Dual EO/IR Sensor Package is manufactured by IAI's Tamam Division, but provides daytime EO Charge Coupled Device (CCD) camera and FLIR camera capability in a single package, allowing the operator to switch between cameras during flight.

5. Version 14 Software Upgrade. Version 14 (or "V14" software) replaces the older, fielded Version 10.1C and integrates all new hardware and software capabilities added to Pioneer. V14 software adds significant new capabilities to the Pioneer UAV, including GPS navigation and the capability to fly more complex Return Home / Return-to-Force profiles than previous software versions. Initial tests were completed in November 1999, with final shore based testing completed in May 2000. Shipboard testing will be completed upon return to the ship.

V14 software includes enhancements to allow use of GPS position, units of Universal Transverse Mercator (UTM)/Meters or Latitude/Longitude (LAT/LON)/nautical miles, Cross-Hemisphere operation, and GPS guided waypoint return home. V14 software was also designed for compatibility with the PDMS, the Unmanned Common Automatic Recovery System (UCARS), the Portable Control System with Antenna Auto-track (PCS-A), and MIAG.

G. DESCRIPTION OF NEW DEVELOPMENT

1. Functional Description. The Pioneer UAV System is a transportable Intelligence, Surveillance, and Reconnaissance (ISR) asset capable of providing Tactical Commanders with day and night battlefield and maritime reconnaissance in support of Marine expeditionary warfare and maritime control operations. The Pioneer UAV System consists of three ground elements, Ground Control Station (GCS), Portable Control Station (PCS), and Tracking and Communication Unit (TCU), and one airborne element, the Pioneer AV. The Pioneer UAV System is capable of operating from improved and unimproved sites ashore, and also previously from ships that had undergone the required ship alteration for the SPARS. Strategic or tactically

vital data may be obtained cost-effectively by exploiting the UAV's low radar cross-section, low IR signature, and remote control versatility.

Pioneer UAV is a line-of-sight system operating in the C-Band (IEEE defined Radar Band, having a frequency between 4 and 8 GHz with a corresponding wavelength between 7.50 and 3.75 cm) and Ultra High Frequency (UHF) spectrums. The AV is operated by the External Pilot (EP) for launch and recovery or for operations within visual range. For missions beyond visual range, AV control is passed to the Internal Operator (IO) or Internal Pilot (IP), located in either the GCS or PCS. The MIAG may also operate the UAV in a programmable, semi-autonomous mode.

The basic Pioneer mission is accomplished by the IP positioning the UAV, under direction of the Mission Commander (MC), to provide a stable sensor platform for optimum imagery resolution of the areas of interest. The Payload Operator (PO) then directs the sensor to provide video imagery of the target. Pioneer imagery is downlinked to the controlling station and transferred to end users, via coaxial cable, a commercially purchased Video Retransmission System (VRS), or hard copy (8 mm or VHS tape, thermal or photo print).

a. RQ-2B Air Vehicle. The RQ-2B AV is a remotely piloted or independently self-controlled (programmable), high wing, lightweight aircraft, capable of carrying a variety of mission payloads. The RQ-2B is built by Pioneer UAV, Inc., which is a joint venture between [AAI Corporation](#), Hunt Valley, Maryland, and Israel Aircraft Industries, Ltd., Lod, Israel.

The AV is controlled by a C2 Radio Frequency (RF) uplink data stream, from either the GCS (via the TCU) or the PCS, or can be programmed to fly independently under control of its autopilot/MIAG (excluding launch and recovery). Control of the AV may be handed off from one station to another (GCS-GCS or GCS-PCS, etc.), effectively increasing the range to that of its fuel capacity.

The RQ-2B uses a pusher-type, two-bladed laminated wood propeller, located at the rear of the main fuselage. The propeller is powered by a horizontally opposed two-cylinder, two-stroke, 26 horsepower engine, which burns a pre-mixed 100 Octane Low Lead (100LL) aviation gasoline and two-stroke motor oil combination. Its cruising speed is typically about 70 kts. The RQ-2B is weather sensitive, lacking both flight surface and carburetor anti-ice capabilities and has limited water intrusion protection. The RQ-2B has a low radar cross-section and its upward pointed engine exhaust ports rapidly dissipate engine exhaust heat through the propeller wash, reducing the AV infra-red signature, and minimizing detection by opposing forces.

The RQ-2B has a service ceiling of 12,000' Mean Sea Level (MSL); however, it is normally operated from 3,000 feet (915 meters) to 5,000 feet (1524 meters) Above Ground Level (AGL), to ensure the best quality imagery. Mission altitude is greatly effected by the need to maintain electronic line-of-sight (ELOS) between the AV and the controlling ground station. The Pioneer's payloads require an optimum range from target of one to three kilometers, and are generally effective to a standoff distance of up to 7 kilometers (4.3 miles).

Standard Pioneer payloads are the Versatron 12DS dual EO/IR sensor, which began fielding in FY01, and the POP-200, which began fielding in March 2003. The Moked-200A (Day TV) and Moked-400C (FLIR) are maintained in inventory, but are no longer fielded assets.

(1) 12DS Payload. The model 12DS Payload consists of a lightweight FLIR system and a lightweight video (EO) camera co-mounted on a stabilized platform. The platform is stabilized using an inner (pitch/yaw) and outer (azimuth/elevation) gimbal system. This stabilized platform provides six axes of passive isolation (x, y, z, pitch/roll, and yaw) that enables both cameras to maintain fixed lines of sight (relative to ground). This allows the cameras to be trained on a specific point via steering commands uplinked to the vehicle.

The platform look angle is controlled by the MIAG electronics contained in the AV. The MIAG issues positioning and mode control commands and receives status reports via the UAV payload cable. Commands to the payload are received through the UAV radio uplink, while payload telemetry and video data are transmitted to ground control through the UAV video and telemetry downlink. The 12DS Payload is installed in the special payload compartment provided in the AV. It receives electrical power from the AV electrical system. The payload's EO camera provides a standard EIA-525 composite video output signal. The FLIR sensor is a real-time, thermal-imaging system based on the principle of detecting thermal energy radiated by objects encountered in its field of view. Received thermal energy is then converted to a standard TV image and passed through video switching circuitry that allows the observer to switch between EO and the FLIR sensor at will. The system has Auto Track.

(2) POP-200. The POP-200 is a day and night observation payload with video auto tracker for UAV application. The payload contains two imaging sensors, a FLIR and a Color TV. The FLIR provides the Operator with Medium Wave Infrared (MWIR) (3-5 micron) vision for target acquisition and tracking capability during day or night use. The Color TV has the same role for daytime operation. The POP-200 combines daylight color TV on a 320 × 240 pixel InSb focal plane array with FLIR on a 28-centimeter gimbal. The 27-kilogram (59.4 pounds) payload is said to meet U.S. Army detection requirements at 3 kilometers.



POP-200

POP-200 SPECIFICATIONS

Dimensions:	
Diameter.....	260 mm
Height.....	380 mm
Weight (typical)	
Payload.....	15 kg
Control Unit.....	0.7 kg
Fields of regard:	
Azimuth.....	360°
Elevation.....	+40 to -110°
Fields of view:	
Focal Plane Array.....	5 × 25° or 4 × 12°
TV.....	Various Zooms
TV and Focal Plane Array.....	4 × 3° to 16 × 12°

The POP-200 is contained in a single lightweight compact unit, which includes all the electronics necessary to operate the sensors and gimbals, and to interface with the AV avionics. This single unit is comprised of two sub-units: a gimballed turret, which is mounted on the carrying UAV, and a plug-in sensors module. The sensors module slides into the turret and functions both as the sensor and as the pitch gimbal with no need for any additional wiring, cables, or connectors. The POP 200 includes the following features:

- Four electrically switched Fields-Of-View (FOV) for the FLIR
- A TV CCD assembly with wide dynamic optical zoom ratio
- 2-axis inertial stabilization with lightweight, quick-change, modular optical sensors module

- Switchable TV/FLIR composite analog video outputs
- Full remote control using a serial communication channel (RS422)
- AVT (Automatic Video Tracker) card for day/night auto-target tracking

The POP-200 system includes an electrical interface box, mounted integral with the payload turret assembly, and circuitry to convert the POP-200 RS422 serial data stream to a format compatible with the AV parallel interface. Additionally, the POP-200 system includes a mechanical interface adapter to mount the turret assembly into the AV. This assembly includes rubber isolated shock mounts and a filler ring/fairing assembly to reduce the gap between the payload ball outer diameter and the fuselage payload opening.

b. Ground Control Station. The Ground Control Station (GCS) contains three primary equipment bays; the Pilot Bay (IP Workstation), the Observer Bay (PO Workstation), and a Tracker Bay that contains the Pioneer Digital Map System (PDMS). The GCS is typically contained in either an S-280 shelter (Marine and maintenance training systems), or a modified 6.1 meters (20 feet) Mobile Maintenance Facility (MMF) shelter for shipboard operations and operator training system.

The GCS communicates with the AV via its companion TCU, which allows operation of the AV throughout all mission phases to the system's maximum range of 185 kilometers (100 nautical miles).

c. Tracking and Communications Unit (TCU). The TCU is connected to the GCS via cable or fiber optics, and provides the GCS with Command and Control (C2) uplink communications to the AV via two transmitters (C-Band and UHF), and receives downlink communications (C-Band) from the AV via a single downlink receiver. C2 uplink data include AV flight commands, payload commands, Identification Friend Foe (IFF) and anti-collision strobe light on/off commands, navigation light control, and a variety of sensor queries. Downlink data include AV performance, position, MIAG acknowledgement of uplink commands, and payload imagery.

COMMUNICATIONS LINK	FREQUENCY	BANDWIDTH	POWER	GCS/TCU RANGE
Primary Uplink (C-Band)	4.55 GHz	12.5 GHz	30 Watts	185 km
Secondary Uplink (UHF)	420 - 450 MHz	600 kHz	50 Watts	185 km
Downlink (C-Band)	4.8 - 4.9 GHz	10 MHz	30 Watts	185 km

d. Portable Control Station. The Portable Control Station (PCS) operates independently of the GCS, allowing split-site operations. Additionally, the PCS can be used to launch the AV and transfer control to a GCS for down-range mission execution, and then receive

AV control from the GCS to execute recovery. The PCS includes an IP workstation, radio frequency unit, hand-held pilot control units, and an electrical power source. The PCS, which does not require a shelter, is typically housed in a S-250 shelter ashore or was stack-mounted in a pre-groomed compartment aboard ship.

COMMUNICATIONS LINK	FREQUENCY	BANDWIDTH	POWER	PCS RANGE
Primary Uplink (C-Band)	4.55 GHz	12.5 GHz	30 Watts	40 km (min)
Secondary Uplink (UHF)	420 - 450 MHz	600 kHz	50 Watts	40 km (min)
Downlink (C-Band)	4.8 - 4.9 GHz	10 MHz	30 Watts	185 km

e. Miscellaneous Equipment

(1) Rocket Assisted Take-Off Launch System. RATO launch allows the AV to be operated from unprepared sites ashore or previously from a ship's deck, where conventional take-off is impractical or impossible. The system uses a launching stand to hold the AV at the proper launch attitude (angle-of-attack), and a disposable rocket motor assembly to boost the AV to flying speed within two seconds. The RATO launch system consists of a launcher control box, junction box, enable plug assembly, 76.2 meters (250 feet) of firing cable, rocket motor initiator, and a MK 125 Rocket Motor assembly. RATO launch is employed by both Navy and Marine Corps Pioneer units.



ROCKET ASSISTED TAKE-OFF LAUNCH

(2) Pneumatic Launching System. The Pneumatic Launching System is designed to launch an AV equipped with launcher skids and a catch-release mechanism from

unprepared ground-based locations lacking a sufficiently prepared surface from which to conduct a conventional take-off. The launching system operates a pneumatic turbine, which draws a nylon strap onto a rotating drum. As the drum rotates, the strap pulls the UAV along an inclined rail for approximately 18.5 meters (61 feet), gaining sufficient end-speed and elevation to sustain controlled flight after the AV clears the end of the launcher ramp. The pneumatic launch system is employed exclusively by Marine Corps Pioneer squadrons.



PNEUMATIC LAUNCH SYSTEM PREPARATION



PNEUMATIC LAUNCH SYSTEM OPERATION

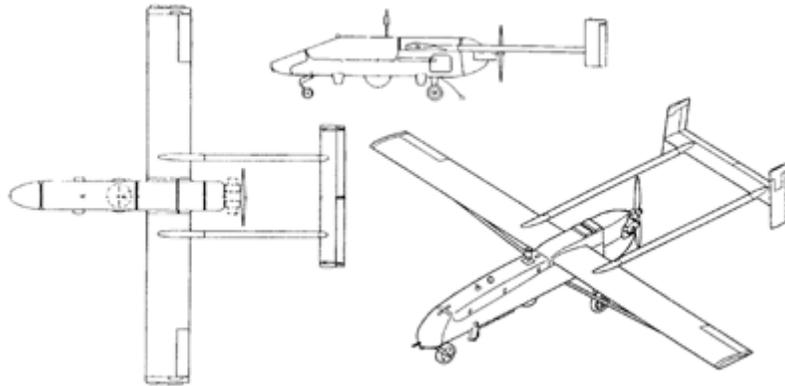
(3) Remote Receiving Station. The Remote Receiving Station (RRS) is a portable imagery/data receiving unit capable of monitoring real-time, non-annotated video directly from the AV. It consists of a receiver, monitor, and an antenna system, and is capable of receiving AV downlink imagery to a range of 25 kilometers (15.5 miles). A 24-Volts, Direct Current (VDC) power source is required for the station. The payload, which is remotely controlled from the GCS or PCS, continuously transmits a picture of the surveyed area, which is displayed on the RRS monitor. The RRS displayed video contains no graphic or parametric data.

(4) Shipboard Pioneer Arrestment and Recovery System. The Shipboard Pioneer Arrestment and Recovery System (SPARS) net recovery system was previously used for shipboard operations where conventional recovery methods were impossible. The SPARS consisted of a recovery net suspended across the aft end of the ship's flight deck between two vertical poles, and a cable tension/brake assembly operating with a third pole located at the forward end of the flight deck. All three poles could be raised and lowered for storage, rigging, and de-rigging the recovery net. The EP flew the AV into the center of the net, which collapsed around the wings and fuselage, stopping forward motion. The net also suspended the AV sufficiently high to prevent damage from striking the flight deck. Once safely trapped, and with the engine secured, AV and net assembly were lowered to the flight deck for post-flight inspection and storage or turnaround.

(5) Unmanned Aerial Vehicles Common Automatic Recovery System. Unmanned Aerial Vehicles (UAV) Common Automatic Recovery System (UCARS) provides automatic recovery guidance for the Pioneer UAV and is developed by Sierra Nevada Corporation. UCARS consists of three subsystems: the Airborne Subsystem (AS) resident in the UAV to be recovered, the Track Subsystem (TS) that provides precise position information used in the automatic recovery of UAV, and the Recovery Subsystem (RS) that contains the software needed to recover the AV. UCARS is capable of operating day or night from land-based (and previously from shipboard) recovery sites and in nearly all types of weather conditions (fog, rain, smoke, low clouds, bright sunlight, etc.). Shipboard Motion Sensor was not approved for shipboard use.

2. Physical Description. The Pioneer UAV System consists of three ground elements and one airborne element, as functionally described above. Additionally, multiple payloads, RRS, launch systems, recovery systems, and other miscellaneous equipment are included in a Pioneer pack-out. The Pioneer UAV System historically had two general configurations. The first is [land-based](#), operated by the Navy, Marine Corps, and MTU 6001 CNATT DET Milton, (located at Outlying Landing Field (OLF) - Choctaw, [NAS Whiting Field](#), Milton Florida). The second was [shipboard /maritime](#), operated by the Navy for deployment aboard six modified Amphibious Transport Dock (LPD) type ships that had undergone extensive alteration to accommodate the Pioneer system and its associated equipment. Although similar, installations were not duplicates, due to varying ship design and technological changes over the installation timeline. At the time of this writing neither Navy nor Marine Corps units currently operate the Pioneer UAV system from ships.

a. RQ-2B Air Vehicle. The Pioneer RQ-2B AV is a high-wing monoplane with a trapezoidal cross-section fuselage, twin tail boom, and tricycle landing gear, with pneumatic main wheels and a steerable nose wheel. It is powered by an air-cooled 352 cubic centimeter, horizontally opposed two-cylinder, two-stroke, crankcase scavenged engine capable of generating 26 horsepower. Both cylinders are fired simultaneously by a magneto ignition system. The engine is installed in a pusher configuration, using a 29-inch diameter, two-bladed, laminated wood propeller.



RQ-2B SPECIFICATIONS

Wing Span.....	5.2 m	(16.9 feet)
Length.....	4.3 m	(14.0 feet)
Height.....	1.2 m	(3.3 feet)
Weights: (See note below)		
AV (empty).....	125 kg	(276 pounds)
Max Take-off (rolling).....	205 kg	(452 pounds)
RATO or Pneumatic	203 kg	(447 pounds)
Speed.....	176 km per hour	(110 knots or 109.37 mph)
Ceiling.....	4,572 m	(15,000 feet)
Range	185+ km	(100+ nm or 115+ statute miles)

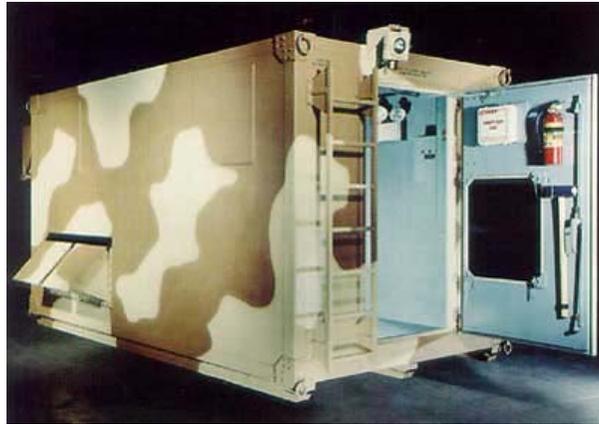
Note: Depending on the payload configuration, up to 18 kg (40 pounds) of weight is added to the AV for balance.

Each AV is stored in a shipping container with the following dimensions:

Dimensions	1.3 m × 1.1 m × 3 m	(52" × 43" × 118")
Cube	4.33 cubic meters	(153 cubic feet)
Weight (with AV).....	478 kg	(1052 pounds)

b. Ground Control Station

(1) Shore-based. The shore-based GCS is installed in a truck or trailer mounted S-280 Shelter (Marine Corps and CNATT Det Milton Maintenance Trainer) or in a modified MMF (CNATT Det Milton Operator Trainer), and contains three standard equipment bays (Pilot Bay, Tracker Bay, and Observer Bay). The Pilot Bay is the IP workstation, and the Observer Bay is the PO workstation. Additionally, the shelter may include a communications equipment rack and small worktable (Mission Commander Bay).



EXTERNAL: MARINE CORPS S-280 SHELTER

Dimensions 3.7 m × 2.2 m × 2.2 m (147" × 87" × 87")
 Cube 18.2 cubic meters (643 cubic feet)
 Weight 668 kg (1470 pounds)



INTERIOR (LEFT TO RIGHT): OBSERVER, TRACKER, AND PILOT BAYS

(2) Shipboard. The shipboard GCS was contained in a modified MMF shelter, which was installed onto pad-eyes welded to the deck as part of the Pioneer ship alteration. The exact orientation (fore-aft, port-starboard) varies by individual ship, but the shelter was generally located on the aft-most portion of the 0-2 deck, starboard side. In addition to the standard Pioneer equipment bays, the shipboard GCS contained additional desks, communications equipment, anemometer remote, and a ship's heading remote. The GCS was connected to the ship's communications system, Pioneer Interior Communications System, electrical power and the TCU, via cable connection to pre-groomed service boxes.

Dimensions 2.4 m × 2.4 m × 6.1 m (8' × 8' × 20')
 Cube 36.25 cubic meters (1280 cubic feet)
 Weight 3409 kg (7500 pounds)

c. Tracking and Communications Unit

(1) Shore-based. The shore-based TCU is installed in a truck portable S-250 shelter, with a roof mounted C-Band dish antenna platform and a telescoping UHF antenna mast. The TCU contains all GCS-to-AV communications equipment, and interfaces with the GCS via cable connection or fiber optics.



TRACKING AND COMMUNICATIONS UNIT

Dimensions 2.2 m × 2.0 m × 1.8 m (87" × 80" × 71")
 Cube 7.96 cubic meters (281 cubic feet)
 Weight..... 818 kg (1800 pounds)

(2) Shipboard. The shipboard TCU was contained in the same S-250 Shelter as the land-based TCU. Although originally designed without support for a roof-mounted dish antenna, all VC-6 shipboard TCUs were modified as land and sea-based units. Additionally, the shipboard TCU contained extra equipment required to operate two remote antennae. The shipboard TCU was installed on the ship's 0-4 deck (0-3 on Austin and Ponce), at the aft end of the signals deck. It was mounted to pre-groomed pad-eyes, and connected to the GCS and antennae via cable connection to deck-mounted junction boxes. The omni antenna was located on a mast atop the TCU. The shipboard TCU used two C-Band dish (directional) antenna to ensure continuous coverage during masking of one antenna due to ship's movement. The forward antenna and pedestal were located within a radome, which sat atop a mast assembly located on the forward part of the ship's 0-4 level (0-3 on Austin and Ponce). The aft antenna and pedestal were located inside a radome located above Primary Flight Control ("Pri-Fly").

Dimensions 2.2 m × 2.0 m × 1.8 m (87" × 80" × 71")
 Cube 7.96 cubic meters (281 cubic feet)
 Weight..... 818 kg (1800 pounds)

d. Portable Control Station

(1) Shore-based. The shore-based PCS is installed in a truck portable S-250 Shelter, and includes a Pilot Bay (IP Workstation) and communications equipment. The shore-based PCS uses a directional horn type C-Band antenna with an omni-directional stub antenna. UHF communications are supplied via a telescoping mast antenna. The shore-base PCS is designed to be remotely deployed from the GCS, but is limited by its AV communications range. The PCS does not have a Tracker Bay or Observer Bay.

Dimensions 2.2 m × 2.0 m × 1.8 m (87” × 80” × 71”)
 Cube 7.96 cubic meters (281 cubic feet)
 Weight..... 1136 kg (2500 pounds)

(2) Shipboard. The shipboard PCS was a portable, stacked isopod configuration vice the rack-mounted configuration of the land-based S-250 Shelter. The PCS was installed in a pre-groomed space on the ship’s 0-1 level, just below Pri-Fly. The space had been modified as part of the Pioneer ship alteration to provide an installation pedestal, power, communications, and antenna support. The PCS C-Band directional (horn) and omni-directional antennae were co-located inside a single radome mounted just below and in front of Pri-Fly.

Dimensions 0.76 m × 0.61 m × 1.78 m (30” × 24” × 70”)
 Cube 6.48 cubic meters (29 cubic feet)
 Weight..... 229 kg (503 pounds)

e. Miscellaneous Equipment

(1) Rocket Assisted Take-Off Launch System. The RATO launch system consists of a launch stand, MK 125 Rocket Motor assembly, rocket motor initiator, and the control system (launch box, 250 feet of firing cable, junction box, and enable plug assembly). The RATO launch stand is a portable, lightweight, wheeled metal stand, used to hold the UAV at the proper angle-of-attack during RATO launch. The unit was secured to the ship’s flight deck using aircraft tie-down chains attached between six handles on the stand and deck tie-down points (pad eyes). On land, cables between the six handles and securing stakes secure the unit. The launch stand weighs approximately 150 pounds.

Dimensions 3.25 m × 1.00 m × 0.51 m (128” × 40” × 20”)
 Cube 1.64 cubic meters (58 cubic feet)
 Weight..... 68 kg (150 pounds)

(2) Pneumatic Launcher. The pneumatic rail launcher is designed to launch a Pioneer UAV (fitted with launching skids and a strap catch-release mechanism). The launcher consists of an air tank (50.8 centimeters in diameter by 9 meters long, with a 1.5 cubic meter capacity), four rail extensions (each 3 meters long) and a base structure, which connects the air tank assembly to a standard 5-ton truck.

CONFIGURATION	LENGTH	HEIGHT	WEIGHT
Transport	10.16 m / 33.33 feet	3.68 m / 12.0 feet	3255 kg / 7161 pounds
Launch	21.64 m / 71.00 feet	4.31 m / 14.1 feet	3255 kg / 7161 pounds

(3) Remote Receiving Station. The RRS is a portable unit that incorporates the receiver, monitor, and antenna system. A 24 VDC power supply is required for the station when operating from a ship or isolated site. The RRS consists of two main subsystems:



REMOTE RECEIVING STATION

(a) Tracking Unit Assembly. The Tracking Unit Assembly (TUA) consists of an omni-directional antenna assembly, tracking plate assembly (including a horn antenna), and a pedestal assembly. The TUA provides 359° non-continuous coverage, with a $\pm 12^\circ$ elevation adjustment, and manually tracks at a rate of 12° per second.

1) Omni Antenna Assembly. The omni antenna is a vertically polarized C-Band antenna that receives AV downlink signals (4.8 to 4.99 GHz) from 360° in azimuth. The omni antenna assembly is approximately 40 centimeters in length and weighs 5.4 kilograms.

2) Tracking Plate Assembly. The tracking plate assembly rotates by manual control, and provides reception for the omni antenna and the horn antenna assemblies. The vertically polarized, directional C-Band horn antenna receives downlink signals (4.5 to 5.5 GHz) and is 85 centimeters long, 46 centimeters wide, and 35 centimeters high. The tracking plate assembly weighs less than 5 kilograms.

3) Pedestal Assembly. The pedestal assembly supports and rotates the tracking plate assembly, and includes a DC motor, a transmission gear, and a control cable. The pedestal assembly weighs 12 kilograms.

(b) Main Unit Assembly. The Main Unit Assembly consists of four main subsystems enclosed in a single case: receiver unit, command panel, front panel assembly, and a power supply assembly.

Note: Shipping dimensions of an RRS packed in a wooden shipping crate are as follows:

Dimensions 0.61 m × 0.61 m × 0.61 m (24" × 24" × 24")
 Cube 0.34 cubic meters (12 cubic feet)
 Weight 116 kg (255 pounds)

(4) Shipboard Pioneer Arrestment and Recovery System. Historically, the major hardware of the SPARS was permanently installed as part of the Pioneer ship alteration. The SPARS included two main poles mounted at the aft-most end of each flight deck catwalk, operated by hydraulic mechanisms that allowed one man to raise or lower each pole. One forward pole mounted on the port side of the helicopter hangar (Austin is the exception), required one man to raise or lower via a pneumatic ram. The recovery net was suspended between the two aft poles via a slipper cable which was suspended by a tension cable and pulley system to the forward pole and cable winch assembly. Although not technically part of the SPARS, two barricade nets were used in conjunction with the SPARS to prevent over or under-run by the AV. The aft barricade was mounted between the two aft SPARS poles, and the forward barricade was mounted between two removable flight-deck-mounted poles, just forward of the suspended recovery net.



SPARS RECOVERY NET

(5) Maintenance Shelters

(a) Land-based. Marine Corps units use a standard S-280 Shelter for maintenance purposes. The maintenance shelter and Peculiar Support Equipment are contained in trailer mounted S-280 Shelters. Empty weight, cube, and dimensions of the S-280 Shelter are as follows:

Dimensions 3.7 m × 2.2 m × 2.2 m (147" × 87" × 87")
 Cube 18.2 cubic meters (643 cubic feet)
 Weight (empty) 668.2 kg (1470 pounds)

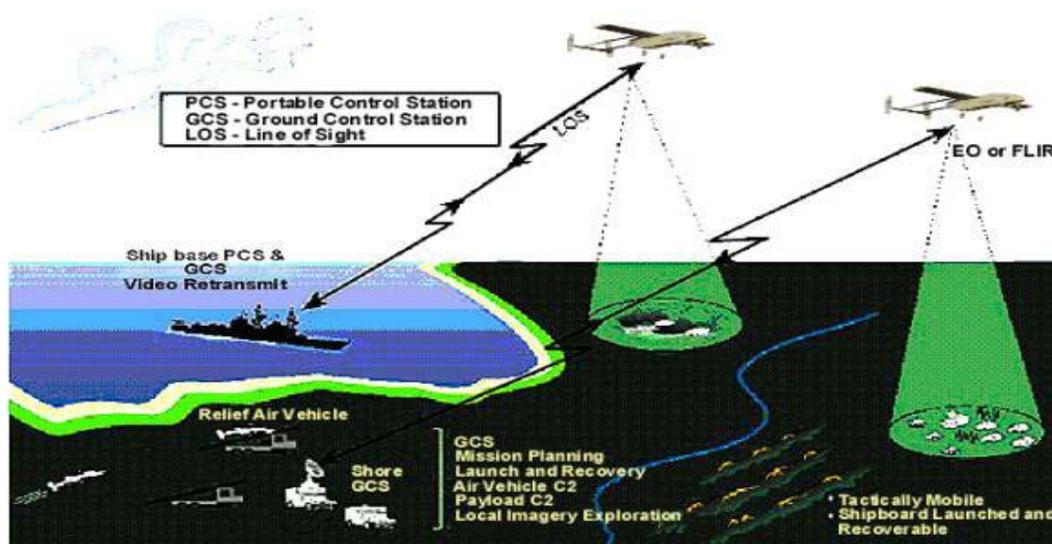
(b) Shipboard. The shipboard MMF was contained in a standard MMF shelter, located on the ship's 0-2 level, next to or across from the GCS (dependent on ship alteration). The MMF contained all ready-use spare parts, and some workspace. The MMF

received electrical power and ship's telephone service, via umbilical, from a pre-groomed junction box.

Dimensions2.2 m × 2.2 m × 6.1 m (8' × 8' × 20')
 Cube36.25 cubic meters (1280 cubic feet)
 Weight..... 2272.7 kg (5000 pounds)

(6) UCARS. The AS provides a unique point of reference on the UAV, enabling the TS to detect and precisely track the UAV. The TS precisely measures the UAV position relative to the touchdown point. When deployed aboard ship, the TS also measured the ship's motion and outputs stabilized UAV position information along with ship motion data required for automatic recovery operations. The Shipboard Motion Sensor (SMS) was not approved for shipboard operations. Included as part of the TS are a Track Subsystem Alignment Set (TSAS) and a video camera to check the pointing position in relation to the TS Antenna position. The TSAS was used for the initial setup/alignment of the TS, post-installation and post-maintenance validations, and regular interval readiness tests before and between UAV missions, referred to as Daily Operational Readiness Test (DORT). The TS was capable of tracking a UAV augmented with an AS at a maximum distance of approximately 14.8 kilometers (8 nautical miles). The Recovery Subsystem (RS) provides auto-recovery functions to the UCARS.

3. New Development Introduction. Beginning in FY04, improvements to the system increased Pioneer functionality, reduced system footprint, and increased system commonality with other UAV programs, while providing increasing interoperability. The Pioneer Improvement Program (PIP) was to upgrade the RQ-2B to ensure long-term viability out to FY10 but has since been restructured as a sustainment program; incremental ECPs will upgrade the system to ensure that it remains a viable and important player in the Joint warfighting **Concept of Operations** (CONOPS).



CONCEPT OF OPERATIONS

4. Significant Interfaces. The Pioneer UAV System interfaces with Government Furnished Equipment (GFE) and previously also with shipboard power and communications equipment. The Video Retransmission System (VRS) is a commercially available VHF transmission system that allowed rebroadcast of the downlinked Pioneer imagery from the GCS aboard the LPD to the ARG command ship. Since the video is tapped off of the GCS's Observer Bay, it contains all applicable annotation, not available from direct receipt of UAV imagery via RRS. Additionally, the VRS is voice capable, allowing for voice-over narration by the Pioneer aircrew.

5. New Features, Configurations, or Material

a. Modular Integrated Avionics Group. MIAG increased Pioneer AV electronic reliability and reduced maintenance time and cost by replacing the Pioneer CPA and its external gyros, air data sensors, GPS receiver, accelerometers, and Engine RPM and Cut Control with a microprocessor-based inertial navigation and avionics suite.

b. UAV Common Automatic Recovery System. UCARS is a microwave Ka-Band (IEEE defined Radar Band having a frequency between 27 and 40 GHz with a corresponding wavelength between 1.11 centimeters and 7.50 mm) radar-based UAV position measurement track system used to track and control recovery of a wide range of UAVs. UCARS precisely tracks modified UAVs through a two-element system, comprised of an Airborne Subsystem (AS), located entirely on the AV, and a ground based Track Subsystem (TS). The TS is capable of tracking an UAV augmented with an AS at a maximum distance of approximately 14.8 kilometers (8 nautical miles). A third subsystem, the Recovery Subsystem (RS), provides auto-recovery functions to the UCARS system, and consists of a circuit card assembly resident within the TS Track Control Unit, a *Versa Module Europa (VME)* bus, and UAV-unique operating software.



UCARS

c. 12DS Dual Electro-optical/Infrared Payload. The Versatron Model 12DS dual sensor package consists of a lightweight IR system and a lightweight color video camera co-mounted on a stabilized gimballed platform, which provides six axes of passive isolation,

enabling both cameras to maintain fixed lines of sight. The 12DS is installed in the special payload compartment provided in the Pioneer AV, and provides a standard EIA-525 composite video output signal. The IR sensor's real-time thermal imagery is converted to a standard TV image and passed through video switching circuitry that allows the observer to switch between color video and the IR sensor video at will.



12DS PAYLOAD

d. POP-200 Plug-in Optronic Payload. The POP-200 system includes an electrical interface box. This unit is mounted integral with the payload turret assembly and includes circuitry to convert the POP-200 RS422 serial data stream to a format compatible with the AV parallel interface.



POP 200 PAYLOAD

H. CONCEPTS

1. Operational Concept. Ten watch stations are associated with the Pioneer UAV System. The EP, PO, IP, and MC Stations are located in or near the GCS. The fifth and sixth

stations involve the IP and EP at the PCS, and the seventh through tenth stations are the Runway or Deck Stations and involve the Crew Chief, a two-man start crew, and a fire/safety observer. The stations are manned, as required, only during UAV system operational and training missions. Maintenance personnel perform pre-flight, launch, recovery, and post-flight evolutions (e.g., RATO teams, manning spare AVs, rigging and manning launch and recovery equipment).

The GCS is the primary operational shelter for the Pioneer UAV System and the central control point for the mission, launch, recovery, payload sensor operation, and AV control. Depending on mission and shelter configuration, the GCS has three or four watch stations: the MC, IP, PO, and EP (optional depending on which ground station is used for launch and recovery operations).

2. Maintenance Concept. The Pioneer UAV System is maintained in compliance with the Naval Aviation Maintenance Program (NAMP), [OPNAVINST 4790.2 \(series\)](#). The general maintenance concept is organizational to depot level, with limited intermediate level support.

a. Organizational. Organizational level maintenance is performed at the unit level at VC-6 DET Patuxent River, VMU-1, VMU-2, and CNATT DET Milton. Organizational level maintenance directly supports the Pioneer UAV day-to-day operations.

Navy organizational level maintenance is performed by technicians with *NEC 8361, UAV Systems Organizational Maintenance Technician*. This NEC is awarded to graduates of both the Pioneer Short Range - Remotely Piloted Vehicle (SR-RPV) Electronics Technician course and the Pioneer SR-RPV Airframe/Mechanic course. Source ratings for the NEC 8361 are: Aviation Electrician's Mate (AE), Aviation Structural Mechanic (AM), Aviation Support Equipment Technician (AS), and Aviation Electronics Technician (AT).

Marine Corps organizational level UAV maintenance is performed by the following MOS:

MOS	TITLE
6214	UAV Mechanic
6072	Aircraft Support Equipment (SE)/Hydraulic/Pneumatic/Structures Mechanic
6314	UAV Avionics Technician
6531	Aircraft Ordnance Technician

Government contractors perform CNATT DET Milton organizational level UAV maintenance.

Organizational level maintenance for the Pioneer UAV System consists of performing preventive and corrective maintenance procedures.

(1) Preventive Maintenance. Preventive maintenance consists of pre-flight and post-flight inspections, and routine servicing.

- Pre-launch and post-landing inspections
- Acceptance inspection and initial buildup
- Corrosion control and preservation

(2) Corrective Maintenance. Corrective maintenance involves minor structural repair as well as fault isolation and access, removal, and repair or replacement of failed components to the lowest level replaceable assembly.

b. Intermediate. Limited intermediate level maintenance for the Pioneer UAV system is performed at the Aircraft Intermediate Maintenance Department (AIMD) Patuxent River. The AIMD for the Pioneer UAV system is manned by a mix of contractor and military personnel. Marine Aviation Logistics Squadron (MALS)-13 and MALS-14 provide calibration and limited airframe support for VMU-1 and VMU-2, respectively.

c. Depot. Depot level maintenance for the Pioneer UAV system is the responsibility of Pioneer UAV Incorporated (PUI), which sub-contracts to various vendors for depot level repair of their respective components.

d. Interim Maintenance. The Pioneer UAV program is a mature program and interim maintenance does not apply.

e. Life Cycle Maintenance Plan. The Pioneer UAV System was procured as an interim system, with no established Life Cycle Maintenance Plan. The Pioneer UAV is maintained through scheduled and unscheduled inspections until the AV becomes unserviceable.

3. Manning Concept. The Navy has established four Pioneer UAV NECs. The following information, including Source Ratings, Course Identification Number (CIN), etc., is taken from the [July 2003 NEC Manual](#):

NEC 8361 - Unmanned Aerial Vehicle (UAV) Systems Organizational Career Maintenance Technician. Performs organizational level maintenance on UAV systems and support equipment.

Source Rating.....AT, AE, AM, AS
 Billet PaygradesE3-E7
 Personnel PaygradesE3-E7
 CourseMandatory
 CIN.....AM/AS, C-690-0644; AT/AE, C-690-0646
 CDP.....3166, 3160

NEC 8362 - Unmanned Aerial Vehicle (UAV) External Pilot. UAV External Pilot directly controls the flight of the UAV during launch and recovery operations by visual reference to the UAV.

Source Rating.....AS, AM, AE, AT
 Billet PaygradesE4-E5
 Personnel Paygrades:E4-E6
 CourseMandatory
 CIN.....C-104-0641, C-104-0642
 CDP.....3164, 3162

Note 1. Flight physical must be completed prior to arrival in accordance with aeromedical reference and waiver guide and also NAVMED P117.

Note 2. Physical Qualification – Class Two Physical.

NEC 8363 - Unmanned Aerial Vehicle (UAV) Internal Pilot. Operates and navigates UAV during the enroute, mission, and return phase of flight.

Source Rating.....AS, AM, AE, AT, AZ
 Billet PaygradesE5-E6
 Personnel PaygradesE5-E6
 CourseMandatory
 CIN.....C-104-0645
 CDP.....372W

Note 1. Flight physical must be completed prior to arrival in accordance with aeromedical reference and waiver guide and also NAVMED P117.

Note 2. Physical Qualification – Class Two Physical.

NEC 8364 - Unmanned Aerial Vehicle (UAV) Payload Operator. Operates the EO/IR UAV sensor during all phases of flight.

Source Rating.....AS, AM, AE, AT, AZ, IS
 Billet PaygradesE4-E6
 Personnel PaygradesE4-E6
 CourseMandatory
 CIN.....C-104-0643
 CDP.....3165

Note 1. Flight physical must be completed prior to arrival in accordance with aeromedical reference and waiver guide and also NAVMED P117.

Note 2. Physical Qualification – Class Two Physical.

The Marine Corps has established the following UAV-related Military Occupational Specialties:

MOS	TITLE
7314	UAV Operator
6214	UAV Mechanics
6314	UAV Avionics Technician
7316	UAV External Pilot
7315	UAV Mission Commander

Additionally, secondary MOS 7316 (EP) may be assigned only to qualified holders of primary MOS 7314 (achieved through formal school qualification process).

4. Training Concept. The Pioneer UAV System training concept provides for organizational level maintenance training based on [OPNAVINST 4790.2 \(series\)](#), and UAV operator training based on the [OPNAVINST 3710.7 \(series\) NATOPS General Operating and Flight Instructions](#) and the A1-RQ2B-NFM-000 Pioneer NATOPS Flight Manual and A1-RQ2B-NFM-500 Pioneer NATOPS Pocket Checklist. Pioneer UAV System training has undergone an annual formal course evaluation since training was taken over by NAMTRAGRU IN 1997. The purpose of these course reviews are to validate the curricula and to ensure the curricula meets the fleet’s needs. A formal training effectiveness evaluation action chit has been documented in Part VI of this NTSP listing NAVAIR (PMA205B) as the action command.

a. Initial Training. Initial training for incorporation of the ECPs associated with this NTSP was provided by NAVAIR (PMA205) upon delivery of the ECPs to the respective Pioneer units and is complete.

b. Follow-On Training. In October 1990, Navy follow-on training was established by using Naval Air Warfare Center Weapons Division (NAWCWD), Point Mugu, California, management and Navy Civilian Technical Services (NCTS) instructors and maintainers. On 1 October 1997, Naval Air Maintenance Training Group assumed responsibility for all operator, maintenance, and flight instruction courses for Pioneer UAV training from NAVAIR (PMA205), which had formerly operated the schoolhouse under the title of Defense Unmanned Aerial Vehicle Training Center (DUTC). The resultant NAMTRAGRU DET Fort Huachuca (MTU 6001) was unique in that it conducted all training associated with the Pioneer UAV System, including maintenance and operator, for both officer and enlisted personnel. MTU 6001 NAMTRAGRU DET was relocated to Naval Air Station (NAS) Whiting Field/Out-Lying Field (OLF) Choctaw, Milton, Florida, during fourth quarter FY01. MTU 6001 operates and maintains two fully operational Pioneer UAV systems for follow-on training. Operator training responsibilities are currently pending transition to CNATRA while maintenance responsibilities remained with CNATT (formerly NAMTRAGRU). Training is summarized as follows:

SUBJECT	DURATION	USN	NEC	USMC	MOS
Operator Courses:					
Internal Pilot	8 weeks	E-4 - E-6	8363	NA	NA
External Pilot ¹	18 weeks	E-4 – E-6	8362	E-4 and above	7316
Payload Operator	6 weeks	E-4 – E-6	8364	E-4 and above	NA
Internal Operator ²	8 weeks	NA	NA	E-1 and above	7314
Mission Commander	3 weeks	O-1 and above	None	O-1 and above	7315
Maintenance Courses:					
Tech Course	9 weeks	AT/AE	8361		6314
Mech Course	7 weeks	AM/AS	8361		6214
<p>Note 1. MOS 7316 is assigned as a secondary MOS only to holders of MOS 7314. Note 2. Internal Operator is held by USMC personnel only.</p>					

Title..... Pioneer SR-RPV Mission Commander

CIN C-2E-0640

Model Manager MTU 6001 CNATT DET Milton

Description This course provides training to designated personnel in all phases of Pioneer UAV System operation during tactical employment of the Pioneer UAV, including:

- Introduction to the Pioneer UAV System
- Pioneer UAV System, Operations, and Flight Modes
- Pioneer Emergency Procedures
- Meteorology, Alternate Launch Methods, and RRS
- NATOPS Procedures

Upon completion of this course, the graduate will be able to safely supervise the flight of the Pioneer RQ-2B as a Mission Commander, within the parameters of the NATOPS flight manual, in a squadron environment.

Delivery method.... Classroom Theory Periods 74
 Laboratory Periods24
 Aircraft Periods21
 Total Training Periods..... 119

Location..... MTU 6001 CNATT DET Milton

Length..... 19 days

Frequency 4 times per year

Convening dates: ...

<i>Class No.</i>	<i>Convene Date</i>	<i>Grad. Date</i>
2004-010-1	3 Nov 03	24 Nov 03
2004-020-1	26 Jan 04	13 Feb 04
2004-030-1	19 Apr 04	7 May 04
2004-040-1	12 Jul 04	30 Jul 04

RFT date..... Currently available

Skill identifier..... MOS 7315

TTE/TD Refer to note in Part IV of this NTSP.

- Prerequisites ◦ Rating as a Naval Aviator, Naval Flight Officer, or anyone so designated by the Commanding Officer.
- Personal Physical Requirements: Officers who maintain their aviation designators (Pilot or NFO) must continue to meet the appropriate standards of their designation. USMC Non-Aviation Designated Officers or Navy Officers no longer qualified for their previous aviation designator shall meet same standards as External Operators
- MOS 7315

Title..... Pioneer SR-RPV External Pilot

CIN C-104-0641

Model Manager MTU 6001 CNATT DET Milton

Description This course, consisting of technical, practical experience, and safety-oriented instruction, provides training to the External Pilot for safe flight operation, successful launch and recovery procedures under normal and emergency conditions, including:

- Introduction to the Pioneer UAV System
- Aerodynamics, Power Plant, Radio, and Air Traffic Control
- Flight Preparation and Familiarization
- Basic Flight Skills Development
- Meteorology
- Advanced Flight Skills Development
- Airframe, Power Plant, and Related Systems
- Half-Scale Pioneer
- Pioneer Flight Training
- Pioneer Flight Training (Advanced Qualification)
- NATOPS Procedures

Upon completion of this course, the graduate will have sufficient knowledge to safely perform, under supervision, the functions of an External Pilot for the Pioneer UAV in a squadron environment.

Delivery method.... Classroom Theory Periods 128

Practical Lab Periods 592 (35 are in the EPSim)

Total Periods720

Location..... MTU 6001 CNATT DET Milton

Length..... 124 calendar days

Frequency 3 times per year

Convening dates: ...	<i>Class No.</i>	<i>Convene Date</i>	<i>Grad. Date</i>
	2004-010-1	6 Oct 03	27 Feb 04
	2004-020-1	23 Feb 04	28 Jun 04
	2004-030-1	14 Jun 04	20 Oct 04

RFT date Currently available

- Skill identifier.....
- AT 8362
 - AE 8362
 - AM 8362
 - AS 8362
 - MOS 7316 (secondary MOS, must hold primary MOS of 7314)

TTE/TD For information on Technical Training Equipment (TTE)/Training Devices (TD), refer to note in Part IV of this NTSP.

- Prerequisites
- Current UAV Flight Physical
 - Obligated service: 30 months
 - USMC – Qualified 7314 Internal Operator

Title Pioneer SR-RPV Internal Operator

CIN C-104-0642

Model Manager MTU 6001 CNATT DET Milton

Description This course, consisting of technical, practical experience, and safety-oriented instruction, provides training to the Internal Pilot and Payload Operator necessary for safe flight operation for the Pioneer UAV and its associated payload under normal and emergency conditions, including:

- Introduction to the Pioneer UAV System
- Pioneer System Operations and Flight Modes
- Operation of the Various Payload Configurations
- Pioneer Emergency Procedures
- Meteorology, Alternate Launch Operations and RRS
- NATOPS Procedures

Upon completion of this course, the graduate will have sufficient knowledge to safely fly the Pioneer UAV and operate its associated payload within the parameters of the NATOPS flight manual in a squadron environment under supervision.

Delivery method.... Classroom Theory Periods 196
 Practical Lab Periods..... 124
 Total Periods 320

Location..... MTU 6001 CNATT DET Milton

Length..... 54 days

Frequency 11 times per year

Convening dates:...	<i>Class No.</i>	<i>Convene Date</i>	<i>Grad. Date</i>
	2003-090-1	8 Sep 03	3 Nov 03
	2004-010-1	6 Oct 03	3 Dec 03
	2004-020-1	10 Nov 03	21 Jan 04
	2004-030-1	8 Dec 03	17 Feb 04
	2004-040-1	26 Jan 04	22 Mar 04
	2004-050-1	1 Mar 04	23 Apr 04
	2004-060-1	29 Mar 04	21 May 04
	2004-070-1	26 Apr 04	21 Jun 04
	2004-080-1	24 May 09	20 Jul 04
	2004-090-1	28 Jun 04	23 Aug 04
	2004-100-1	2 Aug 04	27 Sep 04
	2004-110-1	30 Aug 04	26 Oct 04

RFT date..... Currently available

Skill identifier..... ° NEC 8363
 ° MOS 7314

Note: The NEC Manual (July 03) lists this course for External Pilot only.

TTE/TD Refer to note in Part IV of this NTSP.

Prerequisites ° Must meet the requirements of OPNAVINST 3710.7 series and the Manual of the Medical Department (MANMED)

Note: The July 2003 NEC Manual still reflects a requirement for the External Pilot (NEC 8362) to complete the C-104-0642, Pioneer SR-RPV Internal Operator Course as a prerequisite to attending the C-104-0641, Pioneer SR-RPV External Pilot Course (now no longer catalogued in CANTRAC, instead replaced by C-104-0645, Pioneer SR-RPV Internal Pilot Course).

Title..... Pioneer SR-RPV Payload Operator

CIN C-104-0643

Model Manager MTU 6001 CNATT DET Milton

Description This course, consisting of technical, practical experience, and safety-oriented instruction, provides training to the Payload Operator for safe flight operation for the Pioneer UAV under normal and emergency conditions, including:

- Introduction to the Pioneer UAV System
- Pioneer System Operations and Flight Modes
- Operation of the Various Payload Configurations
- Pioneer Emergency Procedures
- Meteorology, Shipboard Operations and RRS
- NATOPS Procedures

Upon completion of this course, the graduate will have sufficient knowledge to safely operate the Pioneer UAV payload within the parameters of the NATOPS flight manual in a squadron environment under supervision.

Delivery method Classroom Theory Periods 145
 Practical Lab Periods..... 77
 Total Periods 223

Location..... MTU 6001 CNATT DET Milton

Length..... 38 days

Frequency 2 times per year

Convening dates: ...

<i>Class No.</i>	<i>Convene Date</i>	<i>Grad. Date</i>
2004-010-1	23 Feb 04	31 Mar 04
2004-020-1	26 Jul 04	01 Sep 04

RFT date Currently available

Skill identifier.....

- AE 8364
- AM 8364
- AS 8364
- AT 8364
- AZ 8364
- IS 8364

Note: CETARS reflects NEC 8362 and 8364.

TTE/TD Refer to note in Part IV of this NTSP.

Prerequisites ◦ Must meet the requirements of OPNAVINST 3710.7 series and the Manual of the Medical Department (MANMED) and have completed flight physical.

Title..... Pioneer SR-RPV Internal Pilot
CIN..... C-104-0645
Model Manager..... MTU 6001 CNATT DET Milton
Description..... This course, consisting of technical, practical experience, and safety-oriented instruction, provides training to the Internal Pilot for safe flight operation for the Pioneer UAV under normal and emergency conditions, including:
 ◦ Introduction to the Pioneer UAV System
 ◦ Pioneer System Operations and Flight Modes
 ◦ Pioneer Emergency Procedures
 ◦ Meteorology, Shipboard Operations and RRS
 ◦ NATOPS Procedures
 Upon completion of this course, the graduate will have sufficient knowledge to safely operate the Pioneer UAV within the parameters of the NATOPS flight manual in a squadron environment under supervision.
Delivery method..... Classroom Theory Periods 224
 Practical Lab Periods..... 96
 Total Periods 320
Location..... MTU 6001 CNATT DET Milton
Length..... 54 days
Frequency..... 4 times per year
Convening dates: ...

<i>Class No.</i>	<i>Convene Date</i>	<i>Grad. Date</i>
2004-010-1	6 Oct 03	3 Dec 03
2004-020-1	9 Feb 04	5 Apr 04
2004-030-1	12 Apr 04	7 Jun 04
2004-040-1	12 Jul 04	3 Sep 04

RFT date..... Currently available
Skill identifier..... 8363
TTE/TD..... Refer to note in Part IV of this NTSP.
Prerequisites..... ◦ Must meet the requirements of OPNAVINST 3710.7 series and the Manual of the Medical Department (MANMED) and have completed flight physical.

Title **Pioneer SR-RPV Airframe / Mechanic**

CIN C-690-0644

Model Manager MTU 6001 CNATT DET Milton

Description This course, consisting of technical, practical experience, and safety-oriented instruction, provides training to the Navy UAV Systems Organizational Maintenance Technician or Marine Corps Pioneer SR-RPV Airframe/ Mechanic Technician, including:

- Introduction to the Pioneer UAV System and Associated Programs
- Pioneer UAV Subsystems Operation and Maintenance
- Assembly and Disassembly
- Component Removal and Replacement
- Preventive Maintenance
- Flight Line Operations
- Weight and Balance
- Alternative Launch and Recovery

Upon completion of this course, the graduate will have sufficient knowledge to safely perform organizational maintenance on the Pioneer UAV in a squadron environment under supervision.

Delivery method ... Classroom Theory Periods..... 76
Practical Lab Periods 204
Total Periods..... 280

Location MTU 6001 CNATT DET Milton

Length 47 days

Frequency 3 times per year

Convening dates: ...

<i>Class No.</i>	<i>Convene Date</i>	<i>Grad. Date</i>
2004-010-1	20 Oct 03	9 Dec 03
2004-020-1	23 Feb 04	9 Apr 04
2004-030-1	14 Jun 04	2 Aug 04

RFT date Currently available

Skill identifier

- AM 8361
- AS 8361
- MOS 6214

TTE/TD Refer to note in Part IV of this NTSP.

- Prerequisites ◦ C-603-0175, Aviation Structural Mechanic (Structures and Hydraulics) Common Core Class A1 and either
- C-603-0176, Aviation Structural Mechanic (Structures and Hydraulics) Strand Class A1
- or
- C-602-2026, Aviation Support Equipment Technician A1

Title **Pioneer SR-RPV Electronic Technician**

CIN C-690-0646A

Model Manager MTU 6001 CNATT DET Milton

Description This course, consisting of technical, practical experience, and safety-oriented instruction, provides training to the Navy UAV Systems Organizational Maintenance Technician or Marine Corps UAV Avionics Technician, including:

- Introduction to the Pioneer UAV System
- Pioneer UAV System Ground Control Station
- Pioneer UAV System Tracking and Communications Unit
- Pioneer UAV System PCS
- Pioneer UAV System Aerial Vehicle
- Pioneer UAV System RRS
- Pioneer UCARS System
- Pioneer UAV System Flight Line Operations

Upon completion of this course, the graduate will have sufficient knowledge to safely perform organizational maintenance on the Pioneer UAV in a squadron working environment without supervision.

Delivery method ... Classroom Theory Periods102
 Practical Lab Periods132
 Aircraft Period126
 Total Periods360

Location..... MTU 6001 NAMTRAGRU DET Milton

Length..... 61 days

Frequency 4 times per year

Convening dates: ...	<i>Class No.</i>	<i>Convene Date</i>	<i>Grad. Date</i>
	2004-010-1	6 Nov 03	10 Dec 03
	2004-020-1	26 Jan 04	29 Mar 04
	2004-030-1	19 Apr 04	21 Jun 04
	2004-040-1	12 Jul 04	13 Sep 04

RFT date Currently available

Skill identifier.....

- AE 8361
- AT 8361
- MOS 6314

TTE/TD Refer to note in Part IV of this NTSP.

Prerequisites

- C-100-2020, Avionics Common Core Class A1
and either
- C-602-2039, Aviation Electrician’s Mate O Level Strand
Class A1
- or
- C-100-2018, Avionics Technician O Level Class A1
- USMC – C-100-2017 Aviation Technician I Strand Class
A1

c. Student Profiles

SKILL IDENTIFIER	PREREQUISITE SKILL AND KNOWLEDGE REQUIREMENTS
AE 8361, 8362, 8363, 8364	<ul style="list-style-type: none"> ◦ C-100-2020, Avionics Common Core Class A1 ◦ C-100-2017, Avionics Technician I Level Class A1 ◦ C-602-2039, Aviation Electrician’s Mate O Level Strand Class A1
AM 8361, 8362, 8363, 8364	<ul style="list-style-type: none"> ◦ C-603-0175, Aviation Structural Mechanic (Structures and Hydraulics) Common Core Class A1 ◦ C-603-0176, Aviation Structural Mechanic (Structures and Hydraulics) Strand Class A1
AS 8361, 8362, 8363, 8364	<ul style="list-style-type: none"> ◦ C-602-2026, Aviation Support Equipment Technician Class A1
AT 8361, 8362, 8363, 8364	<ul style="list-style-type: none"> ◦ C-100-2020, Avionics Common Core Class A1 ◦ C-100-2018, Avionics Technician O Level Class A1 ◦ C-100-2017, Avionics Technician I Level Class A1
AZ 8363, 8364	<ul style="list-style-type: none"> ◦ C-555-2010, Aviation Administrationman Class A1

SKILL IDENTIFIER	PREREQUISITE SKILL AND KNOWLEDGE REQUIREMENTS
IS 8364	◦ None
MOS 6214, 6314, 7314, 7316	◦ None
MOS 7315	◦ Qualified Marine Corps Aviator

d. Training Pipelines. All pipelines previously taught at Fleet Composite Squadron, VC-6, have been deactivated since December 23, 1991.

CIN	CDP	STATUS	PIPELINE TITLE
D-050-1920	1103	D	SR-RPV External Pilot
D-050-1925	1104	D	SR-RPV Internal Pilot
D-050-1928	1105	D	SR-RPV Payload
D-050-1925	1107	D	SR-RPV Avionics

I. ONBOARD (IN-SERVICE) TRAINING

1. Proficiency or Other Training Organic to New Development

a. Aviation Maintenance In-Service Training. AMIST is intended to support the Fleet training requirements now satisfied by MTIP, and in that sense is the planned replacement. However, it is structured very differently, and will function as an integral part of the new Aviation Maintenance Training Continuum System (AMTCS) that will replace the existing aviation maintenance training structure. AMIST will provide standardized instruction to bridge the training gaps between initial and career training. With implementation of AMIST, technicians will be provided the training required to maintain a level of proficiency necessary to effectively perform the required tasks to reflect career progression. AMIST will begin when funding becomes available.

b. Aviation Maintenance Training Continuum System. AMTCS will redesign the aviation training process (training continuum), and introduce Interactive Multimedia Instruction (IMI) throughout the Navy technical training process. The application and adoption of recent advances in computer hardware and software technology will enable IMI, with its basic elements of Computer-Managed Instruction, Computer-Aided Instruction, and Interactive

Courseware, to be integrated into the training continuum and provide essential support for standardizing technical training. AMTCS has successfully completed its trial period, which ended in April 2004. Beginning in June 2004 at VFA-125 in Lemoore, California, the F/A-18 is the first aircraft to implement AMTCS. The next targeted platforms to use AMTCS are the P-3, EP-3E, C-130, and the E-6. For the latest information regarding AMTCS, contact PMA205B1B.

2. Personnel Qualification Standards. There are no Personnel Qualification Standards (PQS) for the Pioneer UAV system.

3. Other Onboard or In-service Training Packages. Marine Corps onboard training is based on the [Marine Corps Order \(MCO\) P4790.20, Individual Training Standards System \(ITSS\) and Marine Training Management Evaluation Program \(MATMEP\)](#). This program is designed to meet Marine Corps, as well as Navy [OPNAVINST 4790.2 \(series\)](#) maintenance training requirements. It is a performance-based, standardized, level-progressive, documentable, training management and evaluation program. It identifies and prioritizes task inventories by MOS through a front-end analysis process that identifies task, skill, and knowledge requirements of each MOS. MTIP questions coupled to MATMEP tasks will help identify training deficiencies that can be addressed with refresher training.

J. LOGISTICS SUPPORT

1. Manufacturer and Contract Numbers

CONTRACT NUMBER	MANUFACTURER	ADDRESS
N00019-96-H-38389	Pioneer UAV Incorporated (PUI)	9 Schilling Road Hunt Valley, MD 21030

2. Program Documentation. The Pioneer was purchased off-the-shelf, conforming to a Milestone IIIA decision and categorized as a Non-Development Item. The Operational Logistics Support Plan (OLSP) was designed to fulfill the essential requirements of both the Integrated Logistics Support Plan (ILSP) and the OLSP as was then specified by NAVAIRINST 4000.14A. The principles and guidance provided by NAVAIRINST 4000.16 for off-the-shelf equipment were followed in maintaining logistic support.

DOCUMENT TITLE	DOCUMENT NUMBER	PDA CODE	STATUS
Marine Corps VMU Table of Organization (T/O) (Published Semi-annually Feb/Oct)	T/O 8890	TFSD	Feb 03
Pioneer/POP200 ECP	ECPRQ2B-002	PMA263	Jan 03

DOCUMENT TITLE	DOCUMENT NUMBER	PDA CODE	STATUS
Marine Pioneer Requirements Document			Jul 02
System Description Manual	A1-SRRPV-SDM-000	PMA263	Jun 02
NATOPS Flight Manual, Navy Model RQ-2B Pioneer UAV	A1-RQ2B-NFM-000	PMA263	Approved Apr 02
Operation and Maintenance Manual CARS AN/UPN-51(V)	0019A001 Rev. H	PEO(W)	Dec 00
Pioneer/12DS ECP	ECP98-0203-H033	PMA263	Approved Nov 98
Pioneer/MIAG ECP	ECP97-0203-H031R1	PMA263	Approved Feb 98
Pioneer/UCARS ECP	ECP97-0203-H028R2	PMA263	Approved Sep 97
Equipment Facility Requirements Plan For Pioneer UAV System		PMA205	Approved Mar 97
VC-6 Squadron Manpower Document	UIC 55243	NAVMAC	Approved Jul 96
Users Logistic Support Summary For Pioneer Unmanned Aerial Vehicle		PMA263	Approved Jun 96
System Performance Specification for UAV Systems	AS-5276	PMA263	Approved Mar 94
Pioneer UAV System Employment	TAC Memo XZ0010-92	OPNAV	Approved Oct 92
OLSP Pioneer Remote Piloted Vehicle	NAVAIR-418 MS-004	PMA263	Nov 90 Jan 95 rev
NAVAIRSYSCOM Message RPV Training Plans Fiscal Year 88-89		PMA205	Jun 88

3. Technical Data Plan. Hard copy manuals provided by the contractor were reformatted in 1997 into NAVAIR work package format.

According to the Marine Pioneer Requirements Document (July 2002), “all technical manuals for the system will be web based, electronic data. The format will be, at the minimum, Windows based, [XML IETMS](#).” At the time of this writing, there are no plans to develop IETMS for the Pioneer UAV. For further information on IETMS, contact PMA205B.

Specific technical manuals needed for training are listed in Part IV of this NTSP. Certain of the technical manuals listed below were used as a baseline for proposing changes associated with the ECPs. PUI will provide updates to these technical manuals on electronic media for later incorporation by the government. These include changes to the system description, theory of operation, operating procedures, menu descriptions, maintenance procedures, and illustrated parts breakdown areas of the Pioneer Technical Manuals.

These publications are all unclassified, and available to authorized users from the [Naval Air Technical Data and Engineering Service Command](#) (NATEC). Most can be downloaded in electronic format, as indicated by the Adobe PDF© logo in the table below.

	TITLE	NOMENCLATURE
	A1-PIO-RPV-6-1.1	A/V Daily Inspection Maintenance Requirement Cards (MRC) (1 May 95)
	A1-PIO-RPV-6-1.2	GCS/TCU Daily Inspection MRC (1 May 95)
	A1-PIO-RPV-6-1.3	Daily Inspection Pioneer Remotely Piloted Vehicle System Portable Control Station (1 May 95)
	A1-PIO-RPV-6-1.4	Daily Inspection Pneumatic Launcher System MRC (1 May 95)
	A1-PIO-RPV-6-1.5	Cancelled Oct 02. Superseded by A1-SRRPV-MRC-950-3. Listed in Aug 01 TCCD, Course CIN: C-690-0644, Rev. 6.
	A1-PIO-RPV-6-1.6	Cancelled Oct 02. Superseded by A1-SRRPV-MRC-950-2. Listed in Aug 01 TCCD, Course CIN: C-690-0644, Rev. 6.
	A1-PIO-RPV-6-1.7	Maintenance Requirement Cards Daily Inspection Pioneer Remotely Piloted Vehicle System Remote Receiving Station (1 Sep 95)
	A1-PIO-RPV-6-2.1	Air Vehicle Turnaround Inspection MRC (1 May 95)
	A1-PIO-RPV-6-3.1	Air Vehicle Special Inspection MRC (1 May 99)

	TITLE	NOMENCLATURE
	A1-PIO-RPV-6-3.2	Maintenance Requirement Cards Special Inspection Pioneer Remotely Piloted Vehicle System Ground Control Station/Tracking And Communications Unit (1 May 95)
	A1-PIO-RPV-6-3.3	Maintenance Requirement Cards Special Inspection Pioneer Remotely Piloted Vehicle System Portable Control Station (1 May 95)
	A1-PIO-RPV-6-3.4	Cancelled Oct 02. Superseded by A1-SRRPV-MRC-940. Listed in Aug 01 TCCD, Course CIN: C-690-0644, Rev. 6.
	A1-PIO-RPV-6-3.6	Maintenance Requirement Cards Daily Inspection Pioneer Remotely Piloted Vehicle System Pneumatic Launcher System (1 Jul 95)
	A1-PIO-RPV-6-4.1	Conditional Inspection MRC (1 May 95)
	A1-PIO-RPV-WUC-800	RQ-2 (Pioneer UAV) Work Unit Code Manual (1 Sep 96)
	A1-RQ2B-NFM-000	NATOPS Flight Manual Navy Model RQ-2B Pioneer Unmanned Aerial Vehicle (1 Apr 02)
	A1-RQ2B-NFM-500	NATOPS Pocket Checklist Navy Model RQ-2B Pioneer Unmanned Aerial Vehicle (1 Apr 02)
	A1-SRRPV-CARS-600	Organizational Operation and Maintenance with Illustrated Parts Breakdown, Pioneer Unmanned Aerial Vehicle System, Common Automated Recovery System Navigation-Tracking Set, Radar AN/UPN-51(V) (Date not available). Manual not available, still under development. Currently using Sierra Nevada Corp, 0019A001 Technical Manual, Operation and Maintenance with IBP (without cables) Org Level, For UCARS Nav-Track Set, RADAR AN/UPN-51(V).
	A1-SRRPV-DSO-120	Pioneer Short Range Remotely Piloted Vehicle System Downlink Simulator (Date not available)
	A1-SRRPV-EWD-300	Electrical Wiring Diagrams (15 Jan 97)
	A1-SRRPV-GCS-500	Operation Pioneer Remotely Piloted Vehicle System, Ground Control Station (1 Sep 01)

	TITLE	NOMENCLATURE
	A1-SRRPV-GCS-510	Organizational Maintenance, Pioneer Remotely Piloted Vehicle System, Ground Control Station (1 May 01)
	A1-SRRPV-GCS-520	Illustrated Parts Breakdown, Pioneer Remotely Piloted Vehicle System Ground Control Station (1 Feb 02)
	A1-SRRPV-LAU-800	Operation and Organizational Maintenance with Illustrated Parts Breakdown Pioneer Remotely Piloted Vehicle System Pneumatic Launcher System (1 Jun 95)
	A1-SRRPV-MMI-200	Organizational Maintenance with Illustrated Parts Breakdown Pioneer Unmanned Aerial Vehicle System Model RQ-2A Aerial Vehicle (1 May 01)
	A1-SRRPV-MMI-250	Organizational Maintenance with Illustrated Parts Breakdown Pioneer Unmanned Aerial Vehicle System Model RQ-2B Aerial Vehicle (1 May 01)
	A1-SRRPV-MRC-100	Pioneer UAV Aerial Vehicle PMIC (1 Jun 99)
	A1-SRRPV-MRC-105	Periodic Maintenance Information Cards Pioneer Remotely Piloted Vehicle System Model RQ-2B Aerial Vehicle (1 May 01)
	A1-SRRPV-MRC-110	Maintenance Requirement Card, Acceptance/Transfer Inspection (Date not available)
	A1-SRRPV-MRC-115	Maintenance Requirement Cards, Acceptance/Transfer Inspection, Pioneer Remotely Piloted Vehicle System Model RQ-2B Aerial Vehicle (1 May 01)
	A1-SRRPV-MRC-120	Maintenance Requirement Cards, Daily Inspection, Pioneer Remotely Piloted Vehicle System, Model RQ-2B Aerial Vehicle (1 May 2001)
	A1-SRRPV-MRC-130	Maintenance Requirements Cards, Turnaround Inspection, Pioneer Remotely Piloted Vehicle System Aerial Vehicle (1 May 01)
	A1-SRRPV-MRC-140	Maintenance Requirement Cards, Special/Conditional Inspection, Pioneer Remotely Piloted Vehicle System Model RQ-2B Aerial Vehicle (1 May 01)
	A1-SRRPV-MRC-200	Periodic Maintenance Information Cards, Pioneer Remotely Piloted Vehicle System, Ground Control Station/Tracking Communications Unit (1 Feb 97)

	TITLE	NOMENCLATURE
	A1-SRRPV-MRC-300	Periodic Maintenance Information Cards, Pioneer Remotely Piloted Vehicle System, Portable Control Station (1 Feb 97)
	A1-SRRPV-MRC-400	Periodic Maintenance Information Cards, Pioneer Remotely Piloted Vehicle System, Remote Receiving Station (1 Feb 97)
	A1-SRRPV-MRC-500	Periodic Maintenance Information Cards, Pioneer Unmanned Aerial Vehicle System, Common Automatic Recovery System, Navigation-Tracking Set, Radar AN/UPN-51(V) (1 May 01)
	A1-SRRPV-MRC-520	Maintenance Requirement Cards, Daily Inspection, Pioneer Unmanned Aerial Vehicle System, Common Automatic Recovery System, Navigation-Tracking Set, Radar AN/UPN-51(V) (1 May 01)
	A1-SRRPV-MRC-540	Maintenance Requirement Cards, Special Inspection, Pioneer Unmanned Aerial Vehicle System, Common Automatic Recovery System, Navigation-Tracking Set, Radar AN/UPN-51(V) (1 May 01)
	A1-SRRPV-MRC-940	Maintenance Requirement Cards, Special Inspection, Pioneer Unmanned Aerial Vehicle System Support Equipment (1 May 02)
	A1-SRRPV-MRC-950-1	Preoperational Checklist, RQ-2 Pioneer Unmanned Aerial Vehicle System, Fuel Bowser (1 Sep 02)
	A1-SRRPV-MRC-950-2	Preoperational Checklist, RQ-2 Pioneer Unmanned Aerial Vehicle System, Arresting Gear (1 Sep 02)
	A1-SRRPV-MRC-950-3	Preoperational Checklist, RQ-2 Pioneer Unmanned Aerial Vehicle System, Rocket Assisted Take-off Launch Stand (1 Sep 02)
	A1-SRRPV-MRC-950-4	Preoperational Checklist, RQ-2 Pioneer Unmanned Aerial Vehicle System, Fuselage Stand (1 Sep 02)
	A1-SRRPV-MRC-950-5	Preoperational Checklist, RQ-2 Pioneer Unmanned Aerial Vehicle System, Collapsible Wing Stand (1 Sep 02)
	A1-SRRPV-NFM-000	NATOPS Flight Manual, Navy Model RQ-2A Pioneer Unmanned Aerial Vehicle (1 Dec 99)
	A1-SRRPV-NFM-500	NATOPS Pilot's Pocket Checklist, RQ-2A Pioneer Unmanned Aerial Vehicle (1 Dec 99)
	A1-SRRPV-OPS-100	RPV Operation (1 May 01)

	TITLE	NOMENCLATURE
	A1-SRRPV-PCS-700	PCS Operation (1 May 01)
	A1-SRRPV-PCS-710	Organizational Maintenance with Illustrated Parts Breakdown, Pioneer Remotely Piloted Vehicle System, Portable Control System (1 Feb 02)
	A1-SRRPV-RATO-000	Checklist, Pioneer (Remotely Piloted Vehicle) RATO (1 Oct 00)
	A1-SRRPV-RATO-820	Organizational Maintenance with Illustrated Parts Breakdown, Pioneer Remotely Piloted Vehicle System, Rocket Assisted Take-off (1 Aug 01)
	A1-SRRPV-RRS-900	Organizational Maintenance with Illustrated Parts Breakdown, Pioneer Remotely Piloted Vehicle System, Remote Receiving Station (1 Sep 95)
	A1-SRRPV-SDM-000	System Description Manual (1 Aug 95)
	A1-SRRPV-SEM-960	Support Equipment and Arresting Gear Description and Operation (1 May 97)
	A1-SRRPV-SRP-850	Stabilized Television Reconnaissance Payload (1 Mar 95)
	A1-SRRPV-SRP-860	Stabilized Infrared Reconnaissance Payload (1 Mar 95)
	A1-SRRPV-SSM-970	Shipboard Operation and Maintenance with Illustrated Parts Breakdown (1 Nov 95)
	A1-SRRPV-WAB-400	Weight and Balance (1 Sep 00)
	A1-SRRPV-WAB-450	Weight and Balance Handbook, Pioneer Unmanned Aerial Vehicle System, Model RQ-2 Aerial Vehicle (2 Oct 00)

4. Test Sets, Tools, and Test Equipment. Existing test equipment in the Navy and Marine Corps inventory will be used when applicable. Peculiar Support Equipment and special tools required to support peculiar and unique maintenance requirements are controlled through the Navy Individual Material Readiness List (IMRL) system. Equipment required for training is listed in Part IV of this NTSP.

5. Repair Parts. Initial supply support was provided by the contractor and included acquisition, distribution, provisioning, and inventory replenishment of system components, spares, repair parts, and consumable supplies necessary to maintain the Pioneer UAV in a high state of readiness. Currently, supply support is the responsibility of the NAVAIR Assistant Program Manager, Logistics (APML) for UAVs and is managed by the Director, Fleet Support Team at NAVAIR Patuxent River, Code 3.1.3000A. The Director, Fleet Support Team recommends spares and repair part requirements to the APML who provides recommendations to PMA263 for procurement. The Pioneer UAV System utilizes the NAVAIR Interim Supply Support System.

a. Class IX - Repair Parts. Spare parts requirements are generated by the Director, Fleet Support Team and forwarded to the APML, who provides requirements to the Integrated Product Team (IPT) for procurement. Squadrons submit their repairable assets to the Navy Supply Support System.

6. Human Systems Integration. The Pioneer UAV is a mature program. It skipped the traditional development phase of the acquisition process, and nine systems, each with eight AVs, were COTS procured, beginning in 1986. There was a Human Performance Requirements Review (HPRR) scheduled for the last week of January 2003 (see Naval Message from CNO to NAMTRAGRU DET Milton, R0316472Z Jan 03); however, this was not held due to the unforeseen deployment of several of the principals to the Middle East in preparation for operations in Iraq. Please refer to Part VI of this NTSP to review Action Items regarding the Pioneer program and preparations for the next HPRR.

a. Manpower. The RQ-2B Pioneer UAV is operated largely by Marine Corps UAV squadrons VMU-1 and VMU-2, with the Navy maintaining Pioneer capability at *CNATT DET Milton, at NAS Whiting Field, Florida*, and VC-6 DET Patuxent River at Webster Field, St. Inigoes, Maryland. According to the Marine Pioneer Requirements Document (July 2002), in order to meet the goals of Headquarters, United States Marine Corps (HQMC), the Marine Corps Pioneer system must meet the following priorities:

- Ensure the Marine Pioneer system is supportable and meets the operational requirements through FY09
- Provide for interoperability with U.S. Army and U.S. Navy Tactical UAV systems (TCS [Tactical Control System] and TCDL [Tactical Common Data Link] compatible).

[**Note:** This capability as listed in requirements documentation represented a new or improved capability and is not currently feasible due to decision to maintain Pioneer only as a sustainment program.]

- Provide for a reduction in system footprint as to allow for total system deployment on Marine KC-130 Aircraft
- As appropriate, provide for a reduction in force structure

The Pioneer UAV, though a mature program facing sundown around FY10, is still proving its operational worth with Marine Corps forces in Iraq and elsewhere. Over the past decade, VC-6's Pioneer UAV requirements have decreased and today the Navy operates one unit from VC-6 DET Patuxent River. There is no Navy Operational Requirements (ORD) document nor a Manpower Estimate Report (MER) to assist in manpower projections. Though the Pioneer is no longer currently deployed aboard the six Pioneer modified LPD ships, VC-6 retains the capability to deploy with the Pioneer in the future should the need arise. As the Navy moves into Joint operational capability with the other services and has to evaluate other UAV solutions, the Pioneer has suffered from a lack of focus and funding though today it is still proving its worth in the operational theater with Marine Corps forces in Iraq and elsewhere. Over the past decade, VC-6's Pioneer UAV requirements have decreased and today the Navy operates one unit from VC-6 DET Patuxent River.

Manpower and personnel data for Navy and Marine Corps forces is in need of a review in light of current mission requirements. Please refer to Part VI of this NTSP to review pertinent Action Items that are intended to align training and user community manning. Manpower requirements are shown in Part II of this NTSP.

b. Personnel. Both Navy and Marine Corps active duty and civilian contractor personnel operate and maintain the Pioneer RQ-2B at the schoolhouse and in the field. There have been changes to the NEC designations that need to be addressed more clearly in both the NEC Manual and in CANTRAC. Action items have been generated (see Part VI of this document) that are meant to clear up many of these inconsistencies.

c. Training. NETC is responsible for all RQ-2B Pioneer training, which is currently conducted at CNATT DET Milton at NAS Whiting Field. PMA205 is the TSA and provides for all initial training for ECPs. The curricula delivery method employed to teach Pioneer courses consists of platform instruction consisting of instructor-presented phase lectures. Computer-Aided Instruction (CAI) materials consist largely of PowerPoint® slides developed to be used in the classroom. Pilot training includes an integrated sequence of simulator exercises and flight regimes. At this time, there has been no decision to develop Computer-Based Training (CBT) for this system; however, this may be subject to change as fleet training requirements are reviewed. All future ICW and CBT must be Sharable Content Object Reference Model (SCORM) conformant per Executive Order 13111 guidance, and conform with the technical standards to run in the intended environment, i.e., classroom automated electronic classroom or learning resource center, Navy e-learning, AMTCS, or desktop (NMCI ashore or IT21 afloat).

d. Human Factors Engineering. All new design systems and software should address the human-machine interface for operators, maintainers, and support personnel. The design processes also should conform to what are recognized as "best" standard human engineering practices as defined in existing Human Factors Engineering design standards.

e. Environment/Safety/Health. Though at the current time the Program Manager (PMA263) has not executed a Programmatic Environment, Safety, and Occupational Health Evaluation (PESHE) document for the RQ-2 UAV program, numerous studies have been performed to ensure that Environmental and Occupational Safety and Health requirements meet

federal, state, and local standards, regulations, and directives and are enforced by the respective agencies. Available documents include:

- Report of Training Safety Evaluation and Occupational Safety and Health Management Evaluation (OSHME) of Naval Air Maintenance Training Group Detachment (NAMTRAGRU DET), Milton, Florida, performed 18 March 2003, report dated 14 April 2003
- Report of Training Safety Evaluation and Occupational Safety and Health Management Evaluation (OSHME) of Naval Air Maintenance Training Group Detachment (NAMTRAGRU DET), Fort Huachuca, Arizona, performed 3-5 April 2000, report dated 18 April 2000.
- 2001 Baseline Industrial Hygiene Survey, Naval Air Maintenance Training Group Detachment (NAMTRAGRU DET), Milton, FL, performed 12-18 December 2001, report dated 19 February 2002
- Baseline Industrial Hygiene Survey, Naval Air Maintenance Training Group Detachment (NAMTRAGRU DET), Fort Huachuca, Arizona, performed December 1999, report dated 14 January 2000
- Noise Survey, Naval Air Maintenance Training Group Detachment (NAMTRAGRU DET), Fort Huachuca, Arizona, performed 18 September 1998, report dated 28 September 1998
- Environmental Assessment for the Establishment of an Unmanned Aerial Vehicle (UAV) Squadron at Naval Air Station Whiting Field, Santa Rosa County, Florida, Contract No. N62467-97-D-0860, dated September 2000.

[OPNAVINST 5100.23F](#) (paragraphs 0207.p and 0505) requires the activity to conduct a self-assessment of its Occupational Safety and Health Program to identify program strengths and weaknesses at least on an annual basis. Based upon the results of the assessments, plans of action to address program areas in need of improvement shall be developed and implemented. The evaluators writing the Report of Training Safety Evaluation and Occupational Safety and Health Management Evaluation (OSHME) in March-April 2003 found that NAMTRAGRU DET Milton's annual Navy Occupational Safety and Health (NAVOSH) Program Self-Assessment was not current and stated that it needs to be updated annually to identify program shortfalls, metrics, and Process Review and Measurement System (PR&MS) data. The same report also stated, "NAMTRAGRU DET Milton is in compliance with NAVOSH Program requirements. Based on observations and conversations with staff and student personnel, it was apparent safety is an important part of all operations within the command."

The 2001 Baseline Industrial Hygiene Survey report cited above contains a list of discrepancies and recommended corrective actions. It was noted that personnel engaged in flight line operations should be enrolled in a hearing conservation program and wear double hearing protection during Pioneer startup and taxi operations as exposure of employees to noise levels in excess of 104 dBA were experienced. Recommendations for some of the more serious discrepancies included: improved communication to employees of the risks associated with

hazardous chemicals that were used, better compliance with Material Safety Data Sheet (MSDS) and Authorized User List (AUL) documentation and procedures, and the relocation of the emergency power generators serving remote control trailers on the flight line to locations several hundred yards away to reduce the potential for exposure to diesel exhaust fumes.

Note: while these observations pertain to schoolhouse operations, the same policies and procedures should be implemented for the Pioneer user community in the field, as appropriate, in order to minimize exposure to hazardous fumes, carcinogenic solvents, noise levels, etc.

The report of the Environmental Assessment concluded in its summary that no adverse short-term or long-term impacts have been identified resulting from implementation of the establishment of a UAV activity at NAS Whiting Field, and there would be a negligible increase in the amount of aircraft air emissions at NOLF Choctaw, which with all other factors, would not result in a significant environmental impact.

f. Survivability. As the RQ-2B Pioneer is essentially a drone, aircrew survivability is not impacted by the RQ-2B UAV program and does not apply.

g. Habitability. Habitability is not impacted by the RQ-2B UAV program and does not apply.

K. SCHEDULES

1. Installation and Delivery Schedules. Information will be updated in future revisions as necessary.

2. Ready For Operational Use Schedule. Information will be updated in future revisions as necessary.

3. Time Required to Install at Operational Sites. According to the Marine Pioneer Requirements Document of July 2002, "At a minimum, deployment shall be executable using three C-130s. This includes personnel and minimum support capability, defined as one GCS on a HMMWV [[High-Mobility Multipurpose Wheeled Vehicle](#)], GDT [Ground Data Terminal], PGCS [Portable Ground Control Station], PGDT [Portable Ground Data Terminal], AV transport trailer with HMMWV, MRSs, AV launcher, HMMWV personnel carrier, fuel, POL [petroleum, oil, and lubricants], and two electrical generators. The supporting unit will provide support and sustainment services. The deployment covers a 72-hour effort with two missions per 24 hours. Additional equipment and supplies would be required for operations exceeding 72 hours."

4. Foreign Military Sales and Other Source Delivery Schedule. FMS does not apply to the Pioneer UAV program.

5. Training Device and Technical Training Equipment Delivery Schedule.

a. Training Devices. The Pioneer External Pilot Simulator (EPSim) has been delivered to all Pioneer activities. A description of the EPSim provided by PMA205 is included

in Part IV of this NTSP. For further information regarding the Pioneer External Pilot Simulator, contact PMA205-F2.

According to the Marine Pioneer Requirements Document of July 2002, “Computer-Based Training devices and/or simulators will be provided for the AV operators, payload operators, and maintenance personnel. The objective of these devices should focus on hands-on skills for essential operations maintenance training and troubleshooting. Proficiency training aids and devices will be part of every VMU system and stand-alone training devices will be provided at CNATT. The GCS will provide the capability for the incorporation so improved embedded and add-on interactive training, duplicating UAV capabilities, limitations, and emergency procedures. This includes operator interaction with the data link and operator practice interaction with sensors and systems using simulated or real sensor data and all unit level GCS maintenance.”

b. Technical Training Equipment. In the Training Planning Process Methodology Manual (TRPPM), Appendix B - Technical Training Equipment (TTE) is described as: investment cost end items of operational equipment, devoted to the training and instruction of Naval personnel. The Pioneer UAV System has no TTE. On 1 October 1990, a fully operational Pioneer UAV System was designated as Training Equipment and delivered to DUTC Fort Huachuca, Arizona (now relocated to CNATT DET Milton at NAS Whiting Field).

Equipment utilized as Training Equipment, described in the TRPPM as equipment designed for operational purposes in the course of instruction, which is used by the instructor or student as an element of the process of teaching or learning, is covered in Part IV of the NTSP. Much of the information regarding Training Equipment presented in Part IV comes largely from a single document, the latest version of the TCCD for C-690-0644, *Change 6, Training Course Control Document for Pioneer SR-RPV Airframe Mechanic Course*, dated August 2001. This document, and other Pioneer UAV training course control documents, each with its Resource Requirement List (RRL), appear to be in need of update and revision. An inventory of Training Equipment is recommended to determine present equipment requirements for supporting the present configuration of the Pioneer RQ-2B UAV system in the aftermath of the closure of all training locations except for CNATT DET Milton in order to achieve economies by utilizing, or reallocating, the expensive equipment that had been purchased for other training sites.

Training requirements in Part IV are shown *as they are found in current training documents*, and do not necessarily represent valid current requirements.

L. GOVERNMENT FURNISHED EQUIPMENT AND CONTRACTOR FURNISHED EQUIPMENT TRAINING REQUIREMENTS. *Contact CNATT Det Milton for up to date ERL listing for each course.* Information on GFE CFE for training is included, where provided, in Part IV of this document, and as mentioned earlier relies largely on the RRL of C-690-0644, *UAV Airframe Mechanic Training Course* for information. Some items found listed in that course but not listed in Part IV include:

CATEGORY	DESCRIPTION	PART NUMBER
Common Hand Tools	Tool Box, Mech Training	NA
Consumables	Miscellaneous Consumables	NA
Training Devices	None	
Support Equipment (Non-Avionic)	UAV Towing Trolley	2929-96400
	Cable Drum Storage Case	2928-92810
Calibration Standards	None	
Faulted/Pre-Faulted Modules	None	
Trainer Peculiar Materials	None	
Miscellaneous Materials	Goggles	NA
	Apron	NA
	Eye-Wash Station	114052
	Radio, Hand-held	NA
	Tool Box, Mech Training	NA
Ordnance/Ammunition/Pyrotechnics	Motor, Rocket, Jet Assist	572-174-0003
Stand-Alone Computer Systems and Peripherals	Computer, Desktop	M55HIPLUS-166M-MT
	Monitor	M-7F34MR
	Zip Drive	Z100P2
	Projector, Computer Display	NA

M. RELATED NTSPs AND OTHER APPLICABLE DOCUMENTS. NA.

PART II - BILLET AND PERSONNEL REQUIREMENTS

The following elements are not affected by RQ-2B Pioneer UAV system and, therefore, are not included in Part II of this NTSP:

II.A. Billet Requirements

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

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

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

PART II - BILLET AND PERSONNEL REQUIREMENTS

II.A. BILLET REQUIREMENTS

SOURCE OF NAVY NTMPS, TFFMS

DATE: Jul 2003

SOURCE OF VMU-1/2 T/O 8890 Mission Statement

DATE: Mar 2003

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

ACTIVITY, UIC		PFYs	CFY03	FY04	FY05	FY06	FY07
OPERATIONAL ACTIVITIES - USN							
VC-6 DET Patuxent River	55243	1	0	0	0	0	0
VC-6 Shore Surveillance DET Pax	46550	1	0	0	0	0	0
TOTAL:		2	0	0	0	0	0
OPERATIONAL ACTIVITIES - USMC							
VMU-1 Twenty-nine Palms	01480	1	0	0	0	0	0
VMU-2 Cherry Point	01490	1	0	0	0	0	0
TOTAL:		2	0	0	0	0	0
FLEET SUPPORT ACTIVITIES - USMC							
VMU-1 MALS Augment	01480	1	0	0	0	0	0
VMU-2 MALS Augment	01490	1	0	0	0	0	0
TOTAL:		2	0	0	0	0	0

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

ACTIVITY, UIC, PHASING INCREMENT	BILLETS		DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
	OFF	ENL			
OPERATIONAL ACTIVITIES - USN					
VC-6 DET Patuxent River, 55243					
ACDU	6	0	1302 I	8653	DZ8
	6	0	1302 J	8501	DZ8
	6	0	1302 K	8501	DZ8
	0	1	AD1		
	0	6	AD2		
	0	6	ADAN		
	0	1	AE1	8361	
	0	6	AE1	8361	8363
	0	6	AE2	8361	8363
	0	6	AE3	8361	
	0	6	AEAN	8361	
	0	2	AM1	8361	
	0	6	AM1	8361	7232
	0	6	AM1	8362	
	0	6	AM2	8361	8362
	0	6	AM2	8362	
	0	6	AM3	8361	
	0	6	AM3	8361	7232
	0	12	AMAN	8361	
	0	6	APOC	8800	
	0	6	AS2	8361	7607
	0	6	AS2	8364	
	0	6	ASAN	8361	7607
	0	2	AT1	8361	
	0	6	AT1	8363	
	0	6	AT2	8361	8363
	0	6	AT2	8363	
	0	6	ATAN	8361	
	0	12	AZ2	8364	
	0	6	IS2		
	0	6	SK2		
ACTIVITY TOTAL:	18	162			
VC-6 Shore Surveillance DET Pax, 46550					
ACDU	1	0	1302 H	8653	DZ8
	1	0	1302 K	8694	DZ8
	1	0	1520 J	8176	
	1	0	1630 K	9640	
	0	1	APOCS	8800	
	0	1	APOC	8800	
	0	1	APO1		
	0	1	AZ2	6315	
	0	1	IT2	2780	
	0	1	SK1		

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			
ACDU	0	1	SK3		
	0	1	YN1		
	0	1	YN3		
	0	1	YNSN		
ACTIVITY TOTAL:	4	10			
OPERATIONAL ACTIVITIES - USMC					
VMU-1 Twenty-nine Palms, 01480					
USMC	1	0	CAPT	0202	
	1	0	CAPT	0402	
	2	0	CAPT	7210	7315
	3	0	CAPT	9969	7315
	1	0	CAPT	9969	7596\
	1	0	CWO2	0170	
	1	0	CWO2	6302	
	1	0	LT	0207	
	1	0	LTCOL	9969	7202\
	1	0	MAJ	6002	
	1	0	MAJ	7202	7305
	1	0	MAJ	9969	7315
	0	2	CPL	0121	
	0	1	CPL	0151	
	0	3	CPL	0231	
	0	2	CPL	0411	
	0	5	CPL	0621	
	0	1	CPL	1142	
	0	1	CPL	3043	
	0	3	CPL	3521	
	0	1	CPL	3531	
	0	3	CPL	6046	
	0	1	CPL	6072	
	0	3	CPL	6214	
	0	3	CPL	6314	
	0	1	CPL	6531	
	0	10	CPL	7314	
	0	1	CPL	8711	
	0	1	GYSGT	0193	
	0	1	GYSGT	0241	
	0	1	GYSGT	0629	
	0	1	GYSGT	6012	6214
	0	1	GYSGT	6314	
	0	1	GYSGT	7041	
	0	2	GYSGT	7316	7314
ACDU	0	1	HM1	8404	
	0	1	HM3	8404	
USMC	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	0151	
	0	1	LCPL	0411	
	0	2	LCPL	0612	
	0	12	LCPL	0621	
	0	2	LCPL	0651	
	0	5	LCPL	1141	
	0	2	LCPL	1142	
	0	1	LCPL	1345	
	0	1	LCPL	2111	
	0	1	LCPL	3043	
	0	2	LCPL	3381	
	0	3	LCPL	3521	
	0	1	LCPL	3531	
	0	1	LCPL	6072	
	0	11	LCPL	6214	
	0	10	LCPL	6314	
	0	1	LCPL	6531	
	0	20	LCPL	7314	
	0	1	MSGT	6019	
	0	1	MSGT	7316	7314
	0	3	SGT	0241	
	0	1	SGT	0431	
	0	2	SGT	0621	
	0	1	SGT	3043	
	0	1	SGT	3521	
	0	2	SGT	3531	
	0	1	SGT	6012	6214
	0	2	SGT	6012	6314
	0	1	SGT	6042	
	0	2	SGT	6214	
	0	1	SGT	6531	
	0	1	SGT	7041	
	0	1	SGT	7314	
	0	1	SGT	7314	7316
	0	2	SGT	7316	7314
	0	1	SGTMAJ	9999	
	0	1	SSGT	0231	
	0	1	SSGT	0241	
	0	2	SSGT	0431	
	0	1	SSGT	0629	
0	1	SSGT	2862		
0	1	SSGT	3529		
0	1	SSGT	3537		
0	2	SSGT	6046		
0	2	SSGT	6214		
0	1	SSGT	6314		
0	1	SGT	6314		

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			
ACTIVITY TOTAL:	15	168			
VMU-2 Cherry Point, 01490					
USMC	1	0	CAPT	0202	
	1	0	CAPT	0402	
	2	0	CAPT	7210	7315
	3	0	CAPT	9969	7315
	1	0	CAPT	9969	7596\
	1	0	CWO2	0170	
	1	0	CWO2	6302	
	1	0	LT	0207	
	1	0	LTCOL	9969	7202\
	1	0	MAJ	6002	
	1	0	MAJ	7202	7305
	1	0	MAJ	9969	7315
	0	2	CPL	0121	
	0	1	CPL	0151	
	0	3	CPL	0231	
	0	2	CPL	0411	
	0	5	CPL	0621	
	0	1	CPL	1142	
	0	1	CPL	3043	
	0	3	CPL	3521	
	0	1	CPL	3531	
	0	3	CPL	6046	
	0	1	CPL	6072	
	0	3	CPL	6214	
	0	3	CPL	6314	
	0	1	CPL	6531	
	0	10	CPL	7314	
	0	1	CPL	8711	
	0	1	GYSGT	0193	
	0	1	GYSGT	0241	
	0	1	GYSGT	0629	
	0	1	GYSGT	6012	6214
	0	1	GYSGT	6314	
	0	1	GYSGT	7041	
	0	2	GYSGT	7316	7314
ACDU	0	1	HM1	8404	
	0	1	HM3	8404	
USMC	0	1	LCPL	0121	
	0	1	LCPL	0151	
	0	1	LCPL	0411	
	0	2	LCPL	0612	
	0	12	LCPL	0621	
	0	2	LCPL	0651	
	0	5	LCPL	1141	
	0	2	LCPL	1142	

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	1345	
	0	1	LCPL	2111	
	0	1	LCPL	3043	
	0	2	LCPL	3381	
	0	3	LCPL	3521	
	0	1	LCPL	3531	
	0	1	LCPL	6072	
	0	11	LCPL	6214	
	0	10	LCPL	6314	
	0	1	LCPL	6531	
	0	20	LCPL	7314	
	0	1	MSGT	6019	
	0	1	MSGT	7316	7314
	0	3	SGT	0241	
	0	1	SGT	0431	
	0	2	SGT	0621	
	0	1	SGT	3043	
	0	1	SGT	3521	
	0	2	SGT	3531	
	0	1	SGT	6012	6214
	0	2	SGT	6012	6314
	0	1	SGT	6042	
	0	2	SGT	6214	
	0	1	SGT	6531	
	0	1	SGT	7041	
	0	1	SGT	7314	
	0	1	SGT	7314	7316
	0	2	SGT	7316	7314
	0	1	SGTMAJ	9999	
	0	1	SSGT	0231	
	0	1	SSGT	0241	
	0	2	SSGT	0431	
	0	1	SSGT	0629	
0	1	SSGT	2862		
0	1	SSGT	3529		
0	1	SSGT	3537		
0	2	SSGT	6046		
0	2	SSGT	6214		
0	1	SSGT	6314		
0	1	SGT	6314		
ACTIVITY TOTAL:	15	168			
FLEET SUPPORT ACTIVITIES - USMC					
VMU-1 MALS Augment, 01480					
USMC	0	1	CPL	6413	
	0	1	CPL	6423	

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	6466	
	0	1	CPL	6492	
	0	1	CPL	6672	
	0	1	LCPL	6073	
	0	1	LCPL	6432	
	0	1	LCPL	6672	
	0	1	SGT	6073	
	0	1	SGT	6466	
	0	1	SGT	6672	
	ACTIVITY TOTAL:	0	11		
VMU-2 MALS Augment, 01490					
USMC	0	1	CPL	6413	
	0	1	CPL	6423	
	0	1	CPL	6466	
	0	1	CPL	6492	
	0	1	CPL	6672	
	0	1	LCPL	6073	
	0	1	LCPL	6432	
	0	1	LCPL	6672	
	0	1	SGT	6073	
	0	1	SGT	6466	
	0	1	SGT	6672	
	ACTIVITY TOTAL:	0	11		

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

DESIG/ RATING	PNEC/SNEC PMOS/SMOS		PFYs		CFY03		FY04		FY05		FY06		FY07	
			OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
USN OPERATIONAL ACTIVITIES - ACDU														
1302 H	8653	DZ8	1		0		0		0		0		0	
1302 I	8653	DZ8	6		0		0		0		0		0	
1302 J	8501	DZ8	6		0		0		0		0		0	
1302 K	8501	DZ8	6		0		0		0		0		0	
1302 K	8694	DZ8	1		0		0		0		0		0	
1520 J	8176		1		0		0		0		0		0	
1630 K	9640		1		0		0		0		0		0	
AD1				1		0		0		0		0		0
AD2				6		0		0		0		0		0
ADAN				6		0		0		0		0		0
AE1	8361			1		0		0		0		0		0
AE1	8361	8363		6		0		0		0		0		0
AE2	8361	8363		6		0		0		0		0		0
AE3	8361			6		0		0		0		0		0
AEAN	8361			6		0		0		0		0		0
AM1	8361			2		0		0		0		0		0
AM1	8361	7232		6		0		0		0		0		0
AM1	8362			6		0		0		0		0		0
AM2	8361	8362		6		0		0		0		0		0
AM2	8362			6		0		0		0		0		0
AM3	8361			6		0		0		0		0		0
AM3	8361	7232		6		0		0		0		0		0
AMAN	8361			12		0		0		0		0		0
APOCS	8800			1		0		0		0		0		0
APOC	8800			7		0		0		0		0		0
APO1				1		0		0		0		0		0
AS2	8361	7607		6		0		0		0		0		0
AS2	8364			6		0		0		0		0		0
ASAN	8361	7607		6		0		0		0		0		0
AT1	8361			2		0		0		0		0		0
AT1	8363			6		0		0		0		0		0
AT2	8361	8363		6		0		0		0		0		0
AT2	8363			6		0		0		0		0		0
ATAN	8361			6		0		0		0		0		0
AZ2	6315			1		0		0		0		0		0
AZ2	8364			12		0		0		0		0		0
IS2				6		0		0		0		0		0
IT2	2780			1		0		0		0		0		0
SK1				1		0		0		0		0		0
SK2				6		0		0		0		0		0
SK3				1		0		0		0		0		0
YN1				1		0		0		0		0		0
YN3				1		0		0		0		0		0
YNSN				1		0		0		0		0		0

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

DESIG/ RATING	PNEC/SNEC PMOS/SMOS	PFYs		CFY03		FY04		FY05		FY06		FY07	
		OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
USMC OPERATIONAL ACTIVITIES - USMC													
CAPT	0202		2		0		0		0		0		0
CAPT	0402		2		0		0		0		0		0
CAPT	7210	7315	4		0		0		0		0		0
CAPT	9969	7315	6		0		0		0		0		0
CAPT	9969	7596\7	2		0		0		0		0		0
CWO2	0170		2		0		0		0		0		0
CWO2	6302		2		0		0		0		0		0
LT	0207		2		0		0		0		0		0
LTCOL	9969	7202\7	2		0		0		0		0		0
MAJ	6002		2		0		0		0		0		0
MAJ	7202	7305	2		0		0		0		0		0
MAJ	9969	7315	2		0		0		0		0		0
CPL	0121			4		0		0		0		0	0
CPL	0151			2		0		0		0		0	0
CPL	0231			6		0		0		0		0	0
CPL	0411			4		0		0		0		0	0
CPL	0621			10		0		0		0		0	0
CPL	1142			2		0		0		0		0	0
CPL	3043			2		0		0		0		0	0
CPL	3521			6		0		0		0		0	0
CPL	3531			2		0		0		0		0	0
CPL	6046			6		0		0		0		0	0
CPL	6072			2		0		0		0		0	0
CPL	6214			6		0		0		0		0	0
CPL	6314			6		0		0		0		0	0
CPL	6531			2		0		0		0		0	0
CPL	7314			20		0		0		0		0	0
CPL	8711			2		0		0		0		0	0
GYSGT	0193			2		0		0		0		0	0
GYSGT	0241			2		0		0		0		0	0
GYSGT	0629			2		0		0		0		0	0
GYSGT	6012	6214		2		0		0		0		0	0
GYSGT	6314			2		0		0		0		0	0
GYSGT	7041			2		0		0		0		0	0
GYSGT	7316	7314		4		0		0		0		0	0
HM1	8404			2		0		0		0		0	0
HM3	8404			2		0		0		0		0	0
LCPL	0121			2		0		0		0		0	0
LCPL	0151			2		0		0		0		0	0
LCPL	0411			2		0		0		0		0	0
LCPL	0612			4		0		0		0		0	0
LCPL	0621			24		0		0		0		0	0
LCPL	0651			4		0		0		0		0	0
LCPL	1141			10		0		0		0		0	0
LCPL	1142			4		0		0		0		0	0
LCPL	1345			2		0		0		0		0	0
LCPL	2111			2		0		0		0		0	0

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

DESIG/ RATING	PNEC/SNEC PMOS/SMOS	PFYs		CFY03		FY04		FY05		FY06		FY07	
		OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
LCPL	3043		2		0		0		0		0		0
LCPL	3381		4		0		0		0		0		0
LCPL	3521		6		0		0		0		0		0
LCPL	3531		2		0		0		0		0		0
LCPL	6072		2		0		0		0		0		0
LCPL	6214		22		0		0		0		0		0
LCPL	6314		20		0		0		0		0		0
LCPL	6531		2		0		0		0		0		0
LCPL	7314		40		0		0		0		0		0
MSGT	6019		2		0		0		0		0		0
MSGT	7316	7314	2		0		0		0		0		0
SGT	0241		6		0		0		0		0		0
SGT	0431		2		0		0		0		0		0
SGT	0621		4		0		0		0		0		0
SGT	3043		2		0		0		0		0		0
SGT	3521		2		0		0		0		0		0
SGT	3531		4		0		0		0		0		0
SGT	6012	6214	2		0		0		0		0		0
SGT	6012	6314	4		0		0		0		0		0
SGT	6042		2		0		0		0		0		0
SGT	6214		4		0		0		0		0		0
SGT	6531		2		0		0		0		0		0
SGT	7041		2		0		0		0		0		0
SGT	7314		2		0		0		0		0		0
SGT	7314	7316	2		0		0		0		0		0
SGT	7316	7314	4		0		0		0		0		0
SGTMAJ	9999		2		0		0		0		0		0
SSGT	0231		2		0		0		0		0		0
SSGT	0241		2		0		0		0		0		0
SSGT	0431		4		0		0		0		0		0
SSGT	0629		2		0		0		0		0		0
SSGT	2862		2		0		0		0		0		0
SSGT	3529		2		0		0		0		0		0
SSGT	3537		2		0		0		0		0		0
SSGT	6046		4		0		0		0		0		0
SSGT	6214		4		0		0		0		0		0
SSGT	6314		2		0		0		0		0		0
SGT	6314		2		0		0		0		0		0
USMC FLEET SUPPORT ACTIVITIES - USMC													
CPL	6413		2		0		0		0		0		0
CPL	6423		2		0		0		0		0		0
CPL	6466		2		0		0		0		0		0
CPL	6492		2		0		0		0		0		0
CPL	6672		2		0		0		0		0		0
LCPL	6073		2		0		0		0		0		0
LCPL	6432		2		0		0		0		0		0
LCPL	6672		2		0		0		0		0		0

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

DESIG/ RATING	PNEC/SNEC PMOS/SMOS	PFYs		CFY03		FY04		FY05		FY06		FY07	
		OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
SGT	6073		2		0		0		0		0		0
SGT	6466		2		0		0		0		0		0
SGT	6672		2		0		0		0		0		0

SUMMARY TOTALS:

USN OPERATIONAL ACTIVITIES - ACDU													
		22	172	0	0	0	0	0	0	0	0	0	0
USMC OPERATIONAL ACTIVITIES - ACDU													
			4		0		0		0		0		0
		30	332	0	0	0	0	0	0	0	0	0	0
USMC FLEET SUPPORT ACTIVITIES - USMC													
			22		0		0		0		0		0

GRAND TOTALS:

USN - ACDU													
		22	172	0	0	0	0	0	0	0	0	0	0
USMC - ACDU													
			4		0		0		0		0		0
		30	354	0	0	0	0	0	0	0	0	0	0

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

DESIG RATING	PNEC/SNEC PMOS/SMOS	PFYs		CFY03		FY04		FY05		FY06		FY07	
		OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL

TRAINING ACTIVITY, LOCATION, UIC: CNATT DET MILTON, CHOCTAW OLF, NAS WHITING FIELD, FL,

INSTRUCTOR BILLETS

USN														
1520 J	3251		1	0	1	0	1	0	1	0	1	0	1	0
6380 J	3251		1	0	1	0	1	0	1	0	1	0	1	0
6510 J	3251		1	0	1	0	1	0	1	0	1	0	1	0
AE1	8364	9502	0	1	0	1	0	1	0	1	0	1	0	1
AFCM		9502	0	1	0	1	0	1	0	1	0	1	0	1
AMC	8361	9502	0	1	0	1	0	1	0	1	0	1	0	1
AS1	8362	9502	0	1	0	1	0	1	0	1	0	1	0	1
ATCS	8361	9502	0	1	0	1	0	1	0	1	0	1	0	1
AT1	8361	9502	0	1	0	1	0	1	0	1	0	1	0	1
AT1	8362	9502	0	1	0	1	0	1	0	1	0	1	0	1
AT1	8363	9502	0	2	0	2	0	2	0	2	0	2	0	2
AT1	8364	9502	0	1	0	1	0	1	0	1	0	1	0	1
AZC	6315	9502	0	2	0	2	0	2	0	2	0	2	0	2
SKCS		9502	0	1	0	1	0	1	0	1	0	1	0	1

USMC														
SGT	7314		0	2	0	2	0	2	0	2	0	2	0	2
GYSGT	6214		0	1	0	1	0	1	0	1	0	1	0	1
SGT	6214		0	2	0	2	0	2	0	2	0	2	0	2
SSGT	6214		0	1	0	1	0	1	0	1	0	1	0	1
SGT	6314		0	2	0	2	0	2	0	2	0	2	0	2
SSGT	7413/7316		0	2	0	2	0	2	0	2	0	2	0	2

SUPPORT BILLETS

USN														
1520 I	3283	8190	1	0	1	0	1	0	1	0	1	0	1	0
6380 J	9420	3219	1	0	1	0	1	0	1	0	1	0	1	0
7340 M	3251		1	0	1	0	1	0	1	0	1	0	1	0
SKC	2813		0	1	0	1	0	1	0	1	0	1	0	1
SK2			0	1	0	1	0	1	0	1	0	1	0	1
YN1			0	1	0	1	0	1	0	1	0	1	0	1
USMC														
MSGT	7314		0	1	0	1	0	1	0	1	0	1	0	1
OTHER														
CS			16	0	16	0	16	0	16	0	16	0	16	0
GS-11			1	0	1	0	1	0	1	0	1	0	1	0
GS-11			0	0	0	0	0	0	1	0	1	0	1	0
GS-9			1	0	1	0	1	0	1	0	1	0	1	0

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

DESIG RATING	PNEC/SNEC PMOS/SMOS	PFYs		CFY03		FY04		FY05		FY06		FY07	
		OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
TOTAL:		24	28	24	28	24	28	25	28	25	28	25	28

II.A.4. CHARGEABLE STUDENT BILLET REQUIREMENTS

ACTIVITY, LOCATION, UIC	USN/ USMC	PFYs		CFY03		FY04		FY05		FY06		FY07	
		OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
CNATT DET MILTON, CHOCTAW OLF, NAS WHITING FIELD, FL, 31714													
	USN	0.5	6.4	0.5	6.4	0.5	6.4	0.5	6.4	0.5	6.4	0.5	6.4
	USMC	0.2	3.4	0.2	3.4	0.2	3.4	0.2	3.4	0.2	3.4	0.2	3.4
SUMMARY TOTALS:													
	USN	0.5	6.4	0.5	6.4	0.5	6.4	0.5	6.4	0.5	6.4	0.5	6.4
	USMC	0.2	3.4	0.2	3.4	0.2	3.4	0.2	3.4	0.2	3.4	0.2	3.4
GRAND TOTALS:													
		0.7	9.8	0.7	9.8	0.7	9.8	0.7	9.8	0.7	9.8	0.7	9.8

II.A.5. ANNUAL INCREMENTAL AND CUMULATIVE BILLETS

DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS	BILLET BASE	CFY03		FY04		FY05		FY06		FY07	
				+/-	CUM	+/-	CUM	+/-	CUM	+/-	CUM	+/-	CUM

a. OFFICER - USN

Operational Billets ACDU and FTS

1302 H	8653	DZ8	1	0	1	0	1	0	1	0	1	0	1
1302 I	8653	DZ8	6	0	6	0	6	0	6	0	6	0	6
1302 J	8501	DZ8	6	0	6	0	6	0	6	0	6	0	6
1302 K	8501	DZ8	6	0	6	0	6	0	6	0	6	0	6
1302 K	8694	DZ8	1	0	1	0	1	0	1	0	1	0	1
1520 J	8176		1	0	1	0	1	0	1	0	1	0	1
1630 K	9640		1	0	1	0	1	0	1	0	1	0	1

Staff Billets ACDU and FTS

1520 I	3283	8190	1	0	1	0	1	0	1	0	1	0	1
1520 J	3251		1	0	1	0	1	0	1	0	1	0	1
6380 J	3251		1	0	1	0	1	0	1	0	1	0	1
6380 J	9420	3219	1	0	1	0	1	0	1	0	1	0	1
6510 J	3251		1	0	1	0	1	0	1	0	1	0	1
7340 M	3251		1	0	1	0	1	0	1	0	1	0	1

Chargeable Student Billets ACDU and FTS

1	0	1	0	1	0	1	0	1	0	1	0	1
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TOTAL USN OFFICER BILLETS:

Operational			22	0	22	0	22	0	22	0	22	0	22
Staff			6	0	6	0	6	0	6	0	6	0	6
Chargeable Student			1	0	1	0	1	0	1	0	1	0	1

b. ENLISTED - USN

Operational Billets ACDU and FTS

AD1			1	0	1	0	1	0	1	0	1	0	1
AD2			6	0	6	0	6	0	6	0	6	0	6
ADAN			6	0	6	0	6	0	6	0	6	0	6
AE1	8361		1	0	1	0	1	0	1	0	1	0	1
AE1	8361	8363	6	0	6	0	6	0	6	0	6	0	6
AE2	8361	8363	6	0	6	0	6	0	6	0	6	0	6
AE3	8361		6	0	6	0	6	0	6	0	6	0	6
AEAN	8361		6	0	6	0	6	0	6	0	6	0	6
AM1	8361		2	0	2	0	2	0	2	0	2	0	2
AM1	8361	7232	6	0	6	0	6	0	6	0	6	0	6
AM1	8362		6	0	6	0	6	0	6	0	6	0	6
AM2	8361	8362	6	0	6	0	6	0	6	0	6	0	6

II.A.5. ANNUAL INCREMENTAL AND CUMULATIVE BILLETS

DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS	BILLET BASE	CFY03		FY04		FY05		FY06		FY07	
				+/-	CUM	+/-	CUM	+/-	CUM	+/-	CUM	+/-	CUM
AM2	8362		6	0	6	0	6	0	6	0	6	0	6
AM3	8361		6	0	6	0	6	0	6	0	6	0	6
AM3	8361	7232	6	0	6	0	6	0	6	0	6	0	6
AMAN	8361		12	0	12	0	12	0	12	0	12	0	12
APOCS	8800		1	0	1	0	1	0	1	0	1	0	1
APOC	8800		7	0	7	0	7	0	7	0	7	0	7
APO1			1	0	1	0	1	0	1	0	1	0	1
AS2	8361	7607	6	0	6	0	6	0	6	0	6	0	6
AS2	8364		6	0	6	0	6	0	6	0	6	0	6
ASAN	8361	7607	6	0	6	0	6	0	6	0	6	0	6
AT1	8361		2	0	2	0	2	0	2	0	2	0	2
AT1	8363		6	0	6	0	6	0	6	0	6	0	6
AT2	8361	8363	6	0	6	0	6	0	6	0	6	0	6
AT2	8363		6	0	6	0	6	0	6	0	6	0	6
ATAN	8361		6	0	6	0	6	0	6	0	6	0	6
AZ2	6315		1	0	1	0	1	0	1	0	1	0	1
AZ2	8364		12	0	12	0	12	0	12	0	12	0	12
HM1	8404		2	0	2	0	2	0	2	0	2	0	2
HM3	8404		2	0	2	0	2	0	2	0	2	0	2
IS2			6	0	6	0	6	0	6	0	6	0	6
IT2	2780		1	0	1	0	1	0	1	0	1	0	1
SK1			1	0	1	0	1	0	1	0	1	0	1
SK2			6	0	6	0	6	0	6	0	6	0	6
SK3			1	0	1	0	1	0	1	0	1	0	1
YN1			1	0	1	0	1	0	1	0	1	0	1
YN3			1	0	1	0	1	0	1	0	1	0	1
YNSN			1	0	1	0	1	0	1	0	1	0	1
Staff Billets ACDU and FTS													
AE1	8364	9502	1	0	1	0	1	0	1	0	1	0	1
AFCM		9502	1	0	1	0	1	0	1	0	1	0	1
AMC	8361	9502	1	0	1	0	1	0	1	0	1	0	1
AS1	8362	9502	1	0	1	0	1	0	1	0	1	0	1
ATCS	8361	9502	1	0	1	0	1	0	1	0	1	0	1
ATC			1	0	1	0	1	0	1	0	1	0	1
AT1	8361	9502	1	0	1	0	1	0	1	0	1	0	1
AT1	8362	9502	1	0	1	0	1	0	1	0	1	0	1
AT1	8363	9502	2	0	2	0	2	0	2	0	2	0	2
AT1	8364	9502	1	0	1	0	1	0	1	0	1	0	1
AZC	6315	9502	2	0	2	0	2	0	2	0	2	0	2
AZ2	6315		1	0	1	0	1	0	1	0	1	0	1
SKCS		9502	1	0	1	0	1	0	1	0	1	0	1
SKC	2813		1	0	1	0	1	0	1	0	1	0	1
SK2			1	0	1	0	1	0	1	0	1	0	1
YN1			1	0	1	0	1	0	1	0	1	0	1
Chargeable Student Billets ACDU and FTS													
			7	0	7	0	7	0	7	0	7	0	7

II.A.5. ANNUAL INCREMENTAL AND CUMULATIVE BILLETS

DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS	BILLET BASE	CFY03		FY04		FY05		FY06		FY07	
				+/-	CUM	+/-	CUM	+/-	CUM	+/-	CUM	+/-	CUM

TOTAL USN ENLISTED BILLETS:

Operational			176	0	176	0	176	0	176	0	176	0	176
Staff			18	0	18	0	18	0	18	0	18	0	18
Chargeable Student			7	0	7	0	7	0	7	0	7	0	7

c. OFFICER - USMC

Operational Billets USMC and AR

CAPT	0202		2	0	2	0	2	0	2	0	2	0	2
CAPT	0402		2	0	2	0	2	0	2	0	2	0	2
CAPT	7210	7315	4	0	4	0	4	0	4	0	4	0	4
CAPT	9969	7315	6	0	6	0	6	0	6	0	6	0	6
CAPT	9969	7596\7	2	0	2	0	2	0	2	0	2	0	2
CWO2	0170		2	0	2	0	2	0	2	0	2	0	2
CWO2	6302		2	0	2	0	2	0	2	0	2	0	2
LT	0207		2	0	2	0	2	0	2	0	2	0	2
LTCOL	9969	7202\7	2	0	2	0	2	0	2	0	2	0	2
MAJ	6002		2	0	2	0	2	0	2	0	2	0	2
MAJ	7202	7305	2	0	2	0	2	0	2	0	2	0	2
MAJ	9969	7315	2	0	2	0	2	0	2	0	2	0	2

Chargeable Student Billets USMC and AR

			1	0	1	0	1	0	1	0	1	0	1
--	--	--	---	---	---	---	---	---	---	---	---	---	---

TOTAL USMC OFFICER BILLETS:

Operational			30	0	30	0	30	0	30	0	30	0	30
Chargeable Student			1	0	1	0	1	0	1	0	1	0	1

d. ENLISTED - USMC

Operational Billets USMC and AR

CPL	0121		4	0	4	0	4	0	4	0	4	0	4
CPL	0151		2	0	2	0	2	0	2	0	2	0	2
CPL	0231		6	0	6	0	6	0	6	0	6	0	6
CPL	0411		4	0	4	0	4	0	4	0	4	0	4
CPL	0621		10	0	10	0	10	0	10	0	10	0	10
CPL	1142		2	0	2	0	2	0	2	0	2	0	2

II.A.5. ANNUAL INCREMENTAL AND CUMULATIVE BILLETS

DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS	BILLET BASE	CFY03		FY04		FY05		FY06		FY07	
				+/-	CUM	+/-	CUM	+/-	CUM	+/-	CUM	+/-	CUM
CPL	3043		2	0	2	0	2	0	2	0	2	0	2
CPL	3521		6	0	6	0	6	0	6	0	6	0	6
CPL	3531		2	0	2	0	2	0	2	0	2	0	2
CPL	6046		6	0	6	0	6	0	6	0	6	0	6
CPL	6072		2	0	2	0	2	0	2	0	2	0	2
CPL	6214		6	0	6	0	6	0	6	0	6	0	6
CPL	6314		6	0	6	0	6	0	6	0	6	0	6
CPL	6531		2	0	2	0	2	0	2	0	2	0	2
CPL	7314		20	0	20	0	20	0	20	0	20	0	20
CPL	8711		2	0	2	0	2	0	2	0	2	0	2
GYSGT	0193		2	0	2	0	2	0	2	0	2	0	2
GYSGT	0241		2	0	2	0	2	0	2	0	2	0	2
GYSGT	0629		2	0	2	0	2	0	2	0	2	0	2
GYSGT	6012	6214	2	0	2	0	2	0	2	0	2	0	2
GYSGT	6314		2	0	2	0	2	0	2	0	2	0	2
GYSGT	7041		2	0	2	0	2	0	2	0	2	0	2
GYSGT	7316	7314	4	0	4	0	4	0	4	0	4	0	4
LCPL	0121		2	0	2	0	2	0	2	0	2	0	2
LCPL	0151		2	0	2	0	2	0	2	0	2	0	2
LCPL	0411		2	0	2	0	2	0	2	0	2	0	2
LCPL	0612		4	0	4	0	4	0	4	0	4	0	4
LCPL	0621		24	0	24	0	24	0	24	0	24	0	24
LCPL	0651		4	0	4	0	4	0	4	0	4	0	4
LCPL	1141		10	0	10	0	10	0	10	0	10	0	10
LCPL	1142		4	0	4	0	4	0	4	0	4	0	4
LCPL	1345		2	0	2	0	2	0	2	0	2	0	2
LCPL	2111		2	0	2	0	2	0	2	0	2	0	2
LCPL	3043		2	0	2	0	2	0	2	0	2	0	2
LCPL	3381		4	0	4	0	4	0	4	0	4	0	4
LCPL	3521		6	0	6	0	6	0	6	0	6	0	6
LCPL	3531		2	0	2	0	2	0	2	0	2	0	2
LCPL	6072		2	0	2	0	2	0	2	0	2	0	2
LCPL	6214		22	0	22	0	22	0	22	0	22	0	22
LCPL	6314		20	0	20	0	20	0	20	0	20	0	20
LCPL	6531		2	0	2	0	2	0	2	0	2	0	2
LCPL	7314		40	0	40	0	40	0	40	0	40	0	40
MSGT	6019		2	0	2	0	2	0	2	0	2	0	2
MSGT	7316	7314	2	0	2	0	2	0	2	0	2	0	2
SGT	0241		6	0	6	0	6	0	6	0	6	0	6
SGT	0431		2	0	2	0	2	0	2	0	2	0	2
SGT	0621		4	0	4	0	4	0	4	0	4	0	4
SGT	3043		2	0	2	0	2	0	2	0	2	0	2
SGT	3521		2	0	2	0	2	0	2	0	2	0	2
SGT	3531		4	0	4	0	4	0	4	0	4	0	4
SGT	6012	6214	2	0	2	0	2	0	2	0	2	0	2
SGT	6012	6314	4	0	4	0	4	0	4	0	4	0	4
SGT	6042		2	0	2	0	2	0	2	0	2	0	2
SGT	6214		4	0	4	0	4	0	4	0	4	0	4

II.A.5. ANNUAL INCREMENTAL AND CUMULATIVE BILLETS

DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS	BILLET BASE	CFY03		FY04		FY05		FY06		FY07	
				+/-	CUM	+/-	CUM	+/-	CUM	+/-	CUM	+/-	CUM
SGT	6531		2	0	2	0	2	0	2	0	2	0	2
SGT	7041		2	0	2	0	2	0	2	0	2	0	2
SGT	7314		2	0	2	0	2	0	2	0	2	0	2
SGT	7314	7316	2	0	2	0	2	0	2	0	2	0	2
SGT	7316	7314	4	0	4	0	4	0	4	0	4	0	4
SGTMAJ	9999		2	0	2	0	2	0	2	0	2	0	2
SSGT	0231		2	0	2	0	2	0	2	0	2	0	2
SSGT	0241		2	0	2	0	2	0	2	0	2	0	2
SSGT	0431		4	0	4	0	4	0	4	0	4	0	4
SSGT	0629		2	0	2	0	2	0	2	0	2	0	2
SSGT	2862		2	0	2	0	2	0	2	0	2	0	2
SSGT	3529		2	0	2	0	2	0	2	0	2	0	2
SSGT	3537		2	0	2	0	2	0	2	0	2	0	2
SSGT	6046		4	0	4	0	4	0	4	0	4	0	4
SSGT	6214		4	0	4	0	4	0	4	0	4	0	4
SSGT	6314		2	0	2	0	2	0	2	0	2	0	2
SGT	6314		2	0	2	0	2	0	2	0	2	0	2
Fleet Support Billets USMC and AR													
CPL	6413		2	0	2	0	2	0	2	0	2	0	2
CPL	6423		2	0	2	0	2	0	2	0	2	0	2
CPL	6466		2	0	2	0	2	0	2	0	2	0	2
CPL	6492		2	0	2	0	2	0	2	0	2	0	2
CPL	6672		2	0	2	0	2	0	2	0	2	0	2
LCPL	6073		2	0	2	0	2	0	2	0	2	0	2
LCPL	6432		2	0	2	0	2	0	2	0	2	0	2
LCPL	6672		2	0	2	0	2	0	2	0	2	0	2
SGT	6073		2	0	2	0	2	0	2	0	2	0	2
SGT	6466		2	0	2	0	2	0	2	0	2	0	2
SGT	6672		2	0	2	0	2	0	2	0	2	0	2
Staff Billets USMC and AR													
CPL	6214		1	0	1	0	1	0	1	0	1	0	1
CPL	6314		1	0	1	0	1	0	1	0	1	0	1
GYSGT	6214		1	0	1	0	1	0	1	0	1	0	1
SGT	7314		3	0	3	0	3	0	3	0	3	0	3
SSGT	6214		1	0	1	0	1	0	1	0	1	0	1
SSGT	6314		1	0	1	0	1	0	1	0	1	0	1
SSGT	7316		2	0	2	0	2	0	2	0	2	0	2
Chargeable Student Billets USMC and AR													
			4	0	4	0	4	0	4	0	4	0	4
TOTAL USMC ENLISTED BILLETS:													
Operational			332	0	332	0	332	0	332	0	332	0	332

II.A.5. ANNUAL INCREMENTAL AND CUMULATIVE BILLETS

DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS	BILLET BASE	CFY03		FY04		FY05		FY06		FY07	
				+/-	CUM	+/-	CUM	+/-	CUM	+/-	CUM	+/-	CUM
Fleet Support			22	0	22	0	22	0	22	0	22	0	22
Staff			10	0	10	0	10	0	10	0	10	0	10
Chargeable Student			4	0	4	0	4	0	4	0	4	0	4

II.B. ANNUAL TRAINING INPUT REQUIREMENTS

CIN, COURSE TITLE: C-2E-0640, PIONEER SR-RPV MISSION COMMANDER
COURSE LENGTH: 3.0 Weeks **NAVY TOUR LENGTH:** 36 Months
ATTRITION FACTOR: Navy: 0% USMC: 0% **BACKOUT FACTOR:** 0.06

TRAINING ACTIVITY	SOURCE	ACDU/FTS SELRES	CFY03		FY04		FY05		FY06		FY07	
			OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
CNATT DET MILTON, CHOCTAW OLF, NAS WHITING FIELD, FL												
	USN	ACDU	8		0		0		0		0	
	USMC	USMC	8		6		14		14		14	
		TOTAL:	16		6		14		14		14	

CIN, COURSE TITLE: C-104-0641, PIONEER SR-RPV EXTERNAL PILOT
COURSE LENGTH: 18.0 Weeks **NAVY TOUR LENGTH:** 36 Months
ATTRITION FACTOR: Navy: 10% USMC: 0% **BACKOUT FACTOR:** 0.36

TRAINING ACTIVITY	SOURCE	ACDU/FTS SELRES	CFY03		FY04		FY05		FY06		FY07	
			OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
CNATT DET MILTON, CHOCTAW OLF, NAS WHITING FIELD, FL												
	USN	ACDU		2		3		3		3		3
	USMC	USMC		7		0		8		8		8
		TOTAL:		9		3		11		11		11

CIN, COURSE TITLE: C-104-0642, PIONEER SR-RPV INTERNAL OPERATOR
COURSE LENGTH: 8.0 Weeks **NAVY TOUR LENGTH:** 36 Months
ATTRITION FACTOR: Navy: 0% USMC: 0% **BACKOUT FACTOR:** 0.16

TRAINING ACTIVITY	SOURCE	ACDU/FTS SELRES	CFY03		FY04		FY05		FY06		FY07	
			OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
CNATT DET MILTON, CHOCTAW OLF, NAS WHITING FIELD, FL												
	USN	ACDU		3		3		3		3		3
	USMC	USMC		18		27		23		23		23
		TOTAL:		21		30		26		26		26

CIN, COURSE TITLE: C-104-0643, PIONEER SR-RPV PAYLOAD OPERATOR COURSE
COURSE LENGTH: 5.6 Weeks **NAVY TOUR LENGTH:** 36 Months
ATTRITION FACTOR: Navy: 0% USMC: 0% **BACKOUT FACTOR:** 0.11

TRAINING ACTIVITY	SOURCE	ACDU/FTS SELRES	CFY03		FY04		FY05		FY06		FY07	
			OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
CNATT DET MILTON, CHOCTAW OLF, NAS WHITING FIELD, FL												
	USN	ACDU		4		3		4		4		4
		TOTAL:		4		3		4		4		4

II.B. ANNUAL TRAINING INPUT REQUIREMENTS

CIN, COURSE TITLE: C-104-0645, PIONEER SR-RPV INTERNAL PILOT

COURSE LENGTH: 8.0 Weeks

NAVY TOUR LENGTH: 36 Months

ATTRITION FACTOR: Navy: 10% USMC: 0%

BACKOUT FACTOR: 0.16

TRAINING ACTIVITY	SOURCE	ACDU/FTS SELRES	CFY03		FY04		FY05		FY06		FY07	
			OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
CNATT DET MILTON, CHOCTAW OLF, NAS WHITING FIELD, FL												
	USN	ACDU		8		9		19		19		19
		TOTAL:		8		9		19		19		19

CIN, COURSE TITLE: C-690-0644, PIONEER SR-RPV AIRFRAME / MECHANIC

COURSE LENGTH: 7.0 Weeks

NAVY TOUR LENGTH: 36 Months

ATTRITION FACTOR: Navy: 10% USMC: 0%

BACKOUT FACTOR: 0.14

TRAINING ACTIVITY	SOURCE	ACDU/FTS SELRES	CFY03		FY04		FY05		FY06		FY07	
			OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
CNATT DET MILTON, CHOCTAW OLF, NAS WHITING FIELD, FL												
	USN	ACDU		16		7		4		4		4
	USMC	ACDU		0		10		10		10		10
		TOTAL:		16		17		14		14		14

CIN, COURSE TITLE: C-690-0646, PIONEER SR-RPV ELECTRONIC TECHNICIAN

COURSE LENGTH: 9.0 Weeks

NAVY TOUR LENGTH: 36 Months

ATTRITION FACTOR: Navy: 10% USMC: 0%

BACKOUT FACTOR: 0.18

TRAINING ACTIVITY	SOURCE	ACDU/FTS SELRES	CFY03		FY04		FY05		FY06		FY07	
			OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
CNATT DET MILTON, CHOCTAW OLF, NAS WHITING FIELD, FL												
	USN	ACDU		14		12		19		19		19
	USMC	USMC		8		0		8		8		8
		TOTAL:		22		12		27		27		27

PART III - TRAINING REQUIREMENTS

The following elements are not affected by the RQ-2B Pioneer UAV system 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

PART III - TRAINING REQUIREMENTS

III.A. TRAINING COURSE REQUIREMENTS

III.A.2. FOLLOW-ON TRAINING

III.A.2.a. EXISTING COURSES

CIN, COURSE TITLE: C-2E-0640, PIONEER SR-RPV MISSION COMMANDER
TRAINING ACTIVITY: CNATT DET MILTON
LOCATION, UIC: CHOCTAW OLF, NAS WHITING FIELD, FL, 31714

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

CFY03		FY04		FY05		FY06		FY07		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
9		9		9		9		9		ATIR
9		9		9		9		9		Output
0.5		0.5		0.5		0.5		0.5		AOB
0.5		0.5		0.5		0.5		0.5		Chargeable

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

CFY03		FY04		FY05		FY06		FY07		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
4		4		4		4		4		ATIR
4		4		4		4		4		Output
0.2		0.2		0.2		0.2		0.2		AOB
0.2		0.2		0.2		0.2		0.2		Chargeable

CIN, COURSE TITLE: C-104-0641, PIONEER SR-RPV EXTERNAL PILOT
TRAINING ACTIVITY: CNATT DET MILTON
LOCATION, UIC: CHOCTAW OLF, NAS WHITING FIELD, FL, 31714

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

CFY03		FY04		FY05		FY06		FY07		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
4		4		4		4		4		ATIR
4		4		4		4		4		Output
1.3		1.3		1.3		1.3		1.3		AOB
1.3		1.3		1.3		1.3		1.3		Chargeable

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

CFY03		FY04		FY05		FY06		FY07		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
2		2		2		2		2		ATIR
2		2		2		2		2		Output
0.7		0.7		0.7		0.7		0.7		AOB
0.7		0.7		0.7		0.7		0.7		Chargeable

III.A.2.a. EXISTING COURSES

CIN, COURSE TITLE: C-104-0642, PIONEER SR-RPV INTERNAL OPERATOR
TRAINING ACTIVITY: CNATT DET MILTON
LOCATION, UIC: CHOCTAW OLF, NAS WHITING FIELD, FL, 31714

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

CFY03		FY04		FY05		FY06		FY07		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	3		3		3		3		3	ATIR
	3		3		3		3		3	Output
	0.4		0.4		0.4		0.4		0.4	AOB
	0.4		0.4		0.4		0.4		0.4	Chargeable

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

CFY03		FY04		FY05		FY06		FY07		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	13		13		13		13		13	ATIR
	13		13		13		13		13	Output
	1.9		1.9		1.9		1.9		1.9	AOB
	1.9		1.9		1.9		1.9		1.9	Chargeable

CIN, COURSE TITLE: C-104-0643, PIONEER SR-RPV PAYLOAD OPERATOR COURSE
TRAINING ACTIVITY: CNATT DET MILTON
LOCATION, UIC: CHOCTAW OLF, NAS WHITING FIELD, FL, 31714

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

CFY03		FY04		FY05		FY06		FY07		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	6		6		6		6		6	ATIR
	6		6		6		6		6	Output
	0.6		0.6		0.6		0.6		0.6	AOB
	0.6		0.6		0.6		0.6		0.6	Chargeable

CIN, COURSE TITLE: C-104-0645, PIONEER SR-RPV INTERNAL PILOT
TRAINING ACTIVITY: CNATT DET MILTON
LOCATION, UIC: CHOCTAW OLF, NAS WHITING FIELD, FL, 31714

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

CFY03		FY04		FY05		FY06		FY07		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	3		3		3		3		3	ATIR
	3		3		3		3		3	Output
	0.4		0.4		0.4		0.4		0.4	AOB
	0.4		0.4		0.4		0.4		0.4	Chargeable

III.A.2.a. EXISTING COURSES

CIN, COURSE TITLE: C-690-0644, PIONEER SR-RPV AIRFRAME / MECHANIC
TRAINING ACTIVITY: CNATT DET MILTON
LOCATION, UIC: CHOCTAW OLF, NAS WHITING FIELD, FL, 31714

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

CFY03		FY04		FY05		FY06		FY07		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	10		10		10		10		10	ATIR
	9		9		9		9		9	Output
	1.2		1.2		1.2		1.2		1.2	AOB
	1.2		1.2		1.2		1.2		1.2	Chargeable

CIN, COURSE TITLE: C-690-0646, PIONEER SR-RPV ELECTRONIC TECHNICIAN
TRAINING ACTIVITY: CNATT DET MILTON
LOCATION, UIC: CHOCTAW OLF, NAS WHITING FIELD, FL, 31714

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

CFY03		FY04		FY05		FY06		FY07		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	16		16		16		16		16	ATIR
	14		14		14		14		14	Output
	2.5		2.5		2.5		2.5		2.5	AOB
	2.5		2.5		2.5		2.5		2.5	Chargeable

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

CFY03		FY04		FY05		FY06		FY07		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	5		5		5		5		5	ATIR
	5		5		5		5		5	Output
	0.8		0.8		0.8		0.8		0.8	AOB
	0.8		0.8		0.8		0.8		0.8	Chargeable

PART IV - TRAINING LOGISTICS SUPPORT REQUIREMENTS

The following elements are not affected by the RQ-2B Pioneer UAV system and, therefore, are not included in Part IV of this NTSP:

IV.B. Courseware Requirements

IV.B.1. Training Services

IV.C. Facility Requirements

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

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

IV.C.3. Facility Project Summary by Program

NOTE: Where specific equipment Date Required data has not been available, October 1999 has been entered as a default. It is expected that this part of the NTSP will be substantially changed when the training course control documents and resource requirement lists are updated to reflect current equipment configurations, publications, facilities, and fleet training requirements. Contact CNATT Det Milton for an up to date listing of TTE.

PART IV - TRAINING LOGISTICS SUPPORT REQUIREMENTS

IV.A. TRAINING HARDWARE

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

CIN, COURSE TITLE: C-690-0644, PIONEER SR-RPV AIRFRAME / MECHANIC

TRAINING ACTIVITY: CNATT DET MILTON

LOCATION, UIC: CHOCTAW OLF, NAS WHITING FIELD, FL, 31714

ITEM NO.	EQUIPMENT / TYPE OR RANGE OF REPAIR	QTY REQD	DATE REQD	GFE CFE	STATUS
GPTE					
0101	Tester, Igniter Circuit, P/N 101-5CFG	1	Oct 99	GFE	Onboard
0102	Power Supply, Air Data Test Set, P/N 4050D	1	Oct 99	GFE	Onboard
0103	Voltmeter, TRMS, P/N 323-07M40	1	Oct 99	GFE	Onboard
0104	Multimeter, Digital 3½ Digit, P/N 77BN	1	Oct 99	GFE	Onboard
0105	Test Set, Igniter Continuity, P/N 1015BFG	1	Oct 99	GFE	Onboard
0106	Tester, Igniter Circuit, P/N 101-5HJ-NAV3	1	Oct 99	GFE	Onboard
0107	Adjustment Device, Aileron L&R, P/N 2929-91600	1	Oct 99	GFE	Onboard
0108	Test Set, Air Data, P/N PR-93-31050852	1	Oct 99	GFE	Onboard
0110	Attenuator, Fixed, P/N 69A35692-7	1	Oct 99	GFE	Onboard
0111	Attenuator, 20 dB, P/N 18N-20	1	Oct 99	GFE	Onboard
0112	Attenuator, W Type, 3dB, 2W, P/N 8491B3DB	1	Oct 99	GFE	Onboard
0113	Coupler, Directional, P/N 779D	1	Oct 99	GFE	Onboard
0114	Coupler, Directional, P/N 723746-16	1	Oct 99	GFE	Onboard
0116	Attenuator, Stepped, P/N 8494B001	1	Oct 99	GFE	Onboard
0117	Attenuator, Fixed, Coaxial, P/N 8493B010	1	Oct 99	GFE	Onboard
0118	Attenuator, Fixed/Precision 6 dB, DC-18 GHz, P/N 9533-6	1	Oct 99	GFE	Onboard
0119	Attenuator, P/N 8494B10	1	Oct 99	GFE	Onboard
0120	Attenuator, Fixed 3 dB, P/N 4779-03	1	Oct 99	GFE	Onboard
0121	Attenuator, P/N 8493B006	1	Oct 99	GFE	Onboard

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

0122	Attenuator, 30 dB, Type N, P/N 47-30-34	1	Oct 99	GFE	Onboard
0123	Attenuator, 10 dB, Type N, P/N 47-10-34	1	Oct 99	GFE	Onboard
0124	Power Supply, P/N HP6274B	1	Oct 99	GFE	Onboard
0125	Power Supply, AC to DC, P/N 6268B	1	Oct 99	GFE	Onboard
0126	Power Supply, DC, P/N JQE36-3M	1	Oct 99	GFE	Onboard
0127	Power Supply, 40 VDC, P/N DCR40-25B2	1	Oct 99	GFE	Onboard
0128	Power Sensor, Microwave, Coaxial, P/N 8481A	1	Oct 99	GFE	Onboard
0129	Power Meter, RF, P/N 432A-900	1	Oct 99	GFE	Onboard
0130	Power Sensor, Microwave, P/N 8478B	1	Oct 99	GFE	Onboard
0131	Kit, Logic, Troubleshooting, P/N 5023A	1	Oct 99	GFE	Onboard
0132	Power Sensor, P/N HP8481B	1	Oct 99	GFE	Onboard
0133	Probe, RF Test Lead, P/N P6420	1	Oct 99	GFE	Onboard
0134	Power Meter, P/N HP438A	1	Oct 99	GFE	Onboard
0135	Sweep Generator, 10 MHz-20 GHz, P/N 8350B-913-83592B-002	1	Oct 99	GFE	Onboard
0136	Counter, Electronic, 500 MHz-20 GHz, P/N 5350B-001-H03	1	Oct 99	GFE	Onboard
0137	Signal Generator, 2.3 - 6.5 GHz, P/N 8683B-002-003	1	Oct 99	GFE	Onboard
0138	Termination, Coaxial, P/N 405-0990	1	Oct 99	GFE	Onboard
0139	Meter, Power 100 kHz - 100 GHz, P/N 4220-S/3	1	Oct 99	GFE	Onboard
0140	Reflectometer, Time Domain, P/N 150COPT03-04	1	Oct 99	GFE	Onboard
0141	Spectrum Analyzer, 9 kHz - 22 GHz, P/N HP8563E	1	Oct 99	GFE	Onboard
0142	Signal Generator, 252 kHz - 1030 MHz, P/N 8643A	1	Oct 99	GFE	Onboard
0143	Test Set, Swept Frequency Measurement, P/N 1324AS100-2	1	Oct 99	GFE	Onboard
0144	Oscilloscope, P/N TDS320-02-NV	1	Oct 99	GFE	Onboard
0145	Counter, Frequency, 0 - 1.3 GHz, P/N 53131A-010-030-H09	1	Oct 99	GFE	Onboard
0146	Oscilloscope, Digitizing DC - 500 MHz, P/N TDS520A MOD CM	1	Oct 99	GFE	Onboard

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

0147	Test Set, Beacon, C-Band, Tracking Antenna, P/N 2929-92100	1	Oct 99	GFE	Onboard
0148	Pulse - Function Gen .0001 Hz - 20 MHz, P/N145-S872	1	Oct 99	GFE	Onboard
0149	Mooring Device, Air Vehicle Engine Run, P/N 2929-96450	1	Oct 99	GFE	Onboard
0150	Tester, Payload, P/N 21053473-101	1	Oct 99	GFE	Onboard
0151	Pedestal Harmonization Array, P/N 2929-91950	1	Oct 99	GFE	Onboard
0152	Discharger, Battery, P/N 2929-90500	1	Oct 99	GFE	Onboard
0153	Analyzer, Charger, NiCad Battery, P/N 121379-004	1	Oct 99	GFE	Onboard
0154	Discharger Booster, Battery, P/N 121482-001	1	Oct 99	GFE	Onboard
0155	Simulator, Electrical Control Box, P/N 470014	1	Oct 99	GFE	Onboard
0156	Simulator, Airspeed Indicator Unit, P/N 2929-95200	1	Oct 99	GFE	Onboard
0157	Printer, Battery Analyzer, P/N 121470-001	1	Oct 99	GFE	Onboard
0158	Simulator, Downlink, P/N 2918-09399	1	Oct 99	GFE	Onboard
0159	Stand, Launch Assembly, RATO, P/N 60903-46000-40	1	Oct 99	GFE	Onboard
SPTE					
0001	Payload, Stabilized Reconnaissance, P/N 951-91130-00	1	Oct 99	GFE	Onboard
0002	PCU, P/N 40157-40200	1	Oct 99	GFE	Onboard
0003	PCU, P/N 40157-40205	1	Oct 99	GFE	Onboard
0004	Converter, DC/DC, P/N 40157-40415	1	Oct 99	GFE	Onboard
0005	Receiver, Multiple Frequency, P/N W40157-42670-20	1	Oct 99	GFE	Onboard
0006	CPA, P/N 40157-40897-40	1	Oct 99	GFE	Onboard
0007	LCU, P/N ZVN167060-505	1	Oct 99	GFE	Onboard
0008	RF Head, P/N ZVN168118-015	1	Oct 99	GFE	Onboard
0009	Receiver, UHF, P/N 40157-90042	1	Oct 99	GFE	Onboard
0010	SP/SP Receiver, P/N ZVN168119-015	1	Oct 99	GFE	Onboard
0011	Ground Control Station, P/N 40157-41972-10	1	Oct 99	GFE	Onboard
0012	Aircraft, RQ-2A, P/N RQ-2A	1	Oct 99	GFE	Onboard

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

0013	Remote Receiving Station, P/N RRS	1	Oct 99	GFE	Onboard
0014	Tracking and Communications Unit, P/N S-250/G	1	Oct 99	GFE	Onboard
0015	Portable Control Station, P/N S-280 C/G	1	Oct 99	GFE	Onboard
0016	IFF/DME, P/N ATC-600A-1	1	Oct 99	GFE	Onboard
0017	Payload, Stabilized TV Recon, P/N MKD-200	1	Oct 99	GFE	Onboard
0018	Payload, Stabilized TV Recon, P/N MKD-200A	1	Oct 99	GFE	Onboard
0019	Payload, Stabilized Infrared Reconnaissance, P/N MKD-400	1	Oct 99	GFE	Onboard
0020	Payload, Stabilized Infrared Reconnaissance, P/N MKD-400C	1	Oct 99	GFE	Onboard
0201	Attenuator Set, Coaxial, P/N 11582A	1	Oct 99	GFE	Onboard
0202	Box, Deployment, Vert Gyro Unit, P/N 2929-95500	1	Oct 99	GFE	Onboard
0203	Box, Deployment, Engine RPM Cutoff, P/N 2929-95950	1	Oct 99	GFE	Onboard
0204	Stand, Wing, Collapsible, P/N 2929-91400	1	Oct 99	GFE	Onboard
0205	Stand, Fuselage, Collapsible, P/N 2929-91300	1	Oct 99	GFE	Onboard
0206	Box, Deployment, Engine Thermocouple, P/N 2929-95800	1	Oct 99	GFE	Onboard
0207	Charger, GCS Battery, P/N 3Z633C	1	Oct 99	GFE	Onboard
0208	Hook, Arresting System, P/N ZVN500002-505	1	Oct 99	GFE	Onboard
0209	Tester, Payload, P/N 2920-910300	1	Oct 99	GFE	Onboard
0210	Tool Set, Composite Structural Repair, P/N 3156AS100-1	1	Oct 99	GFE	Onboard
0211	Device, Steering Adjustment, Nose Wheel, P/N 2929-91800	1	Oct 99	GFE	Onboard
0212	Device, Weight and Balance, P/N 2929-96300	1	Oct 99	GFE	Onboard
0213	Starter, Aircraft Engine, P/N 40157-42780-10	1	Oct 99	GFE	Onboard
0214	Starter, 12 VDC, P/N 40157-40016-10	1	Oct 99	GFE	Onboard
0215	Device, Adjustment, Rudder L&R, P/N 2929-91700	1	Oct 99	GFE	Onboard
0216	Device, Adjustment, Elevator, P/N 2929-91500	1	Oct 99	GFE	Onboard
0217	Fixture, alignment, Accelerometer, P/N 40157-43258-10	1	Oct 99	GFE	Onboard

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

0218	Shield, Blast, RATO, P/N 60903-46000-10	1	Oct 99	GFE	Onboard
0219	Stand, Launch Assembly, RATO, P/N 60903-46000-40	1	Oct 99	GFE	Onboard
0220	Station, Safety Enclosure, N2 Charging, P/N 40157-40110-10	1	Oct 99	GFE	Onboard
0221	Cable Assembly, Firing, W2, P/N 60903-46328-10	1	Oct 99	GFE	Onboard
0222	Jig, Master, Pneumatic Launcher, P/N 40157-42194	1	Oct 99	GFE	Onboard
0223	Cable Assembly, Firing, W1, P/N 60903-46090-10	1	Oct 99	GFE	Onboard
0224	Cable, Ignitor Circuit Tester, W3, P/N 60903-46344-10	1	Oct 99	GFE	Onboard
0225	Box, Deployment, RGU, P/N 2929-95900	1	Oct 99	GFE	Onboard
0226	Sling Assembly, Tilting, P/N ZVN910120-501	1	Oct 99	GFE	Onboard
0227	Cable, Test, W4, P/N 60903-46343-10	1	Oct 99	GFE	Onboard
0228	Test System, Engine, P/N UAV-ETS-200	1	Oct 99	GFE	Onboard
0229	Gauge, Force, 0 - 50 lbs, P/N ML-4850-2	1	Oct 99	GFE	Onboard
0230	Alignment Tool, Booster Bracker, P/N ZVN910110-501	1	Oct 99	GFE	Onboard
0231	Switch Assembly, Remote SAFE/ARM, P/N 60903-46330-10	1	Oct 99	GFE	Onboard
0232	Compressor, Booster Station, N2 Charging, P/N 40157-40105-10	1	Oct 99	GFE	Onboard
0233	Launcher, Pneumatic, P/N 37262-40000-10	1	Oct 99	GFE	Onboard
0234	Tester, Hydraulic, Holdback Mechanism, P/N 37262-40094-10	1	Oct 99	GFE	Onboard
0235	Wrench, Nitro Bottle, MKD-400 Camera, P/N 2958-42090-00	1	Oct 99	GFE	Onboard
0236	Test Fixture, Proximity Switch, P/N 37262-40083-10	1	Oct 99	GFE	Onboard
0237	Weight, Test Launching (Dummy Load), P/N 37262-40083-10	1	Oct 99	GFE	Onboard
0238	Extender Card, CPA, P/N 37383-47001-10	1	Oct 99	GFE	Onboard
0239	Starter, Engine, with Support Plate, P/N 4076	1	Oct 99	GFE	Onboard
0240	Tool, Calibration, P/N 938012-501	1	Oct 99	GFE	Onboard
0241	Gyro Unit, Simulation Rate, P/N 2929-95250	1	Oct 99	GFE	Onboard
0242	Tool, Calibration, P/N 2929-92000	1	Oct 99	GFE	Onboard

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

0243	Extender Card, GCS/PCS, P/N 37383-47009-10	1	Oct 99	GFE	Onboard
0244	Extractor, Special Card, P/N 40157-47000-10	1	Oct 99	GFE	Onboard
0245	Box, Deployment, CPA, P/N 2929-95400	1	Oct 99	GFE	Onboard
0246	Box, Deployment, CPA, P/N 2929-95700	1	Oct 99	GFE	Onboard
0247	Box, Deployment, CPA, P/N 2929-96350	1	Oct 99	GFE	Onboard
0248	Box, Deployment, CPA, P/N 2929-95300	1	Oct 99	GFE	Onboard
0249	Box, Deployment, CPA, P/N 2929-96150	1	Oct 99	GFE	Onboard
0250	Box, Deployment, Electrical Power Supply, P/N 2929-95600	1	Oct 99	GFE	Onboard
0251	Box, Deployment, Flux Valve Unit, P/N 2929-96000	1	Oct 99	GFE	Onboard
0252	Box, Deployment, Payload, P/N 2929-96250	1	Oct 99	GFE	Onboard
0253	Box, Deployment, Payload, Electronics, P/N 2929-96200	1	Oct 99	GFE	Onboard
0254	Box, Deployment, Regulator Unit, P/N 2929-95750	1	Oct 99	GFE	Onboard
0255	Box, Deployment, Electrical Power Supply, P/N 2929-95650	1	Oct 99	GFE	Onboard
0256	Simulator, Flux Valve Unit, P/N 2929-95100	1	Oct 99	GFE	Onboard
0257	Simulator, Vertical Gyro Unit, P/N 2929-95050	1	Oct 99	GFE	Onboard
0258	Box, Pedestal Test Assembly, P/N 40157-43801	1	Oct 99	GFE	Onboard
0259	Box, Deployment, Engine Thermocouple, P/N 2929-95800	1	Oct 99	GFE	Onboard
0260	Box, Deployment, CPA, P/N 2929-96100	1	Oct 99	GFE	Onboard
0261	Box, Deployment, Airspeed Transducer Unit, P/N 2929-96050	1	Oct 99	GFE	Onboard
0262	Simulator, Barometric Pressure Unit, P/N 2929-95150	1	Oct 99	GFE	Onboard

IV.A.2. TRAINING DEVICES

DEVICE: Trainer, RQ-2A, P/N 12230 CL 85

DESCRIPTION: No description is available.

Listed in C-690-0644, dated August 2001.

Contact CNATT_DET Milton or PMA205 for further information.

MANUFACTURER: AAI

CONTRACT NUMBER: ###

TEE STATUS: NA

TRAINING ACTIVITY: CNATT DET MILTON

LOCATION, UIC : CHOCTAW OLF, NAS WHITING FIELD, FL, 31714

QTY	DATE	RFT		COURSES
REQD	REQD	DATE	STATUS	SUPPORTED
1	Oct 99		Onboard	C-104-0643

IV.A.2. TRAINING DEVICES

DEVICE: EPSim
DESCRIPTION: The External Pilot Simulator (EPSim) is a desktop computer with associated hand controllers and connector box that runs a program allowing External Pilots to train to fly the Pioneer RQ-2B Unmanned Aerial Vehicle.

The External Pilot Simulator for the Pioneer is designed to give an intermediate and auxiliary training capability to the three Pioneer Squadrons. It is a simulation of ground bases operations and allows the external pilot to practice landing the aircraft at a simulated runway that represents a location at Ft. Huachuca.

The pilot uses the exact part numbered control box that is used for live operations in the fleet. During practice there are several environmental options available including time of day (this changes lighting on the display screen or projected display) wind speed and gust limits. These settings allow the pilot trainee to select conditions that may exist in live operations.

The air vehicle is a high fidelity visual model of Pioneer and includes simulated engine sound because sound is a significant cue used by the pilot in live operations.

The system is delivered in an enclosed transit case. The case contains legs for raising the unit to normal workstation height and rollers for moving it around when legs are not installed. The power required is a standard 115-volt wall outlet. This transportability is necessary in the event that a squadron deploys.

The EPSIM is also used to maintain currency when weather or other operational constraints prevent this.

MANUFACTURER: Contact PMA205
CONTRACT NUMBER: Unknown
TEE STATUS: NA

TRAINING ACTIVITY: CNATT DET MILTON
LOCATION, UIC : CHOCTAW OLF, NAS WHITING FIELD, FL, 31714

QTY	DATE	RFT	COURSES
REQD	REQD	DATE	SUPPORTED
1	Oct 99	Oct 99	Onboard C-104-0641

IV.B. COURSEWARE REQUIREMENTS
IV.B.2. CURRICULA MATERIALS AND TRAINING AIDS

CIN, COURSE TITLE: C-2E-0640, PIONEER SR-RPV MISSION COMMANDER
TRAINING ACTIVITY: CNATT DET MILTON
LOCATION, UIC: CHOCTAW OLF, NAS WHITING FIELD, FL, 31714

TYPES OF MATERIAL OR AID	QTY REQD	DATE REQD	STATUS
01_02.pps Power Point Presentation CAI	1	Oct 99	Onboard
01_03.pps Power Point Presentation CAI	1	Oct 99	Onboard
01_04.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_01.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_02.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_03.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_04.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_05.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_06.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_07.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_09.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_11.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_13.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_14.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_19.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_20.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_22.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_23.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_24.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_25.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_26.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_27.pps Power Point Presentation CAI	1	Oct 99	Onboard
04_01.pps Power Point Presentation CAI	1	Oct 99	Onboard
04_02.pps Power Point Presentation CAI	1	Oct 99	Onboard
04_03.pps Power Point Presentation CAI	1	Oct 99	Onboard

CIN, COURSE TITLE: C-104-0642, PIONEER SR-RPV INTERNAL OPERATOR
TRAINING ACTIVITY: CNATT DET MILTON
LOCATION, UIC: CHOCTAW OLF, NAS WHITING FIELD, FL, 31714

TYPES OF MATERIAL OR AID	QTY REQD	DATE REQD	STATUS
01_02.pps Power Point Presentation CAI	1	Oct 99	Onboard
01_03.pps Power Point Presentation CAI	1	Oct 99	Onboard
01_04.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_01.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_02.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_03.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_04.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_05.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_06.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_07.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_08.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_09.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_10.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_11.pps Power Point Presentation CAI	1	Oct 99	Onboard

IV.B.2. CURRICULA MATERIALS AND TRAINING AIDS

02_12.pps	Power Point Presentation CAI	1	Oct 99	Onboard
02_13.pps	Power Point Presentation CAI	1	Oct 99	Onboard
02_14.pps	Power Point Presentation CAI	1	Oct 99	Onboard
02_15.pps	Power Point Presentation CAI	1	Oct 99	Onboard
02_16.pps	Power Point Presentation CAI	1	Oct 99	Onboard
02_23.pps	Power Point Presentation CAI	1	Oct 99	Onboard
02_25.pps	Power Point Presentation CAI	1	Oct 99	Onboard
02_26.pps	Power Point Presentation CAI	1	Oct 99	Onboard
02_28.pps	Power Point Presentation CAI	1	Oct 99	Onboard
02_30.pps	Power Point Presentation CAI	1	Oct 99	Onboard
02_37.pps	Power Point Presentation CAI	1	Oct 99	Onboard
03_01.pps	Power Point Presentation CAI	1	Oct 99	Onboard
03_02.pps	Power Point Presentation CAI	1	Oct 99	Onboard
03_03.pps	Power Point Presentation CAI	1	Oct 99	Onboard
03_04.pps	Power Point Presentation CAI	1	Oct 99	Onboard

CIN, COURSE TITLE: C-104-0643, PIONEER SR-RPV PAYLOAD OPERATOR COURSE

TRAINING ACTIVITY: CNATT DET MILTON

LOCATION, UIC: CHOCTAW OLF, NAS WHITING FIELD, FL, 31714

TYPES OF MATERIAL OR AID		QTY REQD	DATE REQD	STATUS
01_02.pps	Power Point Presentation CAI	1	Oct 99	Onboard
01_03.pps	Power Point Presentation CAI	1	Oct 99	Onboard
01_04.pps	Power Point Presentation CAI	1	Oct 99	Onboard
02_01.pps	Power Point Presentation CAI	1	Oct 99	Onboard
02_02.pps	Power Point Presentation CAI	1	Oct 99	Onboard
02_03.pps	Power Point Presentation CAI	1	Oct 99	Onboard
02_05.pps	Power Point Presentation CAI	1	Oct 99	Onboard
02_07.pps	Power Point Presentation CAI	1	Oct 99	Onboard
02_08.pps	Power Point Presentation CAI	1	Oct 99	Onboard
02_10.pps	Power Point Presentation CAI	1	Oct 99	Onboard
02_13.pps	Power Point Presentation CAI	1	Oct 99	Onboard
03_01.pps	Power Point Presentation CAI	1	Oct 99	Onboard
03_02.pps	Power Point Presentation CAI	1	Oct 99	Onboard

CIN, COURSE TITLE: C-690-0644, PIONEER SR-RPV AIRFRAME / MECHANIC

TRAINING ACTIVITY: CNATT DET MILTON

LOCATION, UIC: CHOCTAW OLF, NAS WHITING FIELD, FL, 31714

TYPES OF MATERIAL OR AID		QTY REQD	DATE REQD	STATUS
690-0644-AM-01-02	Pioneer System Overview Power Point Presentation CAI	1	Oct 99	Onboard
690-0644-AM-01-04	Pioneer Tools and Hardware Power Point Presentation CAI	1	Oct 99	Onboard
690-0644-AM-012-01	Pioneer RPV General Description and Assembly Power Point	1	Oct 99	Onboard
690-0644-AM-02-02	Airframes Maintenance Power Point Presentation CAI	1	Oct 99	Onboard
690-0644-AM-02-03	Powerplant Maintenance Power Point Presentation CAI	1	Oct 99	Onboard
690-0644-AM-02-04	Fuel System Power Point Presentation CAI	1	Oct 99	Onboard
690-0644-AM-02-05	Electrical System Power Point Presentation CAI	1	Oct 99	Onboard
690-0644-AM-02-06	Electronic System: Central Processing Assembly (CPA) and	1	Oct 99	Onboard
690-0644-AM-02-07	Electronic System: Servos Power Point Presentation CAI	1	Oct 99	Onboard
690-0644-AM-02-08	Communication System Power Point Presentation CAI	1	Oct 99	Onboard

IV.B.2. CURRICULA MATERIALS AND TRAINING AIDS

690-0644-AM-02-09 Support Equipment Power Point Presentation CAI	1	Oct 99	Onboard
690-0644-AM-02-10 12DS Payload Power Point Presentation CAI	1	Oct 99	Onboard
690-0644-AM-03-02 Flight Line Operation Procedures Power Point Presentation CAI	1	Oct 99	Onboard
690-0644-AM-04-01 Aerodynamics Power Point Presentation CAI	1	Oct 99	Onboard
690-0644-AM-04-02 Weight and Balance Power Point Presentation CAI	1	Oct 99	Onboard
690-0644-AM-04-03 Structural Repair Power Point Presentation CAI	1	Oct 99	Onboard
690-0644-AM-05-01 Pneumatic Launcher General Description Power Point Presentation	1	Oct 99	Onboard
690-0644-AM-05-02 RATO Theory of Operation Power Point Presentation CAI	1	Oct 99	Onboard
Camera, Video	1	Oct 99	Onboard
Projector, Overhead	1	Oct 99	Onboard
Screen, Projector	1	Oct 99	Onboard
Television/VCR Combo	1	Oct 99	Onboard

CIN, COURSE TITLE: C-690-0646, PIONEER SR-RPV ELECTRONIC TECHNICIAN

TRAINING ACTIVITY: CNATT DET MILTON

LOCATION, UIC: CHOCTAW OLF, NAS WHITING FIELD, FL, 31714

TYPES OF MATERIAL OR AID	QTY REQD	DATE REQD	STATUS
01_01.pps Power Point Presentation CAI	1	Oct 99	Onboard
01_02.pps Power Point Presentation CAI	1	Oct 99	Onboard
01_03.pps Power Point Presentation CAI	1	Oct 99	Onboard
01_05.pps Power Point Presentation CAI	1	Oct 99	Onboard
01_06.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_01a.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_01b.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_04.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_05.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_07.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_09.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_10.pps Power Point Presentation CAI	1	Oct 99	Onboard
02_11.pps Power Point Presentation CAI	1	Oct 99	Onboard
03_01.pps Power Point Presentation CAI	1	Oct 99	Onboard
03_02.pps Power Point Presentation CAI	1	Oct 99	Onboard
03_03.pps Power Point Presentation CAI	1	Oct 99	Onboard
03_05.pps Power Point Presentation CAI	1	Oct 99	Onboard
03_06.pps Power Point Presentation CAI	1	Oct 99	Onboard
04_01.pps Power Point Presentation CAI	1	Oct 99	Onboard
04_02.pps Power Point Presentation CAI	1	Oct 99	Onboard
05_01.pps Power Point Presentation CAI	1	Oct 99	Onboard
05_02.pps Power Point Presentation CAI	1	Oct 99	Onboard
05_03.pps Power Point Presentation CAI	1	Oct 99	Onboard
05_04.pps Power Point Presentation CAI	1	Oct 99	Onboard
05_06.pps Power Point Presentation CAI	1	Oct 99	Onboard
05_08.pps Power Point Presentation CAI	1	Oct 99	Onboard
05_10.pps Power Point Presentation CAI	1	Oct 99	Onboard
05_11.pps Power Point Presentation CAI	1	Oct 99	Onboard
05_12.pps Power Point Presentation CAI	1	Oct 99	Onboard
06_01.pps Power Point Presentation CAI	1	Oct 99	Onboard
07_01.pps Power Point Presentation CAI	1	Oct 99	Onboard
07_02.pps Power Point Presentation CAI	01	Oct 99	Onboard
OPNAV 4790/60 VIDS/MAF Form (Paper Copy)	1	Oct 99	Onboard

IV.B.3. TECHNICAL MANUALS

CIN, COURSE TITLE: C-2E-0640, PIONEER SR-RPV MISSION COMMANDER

TRAINING ACTIVITY: CNATT DET MILTON

LOCATION, UIC : CHOCTAW OLF, NAS WHITING FIELD, FL, 31714

TECHNICAL MANUAL NUMBER / TITLE	MEDIUM	QTY REQD	DATE REQD	STATUS
A1-SRRPV-GCS-500 Technical Manual, Operation, Pioneer Remotely Piloted Vehicle System, Ground Control Station	Web *.pdf	6	Oct 99	Onboard
A1-SRRPV-LAU-800 Operation and Organization Maintenance with IPB, Pneumatic Launcher System	Web *.pdf	4	Oct 99	Onboard
A1-SRRPV-NFM-000 NATOPS Flight Manual, Navy Model RQ-2B, Pioneer RPAV	Web *.pdf	6	Oct 99	Onboard
A1-SRRPV-NFM-500 NATOPS Pilot's Pocket Checklist	Web *.pdf	6	Oct 99	Onboard
A1-SRRPV-OPS-100 Technical Manual, Operation, Pioneer Remotely Piloted Vehicle System, Aerial Vehicle	Web *.pdf	6	Oct 99	Onboard
A1-SRRPV-RATO-820 Technical Manual, Pioneer Remotely Piloted Vehicle System, Rocket Assisted Takeoff	Web *.pdf	6	Oct 99	Onboard
A1-SRRPV-RRS-900 Operation and Organizational Maintenance with IPB, Remote Receiving Station	Web *.pdf	1	Oct 99	Onboard
DRAFT PDMS USER MANUAL Software User's Manual for the Pioneer Digital Map System	Hard copy	4	Oct 99	Onboard
EP724A, Model 12DS Op Manual EP724A, Model 12-DS UAV Operator's Manual	Hard copy	4	Oct 99	Onboard
FM 1-230 Meteorology for Army Aviators	Hard copy	4	Oct 99	Onboard
OPNAVINST 3710.7 (Series) NATOPS General Flight and Operating Instructions	Hard copy	6	Oct 99	Onboard
Sierra Nevada Corp, 0019A001 Technical Manual, Operation and Maintenance with IPB (without cables) Org Level, For UCARS Nav-Track Set, RADAR AN/UPN-51(V)	Hard copy	1	Oct 99	Onboard

IV.B.3. TECHNICAL MANUALS

CIN, COURSE TITLE: C-104-0641, PIONEER SR-RPV EXTERNAL PILOT
TRAINING ACTIVITY: CNATT DET MILTON
LOCATION, UIC : CHOCTAW OLF, NAS WHITING FIELD, FL, 31714

TECHNICAL MANUAL NUMBER / TITLE	MEDIUM	QTY REQD	DATE REQD	STATUS
A1-SRRPV-GCS-500 Technical Manual, Operation, Pioneer Remotely Piloted Vehicle System, Ground Control Station	Web *.pdf	6	Oct 99	Onboard
A1-SRRPV-NFM-000 NATOPS Flight Manual, Navy Model RQ-2B, Pioneer RPAV	Web *.pdf	6	Oct 99	Onboard
A1-SRRPV-NFM-500 NATOPS Pilot's Pocket Checklist	Web *.pdf	6	Oct 99	Onboard
A1-SRRPV-OPS-100 Technical Manual, Operation, Pioneer Remotely Piloted Vehicle System, Aerial Vehicle	Web *.pdf	6	Oct 99	Onboard
A1-SRRPV-RATO-820 Technical Manual, Pioneer Remotely Piloted Vehicle System, Rocket Assisted Takeoff	Web *.pdf	6	Oct 99	Onboard
A1-SRRPV-SDM-000 Technical Manual, System Description, Pioneer Remotely Piloted Vehicle, System	Web *.pdf	6	Oct 99	Onboard
A1-SRRPV-SSM-970 Technical Manual, Pioneer Remotely Piloted Vehicle System, Shipboard Operation and Maintenance with Illustrated Parts Breakdown, Supplement	Hard copy	6	Oct 99	Onboard
OPNAVINST 3710.7 (Series) NATOPS General Flight and Operating Instructions	Hard copy	1	Oct 99	Onboard
OPNAVINST 4790.2 Series Naval Aviation Maintenance Plan (NAMP)	Hard copy	1	Oct 99	Onboard

CIN, COURSE TITLE: C-104-0642, PIONEER SR-RPV INTERNAL OPERATOR
TRAINING ACTIVITY: CNATT DET MILTON
LOCATION, UIC : CHOCTAW OLF, NAS WHITING FIELD, FL, 31714

TECHNICAL MANUAL NUMBER / TITLE	MEDIUM	QTY REQD	DATE REQD	STATUS
A1-SRRPV-GCS-500 Technical Manual, Operation, Pioneer Remotely Piloted Vehicle System, Ground Control Station	Web *.pdf	1	Oct 99	Onboard

IV.B.3. TECHNICAL MANUALS

A1-SRRPV-LAU-800 Operation and Organization Maintenance with IPB, Pneumatic Launcher System	Web *.pdf	1	Oct 99	Onboard
A1-SRRPV-NFM-000 NATOPS Flight Manual, Navy Model RQ-2B, Pioneer RPAV	Web *.pdf	4	Oct 99	Onboard
A1-SRRPV-NFM-500 NATOPS Pilot's Pocket Checklist	Web *.pdf	4	Oct 99	Onboard
A1-SRRPV-OPS-100 Technical Manual, Operation, Pioneer Remotely Piloted Vehicle System, Aerial Vehicle	Web *.pdf	1	Oct 99	Onboard
A1-SRRPV-PCS-700 Operation, Portable Control Station	Web *.pdf	1	Oct 99	Onboard
A1-SRRPV-RATO-820 Technical Manual, Pioneer Remotely Piloted Vehicle System, Rocket Assisted Takeoff	Web *.pdf	1	Oct 99	Onboard
A1-SRRPV-RRS-900 Operation and Organizational Maintenance with IPB, Remote Receiving Station	Web *.pdf	1	Oct 99	Onboard
A1-SRRPV-SDM-000 Technical Manual, System Description, Pioneer Remotely Piloted Vehicle, System	Web *.pdf	1	Oct 99	Onboard
DRAFT PDMS USER MANUAL Software User's Manual for the Pioneer Digital Map System	Hard copy	1	Oct 99	Onboard
FM 1-230 Meteorology for Army Aviators	Hard copy	1	Oct 99	Onboard
FM 21-26 Map Reading and Land Navigation	Hard copy	1	Oct 99	Onboard
NAVAIR 00-80T-116-2 Aerodynamics for Naval Aviators	Hard copy	1	Oct 99	Onboard
OPNAVINST 3710.7 (Series) NATOPS General Flight and Operating Instructions	Hard copy	1	Oct 99	Onboard
Sierra Nevada Corp, 0019A001 Technical Manual, Operation and Maintenance with IPB (without cables) Org Level, For UCARS Nav-Track Set, RADAR AN/UPN-51(V)	Hard copy	1	Oct 99	Onboard

IV.B.3. TECHNICAL MANUALS

CIN, COURSE TITLE: C-104-0643, PIONEER SR-RPV PAYLOAD OPERATOR COURSE

TRAINING ACTIVITY: CNATT DET MILTON

LOCATION, UIC : CHOCTAW OLF, NAS WHITING FIELD, FL, 31714

TECHNICAL MANUAL NUMBER / TITLE	MEDIUM	QTY REQD	DATE REQD	STATUS
A1-SRRPV-GCS-500 Technical Manual, Operation, Pioneer Remotely Piloted Vehicle System, Ground Control Station	Web *.pdf	1	Oct 99	Onboard
A1-SRRPV-LAU-800 Operation and Organization Maintenance with IPB, Pneumatic Launcher System	Web *.pdf	1	Oct 99	Onboard
A1-SRRPV-NFM-000 NATOPS Flight Manual, Navy Model RQ-2B, Pioneer RPAV	Web *.pdf	1	Oct 99	Onboard
A1-SRRPV-NFM-500 NATOPS Pilot's Pocket Checklist	Web *.pdf	4	Oct 99	Onboard
A1-SRRPV-OPS-100 Technical Manual, Operation, Pioneer Remotely Piloted Vehicle System, Aerial Vehicle	Web *.pdf	1	Oct 99	Onboard
A1-SRRPV-PCS-700 Operation, Portable Control Station	Web *.pdf	1	Oct 99	Onboard
A1-SRRPV-RRS-900 Operation and Organizational Maintenance with IPB, Remote Receiving Station	Web *.pdf	1	Oct 99	Onboard
A1-SRRPV-SDM-000 Technical Manual, System Description, Pioneer Remotely Piloted Vehicle, System	Web *.pdf	1	Oct 99	Onboard
DRAFT PDMS USER MANUAL Software User's Manual for the Pioneer Digital Map System	Hard copy	1	Oct 99	Onboard
FM 1-230 Meteorology for Army Aviators	Hard copy	1	Oct 99	Onboard
FM 21-26 Map Reading and Land Navigation	Hard copy	1	Oct 99	Onboard
OPNAVINST 3710.7 (Series) NATOPS General Flight and Operating Instructions	Hard copy	1	Oct 99	Onboard

IV.B.3. TECHNICAL MANUALS

CIN, COURSE TITLE: C-104-0645, PIONEER SR-RPV INTERNAL PILOT
TRAINING ACTIVITY: CNATT DET MILTON
LOCATION, UIC : CHOCTAW OLF, NAS WHITING FIELD, FL, 31714

TECHNICAL MANUAL NUMBER / TITLE	MEDIUM	QTY REQD	DATE REQD	STATUS
A1-SRRPV-GCS-500 Technical Manual, Operation, Pioneer Remotely Piloted Vehicle System, Ground Control Station	Web *.pdf	6	Oct 99	Onboard
A1-SRRPV-LAU-800 Operation and Organization Maintenance with IPB, Pneumatic Launcher System	Web *.pdf	4	Oct 99	Onboard
A1-SRRPV-NFM-000 NATOPS Flight Manual, Navy Model RQ-2B, Pioneer RPAV	Web *.pdf	6	Oct 99	Onboard
A1-SRRPV-NFM-500 NATOPS Pilot's Pocket Checklist	Web *.pdf	6	Oct 99	Onboard
A1-SRRPV-OPS-100 Technical Manual, Operation, Pioneer Remotely Piloted Vehicle System, Aerial Vehicle	Web *.pdf	6	Oct 99	Onboard
A1-SRRPV-RATO-820 Technical Manual, Pioneer Remotely Piloted Vehicle System, Rocket Assisted Takeoff	Web *.pdf	6	Oct 99	Onboard
A1-SRRPV-RRS-900 Operation and Organizational Maintenance with IPB, Remote Receiving Station	Web *.pdf	1	Oct 99	Onboard
A1-SRRPV-SDM-000 Technical Manual, System Description, Pioneer Remotely Piloted Vehicle, System	Web *.pdf	6	Oct 99	Onboard
DRAFT PDMS USER MANUAL Software User's Manual for the Pioneer Digital Map System	Hard copy	1	Oct 99	Onboard
FM 1-230 Meteorology for Army Aviators	Hard copy	1	Oct 99	Onboard
FM 21-26 Map Reading and Land Navigation	Hard copy	1	Oct 99	Onboard
NAVAIR 00-80T-116-2 Aerodynamics for Naval Aviators	Hard copy	1	Oct 99	Onboard

IV.B.3. TECHNICAL MANUALS

OPNAVINST 3710.7 (Series) Hard copy 1 Oct 99 Onboard
NATOPS General Flight and Operating Instructions

Sierra Nevada Corp, 0019A001 Hard copy 1 Oct 99 Onboard
Technical Manual, Operation and Maintenance with IPB (without cables) Org Level, For UCARS Nav-Track Set, RADAR AN/UPN-51(V)

CIN, COURSE TITLE: C-690-0644, PIONEER SR-RPV AIRFRAME / MECHANIC
TRAINING ACTIVITY: CNATT DET MILTON
LOCATION, UIC : CHOCTAW OLF, NAS WHITING FIELD, FL, 31714

TECHNICAL MANUAL NUMBER / TITLE	MEDIUM	QTY REQD	DATE REQD	STATUS
A1-PIO-RPV-6-1.4 Daily Inspection Pneumatic Launcher System MRC	Web *.pdf	8	Oct 99	Onboard
A1-PIO-RPV-6-3.6 MAINTENANCE REQUIREMENT CARDS DAILY INSPECTION PIONEER REMOTELY PILOTED VEHICLE SYSTEM PNEUMATIC LAUNCHER SYSTEM	Web *.pdf	8	Oct 99	Onboard
A1-SRRPV-LAU-800 Operation and Organization Maintenance with IPB, Pneumatic Launcher System	Web *.pdf	8	Oct 99	Onboard
A1-SRRPV-MRC-120 Maintenance Requirement Cards, Daily Inspection, Pioneer Remotely Piloted Vehicle System, Model RQ-2B Aerial Vehicle	Web *.pdf	8	Oct 99	Onboard
A1-SRRPV-MRC-130 Maintenance Requirements Cards, Turnaround Inspection, Pioneer Remotely Piloted Vehicle System Aerial Vehicle	Web *.pdf	8	Oct 99	Onboard
A1-SRRPV-MRC-140 Maintenance Requirement Cards, Special/Conditional Inspection, Pioneer Remotely Piloted Vehicle System Model RQ-2B Aerial Vehicle	Web *.pdf	8	Oct 99	Onboard
A1-SRRPV-MRC-940 MAINTENANCE REQUIREMENT CARDS SPECIAL INSPECTION PIONEER UNMANNED AERIAL VEHICLE SYSTEM SUPPORT EQUIPMENT	Web *.pdf	8	Oct 99	Onboard
A1-SRRPV-MRC-950-2 PREOPERATIONAL CHECKLIST, PIONEER UNMANNED AERIAL VEHICLE SYSTEM, ARRESTING GEAR	Web *.pdf	8	Oct 99	Onboard

IV.B.3. TECHNICAL MANUALS

A1-SRRPV-MRC-950-3 PREOPERATIONAL CHECKLIST PIONEER UNMANNED AERIAL VEHICLE SYSTEM ROCKET ASSISTED TAKE-OFF LAUNCH STAND	Web *.pdf	8	Oct 99	Onboard
A1-SRRPV-NFM-000 NATOPS Flight Manual, Navy Model RQ-2B, Pioneer RPAV	Web *.pdf	6	Oct 99	Onboard
A1-SRRPV-OPS-100 Technical Manual, Operation, Pioneer Remotely Piloted Vehicle System, Aerial Vehicle	Web *.pdf	8	Oct 99	Onboard
A1-SRRPV-RATO-820 Technical Manual, Pioneer Remotely Piloted Vehicle System, Rocket Assisted Takeoff	Web *.pdf	8	Oct 99	Onboard
A1-SRRPV-SDM-000 Technical Manual, System Description, Pioneer Remotely Piloted Vehicle, System	Web *.pdf	8	Oct 99	Onboard
A1-SRRPV-SEM-960 Support Equipment and Arresting Gear Description and Operation	Web *.pdf	8	Oct 99	Onboard
A1-SRRPV-SRP-850 Stabilized Television Reconnaissance Payload	Hard copy	8	Oct 99	Onboard
A1-SRRPV-SRP-860 Stabilized Infrared Reconnaissance Payload	Hard copy	8	Oct 99	Onboard
A1-SRRPV-WAB-400 Weight and Balance	Web *.pdf	8	Oct 99	Onboard
NA 00-25-100 NAVAIRSYSCOM Technical Manual Program	Hard copy	8	Oct 99	Onboard
NA 01-1A-8 Structural Hardware Manual	Hard copy	8	Oct 99	Onboard
CNATTINST 1540 Series Training Specification Manual	Hard copy	1	Oct 99	Onboard
OPNAVINST 4790.2 Series Naval Aviation Maintenance Plan (NAMP)	Hard copy	8	Oct 99	Onboard

IV.B.3. TECHNICAL MANUALS

CIN, COURSE TITLE: C-690-0646, PIONEER SR-RPV ELECTRONIC TECHNICIAN

TRAINING ACTIVITY: CNATT DET MILTON

LOCATION, UIC : CHOCTAW OLF, NAS WHITING FIELD, FL, 31714

TECHNICAL MANUAL NUMBER / TITLE	MEDIUM	QTY REQD	DATE REQD	STATUS
A1-PIO-RPV-6-1.3 Daily Inspection Pioneer Remotely Piloted Vehicle System Portable Control Station	Web *.pdf	6	Oct 99	Onboard
A1-PIO-RPV-6-1.7 Remote Receiving Station Daily Inspection	Web *.pdf	6	Oct 99	Onboard
A1-PIO-RPV-WUC-800 RQ-2 (Pioneer UAV) Work Unit Code Manual	Hard copy	1	Oct 99	Onboard
A1-SRRPV-GCS-500 Technical Manual, Operation, Pioneer Remotely Piloted Vehicle System, Ground Control Station	Web *.pdf	6	Oct 99	Onboard
A1-SRRPV-GCS-510 Organizational Maintenance, Pioneer Remotely Piloted Vehicle System, Ground Control Station	Web *.pdf	6	Oct 99	Onboard
A1-SRRPV-GCS-520 Illustrated Parts Breakdown, Pioneer Remotely Piloted Vehicle System Ground Control Station	Web *.pdf	6	Oct 99	Onboard
A1-SRRPV-LAU-800 Operation and Organization Maintenance with IPB, Pneumatic Launcher System	Web *.pdf	6	Oct 99	Onboard
A1-SRRPV-MMI-250 Organizational Maintenance with Illustrated Parts Breakdown Pioneer Unmanned Aerial Vehicle System Model RQ-2B Aerial Vehicle	Web *.pdf	6	Oct 99	Onboard
A1-SRRPV-MRC-105 Periodic Maintenance Information Cards Pioneer Remotely Piloted Vehicle System Model RQ-2B Aerial Vehicle	Web *.pdf	1	Oct 99	Onboard
A1-SRRPV-MRC-115 Maintenance Requirement Cards, Acceptance/Transfer Inspection, Pioneer Remotely Piloted Vehicle System Model RQ-2B Aerial Vehicle	Web *.pdf	1	Oct 99	Onboard

IV.B.3. TECHNICAL MANUALS

A1-SRRPV-MRC-120 Maintenance Requirement Cards, Daily Inspection, Pioneer Remotely Piloted Vehicle System, Model RQ-2B Aerial Vehicle	Web *.pdf	1	Oct 99	Onboard
A1-SRRPV-MRC-130 Maintenance Requirements Cards, Turnaround Inspection, Pioneer Remotely Piloted Vehicle System Aerial Vehicle	Web *.pdf	6	Oct 99	Onboard
A1-SRRPV-MRC-140 Maintenance Requirement Cards, Special/Conditional Inspection, Pioneer Remotely Piloted Vehicle System Model RQ-2B Aerial Vehicle	Web *.pdf	1	Oct 99	Onboard
A1-SRRPV-MRC-500 PMIC, Pioneer Unmanned Aerial Vehicle System, Common Automatic Recovery System, Navigation-Tracking Set, RADAR AN/UPN-51(V)	Web *.pdf	1	Oct 99	Onboard
A1-SRRPV-MRC-520 MRC, Daily Inspection, Pioneer Unmanned Aerial Vehicle System, Common Automatic Recovery System, Navigation-Tracking Set, RADAR AN/UPN-51(V)	Web *.pdf	6	Oct 99	Onboard
A1-SRRPV-MRC-540 Pioneer Unmanned Aerial Vehicle System, Common Automatic Recovery System Navigation-Tracking Set, RADAR AN/UPN-51(V)	Web *.pdf	1	Oct 99	Onboard
A1-SRRPV-OPS-100 Technical Manual, Operation, Pioneer Remotely Piloted Vehicle System, Aerial Vehicle	Web *.pdf	6	Oct 99	Onboard
A1-SRRPV-RATO-820 Technical Manual, Pioneer Remotely Piloted Vehicle System, Rocket Assisted Takeoff	Web *.pdf	6	Oct 99	Onboard
A1-SRRPV-RRS-900 Operation and Organizational Maintenance with IPB, Remote Receiving Station	Web *.pdf	6	Oct 99	Onboard
A1-SRRPV-SDM-000 Technical Manual, System Description, Pioneer Remotely Piloted Vehicle, System	Web *.pdf	6	Oct 99	Onboard
A1-SRRPV-SSM-970 Technical Manual, Pioneer Remotely Piloted Vehicle System, Shipboard Operation and Maintenance with Illustrated Parts Breakdown, Supplement	Hard copy	6	Oct 99	Onboard

IV.B.3. TECHNICAL MANUALS

AI-PIO-RPV-6-1.2 Ground Control Station/Tracking and Communications Unit Daily Inspection	Digital	1	Oct 99	Onboard
DRAFT PDMS USER MANUAL Software User's Manual for the Pioneer Digital Map System	Hard copy	1	Oct 99	Onboard
NAVAIR 01-1A-509 Aircraft System cleaning and Corrosion Control Manual	Hard copy	1	Oct 99	Onboard
NAVAIR 16-1-540 Avionic cleaning and Corrosion Prevention and Control	Hard copy	1	Oct 99	Onboard
NAVAIR 17-15-BAD-1 Battery Maintenance Manual	Hard copy	1	Oct 99	Onboard
OPNAVINST 4790.2 Series Naval Aviation Maintenance Plan (NAMP)	Hard copy	1	Oct 99	Onboard
Sierra Nevada Corp, 0019A001 Technical Manual, Operation and Maintenance with IPB (without cables) Org Level, For UCARS Nav-Track Set, RADAR AN/UPN-51(V)	Hard copy	6	Oct 99	Onboard

PART V - MPT MILESTONES

COG CODE	MPT MILESTONES	DATE	STATUS
PDA	Begin analysis of manpower, personnel, and training requirements.	Oct 85	Completed
ACNO/NMSO	Program manpower and training resource requirements.	Dec 85	Completed
PDA	Award production contract.	Dec 85	Completed
TSA	Award factory training and curriculum contract.	Dec 85	Completed.
EPMAC	Requisition enlisted personnel.	Feb 86	Completed.
NMPC/CMC	Begin ordering enlisted personnel.	May 86	Completed
TSA	Begin initial training.	May 86	Completed
TSA	Deliver curricula materials for initial training.	May 86	Completed
TSA	Deliver TTE.	May 86	Completed
PDA	Promulgate Draft NTP to ALCON for review and comments.	Jun 86	Completed
PDA	Fleet introduction.	Jul 86	Completed
ACNO(MPT)	Chair NTSPC and issue minutes and actions items that result.	May 87	Completed
PDA	Submit Proposed NTP to OPNAV.	Jul 87	Completed
ACNO/DMSO	Initiate OPNAV Form 1000/4A.	Oct 87	Completed
ACNO/CMC	Promulgate OPNAV Form 1000/2 T/O.	Apr 88	Completed
ACNO(MPT)	Promulgate update NTP.	Sep 88	Completed
TSA	Install TTE.	Oct 88	Pending
OPTEVFOR	Begin OPEVAL	Nov 88	Completed
TSA	Begin training services.	Nov 88	Completed
ACNO(MPT)	Approve and promulgate NTP.	Jun 90	Completed
ACNO/CMC	Allocate student billets.	Jul 90	Completed
TSA	Begin follow-on training.	Nov 90	Completed

PART V - MPT MILESTONES

COG CODE	MPT MILESTONES	DATE	STATUS
PDA	Update and revise NTP.	Oct 96	Completed
PMA-205	Submit updated NTP to operator units for review.	Nov 96	Completed
OPNAV 853F	CNET transition.	Oct 97	Completed
PDA	Review NTSP	Aug 98	Completed
PDA	UCARS Integration	Jul 99	Completed
PDA	MIAG Integration	Sep 99	Completed
TSA	Deliver Training Devices	FY 99	Pending
HPC	UAV HPRR	Jan 03	Postponed
AIR 3.2.6	Update NTSP and deliver to fleet for review.	FY 04	Completed
HPC	UAV HPRR	Mar 04	Postponed

PART VI - DECISION ITEMS / ACTION REQUIRED

DECISION ITEM OR ACTION REQUIRED	COMMAND	DUE DATE	STATUS
C-2E-0640 Pioneer SR-RPV Mission Commander Course	CNATT	N/A	There are no open Action Items for this course.
UAV.03PREHPRR.0641.001 (1/28/03) C-104-0641 Pioneer SR-RPV External Pilot Course: CNATTGRUDET Milton (NOLF Choctaw) reduced from 124 days (90 instructional days) to 110 days (80 instructional days) 16.0 Weeks. Submit curriculum for approval. CNATT update NITRAS/CANTRAC to reflect.	CNATT	None stated	Status blank in OATMS as of 20 July 2004.
UAV.03PREHPRR.0641.002 (1/28/03) C-104-0641 Pioneer SR-RPV External Pilot Course: <u>No Action Item specified.</u>	CNATT	N/A	Status blank in OATMS as of 20 July 2004.
C-690-0644 Pioneer SR-RPV Airframe Mechanic Course	CNATT	N/A	There are no open Action Items for this course.
UAV.03PREHPRR.0642.001 (1/28/03) C-104-0642 Pioneer SR-RPV Internal Operator: CNATTGRUDET Milton (NOLF Choctaw) increase course length from 54 days (40 instructional days) to 96 days (70 Instructional days) 14.0 wks. Submit curriculum for approval. CNATT update CETARS/CANTRAC to reflect.	CNATT	None stated	1/28/03 Adjusted OATMS to reflect 96 days (70 Instructional days) 14.0 weeks.
UAV.03PREHPRR.0642.002 (1/28/03) C-104-0642 Pioneer SR-RPV Internal Operator: Repeat of UAV.03PREHPRR.0642.001above.	CNATT	None stated	Status blank in OATMS as of 20 July 2004.
UAV.03PREHPRR.0642.003 (1/28/03) C-104-0642 Pioneer SR-RPV Internal Operator: <u>No Action Item specified.</u>	CNATT	None stated	Status blank in OATMS as of 20 July 2004.
UAV.03PREHPRR.0642.004 (1/28/03) C-104-0642 Pioneer SR-RPV Internal Operator: TECOM ATB: Organize T&R review meeting next HPRR and initiate curriculum adjustments.	TECOM	None stated	Status blank in OATMS as of 20 July 2004.
UAV.03PREHPRR.0643.001 (1/28/03) C-104-0643 Pioneer SR-RPV Payload Operator: CNATTGRUDET Milton (NOLF Choctaw) submit deactivation letter for C-104-0643 CDP 3165. CNATT update CETARS/CANTRAC when letter is approved. Input/Draft change to NEC Manual to add internal operator to course for Navy.	CNATT	None stated	Status blank in OATMS as of 20 July 2004.
UAV.03PREHPRR.0645.001 (1/28/03) C-104-0645 Pioneer SR-RPV Internal Pilot: CNATTGRUDET Milton (NOLF Choctaw) submit deactivation TPP letter for CDP 372W. CNATT update CETARS/CANTRAC when deactivation letter is approved.	CNATT	None stated	Status blank in OATMS as of 20 July 2004.

PART VI - DECISION ITEMS / ACTION REQUIRED

DECISION ITEM OR ACTION REQUIRED	COMMAND	DUE DATE	STATUS
<p>UAV.03PREHPRR.0646.001 (1/28/03) C-690-0646 Pioneer SR-RPV Electronics Technician: ASL-34 - define process by which T/O Organization (8890) is controlled and options for manipulation and set up conference with fleet input and suggestions from executive.</p>	CMC	None stated	Status blank in OATMS as of 20 July 2004.
<p>UAV.03PREHPRR.0646.002 (1/28/03) C-690-0646 Pioneer SR-RPV Electronics Technician: CNATTGRUDET Milton (NOLF Choctaw) - submit ITRs in accordance with directives to pronounce flight schedule restrictions that affect training requirements. Continue to brief via naval message on constraints to flight scheduling and initiate log for verification.</p>	CNO	None stated	Status blank in OATMS as of 20 July 2004.
<p>UAV.03PREHPRR.0646.003 (1/28/03) C-690-0646 Pioneer SR-RPV Electronics Technician: CNATTGRUDET Milton (NOLF Choctaw) develop training/education for the MOS/NEC pipeline training professionals and needs of the fleet.</p>	CNATT	None stated	Status blank in OATMS as of 20 July 2004.
<p>UAV.03PREHPRR.0646.004 (1/28/03) C-690-0646 Pioneer SR-RPV Electronics Technician: ASL-33A - gather documentation to present proposed career progression. Ensure meeting is accomplished with documentation by 6/30/2003.</p>	CMC	6/30/03	Status blank in OATMS as of 20 July 2004.
<p>UAV.03PREHPRR.0646.005 (1/28/03) C-690-0646 Pioneer SR-RPV Electronics Technician: NAVAIR PMA-205/263/OPNAV N00T35 - procure RQ-2B for a trainer aircraft for simulated tech/mech/troubleshooting labs.</p>	NAVAIR	6/30/03	Status blank in OATMS as of 20 July 2004.
<p>UAV.03PREHPRR.0646.007 (1/28/03) C-690-0646 Pioneer SR-RPV Electronics Technician: NAVAIR PMA-205/263/N789 to define Navy Pioneer UAV training requirements for the future.</p>	NAVAIR	None stated	Status blank in OATMS as of 20 July 2004.
<p>UAV.03PREHPRR.0646.008 (1/28/03) C-690-0646 Pioneer SR-RPV Electronics Technician: CNATT (N55) - initiate documentation to ensure detailers are not double-dipping their DNEC levels in the Mech/IP courses.</p>	CNATT	None stated	Status blank in OATMS as of 20 July 2004.
<p>UAV.03PREHPRR.0646.009 (1/28/03) C-690-0646 Pioneer SR-RPV Electronics Technician: CNATTGRUDET Milton (NOLF Choctaw) - review and update courses.</p>	CNATT	None stated	Status blank in OATMS as of 20 July 2004.

PART VI - DECISION ITEMS / ACTION REQUIRED

DECISION ITEM OR ACTION REQUIRED	COMMAND	DUE DATE	STATUS
<p>UAV.03PREHPRR.0646.010 (1/28/03) C-690-0646 Pioneer SR-RPV Electronics Technician: NAVAIR PMA-205/263/OPNAV N00T35 - investigate immediate costing and solutions to <i>NO SIMULATORS CURRENTLY</i>. Initiate injection of simulation in courseware/hardware/software.</p>	NAVAIR	None stated	Per CNO N00T35 email dated 3/7/03: Meeting held with Mark Eagles 3/5/2003 to initiate action from PMA-205.
<p>UAV.03PREHPRR.0646.011 (1/28/03) C-690-0646 Pioneer SR-RPV Electronics Technician: CNATTGRUDET Milton (NOLF Choctaw) - review training tracks and align with maintenance MOS/NECs whether they are payload operators or internal/external pilots.</p>	CNATT	None stated	Per CNO N00T35 email dated 3/7/03: Senior Chief Long is in-work 3/6/03
<p>PMA-263 Website - Pioneer program information at: http://uav.navair.navy.mil/pioneer/default.htm needs the Training and CONOPS information updated. Training needs to agree with current CANTRAC and NEC manual. CONOPS graphic does not reflect Pioneer program terminology.</p>	NAVAIR		Informal action item.

PART VII - POINTS OF CONTACT

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