

U.S. Marine Corps (Ground) Liaison Report

24 June 2009

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ASTRONICS
DME CORPORATION



USMC ATE/TPS Overview

- AN/USM-657 - Third Echelon Test System (TETS)
- AN/USM-717 - Virtual Instrument Portable Equipment Repair/Test (VIPER/T) System
- AN/USM-718 - Ground Radio Maintenance Automatic Test System (GRMATS)
- Platforms/TPSs
- Future Test Activities

USMC ATE Systems



- AN/USM-657 - Third Echelon Test System (TETS)
 - 228 systems
 - 25 Core (Analog/Digital)
 - 165 RF
 - 38 EO
 - Upgrades in process (from VIPER/T program)
 - Instrument Controllers (replacement) – 228
 - Power Distribution Units (replacement) – 164
 - Synchro/Resolver Simulator (added capability) – 26
 - 18 GHz RF Subsystem (replacement) - TBD
 - Field locations
 - Supporting USMC Infantry Divisions, Air Wings, Logistics Groups, Headquarters Groups, and Depots₃



USMC ATE Systems



- AN/USM-717 - Virtual Instrument Portable Equipment Repair/Test (VIPER/T) System
 - 127 VIPER/T Systems total ordered to date
 - 45 RF
 - 44 RF/EO
 - 38 EO
 - 96 VIPER/T Systems delivered to date
 - 25 RF
 - 44 RF/EO
 - 27 EO



MC ATE Systems



N/USM-717 - VIPER/T (Cont'd)

- Systems provided as GFE for development

- Picatinny Arsenal – New Jersey
 - TPS development for LAV-25 A2 LRUs
 - TPS rehost of LW-155 Howitzer APS to VIPER/T platform
- General Dynamics Land Systems – Tallahassee, FL
 - TPS development for Expeditionary Fighting Vehicle LRUs
 - » Factory-to-Field deployable TPSs
- Astronics-DME – Orlando, FL
 - TPS development for DIM-36TH Marine Corps Thermal Optics System
- Elcan Optical Technologies – Richardson, TX
 - TPS development for the Medium Range Thermal Bi-Ocular (MRTB)
- Elbit Systems – Merrimack, NH
 - TPS development for the Long-Range Thermal Imager (LRTI)



USMC ATE Systems



USMC ATE Systems - VIPER/T (Cont'd)

- Fleet fielding beginning in June 2009

- Final verification of legacy TPSs in process at USMC-Albany and DME-Orlando
- 2nd MEB, Afghanistan (LAVA2 and TOW support)
- Combat Logistics Battalion-7, 29 Palms, CA
- Exercise Support Division, 29 Palms, CA
- Electronics Maintenance Company, Camp Lejeune, NC



MC ATE Systems



N/USM-717 - VIPER/T (Cont'd)

- Retrofit Kits for legacy TETS

- Instrument Controllers – New laptop, docking station and Windows XP-based operating system with modified system software
 - 228 modification kits ordered
 - 22 kits delivered (awaiting GFE to deliver additional kits)
- Power Distribution Units - New single box PDU with modified system software
 - 164 kits ordered
 - 78 kits delivered
- Synchro/Resolver Simulators - NAI Synchro/Resolver Simulator VXI card and cables with modified system software
 - 26 kits ordered
 - 5 kits delivered (awaiting GFE to deliver additional kits)



Platforms/TPSs



Current platforms supported by TETS and/or VIPER/T

- AN/MRC-142 Mobile Radio Terminal Set
- AN/TPQ-46A Firefinder Radar
- AN/TRC-170 Radio Terminal Set
- LAV-25 Light Armored Vehicle 25mm Turret LRUs
- TOW II System and Missile Guidance Set
- AN/PAS-22 Long Range Thermal Imager
- M-777A2 (LW155) Light Weight 155 Digital fire Control System LRUs
- M1A1 Abrams (CCAs)



Platforms/TPSs



Current platforms in development on TETS and/or VIPER/T

- LAV-25 A2 LRUs

- Currently in development on VIPER/T by Picatinny

- DIM-36TH Marine Corps Thermal Optics System

- Currently in development on VIPER/T by DME to be completed in July 2009

- General Support of Tactical Handheld and Weapons Mounted Optics and Laser Aiming Devices

- Enhancements to existing AN/PSM-117 APS
- ECP's to current VIPER/T system configuration
- Thermal, Image Intensified, and Laser Devices

- Assault Amphibious Vehicle (AAV)

- AAV LRU/CCA Diagnostics

Platforms/TPSs



Future platforms to be supported by TETS and/or VIPER/T

- AN/TRC-170 enhancements
- AN/TPQ-46A enhancements
- Light Armored Vehicle Instrument Panel, Annunciator Panel and Head-Up Display
- Expeditionary Fighting Vehicle (EFV)
- Shoulder-launched Multipurpose Assault Weapon (SMAW II)



USM-718 - Ground Radio Maintenance Automatic Test System



SMC MARCORSYSCOM Quantico

FP issued 16 December 2008

- Proposals due 3 February 2009

- Contract award pending

Test and diagnostic functions for both current and future
software-defined, tactical radios

DD/IQ contract with up to 700 units

Two phase evaluation process

- GRMATS demonstration unit required to advance to Phase 2

USMC Future Test Activities



New ID/IQ type contract for TPS development and APS production activities for TETS and VIPER/T

USMC MARCORSYSCOM through Fleet and Industrial Supply Center, Seal Beach

RFP Issued 15 May

One year base contract with 4 option years

Proposals currently due 30 June

012" Tester - Future ATE System

Successor to TETS and VIPER/T

Smaller, lighter, new technology

Requirements generation in process

Reconfigurable for specific deployments



MC Future Test Activities



O Test Requirements

Joint Army – Marine Corps EO (JAMEO) effort to define requirements

- Ongoing effort

Identifying requirements/solutions for a downsized Field Level EO Tester using hand held and weapons-mounted optics and laser devices (e.g. image intensifiers) as baseline candidates.

Identifying requirements for an Organizational Level EO Test Suite

Identifying requirements for a Portable Cable Tester

On-vehicle testing of cable assemblies