



U N I T E D S T A T E S M A R I N E C O R P S

U.S. Marine Corps (Ground) Liaison Report

29 April 2015

L. Salzano



USMC ATE/TPS Overview

- General Purpose Automatic Test Systems (GPATS)
- Ground Radio Maintenance Automatic Test System (GRMATS)
- Application Program Sets (APS)
- On-going and Planned Programs

GPATS

GPATS Radio Frequency (RF) Variant

- **AN/USM-717(V)2**
 - VIPER/T (Astronics) RF Variant
- **AN/USM-657B(V)2 RF**
 - TETS (ManTech) RF Variant
- **Systems are form, fit, functionally the same**
- **Support Test Program Sets that require RF capabilities in addition to analog/digital**
- **(128) total RF systems to be deployed for USMC users**
 - Reduced inventory based on USMC force reduction



GPATS

GPATS Electro-Optic (EO) Variant

- **AN/USM-717(V)3**
 - VIPER/T EO Variant
- **Consists of a core test system with EO subsystem**
- **Supports testing of multiple EO devices:**
 - Infrared (IR) and Image-Intensified (I²) night vision devices
 - Laser designators, illuminators, laser aiming devices, and laser range finders.
- **(82) total EO systems to be deployed for USMC users**



GPATS

- GPATS Obsolescence Program
 - New acquisition program initiated to address current and anticipated obsolescence for GPATS (TETS and VIPER/T)
 - Currently there are 4 procurements planned under this Program:
 - Common Instrument Controller (CIC)
 - Will replace current IC (laptop/docking station) with a modern, Windows 7- compliant solution
 - Analog Instrumentation Refresh
 - Radio Frequency (RF) Refresh
 - Digital Test system (DTS) Refresh
 - Multiple planned awards from 2015-2017
 - In planning stage at this time

GRMATS

Ground Radio Maintenance Automatic Test System (GRMATS)

- **AN/USM-718 (GRMATS Block I)**
- **(68) systems delivered in 2007 and fielded to support urgent requirement for software-defined radio test support through a Field User Evaluation**
- **This system (Block I) has been retired, complete removal June 2015**
- **AN/USM-718A (GRMATS Block II)**
- **All (562) systems have been delivered**



AN/USM-718 (ATS2000)



AN/USM-718A (GRMATS)

Application Program Sets

- Application Program Sets
 - ID/IQ contracts for TPS Development and APS Production
 - 23 Task Orders awarded:

AN/PSM-105 Rehost and Production (AN/TRC-170)	Video Capture Card Obsolescence Study
AN/PSM-113 APS Production (Training TPS)	AN/USM-657 (TETS) IETM Updates
AN/PSM-109 TPQ-46A Firefinder TPS Rehost and Development	AN/USM-717 (VIPER/T) IETM Updates
AN/PSM-120 LAV25-A2 Instrument Panel Rehost and Production	AN/PSM-120 IETM Development
AN/PSM-123 LAV25-A2 MOOG APS Production	AN/PSM-123 IETM Development
Racal 3152 Obsolescence Study	Ground Radio Application Program Set (GRAPS) Rehost and Production

Application Program Sets

- Application Program Sets
 - ID/IQ contracts for TPS Development and APS Production

Instrument Controller Obsolescence Study	GRAPS additional hardware production quantities
System Controller upgrade for AN/USM-657A & B and AN/USM-717(V)	AN/PSM-109 Production
VIPER/T EO Glass Covers	AN/PSM-127 GRAPS Production Follow-On
APS Spares	RT-1949 PRC-117G GRAPS Cable Production
Tactical Remote Sensor System (TRSS) TPS Development/ Production	Power Supply Application Program Set (PSAPS)
GPATS Robust System Switching Test (RSST)	

Application Program Set (APS) Overview

- Ground Radio Application Programs Sets (GRAPS)
 - GRAPS are essentially TPS kits used in conjunction with AN/USM-718A GRMATS for testing USMC tactical radios
 - Astronics Test Systems completed rehost of 14 TPSs from the legacy GRMATS (Block I) to the currently fielded GRMATS (Block II)
 - Included production of 100 GRAPS kits
 - Astronics delivered an additional 456 kits under separate contracts

Application Program Set (APS) Overview

- Currently Fielded GPATS Application Program Sets
 - AN/PSM-105 - AN/TRC-170 LRU/CCA
 - AN/PSM-109 - AN/TPQ-46 LRU/CCA
 - AN/PSM-112 - LAV-AT LRU
 - AN/PSM-113 - TPS Trainer (CCA-level)
 - AN/PSM-115 - AAV MSQ-115 Diagnostics
 - AN/PSM-117 - Electro-Optic Test Suite
 - AN/PSM-118 - LAV-25 Chain Gun (Replaces Bailey Box)
 - AN/PSM-119 - LW 155 LRU Diagnostics
 - AN/PSM-123 - LAV-25A2 LRU Screening/ Diagnostics
 - AN/PSM-120 - LAV Instrument Panels/ Heads-Up Display
 - AN/PSM-124 - M1A1 Tank CCA Diagnostics

Application Program Set (APS) Overview

- Current Efforts in Development/Production
 - Astronics Test Systems – Orlando, FL
 - TRSS TPS Development and Production (6 new TPSs, 22 prod sets)
 - GPATS Robust System Switching Test (6 new TPSs)
 - Analysis, Integration and Design, Inc – Melbourne, FL
 - Power Supply Application Program Set (PSAPS) (21 new TPSs, 4 prod sets)
 - M41A4 Saber System CCA TPS Development (12 new TPSs)
 - Automatic Test Systems Division - Picatinny Arsenal, NJ
 - TPS Development for LAV-25A2 Circuit Card Assemblies (CCA)
 - TPS Development for Saber (TOW replacement) LRUs
 - TPS Development for VSAT LRUs
 - TPS Updates for LW-155 LRUs
 - TPS Development for LAV-25A2 Improved Thermal Sight System (ITSS) LRUs
 - TPS Development for LAV-AT (Anti-Tank) Upgrade LRUs

Application Program Set (APS) Overview

- **Planned GPATS TPS Efforts**
 - Assault Amphibious Vehicle (AAV) Upgrade Support
 - LAV Mobility and Obsolescence (MOB) Program Support
 - LAV Foreign Military Sales (FMS) Support

Ongoing Efforts

- **LAV Foreign Military Sales (FMS) Support**
 - USMC TMDE providing support for FMS procurement of USMC VIPER/T systems and LAV-25 APSs
 - Contract# N64267-15-C-0021 awarded to Astronics Test Systems (DME) on 31 Mar 15
 - (2) VIPER/T and APS FAT units
 - Additional production quantities
 - In-country training support
 - TMDE will support additional ATE and APS procurements, as required
- **Stand Alone VIPER/T Electro-Optic (SAVEO) Test System**
 - Task order awarded to Astronics Test Systems to provide a stand-alone controller, power supply and instrumentation solution to utilize with existing VIPER/T EO collimators
 - PDR completed on 9 April 2015
- **EMSS connectivity in support of:**
 - Global Combat Service Support- Marine Corps (GCSS-MC) Mobile Service
 - Automatic system updates
- **Inter-service Initiatives**
 - Common USMC ATE Interface
 - SBIR NAVAIR-101-666 - Universal Switching Across Automatic Test Systems