



Project Manager Soldier Survivability

PRECISION
Is the Standard

Every Ounce Matters, Every Bullet Counts

Product Manager Soldier Clothing and Individual Equipment (PM SCIE)

Personnel Airdrop Systems Brief to PIA Government Systems Committee

21 MAY 21

Takis Blanas
Team Leader

LTC Naim R. Lee
PdM SCIE

PM SCIE Personnel Airdrop Systems Team

Mr. Clay Williamson
Acting Deputy PM SCIE



Organization



Ft. Belvoir, VA



Program Executive Office (PEO) – Soldier
PEO MG Anthony Potts



Project Manager
Soldier Survivability (PM SSV)
PM – COL Derek Bird



Product Manager
Soldier Clothing and Individual Equipment
(PM SCIE)
PdM – LTC Naim Lee

Personnel Airdrop
APM – MAJ Phil Yandall



Natick, MA

Personnel Airdrop Systems Team
(matrixed to PM SCIE)
Combat Capabilities Development Command Soldier
Center - Aerial Delivery Directorate
Team Leader – Takis Blanas

Field Liaisons
Ft. Bragg
Ft. Lee
Ft. Benning
YPG

TACOM - Integrated Logistics Support Center (ILSC)
Aerial Delivery Engineering Support Team (ADEST)
Airdrop Technology Team (ATT)



Mission



PM SCIE's Personnel Airdrop Team develops, provides and manages innovative and reliable parachute systems and ancillary equipment to precisely deliver fully combat equipped Airborne Warfighters to the ground, enhancing their lethality, survivability, and mission success.



T-11 & MC-6 Re-buy



- Life Cycle Replacement fielding under way for both T-11 and MC-6 systems going out of service life
- T-11: PM-SCIE multi-year contract awarded July 2019
 - Ramp-on opportunity: third & sixth ordering period
 - First opportunity opens Aug 2021
- MC-6: PM-SCIE multi-year contract awarded June 2020
 - Ramp-on opportunity: Continuous whenever a new vendor gets on QPL





Next Generation Static Line (NGSL) Parachute System



- RFI to Industry released 26 Apr 21
- Responses due 28 May 21
- <https://beta.sam.gov/opp/e1a85bd4e4434a35b91e054f3e5c5497/view>
- POC: Brian Huffman
- email: brian.g.huffman3.civ@mail.mil

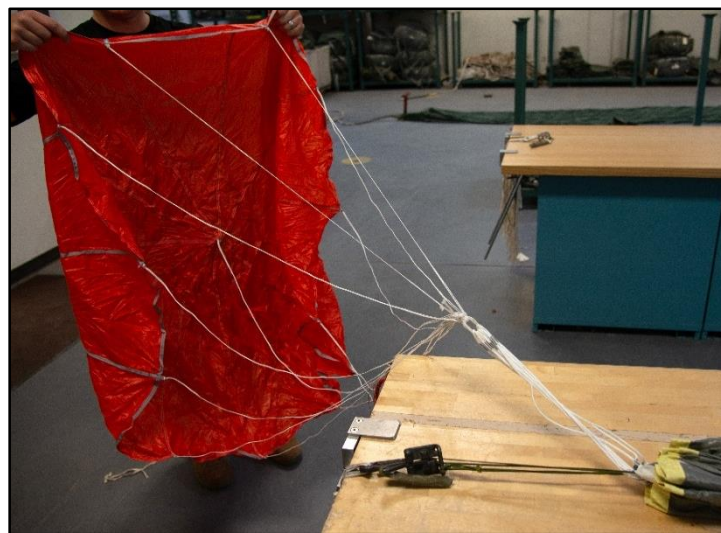


T-11R Single Pin (T-11R-SP)

- Modification consists of new pack tray, ripcord handle, and extractor parachute
 - Pack tray and ripcord handle mitigate risk of inadvertent activation due to high-speed windblast
 - Extractor parachute modification addresses premature extractor release for 400 lb total rigged weight - no main malfunction
 - Pack tray incorporates features to accommodate future Static Line Reserve Parachute Automatic Activation Device (SLRPAAD)
- Current Status
 - Operational Testing completed Mar 21
 - ECP Completed
- Implementation via Maintenance Advisory Message (MAM) and lifecycle replacement (LCR) fielding
 - Fielding projected to begin 1QFY22



T-11R New Pack Tray



Modified Extractor Parachute



Parachutist Flotation Device (PFD)



- Provide a common material solution for low and high altitude airborne operations when water obstacles are near or on the intended drop zone
- Source selection in progress
- Design Validation (DV) completed 1QFY21
 - Volume / buoyancy
 - Construction / bladder integrity
 - Basic integration to existing parachute systems and equipment
- Developmental Testing (DT) and Operational Testing (OT) scheduled for 3QFY21
 - Buoyancy, water entry evaluations, integration and human factors evaluations
 - Intentional slick water jumps (T-11 and RA-1)
- First Unit Equipped (FUE) projected 2QFY22
- Initial Operational Capability (IOC) projected 1QFY24



Fort Benning 250-ft Tower Training Parachute Certification



- Effort to update the 250-ft tower training parachute (J-1)
 - New J-3 parachute will use currently available textile/hardware specifications and block canopy construction
 - Canopy geometry will be maintained from J-1
 - Rate of descent equal to J-1 will be maintained in order to keep program of instruction the same
- Operational Testing Completed Apr 21
- Projected procurement of 25 J-3s for 1/507th in 4QFY21



Basic Airborne Course Student Descending from 250-ft Tower with J-1 Training Canopy



Parachute Emergency Release System (PERS)



- Requirement approved in 2QFY21
- Allows for safe release of static line jumper in event they become towed
- When towed jumper is identified, Jumpmaster will employ the PERS
- PERS will lower jumper safely to ground
- Request For Information released 28 APR 21
- Projected Timeline
 - Developmental Testing (DT) and Operational Testing (OT) in FYs 22 and 23
 - Initiate fielding in FY24



Static Line Reserve Parachute Automatic Activation Device (SLRPAAD)



- Capability gap to automatically deploy Static Line Reserve in case of jumper incapacitation or loss of altitude awareness
- The SLRPAAD will determine if reserve parachute activation is necessary to prevent injury and/or death during static line parachute operations
- Government S&T effort to develop algorithm and HW suite ongoing
- Provisions in new T-11R-SP pack tray design for a SLRPAAD without interference
- Request for Information release projected for 4QFY21/1QFY22
- Requirements development in progress.

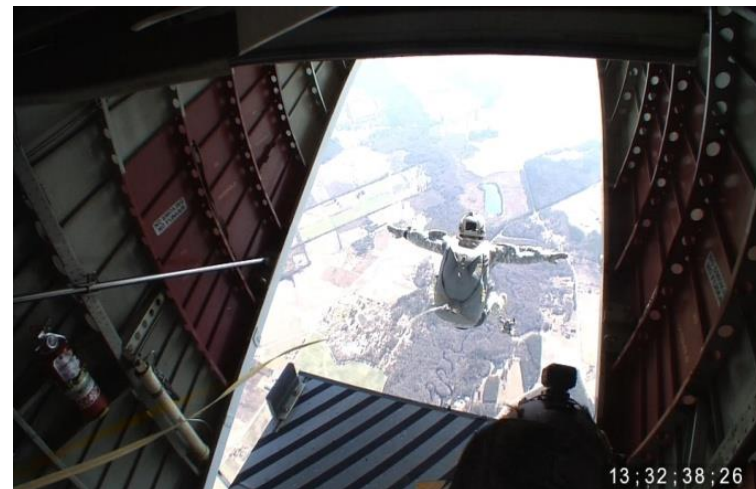




RA-1 Advanced Ram Air Parachute System (ARAPS)



- High performance ram air parachute system used to infiltrate small teams into denied areas using High Altitude Low Opening (HALO) and stand-off techniques for both SOF and conventional forces; replaced MC-4
- Enhanced canopy performance allows for increased stand-off, thus decreasing aircraft vulnerability
- Enables parachutist to safely carry increased combat load and operate at higher altitudes (450 lbs. AUW at 25,000 MSL)
- Lift to Drag Ratio 4:1
- Two methods of deployment:
 - Military Free Fall (MFF) that includes Bottom of the Container (BOC) and Over the Shoulder
 - Double Bag Static Line (DBSL)





RA-1 Above 25K Effort



- The current RA-1 system cannot be deployed Above 25,000 ft. MSL at current threshold weights
- Above 25K (A25K) Performance Criteria
 - Must be deployable from altitudes of up to 35,000ft MSL at increased airspeed at an exit weights of 360 lbs. (T) to 450 lbs. (O)
 - Shall be deployable from all aircraft currently used during MFF and DBSL operations
 - Should provide capability for jumper input to modulate glide down to 2 to 1 lift to drag ratio (T) or down to 1 to 1 lift to drag ratio (O)
- Request for information to industry released 7 Jan 20
 - Five companies responded
 - Test canopies procured from all five
 - Integration testing with RA-1 container and performance evaluation jumps commenced MAR 21



Jumper Maneuvering to Desired Impact Point



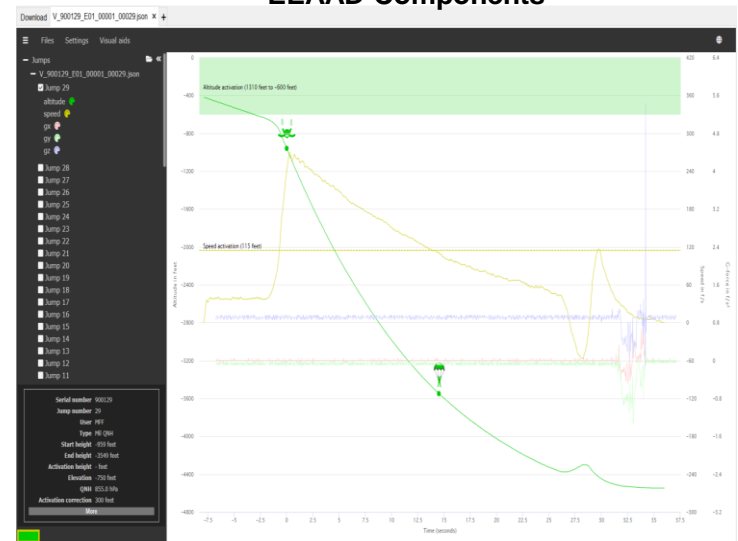
Enhanced Electronic Automatic Activation Device (EEAAD)



- Next-generation automatic activation device to replace current system (EAAD)
 - Enhanced capability for flight data recording and unit-level download & analysis
 - Configuration control for hardware and software
- Contract awarded to Vigil May 20
- Developmental Testing (DT) commenced Dec 20
- Operational Testing (OT) projected to begin 3QFY22
- First Unit Equipped (FUE) projected 2QFY23



EEAAD Components



EEAAD Flight Data



Parachutist Oxygen Delivery System (PODS)



- Requirement for PODS approved Oct 20
- Parachutist's requirements for oxygen (O₂) increased for extended High Altitude and stand-off missions
- Oxygen consumption studies confirmed existing O₂ bailout bottles used by Military Freefall (MFF) Parachutists cannot not provide parachutist with sufficient oxygen to support these operations
- An enhanced capacity oxygen delivery system is required that will support extended duration missions
- PODS will consist of five (5) components
 - Individual Oxygen Source (IOS)
 - Transfer Pump
 - Pre-Breather
 - Parachutist Oxygen Mask (POM)
 - System Test Device
- Pursuing program initiation in FY23





Military Altimeters (MA-1)

- Requirement for Military Altimeter (MA-1) approved Jan 21
- Currently fielded altimeters have operational issues or are no longer being supported by manufacturers
- Need exists for an updated, ruggedized MFF altimeter with improved accuracy, data logging and ease of use
- Earlier evaluation show that several commercially available altimeters exist meeting User requirements:
 - Form, Fit and Function assessments
 - Wind Tunnel testing
 - Altitude Chamber testing
 - Electromagnetic (MIL STD 461) testing
 - Environmental (MIL STD-810) testing
 - User Assessments – Live Jumps
- Pursuing program initiation in FY23





Points of Contact



Phil Yandall (MAJ, IN)

Assistant Product Manager

philip.g.yandall.mil@mail.mil

Office: (703) 805-8528

Work Cell: (703) 906-8287

Takis Blanas

Team Leader Personnel Airdrop Systems Team

panagiotis.blanas.civ@mail.mil

Office: (508) 206-3281

Work Cell: (508) 314-3283