AMRDEC Homeland Security

Security Through Technology

U.S. Army Aviation & Missile Research, Development, and Engineering Center (AMRDEC)

Leveraging AMRDEC Assets to Rapidly Field Homeland Security Solutions

TECHNOLOGIES

- Sensors and Seekers
- Robotics
- Materials/Structures
- Propulsion
- Avionics
- Optics
- Software Engineering
- Directed Energy
- Terrain Databases
- CBRNE Sensors

CAPABILITIES

- Unmanned Systems
- Rapid Prototyping
- Systems Integration
- Modeling and Simulation
- Testing and Evaluation
- Constructive Simulations
- Contracting Mechanisms in Place
- Life Cycle Software Development, Testing, and Maintenance

RESOURCES

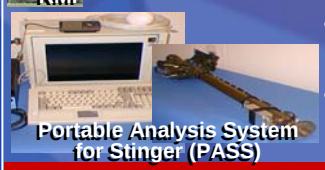
- High Tech Workforce: 2nd Largest Concentration of Engineers in U.S.
- 2nd Largest Research Park in U.S.
- Links to Major Universities & Established Ties to National Labs
- Redstone Laboratories: 1.6M sq ft
- Redstone Test Ranges: 14K Acres
- Team Redstone Co-located Army and Federal Partners:
  - AMCOM – Redstone Technical Test Center
  - AMRDEC – Redstone Scientific Info. Center
  - SMDC – Ordnance Munitions & Electr. Maintenance School
  - NASA – Corps of Engineers
  - FBI – Missile Space and Intel. Center

A Trusted Agent for Evaluating Counter-MANPADS

We built them. We know how they work. We know their susceptibilities!

EXPERTISE

- Over 30 years of experience designing, developing, testing, fielding the STINGER family of MANPADS (Basic, Post, RMP)
- Senior Staff hold numerous patents in missile guidance, signal processing and Counter-Countermeasure (CCM) techniques.
- Senior Staff that supports MSIC in FME of MANPADS threat hardware
- Active programs in Counter IR MANPADS focusing on Laser Jammer optimization
- Active programs in development and test of light-weight Threat Detection, Identification and Location Sensors for Aircraft Situational Awareness & Survivability



TEST FACILITIES / HARDWARE

- Laser Countermeasure (CM) Laboratory for the development and evaluation of laser CM techniques and optimization against known MANPADS threats
- Russell Measurement Facility (RMF) – 300 foot tower with working laboratory at the top for simulated airborne sensor and CM/CCM testing of MANPADS.
- Fully instrumented MANPADS hardware (PASS) for real world evaluation of counter-MANPADS technology effectiveness

MODELING & SIMULATION

- Senior Staff that can exercise Government-owned MANPADS fly-out models/simulations to evaluate counter-MANPADS technology effectiveness
- Capability to Utilize these Models as part of the proposal evaluation process
- Capability to Utilize these Models during the design and development process to evaluate effectiveness of CM techniques.
- Numerous MANPADS models/simulations at various levels of fidelity:
  - Desktop Acquisition Range Modeling - Provides inputs to detailed simulations
  - STINGER 6 DOF Fly-Out Models
  - Hybrid Simulation Capability for detailed analysis

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