



Missile Flight

Redstone Test Center



Medium Range Missile Flight Tests: Include remote or man fired missile tests against stationary or moving targets.

Small Missile & Rocket Flight Tests: Incorporates remote or man fired missile and rocket tests against stationary or moving targets.

Warhead Testing: Encompasses dynamic and /or static warhead component level fuzing target interaction, and/or lethality testing.

Hit Avoidance/Active Protection System Testing: Consists of fully instrumented threat and vehicle countermeasures' test range.

Aviation Weapons Systems Integration & Testing: Combines machine gun and limited rocket and laser testing from various Army aviation platforms.

Test Areas, Facilities, & Other Capabilities:

1. **Main Test Range Test Area 1:** 8 Km long instrumented test range located on 8,000 acres - Supports live fire and hazardous testing of US Army weapons systems, subsystems, and components.
2. **Small Rockets Range:** 500 Meters Long instrumented test range - Supports dynamic testing on small missile and rockets throughout the acquisition lifecycle.
3. **Sled Track Test and Warhead Test Facility:**
 - 2 Monorail sled tracks (1,000' & 2,000') - Supports dynamic and static warhead testing
 - 1 - 8" Air gun delivery system - Supports dynamic warhead testing
 - Adaptable payload electronic safe and arm device rated to +1,700 g's to -30,000 g's
 - Onboard 4-channel record device rated to + or -50,000 g's.
4. **Supersonic Rocket On A Rope(SOAR) Test Methodology** - Uses 2.75 rocket to accelerate test articles to supersonic speed for developmental test in controlled environment.
5. **Active Protection Systems Test Facility:** Supports active vehicle countermeasures to small rockets and missile threats with full instrumentation, TSPI, and high speed imagery.
6. **Longbow STAF Facilities (Supporting Subsystem Test & Analysis Branch):** Supports non-destructive testing of Longbow missiles.
7. **Complete Time, Space and Position Information (TSPI) Data Collection:**
 - Doppler Radar- 1000 micro radians accuracy, track a 1 m² to 35+ km with optimum conditions
 - Mobile Mutsensor TSPI System (MMTS) - 1000 urad accuracy, 10 km range, to mach 6
 - Survey capability- sub-centimeter accuracy when receiving differential correction
8. **Telemetry Reception and Hard-line Instrumentation:** Complete instrumentation infrastructure to support conductor, fiber optic, or wireless instrumentation needs for data collection.
9. **High Speed Digital Imaging, Video, and Photographic Capabilities:**
 - State-of-the-art High Speed Digital Imaging - Used for launch, target, and warhead data collection and data reduction
 - Other imaging and documentation capabilities - Professionals available to shoot Digital High Speed Imagery, High Definition and Standard Definition video formats, and High Resolution Digital photos
 - Full Video Editing Facility - Available for customer documentation and video productions
 - High Velocity Ordinance Tracker (HVOT) - a video tracking platform with a range to 4 km, can track an object moving at mach 2 [capability available in mid FY11]
10. **Secure Explosive Storage Facility:** Complete logistic support staff to facilitate shipping, receiving and storage of arms, ammunition, and explosives.
11. **Environmental Conditioning Chambers:** Chambers co-located on test sites to temperature condition "items under test" prior to launch.
12. **Data acquisition equipment:** Data acquisition equipment and sensors to record pressures, accelerations, acoustic, strain and etc. at up to 16 bit at 2 MS/s.