



ELECTROMAGNETIC SENSOR TEST FACILITY

LABORATORY INFORMATION FACT SHEET

CONTACT US:

Technology Transfer Office

Email: usarmy.pica.devcom-ac.mbx.t2@army.mil

v.02



The Electromagnetic Sensor Test Facility (ESTF) is a dedicated Department of Defense facility established to provide a cost effective means to investigate, validate and evaluate the various aspects of electromagnetic and optical sensor devices, especially in real-world radar cross section (RCS) measurements

TECHNOLOGY/FACILITY DESCRIPTION:

The ESTF consists of a large (60'W x 80'L x 55'H) barn-like building equipped with a vertical-firing pressurized air cannon, a horizontal-firing pressurized air cannon and a

gravity-based sensor drop platform. The air cannons are used to fire instrumented sensor packages past targets or into the sand test area to verify their performance against various targets. A 125 psi air compressor provides the pressurized air for cannon operation. Inside the ESTF, target accessibility and maneuvering is provided by a positionable hoist system with a load limit of 500 lb., arranged on the centerline of the building. Within the ESTF is a heated/air conditioned office area for control of experiments and shelter during air cannon firing, the sensor test area and work areas for assembly of devices. Sensor/seeker data collection is supported by networked high speed video cameras and standard test equipment such as spectrum analyzers, oscilloscopes, high-speed multichannel data recorders and IRIG-B/NTP/ PTP timing protocols. The Fuze Division also has access to various unmanned aerial vehicles for RCS and other measurements. Calibrated spheres and other standard targets are also available and custom targets can be customer-supplied.



EQUIPMENT AND EXPERTISE AVAILABLE:

- Spectrum analyzers up to 26.5 GHz bandwidth
- Oscilloscopes up to 2 GHz bandwidth
- Sniffer antennae from 1-18 GHz
- Vision research high-speed video cameras
- Standard and real-world target sets
- High-speed multichannel data recorders
- Testing and evaluation of electromagnetic sensors
- GPS-based timing protocols available
- Data collection for modeling and verification
- Potential for evaluation of buried target detection