



FRANKFORD LABORATORY

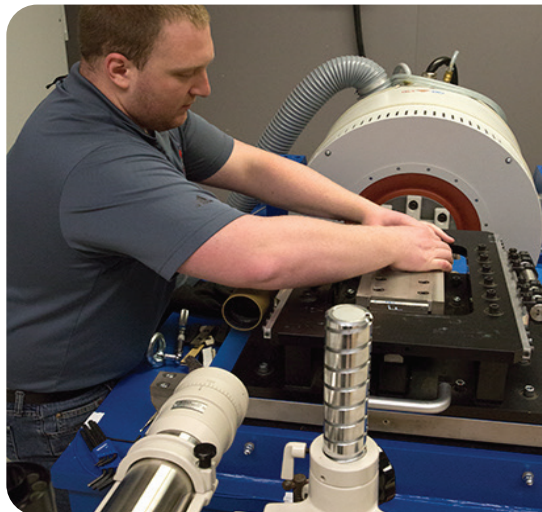
LABORATORY INFORMATION FACT SHEET

CONTACT US:

Technology Transfer Office

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

v.02



The Frankford Lab is an environmental test facility for small arms weapon optics; it facilitates various test capabilities for evaluation of optical sighting systems in a military operational environment as recommended by MIL-STD-810.

TECHNOLOGY/FACILITY DESCRIPTION:

A small arms weapon shock simulator allows Picatinny rail-mounted accessories to be tested for survivability and zero-retention at weapon rate-of-fire (up to 800 rpm) without incurring undesirable cost, schedule and safety detriments

associated with live-fire testing. Shock simulation is vectored to emulate multi degree-of-freedom acceleration experienced during live-fire events; shock control is fully automated and monitored. The Frankford Lab also accommodates extreme temperature and humidity testing primarily for optical devices. It is further equipped with a large aperture reflective collimator, autocollimators, theodolite and various optical fixtures for on-location precision assessment of optical sighting system performance.

EQUIPMENT AND EXPERTISE AVAILABLE:

- Small arms weapon shock simulator tunable that emulates pyroshock at accessory rail of 5.56 mm to 0.50 cal direct fire and 40 mm indirect fire weapons
- 20 cu ft temperature and humidity chamber with large pass-thru ports and viewing windows
- 1m water immersion vessel
- Nikon 6D autocollimators
- 16" Davidson reflective collimator
- High capacity rotary table
- Optical breadboards and various mounting opto-mechanics
- Live-fire zero retention testing of Picatinny rail mounted accessories on small arms weapons
- Operational and storage temperature testing
- Humidity testing
- Water immersion testing
- General alignment and alignment testing of aiming devices