



TACTICAL BEHAVIOR RESEARCH LABORATORY (TBRL)

LABORATORY INFORMATION FACT SHEET

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The US Army's Tactical Behavior Research Laboratory investigates the human portion of an armaments performance equation; providing the analytical proof of performance effectiveness for armaments systems. Operational Research is conducted using relevant environments including standard Test Beds and Virtual/Augmented Reality.

TECHNOLOGY/FACILITY DESCRIPTION:

Experimentation, Verification & Validation, Assessment Lab (EVVAL):

On one side of the lab, testing is

focused on Human Systems Integration where Soldiers are recruited to perform their duties using DEVCOM Armaments Center armament systems. By utilizing virtual employment simulations of operational scenarios, performance data can be gathered very early in the life cycle and designs can be refined at low cost by utilizing prototypes, mock-ups, or engineered models.

Target Behavioral Response: On the other side of the lab, testing is focused on human response to Less-Than-Lethal Weapons, Non-Lethal Weapons (NLW), and Scalable Effects. This type of effectiveness testing is conducted using human research volunteers to verify and validate weapon/system performance. Target behavioral testing capabilities range from the testing of individual subjects to large crowds.

Human Performance Testing can be done during all phases of the acquisition life cycle in order to meet the needs of the Soldier. The TBRL works with the DEVCOM AC Human Research Protection Office to ensure compliance with Federal Law and US Army Regulations in the matters of human research and subject safety.



EQUIPMENT AND EXPERTISE AVAILABLE:

- Cognitive and Physiological Monitoring and Analysis
- Social Network Analysis
- Behavior Analysis, Psycho-Social Paradigms
- Armament Human/Soldier Systems Integration (HSI)
- HSI - Optical Integration
- Non-Lethal Weapons Effectiveness Research
- Design of Experiments / Research Design
- Human Research IRB Protocol Development
- Human Research Subject Recruitment
- Experimentation, Verification & Validation, Assessment Laboratory
- Target Behavioral Response
- Electrophysiology Laboratory [EEG, ECG, EMG, EDA, ICG]
- Virtual Reality and Augmented Reality Test Beds
- Motion Capture Test Beds
- Eye Tracking
- Indoor and Outdoor Configurable Test Beds
- 25,000 sq. ft. indoor laboratory
- 150+ acres outdoor rural/urban facilities