U.S. ARMY

ECONOMICAL TARGET-2 (ET-2)

ET-2 provides customers with an affordable target representative of a tactical ballistic missile

Economical Target 2 is a low-cost, unguided target vehicle designed for threat representative flight tests. ET-2 is launched from a transportable launcher, which allows maximum flexibility in selecting launch sites. The ET-2 has successfully flown multiple times at White Sands Missile Range, New Mexico, as a radar tracking target.

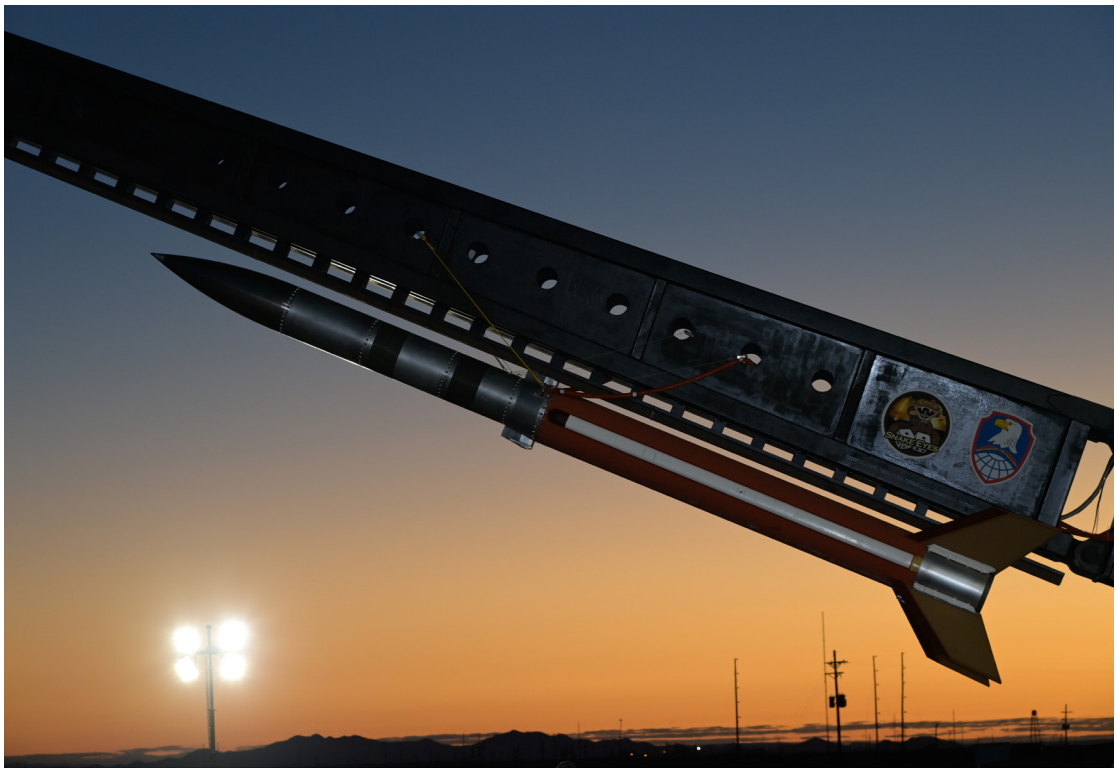
It includes state-of-the-art instrumentation, such as a GPS receiver and accelerometers, to collect on-board performance characteristics and flight environments. While ET-2 is currently unguided, its design can be adapted for future enhancements, such as actuator-controlled fins, guidance systems, and flight termination systems.

The Test Directorate provides equipment and personnel support to the ET-2 mission throughout flight test planning and execution.

- *Cost Saving*: Affordable, unguided target vehicle representative of Tactical Ballistic Missile
- *Full Service*: Planning, coordination and execution of flight and ground tests
- *Flexible Launch Location*: Targets launched from 25K transportable target launcher
- *Government Furnished Equipment*: utilizes GFE motors
- *Data Collection*: Ultra-high data rate telemetry on mobile platforms
- *Data Analysis*: Trajectory, range safety, and link margin analyses and post-test data analysis at fidelity customized to the requirement

PROGRAM MISSION

Developed by the U.S. Army Space and Missile Defense Command's Technical Center, Economical Target-2 aims to provide a cost-effective solution for missile defense systems in need of low-cost sensor characterization articles. The Test Directorate will work with the customer from mission planning to target launch to ensure all test parameters are met.



TARGET DESIGN, MISSION PLANNING

ET-2 is a spin stabilized, unguided target that is representative of a tactical ballistic missile. The ET-2 design utilizes a government furnished equipment motor, which reduces manufacturing cost of the target.

WIND WEIGHTING

Due to its static fin design, ET-2 is sensitive to low-level winds. Multiple weather balloons are launched during the ET-2 countdown to retrieve wind data. In order to maintain desired trajectories, azimuth and elevation adjustments are made to the launcher throughout the countdown.

25K TRANSPORTABLE TARGET LAUNCHER (TTL)

The ET-2 launcher is transportable, and is capable of launching 25,000-pound maximum static load rockets. The design is supportive of launching an array of existing and future concept rockets. These configurable rail launchers are over-road and C-5 transportable, thus providing worldwide deployment capability. Their transportability allows unique launch positioning of test articles facilitating unique kinematic geometries. This pair of launchers enables simultaneous launches and provides new dynamics for testing a system's performance.

FUTURE TARGET ENHANCEMENTS

The ET-2 design can incorporate features to allow for future target enhancements such as a hit detection system, actuator controlled fins, guidance system, flight termination system, advanced payloads, encrypted telemetry data, etc.

DATA COLLECTION: TELEMETRY/OPTICS/ INFRARED

The Test Directorate offers resource support for ET-2 test events including transportable telemetry stations operable from unimproved sites. These can be operated stand alone or integrated with range or other systems. The division's mobile telemetry is capable of supporting very high data rate with the ultra-low bit error-rates required for reliable hit point detection data capture.

DATA ANALYSIS: 6-DOF, TRAJECTORY, PRE/ POST TEST

The Test Directorate performs trajectory, range safety, and link margin analyses as well as post-test data analysis at fidelity customized to the requirements. From planning, development, instrumentation, launch services, data collection and data analysis, the division's goal is to provide full service to Operational Weapon System Development and Testing through rigorous event-driven processes, lowered cost and custom requirements-based engineering.

For more information, please contact: USASMDC Public Affairs Office

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