

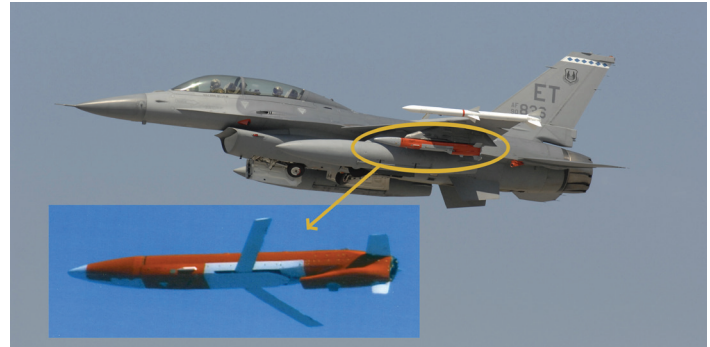
Miniature Air Launched Decoy (MALD) and MALD-Jammer (MALD-J)

Executive Summary

- In FY12, the Program Office converted the Miniature Air Launched Decoy (MALD) procurement line to MALD-Jammer (MALD-J). The Air Force will no longer procure any MALDs without the jammer.
- The Air Force Test and Evaluation Center (AFOTEC) completed IOT&E except for full mission-level testing, which is scheduled for October 2013.
- The Air Force launched 11 MALD-J vehicles in operational environments.
- Preliminary analysis indicates that MALD-J (and MALD) did not satisfy navigational accuracy requirements in operationally relevant environments.
- Preliminary results indicate that the Air Force's corrective actions for MALD have improved the materiel reliability of both MALD and MALD-J.

System

- MALD is a small, low-cost, expendable, air-launched vehicle that replicates how fighter, attack, and bomber aircraft appear to enemy radar operators.
- The Air Force designed the MALD-J as an expendable, close-in jammer to degrade and deny an early warning or acquisition radar's ability to establish a track on strike aircraft while maintaining the ability to fulfill the MALD decoy mission.
- In FY12, the Program Office converted the MALD procurement line to MALD-J. The Air Force will no longer procure any MALDs without the jammer.
- The F-16C/D and B-52 are the lead aircraft to employ MALD and MALD-J.



Mission

Combatant Commanders will use units equipped with:

- MALD and MALD-J to improve battlespace access for airborne strike forces by deceiving, distracting, or saturating enemy radar operators and Integrated Air Defense Systems.
- MALD to allow an airborne strike force to accomplish its mission by deceiving enemy radars and forcing air defense systems to treat MALD as a viable target.
- MALD-J to allow an airborne strike force to accomplish its mission by jamming enemy radars and air defense systems to degrade or deny detection of friendly aircraft or munitions.

Major Contractor

Raytheon Missile Systems – Tucson, Arizona

Activity

- AFOTEC completed testing of the MALD in FY12; the Air Force will no longer procure MALDs.
- The Air Force tested design changes in MALD intended to improve reliability in flight tests during FY12 under the Reliability Assessment Program (RAP).
- The MALD-J Program Office fired eight MALD-J missiles in FY13 as part of the Jammer Reliability Assessment Program (JRAP), which builds upon the MALD RAP and is intended to verify correction of reliability shortfalls in previous MALD testing. No failures were noted during these events.
- AFOTEC executed 4 operational test events as part of the IOT&E in accordance with a DOT&E-approved test plan, launching a total of 11 live missiles in FY13.
- AFOTEC launched 11 free-flight missiles, captive-carried 9 missiles on Sabreliner aircraft to assess MALD-J performance, and flew 13 missiles on either B-52H or F-16C/D aircraft wings to accumulate carriage time on the weapon.
- Four of the 11 free-flight vehicles experienced excessive navigational drift in their operational environment. Two of the remaining missiles were prematurely terminated due to range safety system failures.
- Full mission-level simulation, the final stage of the IOT&E, is scheduled for October 2013.
- The MALD-J program participated in a full mission employment test event, which included fifth-generation aircraft. No interoperability issues were observed.

AIR FORCE PROGRAMS

Assessment

- Preliminary analysis of IOT&E data indicates that MALD/MALD-J may not satisfy navigational requirements in operationally relevant environments.
- DOT&E is currently awaiting range data information and expects to publish a classified IOT&E report examining MALD-J system effectiveness and suitability, including deficient navigational accuracy problems upon completion of IOT&E.
- Mission planning testing events (during full mission employment testing) for the MALD-J program indicate the time needed to plan a full load of MALD-J vehicles is excessive (averaging seven hours per missile to plan).
- DOT&E will use a combination of MALD and MALD-J data to evaluate whether vehicle reliability problems observed during previous testing have been resolved. Since no failures in the MALD-J payload to date have occurred, and the other systems are otherwise essentially identical, combining these data is appropriate.

- Preliminary results of the JRAP show reliability corrective actions have improved the materiel reliability of MALD/MALD-J.
- The Air Force has not yet validated and accredited full mission-level simulation; validation and accreditation are necessary to ensure authentic, usable data.

Recommendations

- Status of Previous Recommendations. The Air Force satisfactorily addressed the FY12 recommendation.
- FY13 Recommendations. The Air Force should:
 1. Improve navigational accuracy in operational environments.
 2. Improve mission planning capabilities for the MALD-J program to reduce the time needed to plan a full load of MALD-J vehicles.
 3. Validate and accredit the Digital Integrated Air Defense System simulation facility for the MALD-J program.