Joint Helmet Mounted Cueing System (JHMCS)

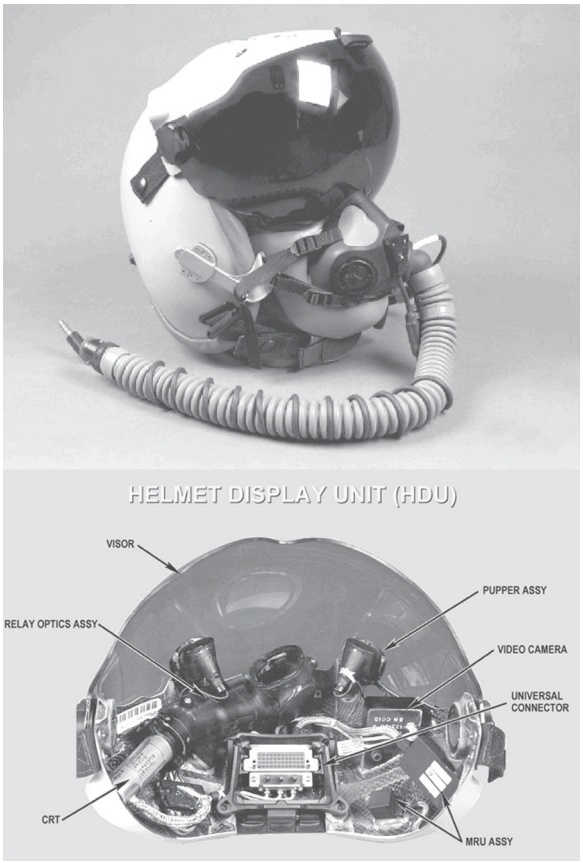
SUMMARY

- In January 2004, DOT&E published the beyond low-rate initial production report and evaluated the Joint Helmet Mounted Cueing System (JHMCS) as effective for daylight operations and not suitable for reliability reasons.
- The Services are exploring options to provide JHMCS compatibility with night vision goggles.

SYSTEM DESCRIPTION AND MISSION

The JHMCS is a modified HGU-55/P helmet that incorporates a visor-projected heads-up display to cue weapons and sensors to the target. It improves effectiveness in both air-to-air and air-to-ground missions. In close combat, a pilot must currently align the aircraft to shoot at a target. JHMCS allows the pilot to simply look at a target in order to designate it to one of the aircraft's weapons systems. This system projects visual targeting and aircraft performance information on the back of the helmet visor, enabling the pilot to see this information while looking outside the cockpit.

The Services will employ the JHMCS in the FA-18C/D/E/F/G, F-15C/D, and F-16 Block 40/50 aircraft with a design that is 95 percent common to all three platforms. The Air Force eliminated funding for JHMCS in the F/A-22. When used in conjunction with an AIM-9X missile, JHMCS allows a pilot to effectively designate and kill targets in a cone more than 80 degrees to either side of the nose of the aircraft, or high-off-boresight.



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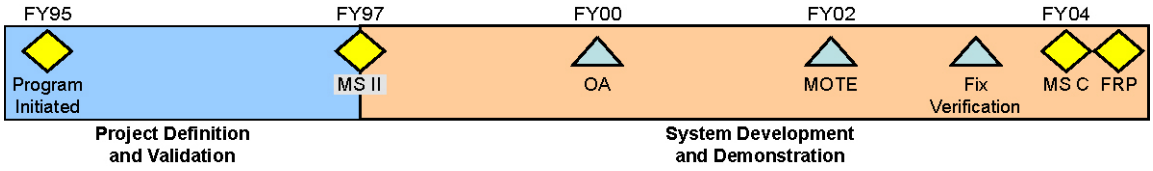
TEST AND EVALUATION ACTIVITY



In January 2004 DOT&E published the beyond low-rate initial production report and evaluated the JHMCS as effective for daylight operations and not suitable for reliability reasons. Multi-Service operational test and evaluation (MOT&E) of JHMCS began in June 2001 for the Air Force and October 2001 for the Navy, and ended in June 2002. The final MOT&E report recommended fix-and-verification of eight deficient areas prior to a full-rate production decision. From January through March 2003, the Air Force Operational Test and Evaluation Center and the Navy's Operational Test and Evaluation Force performed fix verification testing on the eight deficient areas. The Navy equipped two squadrons with the JHMCS as an early operational capability and they used it for approximately ten months, flying over 4,700 JHMCS hours, including combat in Iraq. After completing the correction of the eight deficient areas, the Services began full-rate production and fleet introduction of the JHMCS in January 2004.

TEST AND EVALUATION ASSESSMENT

Based on MOT&E data and test observations, DOT&E determined that JHMCS was operationally effective, but not operationally suitable due to significant deficiencies in reliability and maintainability. Since fleet introduction, the services have solved the reliability problems and achieved an acceptable system reliability rate.

JHMCS brings a significant increase in combat capability by allowing aviators to look and designate air and ground targets in a matter of seconds and without maneuvering their aircraft. This capability, however, has one significant limitation: limited night capability. The Services are exploring options to provide JHMCS compatibility with night vision goggles.