Suite of Integrated Radio Frequency Countermeasures (SIRFC) (AN/ALQ-211)

SUMMARY
- The Suite of Integrated Radio Frequency Countermeasures (SIRFC) Limited User Test (LUT) in 2001 demonstrated limited radar warning receiver effectiveness but poor jammer effectiveness. The system is currently in a development test phase (following corrective actions from 2001) with Initial Operational Test and Evaluation (IOT&E) planned for late 2005.
- The Test and Evaluation Master Plan (TEMP) and test plans are being drafted. An operational assessment will be conducted in 2QFY05.

SYSTEM DESCRIPTION AND MISSION
U.S. Army Special Operations Command intends for the SIRFC to be part of an integrated aircraft survivability system that provides warning and countermeasures to ensure optimum protection for the host aircraft. Original plans called for integration of the system on the AH-64D, MH-60K, and MH-47E helicopters, and the CV-22. The lead aircraft for SIRFC integration and test and evaluation was the AH-64D Longbow Apache, but the Army decided that SIRFC is no longer required on that platform. Development continues for Special Operations Command Aircraft, MH-47G, MH-60M, and CV-22.

SIRFC consists of two required sub-systems, the Advanced Threat Radar Jammer and the Advanced Threat Radar Warning Receiver (RWR). The system provides warning (situational awareness), active jamming (self-protection), and when necessary, expendable countermeasures control to defeat threat radar guided weapon systems. Future integration of SIRFC with the Suite of Integrated Infrared Countermeasures on the MH-47G and MH-60M will optimize multi-spectral threat countermeasures for those aircraft. SIRFC achieved Milestone II in FY95 resulting in an Engineering Manufacturing Development contract to produce five test articles supporting test and evaluation through IOT&E.

The government conducted developmental flight tests on the Longbow Apache in July and August 2001 and a LUT in September and October 2001. Analysis of the performance in the developmental test and the LUT indicated that, while SIRFC effectiveness as a RWR was superior to that of other RWRs tested, there were performance deficiencies. Jamming effectiveness in a threat environment was poor. As a result, the Army awarded a correction of deficiencies contract to the system development contractor. The Technology Application Program Office at Fort Eustis, Virginia, assumed test responsibilities following the Army’s decision not to continue development other than for Special Operations applications. The Army made a low-rate initial production (LRIP) decision to produce additional units for test and integration on follow-on platforms in May 2002. The corrective actions are being implemented in the LRIP units for further testing. SIRFC, which has not yet undergone an IOT&E, will undergo operational testing, planned for FY06, before the full-rate production decision. However, an additional LRIP-buy of eight systems, based on favorable results from the upcoming developmental tests, is planned prior to IOT&E.
Test activity in FY04 consisted of laboratory tests at Fort Monmouth, New Jersey, to evaluate performance of corrective actions and incremental software drops, as well as pole tests at Eglin Air Force Base and the Electronic Combat Range at China Lake to optimize electronic countermeasure techniques against the threats. Anechoic chamber testing was conducted at Patuxent River Naval Air Station to characterize installed performance. A Reliability Development and Growth Test has begun, with contractor and governmental developmental flight tests beginning in late 2004.

TEST AND EVALUATION ASSESSMENT
Results of the tests of the upgraded SIRFC have revealed no major problems. True indications of the upgraded SIRFC capabilities and performance will not be available until the government developmental and operational flight tests begin. Planned testing is adequate to support the current acquisition plan.