

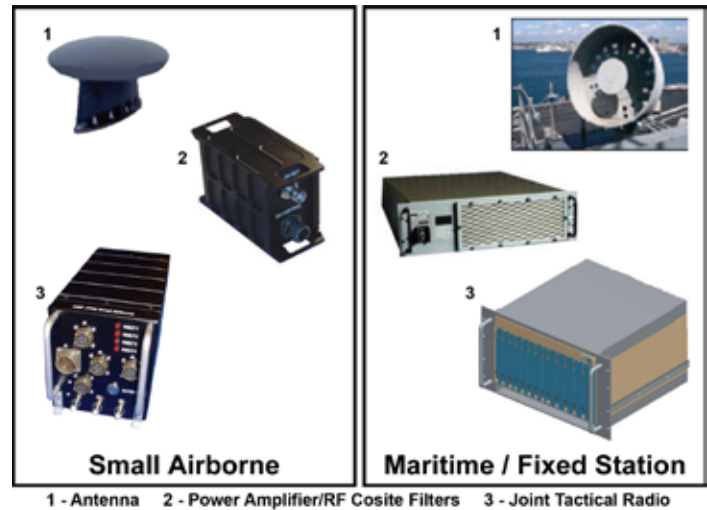
## Joint Tactical Radio System (JTRS) Airborne / Maritime / Fixed Station (AMF)

### Executive Summary

- The Airborne / Maritime / Fixed Station (AMF) Joint Tactical Radio System (JTRS) program is in the pre-Milestone B phase of acquisition. The Milestone B was postponed until November 2007 due to a reassessment of the AMF development and acquisition strategy caused by funding shortfalls in the program.
- DOT&E approved the AMF JTRS Test and Evaluation Master Plan (TEMP) in March 2007. Proposed program funding reductions for Milestone B resulted in cuts in the number of host platforms, test sites, and engineering design models available for test. These reductions have not had a significant impact on the overall test strategy outlined in the TEMP.
- Any significant re-structuring of the AMF JTRS program will necessitate a review of the continued adequacy of the current TEMP.

### System

- AMF JTRS is one of the product lines in the JTRS family of software configurable radios.
  - Communications waveforms operating in the radio frequency range of 2 Megahertz to 2 Gigahertz can be implemented in the AMF JTRS radio terminal, depending upon host platform communications requirements.
  - The AMF JTRS radio terminals are not intended to be standalone communications systems but must be integrated into host platforms, along with peripherals such as antennas, controls, displays, and high-power amplifiers to perform the communications mission.
  - The current production concept calls for two form factors, a Small Airborne and a larger Maritime/Fixed Station. The Small Airborne form factor has a requirement for two separate full duplex channels and the Maritime/Fixed Station has a minimum requirement of four separate full duplex radio channels.
- Development and acquisition will be evolutionary, resulting in increased communications and networking waveform capabilities. The AMF JTRS Increment 1 radio terminal



will include legacy and next-generation Internet Protocol networking voice, data, and video communications capabilities.

- AMF JTRS Increment 1 initial host platforms include the AH-64 and CH-47 helicopters, the C-130 airlift aircraft, and Guided Missile Destroyers.

### Mission

- Joint Force Component Commanders employ AMF JTRS to provide interoperable communications with maritime, land component, and aviation assets using legacy cumulative waveforms including Link-16 (a tactical data link) and future waveforms, including the Mobile User Objective System and the Soldier Radio Waveform, data link and digital voice communications, and networking capabilities.
- Commanders and platform operators use AMF JTRS to provide increased Service, joint, and Allied force communications interoperability resulting from the integration of shared communications waveforms in the AMF JTRS.

### Activity

- The AMF JTRS TEMP Annex, developed as a collaborative effort with the Air Force, Army, and Navy test agencies, was approved by DOT&E in March 2007 to support entry into Milestone B.
- The Milestone B was postponed until December 2007 to permit a comprehensive review of the AMF JTRS program. The re-assessment focused on the total ownership costs

associated with the proposed AMF form factors, platform integration costs, and program funding shortfalls.

- No testing was conducted during FY07.

### Assessment

- In May 2007, the planned procurement of engineering development models for contractor and developmental testing

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was reduced and the number of test locations consolidated to off-set shortfalls in program funding. These changes did not impact the basic test strategy outlined in the approved TEMP. The revised procurements include sufficient low-rate initial production units to support the IOT&E.

- To make efficient use of resources and reduce the time needed for operational test where appropriate, the AMF JTRS test strategy includes early involvement by Operational Test Agencies in planning and collecting data during contractor and developmental testing. Operational Test Agencies and DOT&E will independently evaluate applicable integrated test results along with dedicated operational test data.
- The AMF JTRS test strategy progresses from radio terminal box-level testing to host platform integration testing, and

culminates in multi-Service testing. The multi-Service testing will focus on interoperability and network stressing scenarios.

- Any significant re-structuring of the AMF JTRS program will necessitate a review of the continued adequacy of the current TEMP.

### Recommendations

- Status of Previous Recommendations. The AMF JTRS program has addressed FY06 recommendations with the development of the AMF JTRS Acquisition Strategy Report and the TEMP.
- FY07 Recommendation.
  1. The Program Office should update the TEMP following contract award.