

The Future of JTRS.  
Defined.



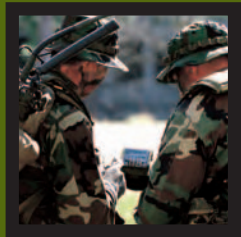
**HARRIS**

## Wave of the Future

Today, the paths of distinct military branches are intersecting more than ever. Units need to coordinate their joint operations with unprecedented speed and security. At home and abroad, the success of these critical missions depends largely on effective communications. This requirement has driven the creation of the Joint Tactical Radio System (JTRS), the U.S. military initiative to acquire a family of affordable, high-capacity tactical radios with interoperable line-of-sight/beyond-line-of-site (LOS/BLOS) C<sup>4</sup>I capabilities. While many may find the scope of the JTRS program daunting, Harris views JTRS as yet another opportunity to define the future of radio communications.

The cornerstone of JTRS is the development and deployment of Software-Defined Radio (SDR) technology through a standardized, open software architecture. Once achieved, waveform interoperability across a variety of radio platforms will be possible, extending radio hardware life cycles and facilitating the insertion of new technology and capability through software upgrades.

In many ways, Harris Corporation has been laying the groundwork for JTRS even before it was given a formal name. Our engineers are pioneers in the area of SDR technology, as evidenced by our digital FALCON™ II architecture, that has been applied to handheld, manpack, vehicular, and base station systems. FALCON™ II tactical radio products have been deployed throughout the world.



## The Radio of the Future... Demonstrated Today

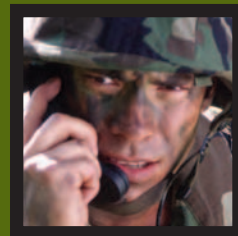
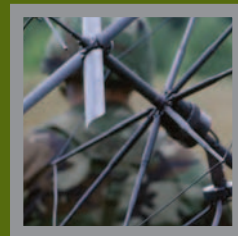
Harris was selected by the JTRS Joint Program Office (JPO) of the U.S Department of Defense (DoD) for its Step 2B architecture validation activities, validating the JTRS Software Communications Architecture (SCA) specification for battery-powered, manportable platforms. This effort involves implementing the SCA and two waveforms (voice and data) on the JTRS Manpack Testbed Radio (JMTR) prototype, based on Harris' FALCON™ II AN/PRC-117F radio.

The first demonstrations of these waveforms were successfully conducted in 2001. As a result of these demonstrations, the JTRS JPO further extended the JTRS manportable validation to additional areas, including addressing the complexities of increased processing power.

Harris will also validate the security element of the SCA, using its Sierra™ reprogrammable encryption module.

Harris continues as one of the industry leaders for JTRS

JTRS has been named the "DoD radio of tomorrow," so determining its viability of this program during the validation phase is a critical step in developing the DoD communications of the future. As history demonstrates, Harris has the talent and the experience to successfully implement the DoD's radio of the future, today.



## The Shape of Radios to Come

As a result of its extensive SDR experience and continued success in Step 2B validation efforts, Harris is participating in the U.S. Government Joint Tactical Radio System Program.

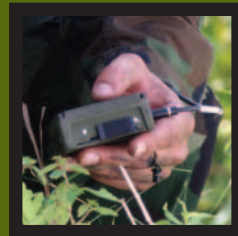
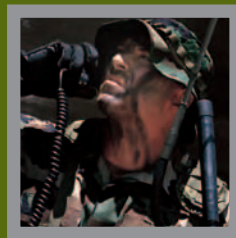
The first phase of JTRS procurement is led by the U.S. Army for the joint services. The Cluster 1 procurement effort will be spread across five years for the Engineering, Manufacturing, & Development (EMD) and Low Rate Initial Production (LRIP) of radio systems for Airborne Rotary Wing Aircraft and Ground Vehicular platforms.

With its demonstrated field performance of interoperable handheld, manpack, vehicular, base station, maritime, and fixed-site radios, Harris has already built the foundation to support the requirements of all Clusters. As Cluster 2, 3, and 4 proceed over the coming years, Harris expects to continue serving as a trusted DoD resource in this evolving endeavor.

### A Proven Leader in SDR Technology

In the late 1980s, Harris pioneered SDR and secure radio communications domains, providing reprogrammable, software-based radio solutions. The evolution of Harris' FALCON™ II family of radios represented a new era in radio technology.

The FALCON II radios cover the frequency range from 1.6 MHz to 512 MHz and are built from an object-oriented software implementation, promoting software reuse and high reliability.



## Integrated Networking Technology for the Digital Battlefield

The AN/PRC-117F(C) multiband, multimission radio is a key member of the FALCON II radio family, providing 30 to 512 MHz continuous frequency spectrum coverage. The AN/PRC-117F(C) is a manportable radio platform with embedded INFOSEC capabilities. It includes the most robust suite of fully certified military waveform applications available today.

### Reprogrammable INFOSEC for Today's and Tomorrow's Waveform Applications

The DoD JTRS initiative demands the use of reprogrammable INFOSEC solutions. Harris is at the industry forefront to meet this requirement. We provide embeddable security products that meet the most demanding INFOSEC needs. Our encryption, key management, and host interfacing capabilities reflect more than a decade of extensive experience in the high assurance security market.

Harris' Sierra™ Module combines the advantages of the government's high-grade security (Type 1) with the cost efficiency of a reprogrammable encryption module. Sierra provides a common security solution to users with multiple mission requirements, such as those specified by the JTRS Operational Requirements Document. Sierra is a definitive COMSEC solution for JTRS applications, ensuring interoperability of secure warfighter communications.



## Meeting the Needs of the JTRS Program and Beyond

As a Software-Defined Radio (SDR) pioneer, Harris patented SDR technology, allowing a reconfigurable radio architecture and developed the first implemented object-oriented radio software. Today, Harris continues to provide radios with unsurpassed performance in high-speed data waveforms. We are poised to supply a complete family of JTRS platform configurations for all Clusters of the JTRS Program. Whether the requirements call for handheld, manpack, vehicular, base station, maritime, or fixed-site radios, we have the experience and expertise to deliver.



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\*quantities are limited.

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