



AN/PRC-148 JTRS ENHANCED MBITR (JEM) FEATURES

The AN/PRC-148 JEM, an evolution of the AN/PRC-148 MBITR, is the smallest, lightest, and most power-efficient, tactical handheld radio in use today covering the 30-512 MHz frequency range. The AN/PRC-148 JEM's Software Communications Architecture (SCA)-compliant platform hosts all of today's core narrowband waveforms and enables the integration of program enhancements, future waveforms, and additional modes of operation, allowing the radio to be used for a wider variety of missions and providing maximum user flexibility. The AN/PRC-148 JEM is field upgradable through software downloads.

There are approximately 200,000 AN/PRC-148s (MBITRs and JEMs) deployed globally. Thales offers an upgrade program to trade in AN/PRC-148 MBITRs for AN/PRC-148 JEMs.

Available features and waveforms:

- **SINGARS**

Single Channel Ground and Airborne Radio System (SINGARS) is the primary VHF waveform used by the U.S. Department of Defense. This frequency hopping Electronic Counter-Counter Measures (ECCM) waveform and the Frequency Hop Master mode are both available in the AN/PRC-148 JEM, allowing full interoperability with all legacy VHF systems running the SINGARS waveform. Also available: Radio Broadcast Situational Awareness (RBSA); Frequency Hopping 2 interoperability in accordance with MIL-STD-188-241-1. Frequency range of 30 to 88 MHz.

- **SATCOM Integrated Waveform (IW)**

The newly-fielded SATCOM DAMA successor, SATCOM IW doubles capacity for communications services over legacy DAMA, increases data throughput services, improves voice communications quality through inclusion of MELP voice encoding, and improves overall usability through a more intuitive human-machine interface. A dedicated SATCOM capability based on MIL-STD 188-181C is provided for users with that access. Non-proprietary, in accordance with MIL-STD-188-181C (5 kHz and 25 kHz UHF SATCOM) and MIL-STD-188-183B (5 kHz and 25 kHz multiple access UHF SATCOM).

THALES

AN/PRC-148 JTRS ENHANCED MBITR (JEM) FEATURES (continued)

- **Project 25, AES**

Project 25 (P25) in the AN/PRC-148 JEM allows interoperability with public safety sectors operating in the conventional mode. P25 is a suite of public safety standards for interoperable digital two-way wireless communications for use by federal, state/province and local public safety agencies in North America to enable them to communicate with other agencies and mutual aid response teams in emergencies. AES is the Advanced Encryption Standard.

- **High Throughput Waveform (HTW)**

HTW provides increased data throughput capabilities of up to 56 kbps through a 25 kHz Line-of-Sight channel, allowing an increase of up to 3.5 times the over-the-air data speed relative to the standard AN/PRC-148 data rate of 16 kbps. This option provides significantly improved performance. Non-proprietary, in accordance with MIL-STD-188-181B.

- **Over-the-Air-Cloning (OTAC)**

OTAC provides a wireless capability for programming/configuring multiple radios at once without the need for a cabled connection, reducing mission planning time and errors associated with individual hand entries.

- **Retransmission**

This feature allows two AN/PRC-148 radios to be configured to provide retransmission capability, thus providing range extension in difficult urban or terrestrial situations.

- **Mixed Excitation Linear Predictive Vocoder (MELP)**

This option provides an enhanced vocoder at 2400 bps for improved voice quality and interoperability in ANDVT and Dedicated SATCOM IW modes.

- **Advanced Narrowband Digital Voice Terminal (ANDVT)**

The secure voice terminal for low bandwidth secure voice communications throughout the U.S. Department of Defense, ANDVT allows AN/PRC-148 JEM users greater access to UHF SATCOM nets. 5 kHz bandwidth, maximum 2400 baud rate.

- **HAVEQUICK I/II**

HAVEQUICK is a secure air-to-air and ground-to-air communications capability utilizing a time-of-day GPS feed and frequency hopping ECCM waveform. In accordance with MIL-STD-188-220. Frequency range of 225 to 400 MHz.

