



AN/PRC-148 MBITR

Multiband Inter/Intra Team Radio



- Contiguous 30-512 MHz Coverage
- 100 Programmable Presets
- Smallest and Lightest Multiband Handheld Available
- Type III DES; NSA Endorsed Type I Encryption
- 2 Meter and 20 Meter Immersible Variants
- Waveforms/Modes (Implemented and Planned)
 - AM/FM
 - HAVEQUICK I/II
 - MIL-STD-188-241-1/-2 (SINGARS)
 - ANDVT (LPC-10, MELP Vocoders)
 - Retransmission
- Part of a Complete Communications System for Mounted and Dismounted Operation (See page 3 for details)

Serving U.S., Allied, and Coalition Forces Globally



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Multiband Inter/Intra Team Radio



In a ruggedized package weighing less than two pounds, the combat-proven AN/PRC-148 MBITR replaced more than 60 pounds of communications equipment with no loss in operational capability. The AN/PRC-148 MBITR has provided unprecedented interoperability with existing military and commercial legacy radio systems for years and, with software upgradeability, ensures future operation with the next generation of communications equipment. Seven programmable devices, supported by flash memory, are incorporated into the AN/PRC-148 MBITR architecture, creating a truly software-based, handheld radio. The smallest, lightest, and most-widely fielded tactical handheld radio covering the 30-512 MHz frequency range, the AN/PRC-148 MBITR has been used extensively in Operation Enduring Freedom and Operation Iraqi Freedom. **JTRS configuration of the AN/PRC-148 also available—AN/PRC-148 JEM.**

TECHNICAL SPECIFICATIONS

Frequency Range

- 30-512 MHz contiguous
- 5 kHz and 6.25 kHz step size

Frequency Stability

- 5 ppm

Waveforms/Modes of Operation

Implemented and Planned

- AM/FM
 - Non-secure voice
 - Non-secure narrowband voice (FM)
 - 12 and 16 kbps secure voice
 - 12 and 16 kbps secure synchronous data
 - Secure asynchronous data to 4800 bps
- HAVEQUICK I and II
 - Secure and non-secure single channel voice
 - Secure and non-secure frequency hopping voice
- MIL-STD-188-241-1/-2 (SINCGARS)
 - Secure and non-secure single channel voice
 - Secure and non-secure frequency hopping voice
 - Secure single channel and frequency hopping data (600, 1200, 1200N, 2400, 2400N, 4800, 4800N, 9600N, 16000, RS-232)
- ANDVT
 - Secure narrowband voice (LPC-10, MELP Vocoders)
 - Secure 2400 bps synchronous data
- Retransmission Modes
 - AM/FM
 - ANDVT
 - SINCGARS

Receive Sensitivity (Digital/Analog)

- FM: -116 dBm 12 dB SINAD (-118 dBm typical)
- AM: < 1.5 μ V 10 dB SINAD

Adjacent Channel Rejection

- 45 dB at \pm 25 kHz

Spurious and Image Rejection

- > 58 dB

Receive Audio Distortion

- < 10% at Rated Audio Power

Acoustic Output Power

- > 85 dB SPL

Transmit Output Power

- 0.1, 0.5, 1.0, 3.0 and 5.0 Watts (FM and PSK)
- 1.0 and 5.0 Watts (AM)
- User selectable

Transmit Characteristics

- Radiated spurious output: < -13 dBm
- Audio distortion: < 10%
- Adjacent channel power ratio: > 45 dBc

Reliability

- MTBF: > 30,000 hours field measured
- MTTR: < 8 minutes

Emergency Beacons and GPS

- AM Swept Tone Beacon
- GPS interface to PLGR, DAGR, and the Thales Remote Control Unit with GPS

TEMPEST Compliance

- NSTISSAM TEMPEST/1-92, Level II
- NACSEM 5112

Interoperability

Includes::

- AN/PRC-77, AN/PRC-113, AN/PRC-117A-G, AN/PRC-127, AN/PRC-139, AN/PRC-152, AN/PSC-5C/D, AN/VRC-12 Series, ARC-164, ARC-231, RT-1523A-F
- MX300 Series, Saber Series

Programmable Channels

- 100 memory preset channels
- Menu selectable groups
- Clear/Encrypted mode selection on a channel-by-channel basis
- User programmable from:
 - Front panel menu
 - PC Programmer
 - Radio-to-radio cloning
 - Remote Control Unit with GPS

Controls

- On/Off/Volume/Whisper/Zeroize knob
- 16-Position channel select knob
- Large recessed tactile push-to-talk switch
- Squelch override push-button
- Backlit 7-button keypad (NVG compatible)
- Two user programmable function keys
- Software configurable option keys

Indicators

- 32 x 80 pixel backlit LCD (NVG compatible)
- Intuitive menu driven user interface
 - Channel name/frequency
 - Group name
 - Clear/Secure mode
 - Key location
 - Battery capacity
 - Transmit power

Connectors

- 50 Ohm TNC female (antenna)
- 10-pin multi-function immersion
- Sealed top connector (20 meter)
- 6-pin multi-function top connector (2 meter)
- 18-pin side connector for extended capabilities and upgrades
- RF side connector for cable-free system expansion

COMSEC

- US Type 1
- VINSON and FED-STD-1023
- Receive OTAR compatible
- DES (Optional) 12kbps voice

Physical Parameters (with battery)

- Length: 8.44 inches (21.44 cm)
- Width: 2.63 inches (6.68 cm)
- Depth: 1.52 inches (3.86 cm)
- Volume: 33.74 cubic inches (552.8 cubic cm)
- Weight: 30.6 ounces (867.5 gm)

Finish

- NBC compatible
- Matte black, non-reflective

Environmental Specifications

- Temperature
 - Operating: -31° to +60° C
 - Storage: -33° to +71° C
- Humidity: 95% non-condensing
- Shock: EIA-603-1992
- Vibration: EIA-603-1992
- Altitude: 30,000 feet
- Immersion:
 - 20 meter version
 - 2 meter version

Batteries

- Rechargeable Lithium-Ion
 - 4800 mAh: > 12 hours life at 5 Watts*
 - Optional: 5800 mAh: > 15 hours life at 5 Watts*
- Non-rechargeable battery holder
 - Commercial Lithium cells
 - > 8 hours life at 5 Watts*

*Standard duty cycle (8:1:1)

Antenna Set

- 30-88 MHz
- 90-512 MHz
- Additional band specific antennas available

Complete AN/PRC-148 System Elements:

- Dismounted/Fixed Site:
 - 5 Watt Multiband Inter/Intra Team Radios (AN/PRC-148 JEM, AN/PRC-148 MBITR, and PRC6809 MBITR)
 - 20 Watt Man Portable System
 - 20 Watt and 50 Watt Base Stations
 - 20 Watt Tactical Repeater
- Vehicular:
 - 20 Watt and 50 Watt Vehicle Adapters
 - 20 Watt AN/VRC-111 Vehicle Adapter Amplifier
 - 50 Watt AN/VRC-111 Vehicle Adapter Amplifier – Dual Channel
 - 50 Watt Vehicle Adapter Amplifier – Single Channel
 - 50 Watt Low Profile Vehicle Adapter
 - 50 Watt AN/VRC-113 Cradle Vehicle Adapter
- Accessories (partial list):
 - Remote Control Unit with GPS
 - Radio Holster
 - Radio System Carrying Bag
 - AC Powered Single-slot Battery Charger
 - AC/DC Powered 6-slot Battery Charger
 - AC Powered 6-slot Battery Charger
 - DC Powered 2-slot Tactical Charger
 - Non-rechargeable Battery Cell Holder
 - Band Specific Antennas
 - Specialized Audio Accessories
 - Programming, Cloning, Data, GPS, PDC, and Retransmission Cables
 - Special Power Adapter Interface and Cables
 - Power Amplifiers



Photo Courtesy of Air Force Link

- Non-U.S. Government sales are subject to U.S. Government approval.
- Specifications are subject to change without notice.



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