



## PRC6809 MBITR

Multiband Inter/Intra Team Radio



- Contiguous 30-512 MHz Coverage
- Selectable RF Output Power (0.1- 5.0 Watts)
- 30.6 Ounces (867.5 gm)
- 33.74 Cubic Inches (552.8 cubic cm)
- DES/Type III and AES/256-bit Encryption Options
- 2 Meter and 20 Meter Immersible Variants
- Waveforms/Modes:
  - HAVEQUICK II Frequency Hopping ECCM Waveform
  - Capability for Country-specific ECCM Waveforms
  - AM/FM
  - Voice/Data
  - Retransmission
  - Situational Awareness
  - Enhanced Situational Awareness (optional)
- Part of a Complete Communications System for Mounted and Dismounted Operation

**Advanced Multiband Capabilities in a Rugged, Lightweight Package**



# PRC6809 MBITR

## Multiband Inter/Intra Team Radio



In a ruggedized package weighing approximately two pounds, the PRC6809 MBITR serves defense, allied, and coalition forces globally. Based on the combat-proven AN/PRC-148 MBITR, the PRC6809 MBITR provides unprecedented interoperability with existing military and commercial legacy radio systems. And with software upgradeability, future operation with the next generation of communications equipment is ensured. The multi-processor architecture of the PRC6809 MBITR creates a truly software-based, handheld radio. The PRC6809 MBITR can be utilized with the full set of AN/PRC-148 system components for mounted and dismounted operations. (See page 3 for complete list.)

**Technology for real world situations—proven.**

### TECHNICAL SPECIFICATIONS

#### Frequency Range

- 30-512 MHz Contiguous
- 5 and 6.25 kHz Step Size

#### Modulation Types

- AM and FM (Single Channel)
- FM Narrowband (Single Channel)

#### Frequency Stability

- Better than  $\pm 5.0$  PPM

#### Receive Sensitivity

- -116 dBm 12 dB SINAD (-118 dBm typical)
- AM: < 1.5  $\mu$ V 10 dB SINAD

#### Adjacent Channel Rejection

- Greater than 45 dB at  $\pm 25$  kHz

#### Spurious & Image Rejection

- Greater than 58 dB

#### Third Order Intercept Point

- Greater than +5 dBm

#### Receive Audio Distortion

- Less than 10% at Rated Audio Power

#### Acoustic Output Power

- Greater than 85 dB SPL

#### Transmit Output Power

- 0.1, 0.5, 1.0, 3.0 & 5.0 watts (FM)
- 1.0 & 5.0 watts (AM)
- User Selectable per channel

#### Transmit Characteristics

- Radiated Spurious Output: < -13 dBm
- Audio Distortion: Less than 10%
- Adjacent Channel Power Ratio: >62 dBc

#### Reliability

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

#### Emergency Beacons

- AM Swept Tone Beacon

#### Interoperability (Plain Text)

- AN/PRC-77, AN/PRC-113, AN/PRC-117A-F, AN/PRC-139, AN/PSC-5C/D, AN/VRC-12 Series, RT-1523A-F
- MX300 Series, Saber Series, XTS 3000, XTS 5000
- Thales 25, Thales Liberty™ Multiband Land Mobile Radio (LMR)

#### Programmable Channels

- 100 Memory Preset Channels
- Menu Selectable Groups
- Clear/Digital Voice Mode Selection on a Channel-by-Channel Basis
- User Programmable from:
  - Front Panel Menu
  - PC Programmer
  - Radio-to-Radio Cloning

#### Controls

- On/Off/Volume/Whisper Knob
- 16-Position Channel Select Knob
- Large Tactile Push-To-Talk (PTT) Switch
- Squelch Override Push-button
- Backlit 7-Button Keypad (NVG Compatible)
- Software Configurable Option Keys

#### Indicators

- 32 x 80 Pixel Backlit LCD (NVG Compatible)
- Intuitive Menu Driven User Interface
  - Channel Name/Frequency
  - Group Name
  - Clear/Digital Voice Mode
  - 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

#### Encryption

- Type-III DES (Optional)
- 256-bit AES (Optional)

#### 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:
  - PRC6809-ABR-BAS 20 Meter Version
  - PRC6809-BBR-BAS 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 Hour Life at 5 Watts+

\*Standard Duty Cycle (8:1:1)

### Data

- 12 and 16 kbps synchronous

### Antenna Set

- 30-90 MHz
- 90-512 MHz

### 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 Australian Government Department of Defence

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





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**Intertek**

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