

PRC3160

HF Tactical Manpack Radio



- **1.6 to 30 MHz, 10 Hz Steps**
- **100 Programmable Memory Channels**
- **Digital Signal Processing (DSP)**
- **Frequency Hopping, Voice Encryption Options**
- **Rugged (MIL-STD-810), Completely Immersible**
- **Manpack/Mobile/Base Configurations up to 400W**
- **Internal Digital Automatic Antenna Tuner**
- **Full Alpha-Numeric Keypad and Display**
- **ALE**
- **BITE to Module Level**

Datron's PRC3160 is a DSP-based HF/SSB tactical manpack transceiver designed for demanding, high visibility battlefield applications. It is a 20W radio operating over the full 1.6 – 30 MHz frequency hopping range with 10 Hz resolution featuring frequency hopping, voice encryption, and ALE. The PRC3160 is rugged, lightweight, easy to program and use, and can be configured with numerous add-on accessories to create a wide variety of manpack, mobile or base station systems.

Standard configurations are available at the 20W, 100W, and 400W levels using the basic PRC3160 manpack radio as the core. Datron accessory equipment including shock mounts, RF booster amplifiers, antenna tuners, modems, and remote control units can be added as required to fulfill specific mission needs. All systems are MIL-STD-810 compliant and completely immersible to satisfy the most demanding environmental conditions.

The PRC3160 is designed for operation on any frequency in the 1.6 – 30 MHz range. 100 programmable memory channels are available and can be programmed either from the front panel of the radio or remotely from a computer. The radio contains a comprehensive BITE program to test essential transmit and receive functions as well as static functions like battery status.

The PRC3160 has a built-in digital antenna tuner that automatically matches the standard 3m HF whip and various long-wire antennas over the full frequency range. The tuner has a "memory" mode whereby it stores the tuned configuration for up to 100 channels to facilitate scan mode operation and to allow for silent tuning when necessary.

Key internal options available for the PRC3160 include frequency hopping, voice encryption, and ALE. These options can be installed at any time into standard PRC3160 radios. The radio's internal modem, alpha-numeric keypad, and large display allow data message capability without external data devices. The PRC3160 also works with external high-speed HF modems like Datron's 5300-series and the MIL-STD-10A/B.

PRC3160 SPECIFICATIONS

GENERAL

Frequency Range	1.6 to 30 MHz;
Available Channels	2,840,000 in 10 Hz steps
Preset Channels	100 Programmable memory channels
Frequency stability	1 ppm
Scanning	Radio and ALE scan modes
Channel Programming	From front panel or remotely via computer
Modes (standard)	USB, LSB, CW, AME, Data; simplex or half-duplex
Modes (optional)	ECCM, Voice Encryption, ALE, FSK Modem
Input Power Requirements	11 – 15 Vdc;
Battery Pack	Sealed lead acid; NiCd
Low Battery Indicator	LCD battery icon
Antenna Port	BNC for 50 ohm broadband antennas or for external amplifier; whip/wire antenna port.
Display	Backlit, multi-function custom LED
Input Protection	Fully protected against antenna mismatch (Tx), up to +51dBm input (Rx), and high temperature

Mechanical, Environmental

Size	8.9" x 3.6" x 8.9" (22.6cm x 9.1cm x 22.6cm); W x H x D, without battery pack. 12.0" (30.5cm) D with battery
Weight	7.5 lbs (3.4 kg), without battery pack; 12.5 lbs (5.7kg) with NiCd battery; 14.0 lbs (6.4kg) with lead acid pack
Package	OD, sealed, including battery pack.
Temperature	-30 to +60 degrees C., operating
Shock, Vibration, Humidity, Fungus, Altitude	Per MIL-STD-810

Transmitter

RF Power Output	5/20W, PEP or average, manpack; 5/20/100/400W in mobile configuration
Duty cycle	Continuous service, all modes
Harmonics	-45 dB (2 to 30 MHz), with ATU

Receiver

Sensitivity	10 dB SINAD for 0.5uV input (SSB); 0.35uV for 10 dB SINAD (CW); 3.0uV for 10 dB SINAD (AME, 30%)
Squelch	Audio derived, noise immune
Audio	20mW into 500 ohm load; 0 dBm into 600 ohms.

Antenna Tuning

Antennas	Whip and long wires; fully automatic antenna tuning; 100 channel memory.
Tune time	< 2 secs initial tune; < 100ms, memory mode for preset channels
Antenna Switching	Tuner bypassed and 50 ohm port automatically engaged when whip (or long-wire) antenna removed

Note: all specifications subject to change without notice



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