

PRC1099A

HF Tactical Manpack Radio



- **1.6 to 30 MHz, 10 Hz Steps**
- **100 Programmable Memory Channels**
- **Rugged (MIL-STD-810), Completely Immersible**
- **Manpack/mobile/base Configurations**
- **5/20/100/400 Watts**
- **Internal Automatic Antenna Tuner**
- **Remotely Controllable**
- **FED-STD-1045A ALE**
- **BITE to Module Level**
- **Multiple Battery Charging Options**

Datron's PRC1099A is an 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 range with 10 Hz resolution. The PRC1099A is rugged, lightweight, easy to use, and can be configured with numerous add-on ancillaries and 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 PRC1099A 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. Each high-power configuration is designed so that the core radio can be quickly removed ("jerk-and-run") for emergency use of the PRC1099A as a manpack. All systems are MIL-STD-810 compliant and completely immersible to satisfy the most demanding environmental conditions.

The PRC1099A is designed for SSB operation on any frequency in the 1.6 – 30 MHz range. 100 programmable memory channels are available; these channels 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, memory and display.

The PRC1099A has a built-in antenna tuner that automatically matches the standard 3m HF whip (AT-271A/U) 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.

A variety of internal options are available for the PRC1099 including FED-STD-1045A ALE. The radio is remotely controllable and the mobile configurations feature an extended control unit (PRC1099-ECU).

Datron's PRC1099A has a proven track record, having been successfully deployed around the world, providing reliable tactical HF communications in the harshest battlefield environments.

PRC1099A SPECIFICATIONS

General	
Frequency Range	1.6 to 30 MHz;
Available Channels	2,840,000 in 10 Hz steps
Preset Channels	100 Programmable memory channels
Scanning	Radio and ALE scan modes
Channel Programming	From front panel or remotely via computer
Modes	USB, LSB, CW, AME; simplex or half-duplex
Input Power Requirements	11 – 15 Vdc
Battery Pack	BB-LA6 sealed lead calcium; BA5598/U Lithium (case holds spare battery)
Low Battery Indicator	LCD battery icon
Antenna Port	BNC for 50 ohm broadband antennas or for connection to external amplifier; whip antenna port.
Display	Backlit, multi-function custom LED
Mechanical, Environmental	
Size	11.1" x 4.1" x 9.25" (28.2cm x 10.5cm x 23.5cm); W x H x D, including battery pack.
Weight	9.7 lbs (4.4 kg), w/o battery pack; BB-LA6 pack is 2 lbs (0.9kg).
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	-50 dB (2 to 30 MHz)
Receiver	
Sensitivity	10 dB SINAD for 0.5uV input
Squelch	Audio derived, noise immune
Audio	500mW into 16 ohms; 50mW at 150 ohms; 0 dBm into 600 ohms.
Antenna Tuning	
Antennas	Whip (AT-271A/U) and long wires (use LWA for wires longer than 15m); fully automatic antenna tuning; 100 channel memory.
Tune time	1-3 seconds initial tune; 20ms, memory mode for preset channels (no RF output in memory tune mode)
Antenna Switching	Tuner bypassed and 50 ohm port automatically engaged when whip (or long-wire) antenna removed
Internal Options	
1099ALE	FED-STD-1045A ALE

Note: all specifications subject to change without notice



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