

## PRC1099A HF Tactical Manpack Radio




Datron's PRC1099A is an HF/SSB tactical manpack transceiver designed for demanding 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 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 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 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 for scan mode operation and silent tuning when necessary. Internal options available for the PRC1099 include FED-STD-1045A ALE.

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

- **1.6 to 30 MHz, 10 Hz Steps**
- **100 programmable memory channels**
- **Rugged (MIL-STD-810); immersible**
- **5/20/100/400 watts**
- **Internal automatic antenna tuner**
- **Remotely controllable**
- **FED-STD-1045A ALE**
- **BITE to module level**
- **Multiple battery charging options**

# 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	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 LCD

### 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 duty service at 5W
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 @ 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 (typical); 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
---------	-------------------

