

## RT7000

Rugged HF Transceiver

**Radios: Tactical HF**



The RT7000 is a rugged, 1.6 to 30 MHz, HF/SSB transceiver designed to provide long distance voice and data communications. The RF output power is rated at 125 W, PEP and 100 W, average, and there is complete protection against antenna mismatch. Modes include USB, LSB, CW, and AME; and up to 1000 preset memory channels are available.

A wide variety of mobile and base station system configurations are offered with RF power levels up to 5000 W that include desktop and rack-mounted systems with remote control and broadband or narrowband antenna systems. Models are available in either + 12 V DC or + 28 V DC for use in any type of vehicle and are fully protected against input power disturbances. The radios are waterproof and ruggedly built to meet the environmental specifications in MIL-STD-810D, E, and F for operation in harsh environments. The radios now include as standard a DSP-based voice enhancement module to enhance the received voice quality. Automatic BITE capability, with fault detection down to the module level, is standard in all RT7000s. BITE status messages are shown on the display to allow even unskilled operators to easily repair the radio at the field level.

A number of internal options are available for the RT7000 transceivers. For automatic selection of best channel and station-to-station linking, the RT7000 offers MIL-STD-188-141B automatic link establishment (ALE). Voice encryption, impulse noise blanking, and special data and CW filters are other embedded features that can easily be added to the standard transceiver.

A complete line of accessories are available for the RT7000 including RF booster amplifiers, antenna tuners, high-speed modems, rugged notebook computers, and HF E-mail and network management application software to provide comprehensive HF communications solutions. A variety of remote control options are offered including extended front panel control, long-range remote control and high-speed remote control.

- Rugged 125 W HF transceiver
- Mobile and fixed station
- Continuous duty operation – voice and data
- MIL-STD-188-141B ALE
- Voice encryption
- Remote and extended control capability
- Core of high-power systems
- B.I.T.E. capability
- Separate receivers and transmitters available
- MIL-STD-810 tested RT7000 Rugged HF Transceiver



## General Specifications

<b>Frequency Range</b>	1.6 to 30 MHz (TX); 100 kHz to 30 MHz (RX); 10 Hz channel spacing
<b>Preset Channels</b>	256, standard; 1000, optional
<b>Scanning</b>	Multiple scan groups, operator-selectable scan rates
<b>Channel Programming</b>	From front panel or dedicated remote control console
<b>Frequency Stability</b>	0.5 ppm
<b>Modes</b>	USB, LSB, CW, AME; simplex or half-duplex
<b>Input Power Requirements</b>	11 – 16 V DC (+ 12 V DC models); 20 – 32 V DC (+ 28 V DC models)
<b>Input Power Protection</b>	Reverse polarity, transient and under/over-voltage
<b>Antenna Port</b>	50 $\Omega$ , type N connector
<b>Antennas</b>	50 $\Omega$ broadband or narrowband with antenna tuner (RAT7000B, RAT1000C)
<b>Interface</b>	Control: two COM ports - RS232; optional EIA RS422/423/485 COM2 port available Audio: 600 $\Omega$ , balanced and isolated

## Mechanical and Environmental Specifications

<b>Size</b>	
• Height	15.24 cm
• Width	35.56 cm
• Depth	45.72 cm
<b>Weight</b>	15.86 kg
<b>Cooling</b>	Rear panel heatsink; RT7000FAN-1 Fan Kit (optional) – recommended for continuous duty or any data mode operation
<b>Immersion</b>	to 1 m
<b>Temperature</b>	- 30°C to + 60°C, operating
<b>Shock, Vibration, Humidity, Fungus, Sand and Dust</b>	Per MIL-STD-810D, MIL-STD-810E, and MIL-STD-810F

<b>Transmitter</b>	
• RF Power Output	125W, PEP; 100W, average; programmable – 3 levels
• Duty Cycle	Continuous service, all modes
• Harmonics	- 60 dB (2 to 30 MHz)
<b>Receiver</b>	
• Sensitivity	- 113 dBm @ 10 dB SINAD (2 – 30 MHz)
• Attenuator	+ 20 dB, operator selectable
• Audio	5 W into 4 $\Omega$ ; 0 dBm into 600 $\Omega$



September 2018

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