

PRC-4075 Tactical 500 Watt HF Transmitter

- Liquid cooled linear amplifier
- 1.5 30 MHz continuous coverage
- 500 W continuous duty cycle (100%)
- USB, LSB (SSB), CW, FSK, AM, ISB (Data)
- 2G & 3G Automatic Link Establishment (ALE) options
- Digital Voice and Secure Digital Voice
- Housed in rugged 5RU rack mount case
- IP Connectivity
- Wireless operation via iOS, Android & Windows devices

The Barrett 500W Tactical HF Transmitter (P/N: 4090-08-10) is a compact easily deployed communications solution developed for tactical base station applications. The transmitter comes as a complete package with our PRC-4090 exciter, power supply, 4075 linear amplifier and interconnecting cables all pre connected in a rugged 19" 5RU rack mount case. The 4075 linear amplifier unit (lower rack mount case shown in image to the right) can be ordered as an individual unit under P/N: 4090-08-05.

The 4075 linear amplifier is designed and engineered for modern communications which are heavily data orientated, requiring the equipment to work at high duty cycles for extended periods of time. The unique liquid cooled design increases cooling efficiency resulting in less system deterioration due to overheating in the power stages, extending overall equipment service life.



The 500W tactical HF transmitter natively supports the Barrett PRC-4090 HF SDR Transceiver/Exciter



The amplifier natively supports the Barrett PRC-4090 SDR Transceiver/Exciter (or similarly configured Barrett 4050 Exciter) which when coupled requires no further tuning or adjustment. A flexible I/O interface and analogue ALC feedback provide the transceiver/exciter full control over final output power. Intelligent electronic controls protect the amplifier from input and output overload while providing a sophisticated early warning and diagnostic interface for system monitoring and event logging. Customisable auxiliary ports are also available for enhanced system control.

The Barrett ISO9001 Quality Assurance Program ensures consistent performance and the highest reliability.





500W Tactical HF transmitter



Typical configuration

PRC-4090 HF SDR Transceiver/exciter

PRC-4090 System docking station

PRC-4090 AC power supply/battery charger

PRC-4090 Control handset

Amplified speaker

4075 Linear amplifier (500W)

4075 50V DC Power supply

Supro Box 19" 5RU Anti shock rack mount case

General Specifications

Frequency coverage 1.5MHz to 30MHz (reduced

performance below 1.6MHz)

 \pm 0.5 PPM -30°C to +70°C (\pm 0.1 Frequency stability

PPM available optionally) (PRC-

4090 Transceiver/Exciter)

Channel capacity 1000 with PRC-4090 HF Transceiver Modes

J3E (USB, LSB) - H2B (AM) - J2A (CW) -(CF (Custom Filter) - ISB

(data option)

Power output 500W PEP

Duty cycle 100%, Continuous PEP, CW **Exciter** PRC-4090 HF SDR transceiver **External Dimensions** Each 5RU case 900 x 570 x H 374

mm including lids

4075 Linear Amplifier Specifications

 $500W \pm 1.5 dB$ **Power Output CW**

+25 dB **Power Gain**

Harmonics & Spurious Less than -55 dB

ALC Voltage (output) $0 \sim 10 \text{V}$ **Filter Type** 7 Band LPF

Dimensions 178H x 482W x 480D mm

excluding handles and I/O

connectors

50V dc @ 60A, 24V dc @ 2.5 A **Power Requirements**

Rack Height 5RU, 19" Rack mount (Amplifier

and 50V power supply only)

Weight 35 kg (77 lbs)

Cooling Liquid cooled, Water, Propylene

Glycol mixture

Temperature -20°C to +65°C operational,

-40°C to +85°C storage

Humidity 95% relative, non condensing

Altitude 3000 m above sea level (not

airborne), 9000m transportation

Input overdrive protection +6 dBm max

Output VSWR protection 3:1 nominal all magnitude and

> phases 85°C

Thermal Overload protection

Fault Log

System events and error reporting **Standards** Designed to meet or exceed:

- FCC/IC/ETS

- CE

- Australia/New Zealand AS/ NZS 4770 2000 and AS/NZS 4582:1999

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Specifications are typical. Equipment descriptions and specifications are subject to change without notice or obligation.

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