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 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.

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

- **Frequency coverage**: 1.5MHz to 30MHz (reduced performance below 1.6MHz)
- **Frequency stability**: ± 0.5 PPM -30°C to +70°C (±0.1 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

- **Power Output CW**: 500W ± 1.5 dB
- **Power Gain**: +25 dB
- **Harmonics & Spurious**: Less than -55 dB
- **ALC Voltage (output)**: 0 ~ 10V
- **Filter Type**: 7 Band LPF
- **Dimensions**: 178H x 482W x 480D mm excluding handles and I/O connectors
- **Power Requirements**: 50V dc @ 60A, 24V dc @ 2.5 A max
- **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 +6 dBm max
- **Input overdrive protection**: System events and error reporting
- **VSWR protection**: 3:1 nominal all magnitude and phases
- **Thermal Overload protection**: 85°C
- **Fault Log**: Designed to meet or exceed:
  - FCC/IC/ETS
  - CE
  - Australia/New Zealand AS/ NZS 4770 2000 and AS/NZS 4582:1999

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

Typical configuration

1. PRC-4090 HF SDR Transceiver/Exciter
2. PRC-4090 System docking station
3. PRC-4090 AC power supply/battery charger
4. PRC-4090 Control handset
5. Amplified speaker
6. 4075 Linear amplifier (500W)
7. 4075 50V DC Power supply
8. Supro Box 19” 5RU Anti shock rack mount case