



- **Liquid cooled linear amplifier**
- **1.6 – 30 MHz continuous coverage**
- **1 kW or 500 W continuous duty cycle (100%)**
- **USB, LSB (SSB), CW, FSK, AM**
- **Remote control via IP and WiFi**
- **Compatible with existing 4 & 6 digital selective calling radio networks**
- **2G & 3G Automatic Link Establishment (ALE) options**
- **ARINC ICAO Annex 10 Aeronautical Selcall option**
- **Field re-programmable via USB**

The Barrett 4075 high power HF Transmitter is a compact rack mounted communications solution developed for base station applications in large HF networks. It can be supplied in 1kW and 500 W versions. The transmitter comes as a complete package with an exciter, power supply, power amplifier, interconnecting cables and all required rack mount hardware.

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 compact rack mounted amplifier, together with its power supply occupies just 5U of cabinet space.

The Barrett 4075 amplifier natively supports the Barrett 4050 Transceiver/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 4075 from input and output overload while providing a sophisticated early warning and a diagnostic interface for system monitoring and event logging. Customisable auxiliary ports are also available for enhanced system control.

The 4075 system is field re-programmable via USB allowing the end user to update system software. An on-board micro SD card provides enhanced flexibility for display customisation and event logging.

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



The Barrett 4075 amplifier natively supports the Barrett 4050 HF SDR Transceiver/Exciter



**FEATURING  
NEW LIQUID  
COOLED  
LINEAR  
AMPLIFIER**



# 4075



## Typical 4075 High power 1 kW HF transmitter example

- 1 Barrett 4075 Power distribution unit
- 2 Barrett 4050 SDR HF transceiver exciter
- 3 Barrett 4022 24V Power supply
- 4 Barrett 4075 48V Power supply
- 5 Barrett 4075 Linear amplifier

The Barrett 4075 High power 1kW HF transmitter package is installed into either a 20U P/N BC407510 or 39U P/N BC407510 rack unit with a depth of 700 mm.

The Barrett 4075 High power 500W HF transmitter package is installed into a 20U rack unit with a depth of 700 mm P/N BC407512.

The packages ship as a complete unit including 19' rack mounting kits and blanking plates and all necessary cables and hardware ready for operation.

## General Specifications

Frequency coverage	1.6MHz to 30MHz
Channel capacity	1000 with 4050 HF Transceiver
Modes	J3E (USB, LSB) - H2B (AM) - J2A (CW) - B2B (AFSK) Software-Defined filter bandwidth
Power output	1000W PEP or 500W PEP
Duty cycle	100%, Continuous PEP, CW
Exciter	4050 HF SDR transceiver

## 4075 Linear Amplifier Specifications

Power Output CW	1kW or 500W $\pm$ 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
Input overdrive protection	+6 dBm max
Output VSWR protection	3:1 nominal all magnitude and phases
Thermal Overload protection	85°C
Fault Log	System events and error reporting
Standards	Designed to meet or exceed: <ul style="list-style-type: none"> <li>- FCC/IC/ETS#</li> <li>- CE#</li> <li>- Australia/New Zealand AS/NZS 4770 2000 and AS/NZS 4582:1999</li> </ul>

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

# Approval pending

BCB40750/4

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