



BARRETT COMMUNICATIONS

High Frequency Single Sideband Communications Systems

980 General Specifications

- Standards**
Complies with European standard ETSI 300 373
Complies with EMC standard IEC 945
- Tx frequency range
1.6MHz to 30MHz (continuous)
- Rx frequency range
500kHz to 30MHz (continuous)
- Channel capacity
Up to 450 programmable channels (simplex or semi-duplex)
- Frequency resolution
10Hz program mode 1Hz tunable receiver
- Intermediate frequencies
45MHz and 455kHz (double conversion)
- Operating modes
J3E (USB) -H3E (AM) -J2A (CW)
J2B(AFSK) with narrow filter.
- Operating temperature
-30°C to +55°C
- Humidity
95% relative, non condensing
- Display system
Supertwist backlight LCD matrix, 16 character x 2 line
- Controls
20 key keypad (illuminated), analogue power/volume
- Supply voltage
13.8VDC +20%/-10% negative earth.
24 VDC + 20% / -10% galvanically isolated from transceiver metalwork and ground (using matching switch mode PSU)
Polarity protected.
Overvoltage protected

Barrett 911 Automatic Antenna Tuner.

General specifications

- Frequency range
1.6 to 30MHz
- Channel capacity
Unlimited (memory stores 10 FIFO)
- Power rating
150 Watt/PEP
- Power requirements
12.6V DC (nominal) @ 1Amp (nominal)
- Input impedance
50 Ohms
- Dimensions
350mm x 285mm x 75mm
- Weight
3.5Kg

980 Class "A" GMDSS HF & VHF console dimensions.



540 x 400 x 320mm

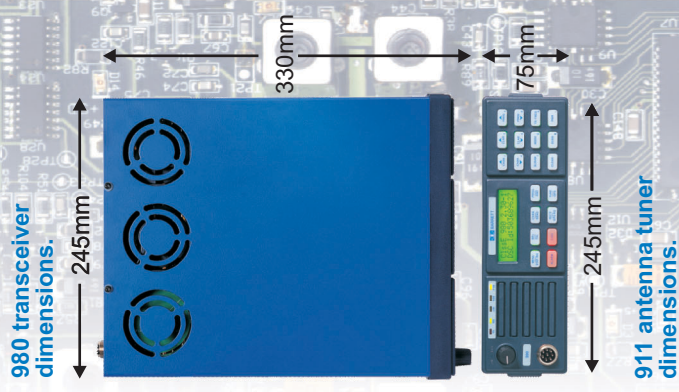
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CERTIFICATE OF APPROVAL No. 4747

Dealer Stamp



BARRETT COMMUNICATIONS

High Frequency Single Sideband Communications Systems

Marine HF transceivers

The Barrett 980 series of HF marine transceivers are state of the art, economical 125 Watt HF SSB transceivers designed for both GMDSS and non-GMDSS marine installations.

To satisfy this broad range of requirements, three versions of the Barrett 980 are available for maritime operations:-

The Barrett 980 packaged with ICS Electronics DSC controllers.

For compulsory GMDSS installations the Barrett 980 P/N BC98002 packaged with the ICS Electronics DSC console meets all international Class "A" requirements. Two packages are available one HF only and an HF and VHF package.

Both packages are housed in easy to install stand alone desk mounted cases with integrated scanning receivers and only require connection of antennas, power and NMEA 0183 GPS data. These systems are equally suitable for use by merchant vessels, passenger vessels, naval ships, yachts and fishing boats. The transceiver is controlled via one easy to use touch screen control panel.

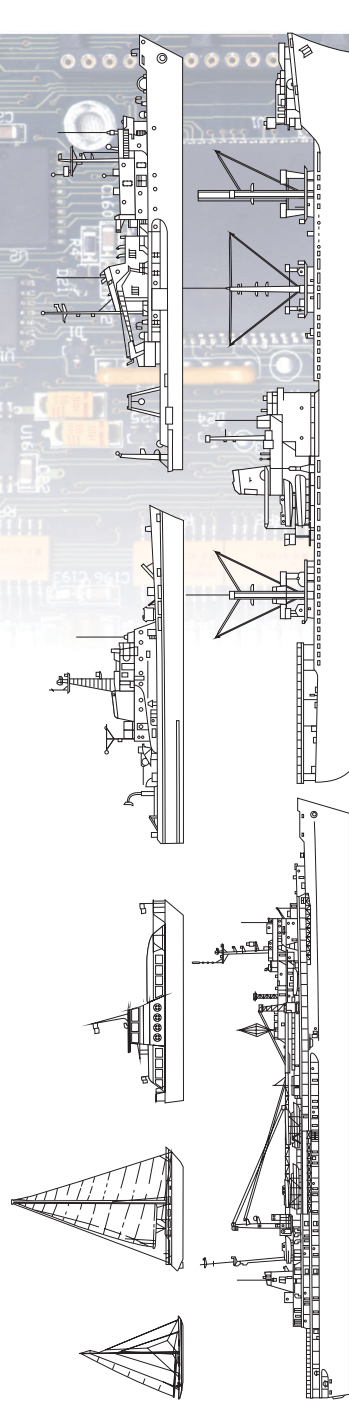
(The Barrett 980 P/N BC98002 can also be used now as a stand alone transceiver and upgraded for GMDSS Class "A" or Class "E" operations when required)

The Barrett 980 DSC Class "E" transceiver

A stand-alone HF transceiver, the Barrett 980 DSC Class "E" transceiver P/N BC98007, with internal DSC, meets all the requirements for ITU 493-8 Class "E" DSC operations. Suitable for yachts and motor vessels that do not require compulsory fitting of Class A GMDSS equipment but want the safety coverage offered under the international GMDSS system.

The Barrett 980 standard marine transceiver

For marine installations that do not require GMDSS compliance or DSC, the Barrett 980 P/N BC98003, provides all the facilities expected of a marine transceiver.



advanced marine HF transceivers



Quality System
Certified to
ISO 9002
Registration No. 57114



The Barrett 980 DSC Class "E" transceiver

What is GMDSS?

All vessels operating offshore that want the safety coverage provided by coastal radio networks, should be fitted with a HF transceiver that is GMDSS compliant. This applies to all sea going craft, large and small. But what is GMDSS? It stands for Global Maritime Distress Safety System and is specifically designed to automate a ship's radio distress alerting function, and, as a consequence, removes the requirement for manual (i.e. human) watch keeping on distress channels.

The basic concept of GMDSS is that search and rescue authorities ashore, as well as shipping in the immediate vicinity of the ship in distress, will be rapidly alerted to a distress incident so that they can assist in a co-ordinated SAR operation with the minimum delay.

What is DSC?

DSC is a calling system used to automate distress alerts sent over radio systems.

It is used to establish initial contact between stations and also allows for the automatic transmission of more detailed information including: priority of the call, calling station, called station(s), position of the ship in distress, nature of distress and information relating to subsequent communications.

980 range features

All marine packages include the transceiver, Barrett 911 automatic antenna tuner with interconnect cables and mounting hardware. In addition to the packages Barrett 980 marine transceivers are available in the following configurations:-

Local control:- transceiver operated from the front panel of the one piece transceiver.

Remote control:- transceiver operated from a remote head mounted away from the main unit. (no operating panel on the main unit.)

Dual control:- transceiver can be operated either from a remote head mounted away from the main unit or from the front panel mounted on the main unit.

Full HF spectrum coverage

Transmit and receive frequency range from 1.6 to 30 MHz

Syllabic mute (squelch)
Only responds to human voice and is immune to noise bursts etc.

450 user configured memory channels
A powerful, channel based, configuration system allowing all channels to have individual characteristics as follows:

- Separate transmit and receive frequencies.
- Operation mode - USB-J3E, AM-H3E, CW-J2A and FSK-F1B.
- Visual display of channel use.
- Scan table membership - member of scan table one, two or both.
- High or low power select.
- Optional antenna socket selection.

Simple functional display
All operational information is easily viewed on a temperature compensated LCD display that has adjustable back-light features for night operation.

BITE
Built In Test Equipment To enable simple in field diagnostics of suspected faults, the BITE tests receiver performance, selcall operation, syllabic mute operation, VCO operation and serial communications port viability.

Fully EMC tested to IEC 945 standard
New extruded chassis and circuit design eliminates any spurious radiation -enables closely co-located operation with VHF and UHF transceivers, without interference.

Built in antenna VSWR indication
For field staff to check the correct operation of antennas, the tune function displays antenna forward and reverse power.

Ease of Use
All Barrett 980 marine transceivers are simple to operate with waterproof, sealed rubber soft-touch keys and an easy to read display providing frequency, mode and channel usage information.

Rugged construction
Housed in an extremely strong corrosion treated, custom extruded aluminium chassis with generous heat dissipating capabilities and in-built whisper quiet fans, Barrett 980's will operate in both voice and high duty cycle selective call and data modes in the most arduous environments.

Auxiliary socket
The auxiliary socket provides connection to external HF data modems. Commonly used signals available on the auxiliary connector include -600 Ohm balanced receive audio output, 600 Ohm balanced transmit audio input, PTT input, scan stop input



The Barrett 980 Class "A" GMDSS HF & VHF console.

The Barrett 911 automatic antenna tuner

from external HF data modems, external position information input from NMEA 0183 standard GPS receivers and RS-232 control.

Compact size
Measuring 24.5mm x 330mm x 75mm, the Barrett 980 "Class E" is the smallest fully featured commercial synthesised transceiver on the market today.

Tunable receiver
Tunes all frequencies, in all modes, between 500kHz to 30MHz in 1Hz increments.

Microphone
Uses an easy to replace, commonly available, industry standard plug.

Transmit time out function
If the transceiver has inadvertently been left in transmit i.e. a microphone jammed under a seat - after a fixed period of time the transmitter is disabled. It is re-enabled by pressing the push to talk button momentarily.

911 antenna tuner
The 911 automatic antenna tuner is housed in a fully sealed weatherproof enclosure and will tune long wire or whip antennas over a frequency range of 1.6 to 30 MHz. The 911 is supplied complete with fully terminated control cables having an overall length of 6 metres. Additional extension cables are available as required.