

# High Frequency Single Sideband Communications Systems

# 930 specifications

**Transmit frequency range** 

Receive frequency range 500kHz to 30MHz (continuous) **Power output** 125 Watt PEP Voice, 100 Watt PEP two tones, ±1dB. Up to 20 programmable channels (simplex or semi-duplex) **Channel capacity Frequency resolution** 10Hz program mode Standard ±50Hz (0° to +55°C) **Frequency stability** J3E (USB, LSB) - H3E (AM) - J2A (CW). **Operating modes** 0.25uV (-119dBm) for 10dB SINAD - J3E Mode (With RF pre-amp on) **Sensitivity Audio output** 4W into 4 Ohms, 2W into 8 Ohm at less than 5% distortion **Operating temperature** -30°C to +55°C **Humidity** 95% relative, non condensing 840 mA standby (muted, back-light off) 850 mA standby (muted, back-light off) **Current consumption** 930 local control 930 remote control **Current consumption transmit** Voice average less than 9 Amps typical Two tone less than 15 Amps typical 3.7Kg. 3.45Kg. 0.4Kg Weight 930 local control model 930 remote control model, main unit 930 remote control model, remote head 245mm x 330mm x 75mm 245mm x 310mm x 75mm **Dimensions** 930 local control 930 remote control, main unit 930 remote control, remote head 200mm x 65mm x 75mm 230mm -85mm 330mm 310mm 65mm 200mm -

1.6MHz to 30MHz (continuous)

BCB93000/4

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Dealer Stamp



# High Frequency Single Sideband Communications Systems

## 930 HF SSB transceiver

#### **FULL SPECIFICATION**

The Barrett 930 transceiver is a state-of-the-art 20 channel, 125 Watt HF transceiver designed specifically for ease of operation, yet providing all the features required to successfully operate a HF communications network. The 930 is built to conform to the technical specifications of European Standard ETS 300 373, a standard developed for the exacting role of international maritime distress communications, and exceeds the requirements of Australian land mobile communications standard RB209.

#### **ECONOMICAL**

Utilising the "free to air" nature of HF communications spectrum the Barrett 930 transceiver provides remote communications with no ongoing call charges.

#### **SELECTIVE CALL**

In addition to the features expected of a professional HF transceiver, the Barrett 930 offers an optional selective call system f.or simplified network operation.

#### **STRENGTH**

Housed in an extremely strong, corrosion resistant, custom extruded aluminium chassis, with generous heat dissipating capabilities, the Barrett 930 will operate in voice and high duty cycle CW modes in mobile and fixed stations.

#### **COMPLETE SYSTEMS**

Barrett offers a large range of mobile and base station antennas. Together with Barrett's international service backup, the Barrett 930 transceiver will provide long distance voice communications for all environments.







## 930 features

#### Full HF spectrum coverage

Transmit and receive frequency range from 1.6 to 30MHz.

#### 125 Watt PEP power output

The transceiver has 125 Watt (PEP) power output in voice mode on all frequencies.

#### All mode capability

USB - J3E,  $\dot{L}$ SB - J3E, AM - H3E, CW - J2A . An optional 500Hz filter is available for CW.

#### Selective call - "Selcall"

Selective call - Selcall - provides a simple and efficient method of calling stations within a network. With the combined "Selcall - Telcall" option fitted - all current derivatives of CCIR 493 format can be programmed into the 930 transceiver on a channel by channel basis.

#### Scanning

Channel scanning combined with the "Selcall Option" means calls will always get through, no matter what frequency or channel is operational due to propagation. Two scan tables are available, channels can be programmed as members of either table or both.

#### **Emergency Selcall with geographical position**

The Barrett 930 displays and annunciates emergency selective calls, also showing the position of the station sending the emergency call if it is fitted with a GPS receiver.

#### Simple functional display

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





#### 20 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, LSB-J3E, AM-H3E, CW-J2A.

Visual display of channel use.

Scan table membership - member of scan table one, two or both.

High or low power programmable by channel.

Optional antenna socket selection - two antenna sockets available for selection on a channel by channel basis.

Selective call format - all common CCIR 493 derivatives in use today can be selected.

#### "Statcall"

A selcall based diagnostic tool that enables interrogation of remote transceivers to retrieve vital transceiver operating parameters. The Barrett 930 will respond to a Statcall interrogation from a Barrett 950 transceiver.

#### "Pagecall"

The Barrett 930 will receive and display a 32 character alpha numeric "Pagecall" message transmitted from a Barrett 950 transceiver connected to PC loaded with Barrett page call software.

# Scan resume-no missed calls

If the transceiver has been left unattended it automatically returns to scanning and is ready to receive calls on any channel.

# Syllabic mute (squelch)

Only responds to human voice and is immune to noise burst etc.

#### Selcall mute (quiet line)

When using Selcall scanning this mute only opens when a selcall is directed to a specific transceiver. This reduces operator fatigue as the operator is not obliged to listen to HF noise or traffic not directed to

#### BITE - Built In Test Equipment

To enable simple field diagnosis of suspected faults the BITE system 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.

#### Second antenna connector

An optional second antenna connector allows each channel to select one of two antennas - ideal when long and short distance antennas are used.

### Rugged construction

An extruded aluminium chassis combined with a rugged weather resistant glass reinforced nylon front panel has been designed to withstand harsh and hostile environments. Extensive vibration testing and temperature cycling has proved the Barrett 930 will operate in the world's toughest environments.

#### Compact easy to install remote control head for vehicles

Available in a remote control configuration the 930 is ideal for installation into today's compact vehicles. In specialised applications the 930 can be used in a dual control configuration

with both a front panel and a control head.

#### Transceiver programming

Programming is achieved either using the front panel (depending on local legislation) or a personal computer loaded with a Barrett 900 series transceiver programming package, connected to the 930 auxiliary socket from the computer's communications port. Once one transceiver has been programmed all other transceivers that are to be used in a network can be "cloned" with identical data by using a Barrett "cloning" cable plugged between their auxiliary sockets.

## Microphone

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

#### Noise blanker

A separate receiver within the 930 generates the noise gating pulses which gate a new technology high speed switch providing superior impulse noise blanking performance.

#### **Security function**

A built-in function allows a network operator, using a Barrett 950 transceiver, to send a unique coded selective call to "kill" a stolen transceiver. Once "killed" the transceiver must be unlocked using a special code sequence.



#### 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.

#### Compact size

Measuring 245mm x 330mm x 75mm, the Barrett 930 is the smallest fully featured commercial synthesised transceiver on the market today.

#### **Rack mounting**

As with all of the Barrett 900 series HF equipment, a 2U 19" rack mount conversion kit is available for the Barrett 930.

