

Digital Voice (Encoding)

Encoding can improve the reliability of communications over noisy channels where reception of analogue voice can be very poor. Poor voice quality can be improved markedly by the use of digital voice modules to the point where barely usable frequencies are made clear. Secure Digital Voice allows users to encrypt their communications over HF therefore providing a secure HF network.



Encoding
off



Encoding
on

Both Digital Voice and Secure Digital Voice capability can be utilised in Barrett 4000 and 2000 series HF Transceivers using Barrett digital voice modules which are designated as:

- DV Digital Voice module with no encryption
- SDV-56 Secure Digital Voice module with DES 56 encryption
(No export licence required)
- SDV-256 Secure Digital Voice module with AES 256 encryption
(Export licence required)

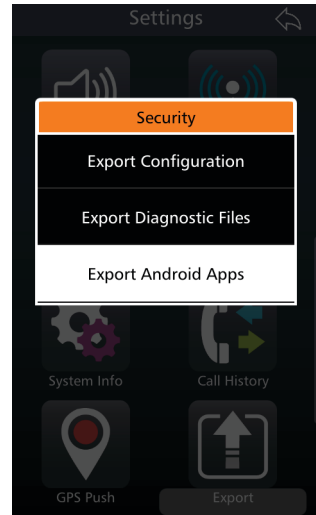
Signal-to-noise ratio conditions can change during communications between HF stations. The digital voice modules have auto baud capabilities which automatically adjust baud rates up or down whilst communicating between the transceivers allowing the users to transmit and receive signals with optimal voice clarity.

For more information on Digital Voice, please consult the Barrett HF Radio Digital Voice and Secure Digital Voice Operating Manual (P/N BCM40504).

Export

The export function of the PRC-4090 is predominantly used for diagnostic purposes and diagnostic and log files can be exported and sent to Barrett Communications.

The Android version of the Barrett 4000 Series Remote Control App can be downloaded directly from the transceiver head. For further information please consult the Barrett 4000 Series IP Connectivity Guide (P/N BCM40507).



Frequency Hopping

This option requires an Export Permit.

Frequency hopping can be used to limit performance degradation due to interference and to reduce the likelihood of interception. Frequency Hopping Spread Spectrum (FHSS) is a method of transmitting radio signals by rapidly switching a carrier among many frequency channels.

The transceiver employs a unique frequency hopping system that uses an external GPS.

Note: An external GPS must be connected and providing valid data for the frequency hopping system to operate.

Selecting the Hopping Band

Select a channel as per normal. This channel and mode is used by the transceiver to determine the hop band.

Entering the Hopping PIN

This code is entered under Settings < Security (see page 101). All of the transceivers that will be communicating on the same hopping band will need to have the same Hopping code.

Enabling and Disabling Hopping

1. Attach a GPS receiver to the rear of the transceiver.
2. Select a channel with a transmit frequency (i.e. not disabled).
3. Enter the Hopping Pin
4. Press the Hopping icon on the transceiver home screen to activate Hopping.

Hopping voice communication can now be used.

Pressing the Hopping key for a second time (or pressing the back button) disables Hopping mode.



Hop

GPS Push

GPS Push is an additional option used in conjunction with the Barrett 4077 HF Map & Track Software and provides automated transmission of GPS location at set intervals. These intervals can be programmed using the Barrett 4000 Series Programming Software (P/N BCA40001).

For further information, please contact Barrett Communications.



GPS Push State

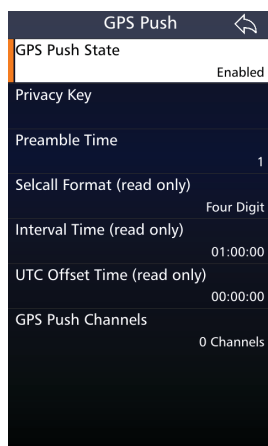
GPS Push state enables or disables the automatic transmission of the GPS location.

Privacy Key

This allows the input of the GPS privacy key. This privacy key allows the transmission to be DES56 encrypted, so long as the receiving station has the same privacy key in order to decrypt the transmission (DES56 encryption does not require export approval).

Preamble Time

Length of preamble transmitted at the start of the GPS Push call.



Note: Read Only items are set in the Barrett 4000 Series HF Programming Software. See the appropriate manual for more information.

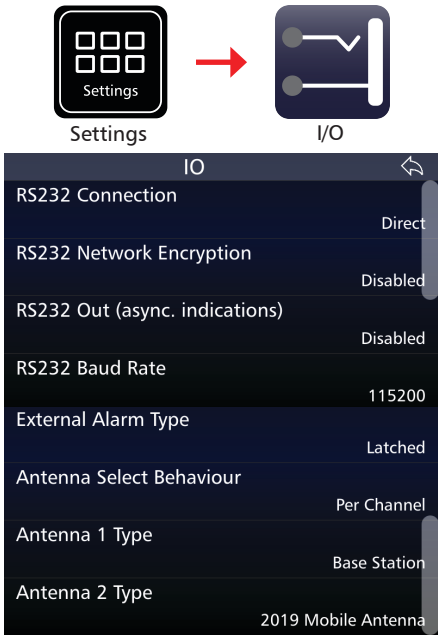
IO Settings

Tap **IO** from the **Settings** screen to display the IO screen.

A list of items that may be configured is displayed.

The current status of each of the items is displayed to the right.

To reveal more items, either swipe down on the touch screen or press .



RS232 Connection

This selects whether the RS232 connection is made via a direct connection to the top hotshoe auxiliary connector on the PRC-4090 or via a network (WiFi or Ethernet - please see 4000 Series IP Connectivity/Networking Guide [P/N BCM40507]).

RS232 Network Encryption

Enabling RS232 Network Encryption secures information transfers over RS232 networked connections. Disabling this feature removes any encryption from the RS232 network.

RS232 Out (async. Indications)

This setting enables or disables RS232 status information output from the transceiver via the top hotshoe auxiliary connector.

Note: This command does not enable/disable RS232 control of the transceiver when the RS232 option is fitted. It is used to control the output of status information via RS232 used by some external programs such as vehicle tracking.

RS232 Baud Rate

This menu option allows the selection of the RS232 Baud rate.

The Baud rate setting is dependent on the external device/application connected to the transceiver.

Tap **RS232 Baud Rate** from the IO screen to display the RS232 Baud Rate screen.

Select either: 9600 or 115200.

External Alarm Type

(Not applicable to the PRC-4090) This sets the action of the external alarm output when a Selcall is received by the transceiver. It can be set to either a pulse output (for use with a horn) where the output is activated 15 seconds on, 15 seconds off; or a constant output (for use with a rotating beacon). Both are reset by pressing  or the PTT button.

Select either: Latched or Pulsed.

Antenna Select Behavior

This master setting can override the pre-programmed channel antenna selection. This setting is designed to be used in conjunction with the PRC-4090 System Docking Station. This is not used for Manpack configurations.

Select:

Per Channel (default): Antenna selection operates as per channel programming.

Antenna 1: All channels, regardless of programming, will transmit/receive using Antenna 1.

Antenna 2: All channels, regardless of programming, will transmit/receive via Antenna 2.

Antenna 1

For Antenna 1 see page 24.

Antenna 2

This option is only active if connected to a Dual Port Antenna Switch Unit (P/N BCA40506) which can only interface with the System Docking Station.

Note: 4075 Linear and 4075 Linear with ATU are not available for Antenna 2 Type.

Select an antenna type from the following:

Antenna Type	Select when...
Base Station	Base station antennas such as the Barrett 912 series are used. No tuning signals are emitted on channel change.
910 Mobile Ant	Using a Barrett 910 automatic tuning mobile antenna
911 Auto Tuner	Using a Barrett 911 automatic tuner
2019 Mobile Ant	Using a Barrett 2019 automatic tuning mobile HF antenna
2018 Loop Ant	Using the 2018 Mobile magnetic loop HF antenna
4011/4015 Auto Tuner	Using a Barrett 4011 or 4015 automatic tuner
4017 Auto Tuner	Using a Barrett 4017 automatic tuner
OEM Tuner	3040 tuner compatible (non-Barrett product)
411 Auto Tuner	Using a Barrett 411 Automatic Tuner
Disabled	Antenna 2 not used

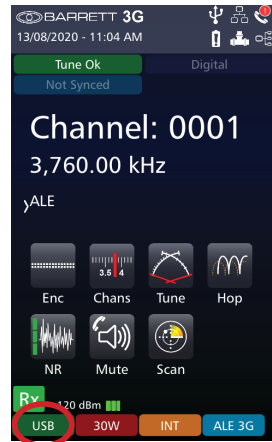
Modes

The current mode of transmission is displayed in the lower left hand corner (green background). The example opposite shows the transceiver in USB mode.

Pressing and holding the mode will allow an operator to change the mode to USB, LSB, CF, CW or AM mode for the current channel

Note: The mode icon will only temporarily set the mode for a selected channel, reverting to that channel's programmed default mode after the channel is changed, or the transceiver is turned off.

For further information on setting up modes for channels, see page 69.



Mute

The mute function suppresses the channel noise heard by the operator. It is designed to open (allow noise) when the transceiver detects audio, a large enough signal or a call (depending on the mute type selected).



Mute

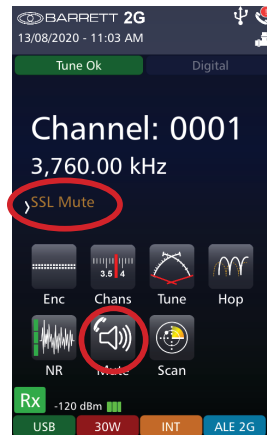
There are three types of mute available from the Home Screen.

Press and hold the active mute icon to select from one of the following three mute types:

- **Voice Mute** When using analogue voice, Voice Mute allows audio only when speech is detected on the selected channel. When Digital Voice is active, Voice Mute additionally opens for digital signals.
Note: The voice mute sensitivity can be set to three levels.
- **SSL Mute** Allows audio only if signal strength exceeds the nominated threshold (analogue or digital signals).
Note: The signal strength mute level can be set to three levels.
- **Call Mute** Allows audio when a call is sent to the transceiver. When Digital Voice is also active, Call Mute allows audio only when digital voice traffic is detected.

The example opposite shows SSL Mute.

After two seconds, the Mute indicator is hidden and replaced by the channel label.



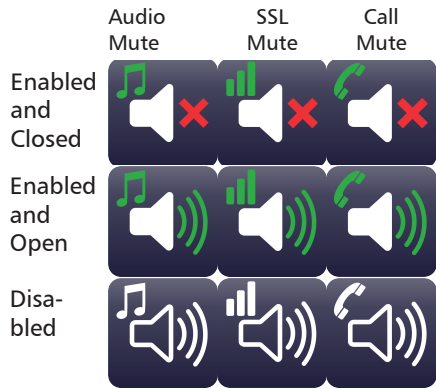
Each mute type has two primary mute states: Enabled or Disabled. However, the Enabled state can be either open or closed. Each of these states is further described below.

Enabled and Closed: No transmission audio is currently being detected by the transceiver. No sound is heard.

Enabled and Open: Transmission audio has been detected by the transceiver. This state is temporary and will automatically revert to mute Enabled and Closed state once audio is no longer detected.

Disabled: Audio is not censored and all noise can be heard.

Tapping the mute icon will toggle the mute state between Enabled and Disabled.



Tapping **Mute** from the **Settings** Menu displays the Mute settings screen.

Voice Mute Sensitivity refers to the "hardness" of the voice mute and its sensitivity to voice activity on a channel.

Signal Strength Level refers to the level at which the mute (squench) opens. When set to low, the mute will open on a relatively low level of received signal. For high, the mute will open for a relatively high level of received signal.



Network

This menu can be accessed from the **Settings** menu.



Settings

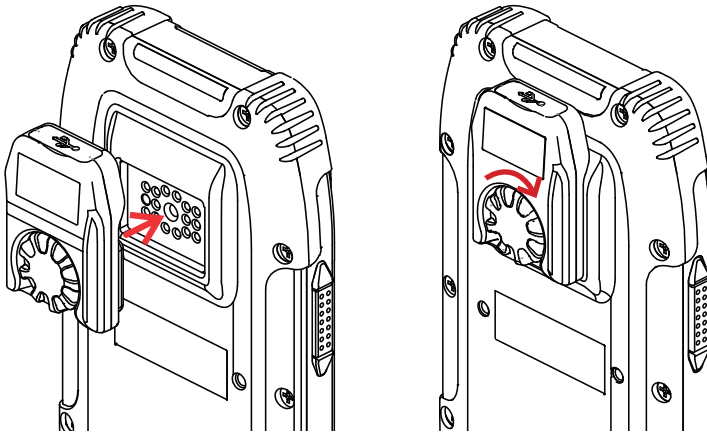


Network

The PRC-4090 HF SDR Transceiver has the ability to interface with IP networks, allowing mobile cellular handsets, tablets and desktop PCs to connect directly to the transceiver via Ethernet or WiFi with the use of specialised adapters. For more information, see the Barrett IP Connectivity and Networking Guide (P/N BCM-40907).

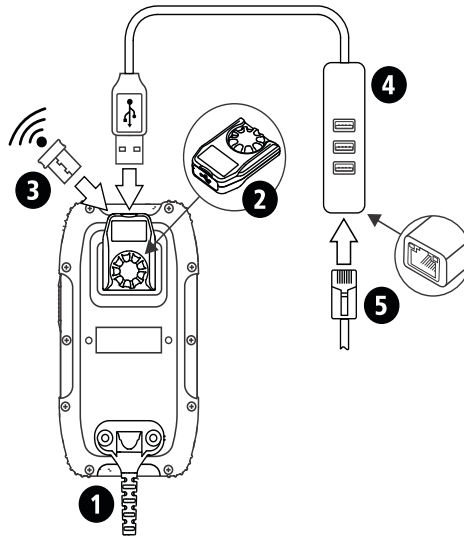
When using a 4050/4090 Control Handset without a docking station, a PRC-4090 Handset USB Interface (4090-01-27) must be attached to the rear of the handset.

The PRC-4090 Handset USB Interface is attached as shown in the diagrams below. Once in place, turn the wheel until unit is secure.



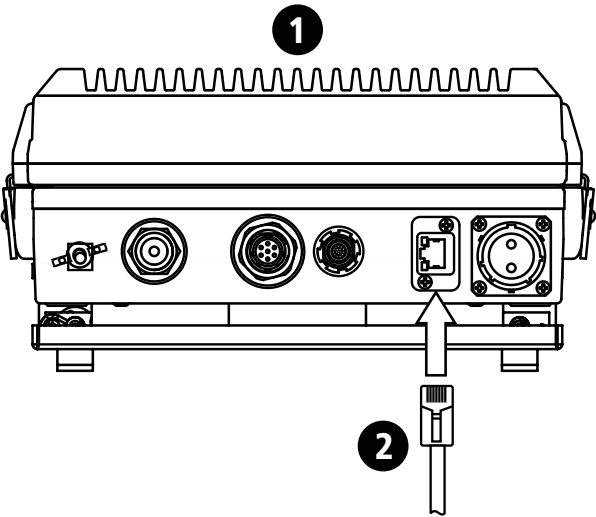
IMPORTANT: Ensure that the USB Interface Unit is attached **BEFORE** the USB device is inserted.

The diagram below shows the possible connections between the above PRC-4090 Control Handset and an IP network.



- 1 PRC-4090 Control Handset (P/N 4090-01-09)
- 2 PRC-4090 Handset USB Interface (4090-01-27)
- 3 WiFi Adaptor (P/N BCO40508)
- 4 USB to Ethernet Adaptor with USB ports (P/N BCA40505)
- 5 Ethernet (RJ45) cable

The diagram below shows the network connection from a Barrett PRC-4090 HF SDR Transceiver in Mobile configuration (P/N 4091-00-10).



- 1 Barrett PRC-4090 HF SDR Transceiver in Mobile configuration (P/N 4091-00-10)
- 2 Ethernet (RJ45) cable

Noise Reduction (NR)

Selecting **NR** from the handset allows the Digital Signal Processor (DSP) noise reduction depth to be adjusted to suit the operator's requirements.

Tap **NR** from the Home screen to cycle through the options: Off, Low, Medium, or High.

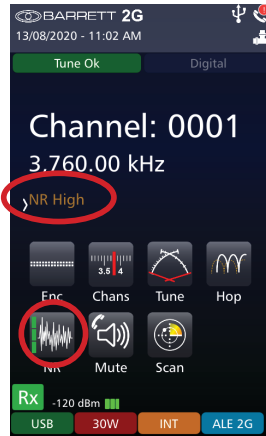
The example shows an NR set to High.

After two seconds, the NR indicator is hidden and is replaced by the channel label.

When the noise reduction system is active (low, medium or high) the NR icon displays an indication of the setting.



NR



NR
Off



NR
Low



NR
Medium



NR
High

RF Settings

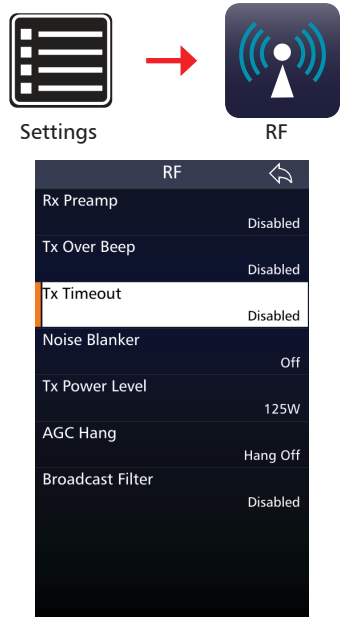
Tap **RF** from the **Settings** menu to access the RF menu.

A list of items that may be configured displays.

A brief description of each of the items is described beneath the items.

The current status of each of the items is displayed to the right.

To reveal more items, either swipe down on the touch screen or press .



Rx Preamp

Enables or disables the RF pre-amplifier. The pre-amplifier provides an additional receiver gain of 5 dB. Generally, the RF pre-amplifier is switched off when an automatic mobile antenna is in use as these antennas have a built-in RF pre-amplifier.

Tx Over Beep

When this option is selected, the transceiver transmits a short tone after the PTT button is released. The tone provides an audible indication to the Operator at the remote station that the local station has stopped transmitting.

Tx Timeout

When this feature is enabled, the transceiver will stop transmitting if the PTT button is held on for more than the allowed time limit eg. if the handset is accidentally wedged under a seat. Releasing and pressing the PTT button will re-enable transmission.

Set the maximum transmit time to either one, two, or three minutes. Alternatively, this transmit timeout can be disabled.

Noise Blanker

This setting allows the predictive noise blanker to be switched on or off. The noise blanker is useful to reduce repetitive vehicle related electrical interference eg. noise from a windscreen wiper motor.

Note: The noise blanker will not be effective in situations where for example, external power line noise is blanketing the receiver.

Select either: Off or On.

Note: In certain situations noise blankers can cause intermodulation in receivers. In these cases the noise blanker should be disabled.

Tx Power Level

This section sets the global RF power output for all channels in the transceiver.

Select either: 10 W, 30 W, 125 W, or 150 W in SDS mode.

Select either: 10 W, 30 W in Manpack mode.

AGC Hang

Automatic Gain Control (AGC) Hang delays the AGC system's gain response after a signal level decreases to zero. This prevents receiver noise for the hang period.

Select either: Hang Off or Hang AGC.

Broadcast Filter

With the Broadcast Filter enabled, strong broadcast signals below 1.6 MHz will be filtered out.

Select either: Disabled or Enabled.

Scanning

Scanning allows the transceiver to monitor several channels for incoming calls. For example, a station calling a station that is in scanning mode can send a Beacon Call on any channel knowing the station it is calling is monitoring all its available channels. A response from the scanning station will only occur on channels that are open for communication. It is particularly useful as the nature of HF signal propagation means that not all channels are available for communications at one time.

Stations in scan can also monitor channels for voice activity or signals received that have signal strengths over a preset level.

The transceiver will come out of scanning mode for the following reasons:

- A Selcall is received.
- Signal Strength Level (SSL) mute is selected and a signal with a level greater than the pre-set threshold is received.
- Audio (syllabic) mute is selected and a voice signal is detected.

The **Scan icon** on the Home screen, once pressed, initiates scanning according to the currently selected scan table, see Scan Settings page 97. If no scan tables are available a "No Scan Channels" error will be shown.



Scan

Whilst scanning, several options on the screen are hidden (Channels, Hop and Tune) and the Scan icon is animated.

To stop scanning, press  or the scan icon.

Pressing the Scan icon for longer than 1 second will bring up 1 of 3 possible screens:

- The Scan Settings menu (see page 97) when ALE 2G or 3G are not enabled.
- A list of the available ALE 2G Preset Maps when ALE 2G is enabled (See Barrett ALE 2G and 3G User Guide (P/N BCM40524)).
- A list of the ALE 3G Pool entries (See Barrett ALE 2G and 3G User Guide (P/N BCM40524)).

Scan Settings

To display the Scan Settings, select **Scan** from the **Settings** Menu.

Tap **Scan** from the Settings screen to display the Scan screen.

A list of items that may be configured is displayed. To reveal more items, either swipe up on the touch screen or press .



Scan Rate

This defines the rate of which the scanning should be performed.

Select the scan rate applicable to non-Selcall scan channels, either: 300, 500, 700, 1000, 1500, 2000, or 5000 ms.

Dwell Time

Select the length of time the transceiver dwells (waits) on a channel after scan has been stopped by signal strength level (if signal strength level mute is set) or voice activity (if audio mute is set).

Select between 1 and 10 seconds.

Resume Time

Set the time period after which the transceiver will automatically resume scanning from the last operation eg. after a key press or PTT.

Select either: Off, 1, 2, 3, 5, 10, 15, 20, or 30 minutes.

Scan Table

Select the Scan Table to be used when the transceiver is put into scan mode, or if enabled, when scan resume occurs.

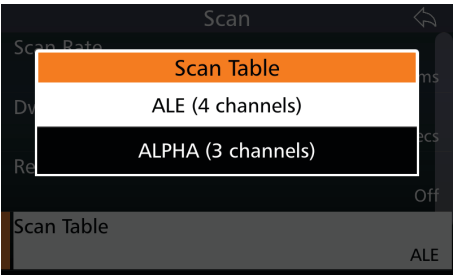
There can be up to eight Scan Tables with 30 channels in each.

Note: When scrolling through the Scan Tables to make a selection, only Scan Tables with channels entered will display. If none of the Scan tables have any channel entries, the message "All Scan Tables Empty" displays.

Tap **Table Selection** from the Scan screen to display the Table Selection screen.

To reveal more items, either swipe up on the touch screen or press .

Each entry shows the name of the table and the respective number of channels.

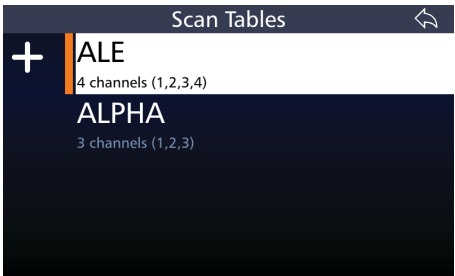


Scan Tables

Note: All channels are displayed in numerical order within the scan table with respect to the entry number. There are a maximum of 30 entries in each table.

Tap **Edit Scan Tables** from the Scan screen to display the Selcall Scan Tables screen.

The example shows two scan tables which may be edited. Each table reveals the name of the table, the antenna, the number of channels in the table and the channel numbers.



Add a Scan Table

To add a Scan Table, tap  from Scan Settings < Edit Scan Tables.

Scan Table Name

This is the name of the scan table. Without setting this, the name will default to "TABLE".

Scan Table Channels

Tap the checkboxes adjacent to the channels you wish to choose and then tap



After configuring the above items, tap  to add the table.

A confirmation message displays.

Tap **Yes**.

Delete a Scan Table

Select the table to be deleted, then tap and hold for three seconds.

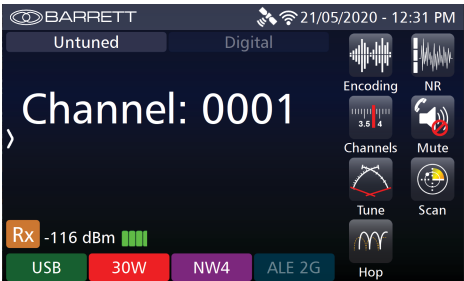
A confirmation message displays.

Tap **Yes**.

Secure Display Mode

This mode stops the channel frequency being shown on the front panel. Channel frequencies are uneditable, as are labels. The pack and diagnostic information becomes irretrievable and cannot be exported.

This mode can only be enabled using the Barrett Communications 4000 Series Programming Software (P/N BCA40001).



Security Settings

This section is used to configure the security settings for the transceiver.

Tap **Security** from the **Settings** menu to access the Security menu.

A list of items that may be configured is displayed.

The current status of each of the items is displayed to the right.

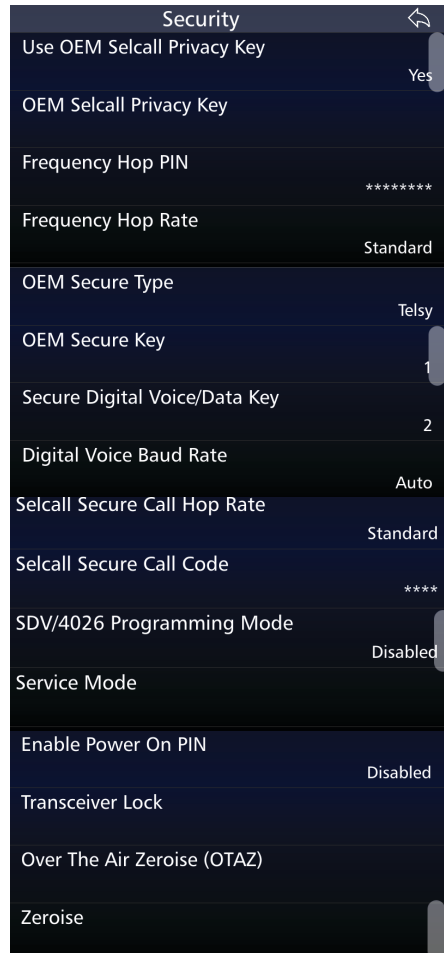
This menu is dependant on the Options installed in a transceiver.



Settings



Security



Use OEM Selcall Privacy Key

This setting indicates whether the OEM Selcall Privacy Key is active.

OEM Selcall Privacy Key

Turning this on allows data type Selcalls (Pagecall, GPS, Status, Telcall) on OEM channels to be encrypted with DES-56 encryption.

See page 31 for more information on OEM Selcall.

Frequency Hop PIN

The Hopping PIN (if the Frequency Hopping Option is enabled on the transceiver) is 8 digits long and is usually provided by a network administrator. The Hopping PIN determines the Hop bandwidth. For instance:

Hopping PINs 00000000 to 19999999 are used for hopping ± 2 kHz

Hopping PINs 20000000 to 49999999 are used for hopping ± 16 kHz

Hopping PINs 50000000 to 99999999 are used for hopping ± 128 kHz

Hopping up to ± 2 kHz is useful for narrow band antennas in situations such as antenna tuners in manpack operation.

Hopping up to ± 128 kHz can be used with wideband antennas such as base station broadband antennas.

Please note that all transceivers that wish to communicate via Hopping need to have the same Hopping PIN and frequency hop rate configured.

Note that once entered, the PIN can never be retrieved or viewed for security reasons.

Frequency Hop Rate

The Frequency Hop Rate changes the number of hops per second used by the encrypting algorithm.

Select either Standard (5 hops per second), Medium (15 hops per second) or High (25 hops per second).

OEM Secure Type

This displays whether a scrambler has been installed and the name of the scrambler.

OEM Secure Key

If keys are installed, keys can be selected from this menu.

Secure Digital Voice/Data Key

The Secure Digital Voice and Data Key is used for secure digital voice and 3G Data calls. Keys need to be entered into the transceiver's SDV module using the Barrett Communications Key Management Software.

Select between 1 and 255.

All transceivers in the network must have the same key number in order to communicate.

For more information, consult the Digital Voice manual (P/N BCM40504).

Digital Voice Baud Rate

The Digital Voice Baud Rate setting fixes the baud rate at 600/700bps, 1200bps, 2400bps or Auto. Setting this rate to Auto will allow the transceiver to automatically adjust the baud rate.

Selcall Secure Call Hop Rate

The Selcall Secure Call Hop Rate is the rate at which the secure call hopping moves between transmission frequencies. Unlike frequency hopping, it doesn't utilise GPS.

Select either Standard (4 hops per second) or High (15 hops per second).

Selcall Secure Call Code

Enter a four-digit number. Both the transmitting and receiving stations must have the same code.

SDV/4026 Programming Mode

If the transceiver is fitted with an SDV module, this option enables the SDV to be programmed.

Select either Disabled or Enabled.

When enabled, the functionality of the transceiver is disabled. After programming the SDV, reboot the transceiver.

For more information, consult the Digital Voice manual (P/N BCM40504).

Service Mode

A mode for use when servicing a transceiver. Only accessible by PIN.

Enable Power On PIN

Selecting this menu option allows a user to manually change whether the transceiver asks for a password upon start-up. This password is set using the Barrett 4000 Series Programming Software.

Transceiver Lock

The Transceiver Lock function locks a remote transceiver via Selcall and uses the remote transceiver's pre-set Transceiver Lock/OTAZ PIN. This function does not remove any settings and can be reversed by entering the Transceiver Lock/OTAZ PIN on the front panel of the transceiver.

Over the Air Zeroise (OTAZ)

OTAZ will clear the following information from a remote transceiver via a Selcall and the entry of the Transceiver Lock/OTAZ PIN for that station:

- all channel information
- all Options
- all ALE 2G and 3G information
- ALL security PINs apart from the Transceiver Lock/OTAZ PIN
- encryption keys

Zeroise

Zeroise will clear the following information from the local transceiver:

- all channel information
- all Options
- all ALE 2G and 3G information
- ALL security PINs apart from the Transceiver Lock/OTAZ PIN
- encryption keys

Remote Access Password

This allows a user to set a password used when accessing the transceiver remotely via serial or network connections e.g. when using the Barrett Remote Control App, the Desktop console or programming via PC.

Stealth Mode

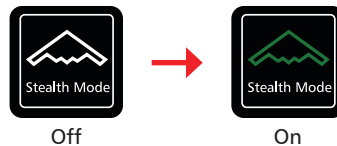
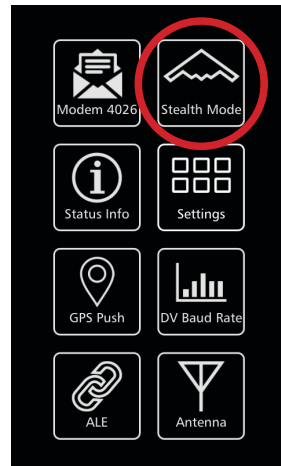
Stealth mode operates as a quiet or silent mode of operation. When active, all transceiver noises are muted, key lights are disabled and the backlight is set to the lowest setting.

To enable stealth mode, tap the icon in the swipe menu.

When active, the icon will be green.

Pressing PTT while stealth mode is active will temporarily deactivate stealth mode, reinstating lights and audio.

Stealth mode will re-activate after 30 seconds of inactivity.

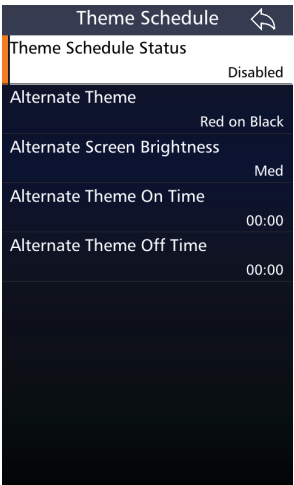


Theme Schedule

The Theme Schedule allows the automatic transition between display themes. This change of themes can be of use for changing, for instance, between a daytime theme and a nighttime theme.

To set a theme schedule, select an alternate theme, the time when the theme will switch on and when it will switch off.

Finally, enable the Theme Schedule by changing the Theme Schedule Status to Enabled.



Default

Black on Green

Green on Black

Red on Black

Tuning

Tuning occurs automatically when PTT is pressed and if the appropriate antenna tuner type has been selected in RF Settings. Tuning can also be activated by pressing and holding the tune icon on the front screen.



Tune

Tuning from the tune icon on the front screen will vary in response depending on the tuner type selected.

If a non-ATU antenna is selected, the transceiver will transmit - at the power level selected - on the current channel. This is transmitted at 1.6 kHz above the Suppressed Carrier Frequency (SCF) (displayed frequency) of the channel until the tune icon is released.

If an ATU antenna has been selected, pressing the tune icon will begin a tune cycle. Tune Tx power (usually between 10 and 30W) is automatically set by the transceiver for the duration of the tune cycle. When the tune cycle begins, the tune icon can be released.

Once the tune cycle has finished, the transceiver transmit power will return to set levels.

The keypad will illuminate red whilst the transceiver is tuning.

When the tune process is completed the display will show "Tune Ok", or "Tune Failed" in the top left-hand corner.

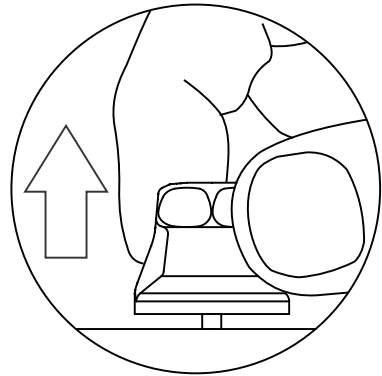
The VSWR briefly displays below the frequency indicating the efficiency of the selected antenna.



Zeroise

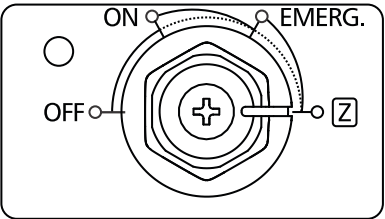
A Zeroise of the transceiver can be performed in two ways:

- A fast emergency zeroise can be performed by pulling and turning the on/off switch to the Z position. A ten second countdown will begin and a zeroise will be performed when zero (0) is reached.
- From the Settings < Security Menu, select Zeroise. The countdown will then begin.



Zeroise will clear the following information from the local transceiver:

- all channel information
- all Options
- all ALE 2G and 3G information
- ALL security PINs apart from the Transceiver Lock/OTAZ PIN
- encryption keys



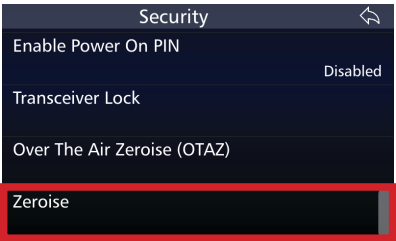
OR



Settings



Security



INSTALLATION 7

This chapter contains the following sections:

- Introduction
- Mobile Installations
- Base Station Installations
- Marine installations

Introduction

This section provides instructions for the installation of land based HF communication equipment. Most of the installation work can be performed by non-technical personnel if they carefully follow the instructions given in this manual. However, it is recommended that the completed installation be checked by a suitably qualified technician. In some equipment configurations, technical adjustment is required for the equipment to operate correctly.

Note: Some equipment has specific instructions supplied with it. Those instructions over-ride the general guidance of this manual, and must be followed in detail.

This chapter begins with connecting a secondary head to the rear of the transceiver and then outlines the most common configurations beginning with man-pack installations, followed by mobile, base station and marine installations. Please read this chapter carefully when considering the best antenna set-up for your situation.

For further information on these installations, please consult the guide provided with your antenna or contact your Barrett dealer.

Please note: When unpacking your order, check the contents against the packing notes provided. Before discarding the cartons, check that all accessories have been removed and are not mislaid in the packing material. Inspect the equipment for any transit damage. If damage has occurred, notify your supplier immediately. Failure to do this could affect the warranty covering the equipment.

Installing a Secondary Control Handset

The PRC-4090 can support a secondary control handset when paired with a PRC-4090 System Docking Station. This secondary handset can be purchased on its own from Barrett Communications and controls the transceiver in the same manner as the primary. This may be useful in multiple situations such as for security reasons, a secondary head may need to be located in another room; personnel carriers may require a head be accessible for those in the back of the vehicle; or marine installations where a secondary head may need to be away from the primary body.

Ensure the transceiver is switched off before connecting secondary control handset.

Note: If only the secondary control handset is connected then the Ethernet functionality of the SDS will not work.

