

# BASIC SETTINGS 4

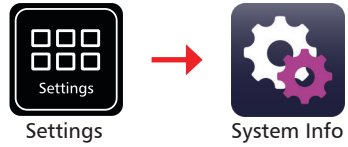
This chapter contains the following sections:

- System Information
- General Settings
- Audio Settings
- Display Settings

## System Information

Select **System Info** from the Settings menu to display the System Information screen.

Some items will not be displayed, unless installed.



### Head Device ID

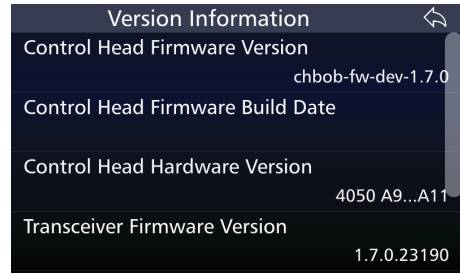
This displays the name of the control head. This name is used to differentiate between primary and secondary heads.

### Serial Number

This displays the transceiver's serial number.

### Version Information

This menu provides software and firmware version numbers. Contact your Barrett provider for more information



## Transceiver Options

This menu displays the installed options present in the transceiver. The image opposite shows all possible options.

From this menu, option PINs (supplied by Barrett Communications) can be entered to activate inactive options.

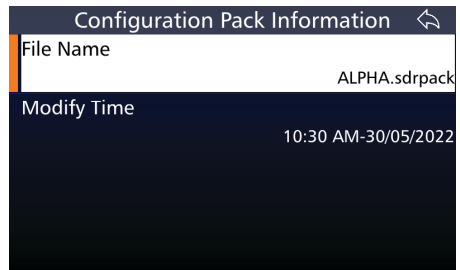
To activate an inactive option, please contact Support at Barrett Communications at:

support@barrettcommunications.com.au.



## Configuration Pack Information

This menu offers easy identification of the transceiver's current pack and when it was last updated.




## SDV/4026 Serial Number

This provides the serial number of the SDV/4026 hardware module fitted in the transceiver.

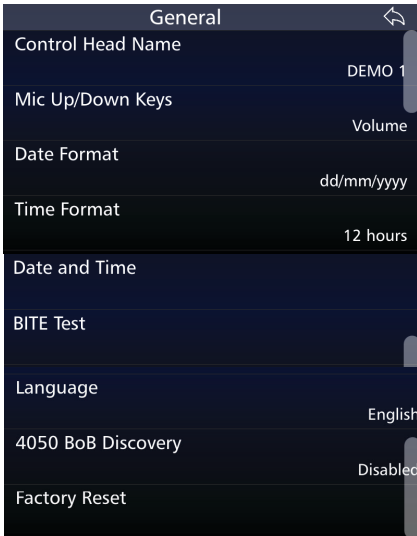
# General Settings

Select **General** from the Settings menu to display the General Configurations screen.

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

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

Note: this menu will appear differently when using the 4000 Series Remote Control Software.



Modifiable name for the transceiver. This name will be used to refer to this transceiver on external networks.

Controls the function of the arrow keys on the side of the hand held microphone. Can control either channel or volume.

Sets the format in which the date is displayed on the transceiver to one of five options.

Toggles the time format between 12 and 24 hour displays. This displays on the transceiver front panel.

Sets up the date, time and timezone displayed on the transceiver. Swipe up or down on the touchscreen to modify.

Built in Testing Equipment. Provides a basic indication of faults in the system. See Appendix 4, page 158.

Language of the transceiver's display.

For use with a Barrett Break-out-Box. If BoB is connected, select Enable.

Will revert transceiver back to factory settings. All channel info, ALE2G/3G info, all security PINs and encryption keys will be cleared.

# Audio Settings

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

A list of items that may be configured is displayed.

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

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



Settings



Audio

Audio	
Beep Level	Off
Alarm Level	Mute
Ring Tone	Ringtone 1
Rx Configuration	Internal Audio
Tx Configuration	Local
Audio Bandwidth	300Hz - 2700Hz
Line Audio	Follows Mute
Line Encoding	Disabled
Line Out Level	0 dBm
Line In Level	0 dBm
Audio Recording	Enabled
Custom Filter Bandwidth	3000Hz (300Hz - 3300Hz)
Dynamic Microphone Preamp	Disabled

Volume level for the Key tones. Can be configured as Low, High or Off

Volume control for the incoming Audio Alarm. Can be configured as Low, Med, High or Mute.

Choose 1 of 7 ring tones for the incoming alarm tone.

Advanced Operations. For more information, see page 69.

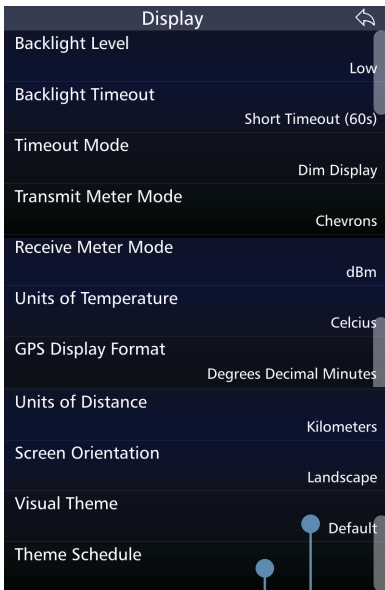
# Display Settings

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

This menu can also be accessed via the swipe screen, provided that the GPS Push option is not enabled.

A list of items that may be configured is displayed.

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



- Adjusts the brightness of the screen backlight. Can be configured as Low, Med, High and Very High.
- Length of time before the Display timeout behaviour activates. Can be configured as Short Timeout (1 min), Long Timeout (3 min) or Always On.
- Behaviour of the screen activated when the backlight times out. Shows screensaver, dims or switches off display.
- The preferred unit to display the Transmit Wattage. Either Watts or Chevrons.
- The preferred unit for displaying the received signal strength. dBm, uV or S Meter.
- Preferred unit of temperature for the transceiver. Celcius or Farenheit.
- Changes the display format for the GPS coordinates in the swipe menu
- Changes the displayed units of distance for the GPS between Kilometres, miles and nautical miles.
- Changes the display orientation between portrait or landscape modes.
- Changes the display theme between default, red, green or dark green.
- See advanced settings page 100

# PROGRAMMING 5

This chapter contains the following sections:

- Channel Programming
- Free Scroll Rx/Tx
- Programming via USB

# Channel Programming

**The programming of channels is restricted in some countries.** In this situation, transceivers will be pre-loaded with a channel pack and this function will be locked in the transceiver menu.

If the transceiver is unlocked, there are three ways to program channels into the transceiver.

1. Manually through the transceiver’s front panel,
2. By inserting a USB storage device containing the appropriate files into the transceiver’s USB socket (see page 66)
3. By using the Barrett Programming Software (P/N BCA40001). This option is not available in all countries. Please check with your Barrett dealer for your location. For more information on using the Barrett 4000 Series HF Programming Software, please refer to the 4000 Series HF Programming Software Manual (P/N BCM40503).

## Programming Channels Through the Front Panel

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


A list of currently used channels is shown displaying channel number, frequency, and channel label.

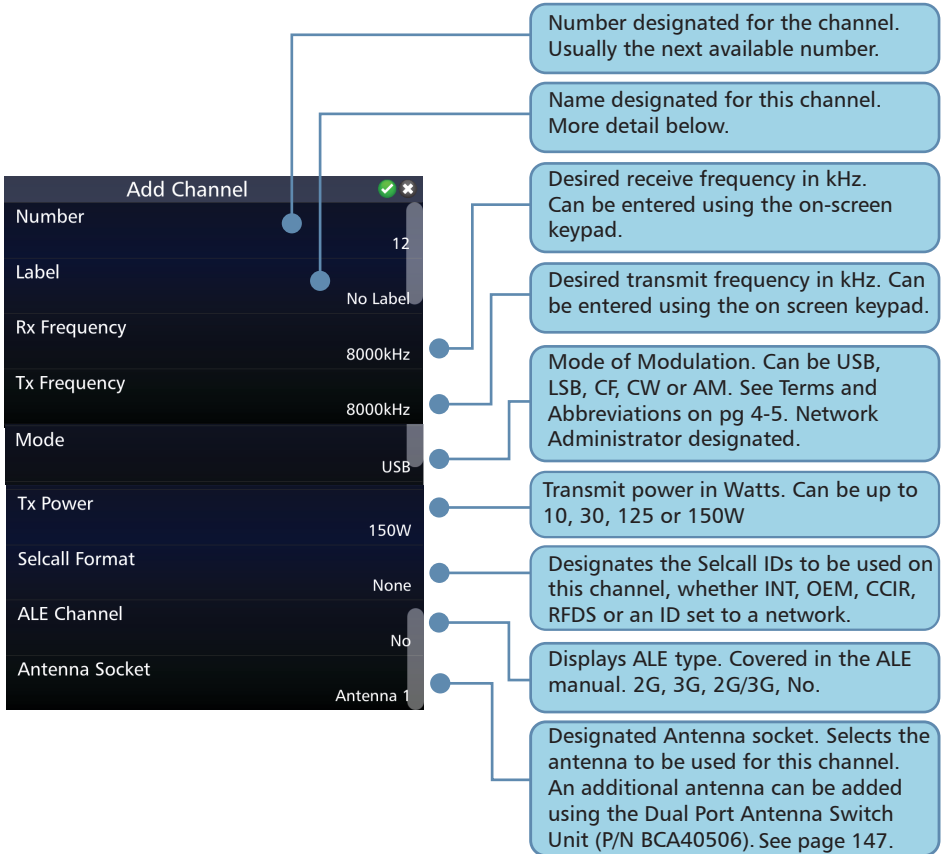
ALE channels appear greyed out and cannot be edited from this menu.





## Adding a new channel

To add a channel, tap  to display the Add Channel screen.



The screenshot shows the 'Add Channel' screen with the following fields and values:




Field	Value
Number	12
Label	No Label
Rx Frequency	8000kHz
Tx Frequency	8000kHz
Mode	USB
Tx Power	150W
Selcall Format	None
ALE Channel	No
Antenna Socket	Antenna 1

Callouts provide the following details for each field:

- Number:** Number designated for the channel. Usually the next available number.
- Label:** Name designated for this channel. More detail below.
- Rx Frequency:** Desired receive frequency in kHz. Can be entered using the on-screen keypad.
- Tx Frequency:** Desired transmit frequency in kHz. Can be entered using the on screen keypad.
- Mode:** Mode of Modulation. Can be USB, LSB, CF, CW or AM. See Terms and Abbreviations on pg 4-5. Network Administrator designated.
- Tx Power:** Transmit power in Watts. Can be up to 10, 30, 125 or 150W
- Selcall Format:** Designates the Selcall IDs to be used on this channel, whether INT, OEM, CCIR, RFDS or an ID set to a network.
- ALE Channel:** Displays ALE type. Covered in the ALE manual. 2G, 3G, 2G/3G, No.
- Antenna Socket:** Designated Antenna socket. Selects the antenna to be used for this channel. An additional antenna can be added using the Dual Port Antenna Switch Unit (P/N BCA40506). See page 147.

After configuring the above attributes, tap  to add the channel. A confirmation message displays. Tap **Yes**.

### Editing a Channel

To edit a channel, select the desired channel by using the  and  keys from the Channel screen and either tap the channel or press  from the keypad.

*Note: Attempting to edit an ALE channel will result in an error message. ALE channels can only be edited from the ALE menu. See Barrett ALE 2G and 3G User Guide (P/N BCM40524).*

The Channel Information screen displays. Edit the fields as desired.

### Deleting a Channel

To delete a channel, tap and hold for three seconds the channel you wish to delete. A confirmation message displays.

Tap **Yes**.


### Label

Channel labels are used to name a channel and remind an operator what the channel is used for eg. UNHCR Geneva.

Channel Labels must be created under the labels menu before they can be applied to a channel.

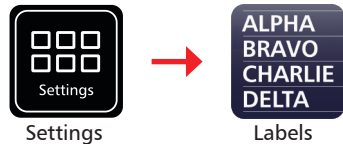
### Adding a New Label

Tap **Labels** from the **Settings** screen to display the Channels screen.




To create a new label, tap the  icon from the Settings<Labels menu.


Type the new label using the on screen keyboard.

This label can now be added to a channel.



### Editing an Existing Label

To edit a channel label from the Channel Labels' screen, select the label by using the  and  keys and either tap the label or press  from the keypad.

Use the keyboard to edit the name of the label, then tap  to save.



### Deleting an Existing Label

To delete a channel label from the Channel Labels' screen, select the channel label you wish to delete, then tap and hold for three seconds.

A confirmation message displays.

Tap **Yes**.



### Mode

Network administrators designate usable channels and modes as one of the following:

USB - Upper Side Band.

LSB - Lower Side Band.

CF - Custom Filter.

CW - Continuous Wave (Morse code).

AM - Amplitude Modulation.

# Free Scroll Rx/Tx (VFO)

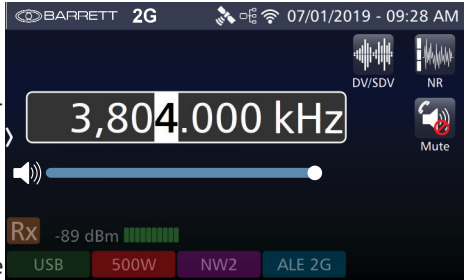
## Frequency Selection

Free Scroll Rx is a feature that allows a user to scroll through frequencies in a receive-only capacity. If the “Free Scroll Tx” option is enabled, pressing PTT will allow transmit on the selected frequency. Transmit exclusion zones (frequencies where an operator cannot transmit) can be set via the 4000 Series Programming Software (P/N BCA40001).

From the home screen tapping the channel frequency will open the Free Scroll function.

This can be navigated in two ways:

- The directional buttons
- The power button/volume control dial
- Tapping the digits



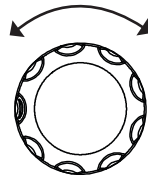
### Directional buttons

The left and right arrow keys change which digit is highlighted.

The up and down keys change the value of the highlighted digit.

### Power Button/Volume Control Dial

Turning the volume dial either changes which digit is selected or the digit's value.

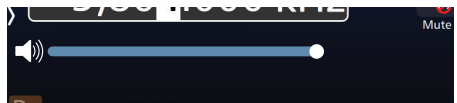


Pressing the power button switches between the two dial functions.

*Note: In this mode, the power button no longer operates as the on/off switch for the transceiver. To power off the transceiver, exit this mode by pressing the back key and then the power button.*


## Adjusting the Volume

As the volume dial serves another function, volume can only be adjusted by dragging the white indicator along the blue sliding bar.




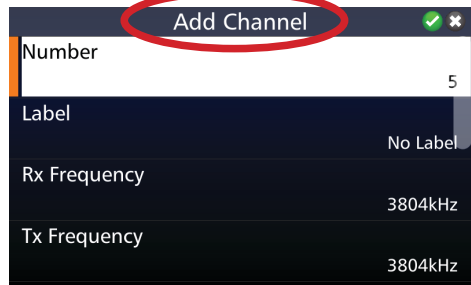
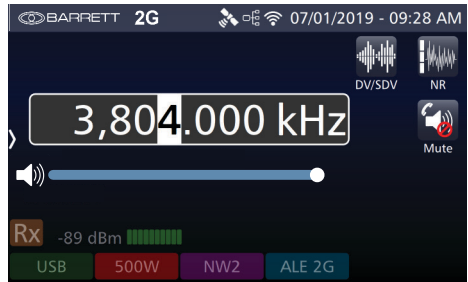
*Note: The Free Scroll menu can be locked in the 4000 Series HF Programming Software and, if locked, will not appear when the frequency is pressed.*

## Adding a Channel from the Free Scroll screen

A channel can be added directly from the Free Scroll screen. When a desirable frequency is found, pressing  on the front panel will allow the frequency to be added at the next available channel number.

All of the fields can be set, as when programming a channel from the channel menu (see "Channel Programming" on page 60).

Press  to save the channel.



## Free Scroll Scanning

By holding the Scan icon, the scan settings for Free Scroll can be set.

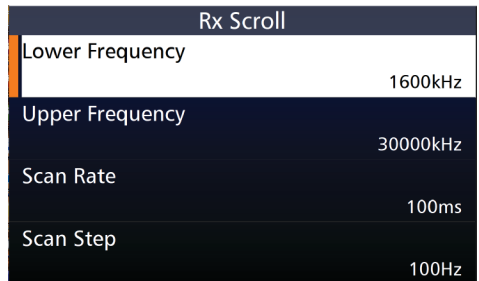
Scan Rate indicates the time spent on each frequency.

Scan Step Indicates the interval between frequencies scanned.

Tapping the scan icon will initiate scanning.



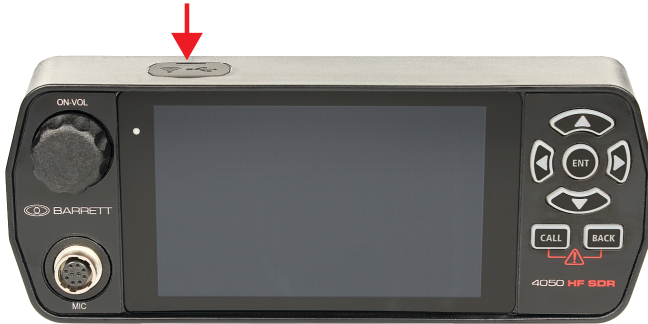
Scan



## Programming Via USB

The transceiver configuration can be imported or exported as a “pack”. This contains the channel configurations, ALE 2G/3G settings, scan tables, contacts and settings amongst other information.

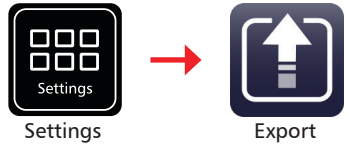
*Note: a valid USB storage device must be inserted to activate.*



### Exporting Settings to a USB

To export the device’s configuration settings, insert a USB storage device into the device’s USB socket.

1. Tap **Settings**, then **Export**.



2. From the Export screen, tap **Export Configuration** to display the Configuration File Name screen.

The default name displays. Use the keyboard to type an alternative name of the configuration file to export to the USB storage device.

Tap  to save.

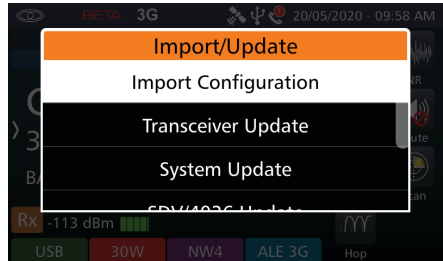
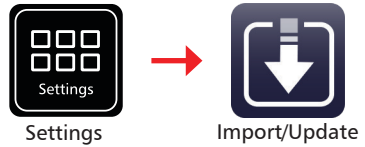
3. Enter an optional password to encrypt the exported pack.
4. The Export Configuration screen displays showing a progress bar confirming the progress of the export.

When prompted, tap **OK** and remove the USB storage device.

## Importing Settings from a USB

1. With a USB storage device inserted into the USB port, tap **Settings**, then **Import**.

If the correct files are on the USB, the transceiver will recognize them and initiate the Import/Update screen.



2. To update the configuration settings (pack), tap **Import Configuration** from the Import/Update screen described above.

Select the required file to import.

If a password was set up for the pack, this will be required for the import to complete.

Confirm that the call history will be replaced when the new pack is loaded.

3. The import process will then begin automatically showing a progress bar. Remove the USB storage device when prompted.
4. The importing of a pack via USB is complete.





# ADVANCED OPERATION 6

This chapter contains the following sections in alphabetical order:

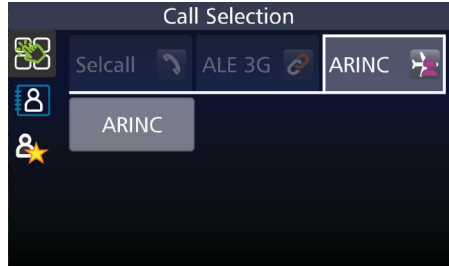
- ARINC Call
- Audio - Advanced
- Collective Call
- Digital Voice
- Export
- Frequency Hopping
- I/O Settings
- Modes
- Mute (Squelch)
- Network
- Noise Reduction (NR)
- RF Settings
- Scanning
- Screen Capture and Re-sync
- Security Settings
- Stealth Mode
- Theme Schedule
- Tuning

## ARINC Call

An ARINC call functions in much the same way as a Selcall. It is a hailing or alert system used exclusively to alert aircraft.

An ARINC ID is a sequence of two sets of 2 letters. Each pair must be entered alphabetically eg. AB-CD or CD-AB.

The interface does not allow invalid ARINC IDs to be entered and blanks out invalid characters.



## Audio - Advanced

From the **Settings** menu, select **Audio**.

For information on Beep Level, Alarm Audio Level and Ring tones, see Basic Settings page 53.



### Rx Configuration

This option sets whether the transceiver receives audio via the antenna or from the Line.

Selecting “Internal Audio” ensures the transceiver receives audio through the antenna.

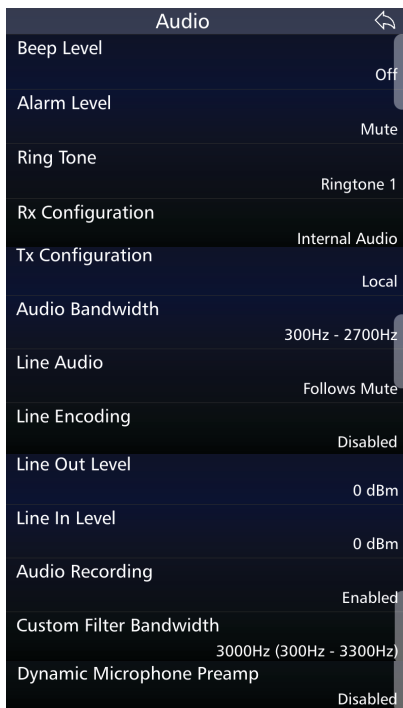
For “External Audio”, the transceiver receives through the auxiliary socket’s 600 ohm balanced audio port. This can be used in many situations, e.g: for a remote receiver in split site operations where audio is received from the remote site.

### Tx Configuration

This option sets whether the 4050 transmits to the antenna or down the line.

When set as “local” the transceiver transmits through the antenna.

When set as “remote”, the transmit audio is sent through the auxiliary socket’s 600 ohm balanced audio port.



### Audio Bandwidth

This section allows the audio bandwidth to be tailored to an operator’s requirements.

Select either:

- 300 Hz - 2700 Hz: used for reduced bandwidth voice operation
- 300 Hz - 3000 Hz: standard voice and data operation
- 300 Hz - 3200 Hz
- 300 Hz - 3400 Hz

### Line Audio

This option sets the muting condition of the 600 ohm balanced audio line output on the rear auxiliary connector.

The line output can be set to Unmuted or Follows Mute. When set to Follows Mute, the line output is muted in the same manner as the speaker output and follows the mute condition currently in use. The line output is usually set to Unmuted when using data modems. Follows Mute should be selected when the transceiver is being used with 2062 Crossgate.

### Line Encoding

When this is selected, the Line audio will also be processed through the Digital Voice hardware.

### Line Out Level

This setting adjusts the output level of the auxiliary 600 ohm balanced audio output port.

### Line In Level

This setting adjusts the input level sensitivity of the auxiliary 600 ohm balanced audio input.

### Audio Record

This option is used to monitor conversations. It utilises the line audio to listen to the received and transmitted audio. Connect an appropriate device to record the conversation using a cable (up 1.2 m in length) with connection specification below.

DB 25 Male Connector Pin	Description	3.5mm Jack Connector Pin
12	Summed Record Audio	Tip & Ring
25	Ground	Sleeve

### Custom Filter Bandwidth

This section allows the audio filter bandwidth to be tailored to an operator's specifically required frequency range. Note that the range must be a minimum of 300 Hz.

### Dynamic Microphone Preamp.

This setting is to be enabled when using the BCA40011 Desktop Microphone. At all other times, set to disabled.

## Collective Call

Collective calls comprise of all-calls, group calls and sub-group calls which involve calling a number of Selcall IDs simultaneously. This is not an individual button in the Selcall menu as a transceiver can group call as a number of call types. For information on other call types please refer to Chapter 3 - Selcall, page 23.

*Note: All call, Group call and Sub-group call must be enabled in the Barrett 4000 Series HF SDR Programming Software (P/N BCA40001).*

### Sending a Group Call

It is recommended that transceivers should NOT be programmed with a Selcall ID ending in "0" as this is used for making group calls. When prompted to enter a Selcall ID for a chosen call type, the first digits represent the groups of IDs you wish to contact.

#### Four Digit format

##### All call

eg. Entering 2000 will contact every transceiver on the channel with an ID that begins with "2".

##### Group call

eg. Entering 2300 will contact every ID on the channel that begins with "23".

##### Sub-group Call

eg. Entering in 2310 will contact every ID that begins with "231".

#### Six Digit format

Same as above. No more than the last 3 digits can hold the 0 value.

eg. Entering 123000 will contact every transceiver beginning with "123".

## 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)

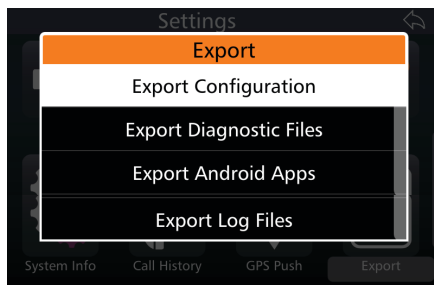
Signal-to-noise ratio conditions can change during communications between HF stations. The digital voice modules have auto baud capabilities which automatically adjust baud rates up or down whilst communicating between the transceivers allowing the users to transmit and receive signals with optimal voice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

Aside from exporting the 4050 configuration settings (pack), the export function of the 4050 can also be used for diagnostic purposes. 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 the channel used for normal/clear transmissions based on the normal procedures used when using an HF system. This channel frequency and mode is used by the Transceiver to determine the hop band. For further information, see page 96.

### Entering the Hopping PIN

This code is entered under Settings < Security (see page 95). All of the transceivers that will be communicating on the same hopping band will need to have the same Hopping code.

### Frequency Hop Rate

The Frequency Hop Rate is the rate at which the frequency hops between transmission frequencies.

Select Standard (5 hops per second), Medium (15 hops per second) or High (25 hops per second) from the Security menu (see page 96).

### 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.



Hop

Hopping voice communication can now be used.

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



## 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 in the transceiver or using the Barrett 4000 Series Programming Software (P/N BCA40001).

When enabled, this option can be toggled on or off from both the Swipe menu and the Settings menu.

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

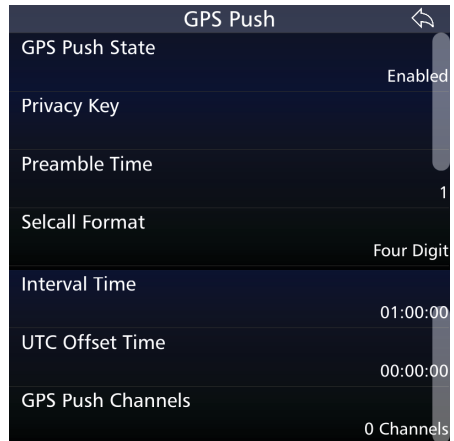
This allows the input of the GPS privacy key. This privacy key allows the transmission to be DES56 encrypted, so long as the receiving station has the same privacy key in order to decrypt the transmission (DES56 encryption does not require export approval).

### Preamble Time

The preamble time allows for differences in transmitting and receiving transceiver's positions in the scan table. It is recommended that the length of preamble is at least half of the number of channels being scanned. (i.e. If 6 channels are being scanned then the Selcall preamble length should be set to a minimum of 3 seconds).

### Selcall Format

This sets the format of the GPS broadcasts, whether 4 digit or 6 digit.



## **Interval Time**

This is the interval between broadcasts. For instance, if the interval is set 30 minutes, every 30 minutes a GPS position will be broadcast after the UTC Offset Time.

## **UTC Offset Time**

This delays the first sounding from midnight UTC and the first GPS broadcast will be made at this time. If there is no UTC Offset Time the first GPS broadcast will occur at 00:00 UTC.

## **GPS Push Channels**

The GPS Push channels are those channels selected on which the GPS Push will be transmitted. These will be transmitted consecutively.

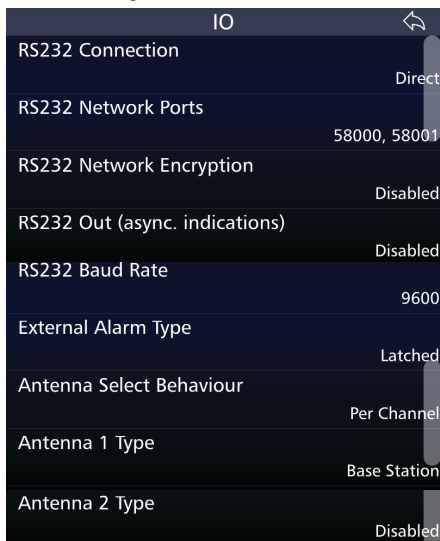
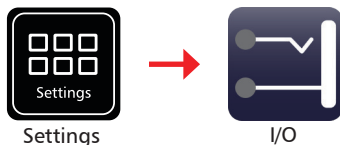
## IO Settings

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 rear of the 4050 or via a network (WiFi or Ethernet - please see 4000 Series IP Connectivity/Networking Guide [P/N BCM40507]).

### RS232 Network Ports

This setting is used when the RS232 connection is set to Network. If using a 3rd party application that has the port 58001 hardcoded, select the 58001 (Legacy) option. In all other cases, leave as "58000, 58001".

### 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 25 pin 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

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 Dual Port Antenna Switch Unit (see page 148).

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 17.

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## Antenna 2

*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 63.



## Mute

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



Mute

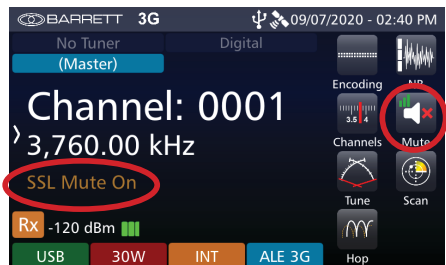
There are three types of mute available from the Home Screen.

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 received by 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.



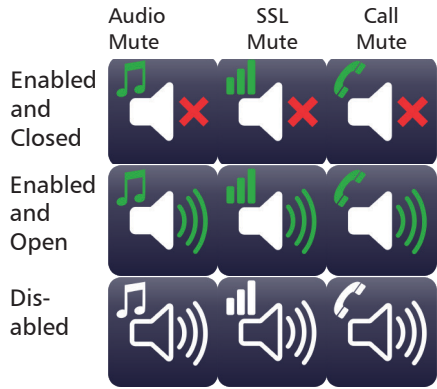
Each mute type has two mute states: Enabled or Disabled. However, the Enabled state can be either open or closed. Each of these states is further described below.

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

**Enabled and Open:** Transmission audio has been detected by the radio. This state is temporary and will automatically revert to mute 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 (squellch) 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.





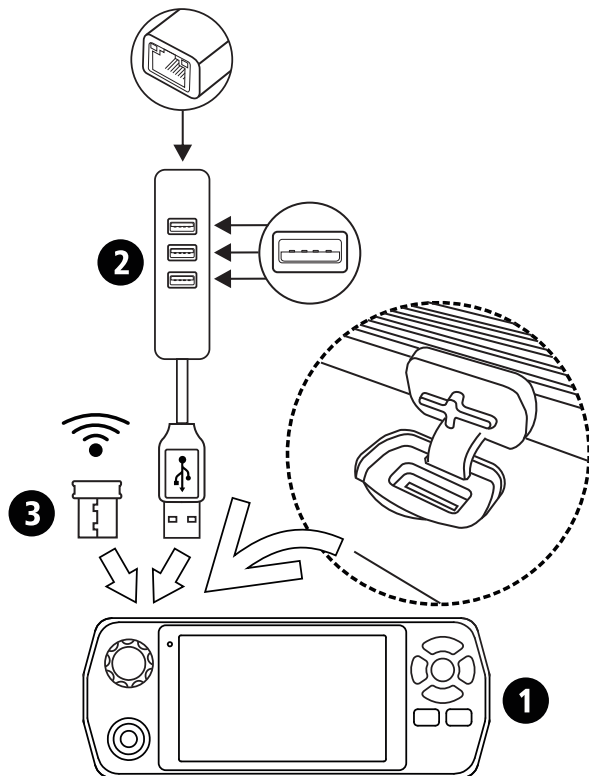
## Network

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

From here, IP and network settings can be set.

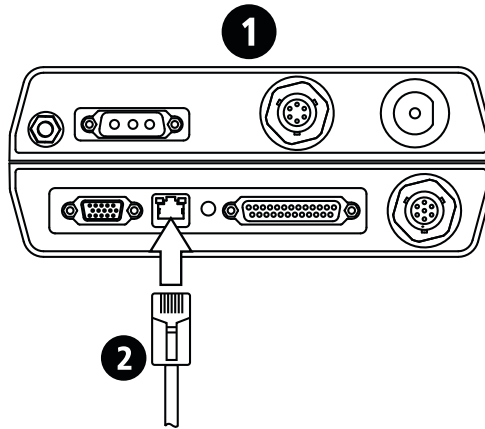
The 4050 HF SDR Transceiver has the ability to interface with IP networks, allowing mobile cellular handsets, tablets and desktop PCs to connect directly to the transceiver via Ethernet or WiFi with the use of specialised adapters. The current range of WiFi and Ethernet adapters replaces the Ethernet connectivity provided by the Barrett Break out Box (discontinued as of April 2019) (P/N BCA40050). For more information, see the Barrett IP Connectivity and Networking Guide (P/N BCM40507).

The following diagram represents possible connections between the Barrett 4050 HF SDR Transceiver and an IP network.



- 1 Barrett 4050 HF SDR Transceiver (front) (P/N BC405000)
- 2 USB to Ethernet Adapter with USB ports (P/N BCA40505)
- 3 WiFi Adapter (P/N BCO40508)

This diagram represents the additional connection between a Barrett 4050ip HF SDR Transceiver and an IP network.



- 1 Barrett 4050 HF SDR Transceiver (rear) (P/N BC405000ip)
- 2 Ethernet (RJ45) cable