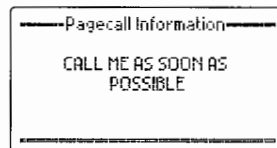
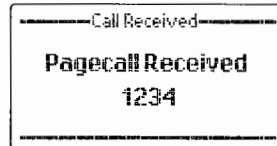


Receiving a "Pagecall" "SMS"

When a Pagecall is received an audible alarm is sounded, the mute (squench) is opened and the display shows the following:-



The audible alarm will sound for thirty seconds and then time out. To cancel the alarm before the time out period and to acknowledge the call, press PTT or any key.

When the audible alarm times out the call received **"Envelope"** icon is displayed in the bottom right hand side of the display.

For details of previously received Pagecalls enter **"Call History"** by holding the



key down for two seconds or more.

Remote station operational status – “Statcall”

“Statcall” allows the operational status parameters of any Barrett transceiver fitted with selcall to be accessed. This status is sent from the remote transceiver as a selcall with the status information embedded within the selcall structure. Information retrieved for remote diagnosis of transceiver performance includes:-

- Selcall ID
- Software version
- Option level fitted and transceiver model
- Receive state battery voltage
- Last transmit state battery voltage
- Signal strength indication of received status request selcall.
- Forward power output level
- VSWR of antenna

Requesting another stations status

select the channel you want to send the Status request call on.
("Beacon call" can be used to select the best channel)

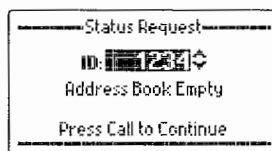
listen for traffic on that channel, if no traffic is heard then continue.

Then press the  key

select "Status Request" with the scroll keys

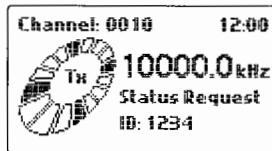


then press the  key

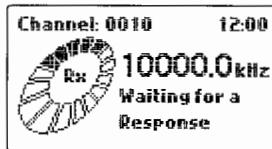


enter the identification of the station you want to request the operational status from (see "Entering station ID's and using the address and telephone books")

then press the  key

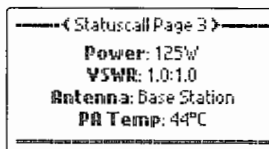
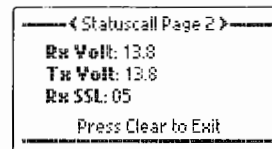
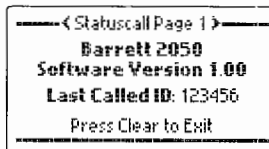


The status request is being transmitted



Your station is waiting for the station you called to send back its "Status data" (which sounds like the remote station sending a Selcall to you) after which the following will be displayed, use the

 **1** or  **3** keys to move through the pages:-



or – the following error messages:-



There was no response from the station you requested the status from, repeat the process or change the channel and repeat the process

Person to person(s) secure call

This facility allows a secure voice connection to be made between two or more stations.

Note:- In the protected menu "Audio Setting" section, scrambler must be enabled in the "Scrambler section" and in the "Scrambler code" section a 4 digit number entered. For security purposes this code must be the same as the code set in the station you wish to call.

select the channel you want to set up the secure link on. ("Beacon call" can be used to select the best channel)

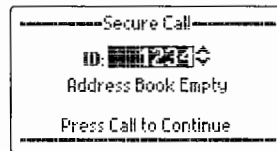
listen for traffic on that channel, if no traffic is heard then continue.

press the  key

select "Secure Selcall" with the scroll keys



press the  key



enter the station ID of the station you wish to call (see "**Entering station ID's and using the address and telephone books**")

Note:- to make a secure call to multiple stations use a group call ID encompassing the required stations.

press the  key

wait for the selective call to be sent.

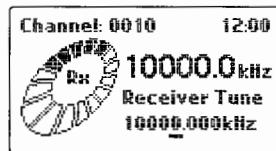
listen for reverive tone from the called station that indicates the call was successful.

If no reverive tone is heard or it was difficult to hear try another channel and repeat the process until a good channel is found. Revertive tones will not be heard if using a group call code to call multiple stations.

Tuning the receiver

The 2050 transceiver can be used as a tunable receiver. The receiver can be tuned from 500 KHz to 30 MHz. in steps ranging from 1 Hz up to 10 MHz.

Press the  key to enter the tuning receiver mode:-



To tune the receiver move the cursor over the digit representing the frequency increment required in the receiver frequency display you wish

to tune using either the  or  keys, then use.

 or  to tune up in frequency

 or  to tune down in frequency

press the  key to return to the previous operating channel.

Scanning with the tunable receiver

The receiver can scan any range of frequencies from 500 KHz to 30 MHz with a frequency step down to 10 Hz.

Setting up scan frequencies

To set up the frequency scan parameters, enter the tuning receiver mode, then:-

Press the  key for two seconds until the following is displayed:-

Lower Limit

01500000 kHz

Type lower frequency

Enter a new frequency, using the numeric keys, to set the lower scan limit boundary - example below shows the lower limit set to 12 MHz:-

Lower Limit

12000.000 kHz

Type lower frequency

then press the  key

Enter a new frequency, using the numeric keys, to set the upper scan limit boundary - example below shows the upper limit set to 14 MHz:-

Upper Limit

14000.000 kHz

Type higher frequency

then press the  key



Using the Scroll keys select step increment required in Hz (Steps available 100Hz (0.1kHz), 250Hz (0.25kHz), 1000Hz (1kHz), 2500Hz (2.5kHz) (example shown 2500Hz)

then press the  key



Using the Scroll keys select step speed in milliseconds. (steps available 100ms, 250ms, 500ms, 1000ms (example shown 250ms)

then press the  key

Start receiver scanning

To start receiver scanning, enter the tuning receiver mode, then:-

press the  key

The receiver will now be scanning using the last entered parameters.

The receiver will now be scanning using the entered parameters.

The transceiver will halt scanning for the following reasons:-

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

Menu functions

Menus

The menu is divided into two sections, the "Standard Menu" and the "Protected Menu". Both sections are used to set or display transceiver parameters. The "Standard Menu" is available directly to operators as no critical operation parameters can be changed in this section.

The "Protected Menu" has some critical parameters and needs the operator to press the menu key for two seconds to enter it.

Note:- Menu items in both menus can be barred from use, if operationally required, by using Barrett 2050 PC based programming software.

Navigating the Menus

All sections of the Menus are operated using the similar key press sequences. In this section when describing the functions available in the Menu system it is assumed the operator is familiar with the following:-

press the  key to enter the "Standard Menu" section

press the  key **for more than 2 seconds** to enter the "Protected Menu" section

use the **Scroll keys** to select the menu item you require.

then press  key

Once in the menu item, again use the **Scroll keys** to select a parameter or enter a value using the numeric or alpha key.

When you have the parameter or value required press the

 key

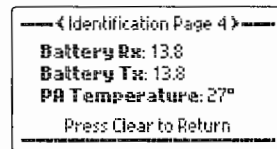
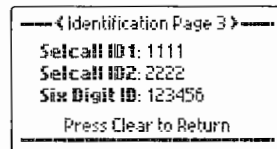
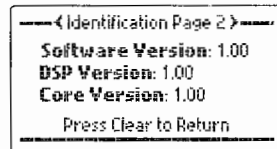
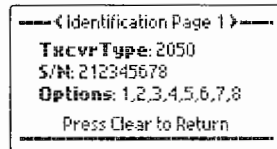
Note:- Due to network operation requirements access to items in the Standard Menu or Protected Menu may be barred by network administrators during programming.

Standard Menu

Identification



Use the  and  keys to scroll back and forth through the identification pages:-



Displays the transceiver model number, transceiver serial number, options fitted, software version, DSP version, core version, the transceiver's selcall ID's, the battery voltage in receive, the battery voltage during the last transmit cycle and the PA temperature.

Display Options

Backlight Level

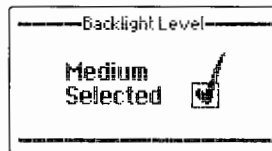


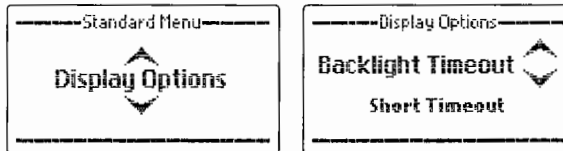
Allows the backlight level on the LCD display to be adjusted to one of three viewing levels:-High, Medium or Low.

Use the **Scroll keys** to select the level required (example Medium):-



when the level required is displayed press the  key



Backlight Timeout


Allows the backlight timeout time to be set so the backlight stays on for a short time from the last key press, for a long time from the last key press or so that the backlight is permanently on or off.

Note:- Having the backlight off reduces the transceiver's power consumption.

Use the **Scroll keys** to select the required setting (example "Always on");-



When the setting required is displayed press the  key



Call History

Whenever a Selcall, Telcall, All call, Group call, Sub group call, Pagecall, Statcall GPS or Emergency call is received or transmitted its details are held in a first in first out call history buffer.

Received calls that have not been viewed before are held in a section called "New Calls", received calls that have been viewed are held for future viewing in the "Inbox" all transmitted calls are stored in the "Outbox". Each history buffer can store up to 30 entries.

New Call

This section lists all types of selcalls that have been received but not yet viewed:-

Standard Menu Call History 	Call History New Calls 3 Received
---	---

New Calls

ID: 1234 **Record:**

Type: Selcall

Received: 12:00 1st Jan

Enter for more details

Inbox

This section lists all types of Selcalls that have been received and viewed and stored for future reference:-

Standard Menu Call History 	Call History Inbox 27 Recorded
---	--

Inbox

ID: 1234 **Record:**

Type: Selcall

Received: 12:00 1st Jan

Enter for more details

Outbox

This section lists all types of Selcalls that have been transmitted:-

Standard Menu Call History	Call History Outbox 24 Recorded
--------------------------------------	--

Outbox
 ID: 1234 Record: 01
 Type: Selcall
 Transmitted: 12:00 1st Jan
 Enter for more details

Navigation when in the "New calls", "Inbox" and "Outbox" is always the same as shown in the "New Calls" example below:-

Standard Menu Call History	Call History New Calls 3 Received
--------------------------------------	--

Either

Use the **Scroll keys** to select the required record:-

New Calls
 ID: 1234 Record: 01
 Type: Selcall
 Received: 12:00 1st Jan
 Enter for more details

New Calls
 ID: 0001 Record: 02
 Type: Pagecall
 Received: 13:46 28th Apr
 Enter for more details

Or

enter a record number using the numeric keys and press

the  key

BARRETT 2050 HF SSB TRANSCEIVER

New Calls
ID: 1234 Record: 21
Type: Selcall
Received: 12:00 1st Jan
Enter for more details

New Calls
ID: 0001 Record: 02↕
Type: Pagecall
Received: 13:46 28th Apr
Enter for more details

In all cases, when a record has been selected, press the



key for more details of the call:-

Inbox
Name: DUBAI BASE
Channel: 0002
Frequency: 2000.0 kHz

If the received Selcall ID is not listed in the transceiver Selcall ID book, associating it with a name, the following will be displayed:-

Inbox
Name: Unknown
Channel: 0002
Frequency: 2000.0 kHz

If the channel the incoming selcall was received on has been deleted since the selcall was received the following is displayed:-

Inbox
Name: DUBAI BASE
Channel: 0002
Frequency: Unknown

Address books

Selcall ID Book – add a new entry

Standard Menu	Address Books
Address Books	Selcall ID Book
	20 Entries

Selcall ID Book

Add Entry

then press the  key

Selcall ID Book

Name: ■

Selcall ID:

Input Name of ID Book Entry

press  key if Uppercase required

Selcall ID Book

Name: ■

Selcall ID:

Uppercase Mode

Input Name of ID Book Entry

enter name to be associated with Selcall ID

Selcall ID Book

Name: MOSCOW BASE ■

Selcall ID:

Uppercase Mode

Input Name of ID Book Entry

then press  key:-

-----Selcall ID Book-----

Name: MOSCOW BASE

Selcall ID: 0-----

Input Selcall ID

enter selcall ID number, four or six digits

-----Selcall ID Book-----

Name: MOSCOW BASE

Selcall ID: 45690-----

Input Selcall ID

then press the  key

-----Selcall ID Book-----

New Entry 

Selcall ID Book – edit an entry

Standard Menu	Address Books
Address Books	Selcall ID Book
	20 Entries

Selcall ID Book

Search Entries

Selcall ID Book

Name: DUBAI BASE

Selcall ID: 001234

Press Enter to edit Selcall ID

Use the **Scroll** keys to select entry and press



key to edit

Selcall ID Book

Name: DUBAI BASE

Selcall ID: 0-----

Input Selcall ID

input new Selcall ID four or six digits

Selcall ID Book

Name: DUBAI BASE

Selcall ID: 547---

Input Selcall ID

then press the



key

Selcall ID Book

Entry Updated

Selcall ID Book – erase an entry

Standard Menu	Address Books
Address Books	Selcall ID Book
	20 Entries

Selcall ID Book
 Search Entries

Selcall ID Book
 Name: DUBAI BASE
 Selcall ID: 0547
 Press Enter to edit Selcall ID

use the **Scroll keys** to select the entry you want to erase.

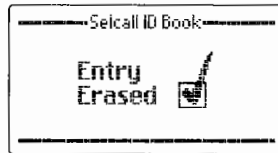
press the Clear key for more than two seconds

Erase Entry
 Are you sure you want to erase
 DUBAI BASE
 No

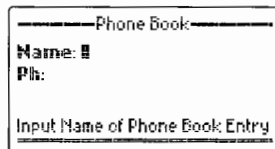
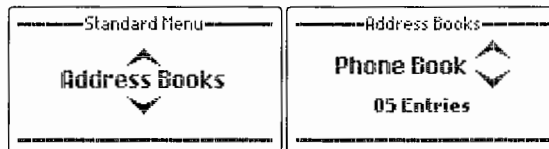
use the **Scroll keys** select "Yes"

Erase Entry
 Are you sure you want to erase
 DUBAI BASE
 Yes

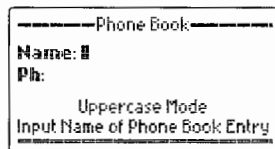
press the ENTER key



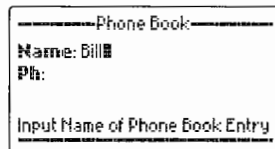
Phone book - add a new entry



press the  key if uppercase required



enter the name to be associated with telephone number



then press the  key

Phone Book

Name: Bill

Ph:

Input Telephone Number

enter the telephone number using the numeric keys (up to 16 digits)

Phone Book

Name: Bill

Ph: 006189555555

Input Telephone Number

then press the  key

Phone Book

New Entry 

Phone book - edit an entry

Standard Menu	Address Books
Address Books	Phone Book
	05 Entries

Phone Book
Search Entries

Phone Book
Name: 00000000
Ph: 95551234
Press Enter to edit Telnumber

Eitheruse the **Scroll keys** to scroll though the phone book to find the entry you want to edit

Phone Book
Name: 00000000
Ph: 0061894341700
Press Enter to edit Telnumber

Or

enter the first letter of the name you are looking for using the Alpha keys, for example, looking for the name Patrick:-

Key in 'p' using alpha keys, then use the **Scroll keys** to find the name:-

Phone Book
Name: Patrick
Ph: 0061894184141
Press Enter to edit Telnumber

then press the  key

BARRETT 2050 HF SSB TRANSCEIVER

now to edit the telephone number press the  key

Phone Book

Name: Patrick

Ph: 

Input Telephone Number

enter the new telephone number using the numeric keys (up to 16 digits):-

Phone Book

Name: Patrick

Ph: 0061895559876

Input Telephone Number

then press the  key

Phone Book

Entry Updated 

Phone Book

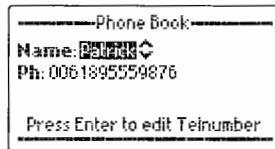
Name: 00000

Ph: 0061895559876

Press Enter to edit Telnumber

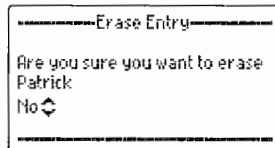
Phone book - erasing an entry

Standard Menu	Address Books
Address Books	Phone Book
	05 Entries

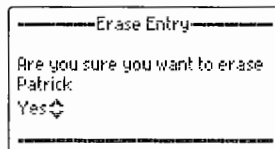


select the entry you want to erase using the **Scroll keys**.

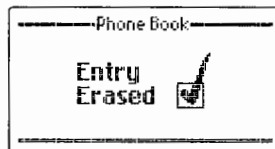
press the  key for more than two seconds



use the **Scroll keys** select "Yes"



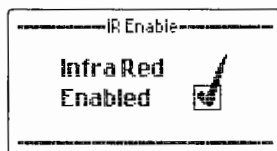
then press the  key



IR Enable



Press the  key to enable the IR facility:-

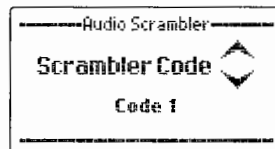


The IR facility will remain enabled ready to link to an IR equipped PC or laptop that is loaded with the Barrett 2000 series programming system for a period of 5 minutes. After this time, unless an IR link has been established, the IR is again disabled. See the "Programming section" of this manual for more details.

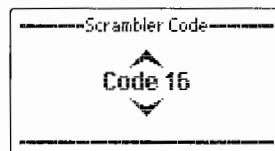
Audio Scrambler



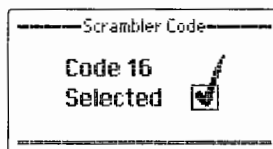
When using the internally fitted audio scrambler accessory PCB that provides backwards compatibility to the 900 series audio inversion scrambler (BCA20031) or the Transcript scrambler (BCA20054), the scramble code is set using this option. All stations using the scramblers require the same scrambler code to be entered:-



The code can be selected between 1 and 16:-

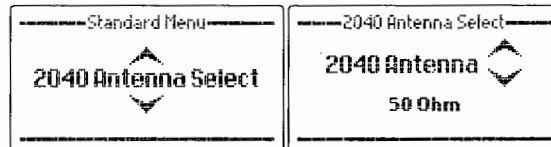


press the  key



Note:- If using the internally fitted rolling code audio scrambler accessory PCB (BCA20054) the code is set on the unit before installation using an external programmer.

2040 Antenna Select (available when 2050 deployed in 2040 manpack adaptor)



This section allows the selection of the antenna type to be used with the 2040 manpack. When an un-tuned antenna such as the whip or a long-wire is to be used "Whip/Long-wire" is selected. This enables the automatic antenna tuner. If a 50 Ohm broadband antenna or a tuned dipole is to be used select "50 Ohm". The automatic tuner is disabled and the BNC socket on the 2040 is used.

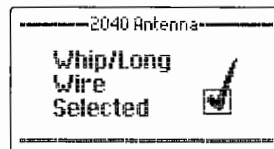
Use the **Scroll keys** to select the setting required (example "Whip L/Wire" :-



press the



key

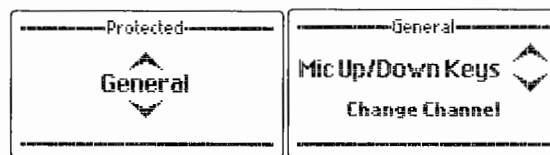


Protected Menu

Refer page 57 for details on how to access the protected menu.

General

Microphone Up/Down Keys

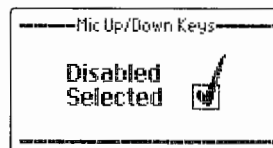


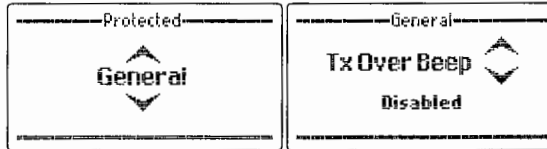
The keys on the top of the microphone can be assigned for two different functions, either as channel up/down keys or as volume control keys or they can be disabled:-

Use the **Scroll keys** to select the setting required (example "Mic keys disabled"):-



press the  key



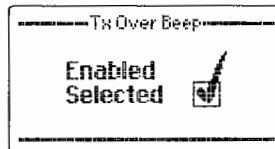
Transmit "over beep"


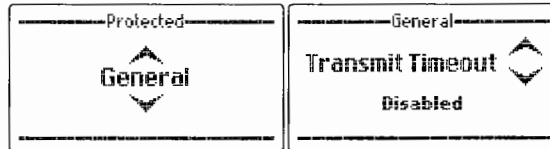
When selected the 2050 transceiver transmits a short tone when the PTT is released. It provides an audible indication to the operator at the remote station that the local station has stopped transmitting.

Use the **Scroll keys** to select the setting required (example "Tx Over Beep enabled"):-



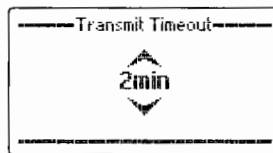
press the  key



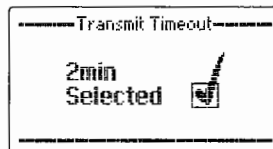
Transmit timeout


When this feature is enabled the 2050 transceiver will disable the transmitter if the PTT (push to talk button on the microphone) is held on for more than the time limit set below i.e. if the microphone is inadvertently jammed under a seat. Releasing the PTT will reset the transmitter. Settings available are "Disabled", 1 minute, 2 minutes, 3 minutes:-

Use the **Scroll keys** to select the setting required (example 2 minutes):-



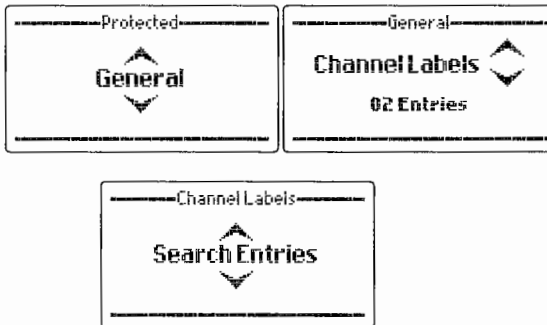
When the setting required is selected press the  key



Channel Labels

This section enables the adding, editing or erasing of channel use labels, these labels are used during channel programming to indicate what particular channels are used for i.e. UNHCR Geneva:-

Edit labels



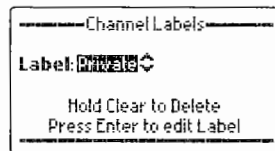
Either

use the **scroll keys** to scroll through to the label you want to edit:-



Or

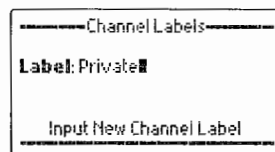
search for label you want to edit by entering the first letter of the label and using the **scroll keys** to select it:-



to edit the label press the



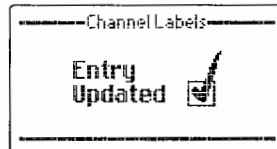
key



edit the entry when editing is complete press the

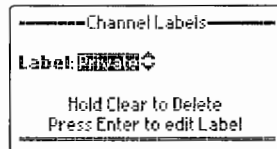


key

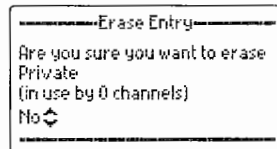


Delete a label

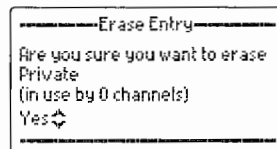
Enter edit mode as shown above and select the label you want to delete:-



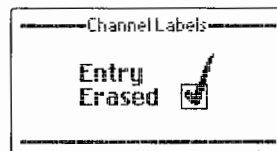
press the  key until the display below appears:-



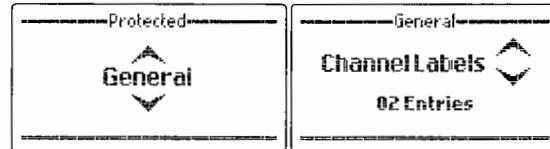
Use the **scroll keys** to select "Yes" you want to delete the entry:-



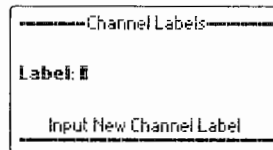
then press the  key.



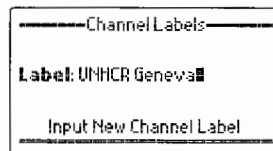
Add an Entry



press the  key

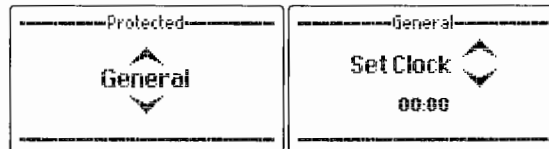


type in a new label using the Alpha keys:-

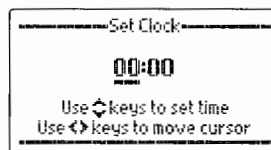


then press the  key.

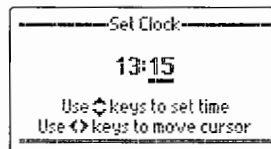


Setting the Clock


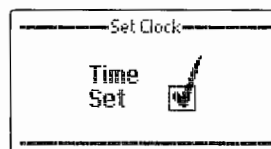
press the  key



Use the Scroll keys and as shown on the screen to set the current time for example 13:15 (1:15 PM):-



When time is set press the  key.



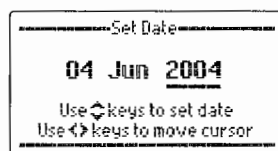
Setting the Date



press the  key

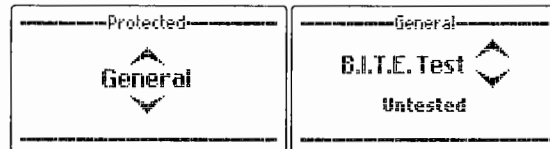


Use the Scroll keys and as shown on the screen to set the current date for example 04 June 2004:-



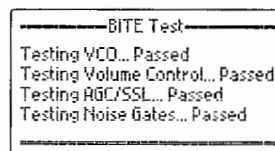
When date is entered press the  key



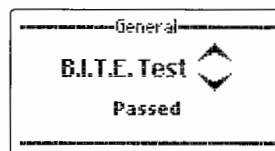
B.I.T.E. Test


This section runs the transceiver's Built in Test Equipment (B.I.T.E.) tests. The transceiver checks vital transceiver functions and reports the results as shown below:-

press the  key



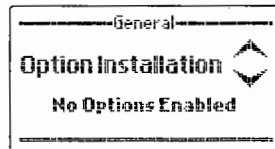
then press the  key to continue:-



press the  key to repeat the test or press the  key to finish.

Note:- The Audio and Signal strength mutes must not be selected when running the B.I.T.E. test or it may fail.

Option installation



Options are installed in the Barrett 2050 transceiver by entering a PIN number supplied by the manufacturer. This PIN number is related to the electronic serial number of the transceiver. A different PIN number is provided depending on the option or combination of options required to be fitted. Most options are fitted in the factory before dispatch.

press the  key

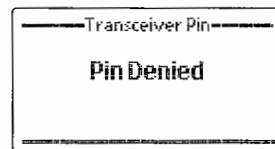


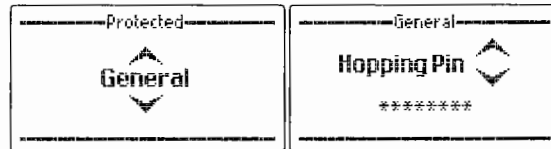
Enter the option PIN number supplied by the manufacturer using the numeric keypad by the manufacturer then press the  key

For example if the PIN number supplied is for all eight options, after entering the PIN number the following is displayed:-

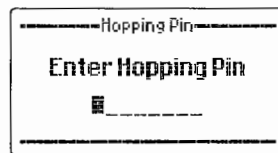


If an incorrect PIN number is entered the following is displayed:-

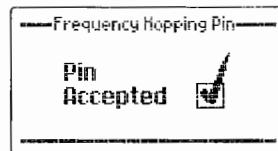


Hopping PIN number entry

Using the numeric keypad enter an 8 digit hopping security code.

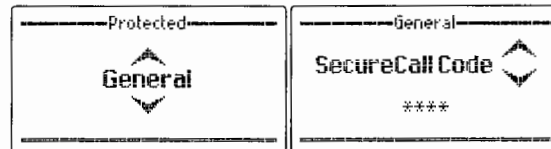


then press the  key



Note:- Refer to the "Frequency Hopping" section of this manual for details of PIN entry and Frequency Hopping in general

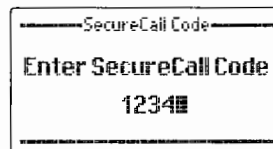
Secure Call Code



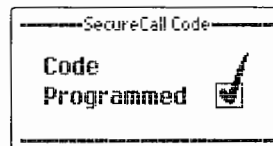
When using the person to person voice scrambler both stations require the same scrambler code to be entered:-

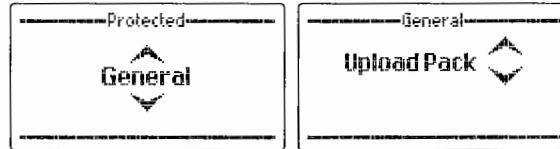


Using the numeric key pad enter a four digit number:-



then press the  key

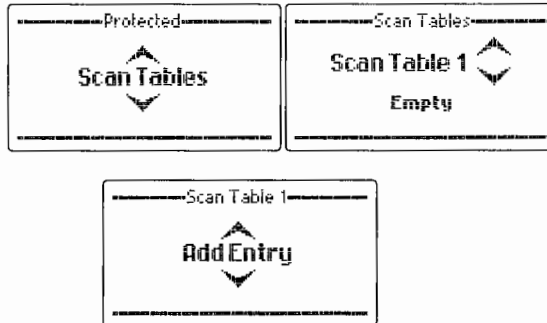


Upload Pack

See section "Cloning (programming) from another transceiver"

Scan tables

Adding channels to a scan table



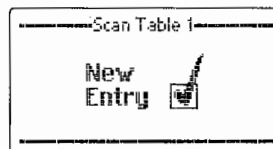
Use the **Scroll** keys to select the channel you wish to add:-



When the channel required is displayed press the



key



Editing channels in a Scan table

Protected ↕ Scan Tables	Scan Tables ↕ Scan Table 1 ↕ 02 Entries
---	---

Scan Table 1

↕

Search Entries

Scan Table 1

Channel: 0003 **Entry:** 00 ↕
Frequency: 3000.0 kHz
Label: Public
 Enter to Edit Scan Table Entry

Either

Use the **Scroll keys** to select the channel you wish to edit:-

Scan Table 1

Channel: 0005 **Entry:** 00 ↕
Frequency: 5000.0 kHz
Label: Public
 Enter to Edit Scan Table Entry

Or

Select the channel you wish to edit by entering the channel number (example channel 1):-

Scan Table 1

Channel: 0005 **Entry:** 1#
Frequency: 5000.0 kHz
Label: Public
 Enter to Edit Scan Table Entry

then press the  key

```

-----Scan Table 1-----
Channel: 0003  Entry: 01↕
Frequency: 3000.0 kHz
Label: Public
Enter to Edit Scan Table Entry
    
```

Then press the  key to edit the channel number
Use the **Scroll** keys to select the new channel for the scan table slot:-

```

-----Scan Table 1-----
Channel: 0000↕ Entry: 01
Frequency: 3000.0 kHz
Label: Public
Select Channel to Scan
    
```

press the  key to enter the new setting:-

```

-----Scan Table 1-----
Entry Edited 
    
```

Erasing entries in a scan table

Select the scan table and channel slot you want to remove using the steps above:-

```

-----Scan Table 1-----
Channel: 0003  Entry: 01↕
Frequency: 3000.0 kHz
Label: Public
Enter to Edit Scan Table Entry
    
```

when the entry you wish to erase is selected press the  key until the following is displayed:-

```

-----Erase Entry-----
Are you sure you want to erase
entry 01 (Channel 0003)?
No↕
    
```

Use the **Scroll keys** to select "Yes" when you are sure you want to erase the entry:-

Erase Entry

Are you sure you want to erase
entry 01 (Channel 0003)?
Yes 

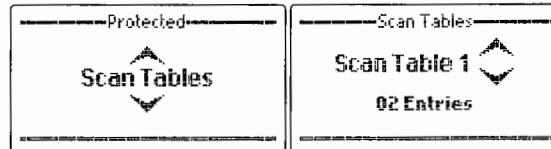
then press the  key

Scan Table 1

Entry
Erased 

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.

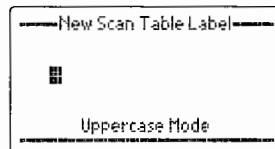
Changing Scan table labels



press the  key



Use the  key to clear the old label:-



using the alpha/numeric keypad enter the new label:-



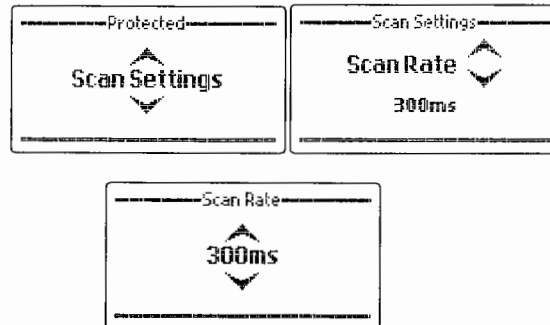
then press the  key

BARRETT 2050 HF SSB TRANSCEIVER



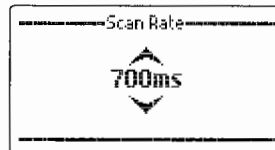
Scan settings

Scan Rate



Selects the scan rate applicable to non-selcall scan channels, selectable between 300mS and 5 seconds per channel.

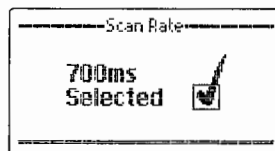
Use the **Scroll keys** to select the scan resume time required (example 700mS):-



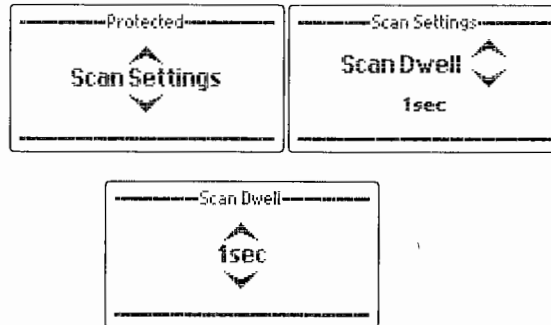
When the setting required is selected press the



key

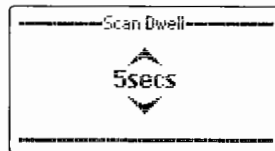


Scan Dwell



Selects 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). The dwell time can be set from 1 to 10 seconds.

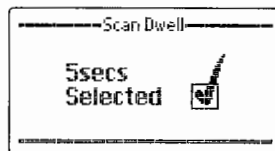
Use the **Scroll keys** to select the scan dwell time required (example 5 seconds):-

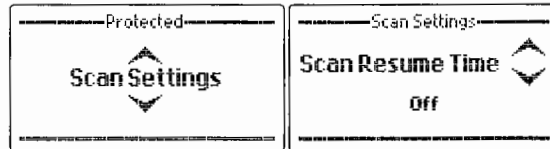


When the setting required is selected press the



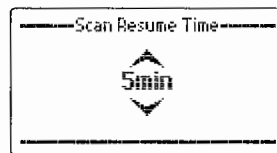
key



Scan Resume Time


This section sets the time period after which the Barrett 2050 transceiver will automatically resume scanning from the last operation i.e. key press or PTT. The scan resume time period can be set between 1 and 30 minutes or it can be disabled.

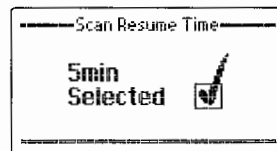
Use the **Scroll keys** to select the scan resume time required (example 5 minutes):-



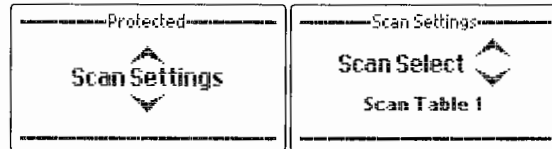
When the setting required is selected press the



key



Scan table select



This section selects the Scan table to be used when the transceiver is put in scan, or if enabled, when scan resume occurs. There are 8 scan tables.

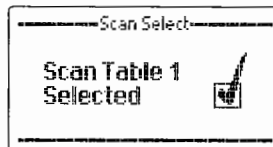
Note:- When scrolling through the scan tables, before selection, only those with channels entered will be displayed.

Note:- Channels can be added, removed and edited and scan tables named in the "Scan table" section.

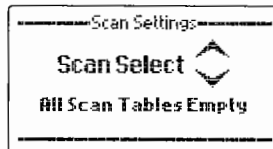
Use the **Scroll keys** to select the scan table required (example scan table 1):-



When the scan table required is displayed press the  key



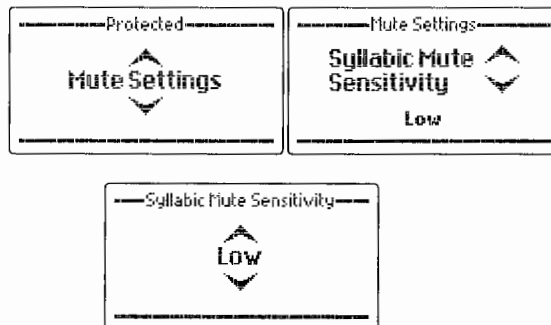
If none of the Scan tables have any channel entries the following is displayed:-



Note:- Direct entry into this section is available by pressing the  key for more than two seconds.

Mute Settings

Syllabic Mute Sensitivity



The sensitivity or "hardness of the syllabic mute (squellch) is set by this section. The mute can be set between low, medium and high sensitivity to voice activity on a channel.

Use the **Scroll keys** to select the setting required (example High):-



When the setting required is selected press the



key

