HF SSB transceiver 9323

This guide contains descriptions of features for the full range of HF SSB series transceivers. The table of contents below only refers to the sections in the guide that describe standard or optional features for your transceiver.

1 About this user guide

2 Overview

3 Using the transceiver

4 Sending calls

Specifications specific to transceiver type 9323

Channel capacity	Up to 400 channels
Frequency range	Transmit: 2 to 26.5MHz Receive: 250kHz to 30MHz
Operating mode	Single sideband (J3E; USB)
Transmitted power	100 watts (PEP)

Options factory fitted in your transceiver

Code	Description
C	CICS—access to Computer Interface Command Set through transceiver's I^2C adapter (accessory) or RS-232 port.
D	Data—support for 9001/9002 fax/data modems.
I	IPC-500—support for IPC-500.
LD	Local Diagnostics—local diagnostics such as dB volts display and SWR.
RC	Remote Control—support for control of transceiver by 8570/8571 remote control system.
RDD	RDD Telcall—telcall format for use with RDD bases (needs SEL or T).
RFDS	RFDS—send RFDS emergency call (Australia only).
SEL	Selcall: Full—send and receive selcall, group call, page call, selective beacon call, status call and telcall.
TP	Tx Power Select—selectable transmit power level.
TxD	TxD—sets channel programming capability.
U	Upper Sideband—upper sideband on transmit frequencies.

The following plastic envelopes are provided for holding your notes.

HF SSB transceiver 9360

This guide contains descriptions of features for the full range of HF SSB series transceivers. The table of contents below only refers to the sections in the guide that describe standard or optional features for your transceiver.

1 About this user guide

2 Overview

3 Using the transceiver

4 Sending calls

5 Receiving calls

6 Advanced features

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Figures

Specifications specific to transceiver type 9360

Channel capacity	Up to 400 channels
Frequency range	Transmit: 2.25 to 30MHz Receive: 250kHz to 30MHz
Operating mode	Single sideband (J3E; USB-LSB)
Transmitted power	125 watts (PEP)

Options factory fitted in your transceiver

Code	Description
ALE	Automatic Link Establishment—support for 9300 ALE controller.
C	CICS—access to Computer Interface Command Set through transceiver's I^2C adapter (accessory) or RS-232 port.
D	Data—support for 9001/9002 fax/data modems.
ES	Emergency Selcall—send and receive emergency selcall.
I	IPC-500—support for IPC-500.
LD	Local Diagnostics—local diagnostics such as dB volts display and SWR.
LU	Lower/Upper Sideband—lower or upper sideband selectable for channel.
RC	Remote Control—support for control of transceiver by 8570/8571 remote control system.
RDD	RDD Telcall—telcall format for use with RDD bases (needs SEL or T).
SEL	Selcall: Full—send and receive selcall, group call, page call, selective beacon call, status call and telcall.
SLO	Selcall Lock Out—prevents sending selective call if channel busy (needs S or St).
TP	Tx Power Select—selectable transmit power level.
TxE	TxE—sets channel programming capability.

The following plastic envelopes are provided for holding your notes.

1 About this user guide

This guide describes how you use the Codan HF SSB transceiver to make and receive calls.

The user guide contains six chapters.

Chapter 1 explains how to use this user guide.

Chapter 2 gives you an overview and describes the equipment and controls.

Chapter 3 explains the basic steps necessary to operate your transceiver.

Chapter 4 explains how to send calls.

Chapter 5 explains how to respond to received calls.

Chapter 6 describes advanced features of the transceiver.

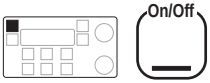
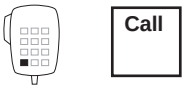
Standards and icons

In this guide, Arial typeface is used for text shown on the transceiver display. For example:

If no response was displayed, send the call again.

Arial typeface in bold is used for the names of buttons, knobs and connectors. For example:

Press the **On/Off** button.

This icon...	Means...
❑	the end of a subject.
	a warning.
	the transceiver button or knob that you need to operate (the **On/Off** button in this example). The solid area in the picture of the transceiver control panel on the left shows you where to find the button or knob.
	the microphone button that you need to operate (the **Call** button in this example). The solid area in the picture of the microphone on the left shows you where to find the button.

Glossary

This term...	Means...
µV	Microvolt.
BER	Bit Error Rate.
A	Ampere.
AC	Alternating Current.
ALE	Automatic Link Establishment.
AM	Amplitude Modulation.
Baud	Binary transfer rate.
Call memory	a list containing details of the last ten calls you have received.
CICS	Computer Interface Command Set.
D	Depth.
dB	Decibel.
DC	Direct Current.
EPROM EEPROM BBPROM SEEPROM	types of Programmable Read-Only Memory.
GPS	Global Positioning System.
H	Height.
HF	High Frequency.
kg	Kilogram.
kHz	Kilohertz.
L/S	Loudspeaker.
LCD	Liquid Crystal Display.
LSB	Lower Sideband.
LU	Lower/Upper sideband selectable.
MHz	Megahertz.

This term...	Means...
mm	Millimetre.
PA	Power Amplifier.
PCB	Printed Circuit Board.
PIN	Personal Identification Number.
PSTN	Public Switched Telephone Network.
PTT button	Press-To-Talk button.
RAM	Random Access Memory.
RDD	Radphone Direct Dial.
Receive-only channel	a channel that allows you to receive calls but not send calls.
Revertive signal	an acknowledgment signal automatically transmitted from a station receiving a call.
RF	Radio Frequency.
RFDS	Royal Flying Doctor Service.
Rx	Receive.
Scan table	a list of channels used when scanning for incoming calls.
Selcall	the simplest type of selective call.
Selective call	a call to a specific station using the station's address. Selective calls include beacon calls, selcalls, group calls, telcalls, GPS calls, page calls, ALE calls and status calls.
SSB	Single Sideband transmission format.
SWR	Standing Wave Ratio.
Transceiver ID	a factory set 16-character alphanumeric code that uniquely identifies your transceiver.
Transmit channel	a channel that allows you to receive and send calls.

This term...	Means...
Two-frequency simplex	a channel that has different transmit and receive frequencies but does not allow simultaneous transmit and receive.
Tx	Transmit.
TXE	Transmit Enabled—allows you to set up new transmit frequencies.
USB	Upper Sideband.
V	Volt.
W	Width.

Other documents

For information on how you set up the transceiver, refer to the *HF SSB transceiver reference manual* (Codan part number 15-04076).

For information on ALE calling, refer to the *9300 ALE controller user guide* (Codan part number 15-04046).

For information on Telstra radiophone services within Australia, refer to the *Radphone Direct Dial User Guide* and *Radphone User Guide* produced by Telstra.

2 Overview

This chapter describes:

- the main features of the transceiver (2-2)
- the buttons and knobs that control the transceiver (2-7)
- the display layout (2-12)
- the connectors on the rear panel of the transceiver (2-14).

Continual research and development has produced different versions of the HF SSB transceiver. Newer versions mean later issues of EPROM which provide different operating features. To check the version of your transceiver, see *Chapter 3, Using View All Settings mode—transceiver software issue.*

This issue of the handbook incorporates operating information for software versions from:

- transceiver (main) 4.00
- head (control) panel 4.00.

Your Codan HF SSB transceiver

The innovative HF SSB series transceiver incorporates the most recent circuit technology and manufacturing techniques to give unbeatable operating performance and reliability. The transceiver is designed for fixed base and mobile installations.

The transceiver is available with either front panel control or with an extended control head using a separate loudspeaker. It can also operate in a multi-control system consisting of a front control panel and up to three control heads.

The special purpose microphone provides key-pad control of most of the transceiver operations and is an extension of the control panel functions.

The control panel features 10 buttons (sealed membrane switches), two knobs and a Liquid Crystal Display (LCD). The display shows the operating status of the transceiver, including channel number, frequency, channel option settings and channel comment. There is a bar graph indication of the transmit and receive signal strengths.

The main features of the transceiver are:

- channels
- scanning
- free-tuning receiver
- selective calling*
- paging*
- GPS*
- telephone interconnect calling*
- fax and data (additional equipment required)*
- cloning.

* These features may require transceiver options to be added to your transceiver.

Channels

The total number of channels that can be stored depends on the transceiver type and the amount of channel comments used.

Channels cover:

- the transmit frequency range specified at the front of this guide
- the receive frequency range 250kHz to 30MHz.

Channels can be single or two-frequency simplex. They can be programmed at the factory or by an authorised Codan dealer through the transceiver microphone socket using Codan XP programming software and an IBM compatible computer.

You can copy existing channel frequencies in the transceiver to other channel locations. You can also create receive-only channel frequencies.

Scanning

This feature allows you to monitor up to 10 selected channels for incoming calls. Scanning can be programmed to stop on receipt of a voice call or a selcall (if option selcall is fitted).

Free-tuning receiver

Your transceiver can be used as a free-tuning receiver covering the receiver world broadcast bands over the frequency range of 250kHz to 30MHz.

Selective call (where fitted)

Selective calling simplifies calling stations. Each transceiver has its own address rather like a telephone number. You call a station by specifying its address. If the station is unattended, your call details are automatically recorded. Selective calling saves you from having to listen to noise when waiting for a call.

Selective calls consist of ALE calls, beacon calls, GPS calls, page calls, selcalls, status calls and telcalls. Selcall is the basic type of selective call for voice communication.

GPS position calls, page calls and selcalls allow you to call a range of stations simultaneously by group calling. This is useful for base stations wanting to contact all mobile stations or for starting a conference discussion between several stations.

To change the call to a group call, you end the address with 00. All stations with matching addresses, excluding the last two digits, will receive your call. For example, a call to 123400 will be received by all stations with addresses in the range 123401–123498.

Your transceiver can store information from 10 stations that have called you while your station was unattended.

Paging (where fitted)

The transceiver has a paging feature that allows you to send and receive text messages up to 64 characters long.

You can either send messages directly from the control panel or from an attached computer terminal. Received messages are displayed and recorded in the call memory of the transceiver.

GPS (where fitted)

You can attach a GPS receiver to the transceiver. The transceiver automatically transmits GPS information in response to a request from another station. You can also send your GPS location to another transceiver.

Telephone (where fitted)

A base station can be connected to an IPC-500 telephone interconnect unit. This allows you to use your transceiver to make telephone calls through the public telephone system.

Fax and data (where fitted)

By connecting ancillary equipment you can use your transceiver for fax and data transmission and reception.

Cloning

For network users, you can copy frequencies and settings from one transceiver to another by the simple process of cloning. A special cable joins the two transceivers together at their microphone sockets.

Installing your transceiver

To install your transceiver and connect the components that make up your station, refer to the *HF SSB transceiver reference manual, Chapter 2, Installation*.

Transceiver options

See the front of this guide for the list of transceiver options fitted in your transceiver.

You can also check which options are fitted in your transceiver by using View All Settings mode (see *Using View All Settings mode, Chapter 3*). This mode provides a list of codes for most fitted options.

To check options such as RDD, which are not displayed in View All Settings mode, refer to the *HF SSB transceiver reference manual, Chapter 8, Selcall address setup*.

Transceiver controls

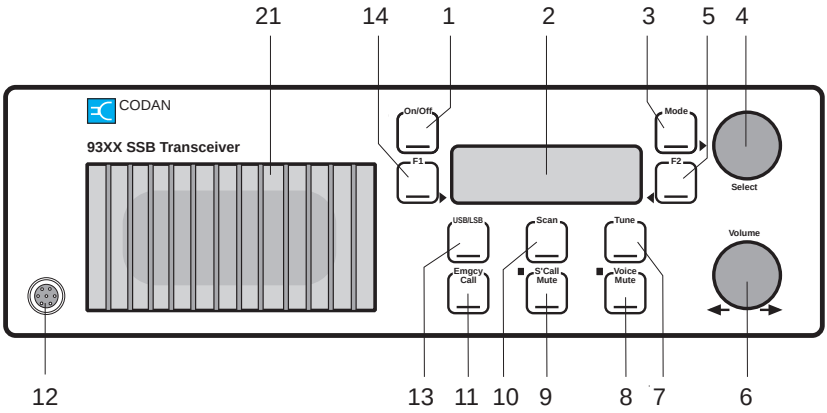


Figure 2.1 Front panel of the transceiver

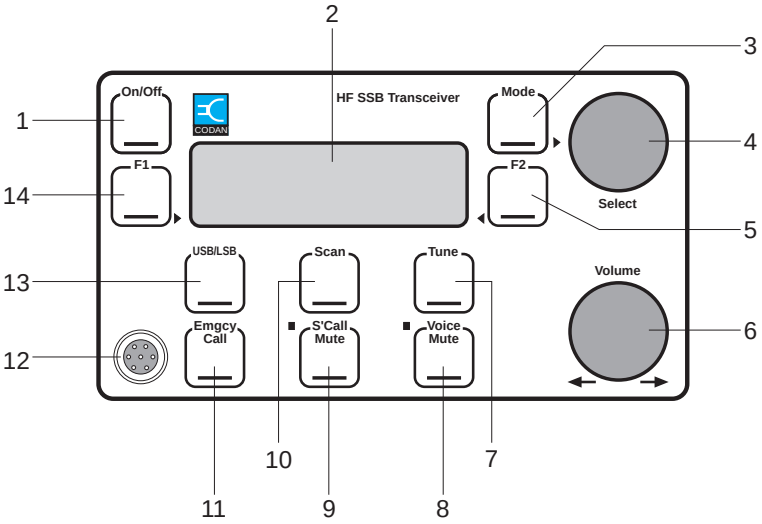


Figure 2.2 Control panel of the control head

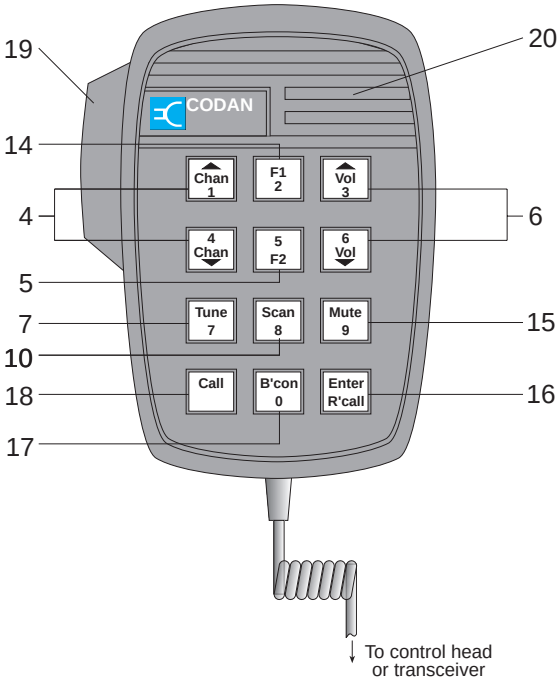
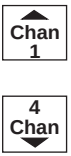
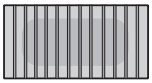


Figure 2.3 The microphone

	Control panel	Microphone	Function
1.	On/Off		The On/Off button switches the transceiver on or off.
2.			The display shows information about the current operation of the transceiver.
3.	Mode		The Mode button changes the operating mode of the transceiver.

	Control panel	Microphone	Function
4.			The Select knob on the control panel and the channel buttons on the microphone change the channel when you are in Channel mode (the normal operating mode). The Select knob is also used with the Volume knob to enter message or channel comment. You rotate the Select knob to select each character. To input numbers you can also use the buttons on the microphone.
5.			The F2 button performs different functions depending on the transceiver's operating mode. The bottom right position of the transceiver display shows the current function.
6.			The Volume knob on the control panel and the volume buttons on the microphone change the loudspeaker volume when you are in Channel mode. The Volume knob is also used with the Select knob to enter message or channel comment. You rotate the Volume knob to move the cursor to where you want to enter the next character.
7.			The Tune button tunes the antenna for auto tuners and antenna systems.
8.			The Voice Mute button removes normal background noise when there is no audio signal. When voice mute is selected, the indicator at the top left of the button is on.

	Control panel	Microphone	Function
9.			The S'Call Mute button removes normal background noise until a selcall is received. When selcall mute is selected, the indicator at the top left of the button is on.
10.		Scan 8	The Scan button starts and stops the transceiver scanning selected channels for incoming calls.
11.			The Emgcy Call button sends an emergency selcall depending on how you set up the transceiver.
12.			The microphone socket.
13.			The USB/LSB button selects upper or lower sideband (USB or LSB). The display indicates the selected sideband.
14.		F1 2	The F1 button performs different functions depending on the transceiver's operating mode. The bottom left position of the transceiver display shows the current function.
15.		Mute 9	The Mute button silences the transceiver until a call is received. It switches the mute on in whichever mute setting (selcall or voice mute) was last selected on the control panel.

	Control panel	Microphone	Function
16.		Enter R'call	The Enter/R'call button on the microphone is used for such functions as: • recalling an existing channel number in Channel mode • viewing the call memory for details of received calls • entering information.
17.		B'con 0	Pressing the B'con button followed by the Call button sends a selective beacon call to establish if communication is possible with another station.
18.		Call	The Call button starts a call on the current channel.
19.		PTT	The Press-To-Talk (PTT) button.
20.			Microphone grille. You speak into this part of the microphone.
21.			The loudspeaker.

The display layout

The 4-line display on the control panel tells you what the transceiver is doing.

For a list of display messages, refer to the *HF SSB transceiver reference manual, Chapter 10, Display messages.*

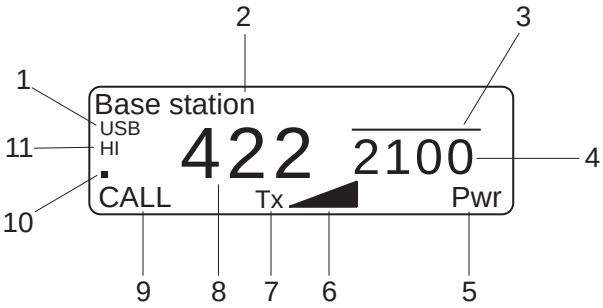


Figure 2.4 The display

	Part of Display	Function
1.	USB	Indicates whether USB, LSB or AM is selected for the displayed channel.
2.	Base station	Shows the channel comment that describes what the channel is used for.
3.	———	Indicates that the channel is a receive-only channel (does not allow you to transmit). If this bar is not displayed, the channel is a transmit channel that allows you to send and receive.

	Part of Display	Function
4.	2100	Shows the kHz transmit/receive frequency of the channel. For 2-frequency simplex channels the receive frequency is normally displayed—the transmit frequency is displayed during transmission. You can display both frequencies at the same time (refer to the *HF SSB transceiver reference manual, Chapter 6, Display frequency)*.
5.	Pwr	Indicates the current function of the F2 button on the front panel.
6.		Indicates the signal strength of the signal being transmitted or received.
7.	Tx/Rx	Indicates whether the transceiver is currently transmitting (Tx) or receiving (Rx).
8.	422	Shows the channel number.
9.	CALL	Indicates the current function of the F1 button on the front panel. For example, if the current channel is a transmit channel, CALL is displayed to show that pressing the F1 button will send a call.
10.	▪	Indicates that the channel is unprotected. If this marker is not displayed, the channel is protected from deletion and all changes (except for the channel comment).
11.	HI	Indicates whether HI (high) or LO (low) power is selected.

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Transceiver rear panel

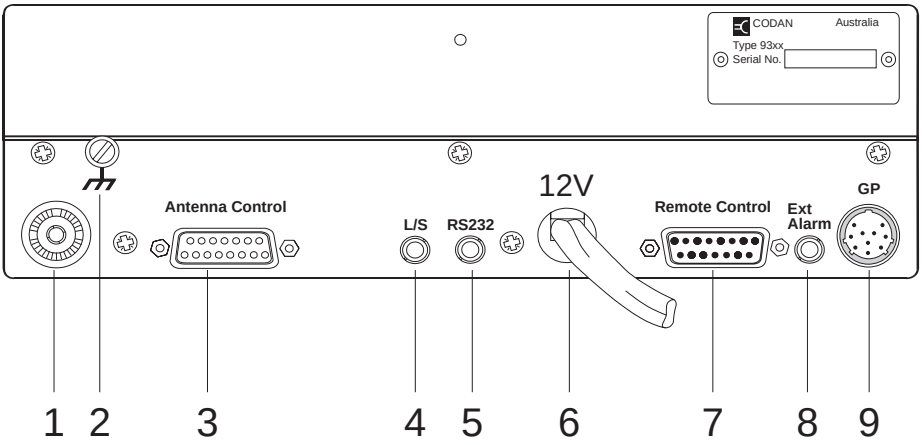
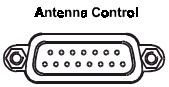
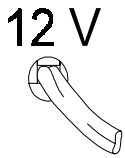
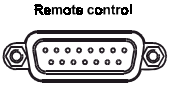


Figure 2.5 Rear panel of the transceiver

	Item	Description
1.		Antenna socket.
2.		Earth (ground) screw.
3.		Antenna Control connector for automatic antennas and antenna tuners.
4.		External 8 ohm loudspeaker (L/S) socket.
5.		RS-232 serial input socket for ancillary equipment such as a computer or GPS receiver.

	Item	Description
6.		12V DC power lead.
7.		Remote Control connector for the control head or a remote control unit.
8.		Ext Alarm socket for an external alarm (for use with selcall if fitted).
9.		10-pin general purpose GP connector for ALE controllers, modems and fax interfaces.

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3 Using the transceiver

This chapter explains the basic steps necessary to operate your transceiver. It covers:

- Types of call (3-2)
- Switching on the transceiver (3-4)
- Adjusting the volume (3-6)
- Selecting channels (3-7)
- Selecting the sideband or AM (USB/LSB/AM, 3-12)
- Tuning the antenna (3-14)
- Using the microphone (3-17)
- Muting the transceiver (3-18)
- Selecting the operating mode (3-20)
- Scanning for incoming calls (3-23)
- Changing transmitter power (3-27)
- Adjusting the display brightness (3-27)
- Adjusting the display contrast (3-29)
- Using Clarifier mode (3-30)
- Using View Channel Options mode (3-31)
- Using Free-Tune Receiver mode (3-33)
- Using View All Settings mode (3-37)
- Customising your transceiver (3-39).

You should have already installed your transceiver by referring to the *HF SSB transceiver reference manual, Chapter 2, Installation*. The displays in this chapter show examples of channel and frequency numbers. You must use numbers appropriate for your own transceiver.

Types of calls

The table below lists the full range of call types for the HF SSB series transceivers. For specific call details, see *Chapter 4, Sending calls.*

Tone calls and voice calls are factory fitted for all HF SSB series transceivers. To find out what other call types are fitted for your transceiver version, see the front of this guide for the list of fitted transceiver options.

Call types that are not factory fitted are available as transceiver options that you fit yourself. To fit a call type, contact Codan for a password that will enable the call type in your transceiver (refer to the *HF SSB transceiver reference manual, Chapter 7, Password entry to enable transceiver options*).

Call type	Description
ALE call	An ALE call automatically selects the best channel to use for sending a call. This removes the need to send selective beacon calls on different channels to find the best channel on which to communicate.
Emergency selcall	An emergency selcall is a simple and automatic way of selectively calling any station in an emergency.
GPS beacon call	A GPS beacon call obtains the Global Positioning System (GPS) location of another station.
GPS position call	A GPS position call sends your Global Positioning System (GPS) location to another station.

Call type	Description
Group call	A group call simultaneously calls a range of stations. Group calls can be GPS position calls, page calls or selcalls.
Page call	A page call sends a text message. It allows you to leave a message at another station.
Status call	A status call enables you to obtain information about a remote transceiver and control equipment connected to it without assistance from the operator at the remote station.
Selcall	A selcall is the basic type of selective call. It allows you to call a specific station by specifying its address. ALE calls, emergency selcalls, beacon calls, GPS calls, page calls, status calls and telcalls are all types of selective call.
Selective beacon call	A selective beacon call is used to determine manually the best channel to use before calling a station to talk or send information.
Telcall	A telcall allows you to use your transceiver to send a telephone call.
Tone call (fitted as standard)	A tone call allows you to call a station that is capable of recognising your two-tone calling signal.
Voice call (fitted as standard)	A voice call is the simplest type of call to send. Your call can be heard by any station tuned to or scanning your current channel.

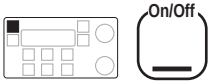
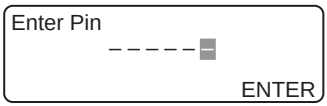
Switching on the transceiver

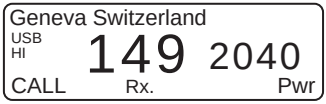
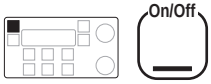
If you have set up the transceiver with a Personal Identification Number (PIN), you will need to enter this PIN before you can use the transceiver.

For details on setting and cancelling the use of a PIN, refer to the *HF SSB transceiver reference manual, Chapter 9, PIN setup.*

If you forget your PIN, you will have to obtain a special password from Codan to delete the PIN before you can use the transceiver.

To switch on the transceiver:

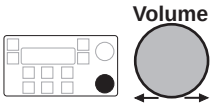
	Action	Notes
1.	Press 	The power up messages are shown briefly. If no PIN needs to be entered, the display shows the currently selected channel: 
	Is the transceiver asking you for a PIN? Yes ➢ **Step 2.** No ➢ **Step 4.**	If a PIN needs to be entered, the display shows: 

	Action	Notes
2.	Enter your PIN   **numeral button**	You can enter your PIN using the **Select** and **Volume** knobs.
3.	Press   **Enter** **R'call**	Example of the display:  Geneva Switzerland USB HI 149 2040 CALL Rx. Pwr If the PIN is incorrect, the transceiver automatically switches off. Start the procedure again.
4.	You are now ready to use the transceiver.	You are in Channel mode, the normal operating mode of the transceiver. When you have finished using the transceiver, switch it off by pressing  **On/Off**

❑

Adjusting the volume

To adjust the volume of the loudspeaker:

	Action	Notes
1.	Rotate 	As you adjust the volume, any muting selected momentarily switches off. The transceiver beeps at the minimum and maximum volume settings.

❑

Selecting channels

Before you can send a call, you need to select which channel to use.

You can change the channel by:

- viewing the list of channels
- recalling a channel number
- recalling a channel receive frequency
- answering a call from the call memory (see *Chapter 5, Reviewing calls held in memory*).

There are two types of channels:

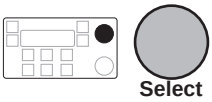
- transmit channels that allow you to send and receive calls
- receive-only channels that only allow you to receive calls.

A bar over the displayed frequency indicates that a channel is receive-only (see *Chapter 2, The display layout*).

Selecting a channel by viewing the list of channels

The easiest way to select a channel is by viewing the list of channels set up in the transceiver.

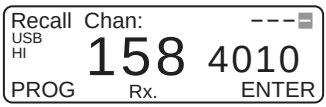
To select a channel by viewing the list of channels:

	Action	Notes
1.	In Channel mode, rotate  until you see the channel you want.	The transceiver always starts up in Channel mode. For example, if you want channel 149, scroll through the list until the display looks like this: 

Selecting a channel by recalling its channel number

You can select a channel by directly entering its channel number. This method saves you from having to scroll through a long list of channels.

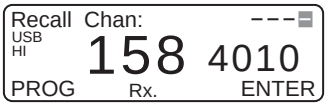
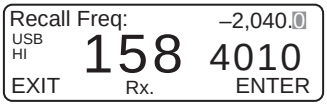
To select a channel by recalling its channel number:

	Action	Notes
1.	In Channel mode, press  **Enter R'call**	The transceiver always starts up in Channel mode. Example of the display: 
2.	Enter the number of the channel you want   **numeral button**	Enter up to four digits.
3.	Press  **Enter R'call**	Example of the display for channel number 149:  If you enter the number of a channel that does not exist, the transceiver beeps and selects the channel with the next higher channel number.

Selecting a channel by recalling its channel frequency

If the feature for recalling channels by frequency is switched on (refer to the *HF SSB transceiver reference manual, Chapter 7, Recall channels by frequency on/off*), you can select a channel by recalling its frequency instead of its channel number.

To select a channel by recalling its channel frequency:

	Action	Notes
1.	In Channel mode, press  **Enter R'call**	The transceiver always starts up in Channel mode. Example of the display: 
2.	Enter the kHz frequency to one decimal place   **numeral button**	Enter a 5-digit or 6-digit number. For example, to select the channel on 2040kHz, enter the number 20400.  When you enter the fifth digit, the display changes from Recall Chan to Recall Freq.

	Action	Notes
3.	Press  **Enter R'call**	For 2040kHz, the display looks like this:  If you enter the frequency of a channel that does not exist, the transceiver beeps and selects the channel with the next higher frequency.

❑

Selecting the sideband or AM (USB/LSB/AM)

The **USB/LSB** button on the control panel switches between upper sideband (USB), lower sideband (LSB) and AM (if fitted) depending on the current channel settings.

You can select USB or LSB for:

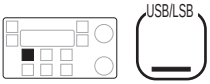
- channels set up with the LU sideband option (lower or upper sideband selectable, see *Using View Channel Options* mode on page 3-31)
- all receive-only channels
- free-tuning in Free-Tune Receiver mode.

You can select AM for any channel if the AM option is enabled (refer to the *HF SSB transceiver reference manual, Chapter 7, Password entry to enable transceiver options*).

The AM setting allows you to transmit on AM to AM stations that are incapable of sideband communication. The AM setting automatically operates as USB on receive.

You can receive AM transmissions on any AM, USB and LSB setting. For an AM broadcast you may find that switching between USB and LSB improves reception.

To change the USB/LSB/AM setting:

	Action	Notes
1.	In Channel mode, make sure that the transceiver is not scanning.	See *Scanning for incoming calls* on page 3-23.
2.	To switch between the available USB/LSB/AM settings for the current channel, press 	The left of the display indicates the selected setting: USB, LSB or AM.

❑

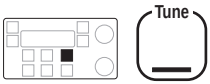
Tuning the antenna

If you have a manual or automatic antenna tuner, you need to tune the antenna after selecting a channel if you are about to send a call.

Although the transceiver will tune automatic tuners and antennas, it is always a good idea to press the **Tune** button whenever you change channel. Tuning the antenna makes it easier to hear when the channel is free from voice and data traffic before starting a call.

Manual tuner

To tune the antenna when you have a manual antenna tuner:

	Action	Notes
1.	In Channel mode, select the channel you want to use.	Example of the display: 
2.	Press and hold down  while you manually adjust the antenna tuner.	

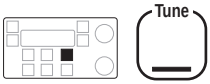
Automatic antenna tuner

This procedure tunes the antenna if you have an automatic antenna tuner.

The transceiver tells you the status of tuning by a message on the display and by a series of beeps.

Message	Beeps	Meaning
Not Tuned (displayed for two seconds)	Two loud low beeps	Antenna not yet tuned.
Tune Fail	Two loud low beeps	Unable to tune antenna.
Tune Pass	Two soft high beeps	Antenna tuned OK.
Tuner Fault (displayed for 10 seconds)	Two loud low beeps	Failed to tune the antenna after two minutes.
Tuning	Two soft high beeps every second	Tuning the antenna now.

To tune the antenna if you have an automatic antenna tuner:

	Action	Notes
1.	In Channel mode, select the channel you want to use and wait until the channel is clear of all voice and data traffic.	Example of the display: Geneva Switzerland USB HI 149 2040 CALL Rx. Pwr
2.	Press  	During tuning, the transceiver beeps every second. Tuning takes a few seconds to complete.
3.	Check the result of tuning from the table above.	Read the message on the top line of the display and listen to the type of beep.

❑

Using the microphone

When talking into the microphone:

- hold the microphone side-on and close to your mouth
- press and hold down the **PTT** button
- speak clearly at normal volume and rate
- use the word ‘over’ to indicate when you have finished speaking and release the **PTT** button
- remember that your conversation can be monitored by anyone tuned to your transmit frequency.

The transceiver incorporates a Sleep mode feature designed to prevent you from operating the transceiver accidentally by pressing the microphone buttons. In Sleep mode, these buttons are inoperative.

Sleep mode does not affect the **PTT** button or the front panel controls.

Sleep mode starts when no microphone button has been pressed for one minute. To cancel Sleep mode, you hold down the microphone button you want to operate for two seconds until you hear a two-tone beep. Immediately after this the button operates.

To save you from having to say ‘over’, you can use the transceiver’s PTT release beep feature. If you switch this feature on, the transceiver automatically indicates that you have finished talking by sending a beep every time you release the **PTT** button. Refer to the *HF SSB transceiver reference manual, Chapter 7, PTT release beep on/off*.

The transceiver prevents you from transmitting for an excessive period. If you want to change this time limit, refer to the *HF SSB transceiver reference manual, Chapter 7, PTT transmit cutout*.

Muting the transceiver

Muting allows you to silence the transceiver so that you do not hear unwanted background noise on the channel until you receive a call.

Three buttons control the mute setting of the transceiver:

- the **Voice Mute** button on the control panel
- the **S'Call Mute** button on the control panel (selects selcall mute)
- the **Mute** button on the microphone.

The Voice Mute button on the control panel

Select voice mute if you expect to receive voice calls. Voice mute silences the transceiver until a voice call is detected.

When the transceiver is not scanning for incoming calls, the **Voice Mute** button switches voice mute on and off. The red indicator at the top left of the button is on when voice mute is selected.

When the transceiver is scanning, the **Voice Mute** button is used to switch between:

- Pause Scan to stop scanning and switch off the mute for five seconds when a voice call is detected
- Hold Scan to stop scanning and switch off the mute for as long as the voice call is detected
- Scanning to continue scanning with mute switched off.

Changing the volume, clarifier setting or channel momentarily switches off mute.

The S'Call Mute button on the control panel

Select selcall mute if selective calling is enabled and you expect to receive selcalls. Selcall mute silences the transceiver until a selcall sent to your transceiver is detected.

The **S'Call Mute** button switches selcall mute on and off. The red indicator at the top left of the button is on when selcall mute is selected.

Pressing the **PTT** on the microphone also switches off selcall mute.

The Mute button on the microphone

The **Mute** button on the microphone switches on or off whichever type of mute was last selected on the control panel (voice or selcall mute).

You can only select between voice and selcall mute from the control panel.

❑

Selecting the operating mode

The transceiver has six operating modes:

- Channel mode (the normal operating mode)
- Clarifier mode
- View Channel Options mode
- Free-Tune Receiver mode
- Setup mode
- View All Settings mode.

Channel mode allows you to perform most of the operating procedures described in this user guide.

Clarifier mode allows you to adjust the quality of the audio signal by varying the pitch of the received signal. See *Using Clarifier mode* on page 3-30.

View Channel Options mode allows you to see the option settings set up for each channel. See *Using View Channel Options mode* on page 3-31.

In Free-Tune Receiver mode, you can set the transceiver to receive signals on any one frequency within its operating range. See *Using Free-Tune Receiver mode* on page 3-33.

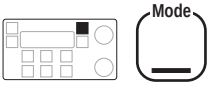
Setup mode allows you to view and change settings that control transceiver operation. Refer to the *HF SSB transceiver reference manual, Chapter 4, Using Setup mode procedures*.

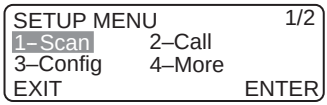
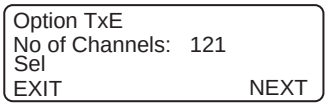
View All Settings mode allows you to view all transceiver settings without allowing you to change any. See *Using View All Settings mode* on page 3-37.

Changing the operating mode

The transceiver starts in Channel mode when you switch it on.

To change the operating mode:

	Action	Notes
1.	Repeatedly press  until you see the display for the mode you want.	If you have used the transceiver in a mode other than Channel mode, the first press takes you back to Channel mode. Example of Channel mode display: Fleet channel USB HI 158 4010 CALL Rx. Pwr Example of Clarifier mode display: CLARIFIER USB HI 158 4010 CALL - + Pwr Example of Channel Options mode display: CHANNEL OPTIONS Ch:158 Tx 4,010 U P Rx 4,010 S2 Id: 185074 T–

Action	Notes
1. (cont.)	Example of Free-Tune Receiver mode display:  Example of Setup mode display:  Example of View All Settings mode display: 

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Scanning for incoming calls

Scanning allows the transceiver to detect incoming calls on more than one channel frequency. This is useful if you expect to receive calls from several stations or from stations that transmit on more than one frequency.

The transceiver scans the list of channels set up in a scan table. It repeatedly scans each channel in the scan table until an incoming call is detected on any of the channel frequencies.

You can create up to three scan tables, each containing up to ten channels. You select which scan table to use when you start the transceiver scanning. For details on types of scanning and how to set up a scan table, refer to the *HF SSB transceiver reference manual, Chapter 3, Scan table creation.*

If automatic scan table scanning is switched on, the transceiver automatically starts scanning after a set time (refer to the *HF SSB transceiver reference manual, Chapter 8, Scan table automatic scanning start*).

If you have set up any of the three scan tables for ALE scanning, automatic scanning resumes with the last scan table used. If there is no ALE scan table, automatic scanning resumes with scan table 1.

During scanning, you can:

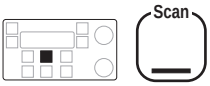
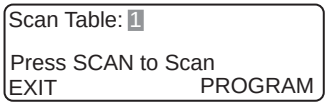
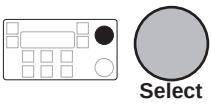
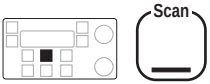
- change the mute setting (see *Muting the transceiver* on page 3-18)
- temporarily pause the scan.

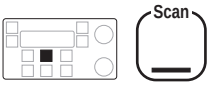
You pause scanning by rotating the **Select** knob on the control panel. You can then use this knob to view information about the channels in the scan table and listen on any of these channels. You resume scanning immediately by pressing the **Scan** button. If you do not touch any button or knob for 30 seconds, scanning automatically starts.

Scanning requires a suitable antenna system. For mobile installations, we recommend a Codan automatic tuning whip antenna.

Selecting a scan table and starting the scan

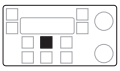
To select a scan table and start the scan:

	Action	Notes
1.	Press 	Example of the display: 
2.	To select one of the three scan tables, rotate 	Select scan table 1, 2 or 3.
3.	To start the transceiver scanning using this scan table, press 	After tuning, the display cycles through the channels.

	Action	Notes
4.	To stop the transceiver scanning, press 	You can also stop scanning by pressing  **PTT** or  **Scan 8**

Starting the scan using the last scan table used

To start scanning the last scan table used:

	Action	Notes
1.	Press  	The display cycles through the channels.
2.	To stop the transceiver scanning, press  	You can also stop scanning by pressing  **PTT** or  

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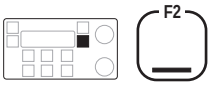
Changing transmitter power

You can set the transceiver to transmit at high or low power.

The usual setting is high power. For short range communication this may be too powerful. For example, excessive signal strength may cause distortion if you transmit to a transceiver sited close to you.

To change transmitter power:

	Action	Notes
1.	In Channel mode, make sure that the transceiver is not scanning.	See *Scanning for incoming calls* on page 3-23.
2.	To switch between high and low transmitter power, press 	The left of the display indicates the selected power setting: HI (high, as in this example) or LO (low): 

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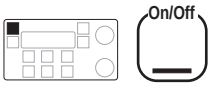
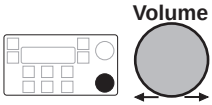
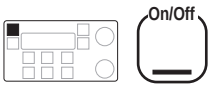
Adjusting the display brightness

You can adjust the display brightness at any time.

To adjust the brightness of the display:

	Action	Notes
1.	Press and hold down  then rotate 	Rotate the knob clockwise to increase brightness or anticlockwise to decrease brightness.
2.	When the brightness is correct, release 	The transceiver does not switch off if you have adjusted the brightness. Setup mode also has a procedure for adjusting brightness (refer to the *HF SSB transceiver reference manual, Chapter 6, Display brightness*).

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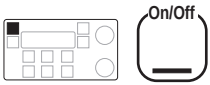
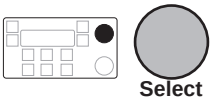
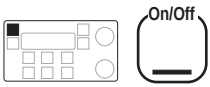
Adjusting the display contrast

You can adjust the display contrast at any time.

To adjust the contrast of the display:

	Action	Notes
1.	Press and hold down  then rotate 	Rotate the knob clockwise to increase contrast or anticlockwise to decrease contrast.
2.	When the contrast is correct, release 	The transceiver does not switch off if you have adjusted the contrast. Setup mode also has a procedure for adjusting contrast (refer to the *HF SSB transceiver reference manual, Chapter 6, Display contrast*).

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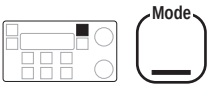
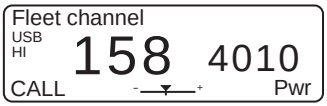
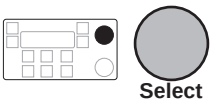
Using Clarifier mode

Clarifier mode allows you to improve the clarity of the voice you can hear by adjusting the frequency of your transceiver channel to match that of the received signal.

All controls operate the same way in Clarifier mode as they do in Channel mode, except for the **Select** knob. This knob is used to operate the clarifier and adjust signal clarity.

When you use the **Mode** button to return to Channel mode, the clarifier adjustment for the current channel remains in force. If you then change to another channel, the adjustment is reset to the centre value.

To use the clarifier:

	Action	Notes
1.	In Channel mode, press 	Example of the display (for five seconds):  which will then change to: 
2.	To make the voice sound clearer, rotate 	The transceiver beeps at the minimum and maximum settings.

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Using View Channel Options mode

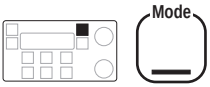
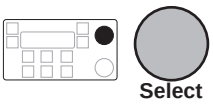
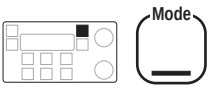
View Channel Options mode allows you to view the channel settings of any channel. To change channel settings, refer to the *HF SSB transceiver reference manual, Chapter 3, Channel creation and editing*.

If you do not touch any button or knob for 30 seconds while in this mode, the transceiver automatically returns to Channel mode.

The table below describes the channel settings.

This setting...	**Means...**
U	Upper sideband.
L	Lower sideband.
LU	Lower or upper sideband selectable.
NP	Not Protected. You can edit or delete this channel.
P	Protected. Apart from changing the channel comment, you cannot edit or delete this channel.
S–	You cannot send selcalls on this channel.
S1	Channel uses selcall group 1 settings.
S2	Channel uses selcall group 2 settings.
S3	Channel uses selcall group 3 settings.
S4	Channel uses selcall group 4 settings.
S5	Channel uses selcall group 5 settings.
T–	You cannot send tone calls on this channel.
T1	Channel uses tone group 1 frequencies.
T2	Channel uses tone group 2 frequencies.
T3	Channel uses tone group 3 frequencies.
T4	Channel uses tone group 4 frequencies.

To view channel settings:

	Action	Notes
1.	Repeatedly press  until you see the display for View Channel Options mode.	Example of the display: CHANNEL OPTIONS Ch:158 Tx 4,010 U P Rx 4,010 S2 Id: 185074 T– The settings for the current channel are displayed.
2.	To view the settings for a different channel, rotate 	If you do not touch any button or knob for 30 seconds, the transceiver automatically returns to Channel mode.
3.	To return to Channel mode, repeatedly press  until you see the display for Channel mode.	Example of the display: Fleet channel USB HI 158 4010 CALL Rx. Pwr

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Using Free-Tune Receiver mode

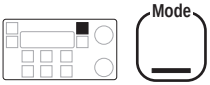
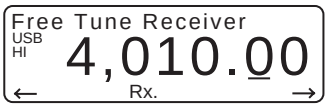
Free-Tune Receiver mode allows you to tune the receiver to any frequency within the transceiver's operating range (250kHz–30MHz).

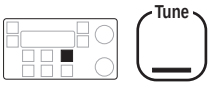
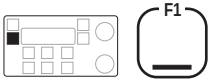
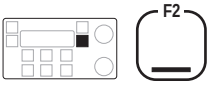
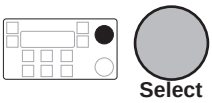
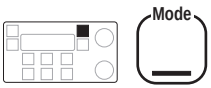
You can temporarily change the frequency of the current channel or you can directly enter a new frequency. When you return to Channel mode, the frequency is reset to the original value.

If you want to save the frequency you set in Free-Tune Receiver mode, you must create a channel that has this frequency (refer to the *HF SSB transceiver reference manual, Chapter 3, Channel creation in Free-Tune Receiver mode)*.

Setting a receive frequency

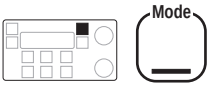
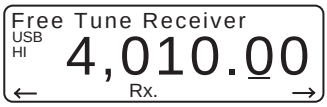
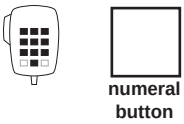
To set a receive frequency using the control panel:

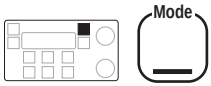
	Action	Notes
1.	Repeatedly press  until you see the display for Free-Tune Receiver mode.	Example of the display:  The display shows the frequency of the current channel.

	Action	Notes
2.	To tune the antenna, press 	See *Tuning the antenna* on page 3-14 for details on antenna tuning. While you remain in Free-Tune Receiver mode, you do not need to tune the antenna.
3.	To move the cursor to a digit you want to change, press  to move left, or  to move right.	The cursor is the small line under one of the digits of the frequency.
4.	To change a digit, rotate 	Repeat steps 3–4 to complete the setting. To return to Channel mode, repeatedly press  until you see the display for Channel mode. The frequency is reset to the original value.

Entering a receive frequency

To directly enter a receive frequency using the microphone:

	Action	Notes
1.	Repeatedly press  until you see the display for Free-Tune Receiver mode.	Example of the display:  The display shows the frequency of the current channel.
2.	Press 	Example of the display: 
3.	Enter the kHz frequency to two decimal places 	For example, to enter 3920kHz, enter 392000.

	Action	Notes
4.	To return to Free-Tune Receiver mode  	To return to Channel mode, repeatedly press  until you see the display for Channel mode. The frequency is reset to the original value.

❑

Using View All Settings mode

View All Settings mode allows you to view the settings that control transceiver operation.

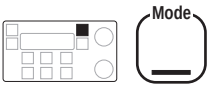
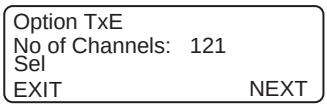
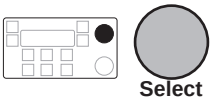
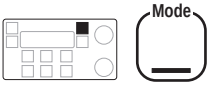
You can view the following information (the items displayed depend on which transceiver options are fitted in your transceiver):

- number of channels set up in the transceiver and enabled options
- time and date
- transceiver software issue
- control panel (front panel) software issue
- your transceiver ID (identification code)
- automatic scanning, selcall mute, 4-digit address compatible
- selcall groups S1–S5 holding your address
- address of station to call in an emergency selcall
- emergency selcall transmit channels
- emergency selcall receive
- 99-beacon, telcall, selcall lockout
- tone call groups T1–T4
- recall by frequency, beep loudness
- PTT timeout, PTT beeps
- RS-232 mode, RS-232 baud, GPS timeout
- antenna band/channel, RF gain
- PA frequency range (your transceiver’s transmitting frequency range).

If you want to change some of these settings, refer to the *HF SSB transceiver reference manual, Chapter 4, Using Setup mode procedures*.

If you do not touch any button or knob for 30 seconds while in this mode, the transceiver automatically returns to Channel mode.

To view transceiver operational settings:

	Action	**Notes**
1.	Repeatedly press  until you see the display for View All Settings mode.	Example of the display: 
2.	To view more transceiver settings, rotate 	If you do not touch any button or knob for 30 seconds, the transceiver automatically returns to Channel mode.
3.	To return to Channel mode, press 	Example of the display: 

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Customising your transceiver

Now you are ready to customise your transceiver so that it can operate efficiently within your network. This section will help to get you started.

Once your station is up and running, you may want to change other settings and further customise your station.

To get an idea of the general operational settings you can change, refer to the *HF SSB transceiver reference manual, Chapter 3, Channel and scan table setup,* and *Chapter 4, Using Setup mode procedures*. Many of these settings you will never need to change since they have already been set up to suit the most common user.

To find out what settings you need to make to be able to send and receive each type of call, read the descriptions for each call type in *Chapter 4, Sending calls*.

General transceiver operation

You will probably want to:

- set the clock (refer to the *HF SSB transceiver reference manual, Chapter 5, Clock setting*)
- reset the clock calibration to its middle position (refer to the *HF SSB transceiver reference manual, Chapter 5, Clock calibration*)
- set up a scan table so that you can scan for incoming calls on more than one frequency (refer to the *HF SSB transceiver reference manual, Chapter 3, Scan table creation*).

You may want to:

- set up a customised message that appears briefly every time you switch the transceiver on (refer to the *HF SSB transceiver reference manual, Chapter 7, Power up message on/off*)
- change the initial mute setting used when the transceiver is switched on (refer to the *HF SSB transceiver reference manual, Chapter 7, Power up mute setting*)
- set up the transceiver to start scanning automatically if you do not touch any button or knob for a certain period (refer to the *HF SSB transceiver reference manual, Chapter 8, Scan table automatic scanning start*)
- change the RF gain setting to suit the level of electrical interference in the area where your station is located (refer to the *HF SSB transceiver reference manual, Chapter 7, RF gain on/off*).

Handling selcalls

If your transceiver is fitted for sending selcalls, you should:

- set up your address in a selcall group so that other stations can call you (refer to the *HF SSB transceiver reference manual, Chapter 8, Selcall address setup*)
- assign the selcall group to the channels you are going to use for sending calls (refer to the *HF SSB transceiver reference manual, Chapter 3, Channel creation and editing*)
- consider how the transceiver communicates with stations incapable of using addresses longer than four digits (refer to the *HF SSB transceiver reference manual, Chapter 8, Selcall address size compatibility*).

Handling telcalls

If your transceiver is fitted for sending telcalls, you should:

- set up a selcall group for use in telcalling (refer to the *HF SSB transceiver reference manual, Chapter 8, Selcall address setup*)
- assign the selcall group set up for telcalling to the channels you are going to use for sending telcalls (refer to the *HF SSB transceiver reference manual, Chapter 3, Channel creation and editing*)
- set up the telephone directory with the telephone numbers of the people you most commonly telcall (refer to the *HF SSB transceiver reference manual, Chapter 3, Telephone directory creation*).

❑

4 Sending calls

This chapter shows you how to send:

- ALE calls (4-3)
- Emergency selcalls (4-7)
- GPS beacon calls (4-12)
- GPS position calls (4-16)
- Page calls (4-20)
- Selcalls (4-26)
- Selective beacon calls (4-29)
- Status calls (4-32)
- Telcalls (4-39)
- Tone calls (4-46)
- Voice calls (4-48).

This chapter covers the full range of call types for HF SSB series transceivers. To find out what types of call your transceiver can send, see the front of this guide for the list of fitted transceiver options. All HF SSB series transceivers can send tone and voice calls.

When making a call, the station you are calling needs to be set to the channel frequency you are using.

In any call procedure up to the point transmission starts, the transceiver automatically switches back to Channel mode if you do not touch any button or knob for 30 seconds. If this happens, start the procedure again.

Messages like No calls available are displayed if the type of call you are trying to send is not enabled. If this happens, check the conditions listed at the start of the call procedure under the heading *Before you can send this call, you need to...*

The displays in this chapter show examples of channel and frequency numbers. You must use numbers appropriate for your own transceiver.

ALE call

An Automatic Link Establishment call (ALE) automatically selects the best channel to use for sending a call. This removes the need to send selective beacon calls on different channels to find the best channel to communicate on.

When you send an ALE call, the ALE controller selects the best frequency from a preset list of channels and attempts to establish a link with the other station on that channel. If it fails, it selects the next best channel and tries again. This process repeats until a link is established or there are no more channels to try.

ALE calls allow you to use both numeric and alphanumeric station addresses. A numeric address is a 6-digit number or less. An alphanumeric address is either a number greater than six digits or an address containing one or more of the characters ‘A–Z’, ‘@’ and ‘?’. Maximum length is 15 characters.

To set up your transceiver’s alphanumeric address, refer to the *HF SSB transceiver reference manual, Chapter 5, ALE alphanumeric address setup*.

When you call an alphanumeric address, your alphanumeric address is used in the call to identify your station.

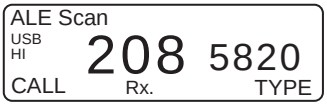
When you call a numeric address, your numeric address is used in the call to identify your station (set up in the selcall group assigned to the current channel).

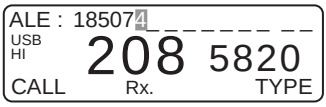
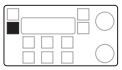
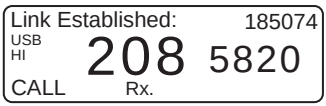
For further details, refer to the *9300 ALE controller user guide* (Codan part number 15-04046).

Before you can send an ALE call, you need to:

- connect an ALE controller and set the correct RS-232 and baud rate settings (refer to the *HF SSB transceiver reference manual, Chapter 11, Connecting ancillary equipment*)
- make sure that the station you are calling is also set up for ALE calling
- set up your address (refer to the *HF SSB transceiver reference manual, Chapter 8, Selcall address setup*)
- set up your alphanumeric address if you intend to call an alphanumeric address (refer to the *HF SSB transceiver reference manual, Chapter 5, ALE alphanumeric address setup*)
- set up a channel for selcalling (refer to the *HF SSB transceiver reference manual, Chapter 3, Channel creation and editing*)
- set up a scan table for ALE call scanning (refer to the *HF SSB transceiver reference manual, Chapter 3, Scan table creation*).

To send an ALE call:

	Action	**Notes**
1.	Normally the transceiver will be in ALE Scan mode.	Example of the display when in ALE Scan mode: 

	Action	Notes
2.	To exit ALE scan mode, press  	Example of the display:  The top right position of the display shows the address of the last station called.
3.	Enter the address you want to call (if different to the one displayed)  	Enter up to 15 characters or digits, from left to right. If the transceiver beeps when you try to enter the address, the channel has been set up with a fixed numeric address. Refer to the *HF SSB transceiver reference manual, Chapter 8, Selcall address setup.*
4.	To send the call, press   or  	You hear your transceiver's calling tones. Example of the display:  When the ALE controller has established the best channel to use, the display looks like this: 

	Action	Notes
5.	Wait for the operator of the other station to return your call.	The operator is notified of your call by an alarm that sounds like a telephone. If the station is unattended, wait to be called back.
6.	To restart ALE scanning, press  Scan 8	Now that you have finished the call, you want the transceiver to be ready to detect the next call sent to you.

❑

Emergency selcall

An emergency selcall is a simple and automatic way of selectively calling any station in an emergency.

An emergency selcall:

- saves you from having to select channels and addresses when sending the call since this information is preset
- alerts the operator of the other station by a special emergency alarm
- automatically sends your GPS position if your station is set up for GPS (see *GPS position call* on page 4-16).

If you do not set up any emergency channels, you will need to select the channel at the time of sending the call.

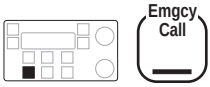
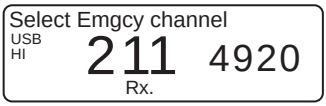
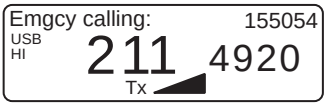
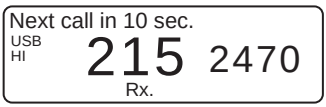
If you set up more than one emergency channel, the transceiver will send calls on successive emergency channels until a call has been sent once on each channel or you stop the calling process by pressing the **PTT** button.

Before you can send an emergency selcall, you need to:

- set up your address (refer to the *HF SSB transceiver reference manual, Chapter 8, Selcall address setup*)
- set up the address to call and up to four emergency channels to be used (refer to the *HF SSB transceiver reference manual, Chapter 6, Emergency Selcall transmit setup*)
- make sure that the station you are calling is set up for receiving emergency selcalls.

Emergency selcall on preset channels

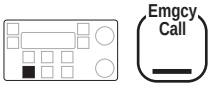
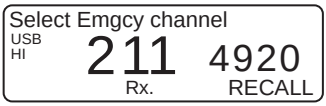
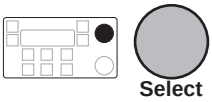
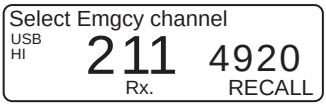
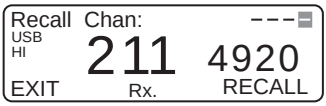
This procedure sends an emergency selcall using the preset emergency channels. If no emergency channels have been set up, the call is sent on the current channel.

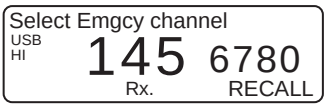
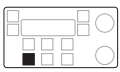
	Action	Notes
1.	Press and hold down for two seconds 	You hear beeping. The channel changes to the first emergency channel (if emergency channels have been set up):  After the two seconds, antenna tuning starts followed by the transceiver's calling tones:  The transceiver waits 10 seconds and repeats the call on the next preset emergency channel: 

	Action	Notes
2.	To start talking after hearing the revertive signal, press  **PTT**	The other station responds by sending a siren-like revertive signal. You may hear a tuning tone first if the other station has an automatic tuning antenna. Pressing the **PTT** button stops the calling process and further channel changing.

Emergency selcall with manual channel selection

This procedure allows you to select the channel at the time of sending an emergency selcall.

	Action	Notes
1.	In Channel mode, press and release 	The speed of beeping slows. You have 30 seconds to select a channel before the transceiver reverts to Channel mode. Example of the display:  If you want to stop the call, press  **PTT**
2.	If you want to select a channel, rotate  Continue➢ **Step 5.**	Example of the display: 
	If you want to recall a channel, press 	Example of the display: 

	Action	Notes
3.	Enter the channel number   **numeral button**	
4.	Press   **Enter R'call**	Example of the display for channel 145:  Select Emgcy channel USB HI 145 6780 Rx. RECALL
5.	Press and hold down for two seconds   **Emgcy Call**	You hear your transceiver's calling tones. Example of the display:  Emgcy calling: 155054 USB HI 145 6780 Tx
6.	To start talking after hearing the revertive signal, press  **PTT**	The other station responds by sending a siren-like revertive signal. You may hear a tuning tone first if the other station has an automatic tuning antenna.

❑

GPS beacon call

GPS (Global Positioning System) is a system for displaying the geographical location of a station. GPS receivers pick up latitude and longitude coordinates from passing satellites.

A GPS beacon call obtains the global position of another station.

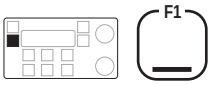
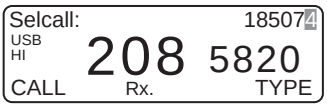
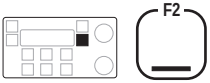
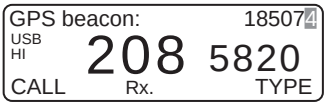
When a station receives a GPS beacon call, it automatically transmits the GPS information. The operator is not alerted that a call has been received. For example, a transportation manager might send a GPS beacon call to locate a mobile station such as a delivery vehicle.

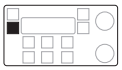
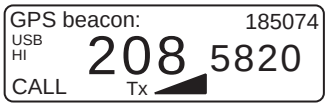
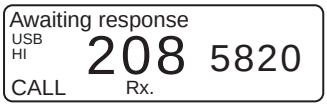
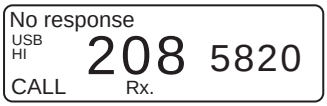
If the station you are calling has set up a privacy key, you will need to set up the same privacy key in your transceiver to be able to receive GPS information from this station.

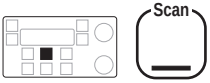
Before you can send a GPS beacon call, you need to:

- enable GPS calling (refer to the *HF SSB transceiver reference manual, Chapter 7, Password entry to enable transceiver options*)
- make sure that the station you are calling is also set up for using GPS
- check if you need to match the other station's use of a privacy key (refer to the *HF SSB transceiver reference manual, Chapter 5, Call privacy on/off*)
- set up your address (refer to the *HF SSB transceiver reference manual, Chapter 8, Selcall address setup*)
- set up a channel for selcalling (refer to the *HF SSB transceiver reference manual, Chapter 3, Channel creation and editing*).

To send a GPS beacon call:

	Action	Notes
1.	In Channel mode, select one of the frequencies scanned by the other station.	
2.	Wait until the channel is clear of all voice and data traffic.	Temporarily switch off any muting so that you can hear activity on the channel.
3.	Press 	The display shows the last type of call made:  The top right position of the display shows the address of the last station called.
4.	Repeatedly press  until you see GPS beacon displayed on the top line.	Example of the display: 

	Action	Notes
5.	Enter the address you want to call (if different to the one displayed)   **numeral button**	If the transceiver beeps when you try to enter the address, the channel has been set up with a fixed address. Refer to the *HF SSB transceiver reference manual, Chapter 8, Selcall address setup.*
6.	To send the call, press   **Call** or   **F1**	You hear your transceiver's calling tones. Example of the display:  While your transceiver waits for call acknowledgment, the display looks like this:  If the call was successful, GPS information is displayed on the top line for 30 seconds. If the call was unsuccessful, the display looks like this for three seconds: 

	Action	Notes
7.	Was the call successful? Yes ➢ **Step 8.** No ➢ **Step 1.**	If No response was displayed, try sending the call again. If the call repeatedly fails, try another channel. If No remote GPS was displayed, the call failed because the other station has no GPS receiver connected or no GPS information.
8.	To restart scanning, press  	Now that you have finished the call, you want the transceiver to be ready to detect the next call sent to you. The GPS information is stored in call memory. To view it, see *Chapter 5, Reviewing calls held in memory*.

❑

GPS position call

GPS (Global Positioning System) is a system for displaying the geographical location of a station. The GPS receiver picks up latitude and longitude coordinates from passing satellites.

A GPS position call sends your global position to another station.

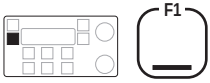
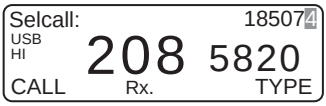
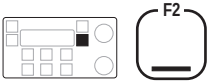
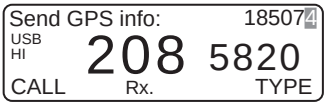
If you want to make sure that only the station you are calling receives your GPS position, use the transceiver's call privacy feature. By setting up a privacy key, you limit the stations that can read your GPS position to those stations using the same privacy key. Refer to the *HF SSB transceiver reference manual, Chapter 5, Call privacy on/off.*

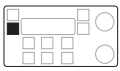
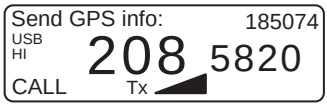
You can send GPS position calls simultaneously to a range of stations by group calling.

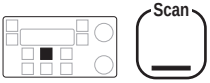
Before you can send a GPS position call, you need to:

- connect a GPS receiver and set the correct RS-232 and baud rate settings (refer to the *HF SSB transceiver reference manual, Chapter 11, Connecting ancillary equipment*)
- enable GPS calling (refer to the *HF SSB transceiver reference manual, Chapter 7, Password entry to enable transceiver options*)
- make sure that the station you are calling is also set up for using GPS
- decide whether you want to use a privacy key (refer to the *HF SSB transceiver reference manual, Chapter 5, Call privacy on/off*)
- set up your address (refer to the *HF SSB transceiver reference manual, Chapter 8, Selcall address setup*)
- set up a channel for selcalling (refer to the *HF SSB transceiver reference manual, Chapter 3, Channel creation and editing*).

To send a GPS position call:

	Action	Notes
1.	To find a good channel to use, send selective beacon calls on the frequencies scanned by the other station.	See *Selective beacon call* on page 4-29.
2.	In Channel mode, select the best channel and wait until the channel is clear of all voice and data traffic.	
3.	Press 	The display shows the last type of call made:  The top right position of the display shows the address of the last station called.
4.	Repeatedly press  until you see Send GPS info displayed on the top line.	Example of the display: 

	Action	Notes
5.	Enter the address you want to call (if different to the one displayed)   **numeral button**	To send a group call, change the last two digits to 00. If the transceiver beeps when you try to enter the address, the channel has been set up with a fixed address. Refer to the *HF SSB transceiver reference manual, Chapter 8, Selcall address setup.*
6.	To send the call, press   **Call** or   **F1**	You hear your transceiver's calling tones. Example of the display:  Within 20 seconds, the other station automatically acknowledges your call by sending a 4-beep tone revertive signal (unless you sent a group call). You may hear a tuning tone first if this station has an automatic tuning antenna.
7.	Was the call successful? Yes ➢ **Step 8.** No ➢ **Step 2.**	If the call failed, try sending it again. If the call repeatedly fails, try another channel.

	Action	Notes
8.	To restart scanning, press 	Now that you have finished the call, you want the transceiver to be ready to detect the next call sent to you.

❑

Page call

A page call sends a text message. It allows you to leave a message at another station.

The message can be up to 64 characters.

You can:

- enter the message when you send the call
- prepare and store up to three canned messages ready for sending (refer to the *HF SSB transceiver reference manual, Chapter 7, Page call canned message setup*).

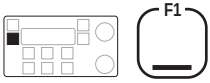
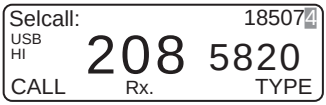
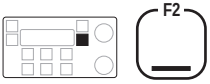
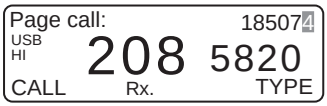
If you want to make sure that only the station you are calling receives your message, use the transceiver's call privacy feature. By setting up a privacy key, you limit the stations that can read your message to those stations using the same privacy key.

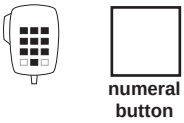
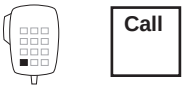
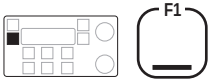
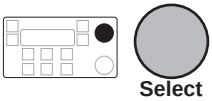
You can send page calls simultaneously to a range of stations by group calling.

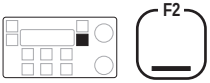
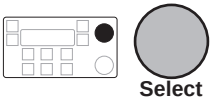
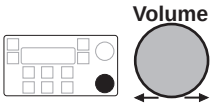
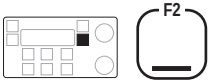
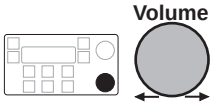
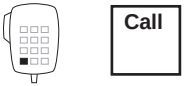
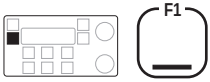
Before you can send a page call, you need to:

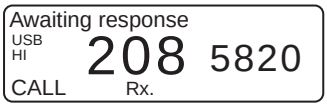
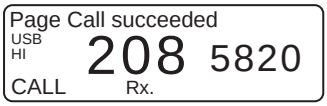
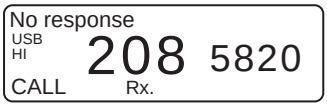
- decide whether you want to use a privacy key (refer to the *HF SSB transceiver reference manual, Chapter 5, Call privacy on/off*)
- decide whether you want to prepare the message in advance. Refer to the *HF SSB transceiver reference manual, Chapter 7, Page call canned message setup*, for information about preparing and storing canned messages
- set up your address (refer to the *HF SSB transceiver reference manual, Chapter 8, Selcall address setup*)
- set up a channel for selcalling (refer to the *HF SSB transceiver reference manual, Chapter 3, Channel creation and editing*).

To send a page call:

	Action	Notes
1.	To find a good channel to use, send selective beacon calls on the frequencies scanned by the other station.	See *Selective beacon call* on page 4-29.
2.	In Channel mode, select the best channel and wait until the channel is clear of all voice and data traffic.	
3.	Press 	Example of the display:  The top right position of the display shows the address of the last station called.
4.	Repeatedly press  until you see Page call displayed on the top line.	Example of the display: 

	Action	Notes
5.	Enter the address you want to call (if different to the one displayed)  	To send a group call, change the last two digits to 00. If the transceiver beeps when you try to enter the address, the channel has been set up with a fixed address. Refer to the *HF SSB transceiver reference manual, Chapter 8, Selcall address setup.*
6.	Press  or  	The display shows the last message you sent, for example, canned message 2: Page call: 2 185074 P l e a s e c a l l m e Enter page message CALL Rx. EDIT
7.	To select a different canned message, rotate  	Example of canned message 3: Page call: 3 185074 L e a v i n g b a s e 4 P M Enter page message CALL Rx. EDIT

	Action	Notes
8.	If you want to edit the displayed message or enter a new message, press  then select each character using  and move between characters using 	Example of the display: Page call: 3 185074 Leaving base 4 PM Enter page message CALL Rx. CLEAR To clear existing text, press  Enter up to 64 characters. To scroll any hidden part of the message into view, rotate  Changes to a canned message are only valid for this call.
9.	To send the call, press  or 	You hear your transceiver's calling tones. Example of the display: Paging: 185074 USB HI 208 5820 CALL Tx

	Action	Notes
9. (cont.)		While your transceiver waits 20 seconds for call acknowledgment, the display looks like this:  If the call was successful, the display looks like this for three seconds:  If the call was unsuccessful, the display looks like this for three seconds: 
10.	Was the call successful? Yes ➢ **Step 11.** No ➢ **Step 2.**	If the call failed, try sending it again. If the call repeatedly fails, try another channel.

	Action	Notes
11.	To restart scanning, press  Scan 8	Now that you have finished the call, you want the transceiver to be ready to detect the next call sent to you.

❑

Selcall

A selcall is the basic type of selective call.

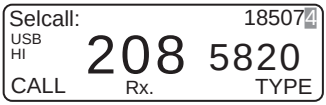
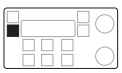
You can send selcalls simultaneously to a range of stations by group calling.

Before you can send a selcall, you need to set up:

- your address (refer to the *HF SSB transceiver reference manual, Chapter 8, Selcall address setup*)
- a channel for selcalling (refer to the *HF SSB transceiver reference manual, Chapter 3, Channel creation and editing*)

To send a selcall:

	Action	Notes
1.	To find a good channel to use, send selective beacon calls on the frequencies scanned by the other station.	See *Selective beacon call* on page 4-29.
2.	In Channel mode, select the best channel and wait until the channel is clear of all voice and data traffic.	

	Action	Notes
3.	Press  	Example of the display:  The top right of the display shows the address of the last station called.
4.	Enter the address you want to call (if different to the one displayed)  	To send a group call, change the last two digits to 00. If the transceiver beeps when you try to enter the address, the channel has been set up with a fixed address. Refer to the *HF SSB transceiver reference manual, Chapter 8, Selcall address setup.*
5.	To send the call, press   or  	You hear your transceiver's calling tones. Example of the display: 

	Action	Notes
5. (cont.)		Within 20 seconds, the other station automatically acknowledges your call by sending a 6-beep tone revertive signal (unless you sent a group call). You may hear a tuning tone first if this station has an automatic tuning antenna.
6.	Wait for the operator of the other station to talk to you.	The operator is notified of your call by an alarm that sounds like a telephone. If the station is unattended, wait to be called back.
7.	To restart scanning, press  Scan 8	Now that you have finished the call, you want the transceiver to be ready to detect the next call sent to you.

❑

Selective beacon call

Selective beacon calls help you determine manually the best channel to use before calling a station to talk or send information.

You can send selective beacon calls if any selective call option is fitted in your transceiver.

You usually send several selective beacon calls before deciding which channel to use for sending a GPS call, page call, selcall, status call or telcall.

When you send a selective beacon call, the receiving station acknowledges your call by sending a beacon revertive signal consisting of four long beeps. You compare the quality of the revertive signals to decide which is the best channel to use for communication.

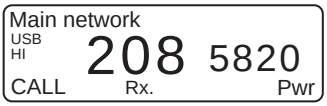
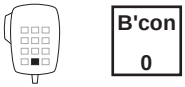
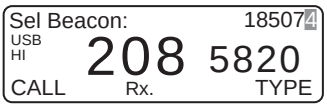
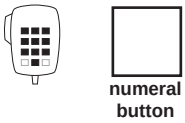
Selective beacon calls allow you to check channel conditions without disturbing stations in your network by frequent test calls. A transceiver receiving a selective beacon call does not record the call or alert the operator.

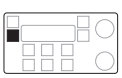
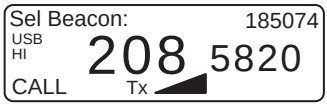
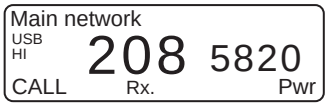
For older transceivers incapable of responding to selective beacon calls, send a 99-beacon call instead. To send a 99-beacon call, send a selcall but change the last two digits of the address to 99. The station you are calling needs to be set up to respond to 99-beacon calls.

Before you can send a selective beacon call, you need to set up:

- your address (refer to the *HF SSB transceiver reference manual, Chapter 8, Selcall address setup*)
- a channel for selcalling (refer to the *HF SSB transceiver reference manual, Chapter 3, Channel creation and editing*).

To send a selective beacon call:

	Action	Notes
1.	In Channel mode, select a transmit channel that is also a frequency scanned by the other station.	Example of the display: 
2.	Wait until the channel is clear of all voice and data traffic.	Temporarily switch off any muting so that you can hear the channel activity.
3.	Press 	Example of the display:  The top right position of the display shows the address of the last station called.
4.	Enter the address you want to call (if different to the one displayed) 	If the transceiver beeps when you try to enter the address, the channel has been set up with a fixed address. Refer to the *HF SSB transceiver reference manual, Chapter 8, Selcall address setup.*

	Action	Notes
5.	To send the call, press   or  	You hear your transceiver's calling tones. Example of the display:  Within 20 seconds, the other station automatically acknowledges your call by sending a 4-beep tone revertive signal. You may hear a tuning tone first if this station has an automatic tuning antenna.
6.	Are the four long beeps of the beacon revertive signal strong compared to the background noise on the channel? Yes ➢ **Step 7.** No ➢ **Step 1.**	Example of the display:  If the beacon revertive signal is weak or inaudible, send a selective beacon call on a different channel.
7.	Send your GPS call, page call, selcall, status call or telcall using the best channel.	

❑

Status call

A status call enables you to obtain information about a remote transceiver or control equipment connected to it without assistance from the operator at the remote station.

There are three types of status call:

- type 1: remote diagnostics call—obtains diagnostic measurements of the remote transceiver
- type 2: remote config call—obtains some configuration details of the remote transceiver
- type 3: user status call—controls equipment at the remote station by sending commands that the remote transceiver automatically passes on to connected equipment.

The remote transceiver responds to your status call by sending back the requested information. This information is recorded in your call memory for you to review.

Expect a longer delay for a remote diagnostics call since the remote transceiver must take several measurements before it can send the reply.

A transceiver receiving a status call does not record the call or alert the operator.

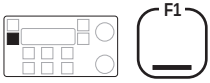
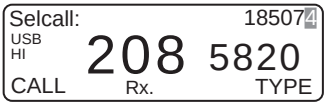
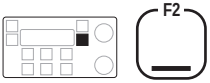
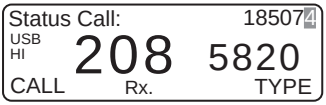
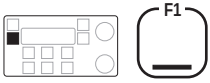
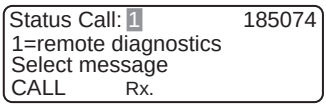
If the station you are calling has set up a privacy key, you will need to set up the same privacy key in your transceiver to be able to receive status information from this station.

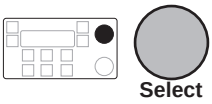
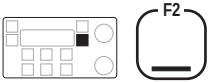
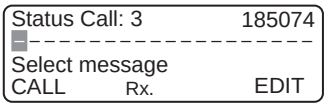
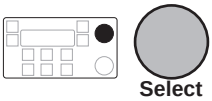
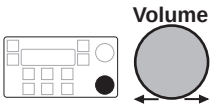
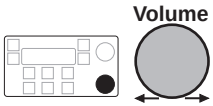
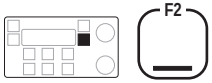
Before you can send a status call, you need to:

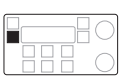
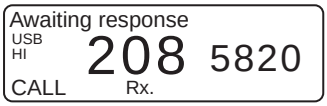
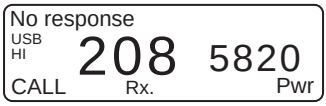
- make sure that the use of status calls is switched on (refer to the *HF SSB transceiver reference manual, Chapter 8, Status call availability on/off*)
- make sure that the station you are calling is also set up for receiving status calls
- check if you need to match the other station's use of a privacy key (refer to the *HF SSB transceiver reference manual, Chapter 5, Call privacy on/off*)
- set up your address (refer to the *HF SSB transceiver reference manual, Chapter 8, Selcall address setup*)
- set up a channel for selcalling (refer to the *HF SSB transceiver reference manual, Chapter 3, Channel creation and editing*).

To send a status call:

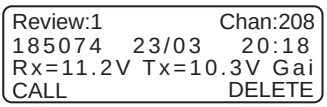
	Action	Notes
1.	To find a good channel to use, send selective beacon calls on the frequencies scanned by the other station.	See *Selective beacon call* on page 4-29.
2.	In Channel mode, select the best channel and wait until the channel is clear of all voice and data traffic.	

	Action	Notes
3.	Press  	Example of the display:  The top right position of the display shows the address of the last station called.
4.	Repeatedly press  until you see Status Call displayed on the top line.	Example of the display: 
5.	Enter the address you want to call (if different to the one displayed)  **numeral button**	If the transceiver beeps when you try to enter the address, the channel has been set up with a fixed address. Refer to the *HF SSB transceiver reference manual, Chapter 8, Selcall address setup.*
6.	Press  	The display shows the last type of status call sent, for example, a remote diagnostics call: 

	Action	Notes
7.	Select one of the three types of status call using  Have you selected type 1 or 2? Yes ➢ **Step 10.** No ➢ **Step 8.**	The status call types are: 1 remote diagnostics 2 remote config 3 user status.
8.	To edit the message for a user status call, press  	Example of the display: 
9.	Select each character using  and move between characters using  	Enter up to 63 characters. To scroll any hidden part of the message into view, rotate  To clear existing text, press 

	Action	Notes
10.	To send the status call, press   or  	Example of the display:  While your transceiver waits for call acknowledgment, the display looks like this:  If the call was successful, the display immediately reverts to the channel mode display. If after 60 seconds the call was unsuccessful, the display looks like this for three seconds: 

	Action	Notes
11.	To view the results of your status call, check the call memory for the types of display shown below.	Call memory holds the information that the remote transceiver sent back to you. In call memory the information scrolls across the screen after a few seconds (see *Chapter 5, Reviewing calls held in memory*).

Remote diagnostics call display:	
nnnnnn dd/mm hh:mm	Address of caller / date time
Rx=nn.nV	Voltage in receive
Tx=nn.nV	Voltage in transmit
S1=nnnµV	Signal strength of received call (µV EMF)
S2=nnnµV	Signal strength two seconds after call was received (µV EMF)
Gain=On/Off	RF gain setting
SWR=n.n	SWR of the antenna
Pwr=nnnW	Power output of the transmitter (Watts)
PA=400	Indicates transceiver has 400W PA

Action	Notes

11. (cont.)

Remote config call display:	
nnnnnn dd/mm hh:mm	Address of caller / date time
nnn-nnn/nn.nn	Main processor: last 6 digits of 90-20nnn-nnn software set number/software version number
nnn-nnn/n.nn	Control head: last 6 digits of 90-20nnn-nnn software set number/software version number
TxD/TxE/TxP	Channel programming capability
S	Selcall option (S or SEL) fitted
SLO	Selcall lockout option fitted
ES	Emergency selcall option fitted
GPS	GPS option fitted
ALE	ALE option fitted
AM	AM option fitted
User status call display:	
nnnnnn dd/mm hh:mm	Address of caller / date time
returned message	Message returned from remote transceiver

❑

Telcall

This section describes how to use your transceiver to transmit and receive telephone calls through the Public Switched Telephone Network (PSTN) and covers operation of the standard telcall and the more secure Radphone Direct Dial (RDD) telcall service.

In a telcall, you can call a station that is capable of connecting you to the PSTN. Your transceiver sends the telephone number you want to call and the receiving station automatically transcribes the call, via a suitable controlling interface to the telephone network, which calls the number you want.

You can send telcalls to stations privately equipped with telephone interconnect units such as the IPC-500.

Your conversation can be monitored by anyone tuned to your transmit frequency.

Before you can send a telcall, you need to:

- make sure that the use of telcalls is switched on (refer to the *HF SSB transceiver reference manual, Chapter 8, Telcall availability on/off*)
- set up your address (refer to the *HF SSB transceiver reference manual, Chapter 8, Selcall address setup*)
- set up a channel for selcalling (refer to the *HF SSB transceiver reference manual, Chapter 3, Channel creation and editing*).

Figure 4.1 shows a typical private network for sending telephone calls. Mobile stations wanting to send telephone calls send telcalls to the base station.

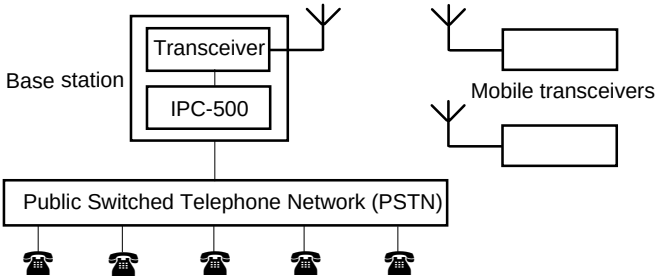


Figure 4.1 Private network for sending telephone calls

You can specify up to sixteen digits for the telephone number. To save you from having to enter the telephone number each time you send a call you can set up to ten telephone numbers in the transceiver's telephone directory (refer to the *HF SSB transceiver reference manual, Chapter 3, Telephone directory creation*).

At the end of a telcall, the telephone line should be disconnected by command before you hang up. You can either send an ENDCALL message or get the person on the telephone to disconnect the line at their end (by dialling 99 on a DTMF-tone phone if an IPC-500 unit is being used).

Radphone Direct Dial

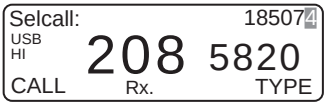
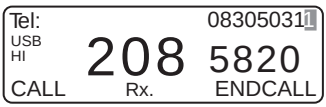
Your address is sent automatically when you send an RDD telcall. It identifies you as the caller. Your RDD PIN protects you from other users copying your address and sending unauthorised calls.

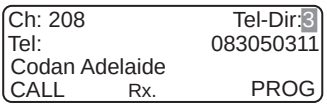
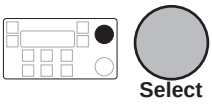
Before you can send an RDD telcall, you need to:

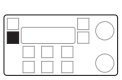
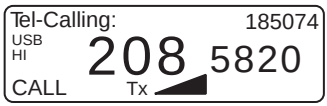
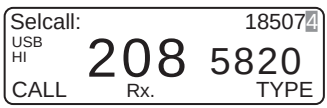
- set up your RDD PIN and address in a selcall group (with RDD as the selcall type, refer to the *HF SSB transceiver reference manual, Chapter 8, Selcall address setup*)
- assign this selcall group to the channels you use to send RDD telcalls (refer to the *HF SSB transceiver reference manual, Chapter 3, Channel creation and editing*).

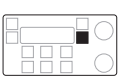
To send a telcall or RDD telcall:

	Action	Notes
1.	To find a good channel to use, send selective beacon calls on the frequencies scanned by the other station.	See *Selective beacon call* on page 4-29.
2.	In Channel mode, select the best channel and wait until the channel is clear of all voice and data traffic.	

	Action	Notes
3.	Press  **Call**	Example of the display:  The top right of the display shows the address of the last station called.
4.	Enter the address you want to call (if different to the one displayed)  **numeral button**	If the transceiver beeps when you try to enter the address, the channel has been set up with a fixed address. Refer to the *HF SSB transceiver reference manual, Chapter 8, Selcall address setup.*
5.	Press  **Enter R'call**	Example of the display:  If the display shows Telcalls disabled, refer to the *HF SSB transceiver reference manual, Chapter 8, Telcall availability on/off*.

	Action	Notes
6.	Do you want to select a telephone number from the transceiver pre-programmed telephone directory? Yes ➢ **Step 7.** No ➢ **Step 9.**	
7.	Press  	Example of the display: 
8.	To select one of the telephone numbers in the directory, rotate  Continue ➢ **Step 10.**	
9.	Enter the telephone number you want to call (if different to the one displayed)  	Enter up to 16 digits.

	Action	Notes
10.	To send the call, press  Call or  F1	You hear your transceiver's calling tones. Example of the display:  Within 20 seconds, the other station automatically acknowledges your call by sending a 4-beep tone revertive signal. You may hear a tuning tone first if this station has an automatic tuning antenna. After a pause, you hear the telephone ringing.
11.	Wait for the person to answer the telephone then respond with normal voice communication.	At the end of a telcall, the telephone line should be disconnected by command before you hang up. If you hear the engaged tone, the other party has hung up without disconnecting the line.
12.	To disconnect the line by sending an ENDCALL message, press  Call	Example of the display: 

	Action	Notes
13.	Press  **Enter R'call**	Example of the display: Tel: 08305031 USB HI 208 5820 CALL Rx. ENDCALL
14.	Press  **F2**	The transceiver transmits the ENDCALL message. Example of the display: Ending call: 185074 USB HI 208 5820 CALL Tx After several seconds, you hear the 5-beep disconnect tone. You return to Channel mode: Main network USB HI 208 5820 CALL Rx. Pwr
15.	To restart scanning, press  **Scan 8**	Now that you have finished the call, you want the transceiver to be ready to detect the next call sent to you.

❑

Tone call

A tone call allows you to call a station capable of receiving your two-tone calling signal.

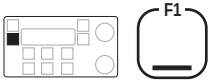
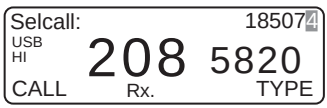
Selective calling has largely replaced tone calling as a method of calling specific stations. You may want to use tone calling if some older stations in your network are incapable of using addresses.

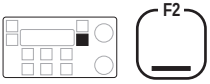
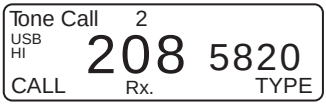
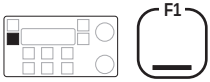
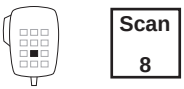
All HF SSB series transceivers can send tone calls.

Before you can send a tone call, you need to set up:

- the tone call frequencies you are going to use (refer to the *HF SSB transceiver reference manual, Chapter 8, Tone call setup*)
- a channel for tone calling (refer to the *HF SSB transceiver reference manual, Chapter 3, Channel creation and editing*).

To send a tone call:

	Action	Notes
1.	In Channel mode, wait until the channel is clear of all voice and data traffic.	
2.	Press  	The display shows the last type of call made: 

	Action	Notes
3.	Repeatedly press  until you see Tone Call displayed on the top line.	Example of the display: 
4.	To send the call, press and hold down for 10 seconds  	You hear your transceiver's calling tones. Example of the display:  The receiving station does not send a revertive signal.
5.	Wait for the operator of the receiving station to respond and communicate in the usual way.	If the receiving station is fitted with a tone call decoder, the operator is notified of your call by an alarm. If the call failed, try sending it again. If the call repeatedly fails, try another channel.
6.	To restart scanning, press  	Now that you have finished the call, you want the transceiver to be ready to detect the next call sent to you.

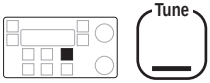
❑

Voice call

A voice call is the simplest type of call to send. Your call can be heard by any station tuned to or scanning your current channel with their selcall mute switched off.

All HF SSB series transceivers can send voice calls.

To send a voice call:

	Action	Notes
1.	In Channel mode, select a transmit channel to use for this call.	Example of the display:  If the frequency is shown with a receive-only bar above it, you cannot transmit on this channel. Select another channel. See *Chapter 2, The display layout* for an example showing a receive-only bar.
2.	To tune the antenna, press.  	If the transceiver is connected to a manual or automatic antenna system, tuning is necessary for optimum transmission and reception on the current channel. See *Chapter 3, Tuning the antenna*.

	Action	Notes
3.	Wait until the channel is clear of all voice and data traffic.	Temporarily switch off any muting so that you can hear activity on the channel.
4.	To start talking, press  **PTT**	If you get no response, try another channel. Speak clearly (see *Chapter 3, Using the microphone*).

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5 Receiving calls

This chapter describes:

- receiving calls (5-2)
- reviewing calls held in memory (5-7)
- setting up the transceiver to receive emergency selcalls (5-10)
- automatic handling of received beacon calls (5-11).

Receiving calls

Voice and tone calls are basic calls. No message is output on the display. You need to respond to these calls immediately as they are not recorded in call memory.

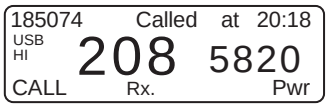
ALE calls, beacon calls, emergency selcalls, GPS calls, page calls, selcalls, status calls and telcalls are all types of selective call. To find out which types of selective call you can send and receive, see the front of this guide for the list of transceiver options fitted to your transceiver.

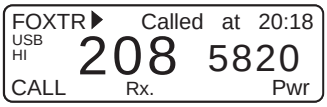
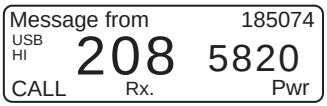
When you receive a selective call, the transceiver:

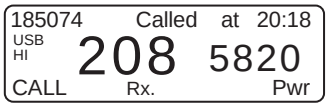
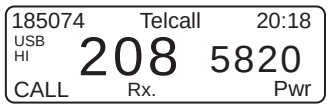
- outputs a message on the display
- generates an audio alarm for 30 seconds
- operates an external alarm facility
- stores details of the call in call memory.

To receive a call, the transceiver must be set to the same frequency of the caller or be scanning this frequency (see *Chapter 3, Scanning for incoming calls*). Remember that stations often transmit on different frequencies throughout the day as channel conditions vary.

The table below shows you how you can recognise the type of call you have received.

Call	**Message on the display**	**Alarm**	**Notes**
ALE call		Two short beeps	ALE call using numeric addresses. Address of caller recorded in call memory.

Call	Message on the display	Alarm	Notes
Alpha ALE call		Two short beeps	ALE call using alpha-numeric addresses. If address of caller is followed by an arrow, refer to call memory for complete address.
Emergency selcall		'Hee-haw' emergency siren for five minutes	Address of caller recorded in call memory. External alarm rings on and off for five minutes.
GPS position call		Three sets of five beeps	Address of caller and GPS information recorded in call memory. External alarm rings for two minutes.
Group call	Display as for non group call (may be selcall, GPS position call or page call).	15 long beeps	As for non group selcall, GPS position call or page call except that no revertive signal is sent. See *Chapter 6, Group calling*. External alarm rings for two minutes.
Page call		Three sets of five beeps	Address of caller and text message recorded in call memory. External alarm rings for two minutes.

Call	Message on the display	Alarm	Notes
Selcall		Three telephone rings	Address of caller recorded in call memory. External alarm rings for two minutes.
Telcall		Three telephone rings	Address of caller and telephone number recorded in call memory. The call may be from an RDD station or from a private station equipped with a telephone interconnect unit. External alarm rings for two minutes.

Responding to an incoming call in scan

If selcall is fitted and a call is received while the transceiver is scanning, the transceiver pauses scanning for 30 seconds and outputs the call alarm. You can answer the call anytime during this period.

When the call alarm stops, the transceiver beeps every four seconds to let you know that a call has been received and stored in the call memory. Beeping continues until you touch any button or knob.

To respond to an incoming call during scanning:

	Action	Notes
1.	When the transceiver alerts you to an incoming call, check the type of call.	Use the table above to decide what type of call this is and how to respond.
2.	To stop your transceiver scanning, press  **PTT**	Scanning stops and S'Call Mute is switched off if the transceiver was Selcall scanning.
3.	To start talking, press  **PTT**	See *Voice call* in Chapter 4.

	Action	Notes
4.	If the transceiver is beeping once every four seconds and is scanning, you missed the call. Stop the transceiver scanning and review the call memory to find out who called.	See *Reviewing calls held in memory* on page 5-7. You can return a call from the call memory by pressing a single button.

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Reviewing calls held in memory

The table below lists the types of received calls that can be held in the call memory.

Call	Call memory display	Entry details
Alpha ALE call	Review:1 Chan:208 Alpha 23/03 20:18 ALE:MALESSA@BASE1 CALL DELETE	Address of caller (alphanumeric), date and time information.
Emergency selcall	Review:1 Chan:208 185074: 23/03 20:18 Emgcy: S23'34.54 E120' CALL DELETE	Address of caller (numeric), date, time and GPS information.
GPS position call	Review:1 Chan:208 185074: 23/03 20:18 S23'34.54 E120'42.54 CALL DELETE	Address of caller (numeric), date, time and GPS information (24-hour Universal Time Coordinated—UTC—latitude and longitude).
Page call	Review:1 Chan:208 185074: 23/03 20:18 Please call Martin CALL DELETE	Address of caller (numeric), date, time and message. If the message is longer than 20 characters, it scrolls across the screen after four seconds.
Selcall or ALE call	Review:1 Chan:208 185074: 23/03 20:18 CALL DELETE	Address of caller (numeric), date and time.
Telcall	Review:1 Chan:208 185074: 23/03 20:18 Tel:083050311 CALL DELETE	Address of caller (numeric), date, time and telephone number.

These calls are always recorded in call memory even if you answer the call immediately. Calls may be on different channels if your transceiver was scanning.

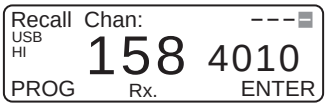
The procedure below shows you how you can return a call by simply pressing the **F1** button on the control panel. Pressing this button sends the same type of call as you received except for GPS and page calls which are returned as selcalls.

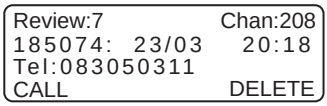
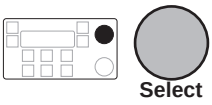
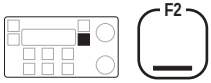
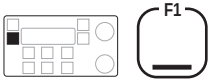
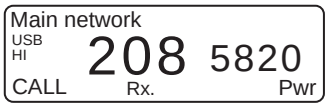
Call memory holds up to ten entries. The last call received has the highest entry number.

If a station called you more than once on the same channel, only the last entry is retained. If you receive more than ten calls, the first entry in memory is deleted to make room for each new entry. Entries for other types of calls are deleted in preference to emergency selcall entries.

Entries are not lost when you switch off the transceiver. They remain in call memory until they are deleted by you or overwritten by later calls.

To review and return calls recorded in the call memory:

	Action	**Notes**
1.	In Channel mode, press  **Enter R'call**	Example of the display: 

	Action	Notes
2.	Press  	The display shows the last call that you received (highest entry number). Example of a telcall (entry number 7): 
3.	To view other calls in the call memory, rotate 	To delete an entry, press  Deleting an entry renumbers the remaining entries.
4.	To call the currently displayed caller, press 	This automatically tunes the antenna and sends a call to the station that called you.
5.	To return to Channel mode, press  **PTT**	Example of the display: 

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Setting up to receive emergency selcalls

An emergency selcall:

- alerts you by a special emergency tone and message
- automatically notifies you of the caller's GPS position if their station is set up for GPS.

You can set up your transceiver to:

- respond to emergency selcalls sent to your station and up to two additional addresses
- respond to all emergency selcalls
- not respond to any emergency selcalls.

Before you can receive an emergency selcall, you need to:

- set up your address (refer to the *HF SSB transceiver reference manual, Chapter 8, Selcall address setup*)
- set up how you want to receive emergency selcalls (refer to the *HF SSB transceiver reference manual, Chapter 6, Emergency selcall receive setup*).
- set 4-DIGIT-COMPATIBLE if you expect emergency selcalls from stations using 4-digit addresses (refer to the *HF SSB transceiver reference manual, Chapter 8, Selcall address size compatibility*).

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Receiving beacon calls

When your transceiver receives any type of beacon call, it takes a few seconds to respond automatically and send the beacon revertive signal to the station that sent the beacon call.

You can recognise that you are receiving a beacon call if you observe your transceiver:

- temporarily pause from scanning
- tune the antenna (if your station has an automatic tuning antenna)
- show Tx  on the display.

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6 Advanced features

This chapter describes advanced features of the transceiver:

- RFDS and Telstra services (Australian services only) (6-2)
- selcall lockout (6-12)
- controlling the transceiver from more than one control panel (6-13)
- operating the transceiver from a computer (6-16).

RFDS and Telstra services

This section applies to Australian services only.

Your transceiver has been customised for operation into the following remote area safety services:

- the Royal Flying Doctor Service (RFDS, 6-2)
- Telstra (6-7).

Channel frequencies for both services are already set up in your transceiver.

This section briefly covers the services offered by each organisation and details the procedures required to use these services.

RFDS

The RFDS is a vital communications link in the Australian outback. Apart from maintaining contact and a listening watch for medical services, the organisation also provides general communication facilities that include radiotelephone and lettergram services.

Each base station is given a unique range of channel frequencies, some of which may be used to provide a day and night communications watch for medical aid and assistance.

It is most important before setting out on a trip or entering an area covered by a base station that you know the listening watch frequencies and operating times. Your calls may never be heard if you have chosen the wrong channel to send a call for help.

We suggest that when you enter an area you arrange to send a test RFDS call to the base station. This will check that you understand the correct call procedure and give you assurance that the facility works properly.

How to contact the RFDS

To contact an RFDS base station, select the station primary frequency and tune the antenna. Before transmitting, check that the channel is not being used. To send the call, follow the procedure in *Chapter 4, Voice call*.

Emergency communications

Each RFDS base station has its own specified times for routine medical consultation. If during normal RFDS base station hours medical advice is required and cannot wait until the routine medical session, you should:

- wait until the first quiet moment on the channel
- call the base station by call sign, give your own call sign and state that this is an urgent medical call.

On receiving this call, the RFDS base station will deal only with the outstation seeking medical advice. Should the channel be continuously busy with traffic, precede the above medical call by a 30 second RFDS emergency alarm call.

If you need medical assistance when the RFDS base station is normally closed, at night or at weekends, follow the procedure on page 6-5, *RFDS emergency call*.

An RFDS base station hearing your call will respond within two minutes with a transmitted tone. The local hospital or police station will be notified that you need assistance. RFDS staff will respond within five minutes of the call being transmitted and ask you to identify yourself. You must then respond accordingly.

RFDS and St Johns Ambulance Stations

The table below lists the Australian control stations and call signs.

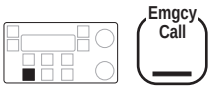
Control Station	Call Sign	Telephone
Alice Springs	VJD	(08) 8952 1033 (08) 8952 5355
Broken Hill	VJC	(080) 88 0777
Cairns	VJN	(070) 53 1952 (070) 53 1953 (070) 53 1954
Charleville	VJJ	(076) 54 1233 (076) 54 1443 (m)
Mount Isa	VJI	(077) 43 2800 (077) 43 2802 (m)
Port Augusta	VNZ	(086) 42 2044
St Johns (Darwin)	VJY	(08) 8922 6262
RFDS Western Operations		
Carnarvon	VJT	*Administration* (09) 414 1200
Derby	VJB	
Kalgoorlie	VJQ	*Radphone bookings* (09) 414 1300
Meekatharra	VKJ	*Medical* 1800 625 800 (m)
Port Hedland	VKL	

(m) = medical calls only

RFDS emergency call

An RFDS emergency call is a special type of tone call used to alert the Royal Flying Doctor Service that you need immediate help.

To send an RFDS emergency call:

	Action	Notes
1.	In Channel mode, select a transmit channel frequency monitored by the nearest RFDS station.	The channel must be set up for emergency RFDS calling. Tune the tapped whip antenna if used.
2.	If possible, wait until the channel is clear of all voice and data traffic.	Temporarily switch off any muting so that you can hear activity on the channel.
3.	To send the call, press and hold down for two seconds 	You hear beeping for two seconds and the transceiver starts tuning the antenna. After tuning, the transceiver sends the emergency tone for 30 seconds. Example of the display: 

	Action	Notes
3. (cont.)		To stop the call during this 30 seconds, press  **PTT** If the station is attended, you will get an immediate reply. If it is unattended, you should hear an acknowledgment tone within two minutes to indicate that your call has been received and that an operator will speak to you soon. If the display shows Not Enabled, the channel is not an RFDS frequency and cannot be used for an emergency call.
4.	Did the RFDS station respond by voice or acknowledgment tone? Yes ➢ **Step 5.** No ➢ **Repeat from Step 2.**	If your call was not acknowledged, try sending it again. If the call fails repeatedly, try another channel.
5.	Wait on this channel for a reply before sending your message.	

Telstra services

Telstra Mobile Satellite and Radio Services provide the HF SSB transceiver user with the ability to access the public switched telephone network (PSTN) at any time of the day or night. This brings the convenience of home or office to the outback traveller through the radio telephone facility of your transceiver and the Telstra organisation. You can send and receive calls just like a normal telephone.

The services provided by Telstra include:

- Radphone Direct Dial (RDD) — for direct dialling from your transceiver without operator assistance
- Radphone selcall — operator connected telephone calls for registered selcall users
- Radphone — operator connected for non-registered users suitable for voice or selcall calling.

To register for ‘Radphone Direct Dial’ or ‘Radphone selcall’ and for further details of Telstra services, contact the Telstra Customer Service Centre on Freecall 1800 810 023 or (02) 901 2103.

You can call a Telstra station by sending a selcall (which is recommended), tone call or voice call on the appropriate Telstra channel indicated in the frequency list handbook supplied with your transceiver.

You should always select the correct frequency for initial contact with a Telstra station as a listening watch is only kept on the voice calling channels.

For further information on using the Radphone service, we suggest you obtain a copy of the Telstra publications *Radphone User Guide* and *Radphone Direct Dial User Guide*.

Transmitting a Telstra beacon call

Beacon calls check signal conditions between your transceiver and the selected Telstra station.

To beacon call Telstra you can either:

- use the station's selcall address (ID number) on a preferred selcall channel using the **B'con/0** button (see *Chapter 4, Selective beacon call*), or
- use the station's beacon address (ID number) on a preferred selcall channel and use the **Call** button (see *Chapter 4, Selcall*).

The first method is recommended as once the optimum channel has been determined, the address remains selected for use in calling.

You should always refer to the appropriate Telstra publication to obtain the correct selcall or beacon address and user information.

The preferred selcall channel is marked 'S' in the Telstra station channel frequency listing.

Radphone Direct Dial (RDD) telcall

When you apply to be an RDD user, Telstra asks for your transceiver ID. To display this 14 character, alphanumeric code, see *Chapter 3, Using View All Settings mode*. Telstra provides you with an address for you to use as your address when sending RDD telcalls and a PIN (a code number of up to six digits). You need to set up both of these in your transceiver.

Your address is sent automatically when you send an RDD telcall. It identifies you as the caller. You will be billed for the call. Your Telstra PIN protects you from other users copying your address and sending unauthorised calls chargeable to your account.

Before you can send an RDD telcall, you need to:

- set up your PIN and address provided by Telstra in a selcall group with RDD as the selcall type (refer to the *HF SSB transceiver reference manual, Chapter 8, Selcall address setup*)
- assign this selcall group to the channels you use for RDD telcalls (refer to the *HF SSB transceiver reference manual, Chapter 3, Channel creation and editing*).

To send an RDD telcall, follow the procedure in *Chapter 4, Telcall*, or the procedure in the Telstra publication *Radphone Direct Dial User Guide*. Refer to the Telstra publication to obtain the correct RDD selcall address to call and other user information.

If your RDD telcall is unsuccessful, the Telstra station may be busy with another call or the channel frequency may be inappropriate for the time of day and range you are working. Try calling again using another called address or channel frequency.

Transmitting a Telstra selcall (Radphone or Radphone selcall service)

When you register as a Radphone selcall user, Telstra provides you with an address for you to use as your address when sending Telstra selcalls. You need to set up this address in your transceiver. Radphone service users operating on selcall also need to set up an address with a code nominated by the user—not Telstra.

Your address is sent automatically when you send a Radphone selcall. It identifies you as the caller. You will be billed for the call.

Before you can send a Radphone selcall, you need to:

- set up your address provided by Telstra in a selcall group with CODAN as the selcall type (refer to the *HF SSB transceiver reference manual, Chapter 8, Selcall address setup*)
- assign this selcall group to the channels you use for Radphone selcalls (refer to the *HF SSB transceiver reference manual, Chapter 3, Channel and scan table setup*).

To send a Radphone selcall, follow the procedure in *Chapter 4, Selcall*, or the procedure in the Telstra publication *Radphone User Guide*. Refer to the Telstra publication to obtain the correct selcall address to call and other user information.

If the call is successful the Telstra station will automatically respond with a revertive signal. The station operator will then send you a voice call.

If your Radphone selcall is unsuccessful, the channel frequency may be inappropriate for the time of day and range you are working. Try calling again using another called address or channel frequency.

Receiving a Telstra telcall or selcall

The following explains how you can receive a telephone call on your transceiver via Telstra and the public telephone service.

Telephone subscribers can book a radio-telephone call to you by dialling the national Telstra booking number 0108.

To receive the call your transceiver must be switched on and either:

- scanning for the selective calls (refer to *Chapter 3, Scanning for incoming calls*) which is recommended, or
- set on the correct channel for the time of day with the antenna tuned to this channel.

On receiving the call you have two options:

- answer it immediately—see *Chapter 5, Responding to an incoming call in scan*
- let the transceiver automatically store the address of the caller in memory to await your reply—see *Chapter 5, Reviewing calls held in memory.*

If you received an RDD telcall but the caller did not include their phone number, return the call as a selcall instead of a telcall. The Telstra operator will know who called you and will assist you in making the connection.

Selcall lockout

Before you can use selcall lockout, you need to make sure that use of this facility is switched on (refer to the *HF SSB transceiver reference manual, Chapter 8, Selcall lockout on/off*).

Selcall lockout prevents you from sending selective calls if the transceiver detects that another station is already in the process of sending a selective call on the same channel. This reduces call interference between stations and increases the chance of success when your call is transmitted.

Selcall lockout does not apply to voice, tone or emergency calls.

When selcall lockout occurs, the transceiver:

- beeps softly twice
- displays the error message 'Busy: Call is active' for two seconds.

Using more than one control panel

You can control the transceiver from more than one control panel if you have connected one or more control heads to your system.

The operating mode of the connected system, identified as Multi-Access or Single-Access mode, is determined automatically according to which of the transceiver functions listed below is being used.

Emergency calls are not affected by operating modes. You can send an emergency call from any control panel at any time.

Multi-Access mode

When the transceiver is in Multi-Access mode, you can use any control panel to control the transceiver. The displays on all control panels are the same.

Multi-Access operating mode functions include:

- PTT voice calls
- scanning
- Channel mode when not calling
- Clarifier mode when not calling
- Free-Tune Receiver mode
- View Channel Options mode.

If you operate between control panels, you need to wait two seconds before controlling the transceiver from the new panel.

Single-Access mode

When the transceiver is in Single-Access mode, you can only control the transceiver from the control panel that initiated the Single-Access operating mode function. No other control panel can be used until you return the transceiver to Multi-Access mode.

Single-Access operating mode functions include:

- sending a call (except for voice and tone calls)
- creating and editing channels
- recalling channels
- creating and editing scan tables
- Setup mode
- View All Settings mode.

Other control panels cannot be used until you return the transceiver to a Multi-Access mode function. These control panels display a message indicating that the transceiver is busy.

The message indicates the transceiver operation:

- BUSY—All Settings mode
- BUSY—Calling
- BUSY—Emergency call
- BUSY—Programming (channel creation and editing)
- BUSY—Reviewing
- BUSY—Scan prog (scan table creation and editing)
- BUSY—Setting up (Setup mode).

Single-Access mode has a 30 second timeout. A control panel left unattended in this mode will not stop other control panels from being used for longer than 30 seconds. When timeout occurs, the transceiver automatically returns to Channel mode.

Note: The **PTT** buttons on the microphones are connected in parallel. When in Single-Access mode, do not use the microphones of the other control panels.

Operating the transceiver from a computer

You can operate your transceiver from an IBM compatible computer or personal organiser instead of a control panel. You send and receive calls using a special computer command language that the transceiver understands.

Make sure that the transceiver is disconnected from the DC power source before connecting anything to the ***Remote Control*** *connector.*

All commands and responses are followed by a carriage return and line feed.

Maximum length is four digits for channel numbers, six digits for numeric addresses and 15 characters for alphanumeric addresses. Messages are enclosed in double quotes.

Equipment connected to the transceiver can also control transceiver operation automatically by generating these commands.

Before you can use a computer to control the transceiver, you need to:

- connect the computer and set the correct RS-232 and baud rate settings (refer to the *HF SSB transceiver reference manual, Chapter 11, Connecting ancillary equipment*)
- set up the computer terminal to operate in Full Duplex mode.

Commands entered at the computer

Command	Meaning
ALECALL=<address>,S	Sends an ALE call. If you specify option S, the call is sent silently with the loudspeaker switched off.
ALPHAID= <alphanumeric address>	Sets your alphanumeric address. It can consist of up to 15 of any of the characters: ‘A–Z’, ‘0–9’, ‘@’ and ‘?’.
CHAN=<channel number>	Changes the transceiver channel to the indicated number if it exists, otherwise the error NOT FOUND is output and the transceiver selects the next higher channel.
CHAN?	Shows you the current channel number.
ECHO=ON ECHO=OFF	To switch between full (echo) and half (echo off) duplex mode. Echo is on by default on power up.
FREQ=<kHz frequency>	Functions the same way as recall by frequency. The transceiver selects the channel with this frequency or the next higher channel. Enter the frequency in whole kHz only. For example, to select the channel on 2040.8kHz, enter the number 2040.
FREQ?	Shows you the current common transmit/receive frequency or the separate transmit and receive frequencies.
GPSBEACON=<address>,S	Sends a GPS beacon call. If you specify option S, the call is sent silently with the loudspeaker switched off.

Command	Meaning
MUTE=OFF MUTE=SELCALL MUTE=VOICE	Sets the mute for the transceiver. You can use the abbreviations O, S and V.
MUTE?	Shows you the selected mute setting (OFF, SELCALL or VOICE).
PAGECALL=<address>, “<message>”,S	Sends a page call. Enter up to 64 characters within double quotes. If you specify option S, the call is sent silently with the loudspeaker switched off.
SCAN=<scan table number>	Starts or stops the transceiver scanning. Enter 1–3 to start scanning using one of the scan tables. Enter 0 (zero) to stop scanning.
SCAN=OFF	Stops scanning.
SCAN=ON	Starts the transceiver scanning using the last scan table used.
SCAN?	Shows you whether the transceiver is scanning one of the three scan tables (1–3).
SELBEACON=<address>,S	Sends a selective beacon call. If you specify option S, the call is sent silently with the loudspeaker switched off.
SELCALL=<address>,S	Sends a selcall. If you specify option S, the call is sent silently with the loudspeaker switched off.

Command	Meaning
SIDEBAND=USB SIDEBAND=LSB SIDEBAND=AM	Changes the sideband setting for the current channel. If the channel does not allow the sideband setting to be changed, nothing happens. You can use the abbreviations SB, U and L.
SIDEBAND?	Shows you the selected sideband setting (USB, LSB or AM). You can use the abbreviation SB?.
STATUSACK=<address>, "<message>",S	Sends a reply to acknowledge that a user status call has been received. This command is typically generated automatically by equipment connected to the transceiver. If you specify option S, the call is sent silently with the loudspeaker switched off.
STATUSCALL=<address>, "<message>",S	Sends one of the three types of status call: a remote diagnostics call for message "1", a remote config call for message "2", or a user status call for any other message up to 63 characters. If you specify option S, the call is sent silently with the loudspeaker switched off.
STATUSTIME=<timeout>	Sets the status call reply timeout in the range 1–255 seconds. The transceiver waits this time for connected equipment to respond to a user status command before sending a negative acknowledgment.
STATUSTIME?	Shows you the current setting of the status call reply timeout in seconds.

Command	Meaning
TELCALL=<address>, <telephone number>,S	Sends a telcall to this telephone number via the station with this address. If you specify option S, the call is sent silently with the loudspeaker switched off.
VER?	Shows you the version of the command set supported by the transceiver.

Computer display in response to a command

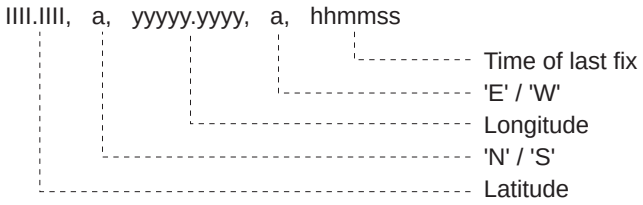
Message	Meaning
ALE-LINK: FAIL	Your ALE call failed because no ALE link could be established.
ALE-LINK:<channel number>, <address of other station>, <your address>,<time of call>	You successfully sent or received an ALE call.
CALL SENT	Your call has been sent.
CALL STARTED	Your call has started.
EMERGENCY: <channel number>, <address of other station>, <your address>,<time of call>, <GPS position>	You received an emergency selcall from the station at this GPS position.
ERROR	Command longer than 100 characters, or invalid command.

Message	Meaning
GPS-POSITION: <channel number>, <address of other station>, <your address>,<time of call>, <GPS position>	You sent a GPS beacon call or received a GPS position call from the station at this GPS position.
MUTE:OFF MUTE:SELCALL MUTE:VOICE	A control panel was used to change the mute setting.
NO ALPHA SELF ID	You tried to send an ALE call to an alphanumeric address but your own alphanumeric address is unset.
NO EXTERNAL UNIT CONNECTED	You sent a user status call to a station that is not connected to a computer.
NO RESPONSE	Your call has not been acknowledged.
NOT FOUND	Non existing channel number or scan table number.
OK	Command accepted and executed.
PAGE-CALL-ACK: <channel number>, <address of other station>, <your address>,<time of call>	Your page call was received.
PAGE-CALL:<channel number>, <address of other station>, <your address>,<time of call>, “<message>”	You received a page call with this message.
SCAN TABLE EMPTY	Attempt to start scanning using a scan table that has not been set up.

Message	Meaning
SCAN:<scan table number>	A control panel was used to change the scan table being used.
SCAN:IPC	IPC-500 scanning.
SCAN:OFF	You attempted to send a call while the transceiver was scanning. Scanning has now stopped.
SEL-CALL:<channel number>, <address of other station>, <your address>,<time of call>,	You received a selcall.
SIDEBAND:USB SIDEBAND:LSB SIDEBAND:AM	A control panel was used to change the sideband setting for the current channel.
STATUS-CALL-ACK: <channel number>, <address of other station>, <your address>,<time of call>, “<message>”	You received an acknowledgment to your status call.
STATUSCALL: <channel number>, <address of other station>, <your address>,<time of call>, “<message>”	You received a user status call.
STATUSTIME:<timeout>	Response to a STATUSTIME? command showing you the status call reply timeout in seconds.
TEL-CALL: <channel number>, <address of other station>, <your address>,<time of call>, <telephone number>	You received a telcall from this telephone number via the other station.

Message	Meaning
TX INHIBITED	You attempted to send a call on a receive-only channel.
CICS:V<version number>	Response to VER? command showing you the command set version number (for example, V2.00).

The GPS position is displayed as follows:



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