2. Overview

Your 8528 HF SSB transceiver employs the latest concepts in design and reliability for long range communications. It has been designed for 12V DC operation in fixed base and mobile installations.

There are two versions of the transceiver; one with front panel control and the other with extended control. The extended control unit consists of a transceiver and a separate control head which can be located up to100 metres away from the transceiver.

The control head can also be used as an accessory with the front panel control version to enable local and extended control of the transceiver.

You operate the transceiver through the front control panel, or control head, which contains sealed membrane switches (or buttons) and a liquid crystal display (LCD). The LCD shows the selected channel number along with the transmit and receive frequencies. In addition, the display shows messages about the operation of the transceiver.

Continual research and development has produced different versions of the 8528 SSB HF transceiver. The different version means a later issue of EPROM which provides different operating features. To check the version of your transceiver, refer to section 4, *Review the EPROM version and options.* This issue of the handbook incorporates operating information for EPROM versions 4.1 to 4.3.

The main facilities and features of the transceiver are:

- channels
- selective call
- scanning
- free tuning receiver
- tone calling
- telephone interconnect
- ARQ-FEC.

Channels

Your transceiver has a capacity of 600 channels, these cover:

- transmit frequency range 2 MHz to 24 MHz
- receive frequency range 0.25 MHz to 30 MHz.

A maximum of 501 transmit and receive channels can be pre-programmed in the factory, or by an authorised Codan dealer. You, as a user, can program the remaining 99 channels from the front panel as P-channels.

Selective call

This facility allows you to transmit a call to a single transceiver or a group of transceivers. To receive a selective call, your transceiver must be fitted with option SD.

Your transceiver can store details of up to ten stations that have called you while your transceiver was left unattended.

Scanning

This facility scans selected channels for audio signals. You can program a maximum of 15 channels to be scanned in sequence for audio signals. When a selective call decode option (SD) is fitted, a maximum of eight selective channels can be programmed and scanned.

Free-tuning receiver

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

Tone calling

This facility allows you to send a tone call (two tones transmitted simultaneously) to signal another transceiver.

Telephone interconnect

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

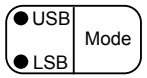
ARQ-FEC

For remote data transmission applications, your transceiver can be connected to a data source comprising computer terminal and interface modem. There are two types of transmission available:

- ARQ - Automatic Repeat Request
- FEC - Forward Error Correction.

The transceiver control panels

The front panel control transceiver (figure 2.1 on page 2-11) and the extended control transceiver (figure 2.2 on page 2-12) have the following control panel designations:

Item No.	Item	Function
1		Transmits either a selective call or tone call on the selected channel.
2		Transmits a tone alarm call on selected frequencies operating within the Royal Flying Doctor Service of Australia.
3		Switches the transceiver on or off.
4		Transmits a carrier signal so that antenna tuners and automatic antenna systems can be tuned.
5		Sets the transceiver to accept programmed information.
6		Selects USB or LSB mode. The indicators show which side band is selected.

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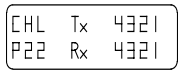
Item No.	Item	Function
7		The indicator is lit when the transceiver is transmitting.
8		Liquid Crystal Display (LCD) shows the channel number and frequency. It also shows messages regarding the operation of the transceiver.
9		Selects either channel or band scan. The indicator is lit when the scan mode is 'on'.
10		Mutes all audio until a selective call is received (option SD required). The indicator is lit when the mute is 'on'.
11		Removes normal background noise when there is no audio signal. The indicator is lit when the mute is 'on'. In addition, it switches the selective call mute off.
12		Shows the options programmed for the selected channel exhibited on the LCD. It is also used to interrogate received selective call memory.
13		Microphone socket.

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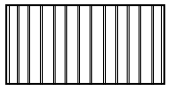
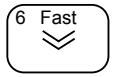
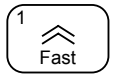
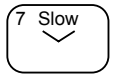
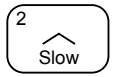
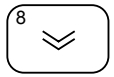
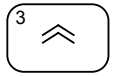
Item No.	Item	Function
14		Loudspeaker.
15		Selects a specific channel when used with the numeric buttons. Dims the display and indicators when pressed twice within one second.
16		Reduces the programmed frequency in steps of 1 kHz. It also keys in number 6.
17		Raises the programmed frequency in steps of 1 kHz. It also keys in number 1.
18		Reduces the programmed frequency in steps of 100 Hz. It also keys in number 7.
19		Raises the programmed frequency in steps of 100 Hz. It also keys in number 2.
20		Reduces the received audio frequency in steps of 10 Hz to help clarify the received speech. It also keys in the number 8.
21		Raises the received audio frequency in steps of 10 Hz to help clarify the received speech. It also keys in number 3.

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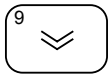
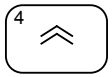
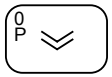
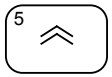
Item No.	Item	Function
22		Selects the next lower channel. It also keys in number 9.
23		Selects the next higher channel. It also keys in number 4.
24		Decreases the audio volume. It also keys in the number 0 and the letter P.
25		Increases the audio volume. It also keys in number 5.

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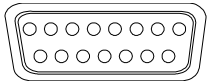
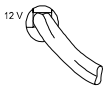
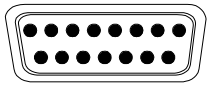
The transceiver and control head rear panel

The front panel control and extended control head transceivers rear panels (figures 2.3 and 2.4 on page 2-13) show the following items:

Item No.	Item	Function
1		Antenna socket.
2		Earth (ground) screw.
3		Automatic antenna control socket.
4		12V DC power lead.
5		External 8 ohm loudspeaker socket. You can still use the internal speaker with an external speaker connected.
6		Remote control unit socket.
7		External alarm, battery power output and the miscellaneous facilities socket position.

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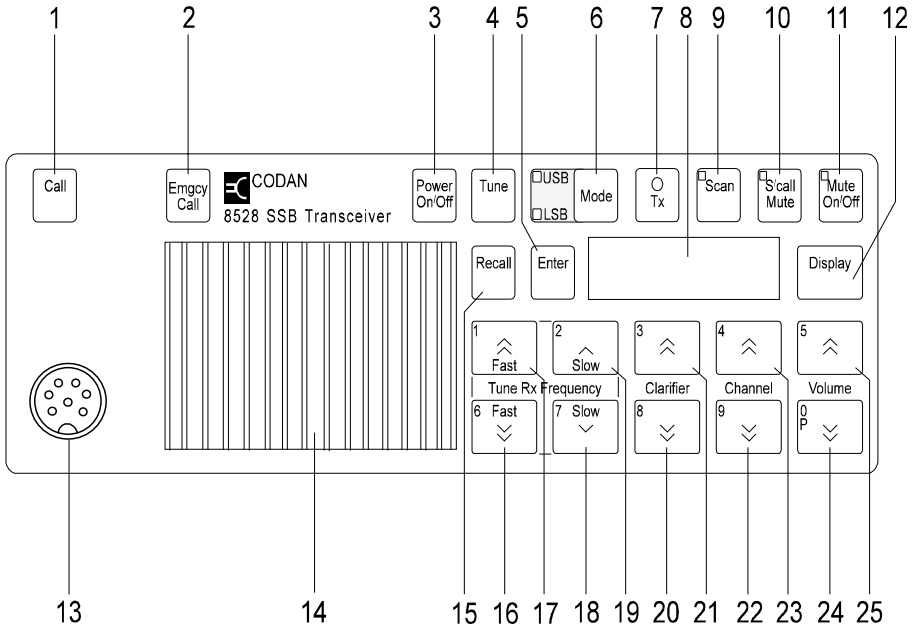

Figure 2.1: Front panel control transceiver

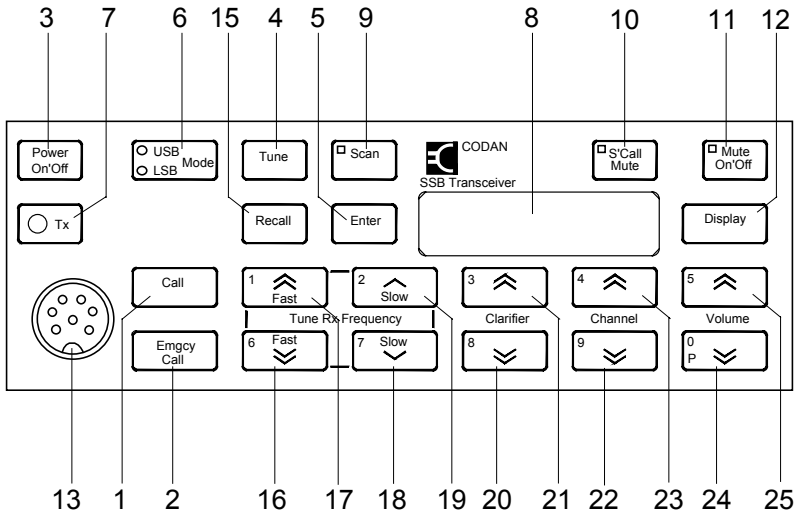

Figure 2.2: Extended control head transceiver

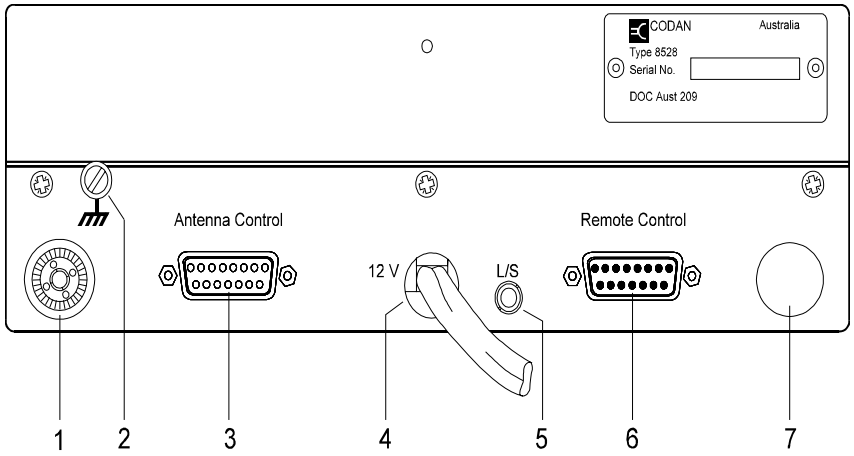

Figure 2.3: The transceiver rear panel

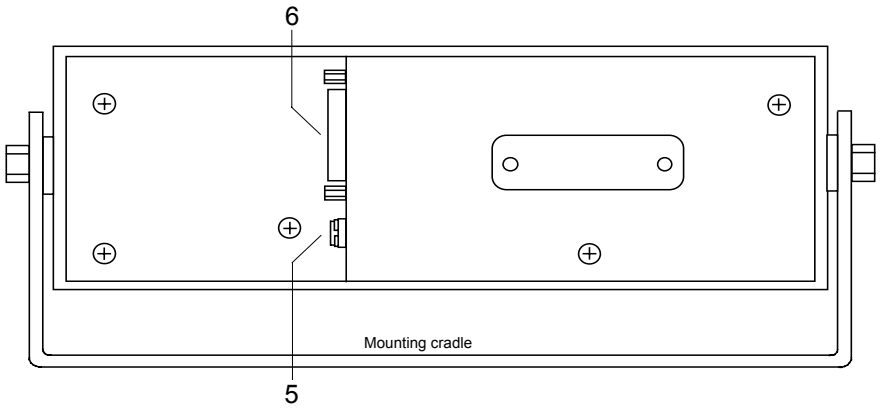

Figure 2.4: The extended control head rear panel