Simrad

VHF Radiotelephone

Shipmate RS8100

183.2021.005 Rev.E English

Warning! *The handset must be turned off while you connect/disconnect the plug for the handset.*

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DISTRESS CALL ..... **overleaf**

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If you need to make a **DISTRESS CALL**

Select the Distress Channel **16**

Hold down the PTT lever on handset.

Transmit calmly, but loud and clear:

MAYDAY - MAYDAY - MAYDAY

THIS IS: *State vessel's name Three Times*

MAYDAY THIS IS: *Repeat vessel's name*

AT POSITION: *State position of vessel*

STATE NATURE OF DISTRESS

Release PTT lever.

Wait briefly for an answer.

If not answered after a short interval, repeat message until answered.

Introduction

The RS8100 is designed for remote installation of the main unit. Two handsets may be fitted and each can be plugged in up to 20m (65ft) from the main unit. Programming and operation of the set is carried out solely through the handsets, either of which may be used for this purpose, in or out of its cradle.

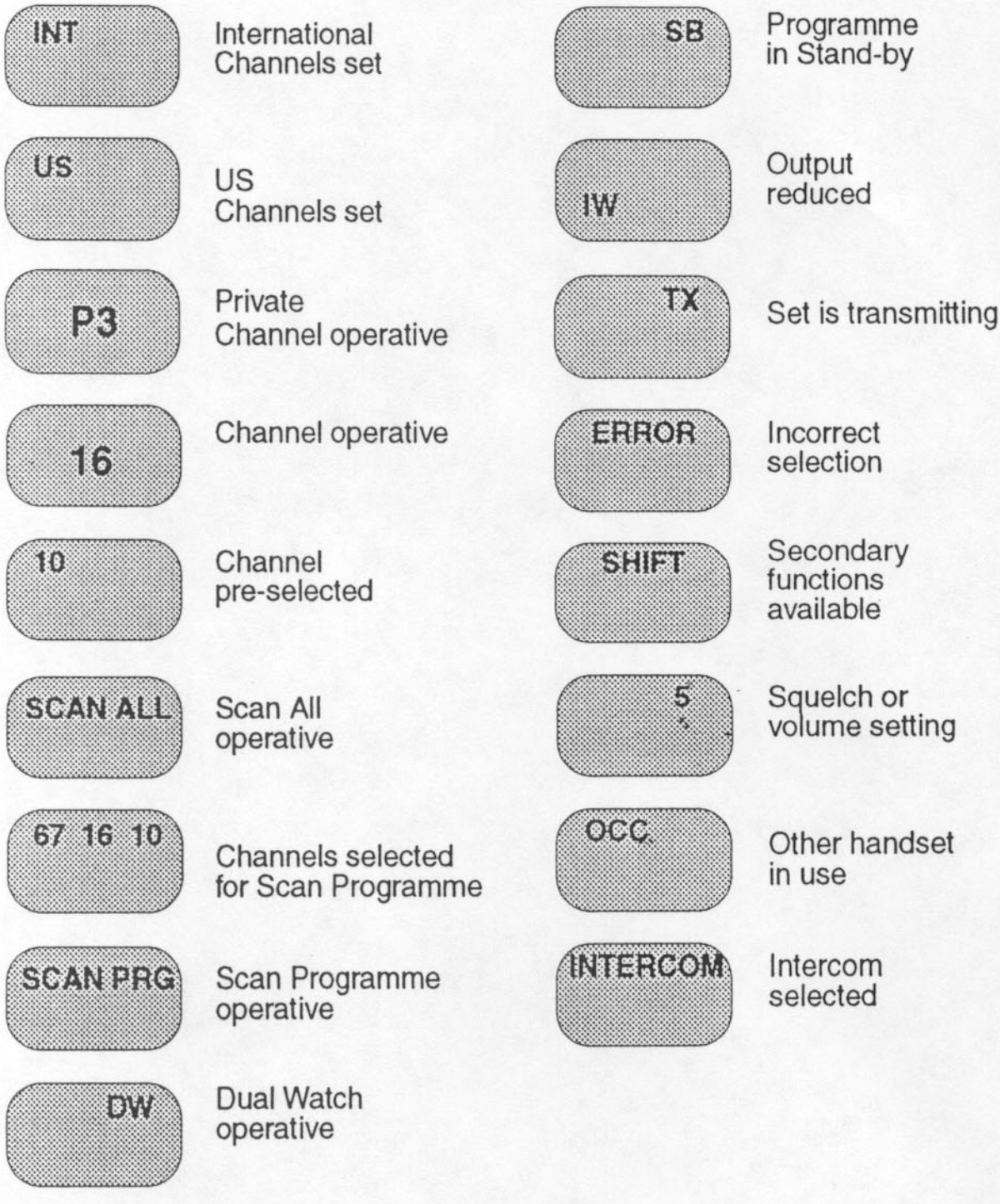
While one handset is in use, the second one will display the legend OCC. However, handset No. 1 will always override handset No. 2.

The Press To Transmit lever, located on the reverse of the keypad, must only be pressed when transmitting. Care should be taken not to press it accidentally when programming a handset out of its cradle.

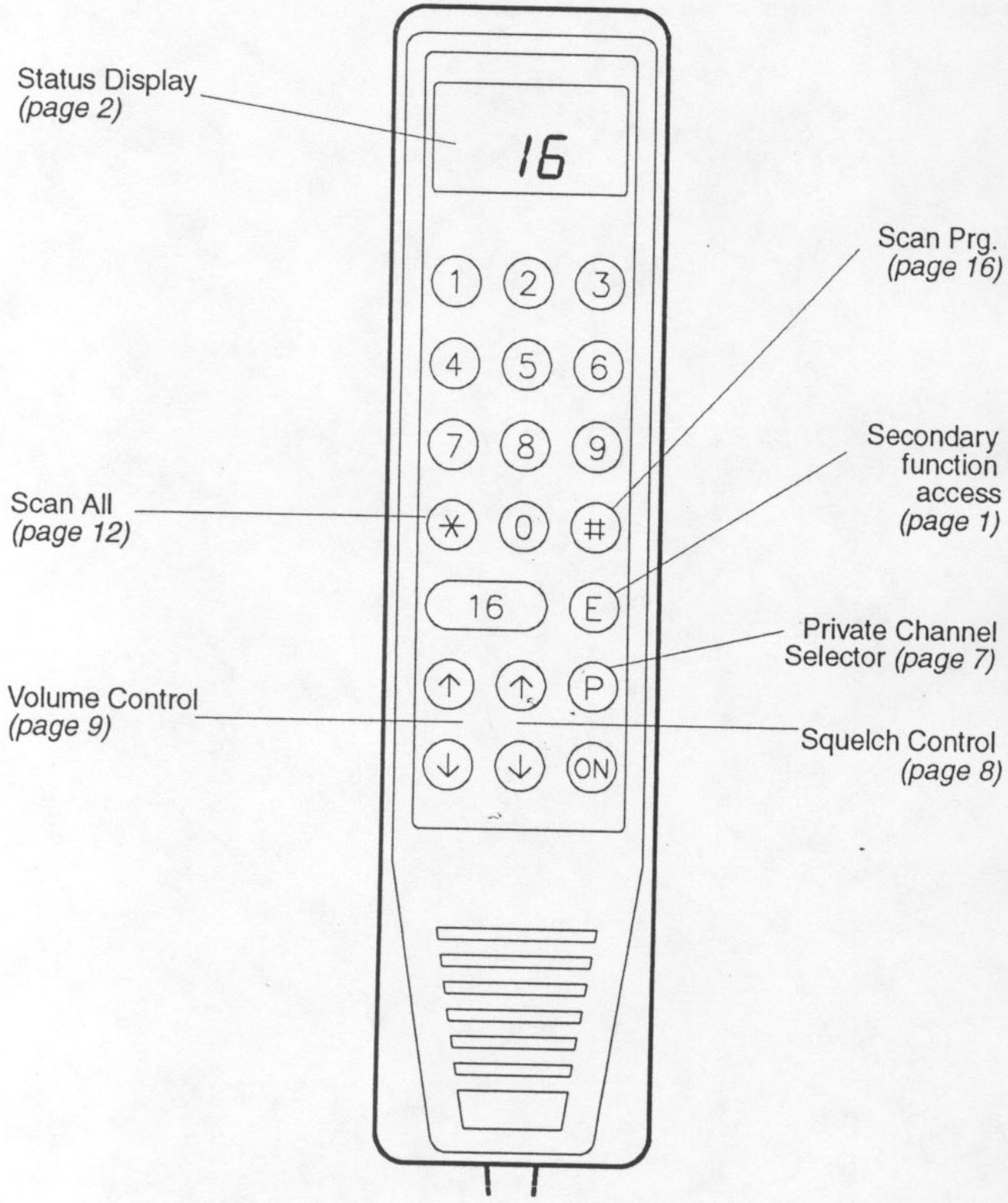
Information regarding channel selection, operating mode and output power is always given on the handset display. Volume and Squelch levels are displayed momentarily when settings are changed. Selection of an unauthorised channel is indicated by the legend ERROR.

The keypad has numerical keys for channel selection and function keys for controlling volume, squelch and scan modes. Key P allows access to private, authorised channels. In addition, key E controls the programming of secondary functions. The legend SHIFT will be shown in the handset display whenever this key is pressed. All key entries are acknowledged by a short tone.

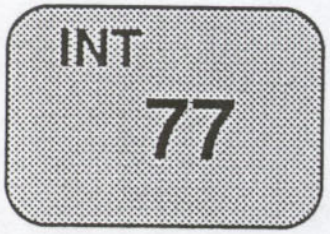
Handset Status Displays



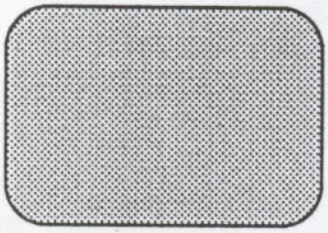
Handset Keys



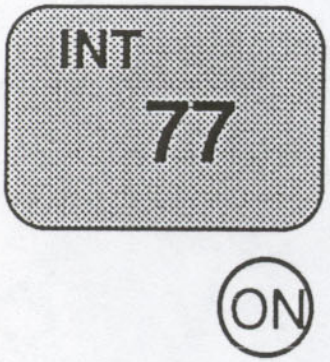
The ON/OFF Switch is fitted at the base of the main unit and a stand-by facility on the handset allows power consumption to be reduced to 20mW, so that the set can be left on almost indefinitely.



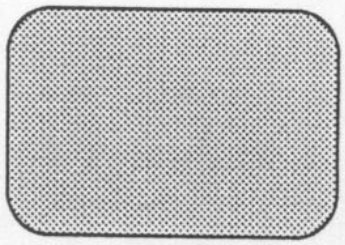
Set the ON/OFF switch of the main unit to the ON position. The display should immediately show the last channel used.



If the last channel is not displayed, it is an indication that the main unit was switched off while the handset was in the stand-by mode.



In that event, press the ON button of the handset once. The channel will be displayed and the unit will be fully operational.



ON

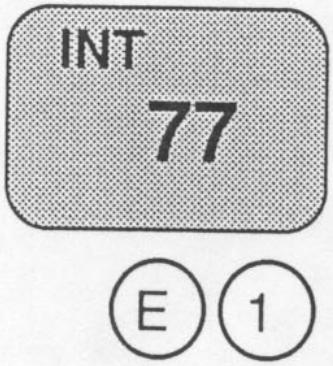
On closing down, press the ON button of the handset and then release it. The display will disappear and power consumption will be reduced to 20mW.

ON

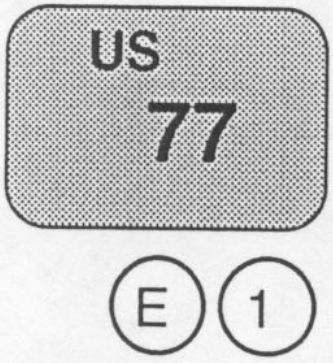
To revert to full operational status from the stand-by mode, simply press the handset ON button once.

If the vessel is to be left unattended for any length of time, the unit should be switched off by setting the ON/OFF switch at the base of the unit to the OFF position.

International and US channels may be used with this unit, permitting operation in all waters. The same handset progamme keys effect the change from one system to the other.

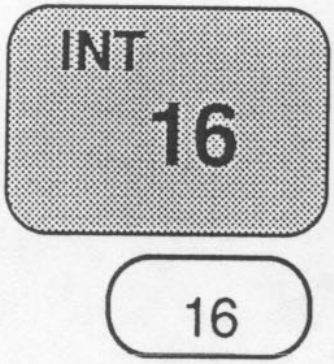


To change from US system to International channels.



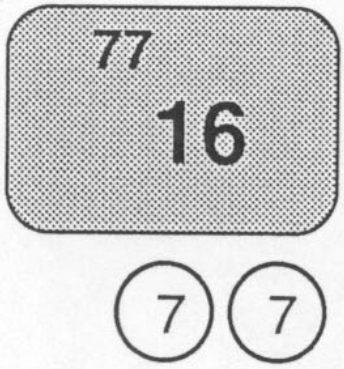
To change from International to US channels. If the legend ERROR is displayed, it indicates that US channels are not available.

US Channels 13 & 67 are limited to 1W output. This is shown by a flashing 1W on the display. For 25W output, press the ON button and the PTT key. When using these channels the handset OFF will be inoperative.

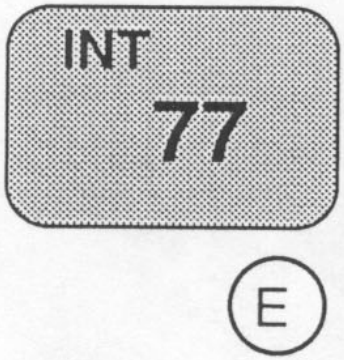


To select the International Distress Channel and General Calling Frequency.

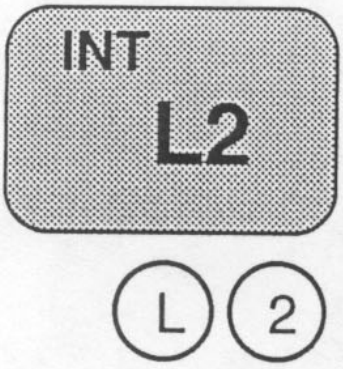
Channel Selection allows access to all legally permissible channels. It also permits direct, single key, operation for the distress and general calling frequency.



To select any public channel, for example, Ship to Ship Channel 77.



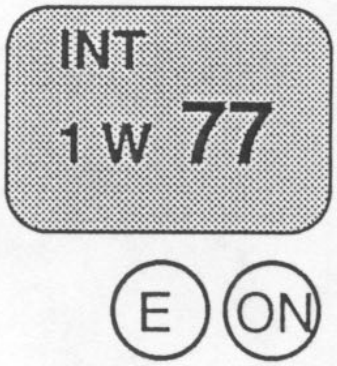
The display will change automatically after 3.5 seconds, or immediately after button **E** is pressed.



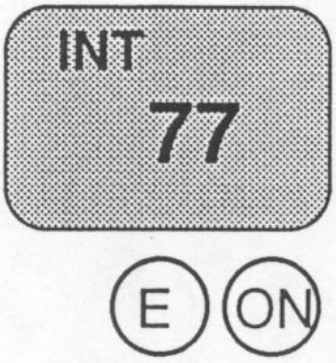
To select a private authorised channel, say Private Channel 3. This will be displayed 3.5 seconds after selection, or immediately after button **E** is pressed.

Output Power can be set to either 1W or to 25W.

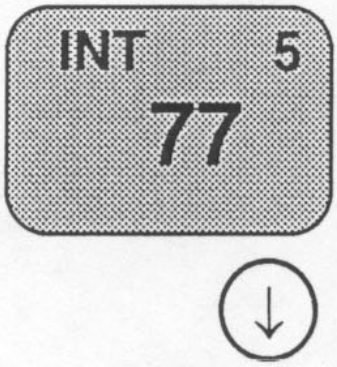
Squelch is adjustable in eight steps from minimum to maximum.



To reduce output power to 1W for short range transmissions.
Regardless of what power was set when the unit was switched off, when it is switched on again it will be at maximum output.

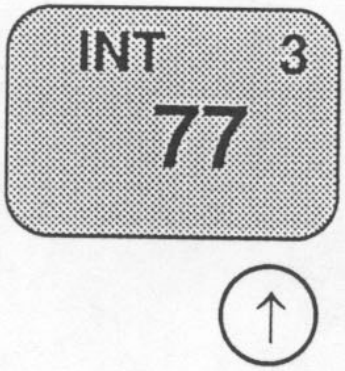


To change from reduced power output to full 25W output for maximum range.

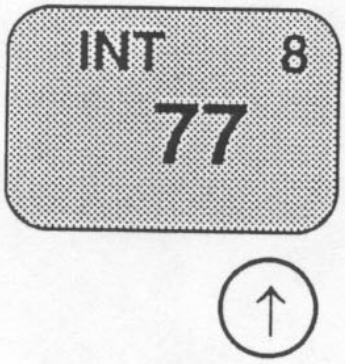


When the set is switched on, the squelch setting will be at 2. Adjust this in steps until noise is heard.

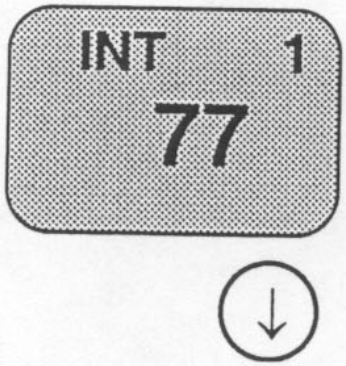
Volume is adjustable in eight steps from minimum to maximum.



Carefully press the increase button until the noise only just disappears.

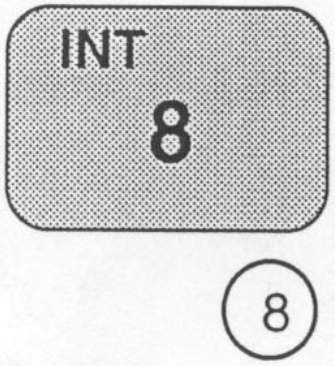


When the set is switched on, volume will automatically be at setting 3. This can be increased in steps up to setting 8.

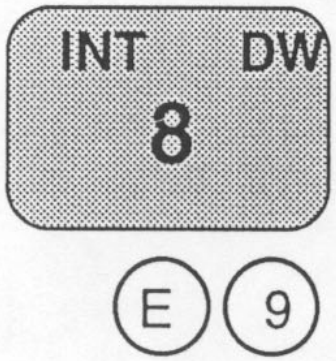


Volume can also be reduced in steps down to setting 1.

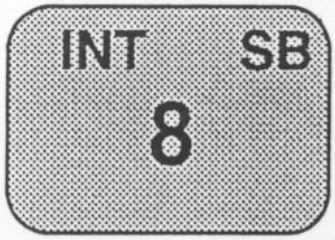
Dual Watch will automatically monitor Channel 16 as well as one other channel pre-selected by the operator. It will function only if there is no noise on squelch and both handsets are in their cradles.



Set the pre-selected second channel, for example, Channel 8.

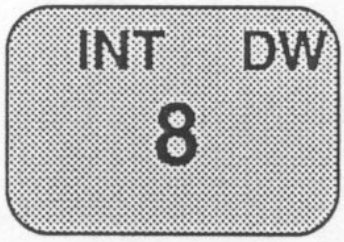


Activate Dual Watch.

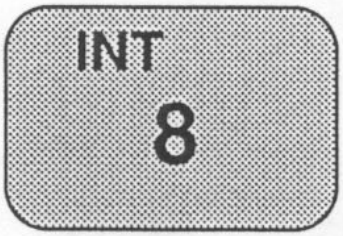


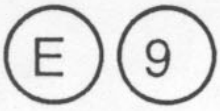
Monitoring of Channel 16 stops when a handset is lifted from its cradle. The pre-selected channel immediately becomes available for communication, and the receiver changes to Stand-by ready to resume Dual Watch.

When a transmission is detected on Channel 16, the Dual Watch will lock the receiver on to that frequency. It will be locked until the signals stop or a handset is lifted for use on the pre-selected channel.

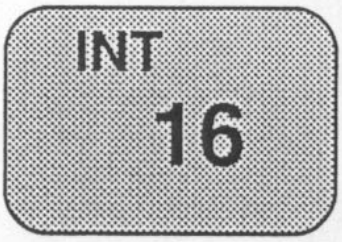


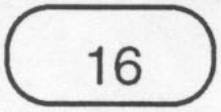
When the handset is returned to its cradle, full Dual Watch function is automatically resumed. Both Channel 16 and the pre-selected channel will again be monitored until a signal is detected or until a handset is lifted from its cradle.





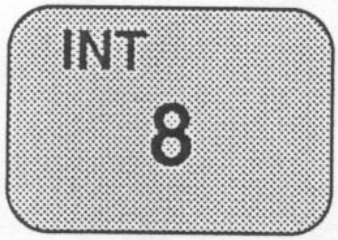
To terminate Dual Watch. Another channel may thereafter be selected for monitoring and Dual Watch be reactivated.

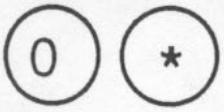




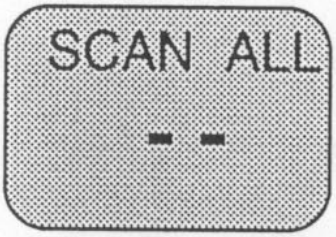
If, while on Dual Watch, the set is used to transmit on Channel 16, Dual Watch is effectively terminated. To resume Dual Watch, a channel in addition to Channel 16 must be pre-selected. Dual watch can then be reactivated.

Scan All mode monitors all public channels for transmissions. Squelch must be set above level 1 before this mode can be selected.

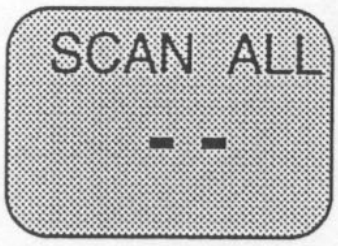




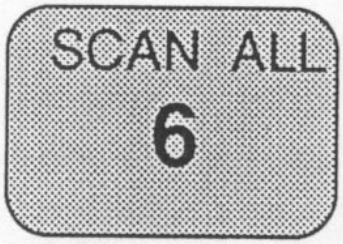
It is good practice before starting Scan All, to ensure that any previously excluded channels are restored.



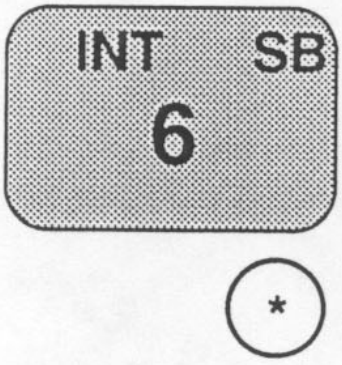
To start Scan All mode.



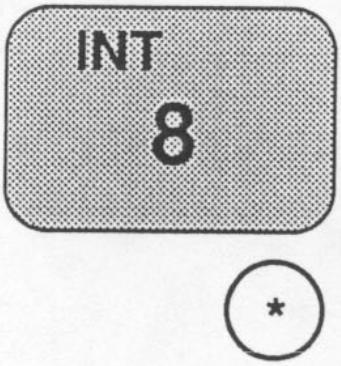
While scanning is in progress, channel numbers will not be displayed.



When a transmission is detected, the set will lock on for five seconds and display the number of the channel it is locked on to.

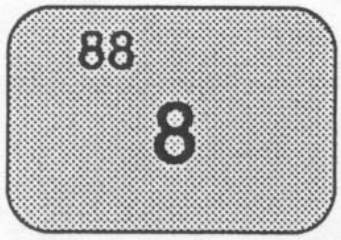


When the handset is lifted, the scanning stops.
Enter the latest used channel, and the unit is ready for communication.



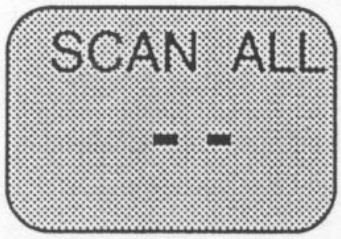
The Scan All mode can be terminated at any time.

Exclusions from Scan All can be made for up to two channels. This will prevent continuously transmitting stations, such as V.H.F. Direction Beacons, from intruding.



8 8

Set in the number of the channel to be excluded from Scan All programme.



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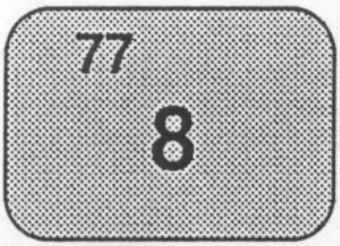
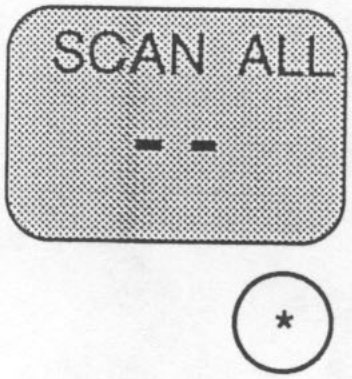
Press immediately, otherwise channel selected for exclusion will instead be programmed for transmission.



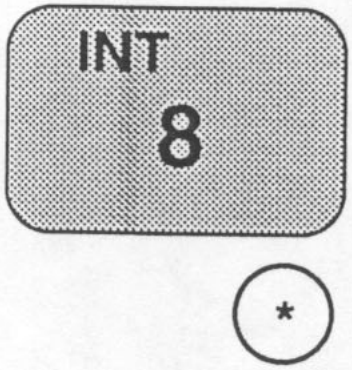
7 7

If required, set in number of a second channel to be excluded from Scan All programme.

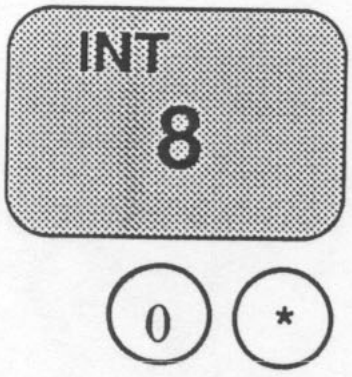
Unless specifically reinstated, channels which are programmed for exclusion from Scan All will remain excluded even if the unit is switched off and then switched on again.



Press immediately to start scanning.



To stop Scan All programme.



This programme will reinstate all excluded channels in a single operation.

Scan Programme mode allows a limited number of channels to be monitored. A minimum of two and a maximum of ten channels can be pre-selected by the operator. The set will lock on to any

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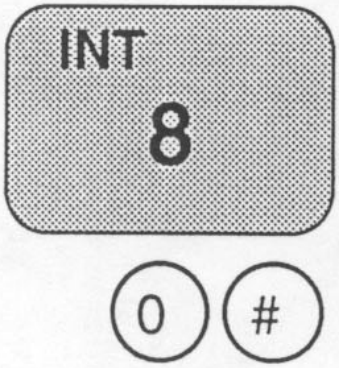
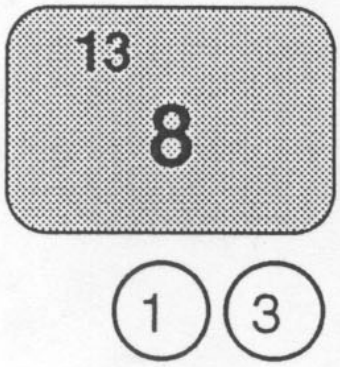
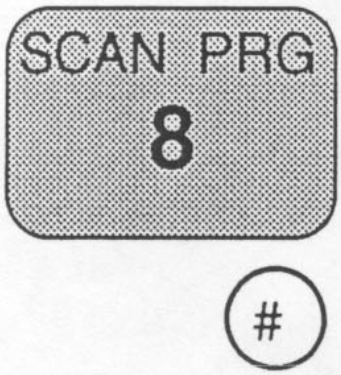


The scan programme must have a minimum of two channels. Channel 5 and 8 are preset, but can be altered. Clear memory and insert new channels.

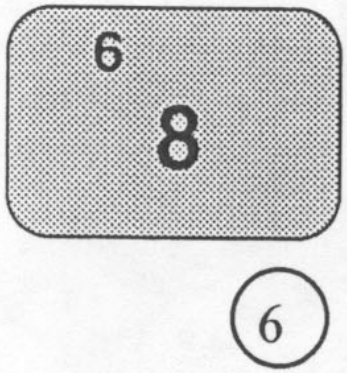


Set in first channel of Scan Programme sequence, for example, Channel 13.

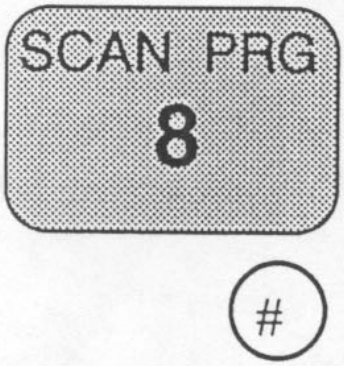


Press immediately, otherwise channel selected will be automatically programmed for transmission.

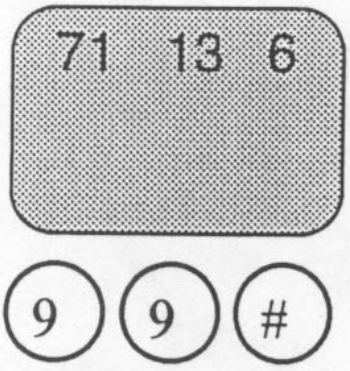
detected signal for four seconds, when scanning will automatically continue unless a handset is lifted for communication. Squelch must be set above level 1 before this mode can be selected.



Set in at least one other channel, for example, Channel 6. A maximum of up to eight more channels can also be set in.

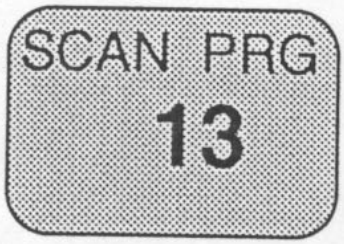


Press immediately.

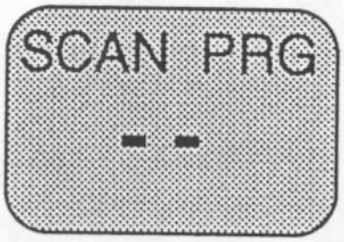


This programme will display all selected channels, in reverse order of scanning.

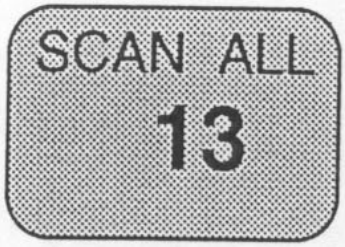
Channels selected for Scan Programme will be retained in the memory of the set, even if power is switched off.



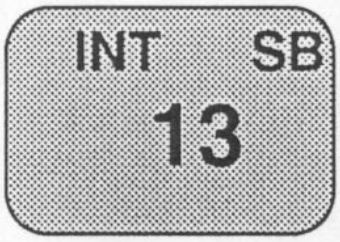
Start Scan Programme mode.



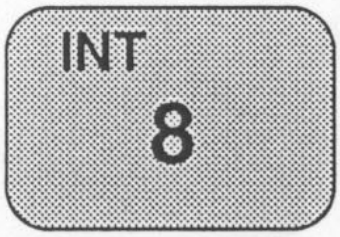
While scanning takes place, channel numbers will not be displayed.



When a transmission is detected, the set will lock on for four seconds and display the number of the channel it is locked on to.

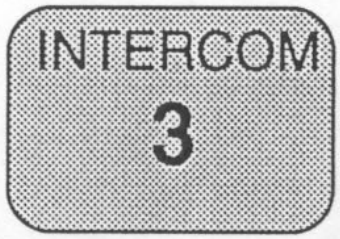


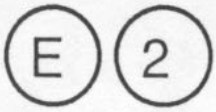
As soon as a handset is lifted, scanning stops, allowing communication with the last channel displayed. The programme automatically goes into stand-by. When the handset is replaced, full scanning will restart.



The Scan Programme mode can be stopped at any time.

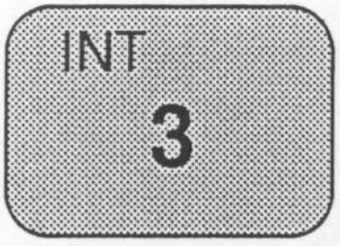
The Intercom facility allows private conversation between the two handsets, or messages over separate loudspeakers, provided there is no radio traffic on the channel selected.





To set up the intercom:
An alarm will sound through the loudspeakers. The second handset should then be picked up, otherwise the message will be heard through the speakers when PTT is pressed.

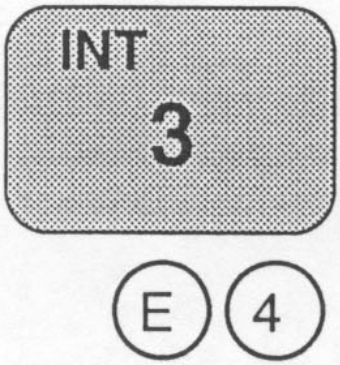
Intercom will automatically go to standby when a radio signal is received. Squelch must be set above level 1 before it can be used.



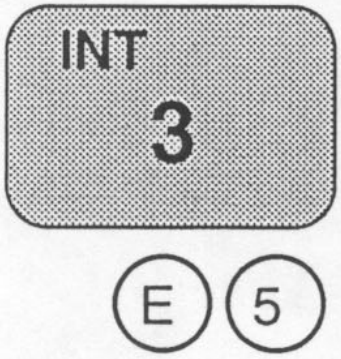
Intercom is cancelled when any programme other than Volume, Squelch, Illumination or Mute is selected, or when the handsets are returned to the cradle.

Muting completely silences the loudspeakers.

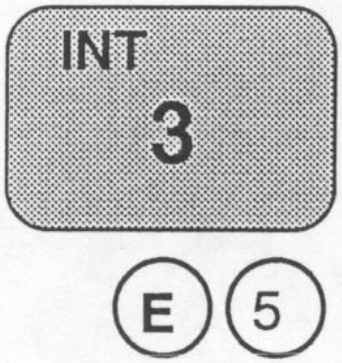
Illumination is automatically on when the handset is switched on.



To mute loudspeakers:
This setting will be automatically cancelled when the handset is replaced, or if the same keys are pressed a second time.

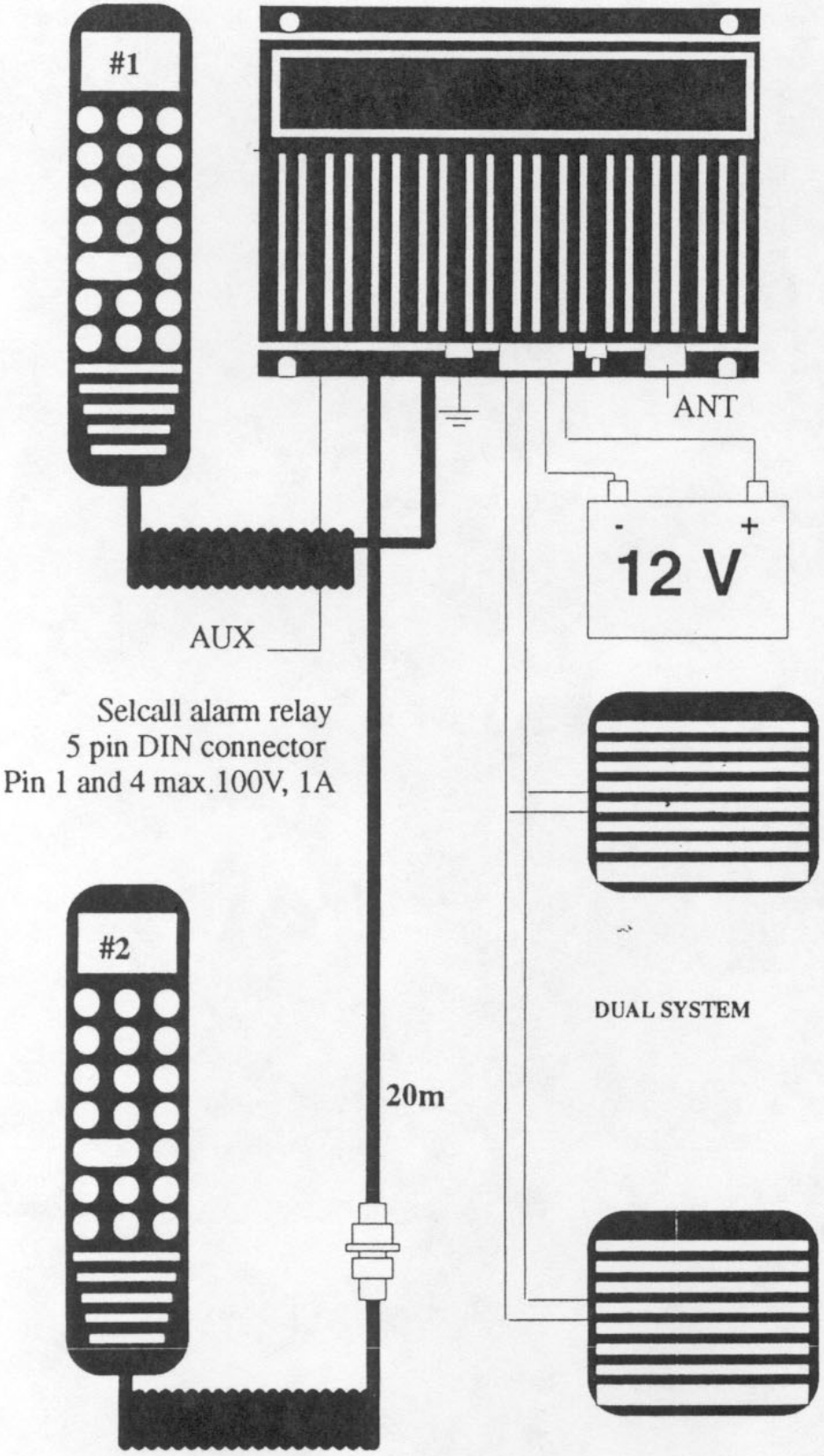


Switch off illumination.



Restore illumination.

INSTALLATION

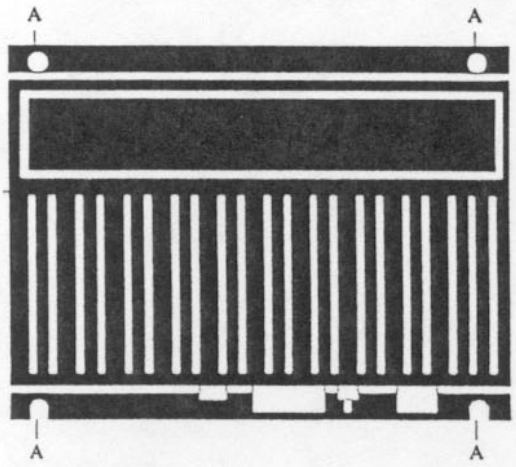


Fuse inside
6.3 A slow blow
5x20mm

Power cable: 1.5m,
2x1.5mm^2.
Extendable to max:
5m, 2x1.5mm^2
10m, 2x2.5mm^2.

Speaker cable: 1.5m,
2x0.4mm^2.
Extendable to max:
20m, 2x0.4mm^2
>20m, 2x0.75mm^2.

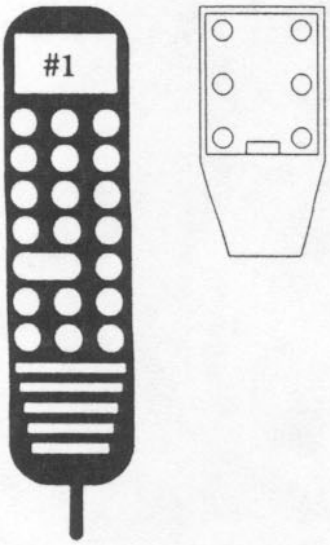
INSTALLATION



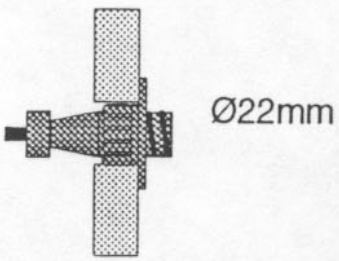
Installation of transceiver unit, handset cradle and watertight socket.

The transceiver unit is not water-proof, so it will have to be install-ed in a dry place.

1. Fasten the transceiver unit with the 4 screws (included) in the holes marked A.



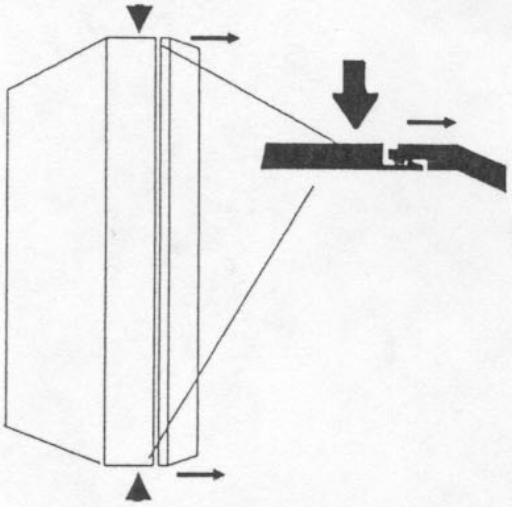
2. Fasten the handset cradle with minimum 4 screws (included).



3. Drill a Ø22mm hole for the watertight socket.

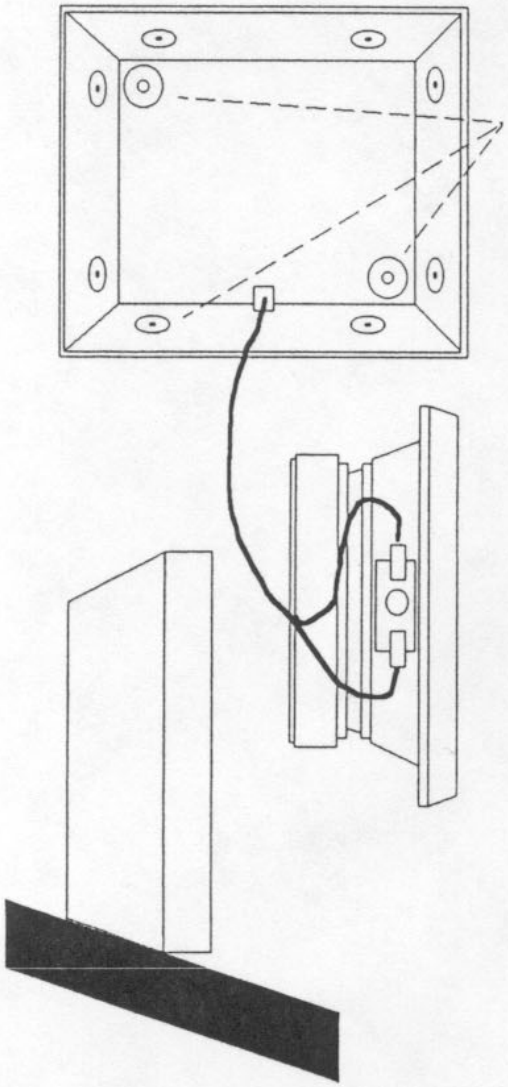
4. Place the socket in the hole and drill four Ø2mm holes for the in-cluded 4 screws.

INSTALLATION



Installation of speaker.

1. Open the speaker by pressing firmly on the top and bottom of the back part, and at the same time pull the front part forward.



2. Drill out the appropriate holes for installation with a Ø4mm drill.

3. Lead the speaker cable through the hole of the rear part.

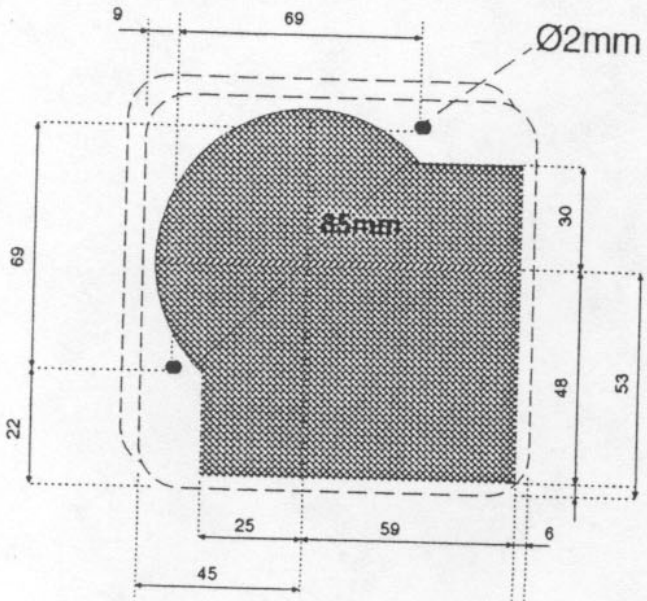
4. Fasten the rear part with the included screws.

5. Connect the speaker cables to the connection terminals.

6. Take the front part of the speaker and press it back together with the rear part.

Note! Speakers for the dual version are supplied with fixed cables and switch.

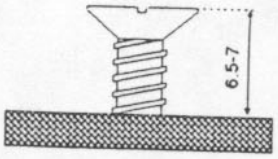
INSTALLATION



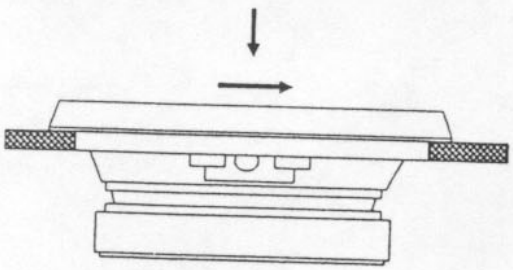
How to flush mount a speaker.

1. Locate the exact position for the speaker.

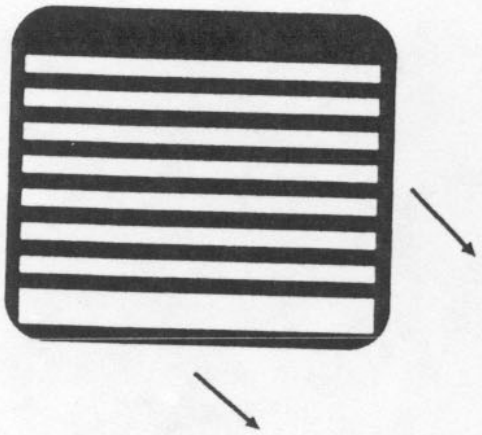
2. Cut out the hole as indicated (shaded area).



3. Drill two Ø2mm holes.



4. Fasten with two 3x14mm self-tapping screws (not included).



5. Insert the speaker into the cutout and slide it into its correct position. The two screws will lock into two keyhole-shaped holes.

Technical Data

General

Power supply:	13.2V dc (12V nominal) isolated earth. Reverse polarity protection.
Operating voltage range:	10.8 to 15.6 V dc
Power drain:	
- receive:	1.5W / 120 mA
- transmit (25W):	60W / 5 A
- transmit (1W):	10W / 0.8 A
- stand-by :	20mW / 0.002 A
Mode:	Simplex / Semi Duplex
Channels:	54 International/US, 130 Private
Facilities:	Scanning, Dual Watch, Priority Key.
Frequency range:	153.9 - 163.1 MHz
Antenna impedance:	50 ohms

Transmitter

Power output:	
- high:	23 - 25W
- low:	1W
AF distortion:	3%
Microphone sensitivity:	4.6mV / 600 ohms

Technical Data

Receiver

Sensitivity:	0.3 μV / 12 dB SINAD
Squelch sensitivity:	Threshold 10 dB quieting, max. 2 μV
AF output power:	4W / 4 ohms
Headphone output:	0.775V / 600 ohms

Construction

Main unit:	To IP51. Moisture resistant. Must be located inside, away from possible exposure to water.
Handset:	To IP54. Weather resistant, but not water-proof. Handset may be placed in cockpit and exposed to rain, but not to continuous waves. Handset plug should be protected.
Dimensions:	221 x 152 x 70 mm / 8.7" x 6" x 2.8"
Weight:	2 kg

INTERNATIONAL MARINE VHF CHANNELS

C= Channel
P= Public
S= Ship to Ship
•= 25 Watt

D= Duplex
H= Harbour
X= Receive only
⊙= 1 Watt

□= Only DK, N, S, SF
■= Only N, SF
◆= Only UK

C	D	P	H	S	Remarks
1	•	•	•		
2	•	•	•		
3	•	•	•		
4	•	•	•		
5	•	•	•		
6				•	
7	•	•	•		
8				•	
9			•	•	
10			•	•	
11			•		
12			•		
13			•	•	
14			•		
15			•	•	
16 SAFETY & CALLING CHANNEL					
17			•	•	
18	•		•		
19	•		•		
20	•		•		
21	•		•		
22	•		•		
23	•	•			
24	•	•			
25	•	•			
26	•	•			
27	•	•			
28	•	•			
P1				◆	157.850 MHz
P2				◆	161.425 MHz
P3					
P4					

C	D	P	H	S	Remarks
60	•	•	•		
61	•	•	•		
62	•	•	•		
63	•	•	•		
64	•	•	•		
65	•	•	•		
66	•	•	•		
67			•		
68			•		
69			•	•	
70 DIGITAL SELCALL					
71			•		
72				•	
73			•	•	
74			•		
77				•	
78	•		•		
79	•		•		
80	•		•		
81	•		•		
82	•	•	•		
83	•	•			
84	•	•	•		
85	•	•			
86	•	•			
87	•	•			
88	•	•			
P1 = L1				□	155.500 MHz
P2 = L2				□	155.525 MHz
P3 = L3				■	155.650 MHz
P4					

US & CANADIAN MARINE VHF CHANNELS

C= Channel D= Duplex •= 25 Watt
P= Public H= Harbour ⊙= 1 Watt
S= Ship to Ship ★= Receive only ◆= USCG only

C	D	P	H	S	Remarks
1			•	•	
2			•	•	
3			•	•	
4			•	•	
5			•	•	
6				•	Safety
7			•	•	
8				•	
9			•	•	
10			•	•	
11			•	•	
12			•	•	
13			⊙	⊙	
14			•	•	
15					★
16	SAFETY & CALLING CHANNEL				
17			⊙		State controlled
18			•	•	
19			•	•	
20	•		•		
21			◆	◆	
22			◆	◆	
23			◆		
24	•	•			Marine operator
25	•	•			Marine operator
26	•	•			Marine operator
27	•	•			Marinte operator
28	•	•			Marine operator
WX1	WEATHER	162.550 MHz ★			
WX2	WEATHER	162.400 MHz ★			
WX3	WEATHER	162.475 MHz ★			
WX4	WEATHER	163.275 MHz ★			
WX5	WEATHER	161.650 MHz ★			

C	D	P	H	S	Remarks
60	•	•	•		
61	•	•	•		
62	•	•	•		
63			•	•	
64	•	•	•		
65			•	•	
66			•	•	
67				⊙	
68			•	•	
69			•	•	
70	DIGITAL SELCALL				
71			•	•	
72				•	
73			•	•	
74			•	•	
77				•	
78			•	•	
79			•	•	
80			•	•	
81			◆	◆	
82			◆	◆	
83			◆		
84	•	•	•		
85	•	•			
86	•	•			
87	•	•			
88				•	
WX6	WEATHER	161.775 MHz ★			
WX7	WEATHER	162.425 MHz ★			
WX8	WEATHER	162.450 MHz ★			
WX9	WEATHER	162.500 MHz ★			
WX10	WEATHER	162.525 MHz ★			