

m-168



25/1 WATT VHF/FM MARINE TRANSCEIVER

Owner's Manual



Contains:

- General Information
- Controls and Indicators
- Operation
- Maintenance and Care
- Troubleshooting

Model No:
 Name:
 Address:
 Town: County: Postcode:
 Date Purchased: Dealer's Name:

SERIAL NO.					

GUARANTEED FOR ONE YEAR FROM DATE OF PURCHASE

QUESTIONNAIRE

It would greatly help us if you could answer the following few questions.
 Please tick where appropriate:

- Where did you purchase this unit?
 Yacht Chandler Marine electronics dealer Diving shop Fishing tackle shop Mail Order
- Are you mainly:
 Sea Angler Freshwater fisherman Professional fisherman Charter Skipper Diver
 Yachtsman Powerboat owner (Tick more than one box if appropriate)
- What prompted purchase?
 Magazine advertisement Saw product in use Recommended Shop display From brochure
- Have you previously purchased a SWIFTECH product? Yes No



FULL ONE YEAR GUARANTEE

Swiftech SL warrants this product against manufacturing defects or malfunction in material and workmanship for one (1) year from date of original purchase. The remedies given under this warranty will be available so long as the consumer can show in a reasonable manner that any manufacturing defect or malfunction in materials or workmanship occurred within one year from the date of original purchase. Proof of the date of the original purchase may be established by filling out and returning the registration card to us. However, failure to return the registration card will not affect the rights under this warranty, so long as the date of original purchase can be shown by any other reasonable manner (such as by sending the receipt or sales slip from the original purchase to us when the product is returned for service). Any manufacturing defect or malfunction in materials or workmanship which occurs within one year from the original purchase date will be repaired without charge or replaced with a new product identical or reasonably equivalent to this product, at Swiftech's option, within a reasonable time after receipt of the product.

This warranty does not cover defects or damage caused by unauthorised articles or services nor does it cover damage through accident or misuse, including failure to provide reasonable and necessary maintenance in accordance with the instructions set forth in your owners manual.

SWIFTECH SL reserves the right to make changes or improvements in its products from time to time without incurring the obligation to install such improvements on equipment previously manufactured.

All transportation expenses for repairs or alterations are the responsibility of the consumer. See reverse side for how to obtain service.

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INTRODUCTION

The SeaCom M-168 is a synthesized, fix-mount VHF Marine Transceiver. The SeaCom M-168 marine radio operates in the 156.025 to 163.275 MHz frequency range. The M-168 operates on all currently allocated marine channels plus 10 weather channels and 15 expansion channels which are switchable for use to either USA, International, or Canada channel designations. The M-168 has an emergency channel 16 which can be immediately selected by pressing the red CH16 key. Channels M1 and M2 marina and race control channels can be accessed by pressing M1/2 buttons.

The SeaCom M-168 also has the following features:

- programmable memory scan that lets you store an unlimited number of your most frequently used channels in memory
- large LCD readout provides for the best visibility...even in bright sunlight
- dual monitoring capability that permits monitoring of Channel 16 and any other channel selected....keeping you informed of distress calls while monitoring other channels



SWIFTECH SL
Unit G
Fort Wallington
Fareham
Hants
PO16 8TT

HOW TO OBTAIN SERVICE

Swiftech SL backs your investment in quality products with quick and expert service and genuine replacement parts. If and when you should ever need service or repairs carried out, telephone or write to us at Fort Wallington, or contact any authorised Swiftech dealer service centre.

Here are some helpful suggestions:

Before returning any instrument to Swiftech SL or an authorised service centre, we recommend that you telephone first with details of the problem as it may well be possible to diagnose the problem and avoid the inconvenience of returning the unit.

Where possible use the original carton when returning for repair or service.

Be sure to include your name, full postal address and telephone number inside the package together with details of the problem. We recommend that you insure the parcel against loss or damage whilst in transit.



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Fareham
Hants
PO16 8TT
0329 823300

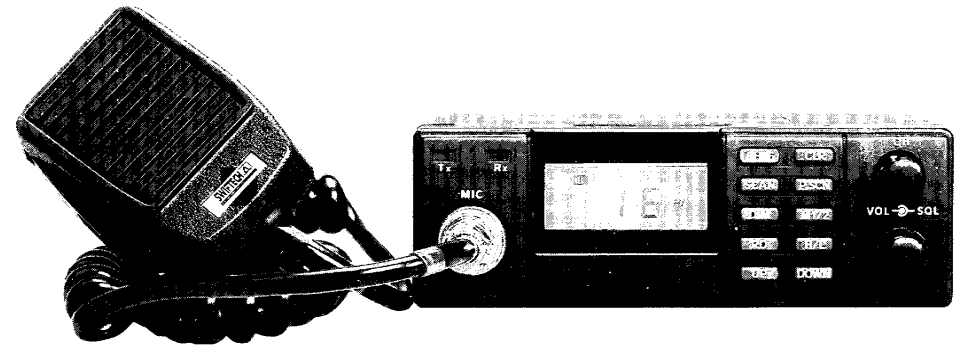
THE COMPLETION AND RETURN OF THE GUARANTEE CARD WITHIN 60 DAYS WILL EXTEND THE GUARANTEE OF THIS PRODUCT BY ONE EXTRA MONTH.

EXPANSION CHANNEL SELECTION CHART

CHANNEL	TRANSMITTER FREQUENCY (Simplex)	RECEIVER FREQUENCY (Simplex)	RECEIVER FREQUENCY Duplex
131	155.700	155.700	160.300
132	155.675	155.675	160.275
133	155.650	155.650	160.250
134	155.625	155.625	160.225
135	155.600	155.600	160.200
136	155.575	155.575	160.175
137	155.550	155.550	160.150
138	155.525	155.525	160.125
139	155.500	155.500	160.100
140	155.475	155.475	160.075
141	155.450	155.450	160.050
142	155.425	155.425	160.025
143	155.400	155.400	160.000
144	155.375	155.375	159.975
145	155.350	155.350	159.950
146	155.325	155.325	159.925
147	155.300	155.300	159.900
148	155.275	155.275	159.875
149	155.250	155.250	159.850
150	155.225	155.225	159.825
151	155.200	155.200	159.800
152	155.175	155.175	159.775
153	155.150	155.150	159.750
154	155.125	155.125	159.725
155	155.100	155.100	159.700
156	155.075	155.075	159.675
157	155.050	155.050	159.650
158	155.025	155.025	159.625
159	155.000	155.000	159.600



M-168 VHF Marine Radio Controls and Indicators



Transmit/Busy Indicator Light(s) (Pg. 6)

Up/Down Buttons - selection of all US, Canadian & International Channels (Pg. 10)

CH16 - Channel 16 Instant Access (Pg. 5)

M1/2 Key - Accesses Marina Channels (Pg. 5)

H/L Key - HI/LO Transmit Power (Pg. 6)

Power/Volume Control Knob (Pg. 4)
Adjustable Squelch Knob (Pg. 4)

Channel Selection Twist Switch (Pg. 4)

Large LCD Display (Pg. 8)

SCAN Button - High Speed Programmable Scan (Pg. 5, 10)

DIM Button - Backlight Switch Button (Pg. 6)

CLR Button - Clear Button (Pg. 6)

P.SCAN Button - Priority Scan Channel 16 (Pg. 5, 11)

R/D Button - Recall/Delete Scan Channel Programming Button (Pg. 6)

CONTROLS

Note: This section defines each control of the radio. For detailed operating instructions refer to page 9 of this manual.

POWER ON-OFF VOLUME SWITCH CONTROL Turns the radio on and off and controls the volume.

SQUELCH CONTROL Sets the point at which random noise on the channel does not activate the audio circuits but a normal signal does. This point is called the squelch threshold. Further adjustment of the squelch control will degrade reception of wanted transmissions.

ROTARY CHANNEL SWITCH A rotary knob on the top of the radio makes channel selection quick and easy.

TX/BUSY LED(S) Indicates the presence of RF power output during transmission when it lights red. Indicates that the selected channel is busy during reception when it lights green.

[UP] (UP) KEY Selects the desired channel. Each press selects the next higher channel number. When held depressed, selects channels at a rate of 12 channels per second.

EXPANSION CHANNEL SELECTION CHART

CHANNEL	TRANSMITTER FREQUENCY (Simplex)	RECEIVER FREQUENCY (Simplex)	RECEIVER FREQUENCY Duplex
65	156.275	156.275	160.875
66	156.325	156.325	160.925
67	156.375	156.375	160.975
68	156.425	156.425	161.025
69	156.475	156.475	161.075
70	156.525	156.525	161.125
71	156.575	156.575	161.175
72	156.625	156.625	161.225
73	156.675	156.675	161.275
74	156.725	156.725	161.325
75	GUARD	GUARD	GUARD
76	GUARD	GUARD	GUARD
77	156.875	156.875	161.475
78	156.925	156.925	161.525
79	156.975	156.975	161.575
80	157.025	157.025	161.625
81	157.075	157.075	161.675
82	157.125	157.125	161.725
83	157.175	157.175	161.775
84	157.225	157.225	161.825
85	157.275	157.275	161.875
86	157.325	157.325	161.925
87	157.375	157.375	161.975
88	157.425	157.425	162.025
90	157.525	157.525	162.125
91	157.575	157.575	162.175
92	157.625	157.625	162.225
93	157.675	157.675	162.275
94	157.725	157.725	162.325
95	157.775	157.775	162.375
96	157.825	157.825	162.425
97	157.875	157.875	162.475
98	157.925	157.925	162.525
99	157.975	157.975	162.575
100	158.025	158.025	162.625
101	158.075	158.075	162.675
102	158.125	158.125	162.725
103	158.175	158.175	162.775
104	158.225	158.225	162.825
105	158.275	158.275	162.875
106	158.325	158.325	162.925
107	158.375	158.375	162.975
108	158.425	158.425	163.025
109	158.475	158.475	163.075
110	158.525	158.525	163.125
111	158.575	158.575	163.175
112	158.625	158.625	163.225
113	158.675	158.675	163.275
114	158.725	158.725	163.325
115	158.775	158.775	163.375
116	158.825	158.825	163.425
117	158.875	158.875	163.475
118	158.925	158.925	163.525
119	158.975	158.975	163.575
120	155.975	155.975	160.575
121	155.950	155.950	160.550
122	155.925	155.925	160.525
123	155.900	155.900	160.500
124	155.875	155.875	160.475
125	155.850	155.850	160.450
126	155.825	155.825	160.425
127	155.800	155.800	160.400
128	155.775	155.775	160.375
129	155.750	155.750	160.350
130	155.725	155.725	160.325

EXPANSION CHANNEL SELECTION CHART

CHANNEL	TRANSMITTER FREQUENCY (Simplex)	RECEIVER FREQUENCY (Simplex)	RECEIVER FREQUENCY Duplex
00	156.000	156.000	160.600
01	156.050	156.050	160.650
02	156.100	156.100	160.700
03	156.150	156.150	160.750
04	156.200	156.200	160.800
05	156.250	156.250	160.850
06	156.300	156.300	160.900
07	156.350	156.350	160.950
08	156.400	156.400	161.000
09	156.450	156.450	161.050
10	156.500	156.500	161.100
11	156.550	156.550	161.150
12	156.600	156.600	161.200
13	156.650	156.650	161.250
14	156.700	156.700	161.300
15	156.750	156.750	161.350
16	156.800	156.800	161.400
17	156.850	156.850	161.450
18	156.900	156.900	161.500
19	156.950	156.950	161.550
20	157.000	157.000	161.600
21	157.050	157.050	161.650
22	157.100	157.100	161.700
23	157.150	157.150	161.750
24	157.200	157.200	161.800
25	157.250	157.250	161.850
26	157.300	157.300	161.900
27	157.350	157.350	161.950
28	157.400	157.400	162.000
29	157.450	157.450	162.050
30	157.500	157.500	162.100
31	157.550	157.550	162.150
32	157.600	157.600	162.200
33	157.650	157.650	162.250
34	157.700	157.700	162.300
35	157.750	157.750	162.350
36	157.800	157.800	162.400
37	157.850	157.850	162.450
38	157.900	157.900	162.500
39	157.950	157.950	162.550
40	158.000	158.000	162.600
41	158.050	158.050	162.650
42	158.100	158.100	162.700
43	158.150	158.150	162.750
44	158.200	158.200	162.800
45	158.250	158.250	162.850
46	158.300	158.300	162.900
47	158.350	158.350	162.950
48	158.400	158.400	163.000
49	158.450	158.450	163.050
50	158.500	158.500	163.100
51	158.550	158.550	163.150
52	158.600	158.600	163.200
53	158.650	158.650	163.250
54	158.700	158.700	163.300
55	158.750	158.750	163.350
56	158.800	158.800	163.400
57	158.850	158.850	163.450
58	158.900	158.900	163.500
59	158.950	158.950	163.550
60	156.025	156.025	160.825
61	156.075	156.075	160.875
62	156.125	156.125	160.925
63	156.175	156.175	160.975
64	156.225	156.225	161.025

To select a USA, International or Canadian channel press the [UP] (UP) key and the CH16 key simultaneously. The display will change from U to I to C each time the keys are pressed.

[DN] (DOWN) KEY

Selects the desired channel. Each press selects the next lower channel number. When held depressed, selects channels at a rate of 12 channels per second.

[CH16] KEY

Used to immediately recall from any channel. Press the CH16 key and the [UP.] (UP) keys simultaneously to switch to USA, International, or Canadian channels.

M1/2 KEY

This key allows instant access to M1 (Channel 37) marina channel and M2 race control channel.

[SCAN] KEY

For two or more programmed channels, this key is used to start scanning between the programmed channels for 100 milliseconds per channel.

[PSCAN] KEY

Press this key to scan CH16 (safety channel) alternately in between every programmed scan channel.

[R/D] KEY

Used to program channels into the radio's memory. Press once to program a channel and press again to delete a channel.

[H/L] KEY

Used to alternate power between high and low.

[CLR] KEY

Stops the radio from scanning when pressed during the scan mode.

Returns to the previous channel when pressed after [CH16] or [M1/2] keys are pressed.

Stops the radio from scanning when pressed during the PSCAN mode. The display will show CH16.

Pressing the CLR key and the DN key while turning the power on will cause the micro-processor to reset and erase all the programmed channels from memory.

[DIM] KEY

Switches the backlight on the LCD on and off.

ANTENNA CONNECTOR

Accepts flexible antenna. This is used to connect the radio to an antenna with impedance of 50 ohms.

CANADIAN VHF MARINE CHANNEL CHART

CHANNEL	TRANSMITTER FREQUENCY	RECEIVER FREQUENCY	MODE S D	CHANNEL ASSIGNMENT
01	156.050	160.650	D	Public Correspondence
02	156.100	160.700	D	Public Correspondence
03	156.150	160.750	D	Public Correspondence
04	156.200	156.200	S	Public Correspondence
05		156.250	S	Public Correspondence
06	156.300	156.300	S	Safety (InterShip)
07	156.350	156.350	S	Commercial (InterShip/Ship-Coast)
08	156.400	156.400	S	Commercial, InterShip
09	156.450	156.450	S	Commercial, (Ship-Coast)
10	156.500	156.500	S	Commercial, (InterShip/Ship-Coast)
11	156.550	156.550	S	Commercial, (InterShip/Ship-Coast)
12	156.600	156.600	S	Port Operations (InterShip/Ship-Coast)
13	156.650	156.650	S	Navigational (InterShip/Ship-Coast)
14	156.700	156.700	S	Port Operations (InterShip/Ship-Coast)
15	156.750	156.750	S	On Board Communications Only
16	156.800	156.800	S	Distress, Safety, and Calling
17	156.850	156.850	S	State Control (Ship to Coast)
18	156.900	156.900	S	Commercial (InterShip/Ship-Coast)
19	156.950	156.950	S	Commercial (InterShip/Ship-Coast)
20	157.000	161.600	D	Port Operations, (Ship-Coast)
21	157.050	157.050	S	Coast Guard
22	157.100	157.100	S	Coast Guard
23	157.150	161.750	D	Coast Guard
24	157.200	161.800	D	Public Correspondence (Ship-Coast)
25	157.250	161.850	D	Public Correspondence (Ship-Coast)
26	157.300	161.900	D	Public Correspondence (Ship-Coast)
27	157.350	161.950	D	Public Correspondence (Ship-Coast)
28	157.400	162.000	D	Public Correspondence (Ship-Coast)
60	156.025	160.625	D	Public Correspondence
61	156.075	156.075	S	Public Correspondence
62	156.125	156.125	S	Public Correspondence
63	156.175	156.175	S	Public Correspondence
64	156.225	160.825	D	Public Correspondence
65	156.275	156.275	S	Port Operations, (InterShip/Ship-Coast)
66	156.325	156.325	S	Port Operations, (InterShip/Ship-Coast)
67	156.375	156.375	S	Commercial, (InterShip)
68	156.425	156.425	S	Non-Commercial (InterShip/Ship-Coast)
69	156.475	156.475	S	Non-Commercial (Ship-Coast)
70	156.525	156.525	S	Non-Commercial (InterShip)
71	156.575	156.575	S	Non-Commercial (Ship-Coast)
72	156.625	156.625	S	Non-Commercial (InterShip)
73	156.675	156.675	S	Port Operations (InterShip/Ship-Coast)
74	156.725	156.725	S	Port Operations (InterShip/Ship-Coast)
77	156.875	156.875	S	Commercial, (InterShip)
78	156.925	156.925	S	Non-Commercial (Ship-Coast)
79	156.975	156.975	S	Commercial (InterShip/Ship-Coast)
80	157.025	157.025	S	Commercial (Ship-Coast)
81	157.075	157.075	S	Coast Guard
82	157.125	156.125	S	Coast Guard
83	157.175	157.175	S	Coast Guard Auxiliary
84	157.225	161.825	D	Public Correspondence (Ship-Coast)
85	157.275	161.875	D	Public Correspondence (Ship-Coast)
86	157.325	161.925	D	Public Correspondence (Ship-Coast)
87	157.375	161.975	D	Public Correspondence (Ship-Coast)
88	157.425	162.025	D	Commercial (InterShip)

USA VHF MARINE CHANNEL CHART

CHANNEL	TRANSMITTER FREQUENCY	RECEIVER FREQUENCY	MODE S D	CHANNEL ASSIGNMENT	FUNCTION	
					SHIP TO SHIP	SHIP TO SHORE
01	156.050	156.050	S	Public Correspondence, Port Operation	YES	YES
05	156.250	156.250	S	Public Correspondence, Port Operation	YES	YES
06	156.300	156.300	S	Safety (Compulsory)	YES	NO
07	156.350	156.350	S	Commercial	YES	YES
08	156.400	156.400	S	Commercial, Inter-ship	YES	NO
09	156.450	156.450	S	Commercial/Non-Commercial	YES	YES
10	156.500	156.500	S	Commercial	YES	YES
11	156.550	156.550	S	Commercial, VTS	YES	YES
12	156.600	156.600	S	Port Operation, VTS	YES	YES
13	156.650	156.650	S	Bridge to Bridge, (1W) NavigationAL	YES	YES
14	156.700	156.700	S	Port Operation, VTS	YES	YES
15		156.750	S	Recv Only-CoAst to Ship	NO	YES
16	156.800	156.800	S	Calling & Safety, Compulsory	YES	YES
17	156.850	156.850	S	State Controlled Ship to Coast (1W)	YES	YES
18	156.900	156.900	S	Commercial	YES	YES
19	156.950	156.950	S	Port Operation	YES	YES
20	157.000	161.600	D	Port Operation	YES	YES
21	157.050	157.050	S	U.S. Govt. Only	YES	YES
22	157.100	157.100	S	Liaison (USCG only)	YES	YES
23	157.150	157.150	S	Port Operation (U.S. Govt. On-y)	YES	YES
24	157.200	161.800	D	Public Correspondence	NO	YES
25	157.250	161.850	D	Public Correspondence	NO	YES
26	157.300	161.900	D	Public Correspondence	NO	YES
27	157.350	161.950	D	Public Correspondence	NO	YES
28	157.400	162.000	D	Public Correspondence	NO	YES
63	156.175	156.175	S	Public Correspondence, Port Operation		
64		160.825	D	Public Correspondence, Port Operation		
65	156.275	156.275	S	Port Operation, VTS	YES	YES
66	156.325	156.325	S	Port Operation, VTS	YES	YES
67	156.375	156.375	S	Commercial, VTS	YES	NO
68	156.425	156.425	S	Non-Commercial	YES	YES
69	156.475	156.475	S	Non-Commercial	YES	YES
70	156.525	156.525	S	Non-Commercial	YES	NO
71	156.575	156.575	S	Intership, Port Operation, Non-Commercial	YES	YES
72	156.625	156.625	S	Non-Commercial	YES	NO
73	156.675	156.675	S	Port Operation, VTS	YES	YES
74	156.725	156.725	S	Port Operation, VTS	YES	YES
77	156.875	156.875	S	Intership, Port Operation	YES	NO
78	156.925	156.925	S	Non-Commercial	YES	YES
79	156.975	156.975	S	Commercial	YES	YES
80	157.025	157.025	S	Commercial	YES	YES
81	157.075	157.075	S	U.S. Govt. Only	YES	YES
82	157.125	157.125	S	U.S. Govt. Only	YES	YES
83	157.175	157.175	S	U.S. Govt. Only	YES	YES
84	157.225	161.825	D	Public Correspondence	NO	YES
85	157.275	161.875	D	Public Correspondence	NO	YES
86	157.325	161.925	D	Public Correspondence	NO	YES
87	157.375	161.975	D	Public Correspondence	NO	YES
88	157.425	157.425	S	Commercial, Aircraft	YES	NO

MICROPHONE JACK

This jack is used to connect the transceiver to a microphone.

POWER CORD

This cord is used to connect the transceiver to a DC power supply of 13.8 volts.

EXTERNAL SPEAKER JACK

This jack is used to connect the transceiver to an external speaker with an impedance of 4 to 8 ohms.

ANTENNA JACK

This jack is used to connect the transceiver to an antenna with impedance of 50 ohms.

PTT BUTTON (Microphone)

Press the push-to-talk switch to transmit a message.

Note: When the K/L is in the key locked mode attempting to depress any key other than the PTT KEY and the K/L KEY the radio will emit a double "beep". When the K/L KEY is in an "unlocked mode" a single confirmation beep will be heard when depressing any key.

INDICATORS

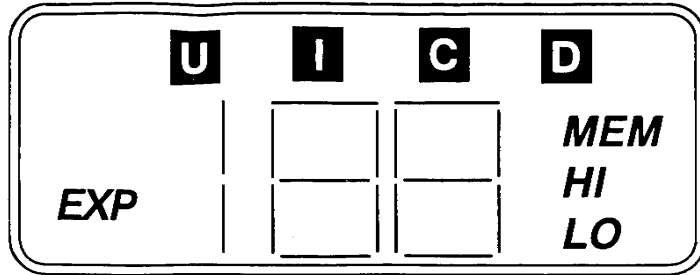


Figure 2. LCD Indicators

Channel Display

Displays the channel in both the transmit and receive modes.

U/I/C Indicator

Indicates the mode of operation for the particular channel. "U" indicates USA mode. "I" indicates international mode and "C" indicates Canadian mode.

EXP Indicator

Indicates an expansion channel has been selected.

Hi/Lo Indicator

"HI" indicates high power and "LO" indicates low power.

MEM

Indicates that the displayed channel is stored in memory.

INTERNATIONAL VHF MARINE CHANNEL CHART

CHANNEL	TRANSMITTER FREQUENCY	RECEIVER FREQUENCY	MODE S D	CHANNEL ASSIGNMENT	FUNCTION	
					SHIP TO SHIP	SHIP TO SHORE
01	156.050	160.650	D	Public Correspondence, Port Operation	YES	YES
02	156.100	160.700	D	Public Correspondence, Port Operation	YES	YES
03	156.150	160.750	D	Public Correspondence, Port Operation	YES	YES
04	156.200	160.800	D	Public Correspondence, Port Operation	YES	YES
05	156.200	160.850	D	Public Correspondence	YES	YES
06	156.300	156.300	S	Safety (Compulsory)	YES	NO
07	156.350	160.950	D	Port Correspondence, Port Operation	YES	YES
08	156.400	156.400	S	Commercial, Inter-ship	YES	NO
09	156.450	156.450	S	Commercial/Non-Commercial	YES	YES
10	156.500	156.500	S	Commercial	YES	YES
11	156.550	156.550	S	Commercial, VTS	YES	YES
12	156.600	156.600	S	Port Operation, VTS	YES	YES
13	156.650	156.650	S	Bridge to Bridge, (1W) Navigational	YES	YES
14	156.700	156.700	S	Port Operation, VTS	YES	YES
15	156.750	156.750	S	Recv Only-Coast to Ship	NO	YES
16	156.800	156.800	S	Calling & Safety, Compulsory	YES	YES
17	156.850	156.850	S	State Controlled Ship to Coast (1W)	YES	YES
18	156.900	161.500	D	Port Operation	YES	YES
19	156.950	161.550	D	Commercial	YES	YES
20	157.000	161.600	D	Port Operation	YES	YES
21	157.050	161.650	D	Port Operation	YES	YES
22	157.100	161.700	D	Port Operation	YES	YES
23	157.150	161.750	D	Public Correspondence	YES	YES
24	157.200	161.800	D	Public Correspondence	NO	YES
25	157.250	161.850	D	Public Correspondence	NO	YES
26	157.300	161.900	D	Public Correspondence	NO	YES
27	157.350	161.950	D	Public Correspondence	NO	YES
28	157.400	162.000	D	Public Correspondence	NO	YES
60	156.025	160.625	D	Public Correspondence, Port Operation		
61	156.075	160.675	D	Public Correspondence, Port Operation		
62	156.125	160.725	D	Public Correspondence, Port Operation		
63	156.175	160.775	D	Public Correspondence, Port Operation		
64	156.225	160.825	D	Public Correspondence, Port Operation		
65	156.275	160.875	D	Public Correspondence, Port Operation, VTS	YES	YES
66	156.325	160.925	D	Public Correspondence, Port Operation	YES	YES
67	156.375	156.375	S	Commercial, VTS	YES	NO
68	156.425	156.425	S	Non-Commercial	YES	YES
69	156.475	156.475	S	Non-Commercial	YES	YES
70	156.525	156.525	S	Non-Commercial	YES	NO
71	156.575	156.575	S	Intership, Port Operation, Non Commercial	YES	YES
72	156.625	156.625	S	Non-Commercial	YES	NO
73	156.675	156.675	S	Port Operation, VTS	YES	YES
74	156.725	156.725	S	Port Operation, VTS	YES	YES
77	156.875	156.875	S	Intership, Port Operation	YES	NO
78	156.925	161.525	D	Port Operation, Public Correspondence	YES	YES
79	156.975	161.575	D	Port Operation, Public Correspondence	YES	YES
80	157.025	161.625	D	Port Operation, Public Correspondence	YES	YES
81	157.075	161.675	D	Port Operation, Public Correspondence	YES	YES
82	157.125	161.725	D	Port Operation, Public Correspondence	YES	YES
83	157.175	161.775	D	Port Operation, Public Correspondence	YES	YES
84	157.225	161.825	D	Public Correspondence	NO	YES
85	157.275	161.875	D	Public Correspondence	NO	YES
86	157.325	161.925	D	Public Correspondence	NO	YES
87	157.375	161.975	D	Public Correspondence	NO	YES
88	157.425	162.025	D	Port Operation, Public Correspondence	YES	NO

TROUBLESHOOTING

Symptom	Cause	Solution
The [SCN] key does not make the radio scan.	No channels READ into the radio's memory	Use the [R/D] key to memorize desired channels into the radio's memory
	Squelch is not adjusted	Adjust the squelch to threshold or to the point where noise just disappears. Further adjustment of the squelch control will attenuate incoming signals.
Other vessel can contact you but you cannot communicate back	Operating on a duplex channel. Duplex channels are used to contact marine operators. The transmit and receive frequencies are different and will not allow ship-to-ship communications.	Use a simplex channel when communicating ship-to-ship
Memorized channels are not retained in memory when the radio is turned off.	Defective DYNACAP (Back-up capacitor) or related circuitry.	Contact your nearest Simpson Lawrence stockist for servicing.

OPERATION

RECEIVING

1. Turn the POWER ON-OFF/VOLUME switch clockwise to turn the radio on. Press the DIM KEY to turn the backlight on. The display will show the last channel the transceiver was on before power was turned off. If backlight is not necessary, press the DIM KEY to turn it off.
2. Press the [UP] or [DN] key or turn the CHANNEL SWITCH to select the desired channel. Refer to the channel chart at the back of this manual for available channels.
3. Set the volume slightly to the left of center.
4. Turn the SQUELCH CONTROL fully counter-clockwise. Make sure that background noise is heard.
5. Adjust the SQUELCH CONTROL to the threshold point where background noise disappears.
6. When a message is received, adjust the volume to the desired listening level. The TX/RX (BUSY) LED will light green to indicate that the channel is busy.

U.S.A. CANADA and INTERNATIONAL MODE

1. Select the mode of operation (USA, International, or Canada) by pressing the UP KEY while pressing the [CH16] KEY. An

“I” for International, “U” for USA, or “C” for Canada will be displayed.

2. Refer to the marine channel charts at the back of this manual for each countries allocated channels.

SCANNING

1. Select a desired channel to be scanned by using the [UP] or [DN] KEY or turn the CHANNEL SWITCH. Press the [R/D] KEY to READ the channel into the radio's memory. “MEM” will appear in the LCD.
2. Repeat the first step for all the desired channels to be scanned.
3. To DELETE a channel from the radio's memory, press the [R/D] KEY again while the memorized channel is displayed on the LCD. The “MEM” will disappear from the LCD.
4. The channels programmed into the radio's memory will remain even if the power is turned off. See section on how to clear the radio's memory.

SPECIFICATIONS

Frequency Range	156.025 to 163.275 MHz
Channels	All currently allocated USA, Canada, and International channels, plus channels M1 and M2, and 15 expansion channels
RF Power Output	25.0 W (high) 1.0 W (low)
Operating Voltage	13.8V D.C. \pm 20%
Current Drain	
standby	0.5A
Receive	0.9A
Transmit	(high power) 6.0A (low power) 1.7A
Dimensions	55(H) \times 155(W) \times 190(D)

purpose. Press and hold the PTT switch and call the marine operator then identify yourself. You will reach the marine operator who will then connect your radio transmission to the telephone lines.

MAINTENANCE

The quality of the solid-state components used in this radio will provide many years of continuous use. Take the following precautions to prevent damage to the radio.

- Never key the transmitter unless an antenna or suitable dummy load is connected to the antenna receptacle.
- Do not disassemble the transceiver. Incorrect reassembly may result in damage to the transceiver. Any services regarding the transceiver must be done by a person who has an authorized license.
- Avoid the use of chemical agents such as benzine or alcohol when cleaning, as they can damage the transceiver surfaces.

5. To start scanning press the [SCAN] KEY. Scanning will advance from the lowest to the highest channel number in memory and will stop where a signal is received.
6. To stop scanning press the [CLR] KEY.

PRIORITY SCANNING

To enable priority scanning press the [P.SCAN] KEY. Scanning will switch between the channels stored in memory and channel 16. Channel 16 is the priority channel and will be scanned after each channel stored in memory.

CLEARING THE RADIO'S MEMORY

To erase all the channels that are stored in memory for scanning:

1. Press and hold the [CLR] KEY and the [DN] KEY while the power is on.

TRANSMITTING

1. Before transmitting, be sure that the channel is clear.
2. Select desired power by pressing the "H/L" KEY. The display will show "HI" for high power or "LO" for low power. Some channels are preset at low power and pressing the "H/L" key will not alter the power setting.

3. Press the PTT (push-to-talk) switch on the microphone. The TX indicator (red LED) will light while transmitting. Speak slowly and clearly into the unit.
4. When receiving a call, wait until the call is finished before transmitting. The radio cannot transmit and receive simultaneously.
5. Always release the PTT KEY immediately upon completion of transmission.

EMERGENCY CHANNEL 16

1. To select the emergency channel, press the [CH16] KEY from any channel.
2. Transmit your emergency signal in the same manner as in regular channels. If you cannot contact anyone on channel 16, switch to another channel.
3. To revert to previous channel from channel 16, press the [CLR] KEY.

SIMPLEX/DUPLEX CHANNEL USE

A *simplex* is used for ship-to-ship communications. The transmit and receive frequencies are the same.

A *duplex channel* is a public correspondence, ship-to-coast channel which is mainly used by Marine Telephone Operators. A duplex

channel cannot be used for ship-to-ship communications because the transmit and receive frequencies are not the same.

NOTE: All channels are factory pre-programmed in accordance with FCC (USA), DOC (Canada), and International regulations, and mode of operation cannot be altered from simplex to duplex or vice-versa.

OTHER FUNCTIONS

Calling Another Boat

1. Make sure the radio is on.
2. Press the [CH16] KEY to go to channel 16. Monitor the channel to make sure that it is clear.
3. When the channel is not busy, press and hold the PTT switch and call the boat you want to communicate with. State the name of the boat clearly, then identify yourself. End the message with "OVER".
4. Once you have established contact, arrange to meet on another ship-to-ship channel (refer to the Marine Channel Charts on the back of this manual for available channels) to continue your conversation. Press the [UP] or [DN] KEYS or turn the CHANNEL SWITCH to go to the agreed channel.

MAKING TELEPHONE CALLS

To make a radiotelephone call use a channel designated for this



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