VHF Handheld Marine Radio
INSTRUCTION MANUAL

■ CAUTION

● Please power off in flammable and explosive environment.

● Make sure the earphone/charging jack cover is fixed tightly to avoid water leakage.

● Make sure the battery cover buckle is fixed tightly to avoid water leakage.

● Please use the supplied AC adaptor or DC charger for charging.

● When installing the battery, the positive (+) and negative (-) electrodes must correspond one by one. Do not install them in the opposite direction.

■ Standard Accessories

Carefully unpack the radio. We recommend that you identify items listed in the following table before discarding the packing materials.

Items	Qty.	Items	Qty.
Antenna	1	AAA NiMH Batteries	5
AC Adaptor	1	Belt Clip	1
DC Charger	1	Hand Strap	1
USB Cable	1	Instruction Manual	1

■ Charging the Batteries

1. Plug the AC adaptor into an AC outlet, or plug the DC charger into the cigarette lighter.
2. Rotate to remove the earphone/charging cover, insert the output terminal into the charging interface, keyboard red light on, and start charging.
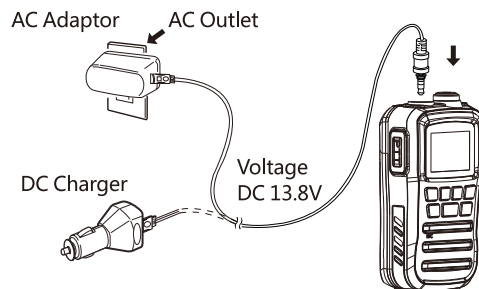

AC Adaptor   AC Outlet

DC Charger   Voltage DC 13.8V

2. The time for NiMH batteries to be fully charged depends on the battery power. Charging should not exceed 10 hours when power OFF, and can not exceed 18 hours when power ON.

※ **It is recommended to charge when power OFF.**

※ **Notice: If alkaline batteries are used, NEVER charge, otherwise alkaline batteries and the radio will be damaged.**

■ Get Acquainted

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3 — LCD Display
4
Microphone
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5
Speaker

◆ Keyboard Description

1. **[PTT] Key:**
   Hold down [PTT] to transmit, speak with normal tone.
   Release [PTT] to receive.

2. **[⏻] Power Key:**
   Hold down this key for 1 second to power ON/OFF the radio.

3. **Channel 16/CALL Channel [C/16]:**
   Press to select Channel 16; Hold for 1 second to select Call Channel.
   ● When the Call Channel is selected, hold for 3 seconds to enter the Call Channel programming mode.
   ● While in the menu mode, press this key to exit.

4. **High/Low Power/Lock Key [LOCK]/[H/L]:**
   Press to select high or low output power; Hold for 1 second to turn Lock Function ON or OFF.

5. **Menu Key [MENU]:**
   Press to enter menu mode; Hold for 1 second to set or clear the TAG channel.

6. **Volume/Squelch/Monitor Key [VOL/SQL] /[MONI]：**
   Press to enter the volume adjustment mode; Press again to enter the squelch adjustment mode; Hold for 1 second to active the Monitor function.
   ● While holding this key, press [▲] to turn on the Volume Maximum Function, repeat again to turn off this function.
   ● While holding this key, press [▼] to turn on the Volume Mute Function, repeat again to turn off this function.

7. **Up/Down Key [▲]/[▼]:**
   While standby, press to select operating channel; While in the menu mode, press to select the menu items; While in channel scan, press to change the scan direction.

8. **Antenna Connector:**
   Connect with 50Ω supplied antenna.

9. **Earphone/Charging/Programming Jack [SP/MIC]/[CHR]:**
   For connecting external earphone/microphone; For connecting AC Adaptor/DC Charger; For connecting programming cable.
   ● Rotate the jack cover counter-clockwise to open; Rotate clockwise to close.
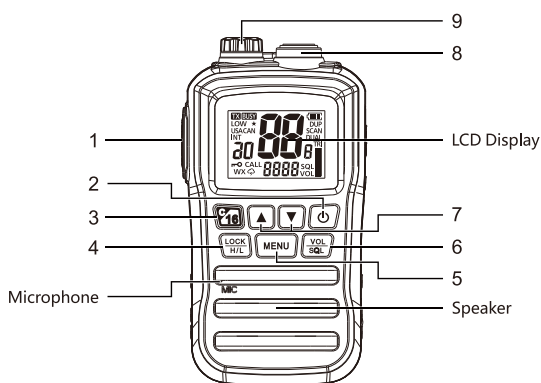
※ **NOTICE: Make sure the jack cover is fixed tightly.**

◆ Display

ICON	DESCRIPTION
TX	Appears while transmitting.
LOW	Appears while selecting low power. Flashes when forced to select low power.
USA	Appears while USA Channel Group is selected.
INT	Appears while INT Channel Group is selected.
CAN	Appears while CAN Channel Group is selected.
BUSY	Appears while channel is busy. Flashes while motoring channel.
★	Appears when TAG Channel is selected.
CALL	Appears when Call Channel is selected.
▭	Battery indicator.
SCAN	Flashes while scanning.
⊶O	Appears while keyboards are locked.
DUP	Appears while a duplex channel is selected.
DUAL	Appears while dual watch.
TRI	Appears while tri-watch.
ᴬ88ᴮ	Indicates the operating channel number. Indicates menu item options in menu mode.
8888	Indicates auxiliary channel. Indicates menu mode items in menu mode.
☁	Appears while weather alarm.
WX	Appears while weather channel is selected.

■ Main Function Operation

◆ Select Channel Group

- This radio contains USA, International and Canadian Channel Group.
- In standby mode, press [MENU] key, then press [LOCK] key to switch Channel Group.

◆ Select Weather Channel

This radio has 10 weather channels.
- In standby mode, press [MENU] key, then press [VOL/SQL] key to switch between operating channel and weather channel.

◆ Edit CALL Channel

1. Hold [C/16] key for 1 second to select CALL Channel, "CALL" and CALL channel number are displayed.
2. Then hold [C/16] key for 3 seconds until two "DUDU" sound are heard to enter CALL channel programming mode, channel number flashes.
3. Press [▲]/[▼] key to select desired CALL Channel.
4. Press [C/16] key to confirm and save CALL Channel.

◆ Set/Cancel TAG Channels

Set TAG (★) for channels need to be scanned, cancel TAG (★) for channels which are no need. The untagged channels will be skipped during the scanning.
- Set/Cancel Single TAG Channels: Hold [MENU] key for 1 second to set/cancel the current channel as TAG channel, "★" displayed for channels which are tagged.
- Set/Cancel All TAG Channels: While Power OFF, hold [LOCK] key and press [⏻] key to power ON, all TAG channels will be canceled in the selected channel group. Repeat the above operations to set all channels as TAG channels.

◆ Scan Operation

Set scan resume timer in the menu mode.
1. Enter "Scdu" menu item to select Scan, exit menu mode to start Normal Scan or Priority Scan.
- "SCAN" flashes on LCD.
- "16" appears on the sub channel readout during priority scan.
- The scan pauses when a signal is received (The resume time can be set in the set mode).
- Channel 16 is monitored in priority scan.
- Press [▲] or [▼]to change the scan direction.
2. Press [MENU] key again, or press [PTT]/ [C/16]/ [⏻] to stop scanning.

◆ Watch Operation

This radio contains Dual/Tri Watch, can be selected in the menu mode.
Dual watch: Watch and monitor in turns between the current channel and Channel 16.
Tri watch: Watch and monitor in turns among the current channel, Channel 16 and CALL Channel.
1. Enter "Scdu" menu item to select Watch, exit menu mode to start Dual Watch or Tri Watch.
- "DUAL" flashes during Dual Watch; "TRI" flashes during Tri watch.
- A "BEEP" sound emits when signal is received on Channel 16.
- Tri Watch switches to Dual Watch when signal received on CALL Channel.
2. Press [MENU] key, or press [PTT]/ [C/16]/ [⏻] to stop watch and motoring.

◆ Vibration Water Draining Function

The Vibration Water Draining Function helps to drain the water away from the loudspeaker housing, which can prevent water ingress to affect the loudspeaker voice quality.
- When standby, press [MENU] key, then press [⏻] key to activate this function.
- A deep sound emits for 10 seconds to drain water. Any key operation is invalid when vibration water draining.

■ Menu Operation

Menu operation method as follows :
1. Press [MENU] key to enter menu mode. Press [▲]/[▼] key to select the desired menu item.
2. Press [MENU] key to enter setting status. Press [▲]/[▼] key to select the desired setting.
3. Press [C/16] key to exit menu mode.

Display	Items	Options
bEEP	Beep Tone	of（OFF）/on（ON）
U IC	Channel Group Selection	USA/INT/CAN/WX
Scdu	Function Selection	Of/SCAN/DUAL
RLrt	Weather Alert	of（OFF）/on（ON）
Prio	Priority Scan	of（OFF）/on（ON）
S_t.	Scan Resume Timer	of（OFF）/on（ON）
dt	Dual/Tri-Watch	d-（Dual Watch）/t-（Tri Watch）
Li 9H	Backlight Level	of（OFF）/1/2/3
Lcdc	LCD Contrast	1/2/3/4
CH_n	Channel Display	3d（3 Digits）/4d（4 Digits）
P_SR	Auto Power Save	of（OFF）/on（ON）
S9LS	Monitor Function	Pu（Push）/Ho（Hold）

■ Main Technical Specifications

	Items	Index
General Specifications	Frequency Range	TX: 156.050-157.425 MHz
		RX: 156.050-163.275 MHz
	Modulation Mode	FM
	Frequency Interval	25kHz
	NiMH Batteries	DC1.2V×5, 850mAh(AAA)
	Frequency Stability	±2.5ppm
	Operating Temperature	- 20℃ ~ + 60℃
	Dimensions (W×H×D)	63mm×119mm×35mm
	Weight (With Batteries)	136g
Transmmiter Specifications	Output Power	3W/1W
	Output Current	≤1.3A/0.8A
	Max. Frequency Deviation	±5kHz
	Spurious Emission	≤0.25μW
	Adjacent Channel Power	≥65dB
	Transmit Audio Distortion	≤5%
Receiver Specifications	Receive Sensitivity	≤0.2μV
	Signal-to-Noise Ratio	≥40dB
	Adjacent Channel Selectivity	≥65dB
	Spurious Response Immunity	≥70dB
	Intermodulation Rejection	≥68dB
	Audio Output Power	≥0.6W

The weather channel frequencies are as follows:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	162.550	6	162.500
2	162.400	7	162.525
3	162.475	8	161.650
4	162.425	9	161.775
5	162.450	10	163.275

Frequency points in different regions

USA	INT	CAN	Transmit	Receive
	01	01	156.050	160.650
1001	1001*4		156.050	156.050
	02	02	156.100	160.700
	03	03	156.150	160.750
	04		156.200	160.800
		1004	156.200	156.200
	05		156.250	160.850
1005	1005*4	1005	156.250	156.250
06	06	06	156.300	156.300
	07		156.350	160.950
1007	1007*4	1007	156.350	156.350
08	08	08	156.400	156.400
09	09	09	156.450	156.450
10	10	10	156.500	156.500
11	11	11	156.550	156.550
12	12	12	156.600	156.600
13*1	13	13*1	156.650	156.650
14	14	14	156.700	156.700
15*3	15*2	15*1	156.750	156.750
16	16	16	156.800	156.800
17*1	17	17*1	156.850	156.850
	18		156.900	161.500
1018	1018*4	1018	156.900	156.900
	19		156.950	161.550
1019	1019	1019	156.950	156.950
	2019		RX only	161.550
20	20	20*1	157.000	161.600
1020	1020		157.000	157.000
	2020		RX only	161.600
	21		157.050	161.650
1021	1021*4	1021	157.050	157.050
		2021	RX only	161.650
	22		157.100	161.700
1022	1022*4	1022	157.100	157.100
	23	23	157.150	161.750
1023	1023*4		157.150	157.150
		2023	RX only	161.750
24	24*5	24	157.200	161.800
25	25*5	25	157.250	161.850
		2025	RX only	161.850
26	26*5	26	157.300	161.900
27	27	27	157.350	161.950
	1027*4		157.350	157.350
28	28	28	157.400	162.000
	1028*4		157.400	157.400
		2028	RX only	162.000
	60	60	156.025	160.625

USA	INT	CAN	Transmit	Receive
	61		156.075	160.675
		1061	156.075	156.075
	62		156.125	160.725
		1062	156.125	156.125
	63		156.175	160.775
1063	1063*4	1063	156.175	156.175
	64	64	156.225	160.825
		1064	156.225	156.225
	65		156.275	160.875
1065	1065*4	1065*1	156.275	156.275
	66		156.325	160.925
1066	1066*4	1066*1	156.325	156.325
67*1	67	67	156.375	156.375
68	68	68	156.425	156.425
69	69	69	156.475	156.475
71	71	71	156.575	156.575
72	72	72	156.625	156.625
73	73	73	156.675	156.675
74	74	74	156.725	156.725
	75*2	75*1	156.775	156.775
	76*2	76*1	156.825	156.825
77*1	77	77*1	156.875	156.875
	78		156.925	161.525
1078	1078	1078	156.925	156.925
	2078		RX only	161.525
	79		156.975	161.575
1079	1079	1079	156.975	156.975
	2079		RX only	161.575
	80		157.025	161.625
1080	1080*4	1080	157.025	157.025
	81		157.075	161.675
1081	1081*4	1081	157.075	157.075
	82		157.125	161.725
1082	1082*4	1082	157.125	157.125
	83		157.175	161.775
1083	1083*4	1083	157.175	157.175
		2083	RX only	161.775
84	84*5	84	157.225	161.825
85	85*5	85	157.275	161.875
86	86*5	86	157.325	161.925
87	87	87	157.375	157.375
88	88	88	157.425	157.425

*1 Low power only
*2 Low power only except the AUS version
*3 RX only
*4 For only the USA and EXP versions
*5 For only the AUS versions

from the face.

Use of non-approved antennas, batteries, and accessories may cause the radio to exceed the FCC RF exposure guidelines.

Transmit no more than the rated duty factor of 50% of the time. To transmit (talk), push the Push-To-Talk (PTT) button.

To receive calls, release the PTT button. Transmitting 50% of the time, or less, is important because the radio generates measurable RF energy only when transmitting (in terms of measuring for standards compliance).