

A300V USER GUIDE

Ocean one[®]
www.hzhmarine.com

Intrinsically Safe
II 2G Ex ib IIB T4 Gb



CE FC RoHS

Foreword

Thank you for purchasing our VHF marine transceiver, you will find the professional and human oriented design of the transceiver during use. Read all instructions carefully and completely before using the transceiver. It is a multifunctional marine radio and well-designed on IMO (International Maritime Organization) resolution.

As adopting advanced waterproof technology, the transceiver is with good waterproof and floating functions.

CAUTION

- The power supply of this transceiver is DC 7.4V, please use CBB300V 7.4V 1200mAh Li-ion Battery as configured. DO NOT repair or disassemble by yourself. DO NOT charge battery in Intrinsic safety locations.
- This transceiver should be charged by configured adaptor. Do not use batteries other than those provided by supplier.
- Do not expose it to direct sunlight for a long time, do not place it in environment or near any heating devices with temperatures below -20°C or above +55°C.
- If it emits smoke or strange odours, remove the battery from the product immediately and contact us or the local dealer.
- Cannot be transmitted without antenna installed, or the devices will be damaged.
- Do not operate it and power off in flammable, explosive environment.
- KEEP the transceiver at least 1 meter away from your vessel's magnetic navigation compass.
- BE CAREFUL, the transceiver meets IP-68 requirements for waterproof protection. However, once the transceiver has been dropped, waterproof protection cannot be guaranteed because of possible damage to the transceiver's case or the waterproof seal.
- MAKE SURE transceiver antenna, earphone jack cover and battery cover are dry before attachment. Exposing the inside of the transceiver to water will result in serious damage to the transceiver.
- Do not put the battery separately in the water or contact with wet material. Do not short circuit the battery. DO NOT ATTACH, REMOVE OR CHARGE THE BATTERY IN EXPLOSION-PROOF LOCATIONS.

■ Recommendation

Clean the transceiver thoroughly with fresh water after exposure to saltwater, and dry it before operating. Otherwise, the transceiver's keys and control components may become unusable due to salt crystallization.

NOTE: DO NOT submerge the transceiver in water if there is any reason to suspect the waterproof protection may not be effective. For example, in cases where the battery cover or DC Jack cap rubber seal is damaged, the transceiver/battery cover/DC Jack cap is cracked or broken, or the transceiver has been dropped, or when the battery cover, antenna or DC Jack cap are detached from the transceiver.



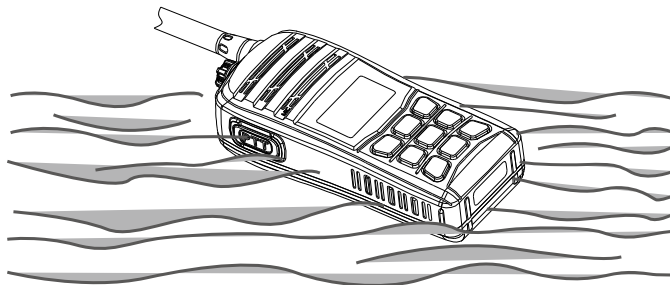
■ FEATURES

◆ Water-resistant protection

The water-resistant protection of transceiver means IP68 requirements, can be more than 1 meter depth in water for 1 hour. Make sure supplied battery, microphone jack cover, antenna etc. are used and well installed before put into water.

◆ Floats on water

- The transceiver can be floated when fell into water.
- The transceiver floats in fresh or salt water even when the supplied accessories, including battery, belt clip, antenna, are attached.
- When a third-party battery pack, belt clip, antenna, etc. are used, it may sink.



CONTENTS

PREPARATION

Supplied Accessories	1
Preparation	1
Charge battery	2
Install/remove battery	2
Install/remove antenna	3
Get acquainted	3
Appearance	3
Display Screen	3

BASE OPERATION

Turn ON/Turn OFF	5
Adjusting the Volume Level	5
Adjusting the Squelch Level	5
Transmitting/Receiving	5
Transmitting	6
Receiving	6
Select Channel Group	6
Select Channel	7
CH 16	7
CALL CH	7
Weather CH	7
Edit Call Channel	7
Monitor Function	7
Volume Mute Function	7
Automatic Backlighting	7
Keyboard Lock Function	7
Vibration Water Draining Function	7

SCAN OPERATION

Scan Types	8
Set TAG Channels	8
Set/Cancel Single TAG Channel	8
Set/Cancel all TAG channels	8
Scan Operation	8

DUALWATCH-TRI-WATCH

Description	9
Operation	10

SET MODE

Set Mode Programming	11
Set Mode Items	11

VHF MARINE CHANNEL LIST	12
SPECIFICATION	13
TROUBLESHOOTING	14

◆ Intrinsic safety

Intrinsic safety marine transceiver adopts a new optimized intrinsic safety design. The battery adopts dual output current limiting protection and short circuit protection. The whole structure design is compact and reliable, with safe and reliable intrinsic safety performance, and is the ideal professional communication transceiver in hazardous gas working environment.

Level Temp-erature	II A	II B	II C
T1(450 °C)	Methane, toluene, methyl ester, Ethane, propane, acetone, Acrylic, benzene, styrene, Carbon monoxide, ethyl acetate, Acetic acid, chlorobenzene, methyl acetate, ammonia	Propylene, propylene Clear, dimethyl ether, Hydrogen cyanide, City gas	Hydrogen, water gas
T2(300 °C)	Methanol, ethanol, ethylbenzene, Propyl alcohol, propylene, butanol, Butane, butyl acetate, Amyl acetate, cyclopentane	Butadiene, ring Ethoxyethane, B Ene, furan	Acetylene
T3(200 °C)	Pentane, pentanol, hexane, Hexanol, heptane, octane, Ethanol, turpentine, Naphtha, petroleum (including steam Oil), fuel oil, Pentanol tetrachloromethane	Dimethyl ether, propylene Aldehyde, hydrogen sulfide	
T4(135 °C)	Acetaldehyde, trimethylamine	Dibutyl ether, two Ether, ethyl methyl, Tetrafluoroethylene	Carbon disulfide
T5(100 °C)			Ethyl nitrate
T6(85 °C)	Ethyl nitrite		

PREPARATION

■ Supplied Accessories

Carefully unpack the transceiver. We recommend that you identify items listed in the following table before discarding the packing materials. If any item are missing or have been damaged, please contact dealer immediately.

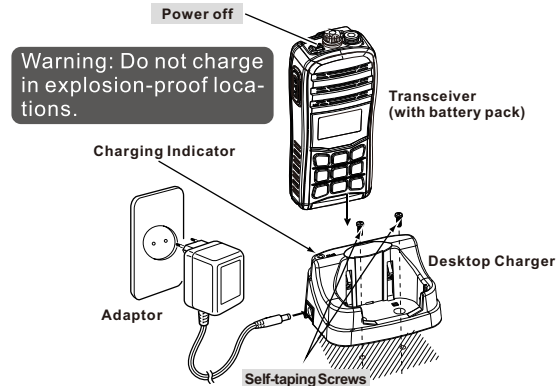
Items	Qty
Antenna	1
Li-ion Battery	1
Adaptor	1
Belt Clip	1
Handstrap	1
User's Manual	1

■ Preparation

◆ Charging the Battery Pack

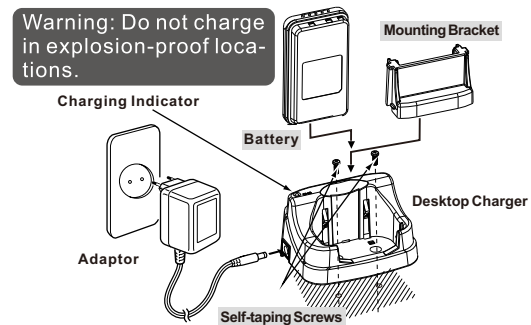
Charging the transceiver with battery pack

1. Connect the adaptor output line with desktop charger, and connect adaptor to the AC Power.
2. Charging by inserting transceiver with battery into desktop charger, confirm well connected.



Charging battery pack separately

1. Connect the adaptor output line with desktop charger, and connect adaptor to the AC Power.
2. Install battery bracket into charging groove of desktop charger.
3. Insert single battery pack into desktop charger.



※ **NOTE:**

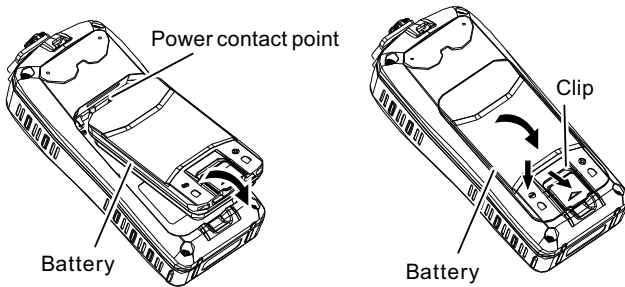
- You can fix the desktop charger on the table by configured self-tapping screw.
- Power off the transceiver before charging.
- Charging indicator lights red while charging.
- Charging indicator lights green while full charge.

◆ **Install /Remove Battery Pack**

To insert the battery pack:

1. Aim battery terminal on power contact point of transceiver, push battery into groove.
 2. Press battery downward and make sure battery clip into groove.
- If the battery cover not fixed well, it may cause water leakage.

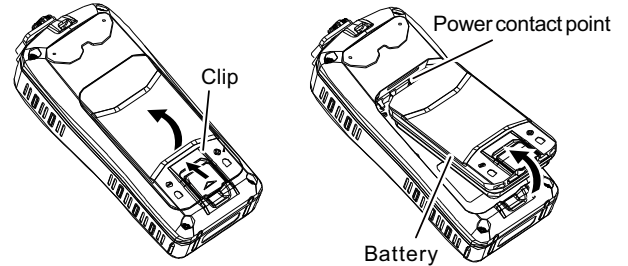
Do not attach battery in explosion-proof locations.



To remove the battery pack

1. Push battery clip upward.
2. Lift upward of battery bottom from groove to remove battery pack.

Do not remove battery in explosion-proof locations.

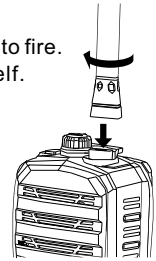


※ **NOTE:**

- Do not short circuit battery terminal or throw it into fire.
- Do not disassemble battery shell by yourself.

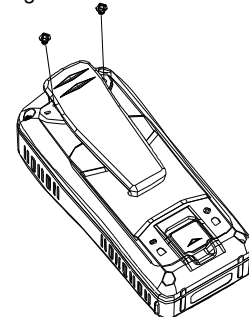
◆ **Install /remove antenna**

1. Connect the supplied fixable antenna to the antenna connector, rotate it clockwise.
2. To remove it, rotate it anti-clockwise.



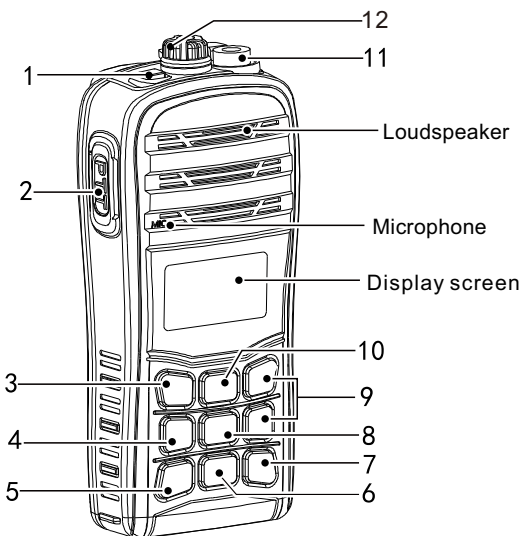
◆ **Install belt clip**


Attach the belt clip to rear cover, and ensure screw holes are align, screw tightly using screw driver.




Get acquainted

■ Appearance



1. Power Key []
 - Hold down this key over 1.5 seconds; to power on/off transceiver.
2. [PTT] Key
 - Hold down to transmit; speak with normal tone.
 - Release to receive.
3. CH [16]/Call CH [16]/[C]
 - Push to select channel 16.

4. Volume Key [VOL]/[MUTE]
 - Press this key, then [?]/[?] to adjust volume.
 - Hold for 1.5 seconds, to open mute function.
5. [SCAN]/[DUAL]
 - Push to start or stop scan mode (including normal and priority scan).
 - Hold for 1.5 seconds to enter the Dual/Tri-watch mode.
 - Push to exit the watch mode
 - Hold this key and HI/LO key for 1.5 second, to activate the AquaQuake Function.
6. High/low power/Lock key [H/L]/[Lock]
 - Push to select the high or low output power.
 - Hold for 1.5 seconds to turn the Lock function ON or OFF.
7. Up/down key [▲]/[▼]
 - Push to select an operation channel in normal mode.
 - While in the Set mode, push to select the setting or value of an item.
8. Squelch/Monitor key [SQL]/[MONI]
 - Press this key, then press [▲]/[▼]key to adjust squelch level.
 - Hold for 1.5 seconds to manually open squelch and active the Monitor function.
 - While hold this key, press []key to turn ON the power and enter the set mode.
9. Favorite/Tag channel key [FAV]/[TAG]
 - Hold for 1.5seconds to select the call channel.(factory default: channel 9)
 - Transceiver factory default call channel is channel 9.
 - When the call channel is selected, hold for 3 seconds to enter the call channel programming mode.
 - While in the set mode, push to return to the normal operation mode.

- Hold this key, then press [▲][▼] key to sequentially select the favorite/tag channels, while ignoring untagged channel.
- Hold for 1.5 seconds to set or clear the TAG for the display channel.
- While holding this key, press [P] key to power on to clear or set all TAG channels in the selected channel group.

10. Channel group key [CH]

- Press this key to switch between normal channel group and weather channel group.
- Hold for 1.5 seconds, to select a channel group of USA, International and Canada.
- Push to return to the previous channel before selecting Channel 16 or the Calling channel.

11. ANTENA CONNECTOR

- Connect the 50Ω supplied antenna here.

12. Earphone Jack [SP MIC]

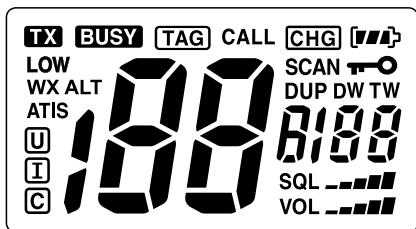
- Use for connecting supplied earphone wire.
- Revolve anti-clockwise access flap to open, revolve clockwise to close.

※ NOTE:

Revolve access flap tightly while no earphone wire connected, to avoid water leakage.

■ Display Screen



Know the meaning of the icons on LCD screen to ensure well operation.



Icon	Description
TX	● Transmit Indicator , Appears while transmitting
LOW	● “LOW” appears when low power is selected ● “LOW” blinks when compulsorily switching to low power mode because of high temperature or low voltage
WX ALT	● “WX” appears when weather channel group selected ● “WX ALT” appears when weather alarm function activated ● “WX ALT” blinks when weather alarm tone received
ATIS	● Appears while working in ATIS Channel
U	● Appears when USA channel group is selected.
I	● Appears when International channel group is selected
C	● Appears when Canadian channel group is selected
BUSY	● Appears when channel busy ● Blinks while monitoring
TAG	● Appears WHEN A TAG channel is selected
CALL	● Appears when the call channel is selected
LOCK	● Appears while the lock function is activated
Battery	● Battery Indicator ● Section rolling display while charging ● Blinks while full charge
SCAN	● Blinks while scanning
DUP	● Appears when a duplex channel is selected.
DUAL	● Appears when dual band watch
TRI	● Appears when tri-band watch
100^B	● Indicates the selected operating channel number ● In set mode, indicates the options of setting item.
100	● In dual watch/tri-watch, appears CH16 during priority scan ● Appears volume level while volume setting ● Appears squelch level while SQL setting ● Appears corresponding items while mode setting
SQL [Bar]	● Show the squelch level ● SQL blinks while setting.
VOL [Bar]	● Show the volume level ● Bar indicator rolling show when max volume. ● Blinks when the volume mute is activated ● VOL blinks while setting

BASIC OPERATION

■ Turn ON/OFF

1. Hold[] for 1.5 seconds to turn ON.
2. Hold[] again for 1.5 seconds to turn OFF.

■ Adjusting the Volume Level

The volume level can be adjusted using [VOL]and[▼]/[▲]

1. Push [VOL]once to enter the volume adjustment mode. Then press [▼]or[▼]to adjust the volume level.
 - The "VOL" icon starts blinking.
 - The transceiver has 31 volume levels and OF means off.
 - When no key operation is performed for 5 seconds, then transceiver returns to normal mode.
2. Push [VOL]again to exit to normal mode.

■ Adjusting the Squelch Level

The squelch level can be adjusted using [SQL]and [▼]or [▲]. In the order to properly receive signals as well as for effectively scan, the squelch must be adjusted to the proper level.

1. Push [SQL] once to enter the squelch adjustment mode, then push [▼]or [▲]to adjust the squelch level.
 - The "SQL" icon starts blinking.
 - The transceiver has 11 squelch levels: OP is completely open; 10 is tight squelch.
 - When no key operation is performed for 5 seconds, the transceiver returns to the normal mode.
2. 1.Push [SQL] again to exit to normal mode.

■ Transmitting/Receiving

◆ Transmitting

1. Push [H/L]to select output power.
 - "LOW" appears when low power is selected.
 - Choose low power for short range communications; choose high power for long distance communications.
 - Some channels are for low power communication only.
2. Hold down [PTT]to transmit, then speak into the microphone.
 - "TX" appears.
 - Channel 70 cannot be used for transmission.
3. Release [PTT]to receive.

※ NOTICE:

- Transmitting without an antenna can damage the transceiver.
- Activate TOT function by PC programming software, then it will limit long time continuous emission.
- 5-10cm between mouth and microphone and speak at a normal voice level.

◆ Receiving

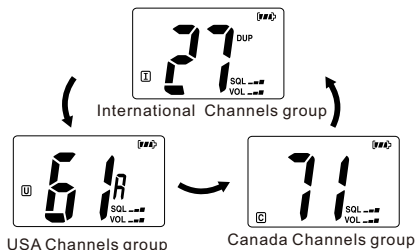
1. Adjust the volume levels by push [▲] or [▲] in Volume adjusted mode.
2. set the squelch levels by push [▲] or [▲]in Squelch adjusted mode.
 - When receiving a signal, "**BUSY**" appears and audio is heard from the speaker.
 - The transceiver has power save function, automatically activates when no signal is received for 5 seconds.

■ Channel Group Selective

This transceiver is pre-programmed with USA, International, Canadian channels. Choose the appropriate channel groups for your operating area.

1. Push [CH] to select a regular channel.

- If weather channel appears, press [CH] again.
- 2. Hold down [CH] for 1.5 seconds, to select USA, International, Canadian channel group in sequence.
- 3. Push [▼] or [▲] to select a channel.
"DUP" appears when a duplex channel is selected, "A" appears when a simplex channel is selected.

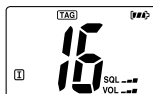


■ Channel Selection

◆ Channel 16

Channel 16 is the distress and safety channel, it is used for establishing initial contact with a station and for emergency communications. Channel 16 is monitored during both dual watch and Tri-watch stand-by.

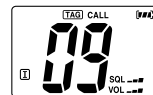
1. Push [16/C] momentarily to select Channel 16.
2. Push [CH] to return to the channel used before Channel 16, push [▲] or [▲] to select a channel.



◆ Call Channel

Each regular channel group has separate leisure-use call channels. The call channel is monitored during Tri-watch. The call channel default as Channel 9 and can be reset.

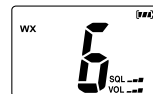
1. Push and hold [16/C] for 1.5 seconds to select the call channel of the selected channel group. "CALL" and call channel number displayed.
2. Push [CH] to return to the channel used before call channel, or push [▲] or [▲] to select other channels.



◆ Weather Channels

THIS RADIO has 10 pre-programmed weather channels. The equipment can detect a weather alarm tone in selected weather channels in receive and scan mode.

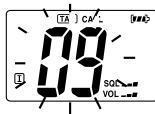
1. Push [CH] to select weather channel and normal channel.
 - Appears "WX" when weather channel selected.
 - Appears "WX ALT" when turn on weather alert function.
2. Push [▼] or [▼] to select channel.



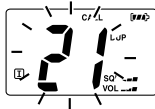
■ Call Channel Programming

Call channel is default as Channel 9, you can program the call channel with you most often-used channel in each channel group for quick recall.

1. Push [CH] to select a desired channel group to be programmed. (USA, International, Canadian)
2. Hold [16/C] for 1.5 seconds to select a call channel. "CALL" and call channel number disappeared.
3. Hold [16/C] again for 3 seconds till it sounds "BEEP" tone and "DUDU" tone to enter call channel programming mode.
 - Channel number blinks.



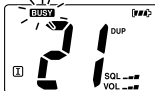
4. Press [▲] or [▲] to select desired call channel.
5. Push [16/C] to confirm and save it, Push [CH] to cancel and exit.



■ Monitor Function

The monitor function opens the squelch, monitor useful signal. Check details description for monitor key setting below.

- Push [MONI] to active monitor function.
- "**BUSY**" will blink and make a sound while monitor function activated.



■ Volume Mute Function

The volume mute function can be activated temporarily, when volume set as OF invalid.

1. Hold [VOL/MUTE] key for 1.5 sec. until heard "Di Di" sound to active volume mute function.
 - The volume adjusted to minimum-off.
 - The volume level indicator starts blinking.
2. Hold [VOL/MUTE] again to turn the volume mute function off.

■ Automatic Backlight

This function is convenient for night time operation. The automatic backlighting can be activated in set mode.

- Push any key except for [PTT] to turn the backlighting ON.
- The backlighting is automatically turned OFF after 5 sec. of inactivity.

■ Lock Function

This function electronically locks all keys (except for [PTT][▼][▼][VOL/MUTE][H/L/LCOK]) to prevent accidental changing of the channel and function access.

- Push and hold [LOCK] for 1.5 seconds to turn the function ON and OFF.



■ Vibration Water Draining Function

This transceiver uses a new technology to clear water away from the speaker grill: Vibration. Vibration helps drain water away from the speaker housing (water that might otherwise muffle the sound coming from the speaker).

This transceiver emits a vibrating beep when this function is activated.

- Push and hold [SCAN] and [HI/LO]
- A low beep tone sounds for 9 seconds to drain water, regardless of volume level setting
- The transceiver does not perform key operations while the Vibration function is activated. The Vibration function can not be activated when an optional speaker-microphone is connected.

SCAN OPERATION

■ Scan Types

Scanning is an efficient way to locate signals quickly over a wide frequency range. The transceiver has priority scan and normal scan.

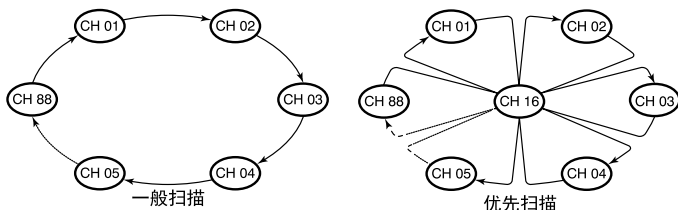
- Weather channels will be scanned also when weather alert function activated.
- Set TAG channels before scan. Cancel tag for channels not need to be scanned.

◆ Normal Scan

It searches through all TAG channels in sequence. However, unlike priority scan, Channel 16 is not checked unless channel 16 is set as a TAG channel.

◆ Priority Scan

A priority scan sequentially searches through all TAG channels while monitoring Channel 16 when a signal is detected on Channel 16, the scan pauses until the signal disappears; when a signal is detected on a channel other than Channel 16, the scan switches to Dual-watch, until the signal disappears.



■ Set TAG Channels

For more efficient scanning, set the desired channels as TAG channels or clear the TAG setting from unwanted channels. Channels that are not tagged will be skipped during scanning.

◆ Set/cancel single TAG channel

1. Push [CH] to select desired channel group.
2. Push [▼] or [▲] to select the desired channel to be set as a TAG Channel.
3. Push and hold [FAV/TAG] for 1.5 seconds, to set the displayed channel as a TAG Channel.
 - "[TAG]" appears in the function display.
4. To cancel the TAG channel setting, push and hold [FAV/TAG] for 1.5seconds.
 - "[TAG]" disappears.

◆ Set/cancel all TAG channels

1. While pushing and holding [FAV/TAG], press [ON] to clear all TAG channels in the selected channel group.
2. Repeat above procedure to set all channels as TAG channels.

■ Scan Operation

Set scan resume timer in the set mode.

1. Push [SCAN] to start normal scan or priority scan.
 - "SCAN" Blinks. □
 - "16" appears on the sub channel readout during a priority scan.
 - When a signal is received, the scan pauses until the signal disappears, or resumes after pausing 5 seconds, depending on the set mode setting.
 - 16 Channel is monitored during priority scan.
 - Push [▼] or [▲] to sequentially select TAG channels, change the scanning direction or manually resume the scan.
2. Push [SCAN] to stop the scan, or push [PTT], [16], [CH] or [FAV] also can stop the scan.

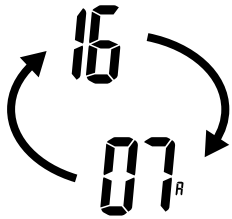
DUALWATCH/TRI-WATCH

■ Description

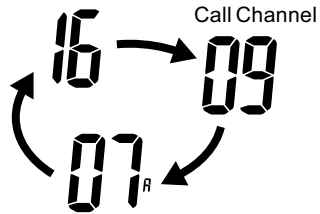
Dual watch/Tri-watch of this transceiver can be selected in set mode.

Dual watch: Watch and monitor in turns between current channel and Channel 16.

Tri-watch: Watch and monitor in turns among current channel, Channel 16 and call channel.



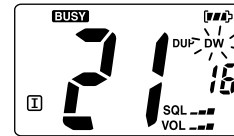
Dual Watch



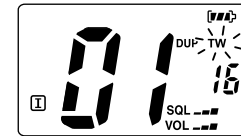
Tri-Watch

■ Operation

1. Push [SCAN/DUAL] for 1.5 seconds to start dual watch or tri-watch.
 - "DW" blinks when dual watch; "TW" blinks when tri-watch.
 - A beep tone sounds when a signal is received on channel 16.
 - Tri-watch switches to dual watch when signal received on call channel.
2. Push [SCAN/DUAL] to cancel dualwatch/tri-watch.



Dual Watch



Tri- Watch

SET MODE

■ Set Mode Programming

The set mode is used to change the settings of transceiver's functions: Beep Tone function, weather alarm , priority scan function, scan resume timer, auto scan function, dual/tri-watch function, monitor key function, automatic backlighting, LCD contrast setting, power save function and squelch sensitivity .

Set Mode Operation

1. Turn off the power
2. While holding down[MONI/SQ] key ,turn ON to enter the set mode
3. Release[MONI/SQ] key , appears “bP”
4. Push[VOL/SQ] key to select a desired setting item.
5. Push[?][?]to select a desired setting parameter.
6. To exit the set mode, push 【16/C】

No.	Display	Set Items	Set parameter options	The default value
1	bP	Prompt Tone	of /on	on
2	AL	Weather Alert	of /on	of
3	Pr	Priority Scan	of /on	of
4	St	Scan Resume Timer	of /on	of
5	AS	Automatic Scanning	of /on	of
6	dt	Dual-band / Tri-band Duty	d-/t-	d-
7	Sq	Monitor key Functions	Pu / Ho	Pu
8	bL	Automatic Backlight	of /on	on
9	LC	LCD Contrast	Hi / Lo	Hi
10	PS	Automatic Power Save	of / on	on
11	SS	Squelch Sensitivity	of / on	of

■ Set Mode Items

◆ Beep Tone Function

Turn the key touch beep sound ON or OFF.

◆ Weather Alert

When there are significant weather information, the U.S. NOAA broadcast stations will transmit alarm weather. When the weather alert function is turned on, walkie-talkies will sound the alarm at the same time “WXALT” symbol flashes. During the scan, the current weather channel in use will be scanned.

- With this function enabled, when weather channel selected, “WX ALT” icon displayed in the screen.

◆ Scan Mode

The transceiver has 2 scan types—Normal and priority scan. Normal scan searches all TAG channels in the selected channel group, priority scan sequentially searches all TAG channels also channel 16.

◆ Scan Resume Timer

The scan resume timer can be set as a pause (OFF) or timer scan (ON).

- OFF: when a signal is detected, the scan pauses on the channel until the signal disappears, and then resumes.
- ON: When a signal is detected, the scan pauses on the channel for 5sec. and then resumes.

◆ Auto Scan Function

The auto scan function automatically starts a normal or priority scan when no signal is received and no operation is performed for 30 seconds.

◆ Dual/Tri-watch Function

Set the watch type to Dual-watch or Tri-watch.

◆ Monitor Key Function

The monitor key temporarily opens the squelch. This item sets the key action.

- Pu(PUSH): The monitor function is activated by holding down [MONI]. The squelch opens while holding down the key.
- Ho(Hold): The monitor function is activated by holding down [MONI] for 1.5 seconds, the squelch stays open until any key is pushed.

◆ Automatic Backlighting

This function is convenient for night-time operation. The backlight can be selected from ON and OFF. When on, press any key except for [PTT] to turn on backlighting.

- The backlighting is automatically turned OFF after 5sec. of inactivity.

◆ LCD Contrast Setting

Set the LCD contrast level to high contrast or Low contrast.

- The LCD contrast level has little effect during indoor use.

◆ Power Save Function

The power save function reduces current drain by turning OFF the receiver circuit for preset intervals.

- OFF: Function is turned OFF
- ON: Function is turned ON and will be activated when no signal is received, and no operation is performed for 5 seconds.

◆ Squelch Sensitivity

Squelch sensitivity function is activated to enhance noise reduction, avoid noise from affecting squelch.

■ VHF Marine Channel List

Channel number			Frequency(MHz)		Channel number			Frequency(MHz)		Channel number			Frequency(MHz)		Channel number			Frequency(MHz)						
USA	INT	CAN	Transmit	Receive	USA	INT	CAN	Transmit	Receive	USA	INT	CAN	Transmit	Receive	USA	INT	CAN	Transmit	Receive	USA	INT	CAN	Transmit	Receive
	01	01	156.050	160.650		21	21	157.050	161.650	68	68	68	156.425	156.425	86A			157.325	157.325					
01A			156.050	156.050	21A		21A	157.050	157.050	69	69	69	156.475	156.475	87	87	87	157.375	161.975					
	02	02	156.100	160.700			21b	RX only	161.650	70	70	70	RX only	156.525	87A	87A	87A	157.375	157.375					
	03	03	156.150	160.750		22		157.100	161.700	71	71	71	156.575	156.575	88	88	88	157.425	162.025					
03A			156.150	156.150	22A		22A	157.100	157.100	72	72	72	156.625	156.625	88A	88A	88A	157.425	157.425					
	04		156.200	160.800		23	23	157.150	161.750	73	73	73	156.675	156.675										
		04A	156.200	156.200	23A			157.150	157.150	74	74	74	156.725	156.725										
	05		156.250	160.850	24	24	24	157.200	161.800	75*1	75*1	75*1	156.775	156.775										
05A		05A	156.250	156.250	25	25	25	157.250	161.850	76*1	76*1	76*1	156.825	156.825										
06	06	06	156.300	156.300			25b	RX only	161.850	77*1	77	77*1	156.875	156.875										
	07		156.350	160.950	26	26	26	157.300	161.900		78		156.925	161.525										
07A		07A	156.350	156.350	27	27	27	157.350	161.950	78A		78A	156.925	156.925										
08	08	08	156.400	156.400	28	28	28	157.400	162.000		79		156.975	161.575										
09	09	09	156.450	156.450			28b	RX only	162.000	79A		79A	156.975	156.975										
10	10	10	156.500	156.500		60	60	156.025	160.625		80		157.025	161.625										
11	11	11	156.550	156.550		61		156.075	160.675	80A		80A	157.025	157.025										
12	12	12	156.600	156.600	61A		61A	156.075	156.075		81		157.075	161.675	Weather Channel		Frequency(MHz)							
13*1	13	13*1	156.650	156.650		62		156.125	160.725	81A		81A	157.075	157.075			Transmit	Receive						
14	14	14	156.700	156.700			62A	156.125	156.125		82		157.125	161.725	1		RX only	162.550						
15*1	15*1	15*1	156.750	156.750		63		156.175	160.775	82A		82A	157.125	157.125	2		RX only	162.400						
16	16	16	156.800	156.800	63A			156.175	156.175		83	83	157.175	161.775	3		RX only	162.475						
17*1	17	17*1	156.850	156.850		64	64	156.225	160.825	83A		83A	157.175	157.175	4		RX only	162.425						
	18		156.900	161.500	64A		64A	156.225	156.225			83b	RX only	161.775	5		RX only	162.450						
18A		18A	156.900	156.900		65		156.275	160.875	84	84	84	157.225	161.825	6		RX only	162.500						
	19		156.950	161.550	65A	65A	65A	156.275	156.275	84A			157.225	157.225	7		RX only	162.525						
19A		19A	156.950	156.950		66		156.325	160.925	85	85	85	157.275	161.875	8		RX only	161.650						
20	20	20*1	157.000	161.600	66A	66A	66A*1	156.325	156.325	85A			157.275	157.275	9		RX only	161.775						
20A			157.000	157.000	67*1	67	67	156.375	156.375	86	86	86	157.325	161.925	10		RX only	163.275						

*Only a low power.

SPECIFICATION

General Specification	
Frequency Range	TX: 156.000–161.450MHz
	RX: 156.050–163.425MHz
Type of Emission	FM (16K0G3E)
Frequency Stability	± 10 PPM
Battery Pack	1200mAh Li-ion(DC7.4V)
Operating Temperature Range	-20°C ~ +55°C
Antenna Impedance	50
Dimensions (H × W × D)	140mm × 65mm × 41mm
Weight	290g (With battery, antenna, belt clip)

Transmitter Specification	
Output Power	5W/1W
Maximum Frequency Deviation	± 5kHz
Spurious Emissions	0.25uW
Adjacent Channel Power	≥ 70dB
Audio Harmonic Distortion	≤ 10%
Current Drain	≤ 1.5A(High power) ≤ 0.9A (Low power) ≤ 0.35A (Max audio output)

Receiver	
Receive Sensitivity	≤ 0.22 μ V
Squelch Sensitivity	≤ 0.22 μ V
HUM and Noise	≥ 40dB
Adjacent Channel Selectivity	≥ 70dB
Spurious Response	≥ 70dB
Intermodulation Rejection	≥ 68dB
Audio Output Power	≥ 0.5W (10%)

Issues described in the following table are some common operational failure .

TROUBLESHOOTING

These types of errors are generally due to improperly connected , the operation caused by incorrect settings , or operator error caused due to incomplete programming . These problems are usually not caused by circuit failure . Before suspect intercom failure, please refer to the relevant section of this manual .

PROBLEM	POSSIBLE CAUSE	SOLUTION	REF.
The transceiver cannot be turned on	<ul style="list-style-type: none"> ● The battery is exhausted. ● Battery pack is not correctly inserted. 	<ul style="list-style-type: none"> ● Recharge the battery pack. ● Correctly insert the battery pack. 	<ul style="list-style-type: none"> ● 1 ● 2
Transmitting is incapable , or high power transmitting is incapable	<ul style="list-style-type: none"> ● Some channels are limited to low power transmitting. ● The battery is exhausted. ● The output power is set to low. ● Working in weather channel or CH 70. 	<ul style="list-style-type: none"> ● Switch to channels without output power limited. ● Recharge the battery pack. ● Push [H/L] to select high output power. ● Quit weather channel or CH 70. 	<ul style="list-style-type: none"> ● 5、 6 ● 1 ● 5 ● 6
The displayed channel cannot be changed.	<ul style="list-style-type: none"> ● Keyboard lock function is activated. 	<ul style="list-style-type: none"> ● Hold [LOCK] key for 1.5 seconds to turn off the function. 	<ul style="list-style-type: none"> ● 7
Scan does not start	<ul style="list-style-type: none"> ● No tag channels are set. 	<ul style="list-style-type: none"> ● Set desired channels as tag channels. 	<ul style="list-style-type: none"> ● 8
Cannot communicate in same channel	<ul style="list-style-type: none"> ● It is duplex channel. ● Work in self-set channel group. 	<ul style="list-style-type: none"> ● Choose channel. ● Set channel frequency as same. 	<ul style="list-style-type: none"> ● 6 ● 6
No prompt tone	<ul style="list-style-type: none"> ● Prompt tone function is turned off. 	<ul style="list-style-type: none"> ● Turn on the prompt tone function in set mode. 	<ul style="list-style-type: none"> ● 10
No sound from loudspeaker	<ul style="list-style-type: none"> ● The squelch level is too high. ● Volume level is too low. ● Speaker has been exposed to water. 	<ul style="list-style-type: none"> ● Set suitable squelch level. ● Push [VOL] key, then [▲] [▼] to adjust volume. ● Discharge water from speaker grill. 	<ul style="list-style-type: none"> ● 5 ● 5 ● 7

Contact

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