> **Congratulations on selecting the MR240™ from**
> **RCA Communications Systems - *The Most Trusted Name In Radio!***

Our new series of business communications products establishes a new benchmark in premium radio products made to perform flawlessly under the most demanding commercial conditions. Cutting edge design, professional grade materials and components, simple operation and superior assembly quality - RCA Communications Systems has it all, including our exclusive no-nonsense, two-year "Warranty Protection Program" one of the most comprehensive warranties in the communications industry.

To ensure you achieve maximum performance from your MR240™ radio, please be sure to carefully read this manual.

MODELS COVERED IN THIS MANUAL:

MR240 Handheld Marine Two-Way Radio

FOREWORD

Thank you for purchasing an RCA MR240™ Handheld Marine Two-Way Radio. Read all instructions carefully and completely before using the transceiver.

MR240 Handheld Marine Two-Way Radio is a powerful marine radio. It is designed to IMO (International Maritime Organization) standards. With proper care this radio should provide you with years of trouble-free operation.

SAVE THIS INSTRUCTION MANUAL - This instruction manual contains important operating instructions. Please read all the instructions carefully and completely before using the transceiver.

CAUTION

■ **NEVER** connect the transceiver to an AC outlet. This may pose a fire hazard or result in an electric shock.

■ **DO NOT** use or place the transceiver in direct sunlight or in areas with temperatures below 5°F (-15°C) or above 131°F (55°C).

■ **KEEP** the transceiver at least 1 meter away from your vessel's magnetic navigation compass.

■ **BE CAREFUL** the transceiver meets IP-X7 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** the flexible antenna and battery cover are securely attached to the transceiver and that antenna and battery cover are dry before attachment. Exposing the inside of the transceiver to water will result in serious damage to the transceiver.

RECOMMENDATION

Clean the transceiver thoroughly with fresh water after exposure to saltwater, and dry it before operating. Otherwise, the transceiver's key, switches and controllers 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 power jack rubber seal is damaged, cracked or broken, or the transceiver has been dropped, or when the battery cover, antenna or DC power jack are detached from the transceiver.
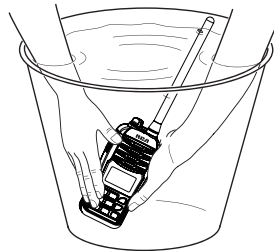

FEATURES

■ FLOATS ON WATER

The transceiver floats in fresh or salt water even when the supplied accessories are attached. Unit may not float when third-party replacement parts and/or accessories are used.

■ **FLOATS AND FLASHES**

At the bottom of each radio is a light that blinks while floating in the water. The LED light is noticeable in the dark (like a flashing fishing float) so the radio can easily be found while in the water. The light works even when the radio is turned OFF.

Flashing Warning Lights
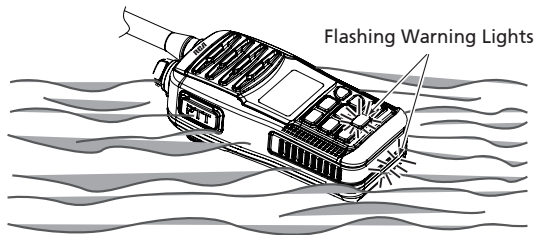
■ **WATER CLEAN**

WaterClean is new technology that helps clears water from the speaker. The WaterClean function emits a vibrating beep that helps remove water, which can muffle the sound coming from the speaker, from the speaker housing.

ADDITIONAL FEATURES

■ Up To 5 Watts

■ Dual Bands / Three Bands Frequency Watch

■ Large LCD Display Easy To See And Operate

■ Auto Scan Function

■ Built-in Charger Circuitry

IN CASE OF EMERGENCY

If your vessel requires assistance, contact other vessels and the Coast Guard by sending a distress call on Channel 16.

DISTRESS CALL PROCEDURE USING CHANNEL 16

1. "MAYDAY MAYDAY MAYDAY."
2. "THIS IS ...." (name of vessel)
3. Your call sign or other indication of the vessel.
4. "LOCATED AT ...." (your position)
5. The nature of the distress and assistance required.
6. Any other information which might facilitate the rescue.

CONTENTS

CONTENTS [continued]

PREPARATION

■ Supplied Accessories

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

Items	Qty.
Antenna	1
Battery Pack	1
Adaptor	1
Belt Clip	1
Hand Strap	1
Instruction Manual	1

■ Charging the Battery Pack

Important: Prior to using the transceiver for the first time, the battery pack must be fully charged for optimum life and operation. To avoid damage to the transceiver, turn the power OFF while charging.

1. Connect the AC Adapter to a standard electrical outlet.

2. Rotate and remove the power jack cap on the top of the transceiver and plug the power adapter connector into the female connection. When the unit is charging, CHG and 🔋 will show up on the display.

3. Once the battery is charged, "FL" will appear on the DISPLAY. Remove Power Adapter from radio.
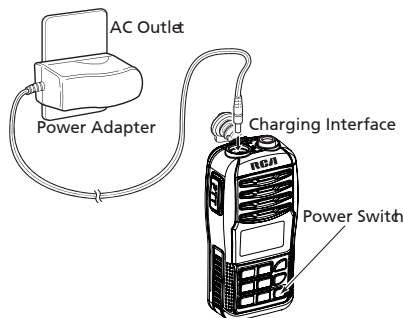
NOTE: If the battery pack is not installed or improperly installed, the DISPLAY will show "Er" when trying to charge the unit.

■ Battery Pack

To insert the battery pack:

Place the battery into the transceiver so it fits flat, and securely attach the battery cover as shown. Push the cover until the latch comes back to the locked position.
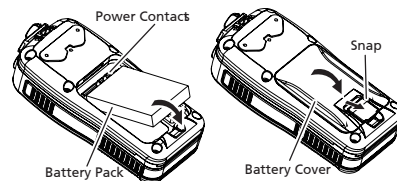
To remove the battery pack, slide the latch and lift the battery cover to remove it. Then remove the battery pack, as shown.
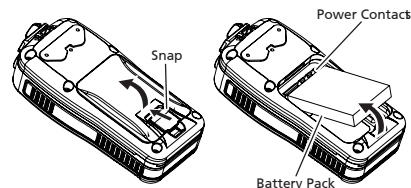
CAUTION: When inserting or replacing the battery pack, please be sure the battery cover latch is returned to the locked position. If the latch is not properly locked, water may enter the unit causing damage.

■ Flexible Antenna

1. To connect the supplied fixable antenna to the antenna connector, rotate it clockwise.

2. To remove the antenna, rotate it counter-clockwise.

- NEVER carry the transceiver by the antenna
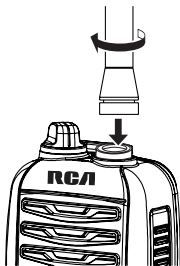
■ Belt Clip

Using the two supplied screws, attach the belt clip to the back of the transceiver.
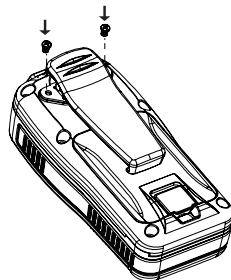
■ Hand Strap

Pass the hand strap through the loop on the side of the transceiver as illustrated at right. This facilitates carrying.
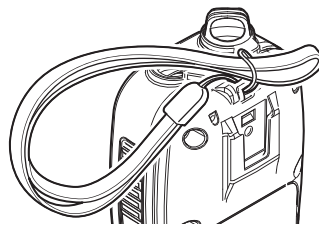
PANEL DESCRIPTION

PANEL DESCRIPTION

10 —
11 —

Speaker

1 —

Microphone

Display

9
2 — 8
3 — 7
4 — 6
5
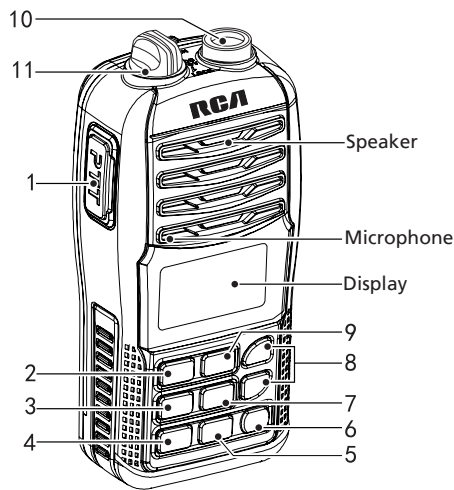
1. PTT (Push To Talk)

- Hold down to transmit; release to receive.

2. 16/C (Channel 16/Call Channel)

- Push to select channel 16.

- Hold for 1 second to select the call channel. (factory default: 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.

3. FAV/TAG

- PUSH to sequentially select your favorite channels in a channel group.

- Hold for 1 second to set or clear the TAG for

the display channel.

- While holding, turn ON the power to clear or set all TAG channels in the selected channel group.

4. SCAN/DUAL

- Push to start or stop a normal or priority scan.

- Hold for 1 second to enter the Dual/Tri-watch mode.

- Push to exit the Dual/Tri-watch mode

- Hold this key and HI/LO key for 1 second, to activate the WaterClean function. (See page 22 for AutoQuake information.)

5. [HI/LO]/[🔒]

- Push to select the high or low output power.
- Hold for 1 second to turn the Lock function ON or OFF.

6. POWER [⏻]

- Push to turn power ON or OFF.

7. VOL./SQL/MONI

- Push to enter the volume adjustment mode or the squelch adjustment mode.

- Hold for 1 second to activate the Monitor function.

- While holding this key, hold [⏻] key to turn ON the power and enter the Set Mode function.

- While in the Set Mode, push to select an item.

- While holding this key, push[▼]to turn ON the Volume Mute function .

Do the same steps again to turn OFF the function.

- While holding this key, push [▲] to turn ON the Volume Loud function.

Do the same steps again to turn OFF the function.

8. [▲]/[▼]UP/DOWN

- Push to select an operation channel.

- While in the Set Mode, push to select the setting or value of an item.

- Push to check TAG channels or change scanning direction during a scan.

9. [CH]

- Hold for 1 second, one or more times, to select a USA, International, or Canada channel group.

- Push to return to the previous channel before selecting Channel 16 or the calling channel.

10. ANTENNA CONNECTOR

- Connect the supplied antenna here.

11. [DC 6V]

- Connect the adaptor or optional power cable here.

NOTE: Reattach the power jack cap when the adaptor is not connected. Otherwise, water may be able to get into the transceiver.

DISPLAY
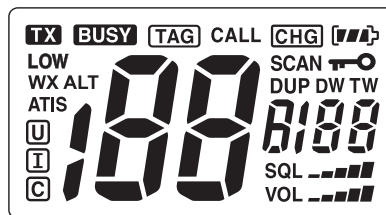
Icon	Description
TX	Transmit Indicator. Appears while transmitting
LOW	Low Power indicator 1) "LOW" appears when low power is selected 2) "LOW" blinks when switching forced low power mode because of a high temperature error or low voltage
WX ALT	Weather Channel and Weather Alert Indicator "WX" appears when the weather channel group is selected. "WX ALT" appears while the weather alert function is activated; icon blinks when an alert tone is received.
ATIS	Appears while working in ATIS Channel
U	Appears when U.S.A. channel group is selected

Icon	Description
I	Appears when International channel group is selected
C	Appears when Canadian channel group is selected
BUSY	Appears when receiving a signal or when the squelch opens Blinks while monitoring
TAG	Appears when a TAG channel is selected
CALL	Appears when the call channel is selected
CHG	Appears when the radio is charging
battery	Battery Indicator, remaining battery power
SCAN	Blinks while scanning
key	Appears while the lock function is activated

Icon	Description
DUP	Appears when a duplex channel is selected
DW	Appears when in Dualwatch mode.
TW	Appears when Tri-watch mode.
188ᵇ¹	Channel number readout. Indicates the selected operating channel number. In Set Mode, indicates the selected condition
88	In Dual/Tri-watch mode shows CH16 during priority scan. Appears while volume selecting Appears while SQL selecting Appears while mode selecting
SQL ▁▃▄█	Shows squelch level
VOL ▁▃▄█	Shows volume level Blinks when the volume mute is activated

BASIC OPERATION

TURN ON/OFF

1. Press [U] for 1 second to turn ON.

2. Press again [U] for 1 second to turn OFF.

ADJUSTING THE VOLUME LEVEL

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

1. Push [VOL/SQL] 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 OFF.

- When no key operation is performed for 5

seconds, the transceiver returns to the normal mode.

2. Push [VOL/SQL] twice to exit the volume adjustment model.

ADJUSTING THE SQUELCH LEVEL

The squelch level can be adjusted using [VOL/SQL] and [▼] or [▲] in the order to properly receive signals. Be sure to adjust the squelch when scanning channels to ensure proper reception.

1. Push [VOL/SQL] twice 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; 1 is loose squelch.

- If a squelch adjustment is not made within 5 seconds, the transceiver returns to the normal mode.

2. Push [VOL/SQL] again to exit the squelch adjustment mode.

RECEIVING AND TRANSMITTING

■ Receiving

1. Set the volume levels by push [VOL/SQL], [▼] or [▲].

2. Set the squelch levels by [▼] or [▲].

- When receiving a signal, [**BUSY**] appears and audio is heard from the speaker.

- To conserve battery power, the transceiver's "Power Save" function automatically activates when no signal is received for 5 seconds.

■ Transmitting

1. Push [Hi/Lo] to select output power.

- "LOW" appears when low power is selected.

- Choose low power for short range communications; choose high power for longer distance communications.

- Some channels work in low power mode 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.

NOTE: Transmitting without an antenna can damage the transceiver.

- To maximize the readability of your transmitted signal, pause for a second after pushing [PTT] hold the microphone 2" - 4" (5 - 10cm) from your mouth and speak into the microphone at a normal voice level.

CHANNEL GROUP SELECTER

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

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

2. Hold down [CH] for 1 second, one or more times,to select the desired channel group.

- The selectable channel groups are different, depending on your operating area.

3. Push [▼] or [▲] to select a channel.

- "A" appears when a simplex channel is selected.

International Channel Group

U.S. Channel Group

Canadian Channel Group
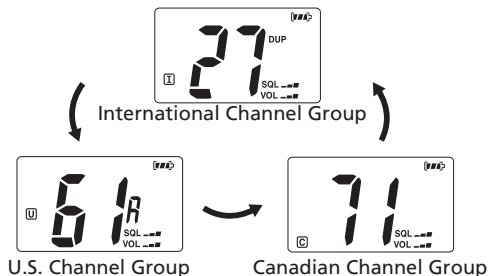
CHANNEL SELECTION

■ Channel 16

Channel 16 is the distress and safety channel. It used for establishing initial contact with an aid station and for emergency communications.

Channel 16 is monitored in both Dualwatch and Tri-watch mode. When not broadcasting, you must always monitor Channel 16.

1. Push [16/C] momentarily to select Channel 16.

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

■ Channel 9 (Call Channel)

Each regular channel group has separate leisure-use call channels. The Call Channel is monitored during Tri-watch. The Call Channels can be programmed and are used to store your most often used channel in each channel

group for quick recall.

1. Push and hold 16/C for 1.5 second to select the Call Channel of the selected channel group. "CALL" and call channel number appears.

2. Push [CH] to return to return to the previous channel, or push [▼] or [▲] to select a channel.

■ Weather Channels

The MR240TM transceiver has 10 pre-programmed weather channels. There are used for monitoring weather broadcasts. The transceiver can automatically detect a weather alert tone on the selected weather channel while receiving on another channel or while scanning.

1. Push [CH] to select weather channel or normal channel.

- Appears "WX" when weather channel selected.

- Appears "WX ALT" when turned on weather alert function.

2. Push [▼] or [▲] to select channel.

CALL CHANNEL PROGRAMMING

Call Channel is used to access the channels you use most often. Channel 9 is the Call Channel default. However, you can set up Call Channels in each channel group for quick recall of the channels you use most often.

1. Push [CH] to select a desired channel group to be programmed

2. Push [16/C] for 1 second to select a Call Channel.

3. Push [16/C] for 3 seconds until you hear a beep and a "DUDU" tone. After the tone, you can begin entering the channels you want in Call Channel Programming.

- Channel number blinks.
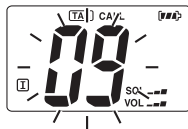
4. Push [▼] or [▲] to select desired call channel

5. Push [16/C] to confirm and save. Push [CH] cancel and exit.
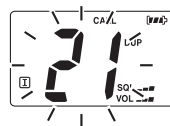
MONITOR FUNCTION

The monitor function opens the squelch.

- Push [MONI] to active monitor function.

- "BUSY" will blink and sound while monitor function actives.
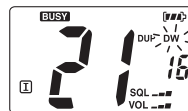
Dual-Band Duty

VOLUME LOUD FUNCTION

The volume loud function temporarily maximizes the volume level. It has no effect when the volume level is 31.

1. Push [VOL/SQL] and [▲] to turn ON the function.

2. Push [VOL/SQL] and [▲] to turn it OFF.

VOLUME MUTE FUNCTION

Volume Mute can be activated temporarily.

1. Push [VOL/SQL] and [▲] to activate.

- The audio is muted.
- The volume level indicator starts blinking.

2. Push [VOL/SQL] and [▲] to turn Volume Mute 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.

- Backlighting is automatically turned OFF after 5 seconds of inactivity.

LOCK FUNCTION

This function electronically locks all keys (except for [PTT], [▼], [▲], [VOL/SQL], and [🔑]) to prevent accidental changing of the channel and function access.

- Push and hold [🔑] for 1 second to turn the function ON and OFF.

WATERCLEAN WATER DRAINING

The MR240 uses new technology to clear water away from the speaker grill: WaterClean. WaterClean helps drain water away from the speaker housing (water that might otherwise muffle the sound coming from the speaker).

The MR240 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 WaterClean function is activated. The WaterClean function can not be activated when an optional speaker or 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.

In addition, the weather alert and auto scan functions are available for standby convenience. These functions can be activated simultaneously, depending on the setting in Set Mode.

Normal Scan

Normal Scan 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.

Normal Scan
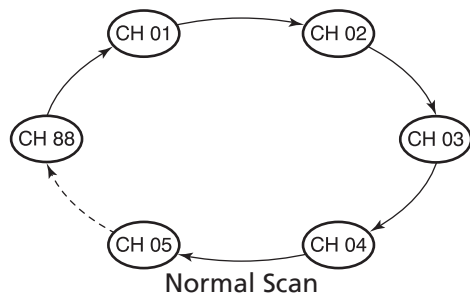
Priority Scan

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 Dualwatch, until the signal disappears.

Priority Scan
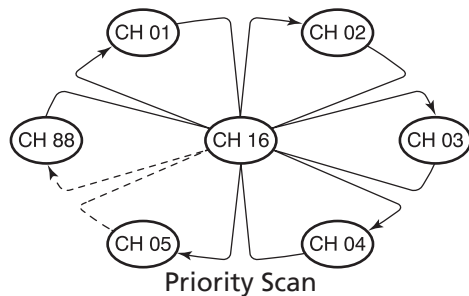
SETTING TAG CHANNELS

For more efficient scanning, set your most used channels as TAG Channels. Channels that are not tagged will be skipped during scanning. Tagged Channels can easily be changed. See below.

■ Setting (or clearing) a TAG channel

1. Push [CH] to select desired channel group.

2. Push [▼] or [▲] to select the desired channels to be set as a TAG Channel.

3. Push and hold "TAG" for 1 second. To set the displayed channel as a TAG Channel.
- "TAG" appears in the function display.

4. To cancel a TAG channel setting, push and hold "TAG" for 1 second.
- "TAG" disappears.

■ Setting (or clearing) all tagged channels

1. While pushing and holding [TAG], turn power [⏻] ON to clear all

TAG channels in the selected channel group.

2. Repeat above procedure to set all channels as TAG channels.

STARTING A SCAN

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.

- Push [▼] or [▲] to sequentially select TAG channels, change the scanning direction or manually resume the scan.

2. Push [SCAN], [PTT], [16/C], [CH] or [FAV] to stop the scan.

To set the Priority Scan Function, Scan Resume Timer and the Auto Scan Function in advance, see Set Mode (page 26).

DUALWATCH / TRI - WATCH

DESCRIPTION

Dualwatch monitors Channel 16 while you are receiving on another channel; Tri-watch monitors Channel 16 and a call channel while receiving another channel. Dualwatch/Tri-watch is convenient for monitoring channel 16 when you are operating on another channel.

Dualwatch   Tri-watch
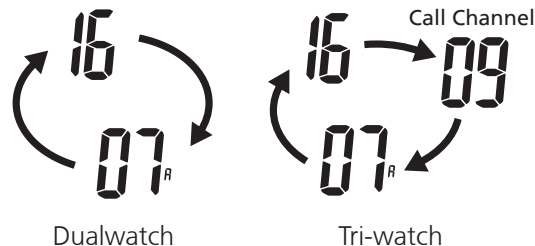
OPERATION

1. Push [SCAN/DUAL] for 1 second to start Dualwatch or Tri-watch.

- "DW" blinks during Dualwatch; "TW" blinks during Tri-watch.

- A beep tone sounds when a signal is received on Channel 16.

- Tri-watch switches to Dualwatch when receiving a signal on the call channel.

2. Push [SCAN/DUAL] to cancel Dualwatch/Tri-watch.
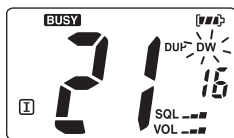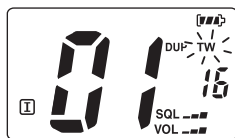
Dualwatch   Tri-watch

SET MODE

SET MODE PROGRAMMING

Set Mode is used to change the settings of transceiver's functions: Beep Tone Function, Priority Scan Function, Scan Resume Timer, Auto Scan Function, Dual/Tri-watch Function, Monitor Key Action, Automatic Backlighting, LCD Contrast Setting and Power Save Function.

■ Set Mode operation

1. Turn OFF the power.

2. While holding down [VOL/SQL], turn ON the power to enter Set Mode.

3. Release [VOL/SQL]. "bP" appears on display.

4. Push [VOL/SQL]to select a desired option of the item.

5. Push [▼] [▲] to select the desired option.

6. To exit Set Mode, push [16/C]

No.	Show	Set Project	Set parameter options	The default value
1	bP	Beep (Off/On)	of /on	on
2	AL	Weather Warning (Off/On)	of /on	of
3	Pr	Priority Scan (Off/On)	of /on	of
4	St	Scan Resume Timer (Off/On)	of /on	of
5	AS	Automatic Scanning (Off/On)	of /on	of
6	dt	**D**ualwatch / **T**ri-watch Duty	d-/t-	d-
7	Sq	Monitor Key Functions (Push/Hold)	Pu / Ho	Pu
8	bL	Automatic Backlight (Off/On)	of /on	on
9	LC	LCD Contrast	Hi / Lo	Hi
10	PS	Power Save (Off/On)	of / on	on

SET MODE ITEMS

■ Beep Tone Function ("bP")

Turns the key touch beep sound ON or OFF.

■ Weather Alert ("AL")

U.S.A. NOAA broadcast stations transmit a weather alarm when there is significant weather information. When the weather alert function is turned on, the radio will sound an alarm at the same time "WXALT" symbol flashes on the screen. During the scan, the current weather channel in use will be scanned.

■ Priority Scan Function ("Pr")

The transceiver has 2 scan types - normal (OFF) and priority (ON) scan. A normal scan searches all TAG channels in the selected channel group.

A Priority Scan sequentially searches all TAG channels while monitoring Channel 16.

■ Scan Resume Timer ("St")

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 5 seconds, and then resumes.

■ Auto Scan Function ("AS")

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 ("dt")

Set the watch type to Dualwatch or Tri-watch.

■ Monitor Key Action ("Sq")

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 open while holding down the key.

- "Ho" (Hold): The monitor function is activated by holding down [MONI] for 1 second. The squelch stays open until any key is pushed.

■ Automatic Backlighting ("bL")

This function is convenient for night-time operation. The backlight can be changed to ON and OFF.

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

■ LCD Contrast Setting ("LC")

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

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

■ Power Save Function ("PS")

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

- OFF: Function is turned OFF

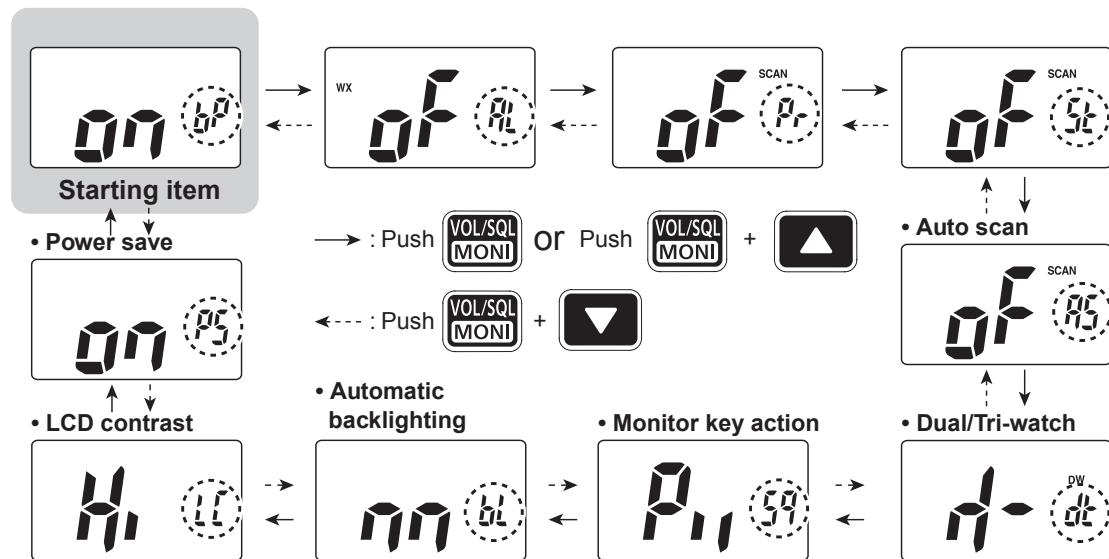- ON: Function is turned ON and will be activated when no signal is received and no operation is performed for 5 seconds.

SET MODE ITEMS (The display shows the current settings, and the selected function is displayed in the dotted circle.)

CHANNEL LIST

Channel number USA	INT	CAN	Frequency(MHz) Transmit	Receive
	01	01	156.050	160.650
01A			156.050	156.050
	02	02	156.100	160.700
	03	03	156.150	160.750
03A			156.150	156.150
	04		156.200	160.800
		04A	156.200	156.200
	05		156.250	160.850
05A		05A	156.250	156.250
06	06	06	156.300	156.300
	07		156.350	160.950
07A		07A	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*2	13	13*1	156.650	156.650
14	14	14	156.700	156.700
15*2	15*1	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
18A		18A	156.900	156.900
	19		156.950	161.550
19A		19A	156.950	156.950
20	20	20*1	157.000	161.600
20A			157.000	157.000

Channel number USA	INT	CAN	Frequency(MHz) Transmit	Receive
	21	21	157.050	161.650
21A		21A	157.050	157.050
		21b	Only receiver	161.650
	22		157.100	161.700
22A		22A	157.100	157.100
	23	23	157.150	161.750
23A			157.150	157.150
24	24	24	157.200	161.800
25	25	25	157.250	161.850
		25b	Only receiver	161.850
26	26	26	157.300	161.900
27	27	27	157.350	161.950
28	28	28	157.400	162.000
		28b	Only receiver	162.000
	60	60	156.025	160.625
	61		156.075	160.675
61A		61A	156.075	156.075
	62		156.125	160.725
		62A	156.125	156.125
	63		156.175	160.775
63A			156.175	156.175
	64	64	156.225	160.825
64A		64A	156.225	156.225
	65		156.275	160.875
65A	65A	65A	156.275	156.275
	66		156.325	160.925
66A	66A	66A*1	156.325	156.325
67*2	67	67	156.375	156.375

Channel number USA	INT	CAN	Frequency(MHz) Transmit	Receive
68	68	68	156.425	156.425
69	69	69	156.475	156.475
70*3	70*3	70*3	156.525	156.525
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*1	75*1	75*1	156.775	156.775
76*1	76*1	76*1	156.825	156.825
77*1	77	77*1	156.875	156.875
	78		156.925	161.525
78A		78A	156.925	156.925
	79		156.975	161.575
79A		79A	156.975	156.975
	80		157.025	161.625
80A		80A	157.025	157.025
	81		157.075	161.675
81A		81A	157.075	157.075
	82		157.125	161.725
82A		82A	157.125	157.125
	83	83	157.175	161.775
83A		83A	157.175	157.175
		83b	Only receiver	161.775
84	84	84	157.225	161.825
84A			157.225	157.225
85	85	85	157.275	161.875
85A			157.275	157.275
86	86	86	157.325	161.925

Channel number USA	INT	CAN	Frequency(MHz) Transmit	Receive
86A			157.325	157.325
87	87	87	157.375	161.975
87A			157.375	157.375
88	88	88	157.425	162.025
88A			157.425	157.425

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

SPECIFICATIONS

General	
Frequency Range	TX: 156.000-161.450MHz
	RX: 156.000-163.425MHz
Type of emission	FM (16K0G3E)
Battery Pack	1500mAh Li-ion (DC 3.7V)
Frequency stability	±10 PPM
Operating temperature range	5°F (-15°C) - 131°F (55°C)
Antenna impedance	50Ω
Dimensions (H × W × D)	5.5″ (140mm) × 2.6″ (65mm) × 1.6″ (41mm)
Weight	8.7 oz (247g)

Transmitter	
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)

SPECIFICATIONS [continued]

Receiver	
Receive Sensitivity	≤0.22μV
Squelch Sensitivity	≤0.22μV
HUM and Noise	≥40dB
Adjacent Channel Selectivity	≥70dB
Spurious Response	≥70dB
Intermodulation	≥68dB
Audio Output Power	≥0.6W (10%)

TROUBLESHOOTING

Radio operation issues are generally due to improper connections, incorrect settings, or incomplete programming, not by unit failure. Please check the troubleshooting issues and refer to the relevant section of the manual in an effort to solve any radio issues. If you do not see a relevant troubleshooting issue, please contact Customer Support for more information.

PROBLEM	POSSIBLE CAUSE	SOLUTION	Pg. #
The transceiver does not turn ON.	1. The battery is exhausted. 2. The battery pack is not correctly inserted.	1. Recharge the battery pack 2. Correctly insert the battery pack.	- 8 - 9
No sound from speaker.	1. The squelch level is too high. 2. Volume level is too low. 3. Speaker has been exposed to water.	1. Set the squelch level to the threshold level. 2. Adjust the audio level to a suitable level. 3. Remove water from the speaker grill using WaterClean.	- 16 - 15 - 22

TROUBLESHOOTING [continued]

PROBLEM	POSSIBLE CAUSE	SOLUTION	Pg. #
Transmitting is impossible, or high power can not be selected.	1. Some channels are limited to low power 2. Some channels only receive. 3. The output power is set to low. 4. The battery is exhausted.	1. Change the channel. 2. Push [Hi/Lo] to select high power. 3. Recharge the battery pack.	- 17-19 - 17 - 8
The displayed channel cannot be changed.	1. The Lock function is activated.	1. Hold down [☎●] (Hi/Lo) for 1 second to turn OFF the function.	- 21
Scan does not start.	1. "TAG" channels are not programmed.	1. Set desired channels as "TAG" channels.	- 24
No beep sounds.	1. Beep Tone function is turned OFF.	1. Turn ON the Beep Tone in the set mode.	-28

BATTERY CAUTION

Misuse of Lithium-ion batteries may result in the following hazards: smoke, fire, or the battery may rupture. Misuse can also cause damage to the battery or degradation of battery performance.

■ **DANGER!** Use and charge only specified Icom battery pack with Icom radios or Icom chargers. Only Icom battery packs are tested and approved for use and charge with Icom radios or Icom chargers. Using third-party or counterfeit battery packs or chargers may cause smoke, fire, or cause the battery to burst.

■ **DANGER! DO NOT** hammer or otherwise impact the battery. Do not use the battery if it has been severely impacted or dropped, or if the battery has been subjected to heavy pressure. Battery damage may not be visible on the outside of the case. Even if the surface of the battery does not show cracks or any other damage, the cells inside the battery may rupture or catch fire.

■ **DANGER! NEVER** use or leave battery pack in areas with temperatures above +122°F (+50°C). High temperature buildup in the battery, such as could occur near fires or stoves, inside a sunheated car, or by setting the battery in direct sunlight may cause the battery to rupture or catch fire. Excessive temperatures may also degrade battery performance or shorten battery life.

■ **DANGER! DO NOT** expose the battery to rain, snow, saltwater, or any other liquids. Never charge or use a wet battery. If the battery gets wet, be sure to wipe it dry before using. The battery by itself is not waterproof.

■ **DANGER! NEVER** incinerate a used battery pack since internal battery gas may cause them to rupture or may cause an explosion.

■ **DANGER! NEVER** solder the battery terminals, or NEVER modify the battery pack. This may cause heat generation, and the battery may rupture, emit smoke or catch fire.

■ **DANGER!** Use the battery only with the transceiver for which it is specified. Never use a battery with any other equipment, or for any purpose that is not described in this instruction manual.

■ **DANGER!** If fluid from inside the battery gets in your eyes, blindness can result. Rinse your eyes with clean water, without rubbing them, and see a doctor immediately.

■ **WARNING!** Immediately stop using the battery if it emits an abnormal odor, heats up, or is discolored or deformed. If any of these conditions occur, contact your Icom dealer or distributor.

■ **WARNING!** Immediately wash, using clean water, any part of the body that comes into contact with fluid from inside the battery.

■ **WARNING!** NEVER put the battery in a microwave oven, high pressure container, or in an induction heating cooker. This could cause overheating, a fire, or cause the battery to rupture.

■ **CAUTION:** Always use the battery within the specific temperature range for the transceiver (–4°F to +140°F; –20°C to +60°C) and the battery itself (–4°F to +140°F; –20°C to +60°C). Using the battery out of its specific temperature range will reduce the battery's performance and battery life.

BATTERY CAUTION [continued]

CAUTION: Shorter battery life could occur if the battery is left fully charged, completely discharged, or in an excessive temperature environment (above +140°F; +60°C) for an extended period of time. If the battery must be left unused for a long time, it must be detached from the radio after discharging. You may use the battery until the remaining capacity is about half, then keep it safely in a cool dry place with the temperature range as follows:

–4°F to +122°F (–20°C to +50°C) (within a month)

–4°F to +95°F (–20°C to +35°C) (within three months)

–4°F to +77°F (–20°C to +25°C) (within a year)

CHARGING CAUTION

Charge the battery pack at least once every six months, even if it has been not used for a long period of time. The battery pack will have slowly self-discharged, even though it has not been used. If the battery pack is left for a long period without being charged, its life cycle will be shorter, or worse, it will never accept a charge again.

Due to the characteristics of the Li-ion rectangular battery, the battery pack may change its shape as the charge and discharge cycles are repeated. This is a normal phenomenon, and it is quite safe to continue to use the pack, as long as it is properly handled. However, when the shape of the battery pack is so changed that the battery pack or battery cover can not be correctly attached to

the transceiver, it is time to replace it with a new one. Otherwise, the transceiver can be damaged due to the loss of air tightness.

■ **DANGER! NEVER** charge the battery pack in areas with extremely high temperatures, such as near fires or stoves, inside a sun-heated car, or in direct sunlight. In such environments, the safety/ protection circuit in the battery will activate, causing the battery to stop charging.

■ **WARNING! DO NOT** charge or leave the battery in the battery charger beyond the specified time for charging. If the battery is not completely charged by the specific time, stop charging and remove the battery from the battery charger. Continuing to charge the battery beyond the specific time limit may cause a fire, overheating, or the battery may rupture.

■ **WARNING! NEVER** insert the transceiver (battery attached to the transceiver) into the charger if it is wet or soiled. This could corrode the battery charger terminals or damage the charger. The charger is not waterproof.

■ **CAUTION: DO NOT** charge the battery outside of the specified temperature range: +32°F to +113°F (±0°C to +45°C). Icom recommends charging the battery at +68°F (+20°C). The battery may heat up or rupture if charged out of the specified temperature range, and battery performance or battery life may be reduced.

WARRANTY STATEMENT

RCA Communications Systems warrants each new radio product it supplies to be free from defects in material and workmanship under normal use and service for the time period listed below, provided that the user has complied with the requirements stated herein.

The warranty period begins on the date of purchase from an Authorized RCA Communications Systems Sales and Service Outlet. This warranty is offered to the original end user and is not assignable or transferable. RCA Communications Systems is not responsible for any ancillary equipment which is attached to or used in conjunction with RCA Communications Systems products.

RCA Communications Systems offers to the original end user a Two (2) Year Limited Warranty on the RCA MR240™ Radio Handset. The MR240™ Antenna, MR240™ Battery and the MR240™ Battery Charger are covered under a One (1) Year Limited Warranty. The MR240™ Belt Clip is not covered under the warranty.

During this period, if the product fails to function under normal use because of manufacturing defect(s) or workmanship, it should be returned to the Authorized RCA Communications Systems Sales and Service Outlet from which it was purchased. The Sales and Service Outlet will repair the product to full operating specifications or replace the product with a new product of the same make and model. The user is responsible for all charges incurred in returning the product to the Authorized RCA Communications Systems Sales and Service Outlet. RCA Communications Systems will be responsible for all charges in returning the product to the end user via standard ground shipping service.

RCA Communications Systems shall have no obligation to repair or replace the product, if there is damage as a result of normal wear and tear or if the damage is caused in whole or in part by catastrophe, fault or negligence of the user, improper or unauthorized alterations or repairs to the product, incorrect wiring, use of the product in a manner for which it was not designed, or by causes external to the product. This warranty is void if the product serial number is altered, defaced or removed.

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The end-user of any two-way radio is solely responsible   for obtaining any license or other authorizations required by the Federal Communications Commission (FCC).   For further information visit www.fcc.gov or call 1-888-CALL-FCC (1-888-225-5322).

RF EXPOSURE COMPLIANCE AND CONTROL GUIDELINES AND OPERATING INSTRUCTIONS

To control your exposure and ensure compliance with the occupational/controlled environment exposure limits always adhere to the following procedures.

Guidelines:
Do not remove the RF Exposure Label from the device.

User awareness instructions should accompany device when transferred to other users.

Do not use this device if the operational requirements described herein are not met.

Operating Instructions:
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 this radio generates measurable RF energy exposure only when transmitting (in terms of measuring for standards compliance). Hold the radio in a vertical position in front of face with the microphone (and the other parts of the radio, including the antenna) at least one inch (2.5 cm) away from the nose. Keeping the radio at the proper distance is important because RF exposures decrease with distance from the antenna. Antenna should be kept away from eyes.

When worn on the body, always place the radio in a approved clip, holder, holster, case, or body harness for this product.

Using approved body-worn accessories is important because the use of or other manufacturer's non-approved accessories may result in exposure levels which exceed the FCC's occupational/controlled environment RF exposure limits.

If you are not using a body-worn accessory and are not using the radio in the intended use position in front of the face, then ensure the antenna and the radio are kept at least one inch (2.5 cm) from the body when transmitting. Keeping the radio at the proper distance is important because RF exposure decreases when increasing distance from the antenna.

Use only RCA Communications Systems approved supplied or replacement antennas, batteries, and accessories. Use of third party antennas, batteries, and accessories may exceed the FCC RF exposure guidelines.

For Sales, Warranty and Customer Support please contact:

Discount Two-Way Radio Corporation – North American Distributor
1430 240th Street
Harbor City, CA 90710
Phone: 310-224-5100 / Fax: 310-224-5101
www.discounttwo-wayradio.com