Overview of Radioddity

“You, our friend and customer, are our focus”

Nothing is more important than your time and money. When you buy radios online, you face a dilemma: buy from a reputable website at a high price, or try to save money by choosing a dealer who may or may not offer quality goods, service and advice. At Radioddity.com, you do not have to choose between low prices and a secure shopping experience. Whether you are buying from us for the first time or a seasoned amateur radio operator, we always hope that with our products, prices, content and sources, you will find exactly what you need.

In recent years, Radioddity has better met the needs of wireless device buyers by creating a secure shopping experience. We do this by offering the highest quality products at an affordable price and providing you with first-class service. You deserve no less.

Our promise: to give you the best shopping experience

Strong partnerships enable us to offer you the latest technology and outstanding value for money under the Radioddity brandname. Our thoughtful and responsive customer service teams help us deliver on our promise to you and meet your every day needs even better. Whether providing you with the latest and greatest DMR and analog radios, accessories and related products, providing outstanding technical support, or by working with the leaders of the amateur radio industry to develop helpful content to assist you with your purchase: Your concerns are our concerns. We want to connect you with high quality radios at low prices. If, in your opinion, we do not honor this promise in any way, please let us know by e-mail: support@radioddity.com

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-15°C or above +55°C.
- KEEP the transceiver at least 1 meter away from your vessel’s magnetic navigation compass.
- BE CAREFUL, the transceiver meets IP-67 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.
The radio floats in fresh or salt water when the supplied accessories are attached.

When a third-party battery pack, strap, antenna, etc. is used, it may sink.

**Features**

- **Floats on Water**
  - The radio floats in fresh or salt water when the supplied accessories are attached.
  - When a third-party battery pack, strap, antenna, etc. is used, it may sink.

- **Floats and Flashes**
  - An LED sends out intermittent light from a transparent section on the bottom of the radio, while floating in the water. As the LED light stands out in the dark (like a flashing fishing float), the radio can be easily retrieved from the water. This function works even when the radio is turned OFF.

**Preparation**

- **What’s in the Box**
- **Charging the Battery Pack**
- **Flexible antenna**
- **Belt clip**

**Panel Description**

- **Display**
- **Turn ON/OFF**
- **Adjusting the Volume Level**
- **Receiving and Transmitting**
- **Channel Group Selective**
- **Channel Selection**
- **Call Channel**
- **Call Channel Programming**
- **Monitor Function**
- **Volume Loud Function**
- **Volume Mute Function**
- **Automatic Backlight**
- **Lock Function**
- **Vibration Water Draining Function**
PREPARATION

Preparation

what’s in the box
Thanks for choosing Radioddity marine VHF radio. We recommend you to check the items listed in the following table before discarding the package.

<table>
<thead>
<tr>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 pcs RV6 radio body</td>
</tr>
<tr>
<td>1 pcs antenna</td>
</tr>
<tr>
<td>1 pcs Adaptor Charger</td>
</tr>
<tr>
<td>1 pcs belt clip</td>
</tr>
<tr>
<td>1 pcs handstrap</td>
</tr>
<tr>
<td>1 pcs user manual</td>
</tr>
</tbody>
</table>

Charging the Battery Pack
1. Connect the adapter to AC Power.
2. Rotate the jack-in-top of transceiver, connect it to the adapter start to charge, LCD appears “CHG” and “FL” to indicate charging.
3. If battery charging is full, LCD appears “FL”, you should remove the adaptor.

NOTE: If you have not inserted the battery pack, the LCD will show “Er”.

Battery Pack
To insert the battery pack:
Place the battery into the transceiver so it fits tall, and then securely attach the battery cover, as shown. Push the cover until the latch comes back to the locked position.

Note: If the battery cover is not covered properly, the radio may leak water from here.

Connecting Flexible Antenna
Connect the supplied flexible antenna to the antenna connector, rotate it clockwise until it is tight.

Belt Clip
At the back of the radio there are two parallel screws mounted above the battery, remove these and thread them through the holes on the belt clip as you screw them back into the radio body.

Note: Do not short the battery terminals or discard the batteries in a fire.

Thanks for choosing Radioddity marine VHF radio. We recommend you to check the items listed in the following table before discarding the package.
1. PTT
   - Hold down to transmit; release to receive.

2. CH 16/Call CH
   - 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 exit the call channel programming mode.

3. FAVITAQ
   - PUSH to sequentially select the favorite channels, while ignoring untagged channel in a 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 watch mode.

5. (Hi/Lo) "H" or "L"
   - Push to select the high or low output power.

6. POWER ON/OFF
   - Hold to turn on/off.

7. VOL/SQ/MONI
   - Push to enter the volume adjustment mode or the squelch adjustment mode.

8. < or > UP/DOWN
   - Push to select an operation channel.

9. [CH]
   - Hold for 1 second, one or more times, to select a channel group from USA, International, and Canada.
   - Push to return to the previous channel before selecting Channel 16 or the calling channel.

10. ANTENNA CONNECTOR
    - Connect the supplied antenna here.

NOTE: Ensure the cap for the DC charging connector is affixed correctly to avoid water ingress.

While in the setting mode, push to select the setting or value of an item.

11. LCD EV
    - Connect the adapter or optional cable here.

PANEL DESCRIPTION

![Panel Diagram]

Display

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Transmit indicator. Appears while transmitting</td>
</tr>
<tr>
<td>2.</td>
<td>Low power indicator.</td>
</tr>
<tr>
<td>3.</td>
<td>Channel number readout. In dual watch, indicates the selected channel.</td>
</tr>
<tr>
<td>4.</td>
<td>Volume level.</td>
</tr>
<tr>
<td>5.</td>
<td>Selecting operating channel number in set mode, indicates the selected condition.</td>
</tr>
<tr>
<td>6.</td>
<td>Selecting operating channel number in set mode, indicates the selected condition.</td>
</tr>
<tr>
<td>7.</td>
<td>Selecting operating channel number in set mode, indicates the selected condition.</td>
</tr>
</tbody>
</table>
The squelch must be adjusted to the proper level. The radio has 11 squelch levels: OP is completely open; 10 is maximum squelch; 1 is minimum squelch.

Push S S:

The selectable channel groups are different, depending on the version.

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 while standing by, you must monitor Channel 16.

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 frequently used channel in each channel group for quick recall.

Appears "WX ALT" when the weather alert function is ON. Call channel is used to access Channel 16 (default is channel 9). You can program the call channel with your most frequently used channel in each channel group for quick recall.

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**Channel Selection**

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.

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 while standing by, you must monitor Channel 16.

**International Channel Group**

<table>
<thead>
<tr>
<th>Channel Group</th>
<th>U.S. channel group</th>
<th>Canadian channel group</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>27</td>
<td>71</td>
</tr>
</tbody>
</table>

**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 frequently used channel in each channel group for quick recall.

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 the version.

3. Push [a] or [t] to select a channel.
4. “A” appears when a simplex channel is selected. “DUP” appears when a duplex channel is selected.
4. Push [VOL/SQL] or [a] to select desired call channel.

**Monitor Function**

The monitor function opens the squelch.
- Push [MON] to activate monitor function.
- "SQUE" will flash and sound while monitor function active.

**Volume Loud Function**

The volume loud function temporarily maximizes the volume loud level, it has no effect when the volume is at 31.
1. Push [VOL][VOL] and [a] to turn ON the function.
2. Push [VOL][VOL] to turn OFF.

**Volume Mute Function**

The volume mute function can be activated temporarily.
- Push [VOL][VOL] and [a] to activate.
- The audio is muted.
- The volume level indicator will start flashing.
- Push [VOL][VOL] to turn off.

**Automatic Backlight**

This function is convenient for night time operation. The automatic backlighing can be activated in set mode.
- Push any key except for [PTT] to turn backlighting ON.
- The backlighting is automatically turned OFF after 5 seconds of inactivity.

**Lock Function**

This function electronically locks all keys except for [PTT/SMS],VOL,SQL to prevent accidental changing of the channel and function access.
- Push and hold [VOL] for 1 second 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 grill (water that might otherwise diffuse the sound coming from the speaker).
- Push and hold [SCAN] and [VOL] to activate.
- A low beep sound tones for 9 seconds to drain water, regardless of volume level setting.
- The transceiver does not perform any key operations while the vibration function is activated. The Vibration function can not be activated when an optional speaker-microphone is connected.

When a signal is received, the scan pauses until the signal disappears or resumes after pausing 5 seconds, depending on the set mode setting.

**Normal Scan**

It scans 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 (ScanWatch), until the signal disappears.

**Setting 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.

**Setting (or clearing) a TAG channel**

1. Push [CH] to select desired channel group.
2. Push [VOL][VOL] or [a] 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 the TAG channel setting, push and hold [TAG] for 1 sec.
  - [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.

**Scanning**

Set the priority scan function, scan resume timer and auto scan function in the set mode.
1. Push [SCAN] to start normal scan or priority scan.
   - "SCAN" blinks.
   - "16" appears on the sub channel head in a priority scan.
2. When a signal is received, the scan pauses until the signal disappears or resumes after pausing 5 seconds, depending on the set mode setting.
3. Push [VOL][VOL] to sequentially switch TAG channels, change the scanning direction or manually resume the scan.
4. Push [SCAN] to stop the scan, or push [PTT][1][6][a][CH][F] to cancel the scan.
The set mode is used to channel the settings of the 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 Programming**

1. Turn OFF the transceiver.
2. While holding down [VOL/SQ], turn ON the power to enter the set mode.
4. Push [VOL/SQ] to select a desired option of the item.
5. Push [A] to select a desired option of the item.
6. To exit the set mode, push [TALK].

**Set Mode Items**

- **Beep Tone Function**
  - Turn the key touch beep sound ON or OFF.
- **Weather Alert**
  - When there is significant weather information, the U.S. NMDA broadcast stations will transmit an alarm weather. When the weather alert function is turned off, weather broadcasts will be sent at the same time.
- **Priority Scan Function**
  - The transceiver has 2 scan types—normal OFF and priority ON. Scan a normal scan searches at TAO channels in the selected channel group. A priority scan sequentially searches all TAO channels while monitoring a Channel.
- **Scan Resume Time**
  - The scan resume timer can be set as a pause (OFF) or timer scan (ON).
- **Auto Scan Function**
  - The auto scan function automatically starts a normal or priority scan when...

<table>
<thead>
<tr>
<th>No.</th>
<th>Show</th>
<th>Set Project</th>
<th>Set Parameter Options</th>
<th>The Default Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BIT</td>
<td>ON/OFF</td>
<td>ON/OF</td>
<td>ON/OF</td>
</tr>
<tr>
<td>2</td>
<td>AL</td>
<td>Weather Warning</td>
<td>ON/OFF</td>
<td>ON/OF</td>
</tr>
<tr>
<td>3</td>
<td>PR</td>
<td>Priority Scan</td>
<td>ON/OFF</td>
<td>ON/OF</td>
</tr>
<tr>
<td>4</td>
<td>ST</td>
<td>Scan Resume Timer</td>
<td>ON/OFF</td>
<td>ON/OF</td>
</tr>
<tr>
<td>5</td>
<td>AS</td>
<td>Automatic Setting</td>
<td>ON/OFF</td>
<td>ON/OF</td>
</tr>
<tr>
<td>6</td>
<td>d1</td>
<td>Dual-band Duty</td>
<td>d-0/-0</td>
<td>d-0/-0</td>
</tr>
<tr>
<td>7</td>
<td>d2</td>
<td>Monitor Key Functions</td>
<td>P1/P2</td>
<td>P1/P2</td>
</tr>
<tr>
<td>8</td>
<td>d3</td>
<td>LCD Contrast</td>
<td>10/15</td>
<td>10/15</td>
</tr>
<tr>
<td>9</td>
<td>d4</td>
<td>Automatic Power</td>
<td>ON/OFF</td>
<td>ON/OFF</td>
</tr>
</tbody>
</table>
The power save function reduces current drain by turning off the receiver circuit for preset intervals 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.

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

<table>
<thead>
<tr>
<th><strong>General</strong></th>
<th><strong>Receiver</strong></th>
<th><strong>Transmitter</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Frequency Range</strong></td>
<td><strong>Receive Sensitivity</strong></td>
<td><strong>Output Power</strong></td>
</tr>
<tr>
<td>TX: 156.025 – 157.425MHz</td>
<td>≤0.22 μV</td>
<td>6W</td>
</tr>
<tr>
<td>RX: 156.000 – 163.425MHz</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Type of Emission</strong></td>
<td><strong>Squelch Sensitivity</strong></td>
<td><strong>Maximum Frequency Deviation</strong></td>
</tr>
<tr>
<td>FM (MHzDE)</td>
<td>≤0.22 μV</td>
<td>≤5kHz</td>
</tr>
<tr>
<td><strong>Battery Pack</strong></td>
<td><strong>IF and Noise</strong></td>
<td><strong>Spurious Emissions</strong></td>
</tr>
<tr>
<td>1500mAh Li-ion (3.7V)</td>
<td>≥60dB</td>
<td>0.25W</td>
</tr>
<tr>
<td><strong>Frequency Stability</strong></td>
<td><strong>Adjacent Channel Selectivity</strong></td>
<td><strong>Audio-Harmonic Distortion</strong></td>
</tr>
<tr>
<td>±10 ppm</td>
<td>≥70dB</td>
<td>&lt;10%</td>
</tr>
<tr>
<td><strong>Operating Temperature Range</strong></td>
<td><strong>Intermodulation</strong></td>
<td><strong>Current Drain</strong></td>
</tr>
<tr>
<td>-10°C to +5°C</td>
<td>≥64dB</td>
<td>≤1.5A (high power)</td>
</tr>
<tr>
<td><strong>Antenna Impedance</strong></td>
<td><strong>Audio Output Power</strong></td>
<td>≤0.5A (low power)</td>
</tr>
<tr>
<td>50</td>
<td>≥6W (10%)</td>
<td>≤0.35A (Max audio output)</td>
</tr>
</tbody>
</table>

### Programming

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

<table>
<thead>
<tr>
<th><strong>Problem</strong></th>
<th><strong>Possible Cause</strong></th>
<th><strong>Solution</strong></th>
<th><strong>Ref.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>The transceiver does not turn ON.</td>
<td>The battery is exhausted.</td>
<td>Recharge the battery pack.</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>The battery pack is not correctly inserted.</td>
<td>Correctly insert the battery pack.</td>
<td>2</td>
</tr>
<tr>
<td>No sound from speaker</td>
<td>The squelch level is too high.</td>
<td>Set the squelch level to the threshold level.</td>
<td>5, 6</td>
</tr>
<tr>
<td></td>
<td>Volume level is too low.</td>
<td>Adjust the audio level to a suitable level.</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Speaker has been exposed to water.</td>
<td>Remove water from the speaker grill.</td>
<td>6</td>
</tr>
<tr>
<td>Transmitting is impossible, or high power cannot be selected.</td>
<td>Some channels are limited to low power range or only receive.</td>
<td>Change the channel.</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>The output power is set to low.</td>
<td>Push [Hi/Lo] to select high power.</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>The battery is exhausted.</td>
<td>Recharge the battery pack.</td>
<td>7</td>
</tr>
<tr>
<td>The displayed channel cannot be changed.</td>
<td>The Lock function is activated.</td>
<td>Hold down [FNC] (Hi/Lo) for 1 second to turn OFF the function.</td>
<td>8</td>
</tr>
<tr>
<td>Scan does not start</td>
<td><em>TAD</em> channels are not programmed.</td>
<td>Set the desired channels as <em>TAD</em> channels.</td>
<td>6</td>
</tr>
<tr>
<td>No beep sounds</td>
<td>Beep Tone function is turned OFF.</td>
<td>Turn ON the Beep Tone in the set mode.</td>
<td>11</td>
</tr>
</tbody>
</table>

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