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› radtel IP68 Waterproof Long Range Handheld Dual Band Two Way Radio 199CH Portable Walkie Talkie AM Air Aviation Band Satcom NOAA FM Radio VOX Grey User Manual

## radtel IP68 Dual Band Two Way Radio

# radtel IP68 Waterproof Long Range Handheld Dual Band Two Way Radio

## USER MANUAL

Model: IP68 Dual Band Two Way Radio

### 1. Introduction

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Thank you for choosing the radtel IP68 Waterproof Long Range Handheld Dual Band Two Way Radio. This device is designed for reliable communication in various environments, featuring IP68 waterproof rating, dual-band operation, and a wide range of advanced functions including AM Air Aviation Band and NOAA FM Radio reception. This manual provides essential information for the safe and effective operation, setup, and maintenance of your radio. Please read it thoroughly before use.

### 2. Safety Information

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To ensure safe operation and prevent damage to your radio or injury to yourself, please observe the following precautions:

- Do not disassemble or modify the radio. Unauthorized modifications can void your warranty and may cause harm.
- Use only radtel-approved batteries and chargers. Using incompatible accessories can lead to fire, explosion, or injury.
- Do not expose the radio to extreme temperatures, direct sunlight for prolonged periods, or corrosive substances.
- Ensure the battery compartment is properly sealed before exposing the radio to water to maintain its IP68 waterproof rating.
- Avoid transmitting without an antenna connected, as this can damage the radio's power amplifier.
- Keep the radio away from medical devices, as it may interfere with their operation.
- Dispose of batteries and electronic components responsibly according to local regulations.

### 3. Product Overview

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The radtel IP68 Dual Band Two Way Radio is a robust communication device. Below is an illustration of the radio with its key components.



**Figure 3.1:** Front view of the radtel IP68 Dual Band Two Way Radio, showing the display, keypad, antenna, and a separate charging cable. The radio features a durable grey casing and a clear screen for frequency and channel information.

## Key Components:

- **Antenna:** For transmitting and receiving radio signals.
- **Power/Volume Knob:** Turns the radio on/off and adjusts the volume.
- **LCD Display:** Shows frequency, channel, battery status, and other operational indicators.
- **Keypad:** For entering frequencies, selecting channels, and accessing menu functions.
- **PTT (Push-to-Talk) Button:** Activates transmission.
- **Speaker/Microphone:** For audio output and input.
- **Accessory Jack:** For connecting external audio accessories (e.g., earpiece, programming cable).
- **Battery Pack:** Provides power to the radio.

## 4. Setup

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### 4.1. Battery Installation and Charging

1. Ensure the radio is powered off.
2. Align the battery pack with the grooves on the back of the radio.
3. Slide the battery pack upwards until it clicks into place.
4. To remove, press the battery release latch (if present) and slide the battery downwards.
5. Connect the charging cable to the radio's charging port and plug the other end into a compatible USB power adapter.
6. The charging indicator will show the charging status. Charge the battery fully before first use.

### 4.2. Antenna Attachment

1. Screw the antenna clockwise into the antenna connector on top of the radio until it is finger-tight. Do not overtighten.

## 5. Operating Instructions

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### 5.1. Power On/Off and Volume Control

- To power on, rotate the Power/Volume knob clockwise until you hear a click.
- To power off, rotate the Power/Volume knob counter-clockwise until you hear a click.
- Adjust the volume by rotating the Power/Volume knob.

### 5.2. Mode Selection (VFO/MR/CH)

The radio supports three working modes:

- **VFO Mode (Frequency Mode):** Allows direct frequency input and scanning.
- **MR Mode (Memory Recall Mode):** Allows selection of pre-stored channels.
- **CH Mode (Channel Mode):** Similar to MR mode, focusing on channel numbers.

Refer to your radio's specific menu options to switch between these modes.

### 5.3. Transmitting and Receiving

- To receive, ensure the radio is powered on and tuned to the desired frequency or channel.
- To transmit, press and hold the PTT button. Speak clearly into the microphone. Release the PTT button to stop transmitting and return to receive mode.



**Figure 5.1:** An individual operating a radtel two-way radio in an outdoor setting, demonstrating typical usage for communication.

#### 5.4. One Key Copy Frequency

This feature allows you to quickly copy the frequency and CTCSS/DCS tones from another radio.

1. Activate the "One Key Copy Frequency" function from the radio's menu.
2. Place the transmitting radio near your radtel radio.
3. Initiate transmission on the other radio. Your radtel radio will detect and copy the frequency and tone settings.

#### 5.5. NOAA Weather Channel Receive

The radio can receive NOAA weather channels to provide real-time weather alerts.

- Access the NOAA weather channel function through the radio's menu or a dedicated button.
- The radio will scan and tune into available NOAA weather broadcasts.

#### 5.6. Air Band Receive (AM Mode)

The radio is capable of receiving air band communications in AM mode (108-136MHz).

- Switch the radio to the appropriate frequency range or mode for air band reception.
- Tune to the desired air traffic control or aircraft frequency.

### 6. Features

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Your radtel IP68 Dual Band Two Way Radio comes equipped with a comprehensive set of features to enhance your communication experience:

- **IP68 Waterproof:** Designed to withstand immersion in water up to 1 meter deep for 30 minutes, ensuring reliable operation in wet conditions.
- **Full Band Scanning Receiver:** Covers 136-619MHz, including FM Receive (66-108MHz) and AM Air Band Receiving (108-136MHz).
- **Channel Name Edit:** Customize channel names for easier identification.
- **Output Power:** Adjustable high/low power settings to conserve battery or extend range.

- **Squelch Level (0-9):** Adjust the squelch threshold to filter out weak background noise.
- **Bandwidth:** Select between wide and narrow bandwidth for optimal signal reception.
- **Time Out Timer (TOT):** Prevents accidental continuous transmission by limiting transmission duration.
- **Busy Channel Lockout (BCLO):** Prevents transmission on an already occupied channel.
- **CTCSS/DCS:** Sub-audible tones for private group communication and interference reduction.
- **199 Channels:** Ample memory channels for storing your preferred frequencies.
- **Beep Tone:** Audible feedback for keypad presses and function confirmations.
- **Voice Prompt:** English voice prompts for menu navigation and status updates.
- **Keypad Lock:** Prevents accidental key presses.
- **Battery Save Mode:** Extends battery life by reducing power consumption during standby.
- **Repeater Offset:** Configurable offset for repeater operation.
- **Double Standby:** Monitor two different frequencies simultaneously.
- **Squelch Tail Elimination (STE):** Eliminates the squelch tail noise at the end of a transmission.
- **Roger Beep:** A short tone transmitted at the end of your transmission to indicate you have finished speaking.
- **Auto Shut Off:** Automatically powers off the radio after a period of inactivity to save battery.
- **Turn on Display Logo or Voltage:** Customizable display options upon power-on.
- **VOX (Voice Operated Exchange):** Allows hands-free transmission when voice is detected.
- **Channel Store and Delete:** Manage your stored channels directly from the radio.

## 7. Specifications

Detailed technical specifications for the radtel IP68 Dual Band Two Way Radio:

Specification	Value
Brand	radtel
Model	IP68 Dual Band Two Way Radio
Color	Grey
Special Feature	Portable, Waterproof
Tuner Technology	FM, AM
Power Source	Battery Powered
Radio Bands Supported	2-Band (Full Band 136-619MHZ Scanning Receiver, 66-108MHZ FM, 108-136MHZ AM Air Band)
Included Components	Battery
Hardware Interface	Radio Frequency
Frequency	66 MHz (FM lower end), 108-136 MHz (AM Air Band)
Compatible Devices	Speaker, Smartphone, Headphone, MP3 Player, Earphone, Tablet, Laptop
Manufacturer	Xiamen Radtel Electronics Co.,Ltd
Channel Number	199

## 8. Maintenance

Proper maintenance ensures the longevity and optimal performance of your radtel radio.

- **Cleaning:** Wipe the radio with a soft, damp cloth. Do not use harsh chemicals or abrasive cleaners. Ensure the accessory jack cover is securely closed before cleaning with water.
- **Battery Care:**
  - Avoid fully discharging the battery frequently.
  - Store the battery in a cool, dry place when not in use for extended periods.
  - Recharge the battery at least once every three months if stored.
- **Storage:** Store the radio in a dry, dust-free environment away from direct sunlight and extreme temperatures. Remove the battery if storing for a long time.
- **Antenna:** Handle the antenna carefully. Do not bend or twist it excessively, as this can damage the connector.

## 9. Troubleshooting

If you encounter issues with your radio, refer to the following common problems and solutions:

Problem	Possible Cause / Solution
Radio does not power on.	Battery is low or dead. Charge the battery. / Battery is not properly installed. Reinstall the battery.
Cannot transmit or receive.	Incorrect frequency/channel selected. Verify settings. / Antenna is loose or damaged. Reattach or replace antenna. / Battery is too low for transmission. Charge battery.
Poor audio quality or static.	Weak signal. Move closer to the other radio or to an open area. / Squelch level is too high. Adjust squelch level. / Interference from other electronic devices. Move away from sources of interference.
Keypad is unresponsive.	Keypad lock is enabled. Disable keypad lock. / Radio may require a reset. Power off and on the radio.
Battery life is shorter than expected.	Battery is old or damaged. Replace battery. / High power transmission used frequently. Use low power when possible. / Battery save mode is off. Enable battery save mode.

## 10. Warranty and Support

Your radtel IP68 Dual Band Two Way Radio is backed by a commitment to quality.

- **Return Policy:** This product is eligible for a 30-day return policy from the date of purchase. Please refer to your retailer's specific return terms.
- **Protection Plans:** Extended protection plans are available for purchase, including 2-Year and 3-Year options, to provide additional coverage beyond the standard return period.
- **Manufacturer Support:** For technical assistance, warranty claims, or further inquiries, please contact Radtel Direct, the authorized seller. You can often find support contact information on the official radtel store page: Visit the radtel Store.