Radtel RT-470

Radtel RT-470 10 Watt Tri-Band Radio User Manual

Model: RT-470

1. Introduction

The Radtel RT-470 is a 10-watt tri-band two-way radio designed for versatile communication. It features multi-band reception including VHF, UHF, Air Band (AM), NOAA weather, and FM radio. This manual provides essential information for the proper setup, operation, and maintenance of your RT-470 radio.

2. What's in the Box

Carefully unpack your Radtel RT-470 radio and verify that all items are present:

- Radtel RT-470 Radio Unit
- Dual Band Antenna
- 2600mAh Rechargeable Lithium-ion Battery
- Desktop Charger
- Belt Clip
- User's Manual
- Charging Cable



Image: Contents of the Radtel RT-470 package.

3. Product Overview

The Radtel RT-470 features a durable housing and a 1.77-inch TFT color display. It includes a full keypad for direct frequency input and menu navigation. Key components and controls are detailed below:



Image: Labeled components and controls of the RT-470 radio.

- **Antenna:** For signal transmission and reception.
- **Power Switch/Volume Knob:** Turns the radio on/off and adjusts audio volume.
- **Status Indicator Light:** Displays radio status (e.g., transmitting, receiving, charging).
- **PTT (Push-to-Talk) Key:** Press and hold to transmit, release to receive.
- **Function Keys:** For menu navigation and feature activation.
- **Speaker:** For audio output.
- **Display:** 1.77-inch TFT color screen showing frequency, channel, and status icons.
- **USB-C Charging Port:** For direct battery charging.



Image: Front view and dimensions of the Radtel RT-470 radio.

4. Setup

4.1 Battery Installation

1. Ensure the radio is powered off.
2. Align the 2600mAh rechargeable Lithium-ion battery with the battery compartment on the back of the radio.
3. Slide the battery into place until it clicks securely.
4. To remove, press the battery release latch (if present) and slide the battery out.



Image: Rear view of the RT-470, showing the battery connection area.

4.2 Antenna Attachment

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

4.3 Charging the Battery

The RT-470 battery can be charged using the included desktop charger or directly via the USB-C port.

Using the Desktop Charger:

1. Connect the desktop charger to a power outlet.
2. Place the radio (with battery installed) or the battery alone into the charging slot.
3. The charger indicator light will show the charging status (e.g., red for charging, green for fully charged).

Using USB-C Direct Charging:

1. Connect the USB-C charging cable to the USB-C port on the radio.
2. Connect the other end of the cable to a compatible USB power source.
3. The radio's display or indicator light will show the charging status.

5. Operating Instructions

5.1 Power On/Off and Volume Adjustment

1. To power on, rotate the Power Switch/Volume Knob clockwise until you hear a click.
2. To adjust volume, continue rotating the knob.
3. To power off, rotate the knob counter-clockwise until it clicks.

5.2 Frequency Bands and Modes

The RT-470 supports multiple frequency bands and reception modes:

- **VHF (2M):** 136-174 MHz (Transmit/Receive)
- **VHF2 (1.25M):** 220-260 MHz (Receive Only)
- **UHF (70CM):** 400-520 MHz (Transmit/Receive)
- **Air Band (AM):** 108-136 MHz (Receive Only)
- **NOAA Weather:** 162.400-162.550 MHz (Receive Only)
- **FM Radio:** 87.5-108.0 MHz (Receive Only)



Image: RT-470 demonstrating Air Band reception capabilities.



Image: Overview of full frequency modulation reception bands.

5.3 Channel Selection and Frequency Input

The radio supports 256 memory channels. You can switch between VFO (Frequency Mode) and Channel Mode using the appropriate function key. In VFO mode, frequencies can be entered directly using the keypad.

5.4 One-Key Frequency Match (Frequency Auto Capture)

This feature allows for quick pairing and grouping by copying a channel from another radio within approximately 1 meter. Refer to the detailed instructions in the user manual for specific steps on activating and using this function.



Image: Demonstrating the One-Key Frequency Match function.

5.5 Advanced Features

- **Dual Standby:** Monitor two different frequencies simultaneously.
- **VOX (Voice Operated Transmit):** Allows hands-free transmission when voice is detected.
- **Squelch:** Eliminates background noise when no signal is present.
- **Scan:** Scans through frequencies or channels to find active transmissions.
- **TOT (Time-Out Timer):** Prevents excessively long transmissions.
- **BCL (Busy Channel Lockout):** Prevents transmission on an occupied channel.
- **DTMF (Dual-Tone Multi-Frequency):** For signaling and control functions.
- **CTCSS/DCS:** Sub-audible tones for selective signaling.
- **Emergency Alarm:** Activates an audible alarm for emergency situations.
- **LED Flashlight:** Integrated light for illumination.
- **Frequency Hopping & Scramble:** Enhances communication privacy.
- **Roger Beep (Frog Sound):** An audible tone indicating the end of a transmission.



Image: RT-470 featuring its large color display and dual standby capability.



Image: Illustration of the Roger Beep (Frog Sound) feature.

6. Maintenance

6.1 Battery Care

- Charge the battery fully before first use.
- Avoid overcharging or completely draining the battery to prolong its lifespan.
- Store the battery in a cool, dry place when not in use.

6.2 Cleaning

- Clean the radio's surface with a soft, damp cloth.
- Do not use harsh chemicals or abrasive cleaners.
- Ensure the radio is dry before use or storage.

6.3 Water Resistance

The Radtel RT-470 is **not waterproof**. Avoid exposing the radio to water, rain, or high humidity to prevent damage.

6.4 Storage

When storing the radio for extended periods, remove the battery and store both components in a cool, dry environment.

7. Troubleshooting

If you encounter issues with your Radtel RT-470, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Radio does not power on	Low or dead battery; improperly installed battery	Charge the battery; ensure battery is correctly installed.
No reception or poor audio quality	Antenna not attached; incorrect frequency/channel; squelch level too high; out of range	Attach antenna securely; verify frequency/channel settings; adjust squelch level; move closer to transmitting radio.
Cannot transmit	Incorrect frequency/channel; battery low; Busy Channel Lockout (BCL) active; Time-Out Timer (TOT) activated	Verify frequency/channel; charge battery; disable BCL; wait for TOT to reset.
Display is blank or frozen	Software error; low battery	Power cycle the radio (remove and reinsert battery); charge battery.

For further assistance, consult the full user manual or contact Radtel customer support.

8. Specifications

Feature	Specification
Brand	Radtel
Model Number	RT-470

Feature	Specification
Color	Black
Number of Channels	256
Frequency Range (Air Band)	118-136 MHz (Receive Only)
Frequency Range (NOAA Weather)	162.400-162.550 MHz (Receive Only)
Frequency Range (FM Radio)	87.5-108.0 MHz (Receive Only)
Frequency Range (VHF)	136-174 MHz (Transmit/Receive)
Frequency Range (UHF)	400-520 MHz (Transmit/Receive)
Maximum Range	10 Kilometers (approx. 6.2 miles)
Voltage	7.4 Volts
Water Resistance Level	Not Waterproof
Battery Type	1 Lithium-ion (included)
Special Features	Voice Scrambler Function, Emergency Alarm, DTMF Code Function, Customizable Boot Interface, FM Radio, Dual Standby
Connectivity Protocol	VHF, UHF, AM, FM
Tuner Type	AM/FM
UPC	751501744558

9. Warranty and Support

9.1 Warranty Information

For detailed warranty information, please refer to the warranty card included with your product or visit the official Radtel website. Keep your purchase receipt as proof of purchase for warranty claims.

9.2 Customer Support

If you require technical assistance, have questions about your Radtel RT-470, or need to report an issue, please contact Radtel customer support through their official channels. Contact information can typically be found on the manufacturer's website or in the product packaging.

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question