

radtel RT-780

Radtel RT-780 User Manual

Comprehensive Guide for Your Portable Two-Way Ham Radio Transceiver

1. INTRODUCTION

Welcome to the user manual for your new Radtel RT-780 portable two-way radio. This device is a versatile ham radio transceiver designed for reliable communication across various frequency bands, including 144-148Mhz and 420-450Mhz for transmit/receive, and a wide scanning receive range from 16-620Mhz, encompassing FM radio and AM Air band frequencies.

To ensure optimal performance and longevity of your RT-780, please read this manual thoroughly before operation. This guide provides detailed instructions on setup, operation, maintenance, and troubleshooting.





Figure 1: Radel RT-780 Portable Two-Way Radio

This image shows the front view of the Radel RT-780 radio, highlighting its display, keypad, and antenna. The radio is grey with a black keypad and a clear digital display showing frequency information.

2. PRODUCT OVERVIEW AND COMPONENTS

Familiarize yourself with the various parts and controls of your Radel RT-780 radio.

Product key analysis



Figure 2: Radtel RT-780 Key Components and Controls

This diagram illustrates the key components of the Radtel RT-780, including the Antenna, TX/RX Indicator, Power on/off & Volume Adjust knob, PTT Buttons (1 and 2), Menu/Confirm button, Monitor button, CH/MR/VFO Switch, Exit key, LCD display, Ear/mic/Programming port, and the numeric keypad with function keys.

2.1. Component Identification

- **Antenna**: For transmitting and receiving radio signals.
- **TX/RX Indicator**: Illuminates to indicate transmit (red) or receive (green) status.
- **Power On/Off / Volume Adjust**: Rotary knob to turn the radio on/off and adjust audio volume.

- **PTT Button 1 & 2:** Push-to-Talk buttons for transmitting on the selected frequency. The RT-780 features dual PTT buttons.
- **Menu/Confirm:** Enters the menu system and confirms selections. Long press activates FM Radio.
- **Monitor:** Short press for UP, long press for UP Fast.
- **CH/MR/VFO Switch:** Short press to switch between Channel (Memory) and VFO (Frequency) modes. Long press to copy frequency from other radios.
- **Exit Key:** Exits menu or current function. In standby, short press switches A/B display, long press toggles Dual Standby on/off.
- **LCD Display:** Shows frequency, channel, battery status, and other operational information.
- **Ear/Mic/Programming Port:** Connects external audio accessories or programming cable.
- **Keypad:** Numeric and function keys for frequency input, channel selection, and feature activation. Short press for DOWN, long press for DOWN Fast. Double click SCAN in standby, long press Keypad lock/unlock.
- **USB-C Charging Port:** Located on the side for convenient charging.

3. INITIAL SETUP

3.1. Battery Installation and Charging

The Radtel RT-780 is powered by a 3800mAh battery. Ensure the battery is fully charged before first use.

1. **Install Battery:** Align the battery pack with the grooves on the back of the radio and slide it into place until it clicks securely.
2. **Charge Battery:** Connect the supplied USB-C cable to the radio's USB-C port and the other end to a compatible USB power adapter (not included) or a computer USB port. The charging indicator will show charging status.
3. **Charging Time:** A full charge typically takes several hours. The indicator will change when charging is complete.



Figure 3: Raddtel RT-780 with USB-C Charging Cable

This image displays the Raddtel RT-780 radio alongside its USB-C charging cable, illustrating the convenient charging method for the device.

3.2. Antenna Attachment

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

4. BASIC OPERATION

4.1. Power On/Off and Volume

Rotate the Power On/Off / Volume Adjust knob clockwise to turn on the radio. Continue rotating to increase the volume. Rotate counter-clockwise to decrease volume and turn off the radio.

4.2. Frequency and Channel Selection

- **VFO Mode (Frequency Mode):** Press the **CH/MR/VFO Switch** button to enter VFO mode. Directly input the desired frequency using the numeric keypad.
- **Channel Mode (Memory Mode):** Press the **CH/MR/VFO Switch** button to enter Channel mode. Use the UP/DOWN arrow keys or the numeric keypad to select a stored channel.

- **Dual Frequency Standby:** The radio supports dual frequency standby. Use the **Exit Key** (short press) to switch between the A and B display frequencies.

4.3. Transmitting (PTT)

To transmit, press and hold either **PTT Button 1** or **PTT Button 2**. Speak clearly into the microphone. Release the PTT button to receive.

4.4. Scanning Functions

- **Full Band Scanning:** The RT-780 supports 16-620Mhz scanning receive. In standby, double-click the **SCAN** key (usually the '#' key) to initiate scanning.
- **FM Radio Broadcast Receive:** Long press the **Menu/Confirm** button to activate the FM radio.
- **Air Band Receive:** The radio can receive 108-136MHz AM Air band frequencies.



Figure 4: Radel RT-780 Airband Reception

This image depicts the Radel RT-780 radio with a background suggesting an airport control tower, illustrating its capability to receive 108-136MHz AM Airband frequencies for real-time aviation communication.

4.5. VOX Function (Voice Operated Transmit)

VOX allows transmission without pressing the PTT button, by detecting your voice. Refer to the menu settings for VOX level adjustment.

4.6. Squelch Level

The squelch function mutes the speaker when no signal is present. The RT-780 offers squelch levels from 0-9. Adjust through the menu to eliminate background noise while ensuring reception of weak signals.

4.7. Fast Copy Frequency

The radio features a fast copy function to quickly acquire frequency and CTCSS/DCS tones from another radio within one meter. Long press the **CH/MR/VFO Switch** button to activate this feature.

5. ADVANCED FEATURES

The Radel RT-780 is equipped with several advanced features to enhance your communication experience:

- **High/Middle/Low Power Selectable:** Adjust transmit power to conserve battery or extend range.
- **Encryption Function:** Provides basic voice scrambling for privacy.
- **Battery Save:** Automatically reduces power consumption when no signal is detected or no operation is performed.
- **Voice Annunciation:** Announces channel numbers or menu options.
- **Channel Name Display:** Allows for custom names for stored channels for easier identification.
- **199 Store Channels:** Ample memory for storing frequently used frequencies.
- **Sub Tone CTCSS/DCS:** Enables selective calling and reduces interference from other users on the same frequency.

- **Bandwidth 12.5k/25k:** Selectable narrow or wide bandwidth for different communication needs.
- **Repeater Offset:** Configurable offset for communication through repeaters.
- **Frequency Measurement Function:** Allows copying frequency and CTCSS/DCS tone from another radio within close proximity.

6. TECHNICAL SPECIFICATIONS

Below are the detailed technical specifications for the Radtel RT-780:

Feature	Specification
Brand Name	radtel
Model	RT-780
Color	Grey
TX/RX Frequency	144-148Mhz / 420-450Mhz
Scanning Receive Frequency	16-620Mhz
FM Radio Receive	65-108MHz
AM Air Band Receive	108-136MHz
Battery Capacity	3800mAh
Output Power	5W
Charging Port	USB-C
Squelch Level	0-9
Store Channels	199
Bandwidth	12.5k/25k

Size



Figure 5: Radtel RT-780 Product Dimensions

This image provides the physical dimensions of the Radtel RT-780 radio, showing its height (124mm), width (61mm), and depth (39mm).

7. MAINTENANCE AND CARE

- **Cleaning:** Use a soft, damp cloth to clean the radio's surface. Do not use harsh chemicals or abrasive cleaners.
- **Battery Care:** To prolong battery life, avoid overcharging and fully discharging the battery frequently. Store the radio and battery in a cool, dry place when not in use for extended periods.

- **Storage:** When storing the radio for a long time, remove the battery.
- **Environment:** Keep the radio away from extreme temperatures, direct sunlight, dust, and moisture.

8. TROUBLESHOOTING

If you encounter issues with your Radtel RT-780, refer to the following common problems and solutions:

Problem	Possible Cause / Solution
Radio does not power on.	Battery is low or depleted. Charge the battery. Ensure battery is properly installed.
Cannot transmit or receive.	Antenna not properly attached. Ensure correct frequency/channel is selected. Squelch level too high (for receiving). Battery may be too low for transmitting.
Poor audio quality or static.	Weak signal. Adjust squelch level. Check antenna connection. Move to an area with better signal reception.
Keypad is unresponsive.	Keypad lock may be active. Long press the '#' key to unlock the keypad.
Battery life is shorter than expected.	Frequent high-power transmissions. Battery may be aging. Ensure battery save function is enabled. Avoid extreme temperatures.

9. WARRANTY AND SUPPORT

Radtel products are manufactured to high quality standards. For warranty information and technical support, please refer to the documentation provided with your purchase or visit the official Radtel website. Keep your proof of purchase for warranty claims.

For further assistance, you may contact Radtel customer service through their official channels. Details can often be found on the product packaging or the brand's official online presence.

Note: Unauthorized modifications or repairs to the device may void the warranty.

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