

radtel RT-490

Radtel RT-490 Tri-Band Radio User Manual

Model: RT-490 | Brand: Radtel

1. INTRODUCTION

The Radtel RT-490 is a versatile tri-band handheld two-way radio designed for a wide range of communication needs. It features GPS functionality, Bluetooth connectivity for smartphone app programming, and the ability to receive air band signals. This manual provides detailed instructions for the proper setup, operation, and maintenance of your RT-490 radio to ensure optimal performance and longevity.

2. PACKAGE CONTENTS

Please verify that all items listed below are present in your package:

- Radtel RT-490 Walkie Talkie
- Lithium Battery (2000mAh) with USB-C port
- Desktop Charger
- Charging Cable
- Belt Clip
- User Manual

3. PRODUCT FEATURES

The Radtel RT-490 is equipped with advanced features to enhance your communication experience:

- **Tri-Band Operation:** Supports 144-148MHz, 222MHz, and 420-450MHz frequencies.
- **GPS Functionality:** Capable of searching GPS and displaying location information. Location data can be transmitted to other RT-490 radios.
- **Bluetooth App Programming:** Program your radio via a smartphone app (iOS and Android compatible) to change TX/RX frequency, subtone, and other features.
- **Air Band Reception:** Receives air band signals (108-136MHz AM RX) and commercial FM radio broadcasts (66-108MHz FM RX).
- **One-Key Copy Frequency:** Automatically captures and copies another radio's frequency and CTCSS/DCS tone for

immediate communication (within 1 meter distance).

- **USB-C Charging:** Convenient charging via a USB-C port on the battery.
- **256 Channel Capacity:** Ample storage for your preferred frequencies.
- **Large Color LCD Display:** Provides clear visibility of radio status and settings.
- **Dual Band, Dual Standby, Dual Watch:** Monitor two frequencies simultaneously.
- **VOX Function:** Voice-activated transmission for hands-free operation.
- **Scan Function:** Scans frequencies for active transmissions.
- **DTMF:** Dual-Tone Multi-Frequency signaling.
- **FM Radio:** Built-in FM broadcast receiver.
- **Emergency Alert:** For critical situations.

4. SETUP GUIDE

4.1 Battery Installation and Initial Charging

Before first use, fully charge the battery. The RT-490 comes with a 2000mAh Lithium Ion battery.

1. Align the battery with the grooves on the back of the radio and slide it upwards until it clicks into place.
2. To charge, connect the USB-C charging cable to the battery's USB-C port or place the radio with the battery attached into the desktop charger. Connect the charger to a power source.
3. The charging indicator light on the radio or desktop charger will show the charging status. A full charge may take approximately 8 hours.

4.2 Antenna Attachment

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

4.3 Belt Clip Attachment

Attach the belt clip to the designated area on the back of the radio using the provided screws.



This image displays the Radtel RT-490 tri-band radio alongside its essential accessories: a 2000mAh lithium-ion battery, a desktop charger, a USB-C charging cable, and the antenna. A smartphone screen is shown, illustrating the Bluetooth app interface used for programming the radio.

5. OPERATING INSTRUCTIONS

5.1 Basic Operation

- **Power On/Off:** Rotate the power/volume knob clockwise to turn on the radio. Rotate counter-clockwise until it clicks to turn off.
- **Volume Control:** Adjust the power/volume knob to control the audio output level.
- **Channel/Frequency Selection:** Use the up/down arrow keys or the keypad to select channels or input frequencies. The radio supports 256 channels.
- **Transmit (PTT):** Press and hold the Push-To-Talk (PTT) button on the side of the radio to transmit. Release to receive.

5.2 GPS Functionality

The RT-490 can acquire GPS coordinates and display your current location. To send your location information to another RT-490 radio, press the PTT button while the GPS function is active. Refer to the radio's menu for specific GPS display and transmission options.

SEND GPS LOCATION INFO TO YOUR FRIENDS

Dozens of menu functions
DTMF 2 tone 5 tone
cross band

DTMF/1750HZ/ANI
Transmitting radio
name display
Channel name display



This image illustrates the Radtel RT-490's GPS functionality. The radio's screen shows location data, and the accompanying text emphasizes the ability to transmit GPS positioning information to other RT-490 radios, facilitating location sharing among users.

5.3 Bluetooth App Programming

The RT-490 supports programming via a smartphone application, compatible with both iOS and Android devices. This allows for convenient adjustment of various radio parameters.

1. Download the official Radtel programming app from your smartphone's app store.
2. Enable Bluetooth on your smartphone and the RT-490 radio.
3. Open the app and follow the on-screen instructions to connect to your radio.
4. Once connected, you can modify settings such as TX/RX frequencies, CTCSS/DCS tones, channel names, and other operational features directly from your phone.

Automatic frequency scan



Support Smartphone APP programming via bluetooth

Scan other radios' CTCSS/DCS and frequency to make a contact.

Copy frequency from other radio

programming



Radtel RT-490 radio screen showing frequencies, with text highlighting automatic frequency scan and smartphone app programming via Bluetooth. This feature simplifies the configuration process.

5.4 One-Key Copy Frequency

This function allows the RT-490 to quickly copy the frequency and CTCSS/DCS tone from another radio, enabling instant communication without manual programming. Ensure the two radios are within 1 meter of each other for this function to work effectively.

Aviation reception

144-146MHz(RX/TX)
430-440MHz(RX/TX)

108-136MHz (AM RX) -
Air Band Receive Only
66-108MHz (FM RX)-
Commercial FM RADIO
Broadcast Receive



Two Radtel RT-490 radios are shown, emphasizing the 'One-key copy frequency' feature. This function allows one radio to quickly scan and copy the frequency and CTCSS/DCS tone from another radio within close proximity, enabling immediate communication without manual programming.

5.5 Air Band Reception

The RT-490 can receive signals in the air band frequency range (108-136MHz AM RX). This allows users to monitor aviation communications. Additionally, it can receive commercial FM radio broadcasts (66-108MHz FM RX).

Copy Frequency From Other Radio



Dual frequency
point waiting 256 storage channels
(128x2 groups) 

This image focuses on the Radtel RT-490's aviation reception feature. It lists the supported frequency ranges for both transmit/receive (144-146MHz, 430-440MHz) and receive-only (108-136MHz AM Air Band, 66-108MHz FM Commercial Radio Broadcast), demonstrating its versatility for various communication needs.

5.6 NOAA Weather Alerts

The radio is capable of receiving NOAA weather alerts, providing timely notifications for severe weather conditions. Consult the radio's menu for activating and configuring NOAA weather alert channels.



The Radtel RT-490 radio is depicted against a backdrop suggesting adverse weather, highlighting its integrated NOAA weather alert feature. This function allows the radio to receive critical weather warnings, enhancing user safety.

6. MAINTENANCE

Proper maintenance ensures the longevity and reliable operation of your RT-490 radio.

- **Cleaning:** Use a soft, damp cloth to clean the radio's exterior. Do not use harsh chemicals or abrasive cleaners.
- **Battery Care:** Avoid overcharging or completely discharging the battery. Store the battery in a cool, dry place when not in use for extended periods.
- **Storage:** Store the radio in a dry, dust-free environment away from direct sunlight and extreme temperatures.

7. TROUBLESHOOTING

If you encounter issues with your Radtel RT-490, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Radio does not power on.	Battery is low or not properly installed.	Ensure battery is fully charged and correctly seated.
Cannot program radio via PC software on Windows 11.	Software compatibility issues with Windows 11.	Try using an older Windows OS version, or utilize the Bluetooth smartphone app for programming. Ensure correct drivers are installed for the programming cable.
Long charging time (approx. 8 hours).	This is the normal charging duration for the included battery.	No action required; this is expected behavior.
Screen appears to scratch easily.	A protective film is still on the screen.	Gently peel off the thin, clear protective film that is cut to the exact size of the screen. This is distinct from the loose packing film.
Poor reception or transmission.	Antenna not properly attached, out of range, or interference.	Ensure antenna is securely attached. Move closer to the other radio or repeater. Check for obstructions or sources of interference.

8. SPECIFICATIONS

Feature	Specification
Model Number	RT-490
Item Weight	7.1 ounces (approx. 201g)
Product Dimensions	3.7 x 1.6 x 5 inches (approx. 9.4 x 4.1 x 12.7 cm)
Batteries	1 Lithium Ion battery required (included)
Display Type	LCD Color Display
Number of Channels	256
Special Features	GPS, Bluetooth, Copy Frequency by Air
Frequency Range	144-148MHz / 222MHz / 420-450MHz (TX/RX), 108-136MHz (AM RX Air Band), 66-108MHz (FM RX Commercial Radio)
Talking Range Maximum	10 Kilometer (approx. 6.2 miles)
Tuner Technology	UHF, VHF, AM, FM
Voltage	7.4 Volts (DC)
Water Resistance Level	Not Water Resistant
Manufacturer	Xiamen Radtel Electronics Co.,Ltd

9. WARRANTY AND SUPPORT

The Radtel RT-490 radio comes with a **1-Year Warranty** from the date of purchase. This warranty covers manufacturing defects and ensures the product meets its specified performance standards under normal use.

For technical support, warranty claims, or any inquiries regarding your Radtel RT-490, please contact the manufacturer, Xiamen Radtel Electronics Co.,Ltd, or the authorized seller, Radtel Direct, through their official support channels. Please retain your proof of purchase for warranty validation.

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