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› Retevis RT81 Digital Two-Way Radio User Manual

## Retevis RT81

# Retevis RT81 Digital Two-Way Radio User Manual

Model: RT81

## 1. INTRODUCTION

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This manual provides detailed instructions for the safe and efficient operation of your Retevis RT81 Digital Two-Way Radio. Please read this manual thoroughly before using the device to ensure proper functionality and to prevent damage.



Figure 1: Retevis RT81 Digital Two-Way Radios with Charging Docks

## 2. PACKAGE CONTENTS

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Verify that all items are present in your package:

- Retevis RT81 walkie talkies (4 units)
- 2200mAh Li-ion Battery (4 units)
- Belt Clip (4 units)
- Charging Dock (4 units)
- Charger Adapter (4 units)
- User Manual (1 unit)



Figure 2: Included Accessories and Components

### 3. PRODUCT FEATURES

- **Digital Mobile Radio (DMR) Standard:** Provides clear, loud, and static-free digital voice communication.
- **IP67 Waterproof and Dustproof:** Designed to withstand immersion in 1 meter of water for 30 minutes and is fully protected against dust ingress.
- **Extended Battery Life:** Equipped with a 2200mAh Li-ion battery, offering over 12 hours continuous working time in analog mode and over 20 hours in digital mode.
- **Long Communication Range:** High power output ensures strong signal penetration, suitable for communication in challenging environments like between buildings.
- **Dual Time Slot:** Enhances communication efficiency.
- **Rugged Construction:** Durable shell structure and materials for use in complex environments.

- **Pre-set Channels:** Channels are pre-set with CTCSS/DCS to minimize interference.

## IP67 waterproof and dustproof



Figure 3: IP67 Waterproof and Dustproof Feature



**Extended battery life**

Continuous working time:

Analog: >12 hours ●

Digital: >20 hours ●

Figure 4: Extended Battery Life

## 4. PRODUCT OVERVIEW

Familiarize yourself with the components of your RT81 radio:



Figure 5: RT81 Radio Components and Dimensions

- **Antenna:** For transmitting and receiving signals.
- **Power/Volume Knob:** Turns the radio on/off and adjusts volume.
- **Channel Selector Knob:** Selects the desired communication channel.
- **PTT (Push-to-Talk) Button:** Press and hold to transmit, release to receive.
- **Side Buttons:** Programmable for various functions (e.g., monitor, scan).
- **Speaker/Microphone:** For audio output and input.
- **Battery Pack:** Removable 2200mAh Li-ion battery.
- **Belt Clip:** Attaches the radio to clothing or a belt.

## 5. SETUP

### 5.1. Attaching the Antenna

1. Align the antenna with the connector on the top of the radio.
2. Turn the antenna clockwise until it is securely fastened. Do not overtighten.

## 5.2. Installing the Battery

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 upwards until it clicks into place.
4. To remove, slide the battery release latch (if present) and slide the battery downwards.



Figure 6: Battery Installation Area

## 5.3. Charging the Battery

1. Connect the charger adapter to a power outlet.
2. Insert the adapter's plug into the charging dock.
3. Place the radio (with battery installed) into the charging dock. Ensure proper contact.
4. The charging indicator light will typically show red during charging and turn green when fully charged.
5. For optimal battery life, charge the battery fully before first use.

## 6. OPERATING INSTRUCTIONS

### 6.1. Power On/Off and Volume Adjustment

- To power on, rotate the Power/Volume knob clockwise until you hear a click.
- Continue rotating the knob clockwise to increase volume, counter-clockwise to decrease.
- To power off, rotate the Power/Volume knob counter-clockwise until you hear a click.

### 6.2. Selecting a Channel

- Rotate the Channel Selector knob to choose your desired channel (1-32).
- The radio may announce the channel number.

### 6.3. Transmitting and Receiving

- **To Transmit:** Press and hold the PTT (Push-to-Talk) button on the side of the radio. Speak clearly into the microphone. The indicator light will typically glow red.
- **To Receive:** Release the PTT button. The indicator light will typically glow green when receiving a signal.
- Ensure you are on the same channel as the other party.

### 6.4. Compatibility with Other Radios

The RT81 radios use pre-set CTCSS/DCS codes to reduce unwanted transmissions. Direct communication with other brands of radios may not be possible without specific firmware adjustments. If interoperability is required, please contact Retevis support for assistance.

The graphic features a dark background with a yellow banner at the top containing the text "Dual Mode Call". Below this, a grey banner reads "More efficient communication". The text "Retevis RT81 DMR walkie talkie" is centered. To the right, a circular inset shows two black Retevis RT81 walkie talkies. Below the text, three circular icons are displayed: a signal icon for "Long range", a circuit icon for "Digital signal", and a water drop icon with "IP 67" for "IP67 waterproof".

Figure 7: Compatibility Information for RT81 Radios

## 7. MAINTENANCE

### 7.1. General Care

- Keep the radio dry. If it gets wet, wipe it dry immediately.

- Avoid exposing the radio to extreme temperatures.
- Do not use harsh chemicals or strong detergents to clean the radio. Use a soft, damp cloth.
- Ensure the antenna is securely fastened but do not overtighten.

## 7.2. Battery Care

- Do not short-circuit the battery terminals.
- Do not dispose of batteries in fire.
- If the radio will not be used for an extended period, remove the battery.
- Store batteries in a cool, dry place.

## 8. TROUBLESHOOTING

| Problem                                         | Possible Cause                                                        | Solution                                                                                                                                                                   |
|-------------------------------------------------|-----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Radio does not power on.                        | Battery is dead or not installed correctly.                           | Charge the battery. Reinstall the battery, ensuring it clicks into place.                                                                                                  |
| Cannot transmit or receive.                     | Incorrect channel selected; out of range; low battery; antenna loose. | Verify channel. Move closer to other radios. Charge battery. Secure antenna.                                                                                               |
| Poor audio quality or static.                   | Weak signal; interference; volume too low/high.                       | Move to an area with better reception. Adjust volume. Ensure antenna is secure.                                                                                            |
| Screws (e.g., belt clip, housing) become loose. | Normal wear and tear, vibration.                                      | Tighten screws. Consider using a thread-locking compound (e.g., Loctite) for critical screws, being careful not to apply to antenna threads if frequent removal is needed. |
| Cannot communicate with other brand radios.     | Pre-set CTCSS/DCS codes are incompatible.                             | Contact Retevis support for firmware or programming assistance to ensure compatibility.                                                                                    |

## 9. SPECIFICATIONS

- **Model:** RT81
- **Item Model Number:** FA9119AX4-C9018A
- **Brand:** Retevis
- **Color:** Black
- **Number of Channels:** 32
- **Battery:** 2200mAh Lithium Ion (included)
- **Voltage:** 7.4 Volts (AC)
- **Water Resistance Level:** IP67 Waterproof
- **Item Weight:** 7.04 ounces (approx. 200g)
- **Product Dimensions:** 4.72 x 2.28 x 1.5 inches (approx. 12 x 5.8 x 3.8 cm)

- **Special Features:** Digital Two-Way Radio, DMR Walkie Talkie, Heavy Duty, Sturdy and Durable, High Power, Fully Dustproof, Single Call, Group Call, All Calls.

## 10. WARRANTY AND SUPPORT

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Retevis provides a **2-year warranty** for the radio body and a **1-year warranty** for accessories. A 30-day no-reason return policy is also offered.

Beyond the warranty period, maintenance services are available, with buyers responsible for associated costs.

For any inquiries or support, please contact Retevis via Amazon mail. Responses are typically provided within 12 hours.

For more information, visit the official Retevis store: [Retevis Amazon Store](#)