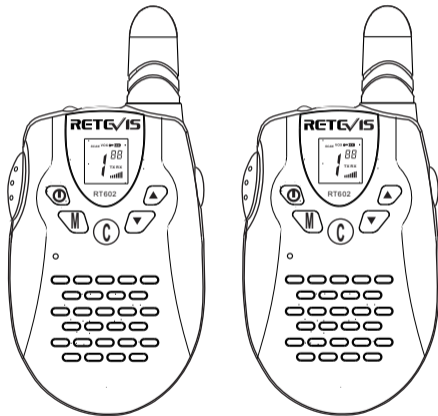


# RETCV<sup>IS</sup>



US

## **RT602** **Walkie Talkie** **User's Guide**

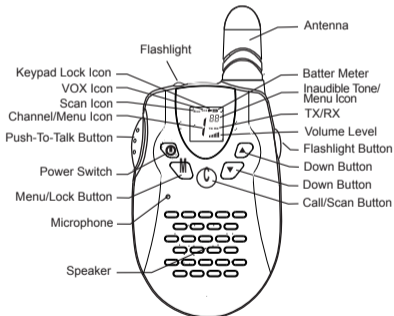


Before using this product, read the operating instructions for safe use contained in the Product Safety and RF Exposure booklet enclosed with your radio.

packing list	quantity
Walkie-talkie	2
Belt Clip	2
User guide	1
Battery	2
Adapter	1
desk stand charger	1

## Specification

TECHNICAL PARAMETERS	
Product number	RT602
Frequency range	FRS
Channel number	22
Channel spacing	12.5KHz
Working voltage	3.7V
Frequency stability	±2.5ppm
Operating temperature range	-20 C ~50 C
The antenna impedance	50Ω
Overall dimensions	115*55*28mm
Weight	62g



TRANSMITER	
RF power	0.5W
Modulation method	11k $\emptyset$ F3E
Noise and harmonic	< -40dB
Residual Radiation	$\leq$ -35dB
Modulation distortion	$\leq$ 7%
Maximum deviation	$\leq$ $\pm$ 5KHz

RECEIVER	
The sensitivity	$\leq$ 0.2 $\mu$ V
Modulation receiver bandwidth	$\pm$ 5KHz
Adjacent Selectivity	$\geq$ 40dB
Intermodulation interference ejection	$\geq$ 35dB
Spurious response inhibition	$\geq$ 70dB
Audio output power	$\geq$ 300mW
Audio distortion	$\leq$ 8%

## Overview of Product

1. Civil Unlicensed Hand-held Radio (UHF)
2. CTCSS/CDCSS(38/61 codes )
3. Actual communication range based on surroundings, such as mountains, trees, buildings and son on.
4. Push-to-Talking( talking through pressing PTT)
5. Auto Scan (to scan automatically by pressing keyboard shortcut)
6. Auto Squelch
7. Call Tone(10 tones available)
8. Keypad tone( to turn on or off if need be)
9. Keypad lock (Long press M Key to lock keypad to prevent accidental operation)

10. LED Flashlight
11. LCD screen (backlighted display)
12. Low battery warning
13. Roger beep(support to switch on or off the the function of roger tone)
14. VOX( Sensitivity Level 1,2,3)
15. Memory function and Reset to factory defaults

### 1. **Power on-off setting and relative function**

Press POWER button for three seconds to start. At the same time, the radio chirps when the LCD screen lights up. Press POWER button again for three seconds to turn it off.

### 2. **Setting the volume**

In standby mode, you can set the volume by adjusting UP/DOWN key(Volume Level 1 is the lowest, Level 8 is the biggest)

### 3. **Scanning function**

Attention: In standby mode, press C button briefly to enable the call tone option from which you have 10 kinds to choose. In standby mode, long press C button to start scanning. (Press the button about three seconds to start. )Scanning function: the radio stops on the channel where it detects a signal(you can press PTT to talk with the other at the moment). When there is no signal, the radio will resume searching five seconds or continue to scroll channels down/up if you press DOWN/UP button. To exit, press PTT briefly.

#### 4. **Keyboard lock**

Long press M key to enable keypad lock in order to prevent accidental operation.

#### 5. **Switching function**

With radio on, press M button to enter the menu setting; Pressing once until current channel begins to flash can enable channel option. Press UP/DOWN key to select a channel. Pressing twice until a number flickers on the top right hand corner can enable CTCSS/CDCSS Interference Eliminator Code option. Pressing three times enables VOX function. You can turn it off or select 3 levels of sensitivity level. Pressing four times enables call tones(Group 1-10). To select a call tone, press UP/DOWN key. To turn on or off keypad tone, press five times. Pressing six times enables the roger tone feature. To return to standby mode, press seven times. To change the setting of relative function in this stage, press UP/DOWN button again. Press PTT to confirm the function or the radio will exist menu after 15 seconds.

#### 6. **Setting Channel**

Refer to operation of Menu function or select the function with radio on until the channel number blinks. Then, press UP/DOWN button to set desired channel ( USA Channel 01-22 ).

#### 7. **CTCSS/CDSS Interference Eliminator Code Option**

Refer to the function of the operation for Menu button or press Menu button twice with radio on until the channel number, for example 01, blinks on the top right hand corner. Then, press UP/DOWN button to

set desired combination(OF position is to switch off CTCSS/CDCSS. Codes 01-38 are CTCSS codes while codes 39-99 CDCSS codes.)

Note: Interference eliminator codes could only protect the equipment from the interference from unwanted signals but cannot prevent from eavesdropping. When this option is disabled, signals can be received on the same channel with or without interference eliminator code . While, signals can only be received on the same channel and same interference eliminator code as the other radio and completely irreverent signals will be filter out if the interference eliminator code option is enabled.

#### 8. **VOX**

Refer to the function of the operation for Menu button or press Menu button three times with radio on until the number 03 flashes( which means VOX sensitivity level 3) .Press UP or DOWN button to set VOX sensitivity level.

Level 3 - High Sensitivity for low background noise level  
Level 2 - Medium Sensitivity for most environments

Level 1 - Low Sensitivity for high background noise level

NOTE: 1. There is short delay between the time you start talking and when the transmission is mad.

- When VOX option is enabled, PTT will automatically shut off and the radio transmit without need of pressing PTT button.
- It will be two seconds before the radio stops transmitting at the end of the talk.

#### 9. **Setting call tone**

Refer to the function of the operation for Menu buttons

or press Menu button four times with radio on until a number (it stands for the kind of call tone) flashes in the display while the icon CA does not flash on the top right hand corner. Press UP or DOWN button to select one kind of 10 call tone in total. Press C button to transmit.

#### 10. Keypad tone

Pressing Menu button five times enables key tone option. Press UP or DOWN button to turn on or off the tone.

#### 11. Roger beep

Pressing Menu button six times enables the roger beep feature. Press UP or DOWN button to turn it on or off .

#### 12. How to communicate

To communicate with each other, set the same channel and tone as the other radio. Press and hold PTT button with the radio about 5 cm away from your mouth when talking. In order to communicate at any time, release PTT immediately at the end of your talk .

Note: The radio provides simplex communication on the same channel so that it does not allow to transmit when it is receiving signals, and vice versa. You cannot hear the other side when the radio is sending out signals and you also cannot talk when the other is talking. If you press PTT to talk, you will not hear what the other is speaking and the other also can not hear you. the icon TX is displayed in LCD when you are pressing PTT to

make transmission and RX displayed when receiving signals.

#### 13. Battery Level

The battery level is displayed in LCD. Please charge the battery in time when it is low.

#### 14. Memory function

Due to memory function, there is no need to reset channel when radio or power is off.

#### 15. Factory defaults

With the radio off, press and hold Menu/Power button to reset the radio to factory defaults.

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- This guarantee card should be kept by the user, no replacement if lost.
- Most new products carry a two-year manufacturer's warranty from the date of purchase. Further details, please read at <http://www.retevis.com/after-sale/>
- The user can get warranty and after-sales service as below:  
Contact the seller where you buy the product.  
Products Repaired by Our Local Repair Center
- For warranty service, you will need to provide a receipt from the actual seller for verification

## **Exclusions from Warranty Coverage**

- To any product damaged by accident.
  - In the event of misuse or abuse of the product or as a result of unauthorized alterations or repairs.
- If the serial number has been altered, defaced, or removed.

<b>Guarantee</b>	
Model Number:	
Serial Number:	
Purchasing Date:	
Dealer:	
Telephone:	
User's Name:	
Telephone:	
Country:	
Address:	
Post Code:	
Email:	

## **Warnings**

### **RF ENERGY EXPOSURE AND PRODUCT SAFETY GUIDE FOR PORTABLE WALKIE TALKIE**



**ATTENTION!**

Before using this radio, read this guide which contains important operating instructions for safe usage and RF energy awareness and control for compliance with applicable standards and regulations.

This walkie talkie uses electromagnetic energy in the radio frequency (RF) spectrum to provide communications between two or more users over a distance. It uses radio frequency (RF) energy or radio waves to send and receive calls. RF energy is one form of electromagnetic energy. Other forms include, but are not limited to, sunlight and x-rays. RF energy, however, should not be confused with these other forms of electromagnetic energy, which when used improperly, can cause biological damage. Very high levels of x-rays, for example, can damage tissues and genetic material.

Experts in science, engineering, medicine, health, and industry work with organizations to develop standards for safe exposure to RF energy. These standards provide recommended levels of RF exposure for both workers and the general public. These recommended RF exposure levels include substantial margins of protection.

All Retevis walkie talkie are designed, manufactured, and tested to ensure they meet government-established

RF exposure levels. In addition, manufacturers also recommend specific operating instructions to users of walkie talkie. These instructions are important because they inform users about RF energy exposure and provide simple procedures on how to control it.

Please refer to the following websites for more information on what RF energy exposure is and how to control your exposure to assure compliance with established RF exposure limits: <http://www.who.int/en>

### **Local Government Regulations**

When walkie talkie are used as a consequence of employment, the Local Government Regulations requires users to be fully aware of and able to control their exposure to meet occupational requirements. Exposure awareness can be facilitated by the use of a product label directing users to specific user awareness information. Your Retevis walkie talkie has a RF Exposure Product Label. Also, your Retevis user manual, or separate safety booklet includes information and operating instructions required to control your RF exposure and to satisfy compliance requirements.

### **Radio License**

Governments keep the radios in classification, most of the classified walkie-talkie need to get local government License, and operation is allowed. The detailed classification and the use of your two radios, please contact the local government radio management departments. For the following specified classification: the USA FRS, Australian CB, the individual license is not required.

### **Compliance with RF Exposure Standards (If appropriate, Reference to the actual product's Safety Marking)**

Your Retevis walkie talkie is designed and tested to comply with a number of national and International standards and guidelines (listed below) for human exposure to radio frequency electro-magnetic energy.

#### **FCC ID**

The FCCID means: This radio complies with the IEEE (FCC) and ICNIRP exposure limits for occupational /controlled RF exposure environments at operating duty factors of up to 50% talk-50% listen and is approved for occupational use only.

#### **IC ID**

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference, and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

In terms of measuring RF energy for compliance with these exposure guidelines, your radio generates measurable RF energy only while it is transmitting (during talking), not when it is receiving (listening) or in standby mode.

Note: The approved batteries, supplied with this radio, are rated for a 5-5-90 duty factor (5% talk-5% listen-90% standby) even though this radio complies with FCC occupational exposure limits and may operate at duty factors of up to 50% talk.

## **RF energy exposure standards and guidelines (if appropriate)**

Your Retevis walkie talkie complies with the following RF energy exposure standards and guidelines:

- United States Federal Communications Commission (FCC), Code of Federal Regulations; 47 CFR part 2 sub-part J.
- American National Standards Institute (ANSI) / Institute of Electrical & Electronic Engineers (IEEE) C95. 1-2005
- IEEE Std. 1528:2013 and KDB447498, Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields.
- Institute of Electrical and Electronic Engineers (IEEE) C95.3-2002
- International Commission on Non-Ionizing Radiation Protection (ICNIRP)
- Ministry of Health (Canada) Safety Code 6 & Industry Canada RSS-102.
- International Electrotechnical Com-mission IEC62209-2:2010]

## **RF Exposure Compliance and Control Guidelines and Operating Instructions**

To control your exposure and ensure compliance with the occupational/controlled environment exposure limits, always adhere to the following procedures.

### **Guidelines:**

- User awareness instructions should accompany the device when transferred to other users.
- Do not use this device if the operational requirements described herein are not met.

### **Operating Instructions:**

- Transmit no more than the rated duty factor of 50% of the time. To Transmit (Talk), push the Push To Talk (PTT) button. To receive calls (listen), release the PTT button. Transmitting 50% of the time, or less, is important because the radio generates measurable RF energy exposure only when transmitting in terms of measuring for standards compliance.
- Transmit only when people outside the vehicle are at least the recommended minimum lateral distance away from a properly installed according to installation instructions, externally mounted antenna.
- When operating in front of the face, worn on the body, always place the radio in a Retevis approved clip, holder, holster, case, or body harness for this product. Using approved body-worn accessories is important because the use of Non-Retevis approved accessories may result in exposure levels, which exceed the IEEE /ICNIRP occupational/controlled environment RF exposure limits.
- If you are not using a body worn accessory and are not using the radio in the intended use position, in front of the face or at the body in the PTT mode or alongside of the head in the phone mode, then ensure the antenna and the radio are kept 2.5 cm (one inch) from the body when transmitting. Keeping the radio at a proper distance is important because RF exposures decrease with increasing distance from the antenna.

### **Hand-held Mode**

- Hold the radio in a vertical position with the microphone (and other parts of the radio including the antenna) atleast 2.5cm





(one inch) away from the nose or lips.

The antenna should be kept away from the eyes. Keeping the radio at a proper distance is important as RF exposure decreases with increasing distance from the antenna.

### Phone Mode

- When placing or receiving a phone call, hold your radio product as you would a wireless telephone. Speak directly into the microphone.

### Electromagnetic Interference/Compatibility

Note: Nearly every electronic device is susceptible to electromagnetic interference (EMI) if inadequately shielded, designed, or otherwise configured for electromagnetic compatibility.



#### Avoid Burns

Small Parts. Not for children under 3 years.



WARNING

#### Turn off your radio power in the following conditions:

- Turn off your radio before removing (installing) a battery or accessory or when charging battery.
- Turn off your radio when you are in a potentially hazardous environments: Near electrical blasting caps, in a blasting area, in explosive atmospheres (flammable gas, dust particles, metallic powders, grain powders, etc.).
- Turn off your radio while taking on fuel or while parked at gasoline service stations.

### To avoid electromagnetic interference and/or compatibility conflicts

- Turn off your radio in any facility where posted notices instruct you to do so, hospitals or health care facilities (Pacemakers, Hearing Aids and Other Medical Devices) may be using equipment that is sensitive to external RF energy.
- Turn off your radio when on board an aircraft. Any use of a radio must be in accordance with applicable regulations per airline crew instructions.

#### Note:

##### - Pacemakers

Defibrillators or other Implanted Medical Devices Persons with pacemakers, Implantable Cardioverter-Defibrillators (ICDs) or other active implantable medical devices (AIMD) should:

- ALWAYS keep the radio more than 15cm from their pacemaker when the radio is turned on.
- Consult with their physicians regarding the potential risk of interference from radio frequency transmitters, such as portable radios (poorly shielded medical devices may be more susceptible to interference).
- Turn the radio OFF immediately if they have any reason to suspect that interference is taking place.
- Do not carry the radio in a chest pocket or near the implantation site, and carry or use the radio on the opposite side of their body from the implantable device to minimize the potential for interference.

### - Hearing Aids

Some digital wireless radios may interfere with some hearing aids. In the event of such interference, you may want to consult your hearing aid manufacturer to discuss alternatives.

### - Other Medical Devices

If you use any other personal medical device, consult the manufacturer of your device to determine if it is adequately shielded from RF energy. Your physician may be able to assist you in obtaining this information.



### Protect your hearing:

- Use the lowest volume necessary to do your job.
- Turn up the volume only if you are in noisy surroundings.
- Turn down the volume before adding headset or earpiece.
- Limit the amount of time you use headsets or earpieces at high volume.
- When using the radio without a headset or earpiece, do not place the radio's speaker directly against your ear.

Note: Exposure to loud noises from any source for extended periods of time may temporarily or permanently affect your hearing. The louder the radio's volume, the less time is required before your hearing could be affected. Hearing damage from loud noise is sometimes undetectable at first and can have a cumulative effect.



### Avoid Burns

#### - Forbid

- Do not use charger outdoors or in moist environments, use only in dry locations/conditions.
- Do not disassemble the charger, that may result in risk of electrical shock or fire.
- Do not operate the charger if it has been broken or damaged in any way.
- Do not place a portable radio in the area over an air bag or in the air bag deployment area. The radio may be propelled with great force and cause serious injury to occupants of the vehicle when the air bag inflates.

#### - To reduce risk

- Pull by the plug rather than the cord when disconnecting the charger.
- Unplug the charger from the AC outlet before attempting any maintenance or cleaning.
- Contact Retevis for assistance regarding repairs and service.

#### - Use of Communication Devices While Driving

- Always check the laws and regulations on the use of radios in the countries and areas where you drive.
- Give your full attention to driving and to the road.
- If available, use the hands-free facility.
- If driving conditions or regulations require it, pull off the road and park before making or answering a call.



### **Approved Accessories**

- This radio meets the RF exposure guidelines when used with the Retevis accessories supplied or designated for the product. Use of other accessories may not ensure compliance with the RF exposure guidelines and may violate regulations.
- For a list of Retevis-approved accessories for your radio model, visit the following website:  
<http://www.Retevis.com>



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