

# RETEVIS

## RT54



RECYCLED PACKAGING

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MADE IN CHINA

### USER'S MANUAL



DIGITAL TWO WAY RADIO



### Introduction

Thank you for choosing RETEVIS radio. Our handheld radios have been designed for ease of use and dependability. We encourage you to read and understand all aspects of this instruction manual to ensure safe and reliable use of our product. If you have any questions about this product, please contact RETEVIS for more information.

**EU Importer:**  
**Importer:Germany Retevis Technology GmbH**  
**Address:Uetzenacker 29,38176 wendeburg**



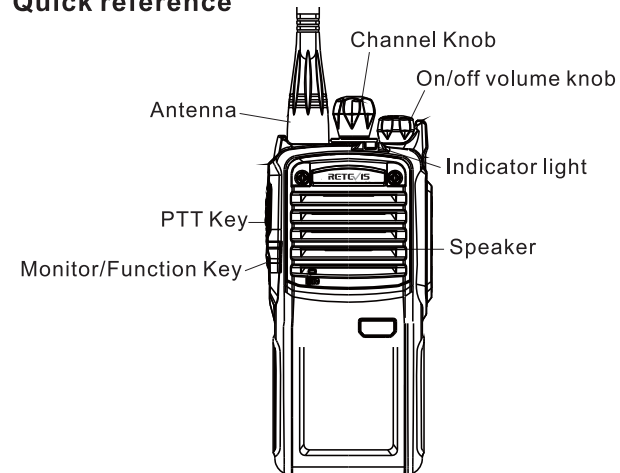
### Safety instruction

Please notice the following precautions to prevent fire, personal injury or damage to the radios.

- ◆ Do not modify the radios no matter what is the reason.
- ◆ Do not put the radios under direct sunlight for long time or nearby heaters.
- ◆ Do not put the radios in any area that with much moist or put it in the area not smooth and steady.
- ◆ This radio is with high power and little size, if a slight fever phenomenon please feel free to use.

**If there is any problem with it, please contact with RETEVIS or the local distributor.**

### Quick reference



**Switch on**

Rotate the volume switch knob clockwise, there will be a “DI” boot prompt after heard “kaca” sound, if no voice, then broadcast the current channel.

**Switch off**

Rotate the volume switch knob anticlockwise, until you heard “Kaca” .

**Volume adjustment**

After successfully boot, rotate the volume switch knob clockwise to increase the volume, anticlockwise to decrease the volume.

**Channel choosing**

Rotate the “channel choosing knob” into the channel what you need,

**Transmit**

After choose the channel, press” PTT” , speaking when the distance to speaker is from 2.5 to 5 centimeters.

**Receive**

Being boot status, when there is a signal comes in, the signal will be received automatically, the indicated light is being green and keeps on.

**RETEVIS Radios quality warranty and liability****The warranty policy not include the flowing conditions:**

- 1.Defect or injuries caused by working in abnormal situation.
- 2.Defect or injuries caused by misuse, accident, or be into water.
- 3.Defect or injuries caused by the users test, operate, repair, install or adjustment.
- 4.The product information on the back aluminum board disappear, the series No. was changed or can not identify.
- 5.There is any damage or unsealed on the sealed battery case.
- 6.Appearance scratches or other decoration damages but not effect normally use.

**General Items**

This warranty policy ruled that all the liability of the product quality, RETEVIS has the right to decide to repair, replace, or refund according to the purchase price; it is the only way to reimbursement solution. This quality warranty replace all other public quality warranty, defaulted quality warranty, include not restrict to a specific purpose or use the defaulted warranty, limited to this warranty period.

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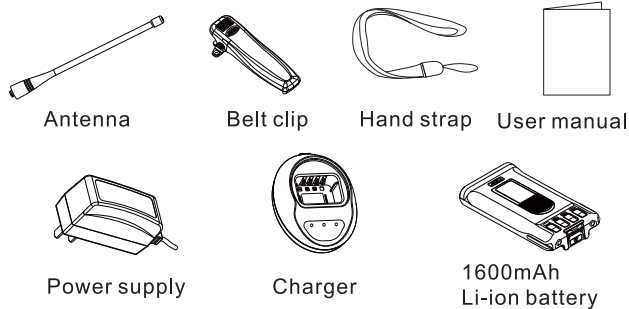
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### Unpacking and checking devices

Carefully remove the radios from the box, we recommend that before you discard the packaging, checking the accessories in accordance with the following table Checklist, if you find any items lost or damaged in transit, please submit Indemnity immediately to the freight company or delivery person.

#### Accessories

Items	Quantity
Antenna	1
Belt clip	1
Power supply	1
Battery	1
Charger	1
Hand strap	1
User manual	1
Certificate	1
Warranty card	1



### Battery information

#### Battery protection

This product uses lithium batteries as a power source, with the lightweight, environmentally friendly, no memory, and some other advantages, the following battery tips that can help you to get the best performance and the most enduring cycle life when use RETEVIS batteries.

1. Be sure to use the original RETEVIS charger to charge the battery.
2. Battery with radios also can be charged, please switch off the radios to ensure battery can be fully and effectively charged.
3. The new batteries can be stored for long period, but should be stored in a cool, dry place. (Need to be recharged once every three months to activate the electrical properties, otherwise it will be damaged and can not use).
4. The stored battery need to be fully charged before use.
5. You can only use the battery charger and power supply specified by RETEVIS.
6. Extreme temperatures will effect the capacity of the battery, should be stored in a dry warm environment.
7. The battery can not be placed in hot or cold place, otherwise it will reduce battery capacity and using life, the battery should always be stored at normal temperature, and radios equipped with cold batteries may not work temporarily, even if fully charged, lithium batteries will be apparently affected at subzero.
8. Do not let the battery short circuit, when metal objects (such as metal bench, pins, etc.) directly connected to the battery positive (metal strips on the battery), For example, the radios on the metal table, while carrying batteries in pocket

or bag, batteries may be accidental short circuit, damage to the battery or the object caused by short circuit.

9.In accordance with local laws dispose of used batteries, usually recycling.

10.Do not discard the batteries into the fire, in order to avoid explosion damage.

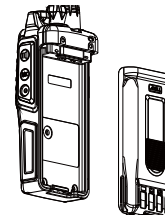
**Battery attention**

- 1.Do not use the damaged charger or batteries.
- 2.Do not put the batteries to other use.
- 3.Battery charging time is determined by the remaining capacity of the battery, the battery type and charger type, the battery can be repeatedly charged and discharged more than 300 times, but gradually aging, when using time shorter than the normal time obviously, should buy a new battery.
- 4.Unused batteries for long time will discharged automatically.

**Battery charge**

When the battery capacity is very low, need to charge before use.

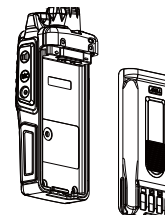
- 1.The battery can be charged lonely or together with the radios(please remember to switch off the radio).
- 2.Charger indicator shows charging situation.
  - ① Yellow light, which means waiting for charge.
  - ② Red light, means charging.
  - ③ Green light, means fully charged.

**Preparation****Install the battery**

- 1.Aligned the corresponding notches with the two raised radio end point on the battery pack.



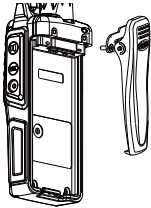
- 2.Close to the back of the battery pack on the radios, until the release gates installed onto the battery.

**Disassemble battery**

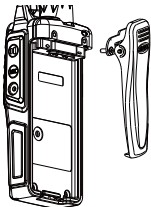
- When disassemble batteries, press the release gate, remove the batteries from the radios.

**Install antenna**

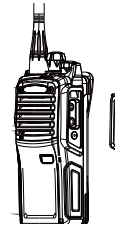
Hold the antenna base, clockwise rotate the antenna onto the top of the radio antenna connector until tighten up.

**Install Belt clip**

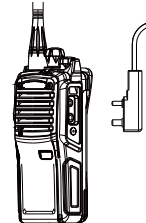
Lock the belt clip onto the up back of the radios, until tighten up.

**Disassembly Belt clip**

Disassemble these two screws from the belt clip by the screwdriver.

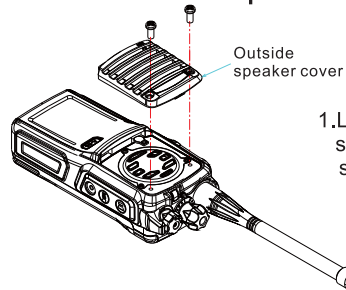
**Install Speaker/microphone insert jack**

If you not use the speaker/microphone, please install the rubber cover on the SP/MIC jack.

**Install Speaker/microphone**

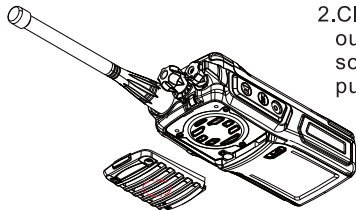
Insert the speaker/microphone plug into SP/MIC jack.

Remove and clean speaker

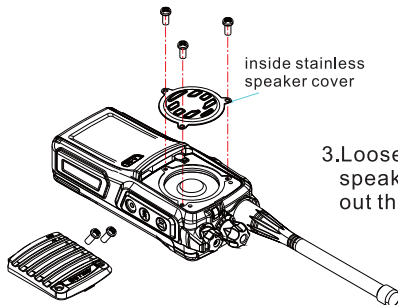


Outside speaker cover

1. Loosen the speaker cover screws and remove the outside speaker cover.

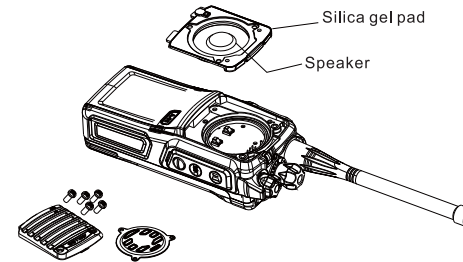


2. Cleaning up the dust in the outside speaker cover, until sound becomes normal and put it back.



inside stainless speaker cover

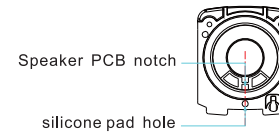
3. Loosen the screws of the speaker inside cover, pull out the inside speaker cover.



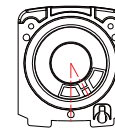
Silica gel pad

Speaker

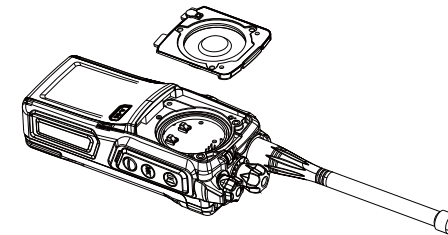
4. Take out the speaker and Silica gel pad together, then pull out the speaker plug.



After clean up the dust, Speaker PCB notch must be aligned silicone pad hole when you install back the silica gel pad to the speaker, like the left picture.

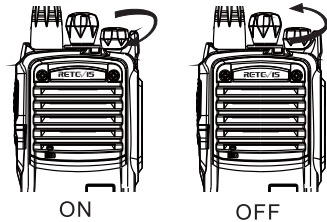


In the left picture, if speaker PCB notch isn't aligned silicone pad hole, will result in Speaker and radios can't be connected, no function with the speaker.





**Switch on/off radios**



Switch on: rotate the on/off switch clockwise to boot the radios, it will be a boot prompt if the radio works normally and start the boot prompt function, otherwise, there is no boot prompt.

Switch off: anticlockwise to rotate the on/off/volume knob till a "kaca" sound then the radio switches off.

**Volume adjustment**

1. Press the monitor key, you will hear a sustained tone.
2. Rotate the on/off/volume knob to adjust the volume
3. Loosen the key.

**Channel choosing**

The radio with 16 channels, some of the channels maybe not written frequency. Please contact with the distributor for more information.

\*Left/right rotate the channel choosing knob to choose the channel.

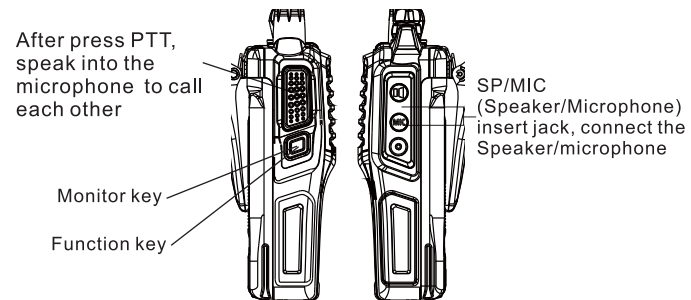
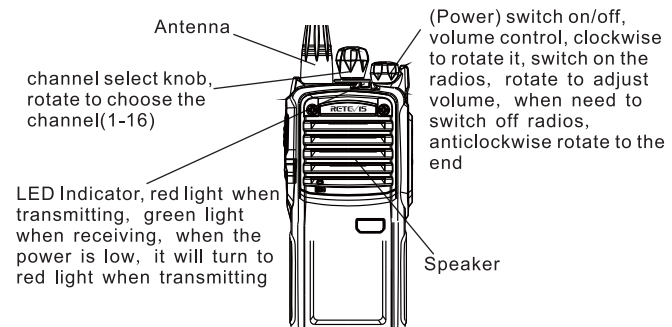
**Transmit**

1. Switch on
2. Rotate the channel choosing knob to choose the channel.
3. Press "PTT" speak when the distance to the speaker is about 2.5-5 centimeter.
4. After finish talking please loosen the PTT.

**Receive**

1. Switch on.
2. Adjust the volume.
3. Turn to the channel what you need.
4. When there is a signal comes in, you will receive the signal.

**Familiar with the radios**



## Basic operations

### (PTT) button

Each channel of radio can be allocated as digital channel, using channel.

▶ While calling, PTT button can enable you to transmit signal to other radios, press PTT for talking, loosen PTT for receiving. The microphone is activated when pressing PTT.

▶ When there is no call, PTT button used to transmit a new call according to programme, if the transmit permission tone has been activated, wait until the short prompt tone is over.

▶ During the transmit, if the “channel available indication” function has been activated(agent preprogrammed), you will hear a short prompt tone after your target radio(receiving your call) loosening PTT button, it shows this channel is currently available, waiting for your answer.

▶ If the call is interrupted(like your radio received an emergency call), you will still hear the channel available prompt tone, you can shoot off “channel available instruction” function by software programmable.

▶ Rotate channel knob to switch digital channels.

### Status recognition indicator

The radio shows its running status through following ways:

LED indicator...

Single frequency single tone...

Prompt tone...

### LED indicator

LED indicator shows running status of radio.

Red light--radio is transmitting.

Green light--radio is powering on or receiving non-encryption call or data,or detecting air activities.

### Prompt tone

Prompt tone provides you the radio' s status or voice prompt when radio is receiving data.

Continuant

Continuously transmitting single tone till the end.

Periodic tone

Transmitting according to continuous cycle time set up by radio, the tone start,stop,and repeat automatically.

Repeated tone

The signal tone repeated by itself, till users makes it stop.

Momentary tone

Transmitting once in a very short time, the time length defined by radio.

High tone prompt tone.

Low tone prompt tone.

Confirmed prompt tone.

Negative prompt tone.

### Receiving and transmitting call

When you know how the handheld radio of RT54 is allocated, then you can use it.

Using this instruction to be familiar with basic calling functions.

Choosing district.....

Choosing radio channel, user ID, or communication group ID.....

Receiving and replying call.....

Transmitting a call.....

### Select district

District is a group of channels, this radio can provides two districts, each district has 16 channels.

Operations:

1.press the preprogrammed district button.

2.You will hear a confirmed prompt tone, indicates radio has transferred from district 1 to district 2, or you will hear a negative prompt tone, indicates radio has transferred from district 2 to district 1.

**Choosing radio channel, user ID, communication group ID**

Operations:

After needed district is setting up(if radio has multiple districts), rotate channel choosing knob to choose channel, user ID or communication group ID.

**Receive and reply radio's call**

After channel, user ID or communication group set up, you are able to receive or reply the call, when radio is transmitting, the LED indicator is red, LED indicator is green while receiving.

**Receive and reply group call**

In order to receive call from user group, the radio must be allocated to this communication group.

- 1.LED indicator is green.
- 2.Hold the radio in a vertical position with the microphone 2.5 to 5cm(1 to 2 inches) away from the lips. If you opened the "channel available indication" function, when you loosen the PTT button, you will hear a short prompt tone, it shows the current channel is available, wait for you answer.
- 3.Replying this call by pressing PTT button, LED indicator will be red.
- 4.While the transmit permission tone is over(if it is activated), then speak to microphone clearly.
- 5.Loosening PTT button for receiving.
- 6.If there is no voice during the preset time period, the call will expire.

**Receive and reply selective call**

Selective call means one radio calls another radio, there are two types of selective call, the one is implementing detection of radio's existence before the calling, the other one is ready to call immediately.

When your radio has been selected, the LED indicator is green, the agent can only program one type of those to the radio.

Operations:

When you are receiving selective call:

- 1.LED indicator is green.

- 2.Hold the radio in a vertical position with the microphone 2.5 to 5cm(1 to 2 inches) away from the lips.If you opened the "channel available indication" function, when you loosen the PTT button, you will hear a short prompt tone, it shows the current channel is available, wait for you answer.
- 3.Replying this call by pressing PTT button, LED indicator will be red.
- 4.While the transmit permission tone is over(if it is activated), then speak to microphone clearly.
- 5.Loosening PTT button for receiving.
- 6.If there is no voice during the preset time period, the call will expire.
- 7.You will hear a short tone.

**Receiving full call**

The full call means one radio calls to all the other radios which at the same channel, it is used to announce important notification that users might to know.

Operations:

- 1.Transmit a prompt tone, LED indicator is green.
- 2.If there is no voice during the preset time period, the full call will expire. If you opened the "channel available indication" function, when you loosen the PTT button, you will hear a short prompt tone, it shows the current channel is available, but you are unable to reply the full call.

PS:When receiving a full call, if you switched to another channel, the radio will stop to receive this full call. During the full call, you are not allowed to use any of preprogrammed button until the call is end.

**Transmit a call**

You can use bellow methods to choose a channel, user ID or communication group ID:

- ▶ Channel choosing knob
- ▶ Preprogrammed single call button

Using channel choosing knob to make calls.

### **Transmit group call**

If you want to make a call to the group, the radio has to be allocated to this group.

Operations:

1. Rotate the channel choosing knob, to choose channel by using activated communication group ID.
2. Hold the radio in a vertical position with the microphone 2.5 to 5cm (1 to 2 inches) away from the lips.
3. Transmitting by pressing PTT button, LED indicator is red.
4. While the transmit permission tone is over (if it is activated), then speak to microphone clearly.
5. Loosening PTT button for receiving, while the target radio is replying, the LED indicator is green.
6. If the "channel available indication" function has been activated, you will hear a short prompt tone while the target radio is loosening PPT button, it indicates the channel is available, waiting for your answer, you can reply by pressing PTT button, if there is no voice during the preset time period, the call will expire.

### **Transmit selective call**

Operations:

1. Rotate the channel choosing knob, using activated user ID to choose channel.
2. Hold the radio in a vertical position with the microphone 2.5 to 5cm (1 to 2 inches) away from the lips.
3. Transmitting by pressing PTT button, LED indicator is red.
4. While the transmit permission tone is over (if it is activated), then speak to microphone clearly.
5. Loosening PTT button for receiving, while the target radio is replying, the LED indicator is green.
6. If the "channel available indication" function has been activated, you will hear a short prompt tone while the target radio is loosening PPT button, it indicates the channel is available, waiting for your answer, you can reply by pressing PTT button, if there is no voice during the preset time period, the call will expire.
7. You will listen to a short tone.

### **Transmit a full call**

This function allows you to transmit signal to all the users at the same frequency, the radio must be preprogrammed so that you can use this function.

Operations:

1. Rotate the channel choosing knob, using activated full communication group ID to choose channel.
2. Hold the radio in a vertical position with the microphone 2.5 to 5cm (1 to 2 inches) away from the lips.
3. Press PTT button to transmit, LED indicator is red.
4. While transmit permission tone is over (if it is activated), then speak to microphone clearly, the user on the channel can not answer full call.

### **Using single transmit key to transmit group call or selective call.**

Single key calling function makes you more convenient to transmit group call or selective call to predefined ID. This function could be assigned to short pressing key or long pressing key, you can only assign one ID to a single key, radios could have several programmable keys.

Operations:

1. Press preprogrammed single key, to transmit a group call or selective call to predefined ID.
2. Hold the radio in a vertical position with the microphone 2.5 to 5cm (1 to 2 inches) away from the lips.
3. Transmitting by pressing PTT button, LED indicator is red.
4. While the transmit permission tone is over (if it is activated), then speak to microphone clearly.
5. Loosening PTT button for receiving, while the target radio is replying, the LED indicator is green.
6. If the "channel available indication" function has been activated, you will hear a short prompt tone while the target radio is loosening PPT button, it indicates the channel is available, waiting for your answer, you can reply by pressing PTT button, if there is no voice during the preset time period, the call will expire. About selective call, you will hear a short prompt tone.

## Advanced function

Use this navigation guide to learn more advanced functions of radios:

Scan list.....

Scan

Short message function.....

Settings.....

### Scan list

Create scanning list to assign to single channel/communication group. searching if there is any voice activities on the current channel through circularly scanning the list of channels and communication groups. Your radio provides maximum 250 scanning list, each of list owns maximum 32 members.

### Scan

When you activated scan function, your radio will check if there is any voice activities on the current channel though circularly scanning preprogrammed list. LED indicator flickers in yellow.

### Two ways of scan

Main channel scanning(manually): your radio will scan all the channels/communication groups in your scanning lists. When access to scan, according to settings, your radio can start scanning from last activated channel or from the starting channel. Automatic scan(automatically): when you choose an activated automatical channels/communication groups, radio start to scan.

### Start and stop scan

Operations:

1.Press preprogrammed scan button, or use channel choosing knob to choose a automatic activated channel.

2.When scan is activated, LED indicator flickers in yellow, you will hear a confirmed prompt tone. When scan is stopped, LED indicator extinguished, you will hear a negative prompt tone.

### During the scan, reply the transmit scan once

Your radio will be located at the channel which has been detected as activated.

Radio stay on this channel, this calls "standby time" of preprogrammed time limited.

Operations:

- 1.Hold the radio in a vertical position with the microphone 2.5 to 5cm(1 to 2 inches) away from the lips. If the "channel available warning" function is activated, you will hear a short warning tone while loosening PTT button by transmit radio, it indicates the channel is available, wait for your answer.
- 2.During the standby time, press the PTT button, LED indicator is red.
- 3.While the transmit permission tone is over(if it is activated), then speak to microphone clearly.
- 4.Loosen PPT button for receiving.
- 5.If you didn't make any response in the standby time, the radio will scan other channels/communication groups.

### Message function

Transmitting preset message

You can transmit the preset message preprogrammed by agent via preprogrammed key.

- 1.Press the preprogrammed key to send a preset message to a predefined ID.
- 2.LED indicator is red.
- 3.Two prompt tones shows message has been delivered successfully, or one prompt tone shows the message can not be delivered.

## Settings

### Set up noise reduction level

You can adjust the noise reduction level of radios, to filter useless calls with low signal strength or background noise higher than normal value.

Operations:

- 1.Press preprogrammed noise reduction button.
- 2.You will hear a confirmed prompt tone, it indicates radio is under deep noise reduction status, or you will hear a negative prompt tone, it revealed radio is under normal noise reduction status.

### Setting the power level

You are able to set the power of each channel of radios as high or low.

Settings: high power enables relatively longer talking range, low power enables nearby talking range.

Operations:

- 1.Press preprogrammed power level button.
- 2.You will hear a confirmed prompt tone, revealed the radio is transmitting under low power, or you will hear a negative prompt tone, revealed the radio is transmitting under high power.

### Opening or closing the VOX function

This function allows you to transmit a hands free activated voice call on the programmed channel. Whenever the microphone on the any accessories with VOX function detects the voice, the radio will automatically transmit the signal in the programmed time.

The VOX function will be forbidden while you pressing PTT button if the radio is running. If there is the need to reactivate the VOX function, you can use one of following ways. Turn off and restart the radio, or change channels via channel knob, or carry out following process.

PS: Opening or closing VOX function is limited to radios which are already activated by VOX. Please consult your distributor or administrator to get detailed information.

Operations:

Press preprogrammed VOX button, opening or closing this function.

### Opening or closing radio's tone/warning

If needed, you can open or close all the tones and warnings of radio(except emergency call warning).

Operations:

- 1.Press the preprogrammed full tone/warning button.
- 2.You will hear a confirmed prompt tone that all the tones and warnings are opened, or you will hear a negative prompt tone that all the tones and warnings are closed.

### Checking the battery capacity's strength

You could check the remaining power of battery.

Settings: yellow LED indicator means battery is charging, green LED indicator means battery is full charged.

Operations:

Press preprogrammed battery capacity button to check out the battery's strength by the color of LED indicator.

### General Specification

Model	RT54
Frequency Range	VHF:136-174MHz UHF:400-470MHz, 410-480MHz, 350-400MHz
Channel Capacity	16CH
Channel Spacing	25 KHz/12.5 KHz
Operation Temperature	-25°C~+60°C
Operation Voltage	7.4VDC
Antenna Impedance	50Ω
Microphone Impedance	2.2KΩ
Battery	Li-ion DC7.4V 1600mAh
Dimension	135 mm×53 mm×33 mm
Weight	318g(with battery and antenna)

### Receiver

Sensitivity (12dB SINAD)	Analog 25K≤-121dBm 12.5K≤-119dBm Digital 0.3μV/BER5%
SNR (Signal-To-Noise Ratio)	25K≥45 dB 12.5K≥40 dB
Adjacent Channel Selectivity	25K≥65 dB 12.5K≥60 dB
Intermodulation	25K≥60 dB 12.5K≥55 dB
Spurious Response Rejection	≥65 dB
Audio Output Power	≥1000 mW
Rated Audio Distortion	≤5%
Frequency Stability	±2.5ppm
Battery life under 5-5-90 duty	14.8 hours (with 1600mAh Li-ion battery) 20.9 hours (with 1600mAh Li-ion battery)

### Transmitter

RF Power	High: UHF 4W / VHF 5W Low: 1.5W
FM Modulation	25K/16KΦF3E 12.5K/8KΦF3E
4FSK Digital Modulation	12.5KHZ data 7K60FXD 12.5KHZ data and voice 7K60FXW
Digital Vocoder Type	AMBE++ or SELP
Digital Protocol	ETSI-TS102 361-1,-2
Harmonic	≥70 dB
SNR (Signal-To-Noise Ratio)	25K≤-45 dB 12.5K≤-40 dB
Rated Audio Distortion	≥5%
Frequency Stability	±2.5 ppm
Max. Frequency Deviation	25K≤5 kHz 12.5K≤2.5 kHz

■ All specifications are subject to change without notice due to continuous development.

## RF ENERGY EXPOSURE AND PRODUCT SAFETY GUIDE FOR PORTABLE TWO-WAY RADIOS

 <b>ATTENTION!</b>	<p>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.</p>
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This two-way radio uses electromagnetic energy in the radio frequency (RF) spectrum to provide communications between two or more users over a distance. RF energy, which when used improperly, can cause biological damage. All Retevis two-way radios 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 two-way radios. 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 two-way radios 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 two-way radio has a RF Exposure



Product Label. The maximum duty factor supported of the product is 50%.

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, business two-way radios operate on radio frequencies that are regulated by the local radio management departments (FCC, ISED, OFCOM, ANFR, BFTK, Bundesnetzagentur...). To transmit on these frequencies, you are required to have a license issued by them. The detailed classification and the use of your two radios, please contact the local government radio management departments.

Use of this radio outside the country where it was intended to be distributed is subject to government regulations and may be prohibited.

#### **Unauthorized modification and adjustment**

Changes or modifications not expressly approved by the party responsible for compliance may void the user's authority granted by the local government radio management departments to operate this radio and should not be made. To comply with the corresponding requirements, transmitter adjustments should be made only by or under the supervision of a person certified as technically qualified to perform transmitter maintenance and repairs in the private land mobile and fixed services as certified by an organization representative of the user of those services. Replacement of any transmitter component (crystal, semiconductor, etc.) not authorized by the local government radio management departments equipment authorization for this radio could violate the rules.



#### **FCC Requirements:**

This device complies with part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference. (Licensed radios are applicable);

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (Other devices are applicable) (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

#### **CE Requirements:**

• (Simple EU declaration of conformity) Shenzhen Retevis Technology Co., Ltd. declares that the radio equipment type is in compliance with the essential requirements and other relevant provisions of RED Directive 2014/53/EU and the ROHS Directive 2011/65/EU and the WEEE Directive 2012/19/EU; the full text of the EU declaration of conformity is available at the following internet address: [www.retevis.com](http://www.retevis.com).

#### • Restriction Information

This product can be used in EU countries and regions, including: Belgium (BE), Bulgaria (BG), Czech Republic (CZ), Denmark (DK), Germany (DE), Estonia (EE), Ireland (IE), Greece (EL), Spain (ES),



France (FR), Croatia (HR), Italy (IT), Cyprus (CY), Latvia (LV), Lithuania (LT), Luxembourg (LU), Hungary (HU), Malta (MT), Netherlands (NL), Austria (AT), Poland (PL), Portugal (PT), Romania (RO), Slovenia (SI), Slovakia (SK), Finland (FI), Sweden (SE) and United Kingdom (UK). For the warning information of the frequency restriction, please refer to the package or manual section.

• Disposal

The crossed-out wheeled-bin symbol on your product, literature, or packaging reminds you that in the European Union, all electrical and electronic products, batteries, and accumulators (rechargeable batteries) must be taken to designated collection locations at the end of their working life. Do not dispose of these products as unsorted municipal waste. Dispose of them according to the laws in your area.



**IC Requirements:**

Licence-exempt radio apparatus

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s).

Operation is subject to the following two conditions:

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

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions

suivantes :

- (1) l'appareil ne doit pas produire de brouillage;
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

**RF Exposure Information**

- DO NOT operate the radio without a proper antenna attached, as this may damage the radio and may also cause you to exceed RF exposure limits. A proper antenna is the antenna supplied with this radio by the manufacturer or an antenna specifically authorized by the manufacturer for use with this radio, and the antenna gain shall not exceed the specified gain by the manufacturer declared.
- DO NOT transmit for more than 50% of total radio use time, more than 50% of the time can cause RF exposure compliance requirements to be exceeded.
- During transmissions, your radio generates RF energy that can possibly cause interference with other devices or systems. To avoid such interference, turn off the radio in areas where signs are posted to do so.
- DO NOT operate the transmitter in areas that are sensitive to electromagnetic radiation such as hospitals, aircraft, and blasting sites.
- Portable Device, this transmitter may operate with the antenna(s) documented in this filing in Push-to-Talk and body-worn configurations. RF exposure compliance is limited to the specific belt-clip and accessory configurations as documented in this filing and the separation distance between user and the device or its antenna shall be at least 2.5 cm.
- Mobile Device, during operation, the separation distance between user and the antenna subjects to actual regulations, this separation distance will ensure that there is sufficient distance from a properly installed externally-mounted antenna to satisfy the RF exposure requirements.
- Occupational/Controlled Radio, this radio is designed for and classified as "Occupational/Controlled Use Only", meaning it must be used only during the course of employment by individuals aware of the hazards, and the ways to minimize such hazards; NOT intended for use in a General population/uncontrolled environment.

- General population/uncontrolled Radio, this radio is designed for and classified as “General population/uncontrolled Use”.

**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 RF exposure limits.

**Hand-held Mode**

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

(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 Choking Hazard**



Small Parts. Not for children under 3 years.

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



**WARNING**

- 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.

**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
- Use careful with the earphone maybe possible excessive sound pressure from earphones and headphones can cause hearing loss

**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.



**WARNING**



**Avoid Burns**

**Antennas**

- Do not use any portable radio that has a damaged antenna. If a damaged antenna comes into contact with the skin when the radio is in use, a minor burn can result.

**Batteries (If appropriate)**

- When the conductive material such as jewelry, keys or chains touch exposed terminals of the batteries, may complete an electrical circuit (short circuit the battery) and become hot to cause bodily injury such as burns. Exercise care in handling any battery, particularly when placing it inside a pocket, purse or other container with metal objects

**Long transmission**

- When the transceiver is used for long transmissions, the radiator and chassis will become hot.



**WARNING**

## Safety Operation

### 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.



**WARNING**

### 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.
- The adapter shall be installed near the equipment and shall be easily accessible

## Approved Accessories



**WARNING**

- 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>

Warranty card	
<p><b>Note:</b></p> <ol style="list-style-type: none"> <li>1. This warranty card is only applicable to two-way radio of the above-listed model and serial number.</li> <li>2. The warranty card is an important document for the end-user to enjoy warranty service, please keep it well.</li> <li>3. The warranty card shall be filled and chopped by the dealer, or it is invalid.</li> </ol>	Customer's name: _____ Gender: _____
	Add and postal code: _____
	Customer's Tel: _____
	Model: _____
	Serial number: _____
	Purchasing date: _____
	Invoice No.: _____
	Dealer: _____ Stamp: _____
	Add and postal code of the dealer: _____
	Contact Tel: _____
Handling people: _____	