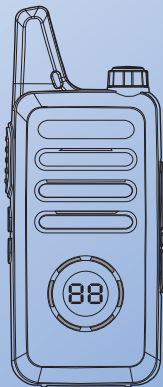


RETEVIS

Two Way Radio

RT22S

USER'S MANUAL



- 22 channel
- Super receive
- Strong anti-interference
- Signal prompt
- Sound
- Dustproof

(EN)

WARNINGS

Product safety and RF Exposure for two way radio:

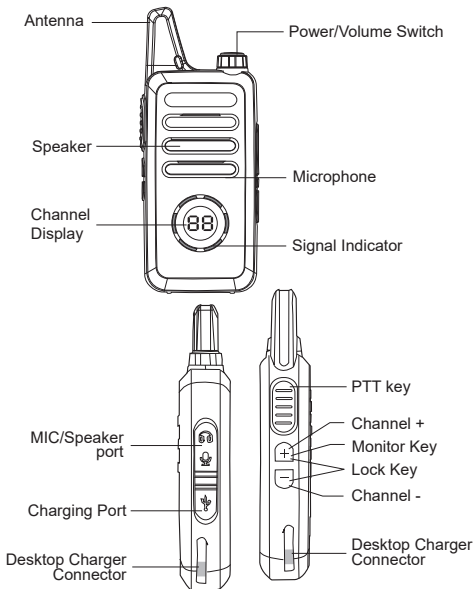


Before using this two way radio, please read the manual which contains important operating instructions for safe usage, RF Energy Awareness, control information and operational instructions for compliance with RF Energy Exposure limits in applicable national and international standards, and also read the operational instructions for safe use.

◇◇ Contents

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◆◆ Function Operations



◆◆ Standard Accessories



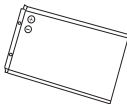
Radio body



Micro-USB



Belt clip



Battery

◆◆ Optional Accessories



Charger

◆◆ Get Acquainted

- The battery is not charged in a factory. Please charge the battery before initial use or after long time storage.
- Repeat charging and discharging the battery 2 or 3 times and the battery would reach its maximum capacity, please replace or charge the battery when it is in low power.
- The quick consume of the power after normal charge shows exhaustion of the battery. Please contact your dealer and buy new approved battery.

◆◆ Function Description

● Time-out-timer

The purpose of the Time-out-timer is to prevent any signal person from using a channel for an extended period of time. If the transmission continues beyond 10 seconds, the transceiver will stop transmission and give out alarms. To stop the alarms, please release the PTT switch and the transceiver will resume the state of standby.

● Battery Saving

The radio would reduce its power consumption. If there is no signal or operation over 10 seconds, the battery saving function would be on automatically. When signal is received or with operation, the radio would switch to normal mode.

- **Low Battery Warning**

When the voltage fall down to lowest level, the tone of "Please Charge" will sound, required to replace battery or recharge the battery.

- **Monitor**

This function can be realized by the long press of the default key. Press the monitor key, the Signal Indicate will change to Green.

- **QT and DQT**

This function mainly uses to avoid irrelative calling in caertain channel. With this function, users can receive calling in corresponding channels only with the same QT/DQT.

- **VOX Function**

VOX is a function that voice can be launched without pressing the PTT key,operation details:Operation details: Switch to channel 7 first, then turn off the radio. Press"CH+"key, turn on the radio at the same time. There will be a voice "VOX ON" or "VOX OFF".

- **Channel Lockout**

Press both **【UP】 【DOWN】** keys to lock(only PTT key, MONITORING key and function keys can be used, **【UP】 【DOWN】** keys can not be used).When locking,short press **【UP】 【DOWN】** keys to broadcast the current channel; Operate them again to unlock.

- **Scanning**

It is convenient for the user to search for calls from other channels. When "Side Key 2" in the software is programmed to the scanning function,long press **【DOWN】** key for two seconds to enter into the scanning mode,the transceiver will start to scan with the current channel;Operate it again to exit.

- **Busy Channel Lockout**

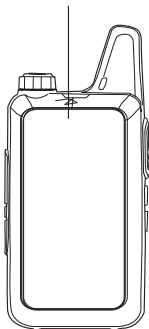
The function prevents you from interfering with other transceivers using the same channel, it needs to be programmed by software.

- **Companding**

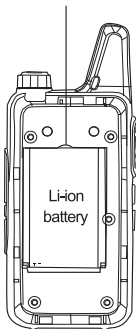
It is a function setting which prevents the inter-channel interference.

◇◇ **Attaching & Removing**

Case Port



Battery Port



◆◆ Technical Parameters

General	
Operating Frequency	FRS
Output Power	$\leq 2W$
Channels	22
Modulation Type	FM(F3E)
Antenna	Integrated Antenna
Antenna Gain	1.8dBi
Bandwidth	12.5KHz
Power Source	DC3.7V
Dimension	136*56*21mm
Transmit	
The maximum deviation	$\leq \pm 2.5KHz$
Residual radiation	<60dB
Current	2.5kHz
Receiver	
Sensitivity	<0.16 μ V (12dB SINAD)
Squelch Sensitivity	<0.2 μ V
Intermodulation	50dB
Audio Power	$\geq 300mW$
Current	$\leq 100mA$
Squelch current	20mA

NO.	Frequency	Sub-audio	Broadband	Power
1	462.5625	67.0	Narrow band	High
2	462.5875	118.8	Narrow band	High
3	462.6125	127.3	Narrow band	High
4	462.6375	131.8	Narrow band	High
5	462.6625	136.5	Narrow band	High
6	462.6250	127.3	Narrow band	High
7	462.7250	136.5	Narrow band	High
8	462.6875	141.3	Narrow band	High
9	462.7125	146.2	Narrow band	High
10	462.5500	123.0	Narrow band	High
11	462.5750	D743I	Narrow band	High
12	462.6000	D332I	Narrow band	High
13	462.6500	D243I	Narrow band	High
14	462.6750	D606N	Narrow band	High
15	462.7000	D731I	Narrow band	High
16	462.7250	D462I	Narrow band	High

◆◆ Warnings

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



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 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. 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 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.

- This device complies with part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference.

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.

- **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.
- 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.
- 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

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.



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:



- 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:



WARNING

- 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.

Avoid Burns



WARNING

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.

Safety Operation



WARNING

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

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>

WARNING: MODIFICATION OF THIS DEVICE TO RECEIVE CELLULAR RADIOTELEPHONE SERVICE SIGNALS IS PROHIBITED UNDER FCC RULES AND FEDERAL LAW.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Remarks:

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

Exclusions from Warranty Coverage:

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

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



RoHS



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MADE IN CHINA