RT22

USER’S MANUAL

- 16 channel
- Super receive
- Strong anti-interference
- The cable copy
- Signal prompt
- Scanning
- Sound
- Dustproof
WARNINGS

Product safety and RF Exposure for two way radio:

| !important | 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. |
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Function Operations

- Antenna
- Power/Voice volume
- Signal light
- Charger light
- Speaker
- Microphone
diamond Function Operations
diamond

- MIC/Speaker port
- USB plug
- Charger connector
- PTT key
- Channel selector plus
- Monitor
- Lock key
- Channel selector reduce
- Charger connector
Standard Accessories

- Radio body
- Charger
- Belt clip
- Battery
Optional Accessories

Charger
MORE OPTIONAL ACCESSORIES OF RETEVIS

Acoustic tube headset

Programming cable

Speaker microphone

Throat mic

Note:
For more information, Please visit our website: www.retevis.com
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.
Optional Functions

• **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.
Optional Functions

- 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 certain channel. With this function, users can receive calling in corresponding channels only with the same QT/DQT.
Attaching & Removing

Case Port

Battery port

Li-ion battery
# Technical Parameters

<table>
<thead>
<tr>
<th>General</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Operating Frequency</td>
<td>US: 462-467MHz</td>
</tr>
<tr>
<td></td>
<td>CA: 400-470MHz</td>
</tr>
<tr>
<td>Output Power</td>
<td>( \leq 2W )</td>
</tr>
<tr>
<td>Channels</td>
<td>16</td>
</tr>
<tr>
<td>Modulation Type</td>
<td>FM(F3E)</td>
</tr>
<tr>
<td>Antenna</td>
<td>Integrated Antenna</td>
</tr>
<tr>
<td>Antenna Gain</td>
<td>1.8dB</td>
</tr>
<tr>
<td>Bandwidth</td>
<td>12.5KHz/25KHz</td>
</tr>
<tr>
<td>Power Source</td>
<td>DC3.7V</td>
</tr>
<tr>
<td>Dimension</td>
<td>96<em>55</em>22mm</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>transmit</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The maximum deviation</td>
<td>( \leq \pm 5)KHz</td>
</tr>
<tr>
<td>Residual radiation</td>
<td>&lt;60dB</td>
</tr>
<tr>
<td>Current</td>
<td>( \leq 1000)mA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Receiver</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity</td>
<td>&lt;0.16(\mu)V(12dB SINAD)</td>
</tr>
<tr>
<td>Squelch Sensitivity</td>
<td>&lt;0.2(\mu)V</td>
</tr>
<tr>
<td>Intermodulation</td>
<td>50dB</td>
</tr>
<tr>
<td>Audio Power</td>
<td>( \geq 300)mW</td>
</tr>
<tr>
<td>current</td>
<td>( \leq 100)mA</td>
</tr>
<tr>
<td>Squelch current</td>
<td>20mA</td>
</tr>
</tbody>
</table>
Warnings

SAR Test method description

- Test position and configuration Head SAR was performed with the device configured in the positions according to IEEE1528, and face up SAR was performed with the device 25mm from the phantom. Body SAR was performed with the belt clip on the device 0 mm from the phantom. Body SAR was also performed with the headset attached and without.

⚠️

WARNING

Antennas

- The antenna in the packing is unique, please do not optional change.

- For safe operation, the antenna for the product shall be least 25mm away from your face, when speaking.

- Switching to other antennas is prohibited and will affect the radio performance.

- DO NOT use any portable radio that has a damaged antenna if a damaged antenna comes into contact with your skin, a minor burn can result.
⚠️ WARNING

Batteries

- All batteries can cause property damage and/or bodily injury such as burns if a conductive material touches exposed terminals. The conductive material may complete an electrical circuit (short circuit) and become hot.

- Exercise care when removing NiMH or AA batteries. Do not use sharp or conductive tools to remove these batteries.

- Exercise care in handling any charged battery, particularly when placing it inside a pocket, purse or other container with metal objects.

- Do not discard your battery in a fire.

- Do not replace the battery in any area labeled “Hazardous Atmosphere”. Any sparks created in a potentially explosive atmosphere can cause explosion or fire.
Warnings

- Do not disassemble, crush, puncture, shred or otherwise attempt to change the form of your battery.

- Do not dry a wet battery or damp battery with an appliance or heat source, such as a hair dryer or microwave oven.

- If the radio battery contact area has been submerged in water, dry and clean the battery contacts before attaching the battery to the radio.

⚠️ CAUTION

Battery Charger Safety Instructions:

- Turn the radio off when charging the battery.

- Do not expose the charger to outside environment. Chargers should only be used indoors.

- Do not operate or disassemble the charger. Do not use a charger that has been dropped or damaged in any way.
Warnings

- Never alter the AC cord or plug provided with the unit. If the plug will not fit the outlet, have the proper outlet installed by a qualified electrician. An improper condition can result in a risk of electric shock.

- To reduce the risk of damage to the cord or plug, pull the plug rather than the cord when disconnecting the charger from the AC receptacle.

- To reduce the risk of electric shock, unplug the charger from the outlet before attempting any maintenance or cleaning.

- Use of an attachment not recommended or sold by Retevis Solutions may result in a risk of fire, electric shock or personal injury.

- Make sure the cord is located so it will not be stepped on, tripped over or subjected to damage or stress.
• An extension cord should not be used unless absolutely necessary. Use of an improper extension cord could result in a risk of a fire and/or electric shock. If an extension cord must be used, make sure that:
  - The pins on the plug of the extension cord are the same number, size and shape as those on the plug of the charger.
  - The extension cord is properly wired and in good condition.

• The supply cord of the AC adaptor cannot be replaced. If the cord is damaged, call customer service.

⚠️

WARNING

• The information listed below provides the user with the information needed to make him or her aware of RF exposure, and what to do to as-sure that this radio operates with the FCC RF exposure limits of this radio.
Electromagnetic Interference/Compatibility

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

• During transmissions, RETEVIS, INC. radio generates RF energy that can possibly cause interference with other devices or systems.

Facilities
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 may be using equipment that is sensitive to external RF energy.

Aircraft
• When instructed to do so, turn off your radio when onboard an aircraft. Any use of a radio must be in accordance with applicable regulations per airline crew instructions.
**Warnings**

**Medical Devices**
- Pacemakers, Defibrillators or other Implanted Medical Devices

Persons with pacemakers, Implantable cardioverter defibrillators (ICDs) or other active implantable medical devices (AIMD) should:
- 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 there is 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.
Warnings

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.

Use of Communication Devices While Driving
• Always check the laws and regulations on the use of radios in the areas where you drive.
- Give full attention to driving and to the road.
- Use hands-free operation, if available.
- Pull off the road and park before making or answering a call, if driving conditions or regulations so require.
Warnings

For Vehicle with Air Bags

- Refer to the vehicle manufacturer’s manual prior to installation of electronic equipment to avoid interference with air bag wiring. Do not place a portable radio in the area over an air bag or in the air bag deployment area. Air bags inflate with great force. If a portable radio is placed in the air bag deployment area and the air bag inflates, the radio may be propelled with great force and cause serious injury to occupants of the vehicle.

Potentially Explosive Atmosphere

- Turn off your radio prior to entering any area with a potentially explosive atmosphere. Only radio types that are especially qualified should be used in such areas as “Intrinsically Safe.” Do not remove, install or charge batteries in such areas. Sparks in a potentially explosive atmosphere can cause an explosion or fire resulting in bodily injury or even death.
Note:
• The areas with potentially explosive atmosphere referred to above include fueling areas such as below decks on boats, fuel or chemical transfer or storage facilities, areas where the air contains chemicals or particles (such as grain, dust or metal powders) and any other area where you would normally be advised to turn off your vehicle engine. Areas with potentially explosive atmospheres are often – but not always posted.

Blasting Caps and Areas
• To avoid possible interference with blasting operations, turn off your radio when you are near electrical blasting caps, in a blasting area, or in areas posted “Turn off two-way radios”. Obey all signs and instructions.
⚠️ WARNING

Your Retevis radio is designed to comply with the following national and international standards and guidelines regarding exposure of human beings to radio frequency electromagnetic energy:


- American National Standards Institute (ANSI)/Institute of Electrical & Electronic Engineers (IEEE) C95. 1-2005

- Institute of Electrical and Electronic Engineers (IEEE) C95.3-2002

- International Electrotechnical Commission IEC62209-2:2010
⚠️ **CAUTION**

- This product is compliance to FCC RF Exposure requirements and refers to FCC website https://apps.fcc.gov/oetcf/eas/reports/GenericSearch.cfm search for FCC ID: 2AAR8RETEVISRT22 to gain further information include SAR Values.

⚠️ **WARNING**

**SAFETY INFORMATION**

- Your wireless hand-held portable transceiver contains a low power transmitter. This product sends out radio frequency (RF) signals when the Push-to-Talk (PTT) button is pressed. The device is authorized to operate at a duty factor not to exceed 50%. In August 1996, the Federal Communications Commissions (FCC) adopted RF exposure guidelines with safety levels for hand-held wireless devices.
• To control your exposure and ensure compliance with the general population or uncontrolled environment exposure limits, transmit no more than 50% of the time. The radio generates measurable RF energy exposure only when transmitting.

⚠️ WARNING

• Any Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment and should not be made. To comply with FCC 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
Warnings (US)

- Component (crystal, semiconductor, etc) not authorized by the FCC equipment authorization for this radio could violate FCC rules.
  **Note:** Use of this radio outside the country where it was intended to be distributed is subject to government regulations and may be prohibited.

⚠️

**WARNING**

**Body-Worn Operation**

- To maintain compliance with FCC’s RF exposure guidelines for body-worn operation, this radio has been tested and meets the FCC RF exposure guidelines when used with Retevis Radio Corp. accessories supplied or designated for this product. Use of other accessories may not ensure compliance with FCC RF exposure guidelines.

- If you wear the radio on your body when transmitting always use Retevis supplied or approved belt clip, holster, case, or body harness for this product.
Warnings (US)

• If you do not use any accessories supplied or approved by Retevis, ensure the radio and its antenna are at least 1 inch (2.5cm) from your body when transmitting.

⚠️ Advertencia
• PELIGRO DE ASFIXIA – Contiene piezas pequeñas.
  No conveniente para niños menores de 3 años.

⚠️ Attention
• RISQUE D’ÉTOUFFEMENT – Contient de petits éléments. Ne convient pas aux enfants de moins de 3 ans.

⚠️ Attenzione
• RISCHIO DI SOFFOCAMENTO – Contiene pezzi di piccole dimensioni. Non adatto a bambini di età inferiore a 3 anni.
⚠️

Warning

• CHOKING HAZARD – Small Parts. Not for children under 3 years.

⚠️

Achtung

• ERSTICKUNGSGEFAHR – Kleinteile. Nicht für Kinder unter 3 Jahren geeignet.

⚠️

Waarschuwing

• VERSTIKKINGSGEVAAR – Bevat kleine onderdelen. Niet geschikt voor kinderen jonger dan 3 jaar.

⚠️

Aviso

• RISCO DE ASFIXIA – Peças pequenas. Produto não recomendado para crianças com menos de 3 anos.
⚠️

WARNING

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

- This device may not cause interference, and
- 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 :

- l'appareil ne doit pas produire de brouillage, et
- l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.
⚠️

CAUTION

Compliance with RF Exposure Standards

Your Retevis radio is designed to comply with the following national and international standards and guidelines regarding exposure of human beings to radio frequency electromagnetic energy:

- American National Standards Institute (ANSI)/Institute of Electrical & Electronic Engineers (IEEE) C95.1.


Warnings (CA)

- International Commission on Non-Ionizing Radiation Protection (ICNIRP). e.
- International Electrotechnical Commission IEC62209-2:2010

⚠️

CAUTION

IC Radiation Exposure Statement

- This EUT is compliance with SAR for controlled exposure limits in IC RSS-102 and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528 and IEC 62209, this equipment should be installed and operated with minimum distance 1 cm between the radiator and your body. This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.
Guarantee Card

Model Number: 

Serial Number: 

Purchasing Date: 

Dealer: 

Telephone: 

Country: 

Address: 

Post Code: 

Email: 

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.