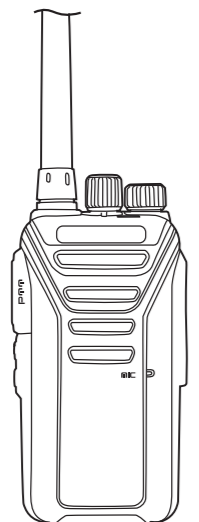


Version:R20190219


RETEVIS

USER'S MANUAL

Two Way Radio RT2V



Shenzhen Retevis Technology Co., Ltd.
 Web: www.retevis.com
 Email: sales@retevis.com
 Facebook: facebook.com/retevis



MADE IN CHINA

FM Transceiver

Dear user:
 Welcome to use our handheld transceiver. We believe you will be pleased to use it in our daily life and work. This transceiver adopts advanced technology, we hope you will be satisfied with its quality and functions. This transceiver will bring you convenient, fast, reliable two-way communication.

Notice:
 • Please read this manual carefully before using this transceiver.
 • Please do not communicate or charge this transceiver in flammable, explosive and area which transceiver communication is prohibited such as oil station, gas station, airport etc.)
 • Please do not operate this transceiver without licence in government laws banned areas.
 • Please make sure this transceiver avoids the sunshine, and avoids to put it near any heating device.
 • Please make sure this transceiver avoids any dusty, humid and water splashed place, and also avoids to put it on unstable surface.
 • If transceiver smells or smokes, please remove the battery pack from transceiver at once, and then contact our company or local dealer.
 • The repair job of this transceiver is in the charge of professionals & technicals, self-disassembly is prohibited.

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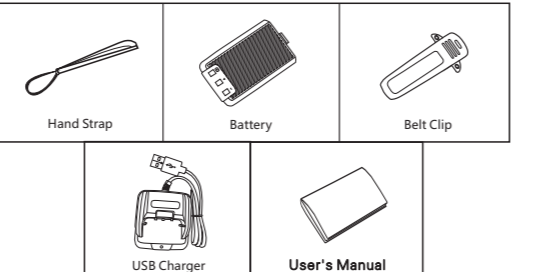
RF ENERGY EXPOSURE AND PRODUCT SAFETY GUIDE FOR PORTABLE TWO-WAY RADIOS.....12

UNPACKING AND CHECKING EQUIPMENT

We recommend that you open the packing box before use and check carefully the main transceiver in the packing box and the supplied accessories. If any item missed or damaged during shipment, please contact the shipper or local dealer.

1. Supplied Accessories

Item	Quantity
Hand Strap	1
Belt Clip	1
Battery	1
USB Charger	1
User's Manual	1



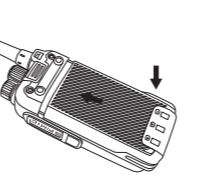
1

PREPARATION

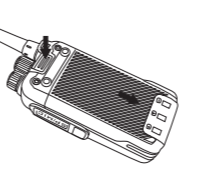
Notice:
Do not charge the battery for a long time!
 If battery is not fully charged within schedule time, stop charging. Otherwise the battery may be overheat and smoke and burst into fire.
 • Battery will be aged even without any usage.
 • It will cost longer time to charge the battery in cool and dry place.
 • Battery working life will be reduced if being charged in hotter place.
 • Battery ages more quickly when stored in hot place. Please do not leave battery in car and put near any heating device.
 • If battery working life becomes shorter, please replace it even if it fully charged. If go on being charged and discharged, the electrolyte will spill.
 • Do not use unusual battery!
 • If battery smells smelly, different colors, out of shape or any unusual display, please remove the battery from charger or operating device and do not use it.
 • Please use standard charger.
 The charger supplied is specialized designed for this transceiver only, it will charge the battery more scientific reasonable, and safely.
1. Use Li-ion Battery
 Charge the battery before use.
 • Do not prevent battery pack from discharging, please remove the battery from transceiver or device when it is not in use, and then store it in a cool dry place
 • For battery long time storage
 1. Remove the battery from device
 2

2. If possible, discharge battery.
 3. Store it in a cool (below 25°C) and dry place.

2. Battery Characteristic
 The capacity of battery will reduce step by step after being charged and discharged again and again.
 • Battery will be aged even without any usage.
 • It will cost longer time to charge the battery in cool and dry place.
 • Battery working life will be reduced if being charged in hotter place.
 • Battery ages more quickly when stored in hot place. Please do not leave battery in car and put near any heating device.
 • If battery working life becomes shorter, please replace it even if it fully charged. If go on being charged and discharged, the electrolyte will spill.
 • Do not use unusual battery!
 • If battery smells smelly, different colors, out of shape or any unusual display, please remove the battery from charger or operating device and do not use it.
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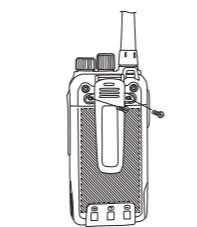


(Pic1)

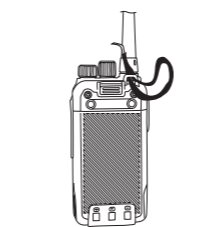


(Pic2)

bottom of transceiver, and pull the bottom part of battery away from the transceiver body, and remove the battery.(Pic2)



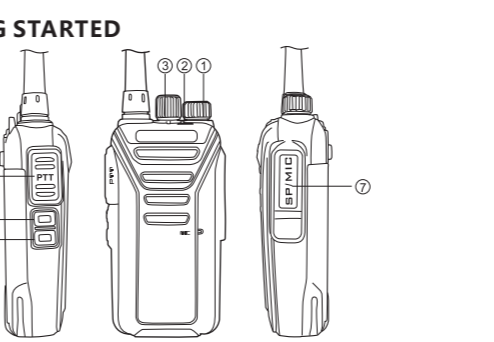
(Pic3)



(Pic4)

5. Install/Remove Belt Clip
 If necessary, install the supplied screws into the belt clip at the back of battery pack for easy carry.(Pic3)
 To remove the belt clip, directly remove the two screws only.
 6. Install Hand Strap
 Install the hand strap at the middle circle of the transceiver.(Pic4)

GETTING STARTED



① **Power/Volume Knob**
 Rotate the knob clockwise to turn on the transceiver, keep rotating to adjust the volume. To turn it off, rotate the knob to the anticlockwise.
 ② **LED Indicator**
 When transmitting, LED indicator turns green, and when receiving, LED indicator turns red. LED indicator will flash red when battery in low voltage.
 ③ **Channel Selection Knob**
 Rotate the knob to select different channels.
 ④ **PTT(Push-To-Talk) Switch**
 To transmit, press PTT button and face towards microphone to talk.
 ⑤ **Scan Key**
 Press it to open and again to close this function.
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⑥ **MONI Key**
 Press it to monitor the selected channel.
 ⑦ **MIC-SP Jack**
 It is to connect the optional microphone-speaker.

BASIC OPERATION
1. Turn On/Turn Off
 Rotate the Power/Volume knob clockwise to turn on the transceiver
 Rotate the Power/Volume knob anticlockwise to turn on the transceiver.
2. Adjust Volume
 Rotate the Power/Volume knob to adjust the volume. Clockwise rotation will rise the volume and anticlockwise rotation will reduce the volume.
 Note: You can press MONI key to monitor the background noise while adjusting volume.
3. Channel Select
 Rotate Channel Selection Knob to select needed channel. Clockwise rotation will rise the channel number and anticlockwise rotation will reduce the channel number.
 Voice Prompt: The radio will be voice prompt recent channel number automatic when you rotate channel knob.
 The voice prompt can be set by English and Chinese, you can select the language by software.
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4. Adjust Squelch Level
 Squelch function is used to let speaker quiet when no any signal. When squelch is on, you can hear background noise from speaker. When squelch is off, no any noise can be heard.
 The selected squelch level will decide where to turn on or off squelch function. If the selected squelch level is too high, then weaker signal can not be heard; If the selected squelch level is too low, then signal will appear with the background noise. (PC programmable)
5. Transmit(Call)
 1. According to different settings of monitor function, press [MONI] key to monitor loudspeaker. Make sure no any transceiver is transmitting on the selected channel.
 2. Press [PTT] key, and speak to microphone.
 (1) Keep microphone away from your mouth about 3~4 cm, and speak in your usual tone, so that the receiver can get best tone quality.
 (2) Press [PTT] key, LED indicator displays red.
 3. Release [PTT] key and start to receive.
6. Receive
 When the selected channel is being called, LED indicator displays green, you can receive the call.
 If the transmitting signal is weaker, and also higher squelch level is set, then maybe you can not receive the call.
 Maybe your local dealer has set CTCSS/DCS signalling on your transceiver. When this programmable channels has been selected, only transceiver with same signalling can be heard. Other transmitting can not be received.
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VOX FUNCTION
 Press and hold the [MONI] key to boot, and VOX setting function will be open, then press [MONI] key again to select VOX levels, you can use short press the [MONI] key to select the VOX levels from 0-9, finally press [PTT] key to confirm. Press and hold the [Scan] key to enter into the VOX delay setting. Then you can short press [Scan] key to select 1-6 VOX delay levels, finally press [PTT] key to confirm.

SCAN FUNCTION
 Press Scan key to start auto scan. When receiving signal, it will stop at current channel, and it will auto scan again after signal disappears in 5s. Press [PTT] key, if scan is working, then transmitting will according to the frequency from the scan start channel. If scan stops, transmitting will according to current channel.(PC programmable)

CTCSS and DCS
 Maybe your local dealer has set CTCSS/DCS signalling on your transceiver. When this programmable channels has been selected, only transceiver with same signalling can be received. Other transmitting can not be received.
 This function can help you not to receive unnecessary call. It seems the transceiver maybe have its own channel after CTCSS/DCS has been input, but if other transceivers have been set same CTCSS/DCS codes, your transmitting can be also heard.

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AUXILIARY FUNCTION
1. Busy Channel Lockout
 Start this function to prevent interfering other transceiver using same channel frequency.
 The default setting of this function is off. If the selected channel is programmed on by software or local dealer, when other transceiver is using this channel, if press [PTT] key, then can not transmit, and transceiver will sound "beep", "beep". To stop beep sound, release PTT key.
 When this channel is free, press PTT key again to transmit.
2. Battery Voltage
 When transceiver power is on, battery voltage will be auto detected. When voltage is low, LED indicator displays red. The transceiver can be used for a while, but excessive transmitting will run out of battery quickly. When battery voltage is very low, an alarm will be heard; transmitting is prohibited. Please charge the battery pack or replace the battery pack.
3. Monitor
 You can press [MONI] key to monitor weaker signal which is difficult to be received under normal operation, and also adjust the selected channel volume if signal disappears.
4. CTCSS Select
 Open the software, input the necessary frequency, click "CTCSS" which is under "CTCSS/DCS decode" and "CTCSS/DCS encode", and select the necessary CTCSS, then write it into transceiver by software.

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5. DCS Select
 Open the software, input the necessary frequency, click "DCS" which is under "CTCSS/DCS decode" and "CTCSS/DCS encode", and select the necessary CTCSS, then write it into transceiver by software.

6. Time-out Timer(TOT)
 TOT function is used to prevent a channel have been used for a long time.
 If the transmitting time exceeds the programmable time, transceiver will stop transmitting, and send alarm sound. Release [PTT] key, transceiver will back to receiving mode automatically.

CTCSS FREQUENCY (50 groups)

1	67.0	12	94.7	23	141.3	34	179.9	45	225.7
2	69.3	13	100.0	24	146.2	35	183.5	46	229.1
3	71.9	14	103.5	25	151.4	36	186.2	47	233.6
4	74.4	15	107.2	26	156.7	37	189.9	48	241.8
5	77.0	16	110.9	27	159.8	38	192.8	49	250.3
6	79.7	17	114.8	28	162.2	39	196.6	50	254.1
7	82.5	18	118.8	29	165.5	40	199.5		
8	85.4	19	123.0	30	167.9	41	203.5		
9	88.5	20	127.3	31	171.3	42	206.5		
10	91.5	21	131.8	32	173.8	43	210.7		
11	94.8	22	136.5	33	177.3	44	218.1		

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DCS FREQUENCY (105 groups)

1	063	119	116	37	225	55	325	773	452	391	627
2	095	30	122	38	226	56	331	774	454	392	631
3	096	21	125	39	243	57	332	775	455	393	632
4	031	22	131	40	244	58	343	776	462	394	645
5	032	23	132	41	245	59	348	777	464	395	654
6	036	24	134	42	246	60	351	778	465	396	662
7	043	25	143	43	251	63	356	779	469	397	664
8	047	26	145	44	252	62	361	780	468	398	758
9	051	27	152	45	255	63	365	81	506	399	712
10	053	28	155	46	261	64	371	82	510	400	723
11	054	29	156	47	263	66	411	83	523	401	731
12	065	30	162	48	265	66	412	84	526	402	732
13	071	31	165	49	266	67	413	85	532	403	741
14	072	32	172	50	271	68	423	86	546	404	743
15	073	33	174	51	274	69	431	87	565	405	754
16	074	34	205	52	306	70	432	88	606		
17	114	35	212	53	311	71	445	89	612		
18	115	36	223	54	315	72	446	90	624		

Technical specifications
 • Operating frequency: MURS
 • Channels: 5
 • Modulation type: F3E
 • Bandwidth: 11.25KHz/20.00KHz
 • Power source: Li-ion Battery 3.7V DC(1100mAh)

Channel and frequency correspondence list

CH.No	CH.Freq.	CH.No	CH.Freq.	CH.No	CH.Freq.
1	151.820	3	151.940	5	154.600
2	151.880	4	154.570		

Note: Above channels are license free channels

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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/>

Changes or modifications not expressly approved by the party

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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 and 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

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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 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 B digital device, pursuant to part 15 of the FCC Rules. 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.

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—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.

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.

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

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 the manufacturer specifically authorized by the manufacturer for use with this radio, and the device or its antenna shall be at least 2.5 cm.
 This radio is designed for and classified as "General population/uncontrolled Use"

For the warning information of the frequency restriction, please refer to the package or manual section.

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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.
 This radio is designed for and classified as "General population/uncontrolled Use"

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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 General population/uncontrolled 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 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.

NOTE: Nearly every electronic device is susceptible to

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• Transmit only when people outside the vehicle are at least the recommended minimum lateral distance away from a properly installed 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/CNIRP RF exposure limits.

Hand-held Mode
 • Port 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

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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.

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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.

Safety Operation
 • 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.

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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.

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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GUARANTEE CARD

Model Number: _____
 Serial Number: _____
 Dealer: _____ Telephone: _____
 User's Name: _____ Telephone: _____
 Address: _____ Post Code: _____

REMARKS:
 1. This guarantee card to be kept by the user, no replenishment if lost.
 2. This guarantee card to be filled & chopped by the dealer, or it is invalid.
 3. Don't alter the guarantee card, please confirm the serial number on the guarantee card is same as that on the machine.
 4. One-year guarantee, charger, battery, earphone, antenna and can cable are not under guarantee.
 5. The user can get repairing service from the following ways:
 a. Go to the shop where you buy the machine
 b. Our local repairing agent

Please cut along this line

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