

Shenzhen Retevis Technology Co.,Ltd







FM Transceiver

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.

· Please do not communicate or charge this transceiver in

Please read this manual carefully before using this

flammable, explosive and area which transceiver CTCSS/DCS..... communication is prohibited(such as oil station, gas station AUXILIARY FUNCTIONS...... · 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, hum and water splashed place, and also avoids to put it on unstable surface. If transceiver smells or smokes, please remove the batte

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 prohibted

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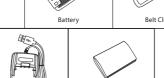
check carefully the main transceiver in the packing box and the UNPACKING AND CHECKING EQUIPMENT.... shipment, please contact the shipper or local dealer. PREPARATION.....

1. Supplied Accessories

USB Charger User's Manual

UNPACKING AND CHECKING EQUIPMENT

CTCSS FREQUENCY(50 CTCSS FREQUENCY)......10



USB Charger User's Manual

PREPARATION

We recommend that you open the packing box before use ar If battery is not fully charged within schedule time, sto

> arging. Otherwise the battery may be overheat and smoke and burst into fire. Do not throw the battery into micro-wave oven and high-

> > ·Do not use unusual battery!

reasonable, and safety.

The battery may be overheat and smoke and burst into fire

·Prevent the break as well as liquid spilling battery from fire! If the battery is spilling(or exuding smelly smell), put it away from inflammable area. The electrolyte spilling from he battery is easy to catch fire, and it will cause battery smokes or burst into fire suddenly.

When charger is power on, put battery in and full connected, the 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 ransceiver only, it will charge the battery more scientific

1 Use Li-ion Battery ·Charge the battery before use. ·To prevent battery pack from discharging, please remove he 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

If possible, discharge battery.

Do not charge the battery for a long time!

2.Battery Characteristic ·The capacity of battery will reduce step by step after being

3. Store it in a cool(below 25°C) and dry place.

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 guickly when stored in hot place. Please do not leave battery in car and put it near any heating device · If battery working life becomes shorter, please replace it even it is fully charged. If go on being charged and discharged, the electrolyte will spill

light will turn red, start charging. When battery has been fully charged, the green light on 4. Install/Remove Battery Pack

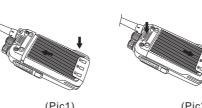
3.Charge Li-ion Battery

· Do not short circuit battery pack terminals or throw battery · Do not try to remove the battery pack shell.

· Do not install battery pack under dangerous conditions otherwise spark will cause explosion. Insert the top part of the battery pack into the top 2 slots of

"click" sound is heard.(Pic1)

To remove the battery pack, make sure the transceiver has been turned off, and then press the battery released latch in the



bottom of transceiver, and pull the bottom part of battery away from the transceiver body, and remove the battery.(Pic2) 5.Install/Remove Belt Clip

If necessary, install the supplied screws into the belt clip at the

6.Install Hand Strap

must be used only during the course of employment by

hazards; NOT intended for use in a General

individuals aware of the hazards, and the ways to minimize such

back of battery pack for easy carry.(Pic3) ① Power/Volume Knob To remove the belt clip, directly remove the two screws only. Rotate the knob clockwise to turn on the transceiver, keep rotating to adjust the volume. To turn it off, rotate the knob to Install the hand strap at the middle circle of the transceiver.(Pic4) the end anticlockwise

② LED Indicator

GETTING STARTED

receiving, LED indicator turns red. LED indicator will flash red when battery in low voltage. ③ Channel Selection Knob

 PTT(Push-To-Talk) Switch To transmit, press PTT button and face towards

microphone to talk. ⑤ Scan Kev Press it to open and again to close this function.

·More accurate adjustment is needed while communication. Note: You can press MONI key to monitor the background When transmitting, LED indicator turns green, and when noise while adjusting volume. 3.Channel Select Rotate Channel Selection Knob to select needed channel Clockwise rotation will rise the channel number and Rotate this knob to select different channels. anticlockwise rotation will reduce the channel number.

> Voice Prompt: The radio will be voice prompt recent channel number automic when you rotete channel knob.

Maybe your local dealer has set CTCSS/DCS signalling on your transceiver. When this programmable channels has The voice prompt can be set by English and Chinese, you been selected, only transceiver with same signalling can be can select the language by software. received. Other transmitting can not be received.

4.Adjust Squelch Level Squelch function is used to let speaker quiet when no any

> 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 boot, you can 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

Press and hold the [MONI] key to boot, and VOX setting

function will be open, then press [MONI] key again to select

level is too low, then signal will appear with the background SCAN FUNCTION Press Scan key to start auto scan. When receiving signal

CTCSS and DCS

VOX FUNCTION

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

Maybe your local dealer has set CTCSS/DCS signalling on

(2) Press [PTT] key, LED indicator displays red. 3. Release [PTT] key and start to receive.

rom speaker. When squelch is off, no any noise can be

The selected squelch level will decide where to turn on or off

squelch function. If the selected squelch level is too high, ther

weaker signal can not be heard; But if the selected squelch

1. According to different settings of monitor function,

transceiver is transmitting on the selected channel.

2. Press [PTT] key, and speak to microphone.

press [MONI] key to monitor loudspeaker. Make sure no an

(1) Keep microphone away from your mouth about 3~4 cm

and speak in your usual tone, so that the receiver can get

If the transmitting signal is weaker, and also higher squelch

level is set, then maybe you can not receive the call.

noise. (PC programmable)

5.Transmit(Call)

your transceiver. When this programmable channels has When the selected channel is being called, LED indicator been selected, only transceiver with same signalling can be displays green, you can receive the call. received. Other transmitting can not be received.

This function can help you not to receive unnecessary call t seems the transceiver maybe have its own channel after CSS/DCS has been input, but if other transceivers have been set same CTCSS/DCS codes, your transmitting can be also heard.

• Do not use any portable radio that has a damaged

batteries, may complete an electrical circuit

5 DCS Select Open the software, input the necessary frequency, click

Start this function to prevent interfereing other transceiver using same channel frequency.

then write it into transceiver by software. The default setting of this function is off, if the selected 6.Time-out Timer(TOT) channel is programmed on by software or local dealer, when other transceiver is using this channel, if press [PTT] key TOT function is used to prevent a channel have been used for then can not transmit, and transceiver will sound "beep "beep". To stop beep sound, release PTT key. If the transmitting time exceeds the programmable time,

]When this channel is free, press PTT key again to transmit. 2. Battery Voltage When transceiver power is on, battery voltage will be auto

AUXILIARY FUNCTION

1. Busy Channel Lockout

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

difficult to be received under normal operation, and also adjust the selected channel volume if signal disappears. 4 CTCSS Select

CTCSS" which is under "CTCSS/DCS decode" and "CTCSS/DCS encode", and select the necessary CTCSS. then write it into transceiver by software.

Technical specifications

◆ Bandwidth: 11.25KHz/20.00KHz

◆ Operating frequency: MURS ◆ Modulation type: F3E

Channel and frequency correspondence list

◆ Power source: Li-ion Battery 3.7V DC/1100mAh

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

FOR PORTABLE TWO-WAY RADIOS



contains important operating instructions for safe usage and RF energy awareness and control for compliance with applicable ATTENTION! | standards and regulations.

frequency (RF) spectrum to provide communications between vo or more users over a distance. RF energy, which when used improperly, can cause biological damage.

tested to ensure they meet government-established RF exposu 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

assure compliance with established RF exposure limits:http://www.who.int/en/

RF ENERGY EXPOSURE AND PRODUCT SAFETY GUIDE

Before using this radio, read this guide which

Version:R20190219

This two-way radio uses electromagnetic energy in the radio

All Retevis two-way radios are designed, manufactured, and

Please refer to the following websites for more information on what RF energy exposure is and how to control your exposure

Local Government Regulations

Product Label. Also, your Retevis user manual, or separate

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 contact the local government radio management departments.

prohibited.

responsible for compliance may void the user's authority granted When two-way radios are used as a consequence of employmen operate this radio and should not be made. To comply with the corresponding requirements, transmitter adjustments should b made only by or under the supervision of a person certified as technically qualified to perform transmitter maintenance and

safety booklet includes information and operating instructions required to control your RF exposure and to satisfy compliance semiconductor, etc.) not authorized by the local government radio management departments equipment authorization for this radio could violate the rules.

the Local Government Regulations requires users to be fully aware of and able to control their exposure to meet occupation equirements. Exposure awareness can be facilitated by the us a product label directing users to specific user awareness nformation. Your Retevis two-way radio has a RF Exposure by an organization representative of the user of those services.

Governments keep the radios in classification, business two-way

Use of this radio outside the country where it was intended to be (1) This device may not cause harmful interference, and

Unauthorized modification and adjustment

repairs in the private land mobile and fixed services as certified

GETTING STARTED.....

BASIC OPERATION.....

VOX FUNCTION.....

SCAN FUNCTION.

Radio License

radios operate on radio frequencies that are regulated by the The detailed classification and the use of your two radios, please

distributed is subject to government regulations and may be

DCS FREQUENCY (105 DCS FREQUENCY).....

RF ENERGY EXPOSURE AND PRODUCT SAFETY GUIDE FOR

TECHNICAL SPECIFICATIONS

PORTABLE TWO-WAY RADIOS.....

Replacement of any transmitter component (crystal,

(2) this device must accept any interference received, including

Changes or modifications not expressly approved by the party

FCC Requirements:

interference that may cause undesired operation.

applicable)

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);

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 required to correct the interference at his own expense.

(Simple EU declaration of conformity) Shenzhen Retevis Technology Co., Ltd. declares that the radio equipment type is compliance with the essential requirements and other relevant provisions of RED Directive 2014/53/EII 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

Restriction Information

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) Malta (MT), Netherlands (NL), Austria (AT), Poland (PL), Portugal (PT), Romania (RO), Slovenia (SI), Slovakia (SK), Finland (FI), Sweden (SE) and United Kingdom (UK).

refer to the package or manual section.

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

following internet address: <u>www.retevis.com</u>.

This device complies with part 15 of the ECC Rules. Operation is subject to the following two conditions: (Other devices are

CE Requirements: waste. Dispose of them according to the laws in your area.

Licence-exempt radio apparatus

subject to the following two conditions:

This product can be used in EU countries and regions, includin interference that may cause undesired operation of the device.

RF Exposure Information For the warning information of the frequency restriction, please

The crossed-out wheeled-bin symbol on your product. manufacturer declared.

literature, or packaging reminds you that in the European • DO NOT transmit for more than 50% of total radio use time, 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

IC Requirements:

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

(1) This device may not cause interference (2) This device must accept any interference, including

> • 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

the transceiver and then press the battery pack down until a

population/uncontrolled environment. 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

are posted to do so. • DO NOT operate the transmitter in areas that are sensitive to To control your exposure and ensure compliance with the electromagnetic radiation such as hospitals, aircraft, and blasting sites. the following procedures.

avoid such interference, turn off the radio in areas where signs

• Portable Device, this transmitter may operate with the antenna(s) documented in this filing in Push-to-Talk and body-• User awareness instructions should accompany the device 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. described herein are not met.

• 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.

when transferred to other users. • Do not use this device if the operational requirements

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 · Occupational/Controlled Radio, this radio is designed for and measurable RF energy exposure only when transmitting in terms classified as "Occupational/Controlled Use Only", meaning it 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.

General population/uncontrolled Radio, this radio is designed for and classified as "General population/uncontrolled Use". or body harness for this product. Using approved body-worn RF Exposure Compliance and Control Guidelines and Operating

occupational/controlled environment exposure limits, always adhere to Hand-held Mode

> Hold the radio in a vertical position with the microph (and other parts of the radio including the antenna) at 2.5 cm (one inch) away from the nose or lips. The an should be kept away from the eyes. Keeping the radi proper distance is important as RF exposure decreases with increasing

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

compatibility.

• When operating in front of the face, worn on the body, always place the radio in a Retevis approved clip, holder, holster, case, accessories is important because the use of Non-Retevis approved accessories may result in exposure levels, which

distance from the antenna.

electromagnetic interference (EMI) if inadequately shielded, designed, or otherwise configured for electromagnetic

Press it to monitor the selected channel.

It is to connect the optional microphone-speaker.

Rotate the Power/Volume knob clockwise to turn on the

Rotate the Power/Volume knob anticlockwise to turn on

Rotate the Power/Volume knob to adjust the volume.

Clockwise rotation will rise the volume and anticlockwise

⑦ MIC-SP Jack

transceiver

the transceiver.

2.Adjust Volume

rotation will reduce the volume.

BASIC OPERATION

1.Turn On/Turn Off

Small Parts. Not for children under 3 years.

exceed the IEEE/ICNIRP RF exposure limits.

a battery or accessory or when charging battery Furn off your radio when you are in a potentiall hazardous environments: Near electrical blasting caps, in a blasting area, in explosive atmosphere (inflammable gas, dust particles, metallic powders, grain powders, etc.). Turn off your radio while taking on fuel or while

parked at gasoline service stations.

that is sensitive to external RF energy.

· Turn off your radio when on board an aircraft

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 equipmen

Any use of a radio must be in accordance with applicable regulations per airline crew instructions.

Avoid Choking Hazard

Turn off your radio power in the following conditions: or earpiece. • Turn off your radio before removing (installing) · Limit the amount of time you use headsets on

> against your ear Use careful with the earphone maybe possible excessive sound pressure from earphones and headphones can cause

hearing loss

Protect your hearing:

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 vo hearing could be affected. Hearing damage from loud noise is sometimes undetectable at first and can have a cumulative effect.

earpieces at high volume.

• When using the radio without a headset or

Avoid Burns

antenna. If a damaged antenna comes into contact with the skin when the radio is in use, a minor • Use the lowest volume necessary to do your job burn can result.

• Turn up the volume only if you are in noisy Batteries (If appropriate) • When the conductive material such as jewelry Turn down the volume before adding headse keys or chains touch exposed terminals of the

(short circuit the battery) and become hot to cause bodily injury such as burns. Exercise care in handling any battery, particularly when earpiece, do not place the radio's speaker directly placing it inside a pocket, purse or other

become hot.

conditions.

Antennas

container with metal objects Long transmission · When the transceiver is used for long transmissions, the radiator and chassis will

environments, use only in dry locations

risk of electrical shock or fire.

• Do not disassemble the charger, that may result in

Safety Operation

• Do not use charger outdoors or in moist

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

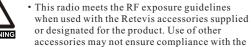
radio may be propelled with great force and cause

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 shall be easily accessible Approved Accessories



or designated for the product. Use of other ccessories may not ensure compliance with the RF exposure guidelines and may violate For a list of Retevis-approved accessories for

• The adapter shall be installed near the equipment

http://www.Retevis.com

You can press [MONI] key to monitor weaker signal which is

automatically.

Open the software, input the necessary frequency, click

GUARANTEE CARD Model Number: ___

Address: _____Post Code: ____

enishment if lost. it is invalid.

your radio model, visit the following website

Serial Number: _____ Dealer: _____ Telephone: ____ User's Name: _____ Telephone: _____

"DCS""which is under "CTCSS/DCS decode" and

"CTCSS/DCS encode", and select the necessary CTCSS,

transceiver will stop transmitting, and send alarm sound.

CTCSS FREOUENCY(50 groups)

Release [PTT] key, transceiver will back to receiving mode

Purchasing Date: _____

REMARKS:

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 way:

a. Go to the shop where you buy the machine b.Our local repairing agent

1. This guarantee card to be kept by the user, no repl-

number on the guarantee card is same as that on the machine.

2. This guarantee card to be filled & chopped by the dealer, or 3.Don't alter the guarantee card, please confirm the serial