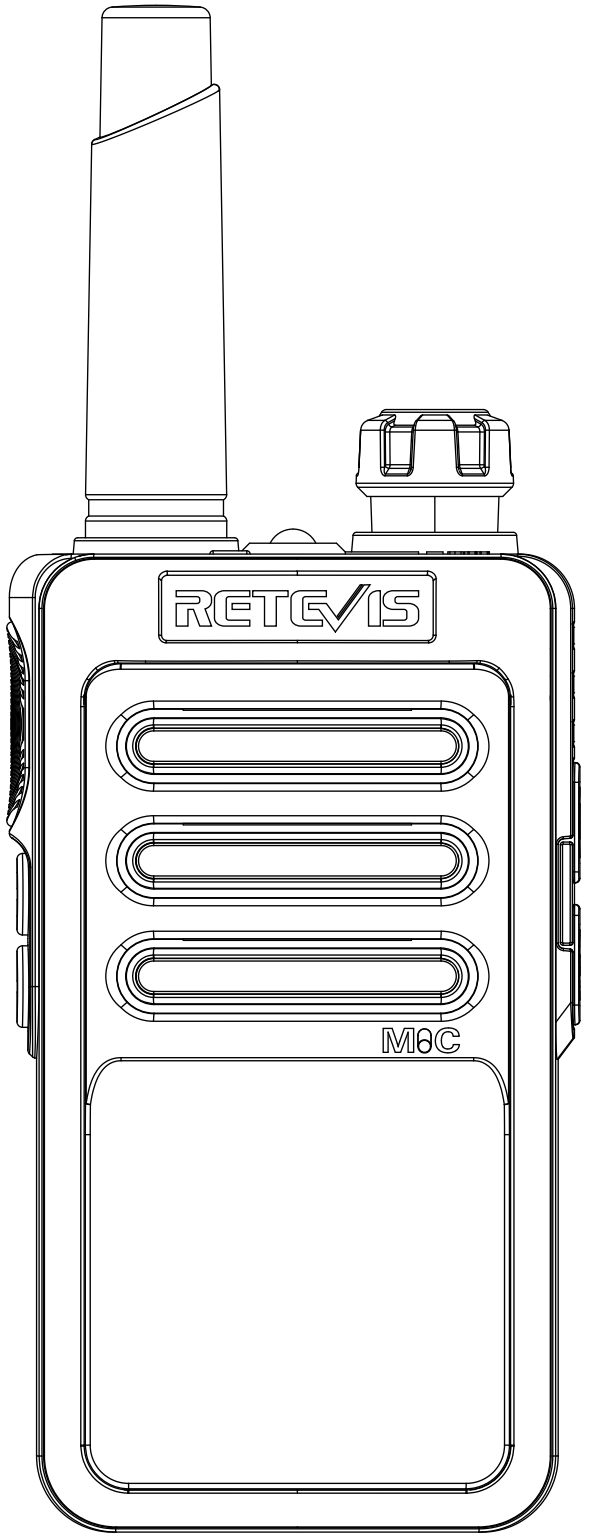
RETEVIS



RB66

Mobile Radio

USER'S MANUAL

Contents

Warning ---------- 01
Notes of charging ---------- 01
Radio introduction ---------- 02
Function operation ---------- 02
WARNING ---------- 06

For downloading further resources:
Brochures, Software/Firmware, Manual etc, Pls contact your direct reseller first OR go to website retevis.com and check “support” in the each product link to download it.

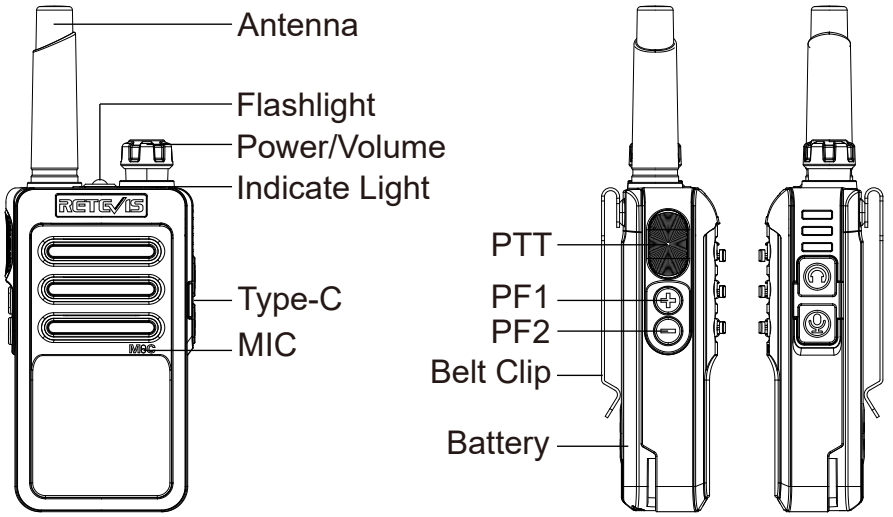
Warning

· Please read this manual carefully before using this radio.
· Please do not communicate or charge this radio in flammable, explosive and area which radio communication is prohibited (such as oil station, gas station, airport etc.)
· Please do not operate this radio without license in govemment laws banned areas
· Please make sure this radio avoids the sunshine, and avoids to put it near any heating device.
· Please make sure this radio avoids any dusty, humid and water splashed place, and also to put it near any heating device.
· If radio smells or smokes, please remove the battery pack from radio at once, and then please contact your nearest distributor.
· The repair job of this radio is in the charge of professionals & technical's, self-disassembly is prohibited.

Notes of charging

· Please use the charger matching this model to charge.
· When charging, it is recommended to turn off the radio first.
· In order to get the best battery performance, please charge for at least 5 hours for the first time.
· Please do not charge the battery for a long time, otherwise the service life of the battery will be shortened. When the battery is fully charged, please stop charging in time.
· The charger is only charged for this radio battery, please do not charge other battery, otherwise it will cause damage to the charger and battery.
· After the battery is fully charged, please place it in a cool, dry place. Please do not get close to fire or expose to sunlight, otherwise there will be a safety hazard.
· During the radio charging, it is not recommended to transmit.
· During the radio charging , the battery will be slightly hot, which is normal.

Radio introduction



No.	Name	Application
1	Antenna	Transmit/Receive Wireless Signals
2	Indicator light	Indicate Working Status
3	Power Knob	Power Switch/Volume Adjustment
4	Flashlight	Lighting“PF2”press 3 seconds
5	Mic	Voice Input
6	PTT	Transmit
7	PF1/PF2	Channel Switch
8	Type-c Interface	Earpiece/Charge Inteface

Charging mode

When the radio is used the Type-C charging cable to charge, the radio indicator is red, and green when fully charged.

When the radio is charged by charging base, the red light on the charging base means charging, and the green light means the battery is fully charged.

Function operation

1. Function and operation

1.1 Turn on/off

Rotate the volume switch clockwise and hear a "click" to indicate that the radio is turned on; turn the volume switch counterclockwise, and hear a "click" sound to indicate that the radio is turned off.

1.2 One-click copy CTC/DCS

Switch radio A to channel 1, turn off the radio, press and hold the channel + button to turn on the one-click copy function, the blue light will flash slowly when entering the pairing; press radio B PTT to transmit, the radio A will make a beep when the signal is paired, the blue light flashes quickly, indicating that the copy CTC/DCS is successful, and the current CTC/DCS will be saved, switch the

channel, then radio A will copy the next CTC/DCS.
Note: This function is the function of intercommunication with other brand radios of same frequency. After the copy CTC/DCS is completed, please restart the radio, otherwise it will consume power quickly.

1.3 Wireless copy CTC/DCS
If you want to copy all the parameters of the radio A to multiple radios, turn all the radios (including the radio A) to channel 2 first, turn off these radios, then press and hold the channel "+" to power on, the blue light flashes slowly (indicates that the wireless copy function is turned on), Press and hold the radio A PPT to transmit, after releasing, the red light is on, and when the red light is off, it indicates that the copy is successful (restart the radios and the copy is successful).
Note: Wireless copy CTC/DCS is only possible when the radio has the same model and software version as the radio A.

1.4 Alarm
Set the side button " + / - " of the radio as the remote alarm function in the software. Press and hold the side button " + / - " on the radio for three seconds to turn on the emergency alarm function, and press the PTT button to turn off the alarm function during alarm. Local alarm + remote alarm.

1.5 English voice broadcast channel function
The voice broadcast column of the software reads: None and English.

1.6 VOX
The side button " + / - " of the radio is set to VOX in the software, long press and hold the side button " + / - " on the radio for three seconds to turn on the VOX function, and long press the side button " + / - " again to turn off the VOX function.
Note: The higher the gain level of the VOX, the lower the volume required for VOX (the gain level can be selected from 0-9).
The longer the VOX delay, the longer the VOX exit time, (VOX delay is divided into 0.5/1/1.5/2/2.5/3s).

1.7 Scan
Set the side key " + / - " of the radio as the scan function in the software, long press the side key " + / - " on the radio for three seconds to turn on the scan function, and long press the side key " + / - " again to close the Scan function.

1.8 Non-standard CTC/DCS
Non-standard CTC/DCS include analog sub-tone CT and digital sub-tone DCS
Analog sub-tone CT can input any analog ctcss between 58-260HZ.
Digital sub-tone DCS can input any digital cdcss between DOOON-D777N and DO01I-D777I.

1.9 Channel Lock
Set the side key " + / - " of the radio as the channel lock function in the software, long press the side key " + / - " on the radio for three seconds to turn on the channel lock function, and long press the side key " + / - " again to close the channel lock function.

1.10 Flashlight

Set the side key " + / - " of the radio as the flashlight function in the software. Press and hold the side key " + / - " for three seconds to turn on the flashlight function. Press and hold the side key " + / - " again to turn it off.

1.11 Monitor

When setting the side button " + / - " of the radio to monitor in the software, press and hold the side button " + / - " on the radio for three seconds to turn on the monitor function.

2. Factory Setting

CH NO.	Frequency(MHz)	Code(Hz)	Power
1	462.5625	67.0	High
2	462.5875	118.8	High
3	462.6125	127.3	High
4	462.6375	131.8	High
5	462.6625	136.5	High
6	462.6875	141.3	High
7	462.7125	146.2	High
8	467.5625	D243N	Low
9	467.5875	D032N	Low
10	467.6125	D047N	Low
11	467.6375	D051N	Low
12	467.6625	D053N	Low
13	467.6875	D065N	Low
14	467.7125	D116N	Low
15	462.5500	123.0	High
16	462.5750	D743I	High
17	462.6000	D332I	High
18	462.6250	127.3	High
19	462.6500	D243I	High
20	462.6750	D606N	High
21	462.7000	D731I	High
22	462.7250	136.5	High

3. Technical Specification

Frequency Range	FRS
Channel Capacity	22
Audio Distortion	<5%
Operating Temperature	－20℃+55℃
Antenna Impedance	50Ω
Output Power	≤2W
Frequency Stability	±2.5ppm
Maximum frequency offset	±5kHz
Stray Radiation	TX≤0.25uW@-36dBm;RX≤2nW@-57dBm
Modulation	8KφF3E
Transmission current	≤1500mA
Receive Sensitivity	-122dBm
Adjacent channel selectivity	≥60dB
Inter-modulation	≥55dB
Operation Voltage	DC 3.7V

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

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.

•User instructions should accompany the device when transferred to other users.

•Do not use this device if the operational requirements described herein are not met.

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 of 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/

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(only applicable to licensed radio)

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 equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
•(Only applicable to home)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.
—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.
•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 Compliance and Control Guidelines and Operating Instructions
•Occupational/Controlled Radio, this radio is designed for and classified as "Occupational/Controlled Use Only", meaning it must be used only during the course of employment by individuals aware of the hazards, and the ways to minimize such hazards; NOT intended for use in a General population/uncontrolled environment.
•General population/uncontrolled Radio, this radio is designed for and classified as "General population/uncontrolled Use".
To control your exposure and ensure compliance with the occupational/controlled environment exposure limits, always adhere to the following procedures. 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.
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 necessary information or less, is important because the

radio generates measurable RF energy exposure only when transmitting in terms of measuring for standards compliance.
•DO NOT operate the radio without a proper antenna attached, as this may damage the radio and may also cause you to exceed RF exposure limits. A proper antenna is the antenna supplied with this radio by the manufacturer or an antenna specifically authorized by the manufacturer for use with this radio, and the antenna gain shall not exceed the specified gain by the manufacturer declared.
•DO NOT transmit for more than 50% of total radio use time, more than 50% of the time can cause RF exposure compliance requirements to be exceeded.
•During transmissions, your radio generates RF energy that can possibly cause interference with other devices or systems. To avoid such interference, turn off the radio in areas where signs are posted to do so.
•DO NOT operate the transmitter in areas that are sensitive to electromagnetic radiation such as hospitals, aircraft, and blasting sites.
•Portable Device, this transmitter may operate with the antenna(s) documented in this filing in Push-to-Talk and body-worn configurations. RF exposure compliance is limited to the specific belt-clip and accessory configurations as documented in this filing and the separation distance between head and the device or its antenna shall be at least 2.5 cm.
•Mobile Device, during operation, the separation distance between user and the antenna subjects to actual regulations, this separation distance will ensure that there is sufficient distance from a properly installed externally-mounted antenna to satisfy the RF exposure requirements. 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.

Hand-held Mode(if applicable)

• 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 (inflammable gas, dust particles, metallic powders, grain powders, etc.).
•Turn off your radio while taking on fuel or while parked at gasoline service stations.
To avoid electromagnetic interference and/or compatibility conflicts
•Turn off your radio in any facility where posted notices instruct you to do so, hospitals or health care facilities (Pacemakers, Hearing Aids and Other Medical Devices) may be using equipment that is sensitive to external RF energy.
•Turn off your radio when on board an aircraft. Any use of a radio must be in accordance with applicable regulations per airline crew instructions.

Protect your hearing:

• Use the lowest volume necessary to do your job.
• Turn up the volume only if you are in noisy surroundings.
• Turn down the volume before adding headset or earpiece.
• Limit the amount of time you use headsets or earpieces at high volume.
• When using the radio without a headset or earpiece, do not place the radio's speaker directly against your ear
• Use careful with the earphone maybe possible excessive sound pressure from earphones and headphones can cause hearing loss
Note: Exposure to loud noises from any source for extended periods of time may temporarily or permanently affect your hearing. The louder the radio's volume, the less time is required before your hearing could be affected. Hearing damage from loud noise is sometimes undetectable at first and can have a cumulative effect.

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
•BATTERY WARNING: KEEP OUT OF REACH OF CHILDREN
•Store spare batteries securely
•If the battery compartment (if applicable) does not close securely, stop using the product and keep it away from children

•If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention
•Dispose of used batteries immediately and safely
Long transmission
•When the transceiver is used for long transmissions, the radiator and chassis will become hot.

Safety Operation

Forbid
•Do not use charger outdoors or in moist environments, use only in dry locations/conditions.
•Do not disassemble the charger, that may result in risk of electrical shock or fire.
•Do not operate the charger if it has been broken or damaged in any way.
•Do not place a portable radio in the area over an air bag or in the air bag deployment area. The radio may be propelled with great force and cause serious injury to occupants of the vehicle when the air bag inflates.

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

Cut along this line

Guarantee

Model Number: _____
Serial Number: _____
Purchasing Date: _____
Dealer: _____ Telephone: _____
User's Name: _____ 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.

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MADE IN CHINA