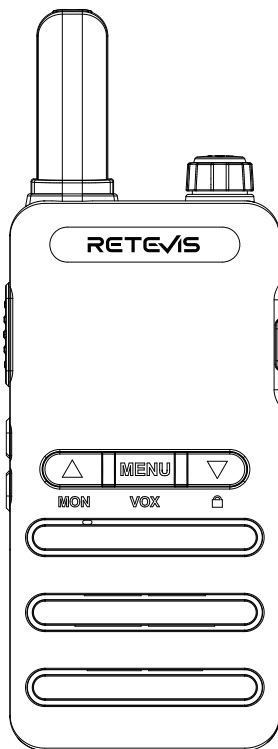


# RETEVIS



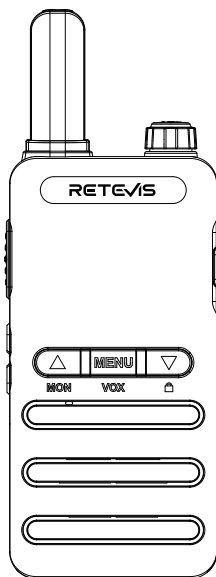
## B3B User Manual

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For downloading further resources:

Brochures, Software/Firmware, Manual etc, Please contact your direct reseller first OR go to website [retevis.com](http://retevis.com) and check “support” in the each product link to download it.



## Function Introduction

- Monitor
- VOX function
- English broadcast
- Key lock function
- TOT
- Busy Channel Lockout
- High/low power selection
- Power saving mode
- Low battery reminder
- 50 CTCSS/210 DCS
- Squelch manual adjustment
- Roger Beep
- Emergency alarm

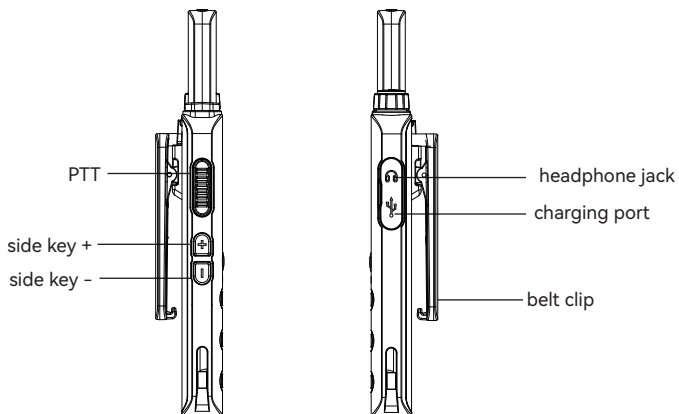
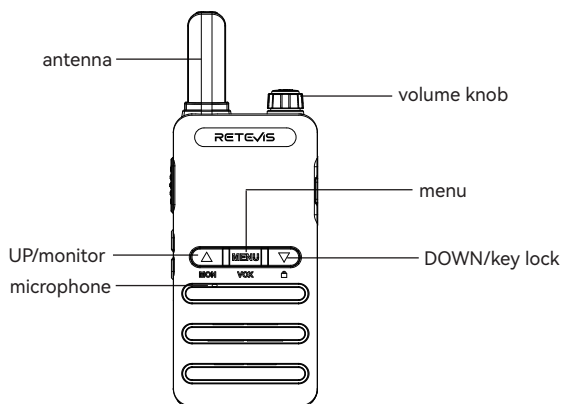
## Charging Notice

- Ionic polymer batteries are not charged at the factory, please charge them at an ambient temperature between 5-40°C before use.
- After purchasing or long-term storage (more than two months), the first time to charge the walkie-talkie, it needs to reach its saturation capacity. After repeated charging/discharging for twice or three times, it will achieve normal charging effect and battery energy.
- Before charging, it is strictly prohibited to use the walkie-talkie during charging, which will affect the normal charging of the ionic polymer battery and cause accidental danger.
- After the walkie-talkie is fully charged, unplug the USB charging plug. Do not charge it for more than 12 hours. To disconnect charger from line voltage (AC outlet) by removing main plug even if the battery is not completely charged.
- Even after completely correct charging, the use time of the walkie-talkie battery does not increase, indicating that the life of the ionic polymer battery has reached to the end, please replace the battery.

Note: this walkie-talkie is charged directly with the adapter. When charging, first insert the plug of the “adapter” into 110~220V power supply, and then the small output plug of the adapter is directly inserted into the walkie talkie.

USB charging port, the power icon on the screen of the walkie-talkie rotates, start charging. When fully charged, the battery icon displays full and stops scrolling.

## I.Functional Profile



## II. Basic Operation

### Switch power supply:

1. Turn the power volume switch knob in the clockwise direction and after hearing a click, and turn on the walkie talkie. Voice prompts “welcome to use”, and the screen shows the current channel machine is powered on.
2. Turn the walkie talkie in the counterclockwise direction until hearing a click, and power off the walkie talkie. The screen light goes out and the machine shuts down.

### Channel selection:

Short press [side key+] / [side key-] to switch to channel. The channel on the screen displays the current channel and voice prompt. The operation key is to increase/decrease the channel number repeatedly, that is, to short press when the operation is performed.

When short press [side key+] : 1—16->1—16->.....

When short press [side key-] : 16—1->16—1->.....

PTT: While holding down the PTT transmit key, please keep the microphone 3-8 cm away from your lips, and speak into the microphone with a normal tone, so that the receiver can obtain the best sound quality.

## III. Function Introduction

### 1. VOX function

VOX refers to the function of speaking into a walkie-talkie but transmitting without pressing the PTT key.

Short press [menu] key to enter VOX adjustment, voice prompts VOX. There are eight VOX levels (1-2-3-4-5-6-7-OFF). Press [▲] or [▼] keys to switch the level, and choose OFF to close VOX. Levels 1-7 indicate the voice control level that is turned on. After the setting is completed, press PTT to exit. It can also be implemented through computer programming software.

Headphone: Wired headphone is a special 3.5mm plug headphone for this product. After the VOX function is turned on, there is no need to press PTT to transmit. When the sending volume is higher than the set trigger volume level, the walkie talkie will automatically transmit voice.

### 2. Squelch level adjustment

The squelch function is to strictly filter out excessive background noise, eliminate or suppress the background noise when the signal is not received, so that the speaker remains silent when the walkie talkie does not receive a signal. The purpose of squelch is to strictly suppress the noise, but if the suppression is too much, the weak call signal will be limited and thus can not be received. If the communication distance is long, the received signal will be weaker at this time, which requires the receiving sensitivity to be higher, and the squelch level should be lowered.

Short press [menu] twice continuously, the voice prompts “Squelch”, and enter the squelch adjustment.

There is a total of eight squelch levels (1-2-3-4-5-6-7-OFF), press [▲] or [▼] key to switch the level. Select OFF to turn on the monitoring function, and short press PTT to exit after setting. It can also be implemented through computer programming software.

### 3. Roger Beep setting

Continuously press [menu] key for three times to enter the Roger Beep setting, the voice prompts “Beep prompt”, press [▲] or [▼] to switch ON/OFF, you can turn on/off the beep transmission, and the default is off.

### 4. Key lock function

Long press [▼] from the front, voice broadcasts “lock”, and the machine turns on the key lock.

Long press the front [▼] , voice prompts “unlock”, and the key is unlocked.

### 5. Monitoring function

Long press [▲] key for 2 seconds to enter monitoring mode, and release to exit the monitoring mode.

Headphone: Wired headphone is a special 3.5mm plug headphone for this product. After the VOX function is turned on, there is no need to press PTT to transmit. When the sending volume is higher than the set trigger volume level, the walkie talkie will automatically transmit voice.

### 6. Power saving mode

Power saving function allows the walkie-talkie to reduce power consumption by reducing the work of the receiving circuit when there is no signal reception in the receiving state. Thus, it extends the use time of the walkie-talkie after a charge, this function can be checked in the "power saving" option in the frequency writing software.

## **7. Low batter reminder**

When the battery is low, the voice prompts you to charge it in time.

## **8.Busy Channel Lockout**

Busy Channel Lockout means that when the walkie talkie receives a signal, it is busy and cannot perform other operations, that is, it cannot transmit.

Specific operations: select a channel in the frequency writing software and set Busy Channel Lockout to ON. Then, the Busy Channel Lockout is turned on, and it cannot transmit when received. Set Busy Channel Lockout to OFF, in this case, the Busy Channel Lockout is turned off and it can transmit when receiving.

## **9.TOT**

The purpose of the TOT is to prevent a person from using a channel for too long. The time of timeout timer can be set through frequency writing software (can be 30 seconds, 60 seconds to 180 seconds, with each level has a 30-second difference). If you continuously transmit to the set time of the timeout timer, the walkie talkie will stop transmitting and emit a warning tone. To stop the warning tone, release the PTT switch. Press the PTT key again to resume the transmission (This function can be set on/off through the computer frequency writing software).

## **10.Compandor**

It is a function to prevent inter-channel interference, and can be used when the incoming interference is too much. It can be set in the frequency writing software. If it sets "yes" in a channel, it indicates the channel has this function. However, if it sets "no", it means the channel does not have this function.

## **11.CDCSS QT/DCS DQT**

This walkie-talkie has 50 sets of standard CTCSS and 210 sets of DCS to choose from. In addition, you can set the range of non-standard CTCSS as 58.0~260Hz and the range of non-standard DCS as D000~D777. (can be set by computer programming software)

## **12.Emergency alarm function**

When frequency writing software "side key" is defined as an emergency alarm, long press the [side key -] for 2 seconds, and the emergency alarm rings, and send an emergency alarm signal. Within the receiving range, the same frequency radio can receive the alarm signal, and press the transmit button to end the emergency alarm transmission.

## **13.One-click pairing**

Mode 1: after the machine is adjusted to channel 1, press and hold [▲] to start, at this time, the green light flashes, and the machine enters mode 1. After receiving the signal, the single channel pairing is completed, and the knob is switched to channel 2 and so on. The machine can be restarted after the pairing is completed; Mode 2: after the two B3B machines are simultaneously tuned to channel 2, press and hold [▲] to start the machine, and the green light of the machine flashes. For the machines that need to be paired, press PTT and the red light is on to start pairing. After pairing is complete, the green light flashes slowly. At this time, all channels are paired and the two machines can restart.

## **IV.Technical Indicators**

The Machine	
Frequency range	462.5500-462.7250MHz 467.5625-467.7125MHz
Rated voltage	DC 3.7V (Jacketed polymer battery)
Memory channel	22 channels
Antenna configuration	Built-in antenna
Working manner	Same frequency PTT
Ground method	Negative pole

Receiver	
Sensitivity	0.16μV(12dB SINAD)
Audio power	≥350mW
Audio distortion	<5%
Intermodulation	≥60dB
Receiving current	≤380mA
Standby current	≤20mA
Transmitter	
Output power	462.5500-462.7250MHz: 32.56dBm 462.5500-462.7250MHz: 26.26dBm 467.5625-467.7125MHz: 26.62dBm
Modulation system	FM (F3E)
Maximum frequency deviation	≤2.5KHz
Pre-emphasis	6dB for every octave
Transmit current	≤1200mA

## V.Factory Settings

### B3B FRS

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

## RF ENERGY EXPOSURE AND PRODUCT SAFETY GUIDE

Before using this device, please read this guide which contains important operating instructions for safe usage, control information and operational instructions for compliance with RF Energy Exposure limits in applicable national and international standards.

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

### 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

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)

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

- (1) This device may not cause harmful interference.
- (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. 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.

### IC

#### 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.

### Disposal

The crossed-out wheeled-bin symbol on your product, literature, or packaging reminds you that all electrical and electronic products, batteries, or accumulators 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 and rules in your area.



### RF Safety

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. 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/>



Transmit no more than the rated duty factor 50% of the time. 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. For users who wish to further reduce their exposure, some effective measures to reduce RF exposure include:

Reduce the amount of time spent using your wireless device.

Use a speakerphone, earpiece, headset, or other hands-free accessory to reduce proximity to the head (and thus head exposure). While wired earpieces may conduct some energy to the head and wireless earpieces also emit a small amount of RF energy, both wired and wireless earpieces remove the greatest source of RF energy (handheld device) from proximity to the head and thus can greatly reduce total exposure to the head.

Increase the distance between wireless devices and your body.

### **Hand-held Mode**

To control your exposure and ensure compliance with the uncontrolled environment exposure limits, always adhere to the following procedure:

-To receive calls, release the PTT button.

-To transmit (talk), press the Push-to-Talk (PTT) button in front of the face.

-Hold the radio in a vertical position with the microphone (and other parts of the radio including the antenna) at least one inch (2.5 centimeters) away from the nose or lips.



### **Electromagnetic Interference/Compatibility**

Nearly every electronic device is susceptible to electromagnetic interference (EMI) if inadequately shielded, designed, or otherwise configured for electromagnetic compatibility. 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, such as hospitals or healthcare facilities.

Persons with pacemakers, implantable cardioverter defibrillators (ICDs) or other active implantable medical devices 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 the body from the implantable device to minimize the potential for interference.

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.

### **Turn off your radio in the following conditions:**

- Turn off your radio prior to entering any area with a potentially hazardous or explosive atmosphere. Only radio types that are especially qualified should be used in such areas as "Intrinsically Safe".

Note: the areas with potentially explosive atmosphere referred to above include blasting caps, blasting areas, inflammable gas, dust particles, metallic powders, grain powders, 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.

- Do not use any radio that has a damaged antenna. If a damaged antenna comes into contact with the skin when the radio is in use, a burn can result.

- Turn off your radio before removing or installing accessories.

### **Use of Communication Devices While Driving**

- Always check the laws and regulations on the use of radios in the areas where you drive. Use of Communication Devices, for example, mobile radio, may not be allowed.

- 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.

- Do not place a portable radio in the area over an air bag or in the airbag deployment area. The radio may be propelled with great force and cause serious injury to occupants of the vehicle when the airbag inflates.



## Protect your hearing

- Use the lowest volume necessary to do your job. Turn up the volume only if you are in noisy surroundings.
- 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 carefully with the earphone maybe possible excessive sound pressure from earphones and headphones can cause hearing loss.



**CAUTION:** 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.

## Batteries Safety

### • WARNING: KEEP NEW OR OLD USED BATTERIES OUT OF REACH OF CHILDREN.

• In the event of a battery leaking, do not allow the liquid to come into contact with the skin or eyes. If contact has been made, wash the affected area with copious amounts of water and seek medical advice immediately.



• Since batteries are sensitive to high temperatures when storing them, keep them in a cool and dry place. The recommended temperature should be between +10 °C and +25 °C and never exceed +30 °C. Batteries should therefore not be stored next to radiators or boilers nor in direct sunlight. Extremes of humidity (below 35% and above 95% relative humidity for sustained periods) should be avoided since they are detrimental to both batteries and packing. Although the storage life of batteries at room temperature is good, storage is improved at lower temperatures provided special precautions are taken. Also, accelerated warming is harmful.

Leaving a battery in an extremely high temperature surrounding environment that can result in an explosion or the leakage of flammable liquid or gas.

Leaving a battery in an extremely high temperature surrounding environment that can result in an explosion or the leakage of flammable liquid or gas.

• The battery supply terminals are not to be short-circuit.  
• Do not replace the battery in any area labeled "Hazardous Atmosphere". Any sparks created in a potentially explosive atmosphere can cause explosion or fire.

• When the conductive material such as jewelry, keys or chains touches 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.

• Batteries should be removed from the appliance when not being used for long periods of time (one months). The batteries should be enclosed in special protective packaging (such as sealed plastic bags or variants) which should be retained to protect them from condensation during the time they are warming to ambient temperature.

• Exhausted batteries are to be removed from the equipment.  
• Do not dismantle, open or shred batteries. Batteries should be dismantled only by trained people.  
• Disposal of a battery into fire, or a hot oven, or mechanically crushing or cutting of a battery, that can result in explosion.

### WARNING: CHOKING HAZARD—Small Parts. Not suitable for children under 3 years old.

The plug of the adapter is considered a disconnect device. The socket-outlet shall be installed near the equipment and shall be easily accessible.

- Contact Retevis for assistance regarding repairs and service.
- For a list of Retevis-approved accessories for your radio model, visit the website:  
<http://www.Retevis.com>



## Guarantee

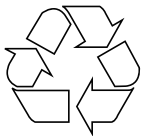
Model Number: \_\_\_\_\_  
Serial Number: \_\_\_\_\_  
Purchasing Date: \_\_\_\_\_  
Dealer: \_\_\_\_\_ Telephone: \_\_\_\_\_  
User's Name: \_\_\_\_\_ Telephone: \_\_\_\_\_  
Country: \_\_\_\_\_ Address: \_\_\_\_\_  
Post Code: \_\_\_\_\_ Email: \_\_\_\_\_

### 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