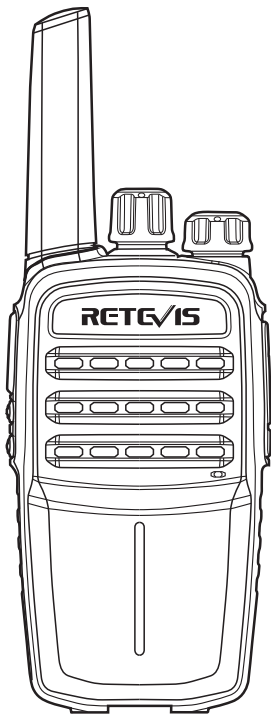


# RETEVIS



## **RT40B**

Two Way Radio  
User's Manual

## Thank you!

we are grateful that you chose our two way radio. We believe this Two Way Radio will provide dependable and reliable communication to personal operating at peak efficiency. The transceivers incorporate the latest in advanced technology. As a result, We feel strongly that you will be pleased with the quality and features of this product!

### Product safety and RF Exposure for Two Way Radio:



Before using this Two way radio, please read the manual which contains important operating instructions for safe usage, RF Energy Awareness, control information and operational instructions for compliance with RF Energy Exposure limits in applicable national and international standards, and also read the operational instructions for safe use.

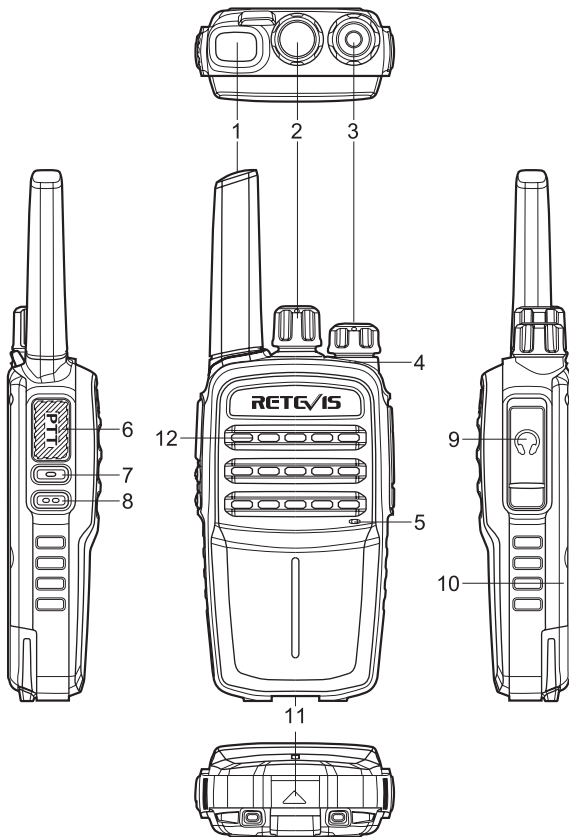
#### **For downloading further resources:**

Brochures, Software/Firmware, Manual etc, Pls 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.

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## GETTING ACQUAINTED



1	Antenna	7	MONI/Alert/VOX
2	Channel Selector Knob	8	Battery Indicator / SCAN
3	Radio ON-OFF / Volume Control Knob	9	Accessory / Charge Jack
		10	Battery Pack
4	LED Indicator	11	Battery Latch
5	Microphone	12	Speaker
6	PTT Switch (PTT)		

## UNPACKING AND CHECKING EQUIPMENT

Carefully unpack the transceiver. We recommend that you identify the items listed in the following table before discarding the packing material. If any items are missing or have been damaged during shipment, file a claim with the carrier immediately.

### Packing List

DESCRIPTION	QUANTITY
Unit Transceiver	1
Li-ion Battery Pack	1
Charger Base	1
Charger Cable	1
Belt Clip	1
User Manual	1
Hand Strap	1

## PREPARATION

### Li-ion Battery Pack Precautions

- Do not short the battery terminals or dispose of the battery by fire. Never attempt to remove the casing from the battery pack.
- Keep the charging temperature always between 5°C and 40°C.
- Do not use the transceiver while charging the battery pack. We recommend you switch the transceiver power OFF while charging is taking place.
- Do not recharge the battery pack if it is already fully charged. Doing so may cause the life of the battery pack to shorten or the battery pack may be damaged.
- Use the battery pack only for its intended purpose. Never use any charger or battery pack that is damaged.
- Do not short-circuit the battery. Accidental short-circuiting can occur when a metallic object such as a coin, clip, or pen causes direct connection of the positive (+) and negative (-) terminals of the battery. This might happen, for example, when you carry a spare battery pack in your pocket or purse. Short-circuiting the terminals may damage the battery or the connecting object.

### Charging the Battery Pack

The battery pack is not charged at the factory, please charge it before use. Initially charging the battery pack after purchase or extended storage (greater than 2 months) will not bring the battery pack to its normal operating capacity. After two or three complete charge and discharge cycles. The full performance of battery will be achieved.

1. Slide the battery pack or transceiver with a battery pack into the desktop charger.
2. Make sure the battery pack contacts are in contact with the charging terminals.
3. The charging LED lights red and charging begins.
4. After charging about 4 hours, when the light turns to green, it means the battery pack is fully charged.

## **BASIC OPERATION**

### **Switch Power On/Off**

1. Turn On: turn the [Power] switch clockwise to switch the transceiver ON, an alert tone will be heard.
2. Turn Off: turn the [Power] switch counter clockwise to switch the transceiver OFF.

### **Adjusting the Volume**

Rotate the [Volume] control to adjust the volume. Clockwise increases the volume and counter clockwise decreases it.

### **Selecting a Channel**

Rotate the [Channel Selector] to choose your desired channel. Clockwise increases the number and counter clockwise decreases it. If the channel number annunciation is activated, the radio will announce the current corresponding channel number.

### **Transmitting & Receiving**

1. Press the [PTT] switch and speak into the microphone in your normal speaking voice, for best sound quality at the receiving station, hold the microphone approximately 1~2 inches (2.5~5 cm) from your mouth.
2. Release the [PTT] switch to receive.

## **ADVANCED OPERATIONS**

### **Time-Out Timer (TOT)**

The Time-Out Timer is used to prevent any caller from using a channel for an extended period of time (OFF, 15~600 seconds). If you continuously transmit for a period of time that exceeds the programmed time, the transceiver will stop transmitting and an alert tone will sound. To stop the tone, release the PTT switch.

### **Battery Save**

The battery save function decreases the amount of power used when signal is not being received and no operations are being performed (no keys are being pressed and no switches are being turned) for 5 seconds, the battery save function activates. When a signal is received or an operation is performed, battery save is disabled. The default setting is ON.

### **Channel Number Annunciation**

Your dealer may have programmed channel number annunciation on your transceiver. There are 3 kinds of the channel number annunciation: "Chinese Male Voice, English Male Voice (Default Setting), None". When you turn the [Channel Selector], the transceiver sounds the current corresponding channel number.

### **Low Battery Alert**

For extra convenience, if the battery level runs low, the transceiver will sounds "do do do" at every 5 seconds, to alert the user to recharge the battery. Please change new battery pack or charge this battery pack.

## **Compandor**

Activate this function for more clear audio output.  
The default setting is OFF.

## **CTCSS/DCS**

There are 50 CTCSS 105 DCS for selection, you can also define your own CTCSS/DCS, or activate the DCS hopping feature, the CTCSS/DCS is a sub-audible tone/code which allows you to ignore (not hear) calls from other parties who are using the same channel, when a channel is set up with a CTCSS/DCS, squelch will only open when a call containing a matching tone or code is received. Meanwhile, signals that you transmit will only be heard by parties whose CTCSS/DCS signaling matches your transceiver.

## **Wireless Replication**

Wireless copy transmission operation:

In channel 1, press and hold the side key 1 to start the machine at the same time, and the red light flashes to enter the copy transmission mode.

Wireless copy receiving operation:

In channel 2, press and hold the side key 1 to start the machine at the same time, and the green light flashes to enter the copy receiving mode. After two sets of operation, press PTT of transmitter, red light of transmitter will flash, green light of receiver will flash, and receiver will restart automatically after transmission and save it.

## **CARE AND CLEANING**

To guarantee optimal performance as well as a long service life of your radio, please follow the tips below,

- Keep your radio dry. Rain, moisture and liquid or water may contain mineral substance that can corrode the electronic circuit.
- Take out the battery when the radio is wet, install the battery pack when it is completely dry.
- Keep away the radio from hot place. High temperature may cause electrical instrument working life shorten, battery pack damaged and plastic component deformation or dissolved.
- Do not throw, knock or shock the radio. Use it rudely may damage internal circuit board and accurate structure.
- Do not use any strong chemicals, cleaner or detergent to clean the radio.
- Do not paint the radio. Painting may block the demountable component to influence normal operation.
- Do not hold the radio by its antenna or headset cable directly.
- Use supplied or approved antenna when change antenna. Unapproved antenna, modified accessories may damage the radio and violate the relevant rules.
- Attach the accessory jack cover when the radio is not in use.
- Make a back-up copy (like frequencies and channels) before you take your radio to service center.

Note: Every tip above are all applicable for your radio, battery pack, desktop charger and accessories. Consult your dealer or take your radio to nearest service center if any parts cannot work normally.

## TROUBLESHOOTING GUIDE

PROBLEM	SOLUTION
No power	<ul style="list-style-type: none"> <li>●The battery pack maybe dead. Recharge or replace he battery pack.</li> <li>●The battery pack may not be installed correctly. Remove the battery pack and install it again.</li> </ul>
Battery power dies shortly after charging	<ul style="list-style-type: none"> <li>●The battery pack life is finished. Replace the battery pack with a new one.</li> </ul>
Cannot talk to or hear other members in your group.	<ul style="list-style-type: none"> <li>●Make sure you are using the same frequency and CTCSS/DCS as the other members in your group.</li> <li>●Other group members may be too far away. Make sure you are within range of the other transceivers.</li> </ul>
Other voices (besides group members) are present on the channel.	<ul style="list-style-type: none"> <li>●Change the CTCSS/DCS setting. Be sure to change the tone on all transceiver in your group.</li> </ul>

## Specification Table

GENERAL		TRANSMITTER		RECEIVER	
Frequency Rang	462.5500~467.7125MHz	RF Power	2 W / 0.5 W	Audio Output Power	500mW -100/+0
Channel	22 CH	Freq Stability	+/- 3.36ppm	Audio Frequency Response	6dB +/-3
Working Voltage	3.7 V	Freq Tolerance	2ppm	Squelch Opening SINAD	8dB -0/+7
Working Time(5:5:9)	12 H	Spurious Emission	-36dBm	Spurious Response Rejection	65dB -5/+0
Working Temperature	-10 C ~55 C	Modulation Distortion	5%	Conducted Spurious Emission	-57dB
Battery Type	Li-ion	Tx Hum & Noise	40dB +0/-5	Rx Hum & Noise	40dB +0/-5



## Frequency table

GENERAL		TRANSMITTER		RECEIVER	
1	462.5625MHz	2 W	12	467.6625 MHz	0.5 W
2	462.5875 MHz	2 W	13	467.6875 MHz	0.5 W
3	462.6125MHz	2 W	14	467.7125MHz	0.5 W
4	462.6375MHz	2 W	15	462.5500 MHz	2 W
5	462.6625 MHz	2 W	16	462.5750 MHz	2 W
6	462.6875 MHz	2 W	17	462.6000 MHz	2 W
7	462.7125 MHz	2 W	18	462.6250 MHz	2 W
8	467.5625 MHz	0.5 W	19	462.6500 MHz	2 W
9	467.5875 MHz	0.5 W	20	462.6750 MHz	2 W
10	467.6125 MHz	0.5 W	21	462.7000 MHz	2 W
11	467.6375MHz	0.5 W	22	462.7250 MHz	2 W

## RF ENERGY EXPOSURE AND PRODUCT SAFETY GUIDE FOR PORTABLE 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

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/>

### 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 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

Governments keep the radios in classification, business two-way radios operate on radio frequencies that are regulated by the local radio management departments (FCC, ISSED, 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 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, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

•(If applicable)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.

•(If applicable)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](http://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.

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 Information(if applicable)**

•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 user 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.

•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".

#### **RF Exposure Compliance and Control Guidelines and Operating Instructions**

To control your exposure and ensure compliance with the occupational/controlled 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 (if applicable):**

•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 measurable RF energy exposure only when transmitting in terms 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.

•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.

##### **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.

### Phone Mode(if applicable)

•When placing or receiving a phone call, hold your radio product as you would a wireless telephone. Speak directly into the microphone.

**NOTE:** Nearly every electronic device is susceptible to electromagnetic interference

### Electromagnetic Interference/Compatibility

(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



- Turn off your radio before removing (installing) a battery or accessory or when
- 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. 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

#### Long transmission

- When the transceiver is used for long transmissions, the radiator and chassis will become hot. charging battery.

### 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>



## Guarantee

Model Number: \_\_\_\_\_ Serial Number: \_\_\_\_\_

Purchasing Date: \_\_\_\_\_

Dealer: \_\_\_\_\_ Telephone: \_\_\_\_\_

User's: \_\_\_\_\_ Telephone: \_\_\_\_\_

Country: \_\_\_\_\_ Address: \_\_\_\_\_

Post Code: \_\_\_\_\_ Email: \_\_\_\_\_

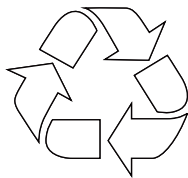
### Remarks:

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