

TT120

User Manual

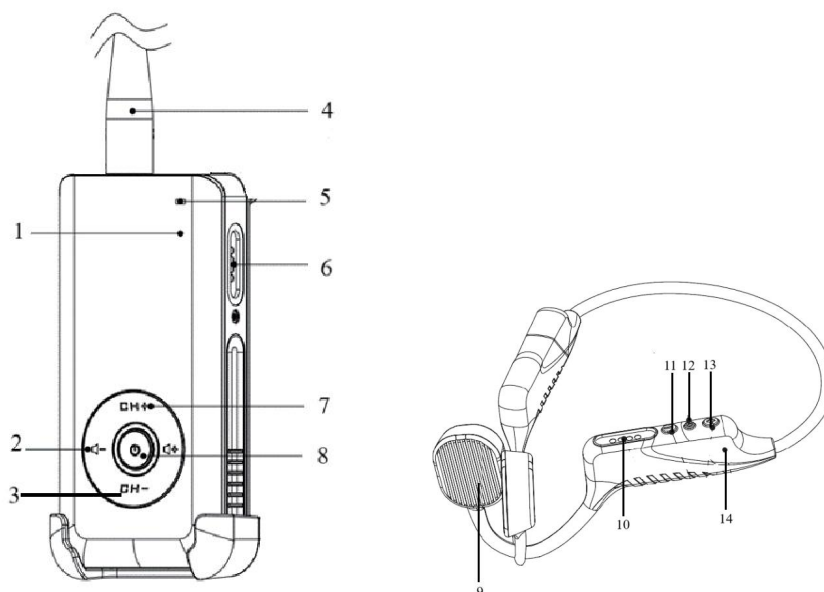
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1. Precautions

1. Maintenance of this device should only be performed by qualified technicians. Do not attempt to disassemble or repair it yourself.
2. For the first charge of a new battery or batteries that have been stored for an extended period (over 2 months), several charging cycles may be required to reach normal battery capacity. Ensure that the batteries are charged at least once every three months.
3. This device does not support usage while charging. Please do not use it while it is being charged.

2. Product Introduction



| | | |
|----|---------------------|--|
| 1 | Built-in Microphone | Input voice |
| 2 | Volume Up / Down | Increase/Decrease output volume |
| 3 | CH- | Channel decrement |
| 4 | Antenna | Transmit signal |
| 5 | LED Indicator | Transmitter status indication: Blue-Charging, Green-Fully Charged, Red-In Use |
| 6 | External Ports | Supports connection to microphone/AUX audio cable/charging cable |
| 7 | CH+ | Channel increment |
| 8 | Power Button | Long press for 5 seconds to turn on/off |
| 9 | Headset | Transmits received audio |
| 10 | External Ports | Support charging |

| | | |
|----|-----------------|--|
| 11 | Decrease Button | Short press for decreasing received volume, long press for channel down |
| 12 | Power Button | Long press to turn on/off |
| 13 | Increase Button | Short press for increasing received volume, long press for Channel Up |
| 14 | LED Indicator | Receiver status indication: Red-Charging, Blue-In Use, Green-Fully Charged |

3. Operation Instructions

3.1 Transmitter Function Operation Instructions

3.1.1 Power On/Off

In the off state, press and hold the power button for 5 seconds to turn on the device. The LED will illuminate, displaying the current communication channel.

In the on state, press and hold the power button for 5 seconds to turn off the device. The LED will extinguish.

3.1.2 Channel Selection

Press the CH+ button to increase the channel, and the CH- button to decrease the channel.

3.1.3 Volume Adjustment

Press the volume up or down buttons to display the volume level. The higher the number, the louder the sound received by the receiver. The maximum volume level is 11.

3.1.4 Communication and External Interface Usage

Connect a microphone to the external interface. Ensure that the transmitter and receiver are on the same channel for normal communication. If an AUX audio cable is required, connect it to the microphone for additional audio input.

3.1.5 One-key Mute

Briefly press the power button to mute the transmitter. A dot will flash on the screen, indicating that communication is disabled. Press the power button again to resume communication.

3.2 Receiver Function Operation Instructions

3.2.1 Power On/Off

In the off state, press and hold the power button for 5 seconds to turn on the device. The blue LED will flash.

In the on state, press and hold the power button for 5 seconds to turn off the device. The blue LED will turn off.

3.2.2 Volume Adjustment

Briefly press the increase button to raise the receiver's volume, and the decrease button to lower it.

3.2.3 Channel Selection

Press and hold the increase button to increase the channel, accompanied by an English announcement of the channel switch.

Press and hold the decrease button to decrease the channel, also with an English announcement of the channel switch.

4. Specifications

| |
|-------------|
| Transmitter |
|-------------|

| | |
|--------------------------|--|
| Size | 260*50*23mm |
| Weight | 158g |
| Battery | Li-ion Battery, Model: 123658, 3500mAh, Weight: 51g, Fire Extinguisher: Carbon Dioxide or Dry Powder |
| Nominal Battery Voltage | 3.7V |
| Signal-to-Noise Ratio | 63dB Stereo SNR |
| Frequency Response Range | 40Hz-15KHz |
| Number of Channels | 9CH |
| Channel Spacing | 200KHz |
| Distortion | 0.1% THD@STEREO, $\Delta f = 67.5 \text{ kHz}$ |
| Operating Time | Approximately 10h |
| Transmission Distance | 120m in open water environment; 50m in underwater environment at depths of 1.5m to 2m; |
| Charging Time | Approximately 5h |
| Waterproof Rating | IP54 |
| Receiver | |
| Size | 260*50*23mm |
| Weight | 39g |
| Frequency | 88.1-107.9MHz |
| Battery | Li-ion Battery, Model: 521333, 270mAh, Weight: 4.8g, Fire Extinguisher: Carbon Dioxide or Dry Powder |
| Nominal Battery Voltage | 3.7v |

| | |
|-------------------|------------------|
| Operating Time | Approximately 5h |
| Charging Time | Approximately 3h |
| Waterproof Rating | IP68 |

Note: The transmission distance and operating time may vary under different working conditions.

5. Package Includes

| Transmitter | |
|-----------------------------|---|
| Transmitter | 1 |
| Microphone | 1 |
| Magnetic USB Charging Cable | 1 |
| Clip | 1 |
| Lanyard | 1 |
| User Manual | 1 |
| Receiver | |
| Receiver | 1 |
| Magnetic USB Charging Cable | 1 |
| earplug | 1 |

6. Common Issues and Solutions

Q: The device won't turn on.

A: Low battery: Please connect the charger.

A: Malfunction during startup or other issues, please contact our customer service.

Q: The transmission volume is low.

A: The speaker is too far from the microphone. It is recommended to speak within 3-10cm of the microphone for optimal sound quality.

A: Increase the volume of the transmitter.

Q: Communication is not possible.

A: The channel parameters are not set correctly. Please reset the parameters.

A: The transmission is beyond the effective communication range.

A: Confirm if the mute function is activated.

1. CAUTION

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.

2. 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.

3.1 US FCC Requirements

3.1.1 This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received, including interference that may cause undesired operation.

3.1.2 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.

3.2 Canada IC Requirements

3.2.1 Licence-exempt radio apparatus

EN: 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.

4 European CE requirements

4.1 Simple EU declaration of conformity

•HENAN ESHOW ELECTRONIC COMMERCE 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.retekess.com.

5. 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. ■■■

5.2 Environmental recycling requirements for German electronic products

(1) Batterien und Akkus

Besitzer von Altgeräten haben Altbatterien und Altakkumulatoren, die nicht vom Altgerät umschlossen sind, im Regelfall vor der Abgabe an einer Erfassungsstelle von diesem zu trennen. Dies gilt nicht, soweit die Altgeräte bei öffentlich-rechtlichen Entsorgungsträgern abgegeben und dort zum Zwecke der Vorbereitung zur Wiederverwendung von anderen Altgeräten separiert werden.

a) Batterien können nach Gebrauch unentgeltlich in der Verkaufsstelle zurückgegeben werden.

b) Der Nutzer ist zur Rückgabe gebrauchter Batterien gesetzlich verpflichtet.

(2) Getrennte Erfassung von Altgeräten

Elektro- und Elektronikgeräte, die zu Abfall geworden sind, werden als Altgeräte bezeichnet. Besitzer von Altgeräten haben diese einer vom unsortierten Siedlungsabfall getrennten Erfassung zuzuführen. Altgeräte gehören insbesondere nicht in den Hausmüll, sondern in spezielle Sammel- und Rückgabesysteme.

(3) Möglichkeiten der Rückgabe von Altgeräten

Besitzer von Altgeräten aus privaten Haushalten können diese bei den Sammelstellen der öffentlich-rechtlichen Entsorgungsträger oder bei den von Herstellern oder Vertreibern im Sinne des ElektroG eingerichteten Rücknahmestellen abgeben. Ein Onlineverzeichnis der Sammel- und Rücknahmestellen finden Sie hier:

<https://www.ear-system.de/ear-verzeichnis/sammel-und-ruecknahmestellen.jsf>

(4) Datenschutz-Hinweis

Altgeräte enthalten häufig sensible personenbezogene Daten. Dies gilt insbesondere für Geräte der Informations- und Telekommunikationstechnik wie Computer und Smartphones. Bitte beachten Sie in Ihrem eigenen Interesse, dass für die Löschung der Daten auf den zu entsorgenden Altgeräten jeder Endnutzer selbst verantwortlich ist.

(5) Hersteller-Registrierungsnummer

Als Hersteller im Sinne des ElektroG sind wir bei der zuständigen Stiftung Elektro-Altgeräte Register (Benno Strauß-Str. 1, 90763 Fürth) unter der folgenden Registrierungsnummer registriert: DE 83916430

6.1 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/>

Keeping the radio at a proper distance is important as RF exposure decreases with increasing distance from the proper antenna. A proper antenna is an antenna supplied with this radio by the manufacturer or specifically authorized by the local authority for use with this radio. This radio can only be operated by use of an antenna of a type and maximum (or lesser) gain approved for the transmitter under regulations and rules. This transmitter must operate with the antenna(s) documented and in Push-to-Talk and body-worn configurations as documented. Using authorized accessories is important because the use of Non-Retekess accessories may result in exposure levels, which exceed the IEEE/ICNIRP RF exposure limits.

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.

6.2 License-Exempt Transmitter Dedicated Use

This radio is designed for and classified as “General population/uncontrolled use”. General population/uncontrolled environments are defined as locations where there is exposure of individuals who have no knowledge or control of RF exposure level.

6.3 Hand-held Mode



To control your exposure and ensure compliance with the controlled 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.

7.1 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.

7.2 Dedicated for Handheld Transmitter

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.

9.1 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.

10.4 Recommended Charging Guidelines for Supplied Chargers and Secondary Batteries (Rechargeable Batteries)

- Turn off your radio before charging.
- Batteries shall be charged at 10°C~40°C environment temperature specified. If the environment temperature is lower than 0°C, the charge shall be prohibited.
- Rechargeable batteries are only to be charged by adults ~~or by children at least 8 years old under adult supervision.~~

11.1 Dedicated for Children's Products

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



12.1 Adapter

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

13.1 Authorized Accessories List

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