

915M Outdoor Full-Duplex Two-Way Intercom User Manual

Preface

Thank you for purchasing this 915M outdoor professional full-duplex intercom device! Designed for outdoor activities such as hiking, mountaineering, camping, cycling, outdoor exploration and team expansion, this product overcomes the limitations of traditional walkie-talkies featuring simplex one-way communication and one-person speaking mode. Adopting the exclusive 915M communication band, it supports networking of up to 15 devices and full-duplex real-time two-way intercom, allowing multiple users to speak and listen simultaneously with instant interaction just like face-to-face conversation. It effectively solves the problems of delayed communication and limited interaction of traditional intercoms, providing efficient, smooth and stable communication support for outdoor team cooperation and travel communication.

This manual details the device functions, operation methods, parameter specifications, safety instructions and maintenance guidelines. Please read it carefully before use and keep it properly for future reference.

1. Product Overview

1.1 Core Features

- **Full-Duplex Real-Time Two-Way Intercom:** Subverts the traditional simplex intercom mode, supporting simultaneous speaking and listening for multiple users. No button operation or turn-taking is required, delivering zero-latency and ultra-smooth communication and restoring natural face-to-face dialogue experience.
- **Exclusive 915M Communication Band:** Adopting the license-free 915M outdoor dedicated band with strong penetration and excellent anti-interference performance, it adapts to complex outdoor environments including mountains, valleys, grasslands and suburbs. It ensures stable signals and long transmission distance while avoiding interference from conventional civilian frequency bands.
- **15-Device Networking Support:** A single group allows synchronous pairing and networking of up to 15 devices, meeting multi-person communication demands for small and medium-sized outdoor team activities, field operations and outdoor rescue scenarios.
- **Professional Outdoor Adaptability:** Lightweight, portable, drop-resistant and dustproof body designed for high and low temperature outdoor environments. It features low power consumption and long battery life with no network traffic or call charges required. No base station is needed, enabling instant networking and communication after power-on without network restrictions.
- **High-Definition Noise Reduction Calling:** Equipped with a professional outdoor noise-reducing microphone and high-definition speaker, it effectively filters wind noise and environmental background noise to ensure clear and transparent voice quality even in noisy outdoor conditions.

1.2 Application Scenarios

Suitable for outdoor mountaineering, hiking, wild camping, mountain cycling, outdoor team expansion, field

operation inspection, small-scale outdoor rescue, self-driving fleet follow-up communication and other outdoor team scenarios with weak or no network coverage.

2. Product Specifications

Parameter Item	Technical Specification
Communication Band	915MHz outdoor dedicated license-free band
Working Mode	Full-duplex real-time two-way intercom (multi-person synchronous interaction)
Maximum Networking Capacity	Supports up to 15 devices for synchronous pairing and networking per group
Communication Distance	Open barrier-free environment (tested at Shenzhen Dameisha Beach): effective communication distance $\geq$ 2100 meters (2.1 km); complex outdoor environment with trees and terrain obstacles: effective communication distance $\geq$ 600 meters. The actual distance and effect may vary slightly due to on-site shelters and electromagnetic interference.
Noise Reduction Function	Built-in intelligent high-definition noise reduction, fully enabled by default. Automatically filters wind noise and background noise without manual switching.
Power Supply	Built-in rechargeable lithium battery, Type-C fast charging
Battery Endurance	Standby time $\geq$ 72 hours; continuous intercom time $\geq$ 8 hours
Operating Temperature	-20℃ ~ +55℃, adaptable to outdoor high and low temperature environments
Body Features	Lightweight, drop-resistant and dustproof
Intercom Mode	Button-free real-time intercom, full-time two-way smooth communication

3. Component Description

- Power Key:** Long press to power on/off; short press to check remaining battery level. Long press for 3 seconds to power on with voice prompt; long press for 3 seconds to power off with voice prompt.
- Volume +/- Keys:** Adjust speaker volume to adapt to different environmental noise levels. In pairing mode, short press the Volume+ key to invite new team members to join the network with corresponding voice prompt.
- Network Matching Key:** Used for device pairing, group creation and network exit. Long press for 3

seconds under power-on state to enter pairing mode with voice prompt. Short press in pairing mode to exit and restore normal working state.

- **Mute Key:** Independent mute switch for intercom audio. Short press to toggle mute status under normal working state. Press in pairing mode to initiate group pairing invitation.
- **Microphone:** High-definition sound pickup microphone with built-in dust and windproof structure
- **Speaker:** High-fidelity loudspeaker with clear and loud sound, supporting full system voice prompts
- **Type-C Charging Port:** Universal fast charging interface, compatible with mainstream chargers and power banks

4. Operation Guide

4.1 Power On / Power Off

Long press the power key for 3 seconds, the device vibrates and powers on with voice prompt **power on**, indicator lights up and enters standby networking state. Long press the power key for 3 seconds again, the device plays **power off** and shuts down with indicators off. The device automatically enters power-saving standby mode after 30 minutes of inactivity. Equipped with a built-in low-voltage protection mechanism, the device periodically plays the low-battery voice prompt **low battery** when power is insufficient, and automatically powers off before battery exhaustion to prevent battery damage and extend service life.

4.2 Group Network Matching (Mode 1: Create New Blank Group)

Application Scenario: Build a new exclusive team group with multiple unnetworked devices for the first time without existing groups.

1. **Step 1: Device Preparation:** Power on all new devices to be networked, ensure sufficient power and keep them in unnetworked standby state.
2. **Step 2: Enter Pairing Mode Uniformly:** Long press the [Network Matching Key] for 3 seconds on each device. The device plays voice prompt **Entering pairing mode** and the ring indicator displays a running light flow effect, officially entering pairing standby state.
3. **Step 3: Initiate New Group Invitation:** When all devices are in pairing mode, short press the [Mute Key] on any device. The device plays **Inviting device to join** and actively initiates a new group networking invitation.
4. **Step 4: Complete Networking:** All other devices in pairing mode automatically respond and join the group. After successful networking, the initiator short presses the [Network Matching Key] to exit pairing mode. The device plays **Connected**, and all devices enter full-duplex real-time intercom state.

4.3 Group Network Matching (Mode 2: Add New Devices to Existing Group)

Application Scenario: Add new devices to an established network group with less than 15 online devices.

1. **Step 1: Device Preparation:** Confirm the existing group is not full, then power on and standby all new unnetworked devices to be added.
2. **Step 2: Enter Pairing Mode:** Only one arbitrary online device in the group and all new unnetworked devices need to long press the [Network Matching Key] for 3 seconds respectively. The device plays **Entering pairing mode** and the ring light shows a running effect to enter pairing state.

3. **Step 3: Invite New Members:** Short press the [Volume+ Key] on the paired online device in the group. The device plays **Adding new teammate** and actively sends an invitation for new devices to join.
4. **Step 4: Complete Member Addition:** All new devices in pairing mode automatically access the existing group. After successful addition, the initiator short presses the [Network Matching Key] to exit pairing mode. The device plays **Connected**, and all devices restore normal full-duplex intercom state.

General Networking Rules: A single group supports a maximum of 15 synchronous networked devices. No new devices can be added when the group is full; partial devices must be removed before re-pairing. Multiple independent groups can be created in the same environment without mutual signal interference. All devices enter real-time two-way intercom automatically after successful networking with no extra operation required.

4.4 Two-Way Intercom Usage

Full-duplex intercom is enabled by default after successful networking. **No button operation is required.** All team members can speak and listen simultaneously with conflict-free and delay-free multi-person interaction. It completely changes the turn-taking limitation of traditional walkie-talkies and realizes natural face-to-face style communication.

Usage Suggestion: Keep your mouth 3–30 cm away from the microphone and face the microphone toward your mouth during sound pickup to obtain optimal call quality and effectively avoid noise, sound distortion and weak pickup issues.

4.5 Function Adjustment

- **Volume Adjustment:** Short press Volume +/- keys to adjust the speaker volume level by level. There are 10 adjustable volume levels (factory default: Level 7), adapting to different scenarios such as quiet camping and noisy mountain areas.
- **Mute Switch Toggle:** In normal power-on state, short press the [Mute Key] to cycle the intercom mute state. Voice prompt **unmuted** for mute off and **muted** for mute on. The microphone stops sound pickup in mute mode while the listening function remains available.

4.6 Charging Operation

Use the original Type-C data cable for charging, compatible with chargers, power banks, and computer USB interfaces. The red indicator light stays solid on during charging; once fully charged, the white indicator light stays solid on. Disconnect the power supply promptly after full charge to avoid overcharging. For first-time use, it is recommended to fully charge the device to ensure optimal battery service life.

5. Indicator Light Status Description

- **Remaining Battery Ring Indicator:** The ring indicator intuitively displays the current remaining battery level. After the device is powered on, short press the power key to enter the battery checking mode. The ring light consists of 10 segments, with each segment representing approximately 10% battery level. The more segments lit, the higher the remaining power, allowing users to quickly check the battery status in any environment.
- **Volume Level Ring Light Display:** The middle ring indicator visually shows the current volume level. The device defaults to Level 7 volume out of 10 adjustable levels; the number of lit segments corresponds to the current volume level.

- **Device Connection Status Light (White Light)**
- Disconnected State: The white light flashes continuously, indicating no network connection.
- Connected State: The white light stays solid on, indicating normal networking and intercom working status.
- **Pairing Mode Ring Light Effect**
- Enter Pairing Mode: The full ring light displays a running flow effect to identify pairing status.
- Ordinary Device Pairing Completed: All ring lights stay solid for 3 seconds, then automatically exit the pairing light mode and restore to normal connection light status.
- Host Device Pairing: The ring light keeps flashing during pairing. Manually short press the network matching key to exit pairing mode and restore normal status.
- **Mute Mode Light Prompt (Red Light)**
- Mute Enabled: Red indicator light stays solid on; microphone is muted while listening function remains active.
- Mute Disabled: Red indicator light turns off, restoring normal two-way intercom pickup function.
- **Charging Status Light Prompt**
- Charging: Red indicator light stays solid on.
- Fully Charged: Red light turns off, and the white status light stays solid on to indicate full charge and standby state.
- **Device Abnormality Prompt:** Flashing red light indicates low battery.
- **Disconnection Voice Prompt:** When the device is unpaired, detached from the group, or out of communication range, it broadcasts the voice prompt **disconnected** every 15 seconds.
- **Network Connection Voice Prompt:** When the device successfully completes network pairing and connection, it broadcasts the voice prompt **Connected**.
- **Low Battery Voice Prompt:** The device periodically broadcasts **low battery** when power is insufficient and automatically powers off before battery exhaustion.

6. Safety Instructions

- This device adopts the compliant 915M license-free frequency band. Do not modify the device frequency band, transmit power, or hardware structure without authorization.
- Do not store the device in high-temperature, humid, rainy, or long-term sun-exposed environments. Avoid water ingress, dropping, impact, and extrusion to prevent damage to the device body and internal components.
- Use standard compliant power adapters for charging. Inferior chargers are prohibited to avoid safety hazards such as battery overheating and short circuits.
- Do not operate the device in flammable and explosive environments such as gas stations and chemical plants.
- Children must use the device under adult supervision to avoid accidental injury or device damage.
- For long-term storage, fully charge and power off the device. Recharge it every 3 months to prevent battery damage caused by over-discharge.

7. Daily Maintenance & Care

- Clean the device body with a dry soft cloth. Do not rinse directly with water or wipe the ports and surface with corrosive liquids such as alcohol and disinfectant.
- Regularly clean dust and debris from the charging port, microphone hole, and speaker hole to avoid affecting charging, sound pickup, and sound output performance.
- If signal instability, stuttering sound, or network failure occurs, check the battery level and network status first; restart the device to resolve most common faults.
- Avoid frequent dropping and severe vibration. Use a matching lanyard or storage bag during outdoor use to extend the device service life.

8. Common Troubleshooting

Fault Phenomenon	Troubleshooting & Solutions
Failed to power on	Check the remaining battery level and charge the device; confirm correct long-press operation of the power key.
Network pairing failure	Confirm all devices are powered on and the group is not full; restart devices and re-pair; keep away from strong electromagnetic interference sources.
Stuttering or noisy call sound	Check and remove obstructions on the microphone and speaker, clean debris from sound pickup holes; stay away from strong interference devices and shorten the networking distance between devices for better call quality.
Short communication distance	Ensure sufficient battery power; avoid heavily sheltered areas such as dense forests and buildings, and use the device in open environments.
No charging response	Replace the data cable or charger; clean dust from the charging port and reconnect for charging.

9. After-Sales Warranty

This product provides official after-sales warranty service. The whole device enjoys a 12-month warranty under non-human damage conditions. Free maintenance and parts replacement are available for quality-related failures within the warranty period. Failures caused by artificial damage, water ingress, and unauthorized modification are not covered by the warranty, and paid maintenance services will be provided.

For after-sales consultation, fault repair, and technical support, please contact our official customer service team.

Warm Tip: Designed exclusively for outdoor team communication, this device requires no SIM card, network signal, or call fees. It is ready for use after power-on. The full-duplex two-way intercom greatly improves outdoor team communication efficiency and safeguards your outdoor travel.

FCC WARNING

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, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: 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.

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment