

iSound NL200

NearLink Microphone Systems

User Manual V1.0



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PREFACE

The purpose of this section is to ensure that the user is able to use the iSound NL200 combo correctly through this manual to avoid danger in operation or property damage. Before using this product, please read the product manual carefully and keep it for future reference.




NOTICE

This manual applies to the iSound NL200 Wireless Microphone System.

This manual describes the functions and use of the various functional modules of the iSound NL200 and guides you through the installation and commissioning of this product.

SYMBOLS

The symbols that may be found in this document are defined as follows.

Symbol	Description
 Note	Provides additional information to emphasize or supplement important points of the main text.
 Caution	Indicates a potentially hazardous situation, which if not avoided, could result in equipment damage, data loss, performance degradation, or unexpected results.
 Danger	Indicates a hazard with a high level of risk, which if not avoided, will result in death or serious injury.

SAFETY INSTRUCTIONS

Danger

- To ensure reliable use of the equipment and the safety of personnel, please observe the following during installation, use and maintenance:
- During the installation and use of the equipment, all electrical safety regulations of the country and the region of use must be strictly observed.
- When installing the equipment, make sure that the input power of the equipment power adapter is 100V-240V, 50/60Hz AC power.

- Keep the working environment well-ventilated so that the heat generated by the equipment during operation can be discharged in time to avoid damage to the equipment due to excessive temperature.
- Always unplug the unit's power adapter from the AC power outlet before:
 - A. Removing or reinstalling any part of the equipment.
 - B. Disconnecting or reconnecting any electrical plug or connection of the equipment.Do not operate with electricity.
- There are AC high-voltage parts in the equipment, non-professionals should not disassemble them without permission to avoid the risk of electric shock.
- Do not repair the equipment privately to avoid aggravating the damage.
- Do not spill any corrosive chemicals or liquids on or near the equipment.
- If the unit emits smoke, odor or noises, turn off the power immediately and unplug the power cord, and contact your dealer or service center.
- If the appliance is not working properly, contact the shop where you purchased the appliance or the nearest service center and do not disassemble or modify the appliance in any way. (We cannot be held responsible for problems caused by unapproved modifications or repairs).

 **Caution**

- Do not drop objects on the equipment or vibrate the equipment vigorously and keep the equipment away from locations with magnetic field interference. Avoid installing the equipment in a place where the surface vibrates or is susceptible to shock (neglecting this may damage the equipment).
- Do not use the equipment in high temperature, low temperature or high humidity environments. Refer to the equipment's data sheet for specific temperature and humidity requirements.
- Use the unit indoors, not in an exposed installation where it may be exposed to rain or extreme humidity.
- When the equipment is not used for a long period of time or in a humid and dewy environment, the main power supply of the equipment should be switched off.
- When cleaning the equipment, please use a sufficiently soft dry cloth or other alternatives to wipe the internal and external surfaces, do not use alkaline detergent to wash, and avoid hard objects to scratch the equipment.
- Please keep all the original packaging materials of the equipment properly, so that in case of problems, use the packaging materials to pack the equipment and send it to the agent or return it to the manufacturer for processing. We will not be responsible for any accidental damage in transit not caused by the original packaging materials.

 **Note**

Basic knowledge and skills in low voltage cabling and wiring of low voltage electronics.

Basic audio and networking knowledge and skills and the ability to read and understand the contents of this manual.



1. INTRODUCTION

1.1 APPEARANCE



1.2 OVERVIEW

The iSound NL200 wireless microphone solution, mainly oriented to the education/meeting projects, is used for sound reinforcement or recording and broadcasting scenarios when teachers or lecturer are speaking.

Based on 2.4G NearLink wireless transmission technology, it creates an interference-free lecture environment for teachers, and the device has high performance and stability. Built-in intelligent algorithms such as Acoustic Feedback Cancellation, Automatic Gain Control, Adaptive Noise Suppression, and Room Acoustic Calibration allow teachers/lecturer to deliver every word clearly to every student/audience without having to worry about the sound being loud or soft.



The iSound NL200T microphone is very small and light to wear; compared to traditional handheld microphones, the microphone allows teachers to free their hands and give full play to body language; compared to far-field microphones, the microphone has better sound quality and allows teachers to move around and pick up a wider range of sound.

A set of iSound NL200 solution includes a charging compartment, a transmitter and a receiver. The charging case can quickly recharge the transmitter, and the receiver supports both UAC digital output and two analog outputs.

1.3 FEATURES

Transmitter features: (iSound NL200T, NL200H)

- Adopts NearLink 2.4G wireless technology.
- Adopts the advanced RISC-V chipset.
- Zero range anxiety, 4 hours of Lithium battery life.
- With a fast-charging case, continuously charge the microphone more than three times.
- Compact design, with a diameter of 32mm and a thickness of 13.8mm.
- Ultra-lightweight design, only 10.5g.
- Two wearing styles (lavalier and headwear with magnetic accessories) can be freely switched; interaction is easier.
- Multi-room use eliminates crosstalk (any microphone can be paired with any receiver).
- One teacher/ lecturer equipped with one microphone, clean and hygienic.
- Simple operation, only one Power-ON button.
- Optional accessories include magnetic headwear and an external antenna.

Receiver features: (iSound NL200R)

- 86 type (UK) box design, easy to install.
- DSP audio processing with built-in Acoustic Feedback Cancellation, Automatic Gain Control, Adaptive Noise Suppression, and Room Acoustic Calibration algorithms.
- Automatic frequency pairing via NFC automatically disconnects after powering off.
- Supports UAC digital and analog output.

2. SCENARIOS

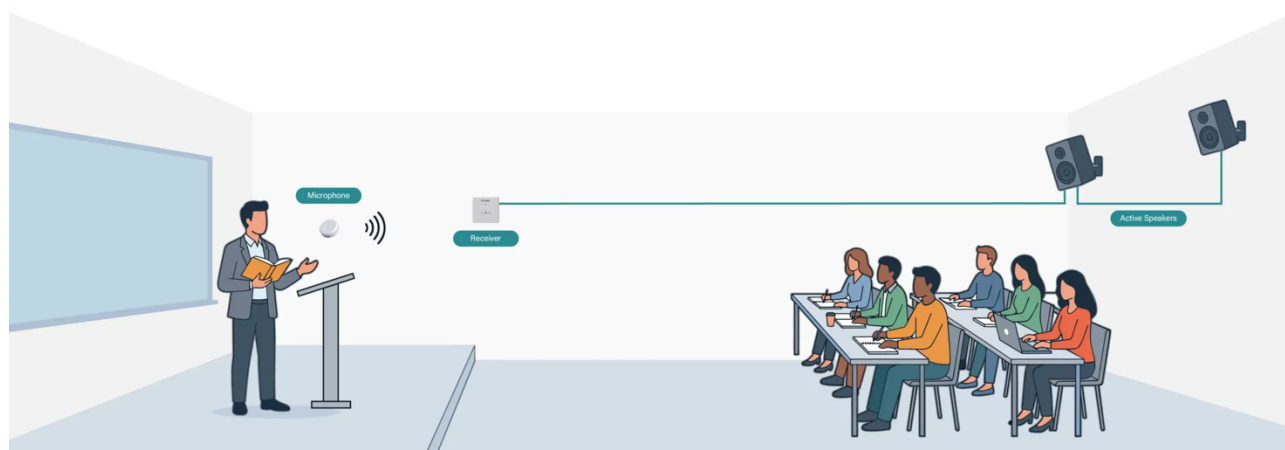
2.1 EDUCATION

CLASSROOM SOUND REINFORCEMENT

General purpose classrooms are usually small enough to allow the receiver to be connected directly to the active speakers.

For easy storage and management, a charging case can be placed on the lectern.

The receiver (**iSound NL200R**) has two analog outputs (1x 3-pin Euro-block balanced, 1x 3.5mm TRS un-balanced), one for audio playback and the other can be used for recorded playback.



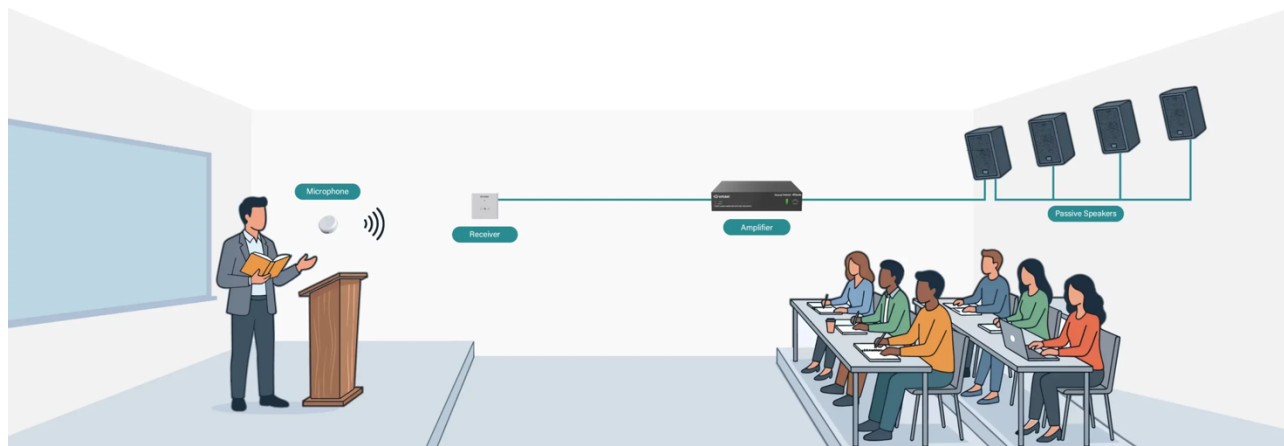
2.2 CONFERENCE/ MEETING

LECTURE THEATRE SOUND REINFORCEMENT

Lecture theatres are usually large enough to allow the receiver to be connected to a professional power amplifier and further to passive speakers.

For easy storage and management, the charging case can be placed on the lectern.

The receiver (**iSound NL200R**) has two analog outputs (1x 3-pin Euro-block balanced, 1x 3.5mm TRS un-balanced), one for audio playback and the other can be used for recorded playback.



3. OPERATING INSTRUCTIONS

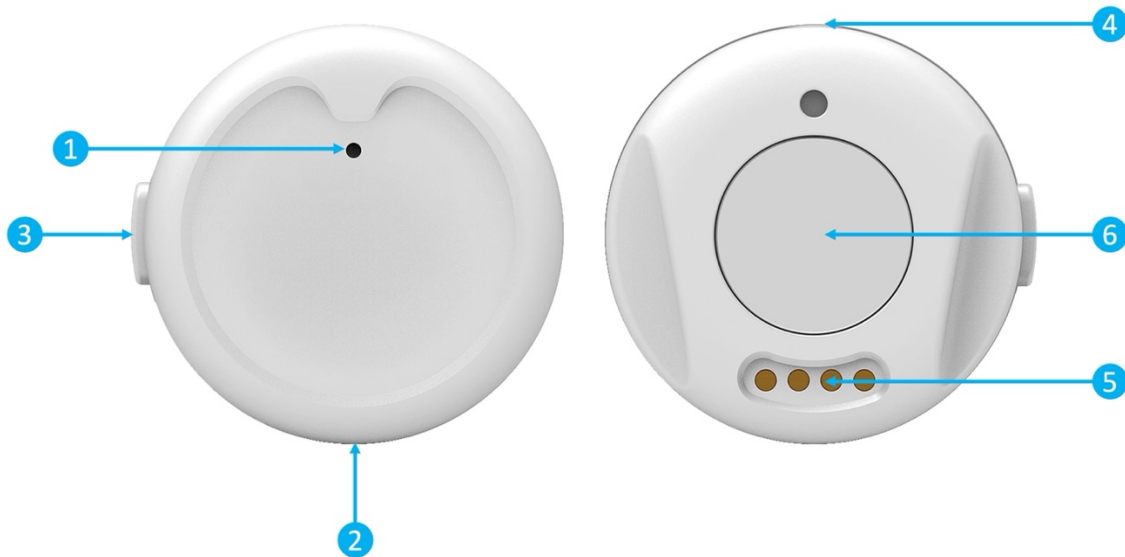
3.1 PROCEDURES

1. **POWER ON:** Long press the transmitter button for **2 seconds**, the green light of the transmitter blinks to indicate that it is powered on and not paired.
2. **PAIRING:** Bring the **front** side of the transmitter close to the NFC sensing area of the receiver, the receiver beeps after successful pairing with a voice prompt and both the transmitter and receiver show a green light always on.

Note:

- 1) *After the transmitter is disconnected, you need to approach the NFC sensor area of the receiver again to re-pair.*
 - 2) *The receiver does not receive NFC sensing when the green light is always on, but only when the green light is flashing.*
3. **MUTE:** Short press the transmitter button once, the speaker will emit a "beep" sound with a voice prompt, the red light of the transmitter is always on, which means it is muted; short press the transmitter button once more, simultaneously play voice prompts, the green light of the transmitter is always on, which means it is un-muted.
 4. **POWER OFF:** Long press the transmitter button for 2 seconds to power off; or directly put into the charging case, automatic power off.
 5. **TRANSMITTER CHARGING:** Type-C interface charging; or put it into the charging case for charging.

3.2 TRANSMITTER OPERATION



① LED Light:

Green light flashing means not connected with the receiver.

Green light always on means successfully connected with the receiver and can work normally.

Red light always on means mute.

Yellow light always on means low power.

Yellow light flashing means charging when charging via Type-C, yellow light off means full power.

The LED light is off when charging case is working.

② USB Type-C: Charge the transmitter.

Note: It needs to be charged by a 5V charger, or a charger that supports the 5V voltage standard, otherwise the transmitter will be damaged.

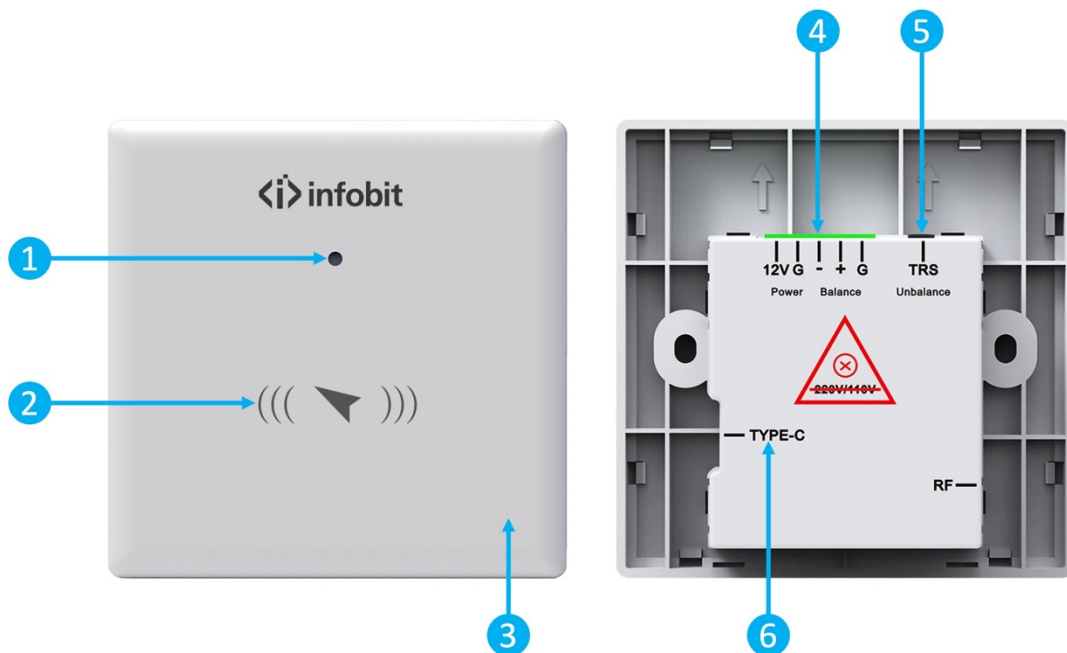
③ Button:

- 1) **Power On/Off:** Press and hold the button to turn the device ON or OFF.
- 2) **Mute:** Short press the button to switch to mute mode or un-mute, followed with a voice prompt.
- 3) **Acoustic Calibration:** When transmitter and receiver are connected, rapidly press the button four times consecutively to trigger Acoustic Calibration. The system will automatically calibrate based on acoustic characteristics (including speaker and room environment), with voice

prompts before and after calibration. Rapidly press the button six times consecutively to toggle Room Acoustic Calibration ON/OFF, followed with a voice prompt.

- ④ **Microphone Pickup:** To ensure a better sound pickup effect, the pickup hole should be aligned with the sound emitting part when wearing it.
- ⑤ **Charging Pins:** Charging in the charging case.
- ⑥ **Magnetic Area:** Support magnetic headwear accessories, magnetic collar clip accessories, magnetic gasket accessories.

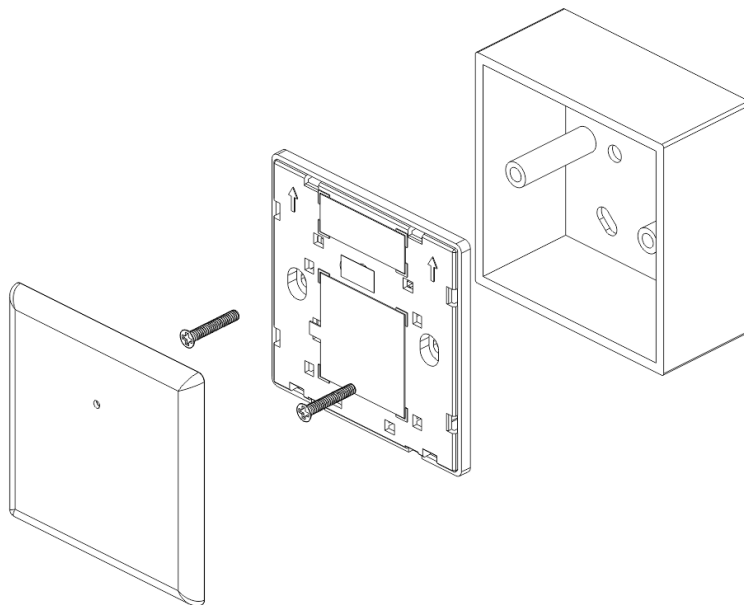
3.3 RECEIVER OPERATION



- ① **LED Light:**
Green light flashing means not connected with the transmitter.
Green light always on means successfully connected with the transmitter and can work normally.
- ② **NFC:** Support NFC induction pairing function, tap the **front** of the transmitter here for pairing.
- ③ **Buzzer:** Beeps when the transmitter and receiver are paired successfully.
- ④ **Balanced Signal and 12V Power Interface:** 5-Pin Phoenix terminal, of which 3-Pin ("-", "+", "G") output balanced signal, 2-Pin ("12V", "G") connect to DC 12V power supply.

- ⑤ **3.5mm TRS:** Output stereo single-ended analog audio signal to active speakers or recording device.
- ⑥ **USB Type-C:** For power supply, also supports digital audio output of UAC protocol.

3.4 RECEIVER INSTALLATION



- ① Wiring the audio cable and power cord well to the 86 (UK) wall box.
- ② Remove the cover plate.
- ③ Connect the audio cable and power cord to the receiver ports.
- ④ Align the receiver with the 86 (UK) wall box, then fasten with two screws.
- ⑤ Install the receiver cover plate.

3.5 CHARGING CASE OPERATION



- ① **White LEDs:** 4x white LEDs indicate different power levels of the charging case, when opening/closing the cover, the white LEDs flash 2 times and light up for 5 seconds and then go out. When the transmitter is put into the charging case for successful charging, the white LED light flashes 2 times for 5 seconds and then go out.
- ② **Charging Area:** The charging case has a magnetic feature, which supports magnetic suction charging.

Note: If the transmitter is put into the charging case and the 4 white LEDs don't flash, it means that the transmitter's charging contacts are not aligned with the charging case contacts, you need to re-adjust the position so that all charging pin are contacted well.

4. FAQ

Questions	Answers
Receiver and transmitter pairing fails after power on.	<ul style="list-style-type: none"> A. Place the front side of the transmitter close to the NFC sensing area of the receiver. B. Pair the transmitter in the NFC recognition zone of the receiver, if the pairing fails the first time, you can try to adjust the position to pair again.
No sound from the microphone	<ul style="list-style-type: none"> A. Check whether the indicator lights of the receiver and transmitter are green, green means normal operation. B. Check whether the indicator lights of the transmitter is red, red means mute, you can click the transmitter button to exit the mute mode. C. Check if the indicator light of the transmitter is ON, “Not ON” means it is not turned on or has no power, it needs to be turned on or charged in time. D. Detect whether the external amplifier is working normally.
Microphone sound is getting low or sporadic	Check the microphone indicator to see if it is yellow, yellow indicates low power and needs to be recharged in time.
General Troubleshooting	Restart the device.

5. PACKAGE LIST

NO.	Name	Quantities
1	Microphone Transmitter (iSound NL200T)	1
2	Charging Case	1
3	Receiver (iSound NL200R)	1
4	Magnetic Lavalier accessories.	1
5	Magnetic Spacer	1
6	USB Type-C Cable	1
7	Storage Bag	1
8	Quick Guide	1
9	Magnetic Headwear accessories (iSound NL200H)	1

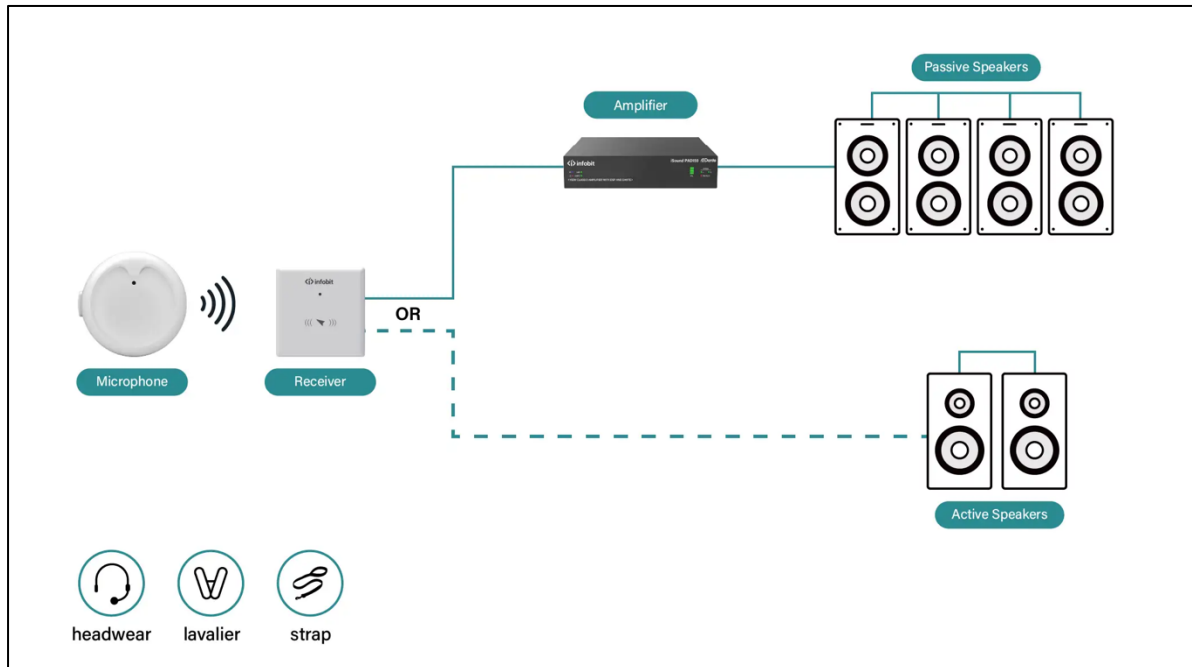
6. SPECIFICATION

Transmitter (iSound NL200T)	
Transmission Mode	2.4G NearLink SLE protocol
Polarity Mode	Omnidirectional
Operating distance (without obstacles)	30 meters
RF Output Power	10dBm
Frequency Response	100Hz ~ 20kHz
Sample Rate	48KHz
Bit Depth	16-bit

Signal-to-noise ratio	≥80dB
Built-in Battery Capacity	97mAh
Power supply mode	Built-in lithium battery power supply; Or USB-C charging.
Battery life	About 4 hours
Charging time	About 1 hour
Weight	10.5g
Dimension	32mm×32mm×13.8mm
Operating Temperature and Humidity	0°C ~ 50°C, 10% ~ 90%RH, No condensation
Charging Case	
Battery Capacity	300mAh
Power Supply Method	Power supply via charging contacts
Power Supply Times to TX	>3 times
Charging Time	About 1 hour
Weight	39g
Dimensions	60.3mm×50.1mm×28.4mm
Operating Temperature and Humidity	0°C ~ 50°C, 10% ~ 90%RH, No condensation
Receiver Parameters	
Transmission Mode	2.4G NearLink SLE protocol
Operating Distance (without obstacles)	30 Meters
RF Output Power	10dBm
Frequency Response	100Hz ~ 20kHz
Sample Rate	48KHz
Bit Depth	16-bit
Signal-to-Noise Ratio	≥80dB

Audio Output	UAC digital; Balanced analog (Phoenix terminal); Unbalanced analog (3.5mm TRS)
Power Supply	DC 12V or USB Type-C Powered
Weight	30g
Dimension	86.1mm×86.1mm×27.3mm
Operating Temperature and Humidity	0°C ~ 50°C, 10% ~ 90%RH, No condensation
Storage Temperature	-10°C ~ 50°C
Package Dimensions (L×W×H)	280mm×210mm×70mm
Package Weight	0.5kg
NearLink SLE Spec	
Version	SLE 1.0
Bandwidth	Max. 4Mbps
Operating Frequency	2.4GHz ISM (2402 ~ 2480MHz)
Transmission Rate	Max. 12Mbps, 6x times of Bluetooth (2Mbps)
Delay	0.25ms, 1/20 to 1/28 of Bluetooth 5.3.
Band Code	Polar
Anti-interference capability	Utilizes Adaptive Frequency Hopping (AFH) technology to enhance anti-interference performance.
Security	AES-128

7. DIAGRAM



8. WARRANTY

The warranty period of this product is **3 years**.

Product performance failures caused by non-accidental damage during the warranty period are eligible for "Three Guarantees" services (Repair, Replacement, and Refund).

The following situations (including but not limited to) are not covered by the warranty:

- Failure to provide a warranty card, or a valid invoice, or if the "Three Guarantees" validity period has expired.
- Damage caused by failure to use, maintain, or manage the product in accordance with the user manual.
- The product model or serial number on the warranty certificate does not match the actual product.
- Damage caused by unauthorized disassembly or repairs.
- Normal discoloration, wear and tear, or consumption during product use.
- Inability to use the product due to the user's own network issues (please consult customer service for assistance).