D100W D100R

NearLink Wireless Microphone System

Description

The D100W D100R NearLink Wireless Microphone System is designed for educational applications, providing clear and stable sound reinforcement and recording for classroom teaching and lecture capture. With advanced NearLink wireless transmission technology, it creates an interference-free teaching environment. Powered by a domestically developed RISC-V processor, the system ensures high performance, low latency, and exceptional stability. Integrated with intelligent algorithms such as feedback suppression, automatic gain control, smart noise reduction, and intelligent sound field calibration, the microphone delivers clear, consistent audio across the entire classroom without volume fluctuations. Its compact, lightweight design ensures a comfortable fit throughout the class. Compared with traditional handheld microphones, it frees the user's hands for natural gestures and movement. Compared with far-field microphones, it provides superior sound quality and a wider pickup range, allowing free movement without loss of clarity.

A complete microphone set includes a charging case, a transmitter, and a receiver. The charging case enables quick recharging of the transmitter, while the receiver supports both UAC digital output and dual analog outputs for flexible integration into various classroom systems.

Specifications

Transmitter Features:

- Designed for classroom teaching, based on NearLink wireless technology.
- Powered by a 100% domestic RISC-V processor.
- No battery anxiety, lithium battery lasts up to 4 hours.
- Fast-charging case included, capable of fully recharging the microphone more than three times.
- Compact size: 32 mm diameter, 13.8 mm thickness.
- Ultra-lightweight design, weighing only 10.5 g.
- Two wearing options (clip-on and head-mounted magnetic accessories, freely switchable) for easier interaction.
- Multi-room use, no cross-channel interference (any microphone can pair with any receiver).
- One teacher, one microphone, clean and hygienic.
- Simple operation, only a single power button.

Receiver Features:

- 86-box design, easy to install.
- DSP audio processing with built-in feedback suppression, automatic gain control, smart noise reduction, and intelligent sound field calibration.
- Automatically pairs when powered on near the card-swipe area, and disconnects automatically when powered off.
- Wireless receiver supports UAC digital output and analog output.

Features

Model		D100W
Transmitter	Transmission Method	NearLink SLE protocol
	Polar Pattern	Omnidirectional
	Operating Range (Line-of-Sight)	20m
	RF Output Power	10dBm
	Frequency Response	100Hz~20kHz
	Sampling Rate	48KHz
	Bit Depth	16 bit
	SNR	≥80dB
	Built-in Battery Capacity	97 mAh
	Charging Method	Via charging case contacts, also supports USB-C charging
	Battery Life	Approx. 4 hours
	Charging Time	Approx. 1 hour
	Weight	10.5 g
	Dimensions	32 mm × 32 mm × 13.8 mm
	Working Temperature	0 °C – +50 °C
Charging Case	Battery Capacity	300mAh
	Power Supply Mode	Powered via charging case contacts
	Number of Charges for Transmitter (Microphone)	>3 times
	Charging Time	Approx. 1 hour

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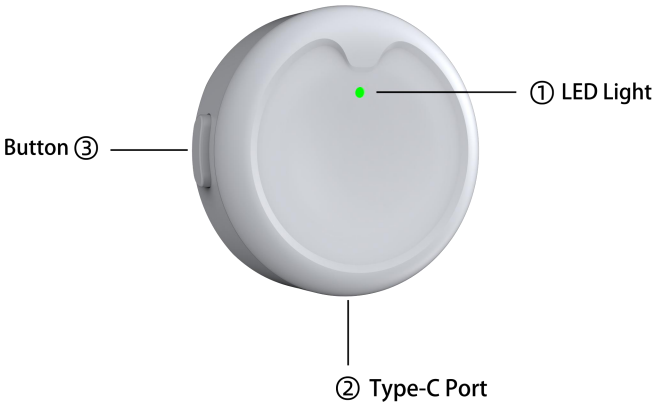
Weight	39g
Dimension	60.3 mm × 50.1 mm × 28.4 mm
Working Temperature	0 °C – +50 °C

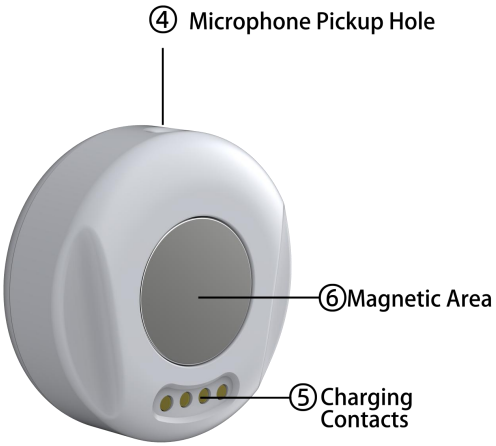
Model	D100R
Transmission Method	NearLink SLE protocol
Operating Range (Line-of-Sight)	20m
RF Output Power	10dBm
Frequency Response	100Hz～20kHz
Sampling Rate	48KHz
Bit Depth	16 bit
SNR	≥80dB
Audio Output	UAC digital, balanced analog (Phoenix connector), unbalanced analog (3.5 mm TRS)
Power Supply Mode	12 V DC or USB-C
Weight	30g
Dimension	86.1mm×86.1mm×27.3mm
Working Temperature	0 °C – +50 °C
Storage Temperature	-10 °C – +50 °C

Name	NearLink SLE Protocol
Protocol Version	SLE 1.0
Bandwidth	Up to 4 Mbps
Operating Frequency	2.4 GHz ISM band (2402–2480 MHz)
Transmission Rate	Up to 12 Mbps, six times faster than traditional Bluetooth (2 Mbps)
Air Interface Latency	0.25 ms — 1/20 to 1/28 of Bluetooth 5.3, 1/4 to 1/8 of BLE
Channel Coding	Polar code channel coding (higher reliability, fewer retransmissions, lower power consumption)
Interference Resistance	Adaptive Frequency Hopping (AFH) technology for enhanced anti-interference capability
Security	AES-128 encryption supported to ensure secure data transmission

Front / Rear Panel



Front View of the Transmitter



Rear View of the Transmitter

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① **LED Indicator:**

Flashing green light indicates the transmitter is not connected to the receiver;

steady green light indicates a successful connection and normal operation;

steady red light indicates mute mode;

steady yellow light indicates low battery. When charging via the Type-C port: flashing yellow indicates charging; the light turns off when fully charged. When charging in the charging case: the LED indicator remains off.

② **Type-C Port**: Used for charging the transmitter.

Note: Use a 5V charger or one that supports the 5V voltage standard. Using chargers with other voltage ratings may damage the transmitter.

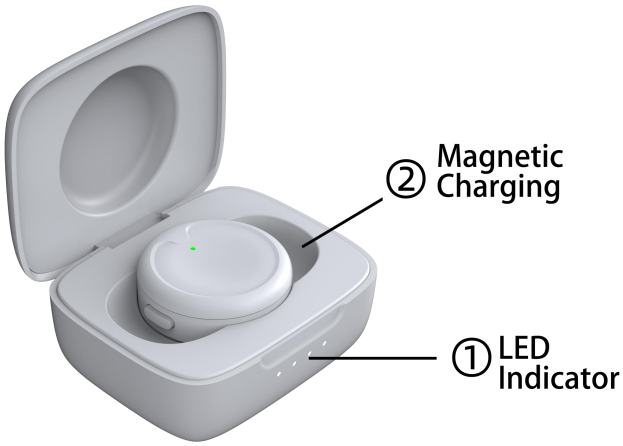
③ **Button:**

1) **Power On/Off:** Press and hold the button to power on or off.
2) **Mute/Unmute:** Short-press the button to switch between mute and active modes, accompanied by a voice prompt.
3) **Sound Field Calibration:** When the transmitter is connected to the receiver, quickly press the button four times to activate the intelligent sound field calibration function. The system will automatically complete calibration based on the sound field characteristics (including the speakers and room environment) and will play a voice prompt before and after calibration. Quickly pressing the button six times toggles the sound field calibration function on or off, with a corresponding voice prompt.

④ **Microphone Pickup Hole:** For optimal pickup performance, please ensure the pickup hole faces the sound source when wearing the device.

⑤ **Charging Contacts:** Used for charging the transmitter inside the charging case.

⑥ **Magnetic Area:** Supports magnetic accessories, including the magnetic headset, magnetic clip, and magnetic adapter pad.



① White LED Indicators:

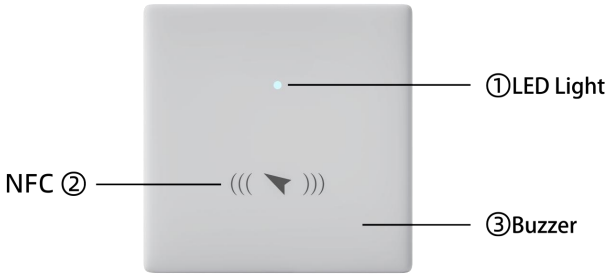
The four white LED indicators represent different battery levels of the charging case.

When the lid is opened or closed, the LEDs flash twice, stay on for 5 seconds, and then turn off. When the transmitter is placed in the charging case and charging begins successfully, the LEDs also flash twice, stay on for 5 seconds, and then turn off.

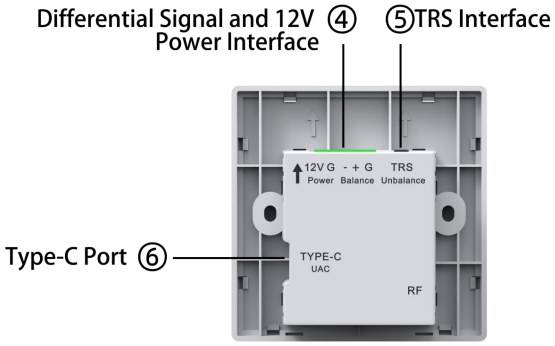
② The charging case has a magnetic design that supports magnetic charging

Note: If the four white LEDs do not flash when the transmitter is placed in the charging case, it indicates that the transmitter's contacts are not properly aligned with the charging contacts. Adjust the transmitter's position to ensure correct alignment.

D100R Receiver:



Front View of the Receiver



Rear View of the Receiver

① **LED Indicator:**
Flashing green light indicates the receiver is not connected to the transmitter;
steady green light indicates a successful connection and normal operation.

② **NFC Area:** Supports NFC pairing. Bring the front side of the transmitter close to this area to complete pairing.

③ **Buzzer:** Emits a beep when the transmitter and receiver are successfully paired.

④ **Differential Signal and 12V Power Interface:**
5-pin Phoenix connector — 3 pins (“–”, “+”, “G”) output differential signals, and 2 pins (“12V”, “G”) connect to a DC 12V power supply.

⑤ **3.5Mm TRS Interface: Outputs stereo unbalanced analog audio signals to active speakers or recording & broadcasting hosts.**

⑥ **Type-C Port:**
Used for power supply and supports digital audio output via the UAC protocol.
Note: Use a 5V power adapter or one compatible with the 5V voltage standard for power supply.