

# BOYA

## 2.4 GHz Ultra-Mini Wireless Microphone

2.4 GHz 迷你无线麦克风系统

BOYA mini

User Manual  
用户手册

## **Statement**

Please read this manual carefully before using, and strictly operate and store it in accordance with the instructions. Please save the manual for future reference. If you need further assistance than the user manual, please consult your retailer for help or email us at: [sales@boya-mic.com](mailto:sales@boya-mic.com)

## **Cautions**

1. Non-professionals are strictly prohibited from disassembling this unit on their own.
2. Please keep it away from heat sources such as radiators or spotlights.
3. Do not remove the battery without professionals' help.
4. Please clean the unit with only a soft, dry cloth.
5. When using and storing, please keep away from dust and moisture.
6. For the best pick-up pattern, do not hold your hand against the microphone capsule cover.

## General Introduction

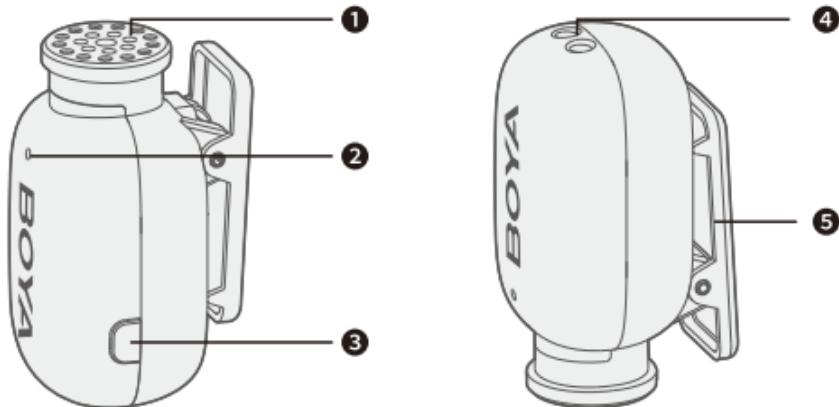
The BOYA mini, a 2.4 GHz Ultra-Mini Wireless Microphone system, features automatic re-connection and selectable noise reduction that offer remarkable flexibility for recording. It adopts specific AI algorithms for changing your voice in real time to provide a highly pleasurable listening experience. With ease of operation, the microphone system is compatible with smartphones, tablets, computers, and more. The BOYA mini is ideal for content creation, live streaming, vlogging, mobile journalism, and much more.

## Features

- Transmitter as lightweight as 5 g
- 3-grade AI noise cancellation
- Delivers CD-quality sound
- Wireless connection & plug and play
- Provides a reliable transmission range up to 100 m
- Playback via device speaker without unplugging receiver
- USB-C version: equipped with a portable charging case to record 30 hours; Camera version: equipped with a portable charging case to record 24 hours

# Product Structure

## Transmitter (TX)



**① In-built Condenser Microphone**

**② Indicator**

Status	Indicator
Unpaired	Blinking blue
Pairing	Blinking blue quickly (5 minutes)
Paired successfully	Static blue
Disconnected (beyond operating range)	Blinking blue
Re-connected (within operating range)	Static blue
Noise reduction enabled	Static green
Low battery	Blinking red (per second)
Charging	Static red
Fully charged	Red light off

**Note:**

- The transmitter(s) will automatically power off after 10 minutes if unpaired.
- If multiple functions are activated on the transmitter(s), its indicator will only illuminate for one feature. The indicator is prioritized as follows: pairing > low battery > re-connecting > noise reduction.

**③ Power Button**

Operation	Function
Press and hold for 2 seconds	Power on or off
Press once	Enable or disable noise reduction
Press and hold for 5 seconds (in shutdown mode)	Enter pairing mode

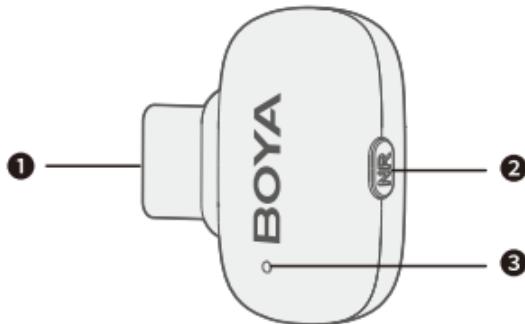
**Note:**

- The transmitter(s) will automatically power on once removed from the charging case, and automatically power off once placed back.
- Noise reduction is disabled by default. This function can NOT be enabled or disabled when the transmitter(s) is re-connecting to a receiver.

**④ Charging Contacts**

**⑤ Belt Clip**

## USB-C Receiver (USB-C RX)



### ① USB-C Connector

It can be connected to iPhone 15 or newer, Android smartphones, tablets, computers and other USB-C devices.

### ② NR Button

Operation	Function	Indicator
Press to select a noise reduction grade	Grade 1 (weak)	Blinking green once
	Grade 2 (medium)	Blinking green twice
	Grade 3 (strong)	Blinking green 3 times
Double press to select an AI sound mode	Uncle voice	Blinking blue once
	Female voice	Blinking blue twice
	Original voice	Blinking blue 3 times
Press and hold for 5 seconds (when plugged into a device)	Enter pairing mode	Blink blue quickly (5 minutes)

#### Note:

- When the receiver connected to a phone, you can play back your

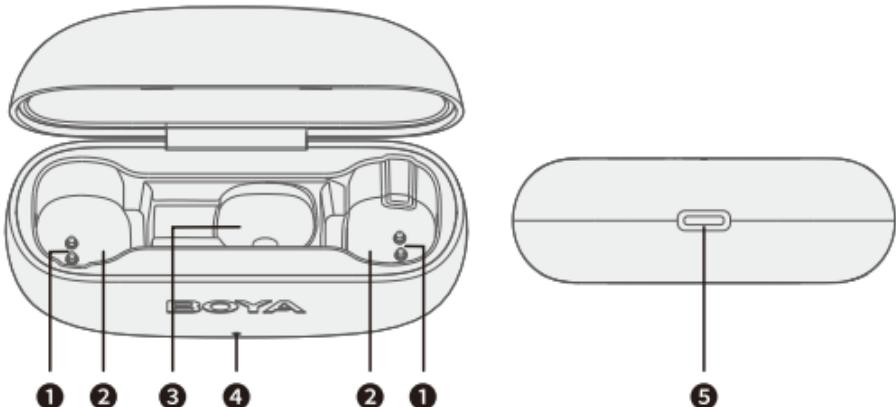
recordings without the need to unplug the receiver. This function is turned on by default.

- Every time the receiver is turned on, the AI sound mode is turned off by default.
- Noise reduction is disabled by default, and its default grade is 3 when turned on for the first time. The noise reduction grade will be retained even after the power is turned off.
- If the transmitter(s) and receiver are in pairing mode but not paired within 5 minutes, they will switch into re-connecting mode.
- Noise reduction on or off, noise reduction grade, and AI sound mode can NOT be set when the unit is in re-connecting mode.

### ③ Indicator

Status	Indicator
Unpaired	Blinking blue
Pairing	Blinking blue quickly (5 minutes)
Paired successfully	Static blue
Noise reduction enabled	Static green
Noise reduction grade 1 (weak)	Blinking green once
Noise reduction grade 2 (medium)	Blinking green twice
Noise reduction grade 3 (strong)	Blinking green 3 times
Uncle voice	Blinking blue once
Female voice	Blinking blue twice
Original voice	Blinking blue 3 times

## CC Charging Case



### ① Charging Contacts

For charging transmitters.

### ② Slot for Transmitters

### ③ Slot for Receiver

### ④ Charging/Remaining Battery Level Indicator

When the charging case is connected to power, this indicator will display the case's charging status.

Status	Battery level (case)	Indicator
Low battery	30% or lower	Blinking red
Charging	31%~99%	Blinking green
Fully charged	100%	Static green

When the charging case is NOT connected to power and the transmitter(s) is placed into it for charging, this indicator will display the case's remaining battery level.

Battery level (case)	Indicator	Charging Cycles (for transmitters)
5% or lower	Blinking red	Unable to charge
6%~30%	Static red	0.3
31%~100%	Static green	0.5~1

**Note:**

- Please charge the charging case as soon as possible when its indicator flashes red.
- When the charging case is out of power, the transmitter(s) does not turn off automatically once placed in.
- It takes about an hour and a half for the charging case to charge the transmitter from 0% to 100%.

**⑤ USB-C Charging Port**

For charging the charging case.

## Magnetic charger to USB-A cable

Simply hold the charger near the charging contacts of the transmitter, where magnets cause it to snap into place automatically.



## How to Use

### For BOYA mini-12 package to BOYA mini-17 package

1. The transmitter(s) will power on automatically as soon as it is taken out of the charging case. The transmitter(s) can be attached to clothes through its belt clip.
2. Plug the USB-C connector into a USB-C device.
3. The transmitter(s) and receiver are pre-paired before leaving the factory. Therefore, they will be paired once they are powered on. Their indicators will glow static blue if paired successfully. If they are disconnected, please follow the below steps:

- ① Press and hold the NR button on the receiver for 5 seconds until its indicator blinks blue rapidly to enter pairing mode.
- ② Press and hold the power button on the transmitter(s) for 5 seconds in shutdown mode until its indicator blinks blue rapidly to enter pairing mode.
- ③ The transmitter(s) and receiver are successfully paired when their indicators turn static blue.
4. Launch a video or audio recording app.
5. Some phones may default to using its built-in microphone, so you may need to switch to the external microphone (BOYA mini) on the recording app.
6. You are ready to record.

### **Note:**

Due to the 2.4 GHz wireless frequency, signals can be easily attenuated. Please try to avoid obstacles, such as walls and buildings, and avoid close proximity to devices with 2.4 GHz signals, such as high-power Wi-Fi antennas, radios, etc.

## **Troubleshooting**

If you encounter problems when using the unit, please refer to the following checklist first. If the problem cannot be solved, please contact the dealer's after-sales service department.

- If there is no sound from the unit or no sound when connected to an external device**

Make sure the connector on the receiver is well connected to your device.

- The operating range of the unit is limited and the sound is frequently intermittent**

Make sure there is no interference between the transmitter(s) and receiver. If the intermittent sound still occurs frequently, please contact our customer service.

- The charging case fails to charge the unit**

- ① Make sure charging contacts are in full contact. Wipe charging contacts with a clean cloth and try again.
- ② If you want to check whether the magnetic force is aging or whether charging contacts are not in sufficient contact, push down the unit placed in the charging case until charging contacts are in full contact to see if it is charged. If the unit still fails to be charged, please contact our customer service.

# Specifications

## Transmitter

Transmission Type	2.4 GHz
Modulation	GFSK
Polar Pattern	Omnidirectional
Antenna	FPC Antenna
Operating Range	Up to 100 m (without obstacles)
Frequency Range	2402-2480 MHz
Distortion	≤0.1%
Frequency Response	20 Hz-20 kHz
Sensitivity	-36 dB
Sampling Rate	48 kHz
Bit Rate	16 bit
Signal-to-Noise Ratio	> 80 dB
Audio Input	In-built condenser microphone capsule
Battery Capacity	65 mAh
Power Requirements	In-built lithium-ion battery / Charging contacts (5 V/1 A)
In-built Battery Life	Approx. 6 hours
Charging Time	Approx. 1.5 hours
Weight	5 g
Dimensions	31 x 15 x 16.4 mm
Operating Temperature	0°C to +45°C
Storage Temperature	-20°C to +50°C

## USB-C Receiver

Transmission Type	2.4 GHz
Modulation	GFSK
Polar Pattern	Omnidirectional
Antenna	Ceramic Antenna
Operating Range	Up to 100 m (without obstacle)
Frequency Range	2402-2480 MHz
Distortion	≤0.1%
Frequency Response	20 Hz-20 kHz
Sensitivity	-36 dB
Sampling Rate	48 kHz
Bit Rate	16 bit
Signal-to-Noise Ratio	> 80 dB
Audio Output	USB-C digital output
Power Requirements	Powered by an external device
Weight	USB-C receiver: 2.5 g
Dimensions	USB-C receiver: 23.2 x 22.4 x 10.1 mm
Operating Temperature	0°C to +45°C
Storage Temperature	-20°C to +50°C

## Charging Case

Battery Capacity	CC: 260 mAh
Charging Time	Approx. 2 hours (5V 2A)
Charging Port	USB-Cport
Charging Cycles	CC: More than once (2*transmitters)
Weight	CC: 29 g
Dimensions	CC: 67.4 x 48.4 x 22.5 mm
Operating Temperature	0°C to +45°C
Storage Temperature	-20°C to +50°C

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.

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

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.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

[www.boyamic.com](http://www.boyamic.com)

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