

BOYA

AI-Powered Supercardioid On-Camera Microphone

BY-MM1 AI

User Manual

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: support@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 BY-MM1 AI is a compact and portable supercardioid shotgun microphone that is designed for video production, livestreaming, podcasting, and mobile interviews. It delivers rich, broadcast-quality audio with a highly directional pickup pattern that precisely captures target sound while effectively minimizing ambient noise. The built-in AI-powered noise cancellation can be enabled with a single touch, providing clear recordings in various environments. Noise cancellation levels, microphone gain, and recording modes can be adjusted via the BOYA Central App for precise audio control.

The BY-MM1 AI features both USB-C and 3.5 mm TRS output jacks, offering broad compatibility with cameras, smartphones, tablets, and computers. When connected via USB-C, the 3.5 mm output jack serves as a real-time headphone monitoring output. The included professional shock mount helps reduce noise. The mic also supports charging while in use. With up to 30 hours of battery life, it is ideal for extended recording.

Features

- True AI noise cancellation, up to -40 dB
- $\Phi 9.7$ mm large capsule with supercardioid pickup
- 48 kHz 24-bit, 50 Hz-20 kHz, 80 dB SNR, 120 dB SPL
- 3.5 mm / USB-C dual output for cameras, phones, and PCs
- Customize low cut, safety track, and monitor via BOYA Central
- Up to 30 hours of recording on a single charge

In the Box

BY-MM1 AI Microphone ×1

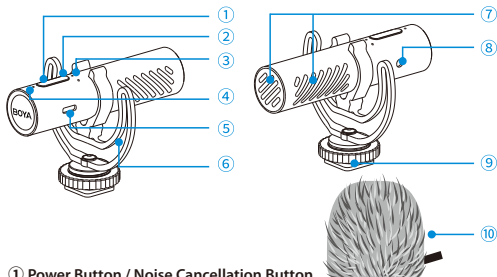
Fur Windshield ×1

Rycote® Lyre® Shock Mount ×1

USB-C to USB-C Data Cable ×1

3.5 mm TRS to TRS Audio Cable ×1

Product Structure



① Power Button / Noise Cancellation Button

- Press and hold the button for 2 seconds to power on or off.
- Press the button twice to mute or unmute the microphone.
- Press the button once to enable or disable noise cancellation. (The noise cancellation feature offers two levels: strong and weak. You can adjust the level in the BOYA Central app to suit different recording environments)

② Volume Button

Press once to adjust the microphone output volume. The levels cycle through -10 dB, 0 dB, and +20 dB.

③ Volume Indicator

○ Solid White ● Solid Red ● Light Off

Volume Levels	Indicator
-10 dB	○ ● ●
0 dB	● ○ ●
+20 dB	● ● ○
Clipping	● ● ●

④ Status Indicator

Status	Indicator
Power on	Solid blue
Noise cancellation enabled	Solid green
Mute on	Blinks red slowly
Low Battery	Blinks red quickly
Charging	Solid red
Fully charged	Solid blue
Firmware upgrading	Blinks red and green alternately

Note: Please charge the microphone when its status indicator blinks red quickly, or it will automatically shut down after 10 minutes.

⑤ USB-C Data Port

This port outputs audio to a smartphone, tablet, or computer, and also charges the BY-MM1AI or updates its firmware.

Note: Firmware upgrades must be performed via the BOYA Central app. During the upgrade process, ensure the device is connected to your smartphone at all times and the app stays active until the upgrade is complete.

⑥ Rycote® Lyre® Shock Mount

⑦ Supercardioid Microphone Capsule

⑧ 3.5 mm TRS Output / Monitoring Jack

This jack allows audio output to a camera, or real-time monitoring via headphones to verify microphone's audio capture quality.

Note: Monitoring must be enabled in the BOYA Central App. By default, this jack is set to microphone output mode.

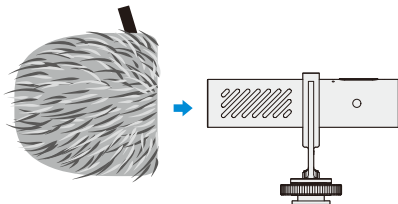
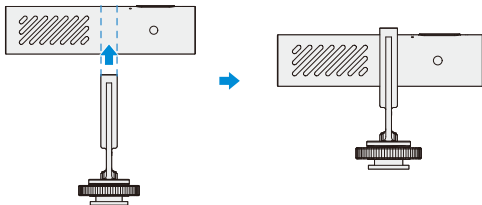
⑨ 1/4" Cold Shoe Mount

Can be mounted on a camera cold shoe or tripod. Rotate the rubber cushion above to secure it.

⑩ Fur Windshield

How to Use

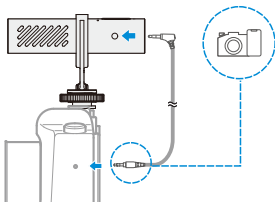
Accessory Installation



When recording outdoors or in a windy environment, it is recommended to attach the fur windshield to the microphone for optimal audio capture.

Using with a Camera

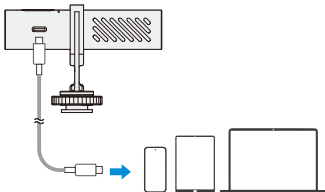
Attach the microphone to the camera's cold shoe or hot shoe using the cold shoe mount at the bottom of the shock mount. Then use a 3.5 mm TRS to TRS audio cable to connect the microphone to the camera for audio transmission.



Using with a Smartphone, Tablet or Computer

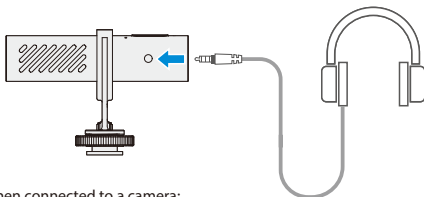
Connect the microphone to your smartphone, tablet, or computer via a USB-C to USB-C or USB-C to USB-A data cable. After connecting, open an audio or video recording app to start capturing audio.

Note: When using the microphone with a computer, go to System Settings or Preferences, and set "BY-MM1 AI" as both the input and output audio device.



Audio Monitoring

- When connected to a smartphone, tablet, or computer:
Open the BOYA Central app and set the output mode to "Monitor Output". Then, connect your headphones to the microphone's 3.5 mm monitoring jack for real-time audio monitoring.



- When connected to a camera:
To monitor audio, plug your headphones into the camera's headphone jack. If the camera doesn't have one, real-time monitoring during recording is not supported.

App Information

Download the BOYA Central app by scanning the QR code or searching “BOYA Central” in your app store. Once the BY-MM1 AI is connected to your smartphone via a USB-C to USB-C data cable, you can use the app to check battery and input levels, adjust microphone gain, noise cancellation, and recording mode, and perform firmware upgrades—all to enhance your recording experience.



Note: Requires iOS 15.6 or later, Android 7.0 or later.

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.

- **Cannot charge while in use**

When connected to a phone or computer, the microphone can be operated normally, but charging is not supported. To charge the product while using, connect it to a power adapter and ensure the power supply is on.

- **The microphone cannot be detected by the app**

Check whether the cable is securely connected. Some smartphones (such as vivo and OPPO) require to OTG to be enabled in the system settings.

- **Monitoring volume is low**

By default, the product is set to microphone output mode. Please connect it to a phone, open the BOYA Central App, and switch the output mode to "monitor output."

- **The microphone doesn't power on**

If the product has not been used for an extended period, the battery may be fully exhausted. Please charge it and try again.

- **No sound**

Check whether the product is muted. If the status indicator blinks red slowly, it means the microphone is muted. Please unmute it.

- **Cannot be upgraded**

Firmware upgrade is not supported when the battery level is below 25%. Please charge the microphone and try again.

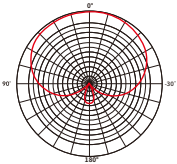
- **The volume indicator glows solid red**

If the volume indicator glows solid red, it means the audio is clipping. Please attach the fur windshield to the microphone or decrease the gain level to avoid it.

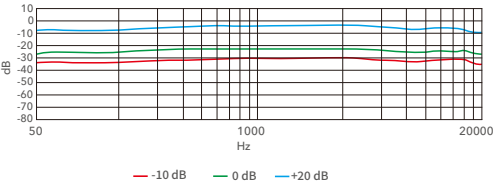
Specifications

Polar Pattern	Supercardioid
Sensitivity	-36 dB
Frequency Response	50 Hz to 20 kHz
Max SPL	≥120 dB
Equivalent Noise Level	≤23 dBA
Sampling Rate	48 kHz
Bit Rate	24-bit
Signal-to-noise Ratio	≥80 dB
Dimensions	φ23.5 × 94 mm
Weight	72 g
Battery Capacity	3.8 V 330 mAh
Charging Time	≤80 Minutes
Battery Life	≥30 Hours(With Noise Cancellation disabled)
	≥10 Hours(With Noise Cancellation enabled)
Charging Temperature	5°C to 45°C
Operating Temperature	5°C to 45°C
Storage Temperature	-20°C to 55°C

Polar Pattern



Frequency Response (0dB=1V/Pa)



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