

BOYA

2.4GHz Wireless Microphone System

2.4GHz无线麦克风系统

BY-MM1W

User Manual
用户手册

Introduction

BY-MM1W is a combination product of a 2.4GHz wireless omnidirectional microphone and a wired cardioid directional shotgun microphone. It boasts exceptional broadcast-grade sound quality and is compatible with cameras, smartphones, tablets, computers, portable recorders, etc. It is ideal for video content, podcasting, live streaming, mobile journalism and more.

The BY-MM1W can switch recording modes according to different scenarios: wireless mode/ wired mode/ combined mode (TX/ RX/ MIX), which allows you to pick up audio from either the transmitter, the receiver, or both.

Features

- Combined recording mode to meet various needs
- Transmitter and receiver can be stored together - easy to carry
- Standard cold shoe adapter on the bottom of the receiver for mounting to cameras, stands, etc.
- Up to 30m wireless operating range
- Equipped with professional shock mount for superior isolation from handling noise
- Equipped with windscreens for an intelligible sound effect
- Equipped with TRS/TRRS audio output cable for connecting to cameras, smartphones, computers and more
- Enable or disable the noise cancellation of transmitter and receiver via the power button on receiver

In the Box



BY-MM1W Microphone
(Transmitter+Receiver) × 1



Shock
Mount × 1



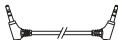
USB-A to USB-C
Charging Cable × 2



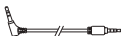
Carrying
Pouch × 1



Fur Windshield
for Transmitter × 1



3.5mm TRS to 3.5mm
TRS Audio Output Cable × 1



3.5mm TRS to 3.5mm
TRRS Audio Output Cable × 1



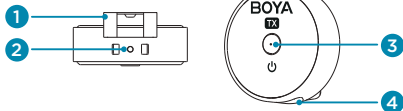
Fur Windshield
for Receiver × 1



Foam Windscreen
for Receiver × 1

Product Structure

Transmitter



- ① Belt Clip
- ② Omnidirectional Microphone Capsule
- ③ Power Button/ LED Indicator

Press and hold for 3 seconds to power on or off. Press to mute or unmute the transmitter. Its LED light indicates the record status and battery level of the transmitter.

Status	Indicator
Unpaired	Blinking blue quickly
Paired Successfully	Static blue
Muted	Blinking red slowly
Noise Cancellation Enabled	Blinking blue slowly
Low Battery	Blinking red quickly & blue light off
Charging	Static red
Fully Charged	Red light off

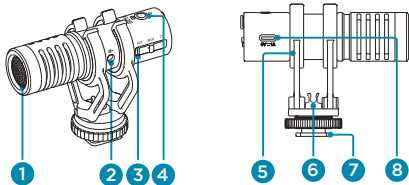
Note:

- 1) Please charge the unit when it indicates low battery status, or it will automatically shut off within 10 minutes.
- 2) If charging the unit when it is ON, the indicator will simultaneously display the current working status and charging status.
- 3) If charging the unit when it is muted, the indicator will display the current working status instead of the charging status.

④ USB Type-C Charging Port

For charging the transmitter.

Receiver



① Cardioid Microphone Capsule

② 3.5mm TRS Output

For audio output to a camera, smartphone, tablet, computer, etc.

③ Recording Mode Toggle

TX mode: Only output the sound recorded by the transmitter.

RX mode: Only output the sound recorded by the receiver.

MIX mode: Output the sound recorded by the transmitter and receiver.

④ Power Button/ LED Indicator

Press and hold for 3 seconds to power on or off. Press once to mute or unmute the receiver. Press the power button on the receiver twice to enable or disable the noise cancellation. Its LED light indicates the record status and battery level of the receiver.

Status	Indicator
Unpaired	Blinking blue quickly (MIX/TX)
Paired Successfully	Static blue (MIX/TX)
Muted	Blinking red slowly
Noise Cancellation Enabled	Blinking blue slowly
Low Battery	Blinking red quickly & blue light off
Charging	Static red
Fully Charged	Red light off

Note:

- 1) Please charge the unit when it indicates low battery status, or it will automatically shut off within 10 minutes.
- 2) If charging the unit when it is ON, the indicator will simultaneously display the current working status and charging status.
- 3) If charging the unit when it is muted, the indicator will display the current working status instead of the charging status.
- 4) When the receiver is recording normally in RX mode, the indicator glows static blue.

⑤ Shock Mount

⑥ Cable Slot

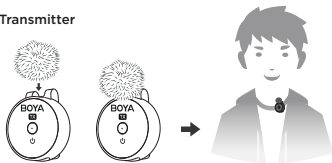
⑦ 1/4" Cold Shoe Adapter

⑧ USB Type-C Charging Port

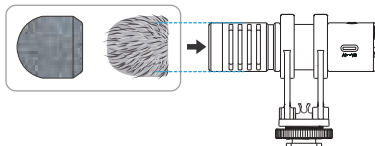
For charging the receiver.

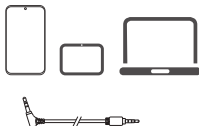
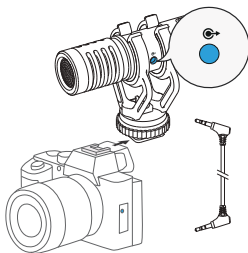
How to Use

Transmitter



Receiver





Connect the receiver to your camera, smartphone, tablet or computer.

Pairing

Press and hold the power button for 3 seconds to turn on the transmitter and receiver. When the recording mode is in MIX or TX, the transmitter and receiver will automatically be paired as soon as they are switched on and the indicators glow static blue. At this time, the audio from the transmitter can be transmitted wirelessly.



Example

In MIX mode: As a camera-mount microphone, the receiver captures the ambient sound. As a wireless microphone, the transmitter captures your voice.

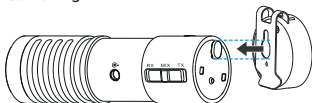


Capture ambient sound



Capture your voice

Combining



Troubleshooting

If you encounter problems when using the unit, please refer to the following checklist before contacting technical support. 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

- ① Make sure the connector on the receiver is well-connected to your device.
- ② Check if the connecting cable is correct and verify again with another cable.
- ③ Make sure the unit is not muted.
- ④ Make sure the recording mode is correct.

Current noise or other abnormal noise appears during monitoring

Make sure there is no interference near the unit. If the noise still exists after changing the unit's position, please contact our customer service.

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

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

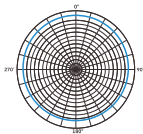
Cautions

1. Disintegration of this device by non-professionals is strictly prohibited.
2. Please keep it away from heat sources such as heaters or ovens.
3. Do not remove the battery without professionals' help.
4. Please clean the device with only a soft, dry cloth.
5. When using and storing, please keep away from the dust and moisture.
6. For the best pick-up pattern, do not hold your hand against the microphone capsule cover.

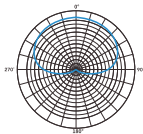
Specifications

Transmission Type	2.4GHz digital frequency
Modulation	GFSK
Frequency Response	20Hz-20kHz
Antenna	PIFA antenna
Operating Range	Up to 30m (without obstacle)
RF Output Power	10dBm (Default)
Distortion	$\leq 0.1\%$
Sampling Rate	48kHz
Bit Rate	16bit
Signal-to-Noise Ratio	Transmitter: $\geq 80\text{dB}$
	Receiver: $\geq 80\text{dB}$
Sensitivity	TX: $-42\text{dB} \pm 2\text{dB}$ (Omnidirectional)
	RX: $-36\text{dB} \pm 2\text{dB}$ (Cardioid)
Polar Pattern	Transmitter: Omnidirectional
	Receiver: Cardioid
Audio Output	3.5mm TRS output
Power Requirements	Built-in lithium-ion battery
Battery Capacity	Transmitter: 50mAh
	Receiver: 150mAh
Charging Connector	USB Type-C
Charging Time	Approx. 2 hours
Battery Life	Transmitter: 4.5 hours
	Receiver: Approx. 9 hours
Dimensions	Transmitter: $\phi 30 \times 10.3\text{mm}$ (excluding belt clip)
	Receiver: $\phi 25.7 \times 87.1\text{mm}$ (excluding shock mount)
Weight	Transmitter: 9g
	Receiver: 33g
Operating Temperature	$0^{\circ}\text{C} \sim +50^{\circ}\text{C}$
Storage Temperature	$-10^{\circ}\text{C} \sim +50^{\circ}\text{C}$

Polar Pattern

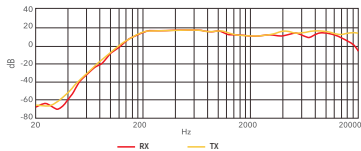


Transmitter



Receiver

Frequency Response



概述

BY-MM1W是一款2.4GHz无线全向麦克风与有线心形指向性枪式麦克风组合产品，拥有清晰饱满的广播级音质，可以搭配相机、智能手机、平板、电脑等设备使用。它是视频内容创作、播客、直播、户外采访等使用场景的理想选择。

产品可根据不同场景切换录制模式：无线模式/有线模式/组合模式（TX/RX/MIX），可以使发射器、接收器或两者拾音。

特点

- 组合收音模式，满足多样的录音需求
- 发射器和接收器可组合收纳，便于携带
- 接收器底部配有标准冷靴座，可安装至相机、支架等
- 无线收音操作距离达30米
- 配置专业防震支架，减少震动杂音干扰
- 配置防风海绵和防风毛套，有效降低风噪与环境噪音
- 配置TRS/TRRS音频线，可广泛兼容相机、手机和电脑等录制设备
- 发射器和接收器的降噪功能可通过接收器上的电源键同步开启/关闭

包装清单



BY-MM1W麦克风
(发射器+接收器) × 1



防震
支架 × 1



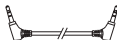
USB-A转
USB-C充电线 × 2



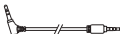
收纳袋 × 1



发射器
防风毛套 × 1



3.5mm TRS转3.5mm
TRS音频输出线 × 1



3.5mm TRS转3.5mm
TRRS音频输出线 × 1



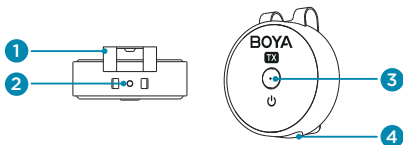
接收器
防风毛套 × 1



接收器
防风海绵 × 1

产品结构

发射器



- ① 背夹
- ② 全向拾音咪头
- ③ 电源键/指示灯

长按3秒开/关机,短按将发射器静音/取消静音。指示灯用于显示发射器工作状态及电量状态,详情见下表。

产品状态	指示灯状态
未联机	蓝灯快闪
联机成功	蓝灯常亮
静音状态	红灯慢闪
降噪开启	蓝灯慢闪
低电量	红灯快闪且蓝灯熄灭
充电中	红灯常亮
充满电	红灯熄灭

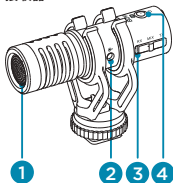
注意:

- 1) 产品处于低电量时请及时充电,否则将在10分钟内自动关机。
- 2) 若在开机状态下进行充电,指示灯将同步显示当前工作状态和充电状态。
- 3) 若在静音状态下进行充电,指示灯将优先显示当前静音状态(而非充电状态)。

④USB Type-C充电接口

用于为发射器充电。

接收器



①心形拾音咪头

②3.5mm TRS输出接口

用于将音频输出到相机、手机、平板、电脑等。

③模式切换键

TX模式：仅输出发射器收录的声音。

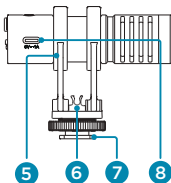
RX模式：仅输出接收器收录的声音。

MIX模式：混合输出发射器与接收器收录的声音。

④电源键/指示灯

长按3秒开/关机；短按一次将接收器静音/取消静音；短按两次接收器电源键开启/关闭降噪。指示灯用于显示接收器工作状态及电量状态，详情见下表。

产品状态	指示灯状态
未联机	蓝灯快闪(MIX/TX模式下)
联机成功	蓝灯常亮(MIX/TX模式下)
静音状态	红灯慢闪
降噪开启	蓝灯慢闪
低电量	红灯快闪且蓝灯熄灭
充电中	红灯常亮
充满电	红灯熄灭



注意：

1) 产品处于低电量时请及时充电，否则将在10分钟内自动关机。

2) 若在开机状态下进行充电，指示灯将同步显示当前工作状态和充电状态。

3) 若在静音状态下进行充电，指示灯将优先显示当前静音状态(而非充电状态)。

4) 接收器在RX模式下正常录音时，指示灯呈蓝灯常亮。

⑤防震支架

⑥线槽

⑦1/4螺孔冷靴座

⑧USB Type-C充电接口

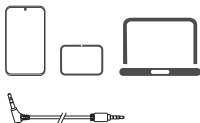
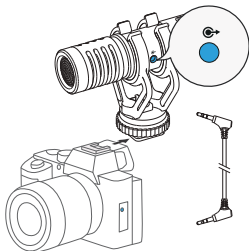
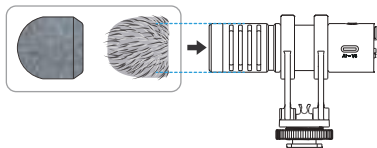
用于为接收器充电。

如何使用

发射器



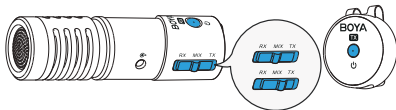
接收器



将接收器连接至您的相机或手机/平板/电脑。

配对

长按电源键3秒将发射器与接收器开机;当录音模式处于MIX或TX模式时,发射器与接收器将自动完成配对,其指示灯均呈蓝灯常亮;此时,发射器收录的音频可进行无线传输。



场景示例

在MIX模式下:接收器作为机顶麦克风可收录环境音,发射器作为无线麦克风可收录人声。

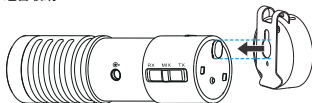


收录环境音



收录人声

组合收纳



故障排除

在使用本机的过程中出现任何问题，请参照以下内容加以解决。如果此手册仍然无法解决您遇到的问题，请与我们当地的经销商售后服务部联系。

产品无声音

- ①检查产品是否连接正常以及接头是否有松动。
- ②检查线材是否使用错误，更换另一条线材再次验证。
- ③请验证产品是否开启了静音模式。
- ④请验证产品是否模式切换错误。

监听时有不干净的电流声或异常噪音等

请检查本机附近是否有干扰源；若本机更换使用位置后还是有噪音，请联系客服咨询。

产品的使用距离受限且声音频繁断续

查看发射器、接收器之间是否有干扰源，将产品更换使用位置再次确认，若声音还是频繁断续，请联系客服咨询。

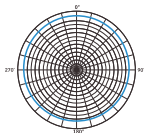
注意事项

- 1.请勿擅自拆开机壳；
- 2.请勿将本机靠近热源，如加热器、烤箱或其他产生热量的设备；
- 3.电池不可自行更换；
- 4.请使用柔软的干布清洁本设备；
- 5.在使用和储存时，请注意防尘和防潮。
- 6.为获得最佳拾音模式，请勿将手放在麦克风咪头上。

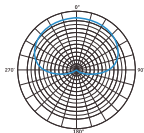
参数

传输方式	2.4GHz数字频段
信号调制	高斯频移键控
频率响应	20Hz-20kHz
天线类型	PIFA天线
操作距离	30米(无障碍)
射频输出功率	10dBm(默认)
失真	$\leq 0.1\%$
采样率	48kHz
位深度	16bit
信噪比	发射器: $\geq 80\text{dB}$
	接收器: $\geq 80\text{dB}$
灵敏度	TX: $-42\text{dB} \pm 2\text{dB}$ (全向)
	RX: $-36\text{dB} \pm 2\text{dB}$ (心形)
极性模式	发射器: 全向型
	接收器: 心形
音频输出	3.5mm TRS输出接口
供电方式	内置锂电池
内置锂电池容量	发射器: 50mAh
	接收器: 150mAh
充电接口	USB Type-C
充电时长	约2小时
续航时长	发射器: 4.5小时
	接收器: 约9小时
尺寸	发射器: $\phi 30 \times 10.3\text{mm}$ (不含背夹)
	接收器: $\phi 25.7 \times 87.1\text{mm}$ (不含支架)
重量	发射器: 约9g
	接收器: 约33g
工作温度	$0^{\circ}\text{C} \sim +50^{\circ}\text{C}$
贮存温度	$-10^{\circ}\text{C} \sim +50^{\circ}\text{C}$

极性模式

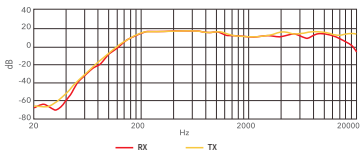


发射器



接收器

频率响应



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