BY-WM6S

UHF Wireless Microphone System

UHF无线麦克风系统

Instruction Manual

Instruction

Thank you for purchasing BOYA BY-WM6S!

The BOYA BY-WM6S is a new generation UHF wireless microphone system, compatible with smartphone, tablet, DSLR camera, camcorder, audio recorder and more.

With low-interference capacity and UHF transmission with true-diversity reception, it helps users guard against many kinds of troubles, even under difficult shooting conditions, and delivers the broadcast sound quality and integrity of audio.

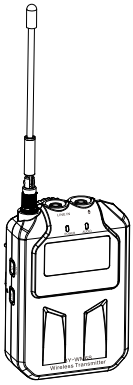
It runs on built-in rechargeable batteries or powered by Type-C DC 5V.

This system is designed with a compact and rugged housing and a detachable antenna that easily carries to indoor and outdoor environments.

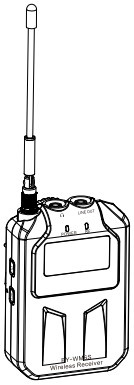
Features

- For mobile journalist, vlogger, filmmaker and videographer
- Compatible with smartphone, tablet, DSLR camera, camcorder, audio recorder
- Deliver clean and broadcast-quality sound for recording
- UHF transmission with 48 channels
- Omnidirectional lavalier microphone included
- Easy-to-read LCD displays
- USB Type-C ports for battery recharging
- Rugged all-metal construction
- Up to 70m (230')(without obstacle) operation range
- Mute function
- 3.5mm headphone output

The **BY-WM6S** consists of one body-pack transmitter (TX6S), a portable receiver (RX6S), and their accessories as following:



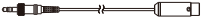
Body-pack transmitters(TX6S) (1)



Portable receiver(RX6S) (1)

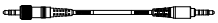
Omni-directional lavalier microphone

3.5mm TRS to TRS audio output cable

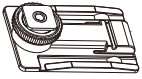


3.5mm TRS to XLR Male Output Cable

Type-C to USB-A connect cable (x2)



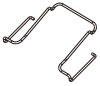
3.5mm TRS to TRRS audio output cable



Cold-shoe mount adapter

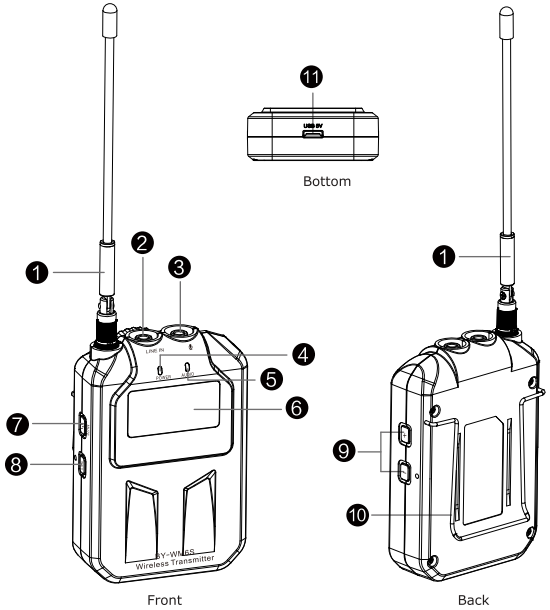
Wind screen

Microphone clip



Belt clip (x2)

Transmitter



1. Antenna

2. LINE IN

3. Microphone input

Connect the supplied lavalier microphone here. Fully insert the microphone's 3.5mm TRS plug and make sure it clicks into place, then lock the plug. To remove, release the locking mechanism, then pull the plug out.

4. Power indicator

For more details about LED indicator, please refer to as following:

Status	LED	"POWER"	"AUDIO"	"RF"
The transmitter and the receiver is connected	Transmitter	√	√	/
	Receiver	√	/	√
The transmitter and the receiver is disconnected	Transmitter	√	√	/
	Receiver	√	/	×
The transmitter and the receiver is connected. And muting function is on.	Transmitter	√	Flashes blue	/
	Receiver	√	/	×
The transmitter or the receiver is in low power	Transmitter	Stays red	√	/
	Receiver		/	√
The transmitter or the receiver is in charging	Transmitter	Flashes red	√	/
	Receiver		/	√

Notes: "√" means the LED light is on. "×" means the LED light is off.

5. AUDIO indicator

6. LCD display

For details, please refer to "LCD display Operation Guide"on page 8

7. Power/Mute button

1) Long press the power of the transmitter ON or OFF.
2) Short press to mute

8. SET button

Channel / Light setting

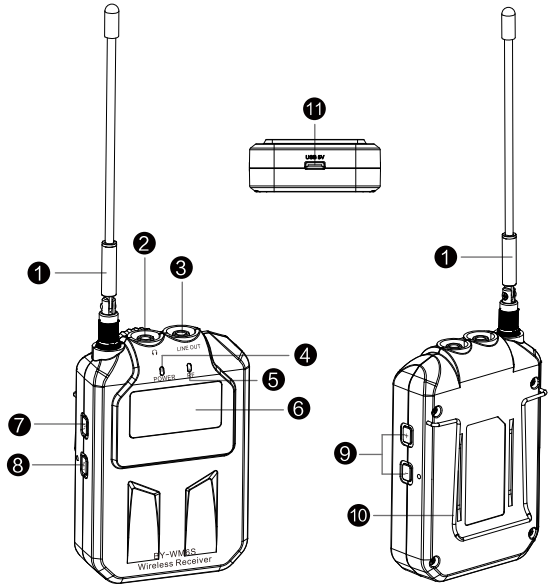
9. + (+ selection)/ – (- selection) buttons

Press these buttons to set the transmission channel, light setting.

10. Belt clip

11. USB Type-C charging port

Receiver



1. **Antenna**
2. **Headphone output**
3. **LINE OUT**

   (3.5mm diameter stereo mini jack)
   Connect one end of the supplied stereo 3.5mm TRS to TRS or XLR to XLR Male output cable here, and the other end to the microphone input on a DSLR camera, camcorder, mixer, or amplifier etc.

4. **Power LED**

   For more details about LED indicator, please refer to page 5.

5. RF indicator

6. LCD display

For details, please refer to "LCD display Operation Guide"on page 8

7. Power button

Long press the power of the transmitter ON or OFF.

8. SET button

Channel / Volume / Light setting

9. + (+ selection)/ – (- selection) buttons

Press these buttons to set the transmission channel, volume and light setting.

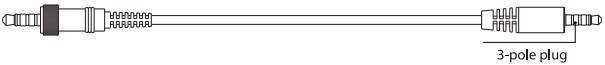
10. Belt clip

11. USB Type-C charging port

What's difference?

① 3.5 mm TRRS connector
- For Smartphone, tablet, Mac or laptop with combo headphone/mic jack

② For cameras, camcorders, audio recorders and other audio/video recording devices.

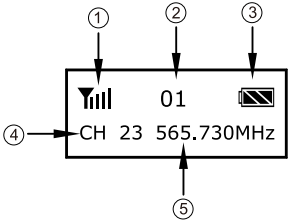


③ USB Type-C to USB-A charging cable
- Using this cable, the devices with USB-A output can deliver power to BY-WM6S.

④ The end of XLR is connected to audio devices with a standard XLR input, such as mixer, amplifier, and more.

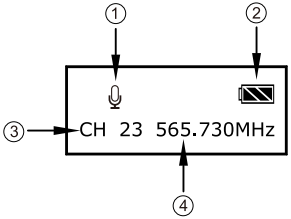
LCD Display Operation Guide

Receiver



1. Signal level
2. Volume setting (1-16)
   - Press the SET button to volume setting
   - Press the +/- (+/- selection) button to adjust volume.
3. Battery indication
4. Channel number (1-48)
5. Frequency

Transmitter

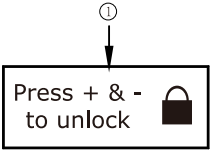


1. MUTE button
   - Press the SET button to mute on.
   - When the icon show " " , mute function is on.
2. Battery indication
3. Channel number (1-48)
4. Frequency

Mute function

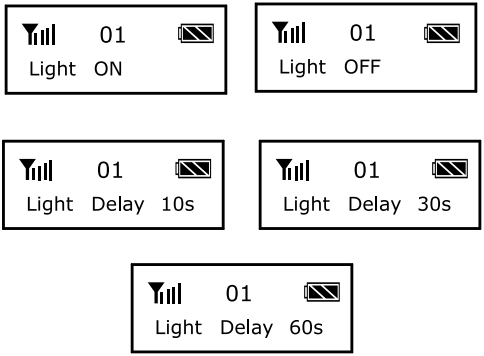
- Transmitter is mute on.

Lock function



- LCD will be locked automatically in 30 seconds.
- Long press bottoms "+" and "-" to unlock.

Backlight



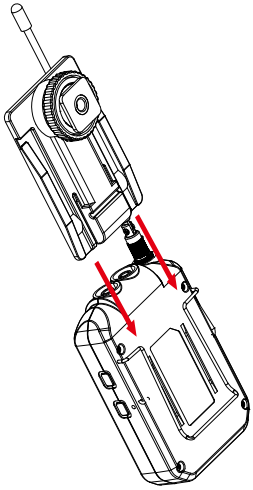
- Press the +/-(+/-selection) button to turn LCD backlight ON/OFF.
- Light delay setting includes 10/30/60s options.

Charging status

- This indication shows the battery is charging.

Attaching the shoe mount adapter

1. Please attach the belt clip in the direction of the shown picture before attaching the shoe mount adapter.
2. Slide the adapter down fitting into the space between the belt clip and the receiver.
3. Make sure the adapter insert into vertical slot in parallel until it properly fixs into the horizontal groove and locks.



Setting the Transmitter and the Receiver

To connect the transmitters and the receiver, follow these steps:

1. Make sure the supplied lavalier microphones are connected to the transmitter microphones input or plug a line-level source into the transmitter line input.

2. Turn on the transmitters and the receiver.
3. Set the transmitters and the receiver to the same channel. If you are experiencing interference or noise on one channel, try a different channel.
4. When the headphone volume low, plug your headphones into the receiver and gradually raise the level to a comfortable volume for monitoring the transmission.
5. The Channel and Volume of the Transmitter and the Receiver are default value when turn on them for the first time.
   - Adjust channel as you need.
   - Adjust as necessary to make sure an ample level is being transmitted to the receiver.
   - The objective is to transmit the highest level without distortion for the best signal-to-noise ratio throughout the signal path.
6. Once you have determined the transmission quality and level are good, mount the transmitter and the receiver.

⚠

NOTE:
If you are connecting the receiver to a sound system, mute the sound system. Do not monitor with the headphones at the stage. Anytime you are changing the channel, remove your headphones and mute connected sound systems to avoid audible RF noise bursts.

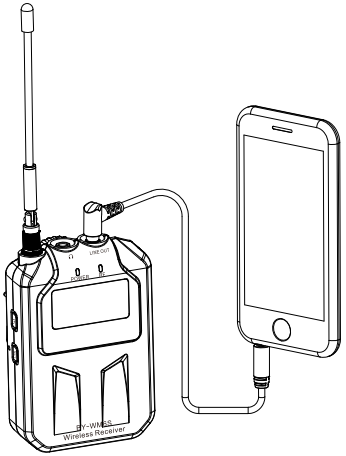
Connecting the transmitter and receiver

Using the microphone with smartphone, tablet, Mac or laptop with combo headphone/Mic jack.

Receiver

1. Mount receiver to smartphone, tablet, Mac or laptop.
2. Using TRRS cable, plug the 3.5 mm connector (straight plug) into the audio jack of your smartphone.
3. Insert the 90° plug of the connecting cable into the receiver "LINE OUT" jack.
4. Insert earphone into receiver " 🎧 " for monitoring sound if you need.
5. Long press the power ON/OFF button (the "POWER" indicator will light in blue)

   Caution: Please do not mix up plug, for details, please refer to" What's difference" on page 7.



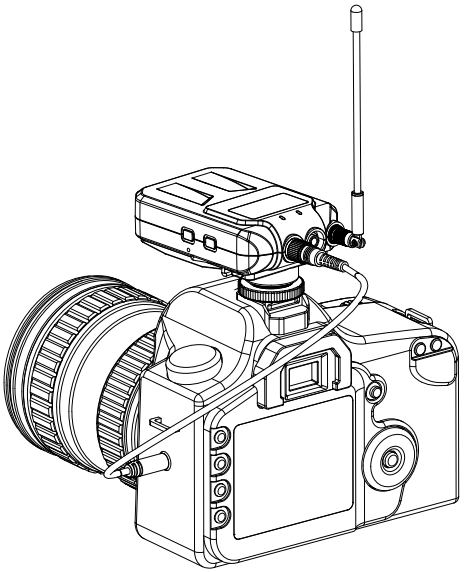
⚠

NOTE:
Not all Android devices support external microphone when taking video, and you may need to download a third-party app and set up sound source as external microphone.

Using the microphone with cameras, camcorders, audio recorders and other audio/video recording devices.

Receiver

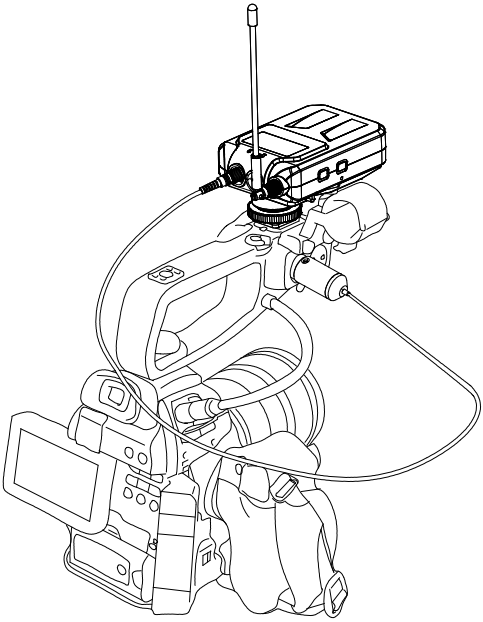
1. Mount receiver to cameras, camcorders, audio recorders and other audio/video recording devices.
2. Using TRS cable, plug the 3.5 mm connector into the audio jack of your camera.
3. Insert the other end of the connecting cable into the receiver "LINE OUT" jack.
4. Insert earphone into receiver " 🎧 " for monitoring sound if you need.
5. Long press the power ON/OFF button (the "POWER" indicator will light in blue)
   - Please make sure the antenna is oriented to the subject getting the best signal.



Using the microphone with camcorders and other XLR recording devices.

Receiver

1. Mount receiver to camcorders and other XLR audio/video recording devices.
2. Using the supplied XLR cable, plug the terminal of XLR connector into the audio jack of your camcorder.
3. Insert the other end of the connecting cable into the receiver "LINE OUT" jack.
4. Insert earphone into receiver " 🎧 " for monitoring sound if you need.
5. Press the power ON/OFF button (the "POWER" indicator will light in blue)
   - Please make sure the antenna is oriented to the subject getting the best signal.



Troubleshooting

If you have any problem using the BY-WM6S components, use the following checklist. If any problem persist, please consult our local dealer, or contact us directly.

Status	Cause	Measure
The units does not turn on.	The batteries of BY-WM6S TX exhausted.	Use the supplied USB Type-C cable to charge it.
The batteries become drained quickly.	The BY-WM6S components is being used under extremely cold conditions.	The batteries drain quickly under extremely cold conditions.
	The BY-WM6S Pro components is being used under extremely hot conditions.	The batteries drain quickly under extremely hot conditions.
There is no sound.	There are in different channel on both transmitter and receiver.	Keep the same channel on both the transmitter and receiver.
	There do not have a good connection with the lavalier.	Please try to reconnect it again.
	There do not have a well connection with the earphone.	Please try to reconnect it again.
The sound is weak.	The input level of the receiver is low.	The input level of the transmitter is low. Adjust the audio output level on the transmitter. Keep this level as high as possible without distortion to reach best Sound and Noise Ratio.
	Insert the lavalier incorrectly into the LINE IN jack.	Pull it out and reconnect to the MIC IN jack.
There is distortion in the sound.	The input level of the receiver is inappropriate.	Adjust the audio output level on the transmitter. Keep this level as high as possible without distortion to reach best Sound and Noise Ratio.
	There are in different channel on both transmitter and receiver.	Keep the same channel as both the transmitter and receiver.
	Headphones with a monaural mini jack is used.	Use the headphones with a stereo mini jack.

Status	Cause	Measure
The audio is noisy or distorted. This situation can include dropouts, white noise, bursts, pops and clicks.	RF interference	There can be a lot of RF interferenceoutdoors. Try moving indoors, where there is less RF interference. Overhead telephone lines, fluorescent lighting, and metal fences can all cause interference. Turn off all nearby computers and mobile phones."
	RF signal is weak.	Make sure there is an unobstructed line of sight between the transmitterand the receiver. Keep in mind that your body, clothes, and onstage sets are possible obstructions. If there are obstructions, you may need to move closer.
	The input level on the camera, recorder, or mixer is too high.	Turn down the audio input level on your camera or recording devices. Turn down the audio output level on the receiver. Turn down the gain level on mixer.
Too much ambience is being picked up.	When using an omnidirectional microphone like the one included with this system, the microphone may be picking up too much ambience.	Make sure the microphone is as close as to the subject as possible.

FCC STATEMENT:

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.

(2) This device must accept any interference received, including interference that may cause undesired operation.

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

NOTE: "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 harmfulinterference 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.

RF warning statement:

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

Specifications

Channel number	48
Oscillator type	PLL synthesizer
Carrier frequencies	556.710-575.980MHz
Reference deviation	+/-5KHZ(-60dBV, 1KHz input)
Signal to noise ratio	82dB or more
RF output power	10mW
Distortion	0.1% or less
Antenna	1/4λ wire antenna
Headphone output level	30mW(16 ohm)
Receive sensitivity	-98dBm
Frequency respose	40Hz to 18KHz (+/-3dB)
Reference audio input level	-60dBV (MIC input. 0dB attenuation)
Power requirement	Built-in Li-ion battery 1600mAh
	DC5V (USB TYPE-C)
	Continuous time: 10 hours, Charging time: 2.5 hours (5V/1A)
Dimensions	60x24x90mm (2.4”x0.9”x3.5”)
Weight	149g (5.3oz)

感谢您选择BOYA!

BY-WM6S是UHF无线麦克风系统，支持手机，平板，单反，摄像机，录音笔等设备。坚硬金属材质，极强抗干扰能力。即使在收录环境极差的情况，也能传输广播级音质和稳定的音频信号。
BY-WM6S由内置锂电池供电，支持Type-C端口充电（直流电5V）
麦克风天线为可拆卸设计，方便外出携带。

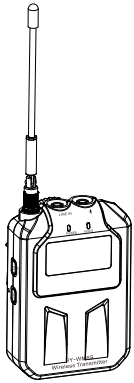
特征

- 适用于新闻记者，博主，电影制作人，视频拍摄爱好者
- 支持手机，平板，单反，摄像机，录音笔等设备
- 传输广播级音质
- UHF频段48个频道
- 配备全向型领夹麦
- 易阅读LCD屏幕
- USB Type-C充电口
- 坚硬金属材质
- 70米无障碍传输距离
- 静音功能
- 3.5mm耳机监听孔

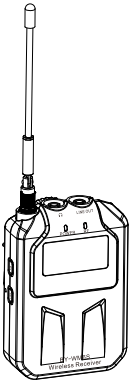
参数

频道	48
振荡方式	PLL振动合成器
使用频段	556.710–575.980MHz
最大偏频	+/–5KHZ(–60dBV, 1KHz input)
信噪比	大于82dB
RF输出功率	10mW
失真	小于0.1%
天线	1/4λ天线
耳机输出功率	30mW(16 ohm)
RF接收灵敏度	–98dBm
频率响应	40Hz to 18KHz (+/–3dB)
音频输入电平	–60dBV
电池	内置锂电池，1600mAh
	DC 5V（Type–C）
	续航10小时，充电2.5小时（5V/1A）
尺寸	60x24x90mm (2.4”x0.9”x3.5”)
重量	149g (5.3oz)

BY-WM6S由一个腰包发射器（TX6S）和一个便携式接收器（RX6S）以及附件组成。详细清单如下：



腰包发射器（TX6S）（x1）



便携式接收器（RX6S）（x1）

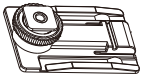
全向型领夹式麦克风（x1）

3.5mm TRS转TRS音频输出线（x1）

XLR音频输出线（x1）

Type-C转USB-A充电线（x2）

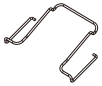
3.5mm TRS转TRRS音频输出线（x1）



冷靴座夹板 （x1）

防风棉

领夹



腰包夹（x2）

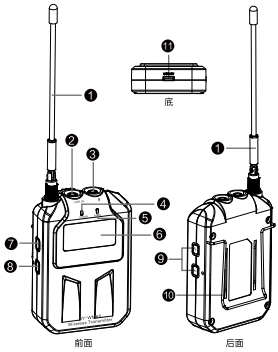
发射器

1. 天线
2. 线性输入
3. 麦克风输入
   安装：确保领夹麦接触良好，旋紧锁头。拆卸：扭松锁头拔出麦克风。
4. LED指示灯
   有关LED指示灯的更多详细信息，请参阅以下内容：

状态	LED	“POWER”	“AUDIO”	“RF”
发射器和接收器	发射器	√	√	/
连接	接收器	√	/	√
发射器和接收器	发射器	√	√	/
断开连接	接收器	√	/	×
发射器和接收器	发射器	√	闪蓝灯	/
连接（静音模式）	接收器	√	/	×
发射器/接收器低	发射器	红灯常亮	√	/
电量	接收器		/	√
发射器/接收器	发射器	闪红灯	√	/
充电模式	接收器		/	√

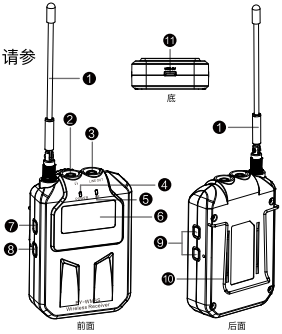
“√”为LED灯亮，“×”为LED灯熄灭。频道和亮度设置

5. AUDIO指示灯
6. LCD屏幕
7. 电源/静音键
8. 设置键
   通道/亮度设置
9. +/ – 设置键
10. 腰包夹
11. Type–C充电口



接收器

1. 天线
2. 监听孔
3. 线性输出
   3.5mm TRS转TRS音频输出线插入线性输出，另一端连接到相机，摄像机，混音器，音响等设备。
4. LED指示灯 有关“LED指示灯”的更多详细信息，请参阅上图表格内容：
5. RF指示灯
6. LCD屏幕
   有关“LCD显示屏操作指南”的更多详细信息，请参阅上图表格内容：
7. 电源键
   长按开关接收器
8. 设置键
   设置通道/亮度
9. +/– 设置键
   通道/音量/亮度设置
10. 腰包夹
11. Type–C充电口



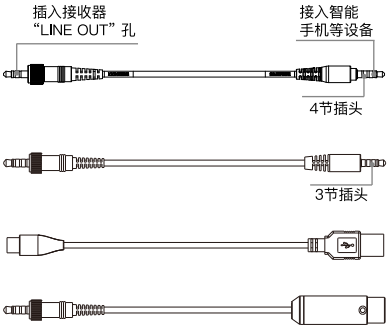
音频线的区别?

① 3.5 mm TRRS音频线
用于连接手机，平板，苹果电脑，笔记本电脑（带3.5mm耳机接口）

② 3.5mm TRS音频线
用于连接相机，摄影机，录音机以及其他录音和摄影设备等。

③ Type–C转USB–A充电线
BY–WM6S支持外界充电

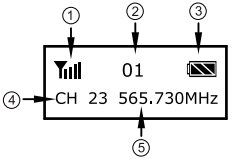
④ XLR接口用于连接XLR输入设备，混音器，调音台等设备



LCD显示屏操作指南

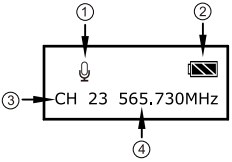
接收器

1. 信号格
2. 音量设置
   – 按SET键设置音量
   – 按+/–键调节音量
3. 电量显示
4. 通道（1–48）
5. 频段



发射器

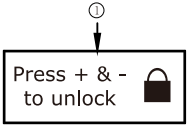
1. 静音键
   – 按SET静音
   – 当图标变为，静音功能开启
2. 电量显示
3. 通道（1–48）
4. 频段



静音功能

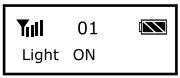
锁屏功能

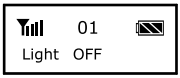
– LCD屏幕会在30秒自动锁屏
– 同时长按“+”“–”键解除

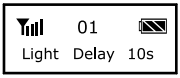


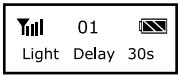
背光灯

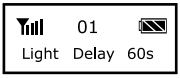
– +/–键
– 打开/关闭LCD背光灯。
– 10/30/60s显示时长设置









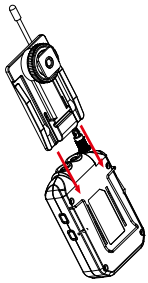


充电状态

– 如图所示，电池正在充电。

安装冷靴座卡板

1. 安装腰包夹
2. 将冷靴座卡板沿着凹槽方向滑入
3. 直至腰包夹将夹板卡紧到位



发射器和接收器配对

1.确保领夹麦接触良好；
2.打开发射器和接收器。
3.将发射器和接收器调到同一频道。遇到信号干扰时，尝试调到其他频道。
4.耳机监听音量低情况下，将耳机插入接收器。
5.第一次使用发射器和接收器时，音量设定为默认数值。
–调节频道
–确保在传输信号路径中保持合适的音量水平，获得最佳的信噪比
6.音量调试完成，将发射器和接收器安装在录制设备上。

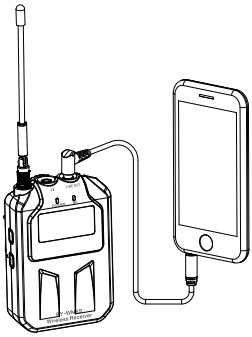
⚠

注意：
若将接收器连接到外放系统，请注意以下情况。
在改变频道过程中，可能会产生爆破音，请移除监听耳机或静音外放系统。

连接发射器和接收器

与手机、平板电脑、苹果电脑、笔记本设备连接的情况

接收器



1. 接收器支持手机、平板电脑、苹果电脑、笔记本。
2. 将3.5mm TRRS音频线插入手机的耳机孔。
3. 音频线另一端插入接收器的“LINE OUT”孔。
4. 如果需要监听录制效果，将耳机插入接收器的监听孔 🎧。
5. 开启设备，开始录制（电源灯闪蓝光）

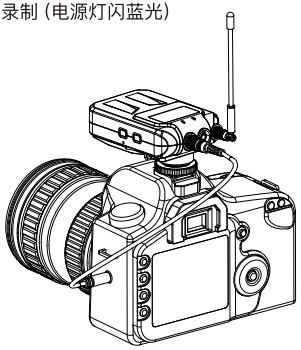
⚠

注意：请勿混用音频线，详情请参考第22页的“音频线的区别”。

提示：在录制视频时，不是所有安卓机都支持外置麦克风，此时你需要下载第三方软件，将声源设置成外置麦克风。

与相机，摄影机，录音机，和其他录音及摄影设备连接的情况。

1. 与相机，摄影机，录音机，和其他录音及摄影设备连接。
2. 插入3.5mmTRS音频线至相机的麦克风输入孔。
3. 音频线另一端连接至接收器的“LINE OUT”孔。
4. 如果需要监听录制效果，将耳机插入接收器的监听孔 🎧。
5. 开启设备，开始录制（电源灯闪蓝光）

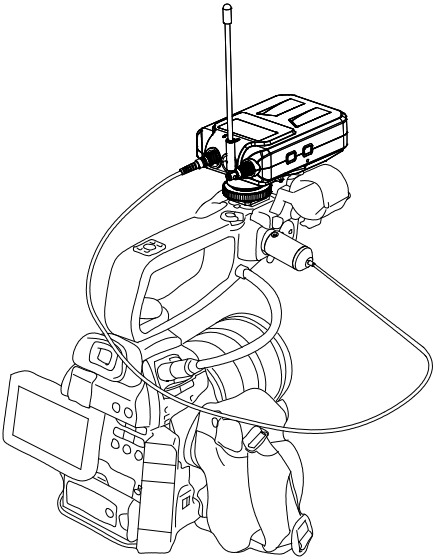


⚠

注意：请勿混用音频线，详情请参考第22页的“音频线的区别”

与摄影机或卡侬设备连接时

1. 将接收器安装在摄影机或卡侬设备上
2. 卡农端口连接摄像机
3. 另一端连接接收器“LINE OUT”孔
4. 将耳机插入耳机监听孔🎧,进行音频监听。
5. 开启接收器
   – 请按照图中所示放置好天线位置，确保最佳的接收信号。



故障排除

如果您在使用BY-WM6S时遇到任何问题，请使用以下清单。
如果仍有问题，请咨询当地经销商，或与我们联系。

状态	原因	措施
无法开机	电池用尽	用Type-C充电线进行充电
电池耗电快	BY-WM6S在极冷条件下使用	电池在寒冷条件下耗电比正常条件要高
	BY-WM6S在极热条件下使用	电池在炎热条件下耗电比正常条件要高
没有声音	发射机上的频道与接收机上的频道不同	将发射器和接收器设置成相同的频道
	领夹麦未完全接入	拔出并重新连接
	耳机未完全接入	拔出并重新连接
声音太小	接收器设置音量太小	调整音量，目标是在整个信号路径中传输最高级别而不失真，以获得最佳信噪比
	领夹麦插入到发射器的线性输入孔	拔出并重新连接麦克风输入孔
声音失真	接收器设置音量太小	调整音量大小； 确保在传输信号路径中保持合适的音量水平，获得最佳的信噪比
	发射器和接收器不在一个频道上	请将设备调至同一频道上使用
	使用了单声道耳机进行监听	请使用立体声耳机进行监听
声音嘈杂失真情况（电流声/底噪声/爆破音）	信号干扰	室外存在信号干扰情况下， 请尽量移至室内使用。 上方的电线,荧光灯,金属栅栏都可能会对无线麦克风造成干扰。 关闭所有电脑和手机等信号设备。
	射频信号弱	确保发射器和接收器天线之间的无障碍物阻挡。 人体，衣服，舞台布景都可能造成阻碍。 确保发射器在接收器的100 米范围内进行信号传输。 如果传输过程中存在障碍物，请缩短发射器与接收器传输距离。
	摄像机，录像机，调音台的输入电平太高。	调低相机或录音设备的音频输入电平 降低接收器上的音频输出电平。 调低调音台的增益; (如果设备上不具备调整增益功能; 且电平仍然很高，可降低接射器上的麦克风电平)
过多收录环境音	如果您在BY-WM6S使用全向型领夹麦，360°全方位收录声音	确保麦克风尽可能靠近被拍摄对象。

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