

BOYA

Dual-Channel Audio Interface

双通道音频接口

BY-AM4

User Manual
用户手册



Introduction

BY-AM4 is a professional-grade dual-channel audio interface, which can be connected to an amplifier and speakers, powered monitors, headphones, or DJ. It delivers exceptional audio quality to music recording, live streaming, podcasting and more.

With two TRS(1/4") & XLR combo inputs and selectable 48V phantom power, the BY-AM4 could be compatible with most XLR microphones (dynamic or condenser) and acoustic instruments on the market, providing mic and line-level signals with clarity and natural tonality. Independent gain controls are provided for each input. The BY-AM4 is capable of recording audio in up to 24-bit, 192 kHz resolution to ensure the high-fidelity and rich detail of your signals.

Featuring loopback, BY-AM4 provides a simple and compact audio mixing solution for routing high-quality audio to and from your computer, tablet, smartphone and more.

Features

- Professional-grade dual-channel audio interface
- TRS(1/4") & XLR combo inputs for connecting dynamic (condenser) XLR mics, instruments or line-level signals
- Act as a convenient MIDI interface between your computer and other MIDI equipment
- With USB-C connector for use with smartphones, tablets, and computers and more
- Selectable separately 48V phantom power for two XLR inputs
- Built-in high-performance noise cancellation
- Audio loopback in real time
- Real-time monitoring & Audio playback

In the Box



BY-AM4 Dual-Channel
Audio Interface



USB-A to USB-C
Charging Cable × 2

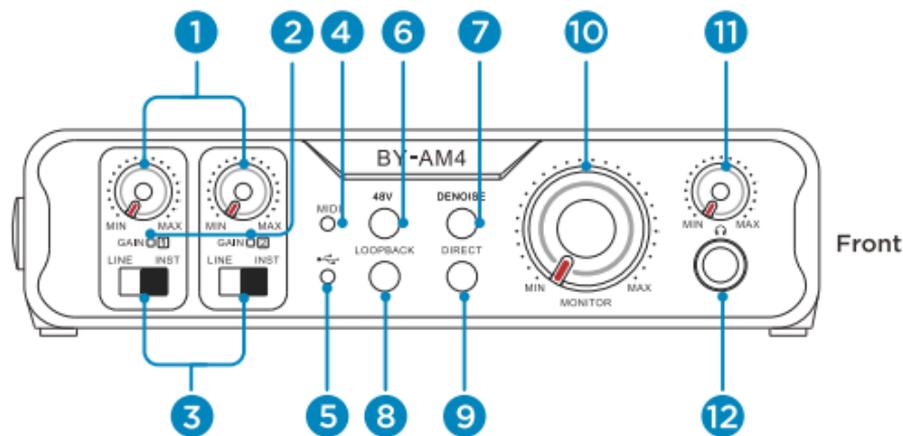


6,35mm to 3,5mm
Audio Adapter × 2



3,5mm TRRS to 3,5mm
TRRS Audio Cable × 1

Product Structure



① Input Volume Control

Use to adjust the input level of INPUT1 and INPUT2.

② Gain Peak LED

The LED lights up green when the input signal is detected. The LED lights up red when the input signal is overloaded.

③ LINE/ INST Switch

Toggle the switch to LINE when connecting to a line-in device to TRS(1/4") & XLR combo input. Toggle the switch to INST when connecting a guitar and other musical instruments to TRS (1/4") & XLR combo input.

④ MIDI LED

The LED lights up when your MIDI device is detected.

⑤ USB LED

The LED lights up when the unit is

connected to a computer or smartphone via the USB-C data port.

⑥ 48V Phantom Power Button (LED)

Press to enable or disable the 48V phantom power. The LED lights up red with phantom power engaged.

Note:

- Please make sure your microphone needs external 48V phantom power, otherwise you may damage your microphone.
- Please disable the phantom power before connecting or disconnecting your mic in order to avoid damaging it.

⑦ DENOISE Button

Press to enable or disable the noise cancellation. With the noise cancellation engaged, ambient noise can be filtered effectively and the vocal will be highlighted. The LED lights up green.

⑧ LOOPBACK Button

Press to enable or disable the loopback. With the loopback engaged, the audio input to this unit can be mixed with the audio of your computer, iPad or smartphone, which will be sent back to your mobile device. The LED lights up green. This feature is ideal for live streaming and in-game dialogue and more.

⑨ DIRECT Button

Press to enable or disable the real-time monitoring.

⑩ Speaker Volume Control

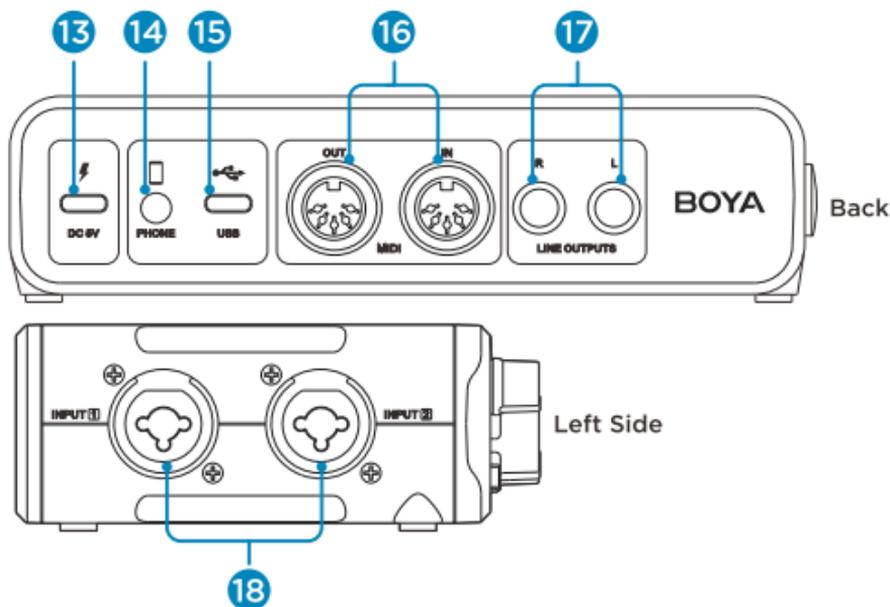
Use to adjust the output level of LINE OUTPUTS.

⑪ Headphone Volume Control

Use to adjust the monitoring volume of your headphone.

⑫ 6.35mm Headphone Monitoring Jack

Connect this to your headphone for audio monitoring. The included 6.35mm to 3.5mm adapter can be used when connecting headphones with a 3.5mm plug.



⑬ USB-C Power Port (DC 5V)

⑭ PHONE Jack

3.5mm TRRS stereo jack for audio input or output. Connect this to

your smartphone or other devices to add sound effects such as prompt sounds or background music using an app.

15 USB-C Data Port

16 MIDI IN/ MIDI OUT Jack

Connect this to a MIDI device, such as a keyboard or sound module.

17 LINE OUTPUTS Jack (L/R)

18 TRS(1/4") & XLR Combo Input

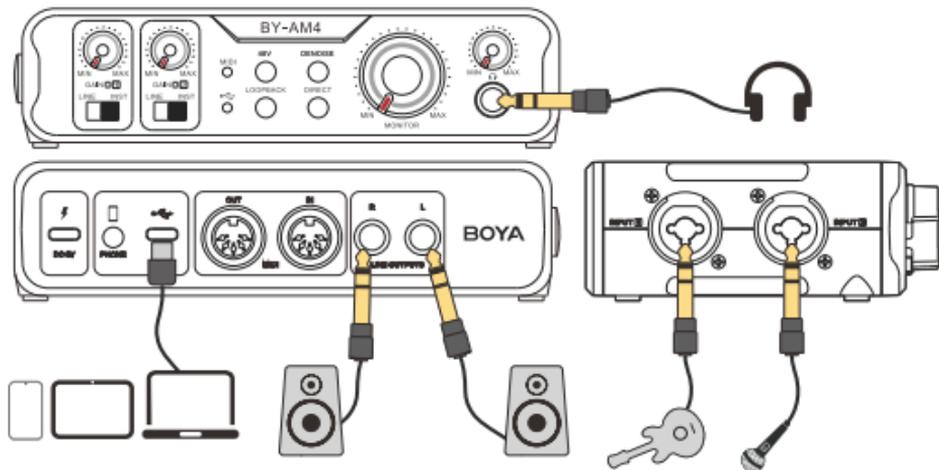
TRS(1/4") Input: Connect this to a connected instrument or line-in device.

XLR Input: Connect this to dynamic or condenser microphone.

Note: Please do not connect the XLR input jack to anything other than a microphone such as the output of a sound module or effects unit, as the signal level will overload the preamplifier, resulting in distortion.

How to Use

Connecting



Note:

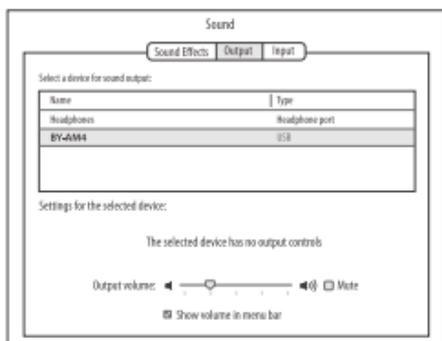
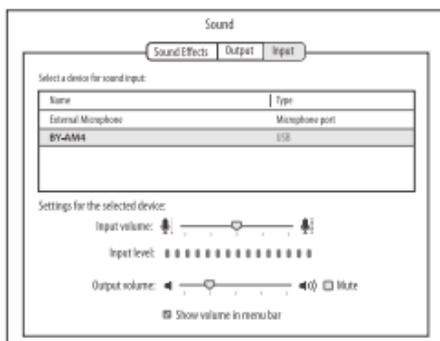
① You run the risk of creating an audio feedback loop if loudspeakers are active when you are monitoring a microphone! We recommend you always turn off (or turn down) monitoring loudspeakers while recording, and use headphones when overdubbing.

② When your iPad is connected to the unit, it is recommended to use an external power supply.

Procedure Setup

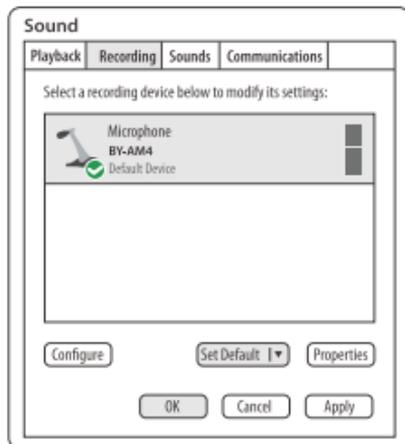
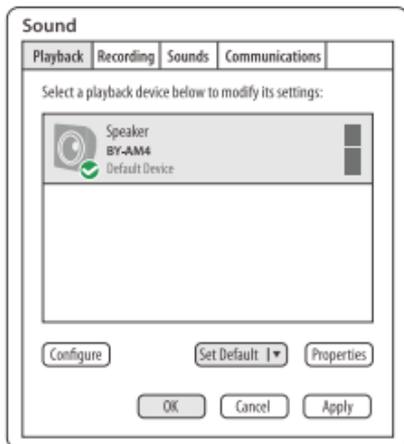
Set up for Mac

1. Connect the BY-AM4 to your computer with the included USB-A to USB-C cable.
2. Open System Preferences and select the Sound icon.
3. Select "BY-AM4" under the "Input" tab.
4. Select "BY-AM4" under the "Output" tab.



Set up for Windows

1. Connect the BY-AM4 to your computer with the included USB-A to USB-C cable.
2. Go to the Control Panel → Hardware and Sound → Manage audio devices.
3. Select "BY-AM4" as the default device under the "Playback" tab.
4. Select "BY-AM4" as the default device under the "Recording" tab.



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 If a passive microphone is connected to the unit, make sure the 48V phantom power is turned on.
- ② Make sure the gain is not turned to a minimum.
- ③ If an instrument is connected to the unit using a 6.35mm plug, check whether the LINE/ INST Switch has been toggled to INST.
- ④ If there is no sound from the Headphone Monitoring Jack, check whether the real-time monitoring (DIRECT button) is enabled.

- **If sound of the unit is too low or too loud or even distorted**

Adjusting the mic gain and finding the most suitable gain level for recording in the current situation to improve the recording effect.

- **Recording in a noisy environment**

In order to improve the recording effect in a noisy environment, it is recommended that press the DENOISE buttons on the unit to enable noise cancellation.

- **Noise appears while microphone and speaker are used simultaneously**

It is recommended to turn off the speaker or turn down the speaker's volume while recording.

- **Failed to connect to a smartphone**

- ① Checking if your smartphone is connected to the USB-C data port of the unit.
- ② Make sure the unit's USB-C power port is connected to an external power supply, and the USB LED lights on.
- ③ Make sure the "OTG" of the smartphone has been enabled.
- ④ If the smartphone is still not recognized, please contact our customer service.

- **Current noise or other abnormal noise appears during monitoring**

- ① Replacing the XLR cable that is connected to an external microphone.
- ② Replacing the power strip that is connected to an external power supply for charging.

Specifications

	Microphone Input	Line Input	Instrument Input	PHONE Input
Frequency Response	20Hz-20kHz±1dB	20Hz-20kHz±1dB	20Hz-20kHz±1dB	20Hz-20kHz±1dB
Dynamic Range	110 (A weighted)	110 (A weighted)	110 (A weighted)	105 (A weighted)
THD + N	<0.008%	<0.01%	<0.05%	<0.01%
Signal-to-Noise Ratio	-102dBu	-102dBu	-102dBu	-98dBu
Gain Range	44dBu	48dBu	40dBu	0dBu
Maximum Input Level	5dBu	+5dBu (at minimum gain)	9dBu (at minimum gain)	5dBu
Impedance	3K	20K	/	3K

	L Line/ Monitor Output	R Line/ Monitor Output	Headphone Output	PHONE Output
Dynamic Range	102 (A weighted)	102 (A weighted)	105 (A weighted)	98 (A weighted)
THD + N	<0.008%	<0.008%	<0.005%	<0.01%
Maximum Output Level	+4dBu	+4dBu	+8dBu	/
Gain Range	/	/	/	25dBu
Impedance	560 ohms	560 ohms	10 ohms	10K
Load Impedance Matching	/	/	32 ohms ~ 330 ohms	/
Sampling Rate	/	/	44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz	/
Power Supply	/	/	USB	/
Computer Connection	/	/	USB plug-in power	/
Phone Connection	/	/	USB (DC 5V) plug-in power	/
Power Supply for Passive Microphone	/	/	48V phantom power	/

Dimensions	160mm×95mm×40mm
Weight	427g
Operating Temperature	0°C ~ +50°C
Storage Temperature	-10°C ~+ 50°C

Check Your BOYA Warranty Status

1. Your BOYA-branded hardware product is warranted against defects in materials and workmanship for a period of ONE (2) YEAR from the date of original retail purchase ("Warranty Period"). This warranty excludes damage resulting from abuse, accident, modifications or other causes that are not defects in materials and workmanship.
2. The Warranty Start Date shall be the date you purchase the Product with a valid invoice.
3. If the Customer is unable to provide an invoice of the original purchase, the Warranty Start Date shall be ninety (90) days after the Production Date displayed on the unit or its serial number (SN).

Go to <https://www.boyamicro.com/service-policy>. Enter a serial number (SN) to retrieve the warranty status for your Product. The result is for reference only, not as judgment criteria for warranty.

Warranty Information

For information about warranty, return, and replacement policies or service for repair, please visit <https://www.boyamicro.com/service-policy>. You acknowledge that the warranty for your device is only valid in the country/region where it was purchased.



BOYA Support

Get more product supports.

<https://cn.boyamicro.com/service-policy>

概述

BY-AM4是一款专业级双通道音频接口，可连接到放大器&扬声器、有源监听音箱、耳机或DJ调音台。音质卓越，适用于音乐录制、直播、播客等使用场景。

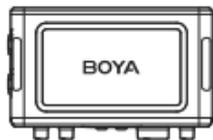
产品带有两个6.35mm/ XLR组合音频输入孔，支持48V幻象供电，可以独立控制不同通道的增益，兼容市场上大多数XLR（动圈或电容）麦克风和原声乐器，提供清晰自然的音频效果。BY-AM4支持以24bit/ 192kHz的采样率录制高保真音频，保留丰富的细节。

BY-AM4具有音频回录功能，可将输入到本机的音频与您电脑、平板或手机的音频相混合，并将其发送回您的设备。

特点

- 专业级双通道音频接口
- 6.35mm/ XLR组合输入孔，可接入动圈/电容XLR麦克风、乐器、线路输入设备
- 可用作MIDI接口，轻松连接电脑与其他MIDI设备
- 具备USB-C接口，可接入手机、平板、电脑等设备
- 可为XLR输入提供48V幻象电源
- 内置高性能音频降噪算法
- 支持实时音频回录功能
- 具备实时监听功能，且能回放监听音频

包装清单



BY-AM4双通道
音频接口 ×1



USB-A转USB-C
充电线 ×2

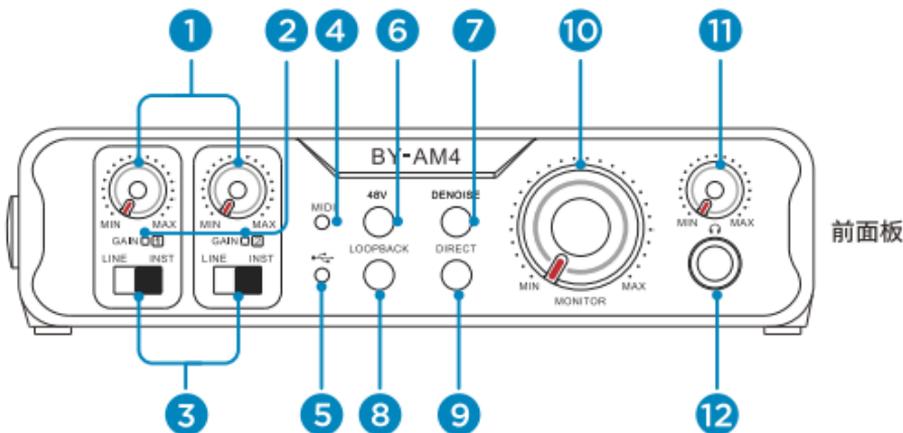


6.35mm转3.5mm
音频转接头 ×2



3.5mm TRRS 转
3.5mm TRRS音频线 ×1

产品结构



前面板

① 输入增益调节旋钮

可调节输入孔1/输入孔2的音量基准。

② 增益峰值检测指示灯

当通道1/2有声音输入时对应指示灯呈绿灯。当输入信号过载时对应指示灯呈红色。

③ LINE/INST切换键

当6.35mm/XLR组合音频输入孔接入线路设备时，拨至LINE模式；接入吉他等乐器时，拨至INST模式。

④ MIDI指示灯

当检测到MIDI IN端口有信号输入时，该指示灯亮起。

⑤ USB指示灯

当本机通过USB-C数据接口连接至电脑/手机时，该指示灯亮起。

⑥ 48V幻象电源按钮/指示灯

短按开启/关闭48V幻象电源；开启后，指示灯呈红灯常亮。

注意：

1) 请确认麦克风是否需要外接48V幻象电源，以免对麦克风造成不可逆的损害。

2) 在插拔麦克风之前，务必关闭48V幻象电源，否则可能造成设备损坏。

⑦ DENOISE降噪按钮

短按开启/关闭降噪功能；降噪开启后可以有效过滤外部环境噪音，突出麦克风录制人声效果，指示灯呈绿灯常亮。

⑧ LOOPBACK回录按钮

短按开启/关闭回录功能；开启后可将输入到本机的音频与您电脑、iPad或手机的音频相混合，并将其发送回您的移动设备，指示灯呈绿灯常亮。此功能适用于直播对话和视频游戏推流等场景。

⑨ DIRECT实时监听按钮

短按开启/关闭实时监听功能。

⑩ 外放音量调节旋钮

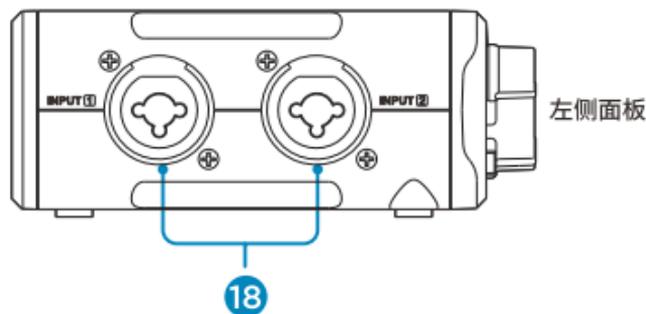
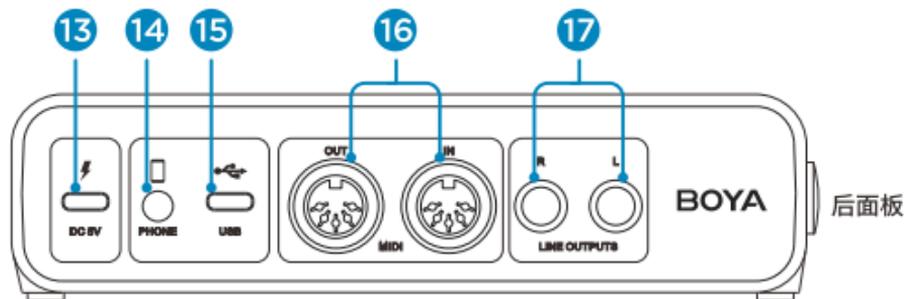
转动旋钮调节LINE OUTPUTS的输出音量。

⑪ 耳机音量调节旋钮

转动旋钮调节监听耳机音量。

⑫ 6.35mm耳机监听接口

连接耳机即可监听输出的音频。若需连接带有3.5mm插头的耳机，请使用配备的6.35mm转3.5mm转接头。



⑬ USB-C供电接口 (DC 5V)

⑭ PHONE接口

3.5mm TRRS 立体声输入/输出插孔, 可连接您的智能手机或其他设备, 使用应用程序添加音效, 例如音频提示音或者背景音乐。

⑮ USB-C数据接口

⑯ MIDI IN/ MIDI OUT接口

用于连接MIDI 设备, 例如键盘或声音模块。

⑰ LINE OUTPUTS线性输出接口 (L/R)

⑱ 6.35mm/ XLR组合音频输入孔 (1/2)

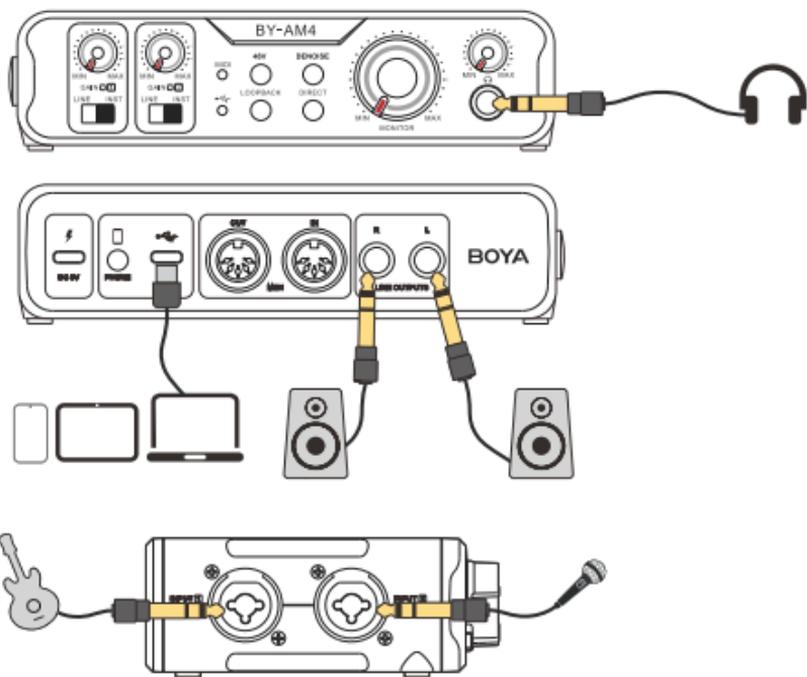
6.35mm输入孔: 可接入乐器或线路输入设备

XLR输入孔: 可接入动圈/电容麦克风

注意: 请不要通过XLR输入孔连接除麦克风以外的任何其他输出 (例如声音模块或效果器的输出), 因为信号电平会使前置放大器过载, 造成音频失真。

如何使用

连接示意图



注意：

- ① 在监听麦克风时，如果使用有源扬声器，存在产生音频反馈回路的风险。建议您在录音时，始终关闭监听扬声器（或调低音量），而在配音时使用耳机。
- ② 在连接iPad时，建议使用外部电源供电。

程序设置

Mac系统程序设置

- 1.使用随附的USB-A转USB-C数据线将BY-AM4接入电脑；
- 2.打开“系统偏好设置”，然后选择“声音”图标；
- 3.选择“BY-AM4”为输入设备；
- 4.选择“BY-AM4”为输出设备。



Windows系统程序设置

- 1.使用随附的USB-A转USB-C数据线将BY-AM4接入电脑；
- 2.进入“控制面板”→“硬件和声音”→“管理音频设置”；
- 3.在“播放”选项卡下选择“BY-AM4”为默认设备；
- 4.在“录制”选项卡下选择“BY-AM4”为默认设备。



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。

• 本机无声音

- ①若接入的是无源麦克风，检查是否已开启48V幻象电源。
- ②检查增益是否被调至最低。
- ③若接入的是6.35mm乐器，检查是否已拨至INST档位。
- ④若本机耳机监听接口无声音，检查是否已开启DIRECT实时监听功能。

• 本机声音过小或过大甚至破音

通过调节增益，找到最适合当前环境录制的档位，提高录制效果。

• 当前录音环境嘈杂且录制效果差

按下本机DENOISE降噪按钮，一键开启降噪模式，提高录制效果。

• 麦克风和音箱同时使用时出现噪音

建议在录音时关闭音箱或者调低音箱音量。

• 连接手机失败

- ①验证手机是否已连接至本机USB-C数据接口。
- ②确保本机已连接外部电源至本机USB-C供电接口，且USB指示灯正常亮起。
- ③请验证手机是否已开启“OTG”开关。
- ④若仍不能识别手机，请联系客服咨询。

• 监听时有不干净的电流声或异常噪音等

- ①更换外接麦克风的卡农线。
- ②更换连接外部电源充电的插排。

参数

	麦克风输入	线路输入	乐器输入	PHONE输入
频率响应	20Hz-20kHz±1dB	20Hz-20kHz±1dB	20Hz-20kHz±1dB	20Hz-20kHz±1dB
动态范围	110 (A加权)	110 (A加权)	110 (A加权)	105 (A加权)
失真率	<0.008%	<0.01%	<0.05%	<0.01%
信噪比	-102dBu	-102dBu	-102dBu	-98dBu
增益范围	44dBu	48dBu	40dBu	0dBu
最大输入电平	5dBu	+5dBu (最小增益时)	9dBu (最小增益时)	5dBu
阻抗	3K	20K	/	3K

	L线路/监听输出	R线路/监听输出	耳机输出	PHONE输出
动态范围	102 (A加权)	102 (A加权)	105 (A加权)	98 (A加权)
THD + N	<0.008%	<0.008%	<0.005%	<0.01%
最大输出电平	+4dBu	+4dBu	+8dBu	/
增益范围	/	/	/	25dBu
阻抗	560Ω	560Ω	10Ω	10K
匹配负载阻抗	/	/	32Ω ~ 330Ω	/
采样率	/	/	44.1kHz、48kHz、88.2kHz、96kHz、176.4kHz、192kHz	/
供电方式	/	/	USB	/
电脑连接	/	/	USB 插入供电	/
手机连接	/	/	USB+DC5V插入供电	/
麦克风供电	/	/	48V幻想电源供电	/

尺寸	160mm×95mm×40mm
重量	427g
工作温度	0°C ~ +50°C
贮存温度	-10°C ~+ 50°C

确认保修状态

1. BOYA保证所附硬件产品,从购入的日期起两年内,材质和工艺均无瑕疵。BOYA对非正常磨损不作担保,对事故或滥用造成的损坏也不作担保。
2. 产品保修起始日期以购机发票开具日为准。
3. 若无发票证明,则保修起始日期以SN号显示的出厂日期向后顺延90日为准。您可以访问服务网址<https://cn.boyamicro.com/service-policy>,输入 SN号查询产品是否在保修期内。该结果仅供参考,不作为判保标准。

售后保修信息

访问服务网址<https://cn.boyamicro.com/service-policy>,获取产品的服务政策,如:保修政策、退换货政策、寄修服务等。
产品只能在购买地所在国家或者区域享受到维保服务。



服务网站

获取全面的服务信息

<https://cn.boyamicro.com/service-policy>

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