



# Manual

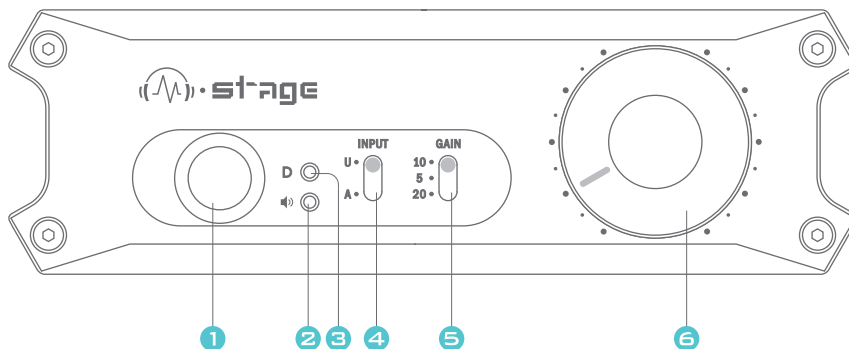
## Overview

- HPA-3U is a biggest evolution since the M-Stage series headphone amplifier came out, the new appearance, the new circuit design and radical performance improvement to make it all difference.
- Full-band of THD + N less than 0.0003%, SNR up to -112dB, bandwidth not less than 150k at -3dB gain, 0.2 $\Omega$  ultra low output impedance, three gain level options to fit for the different impedance and sensitivity headphone, all of these excellence performance improvements to be born the brand new HPA-3U!
- The most stable XMOS U series USB controller on the new USB module, support 24 bit/192kHz sample rate PCM signal playback, DOP method DSD playback capacity, the biggest bright spot is that can be played with your iOS and the most Android devices.
- Excellent structural design to quickly dissipate the heat of power tube via the shell, to ensured the stability of the work; full symmetric circuit layout makes two channels audio have the isometric path; driver stage use the precision constant current source and establish stable working point; Parallel output of the output stage can effectively reduce the output impedance, and improved driving capability, extended dynamic range.
- ALPS 27 series volume potentiometer, Wima and Nichicon audio grade

## Overview

capacitors, Noratel toroidal transformer, precision non-inductive resistance, every carefully chosen components to make HPA-3U not only presents the perfect sound, but also a more stable and reliable working status.

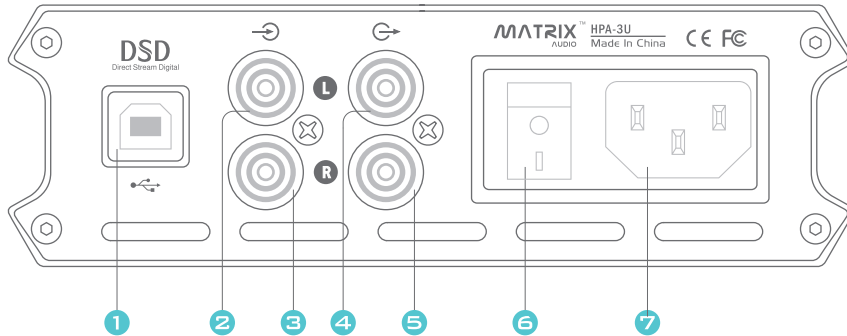
## The Front Panel



- 1 Headphone Jack
- 2 Power LED Indicator
- 3 DSD LED Indicator
- 4 Input Source Switch

- 5 Gain Switch
- 6 Volume Knob

## The Rear Panel



- 1 USB Input
- 2 Left Channel Analog Input
- 3 Right Channel Analog Input
- 4 Left Channel Analog Output
- 5 Right Channel Analog Output
- 6 Power Switch
- 7 AC Power Input

## AC Power

- HPA-3U compatible with AC 100-120V and AC 200-240V two voltage environments, please set the voltage switch on the right position according to your local voltage environment before using.
- The voltage switch is on the left side, the two sections of the voltage switch are 115V and 230V, the following is the voltage range:

115V position is fit for AC100V-120V 50/60Hz

230V position is fit for AC220V-240V 50/60Hz

Please ensure the input voltage is in the right range before using, the incorrect voltage input can damage your device.

- The fuse of HPA-3U on the left side, press down and turn the fuse plug can take out the fuse.
- For reducing the noises and getting the best playback effect, please use the three-phase source wires of the power cord which includes the ground terminal, and ensure the ground is reliable connection.

## Settings & Usage

- Power On/Off

Connected the power plug to the HPA-3U, turn on the power switch, the working LED indicator will light up about one second, then the HPA-3U will enter the working status.

- Switching Input Channels

Using front panel input source switch for switching between the RCA input and USB input.

- Gain Control

The gain switch on the front panel, can set the gain at 5dB, 10dB or 20dB.

- Volume Control

Using the volume knob to adjust the volume, to avoid excessive volume causes hearing damage, please make sure the volume knob on the suitable position before power on.

- Headphone Output

The 1/4" headphone jack is a stereo interface, please do not connect the mono plug into it, otherwise it will have the risk to damage your device. The rear panel line output will automatically muted when headphone jack is plugged in.

## Settings & Usage

HPA-3U can eliminate the power on/off impact noise with its own protection circuit, if a failure caused the amplifier output a higher voltage that the working LED indicator will be off, in this case, please disconnect the headphone plug quickly from the HPA-3U to protect your headphone.



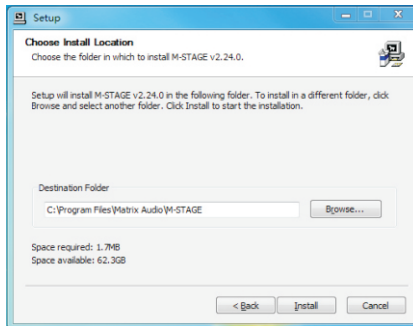
## Driver Setup

- HPA-3U installation of Windows drivers.

Double-click the driver installation file, and select "Next"

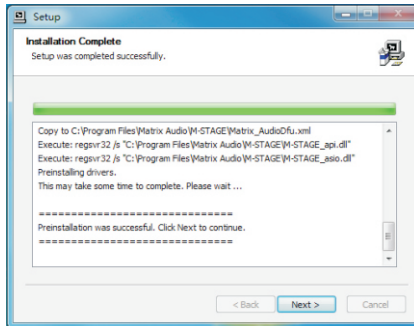


Please select the installation path and select "Install"

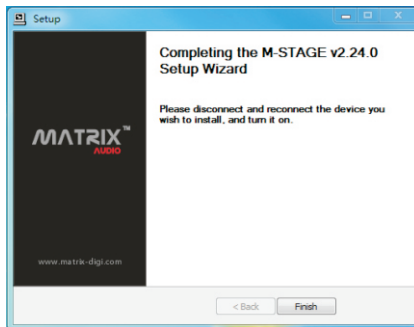


## Driver Setup

Installation completed, select "next"

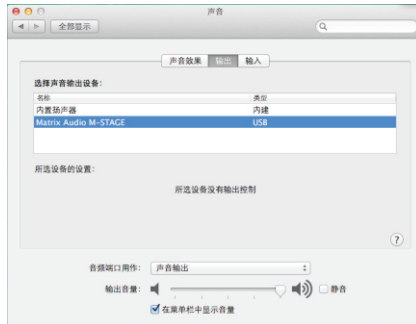


Select "Finish", the driver installation is completed



## Driver Setup

- The Mac OS X 10.6.4 and above version have native support and do not require a driver, select the audio device directly to "MATRIX Audio M-STAGE" in System Preferences.



## Technical Specification

- Line Output

SNR: 112dB A-weighting  
THD+N: <0.0003% at 1kHz 1VRMS A-weighting  
Frequency Response: 20Hz-20kHz(+0.01dB/-0.04dB)  
Out Impedance: 51ohms

- Headphone Output

SNR: 112dB A-weighting  
THD+N: <0.0003% at 33ohms 90mW 1kHz A-weighting  
Frequency Response: 20Hz-20kHz(+0.01dB/-0.04dB)  
Output Impedance: 0.2ohms  
Output power: 2800mW at 33ohms at THD+N=0.01%  
420mW at 300ohms at THD+N=0.01%  
210mW at 600ohms at THD+N=0.01%

- Gain Control

5=5dB 10=10dB 20=20dB

## Technical Specification

- USB Input

USB Chip:	XMOS U-Series Asynchronous USB Chip
D/A Chip:	Texas Instruments DSD1793
SNR:	110dB A-weighting
THD+N:	<0.002% at 1kHz A-weighting
PCM SAMPLE RATE:	16-24Bit/44.1kHz 48kHz 88.2kHz 96kHz 176.4kHz 192kHz
DSD SAMPLE RATE:	DSD64

- System Support

The Windows XP/Vista/7/8/8.1 systems need to install the driver supplied.

The Mac OS X 10.6.4 and above version have native support and do not require a driver

Can be used with the most of Android devices via the OTG cable.

Can be used with the iOS devices via the Lightning to USB Camera Adapter.

## Technical Specification

- Power Specifications

Power Voltage:           230V position is fit for AC220V-240V 50/60Hz  
                                  115V position is fit for AC100V-120V 50/60Hz

Power Consumption: <25W

Fuse:                       AC250V/500mA 5x20mm

- Other Specifications

Dimension:               285mm×142mm×49mm  
                                  ( L×W×H, including the protruding part )

Weight:                   1.7kg

NOTE: For the improvement purpose, specifications subject to changes without prior notice.

## Customer Service

From the purchase date, we will provide you one-year-limited warranty , warranty does not cover accessories.

Any fault caused by quality problems during the warranty period, we will provide free maintenance. The free maintenance do not cover by incorrect using、negligence、accidental damage and unauthorized modifications or replace components.

For more information, please visit [www.matrix-digi.com](http://www.matrix-digi.com).



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