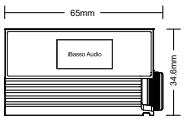
Nunchaku 平衡/单端解码耳放

4.4mm Balanced/3.5mm Single-ended USB DAC & TUBE AMP

包装配件

Nunchaku，Type-C to Type-C连接线，Type-C to Lightning连接线，USB-C转USB-A转接头，简易说明书，保修卡。

数据指标



DAC芯片：两片CS43198
PCM：32bit/768kHz
DSD：最高Native DSD512x
重量: 50g
尺寸: 65mm*34.6mm*15mm

4.4mm平衡（AB模式）

THD+N：-119dB(0.00011%)
@1kHz 200kΩ Load
输出电平：2.8Vrms（Low Gain）
4.1Vrms（High Gain）
输出功率：450mW@32Ω
信噪比：130dB
动态范围：130dB
分离度：145dB
频率响应：15Hz-40kHz ±0.5dB

4.4mm平衡（TUBE模式）

输出电平：2.3Vrms（Low Gain）
4.5Vrms（High Gain）
输出功率：525mW@32Ω
信噪比：107dB
动态范围：110dB
分离度：82dB
频率响应：15Hz-40kHz ±1dB

3.5mm单端（AB模式）

THD+N：-115dB(0.00017%)
@1kHz 600Ω Load
输出电平：1.4Vrms（Low Gain）
2Vrms（High Gain）
输出功率：125mW@32Ω
信噪比：125dB
动态范围：125dB
分离度：116dB
频率响应：15Hz-40kHz ±0.5dB

3.5mm单端（TUBE模式）

输出电平：1.15Vrms（Low Gain）
2.25Vrms（High Gain）
输出功率：150mW@32Ω
信噪比：112dB
动态范围：112dB
分离度：82dB
频率响应：15Hz-40kHz ±1dB

主要特点

- 胆管/Class AB双输出模式。
- 双雷神JAN6418古董胆管。
- OPAMP+BUF架构Class AB耳放，四颗BUF634A作为缓冲级。
- 525mW+525mW@32Ω大推力。
- 采用两颗Cirrus Logic旗舰DAC芯片CS43198。
- KDS飞秒晶振，降低相位抖动，时钟更精准。
- 支持PCM最高32bit/768kHz。
- 支持Naitve DSD最高512x。
- 3.5mm同轴输出支持最高PCM 768kHz及DoP DSD256。
- OLED显示屏。
- 旋钮操作快速完成设置及音量调整。
- 配套安卓APK，支持音量调节、滤波选择、声道平衡调节等功能。
- 可换线设计。
- 3.5mm立体声输出，4.4平衡输出。
- 铝合金CNC机身，两侧钢化玻璃面板。
- 可以作为USB解码耳放供安卓手机、苹果手机、平板电脑，以及MAC、Windows、Linux平台电脑使用。

操作介绍

1. Nunchaku UI指示（图1）。
2.连接成功后播放音乐时，主界面显示当前播放音源的采样率。
3.点击 [旋钮] 打开或关闭OLED屏幕。

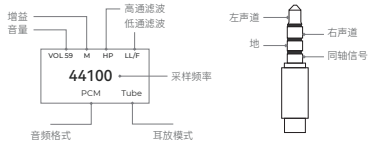


图1　　图2

在灭屏或主界面旋转 [旋钮] 可调整音量。
屏幕亮起后长按 [旋钮] 进入功能选择菜单。
选择菜单里旋转 [旋钮] 可浏览选项。
点击 [旋钮] 可更改设置，设置自动保存。

4. 可以通过选择DAC的低通滤波调整音色
以下为低通滤波对应的全称：

Fast: 高速滚降滤波器　　Slow: 慢速滚降滤波器
LL/F: 低延时高速滚降滤波器　　LL/S: 低延时慢速滚降滤波器
NOS: 非过采样

5. 打开高通滤波时，衰减极低频部分；
关闭高通滤波时，不衰减极低频部分。
6.当选择SPDIF输出时，3.5mm同轴输出支持最高PCM 768kHz及DoP DSD最高256x.（图2）是3.5插头的同轴定义。
7. Nunchaku在Android5.1以上系统的安卓设备上即插即用（受设备系统或者硬件影响，在极少数安卓设备上可能存在兼容性差异）。某些型号的安卓设备，可能需要手动在系统设置里打开OTG功能。
8. 如果你希望在安卓手机上实现功能设置，可安装iBasso UAC APK。
9. Nunchaku使用标准UAC2.0声卡芯片，在苹果系统及Win10系统可实现即插即用。在WinXP, Win7,及Win8系统时，请到iBasso官方网站www.iBasso.cn下载驱动。正确安装后即可作为USB声卡使用。
10. Nunchaku无内置电池，工作时通过USB接口取电，只消耗少量手机电量。由于内置四颗发烧解码芯片，Nunchaku在使用时会产生一定热量，属正常情况，请放心使用。

Nunchaku 平衡/单端解码耳放

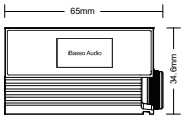
4.4mm Balanced/3.5mm Single-ended USB DAC & TUBE AMP

Package Components

Nunchaku, USB-C to USB-C Cable, USB-C to Lightning cable, USB-C to USB-A converter, User manual, and Warranty card.

Specifications

DAC Chipset: Dual Cirrus Logic CS43198
PCM: Up to 32bit/768kHz
DSD: Native DSD 512x
Weight: 50g
Size : 65mm*34.6mm*15mm



4.4mm Balanced Output (AB Mode) :

THD+N: -119dB(0.00011%) @1kHz 200kΩ Load
Output Voltage: 2.8Vrms (Low Gain) 4.1Vrms (High Gain)
Output Power: 450mW@32Ω
S/N: 130dB
Dynamic Range: 130dB
Crosstalk: 145dB
Frequency Response: 15Hz-40kHz ±0.5dB

4.4mm Balanced Output (TUBE Mode) :

Output Voltage: 2.3Vrms (Low Gain) 4.5Vrms (High Gain)
Output Power: 525mW@32Ω
S/N:107dB
Dynamic Range:110dB
Crosstalk: 82dB
Frequency Response: 15Hz-40kHz ±1dB

3.5mm Single-ended Output (AB Mode) :

THD+N: -115dB(0.00017%) @1kHz 600Ω Load
Output Voltage: 1.4Vrms (Low Gain) 2Vrms (High Gain)
Output Power: 125mW@32Ω
S/N:125dB
Dynamic Range: 125dB
Crosstalk: 116dB
Frequency Response: 15Hz-40kHz ±0.5dB

3.5mm Single-ended Output (TUBE Mode) :

Output Voltage: 1.15Vrms (Low Gain) 2.25Vrms (High Gain)
Output Power: 150mW@32Ω
S/N: 112dB
Dynamic Range: 112dB
Crosstalk: 82dB
Frequency Response: 15Hz-40kHz ±1dB)

Main Features:

- Tube/Class AB dual output modes.
- Dual Raytheon JAN6418 antique tubes.
- OPAMP+BUF Class AB amplifier, BUF634A*4.
- 525mW+525mW@32ohm output power.
- Dual Cirrus Logic CS43198 Master HiFi™ DAC Chips.
- FPGA built-in and KDS Femtosecond oscillator.
- Support of PCM up to 32bit/768kHz.
- Support of Native DSD up to 512x.
- 3.5mm coxial output supports PCM up to 768kHz, and DoP DSD up to 256x.
- OLED screen.
- Knob operation quickly completes settings and volume adjustment.
- Dedicated UAC APP for Android devices, which allows adjustment of volume, channel balance, and digital filters.
- Aluminum CNC case with tempered glass panels on both sides.
- Detachable cable design.
- 4.4mm balanced output and 3.5mm single-ended output.
- Works as a USB-DAC for Android smartphones & tablets, Mac,Windows, & Linux computers.

Operation Introductions:

1. Nunchaku UI introduction (Figure 1).
2. When playing music after connected to a master device, the screen displays the current music sample rate.
3. Press the [knob] to turn on or turn off the OLED screen.
   When the screen is off or on the home screen, rotate the [knob] to adjust the volume.
   When the screen is on, press and hold the [knob] to enter the settings menu.
   Rotate the [knob] in the settings menu to browse the settings.
   Press the [knob] to change settings, Settings will be automatically saved.

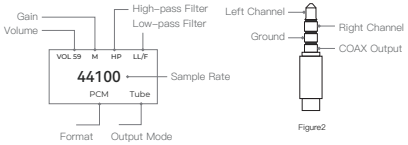


Figure1 Figure2

4. You can adjust sound signature by selecting the DAC's Low-pass filter.
   Fast: First roll-off filter
   Slow: Slow roll-off filter
   LL/F: Short delay fast roll-off filter
   LL/S: Short delay slow roll-off filter
   NOS: Non-oversampling
5. When the high-pass filter is turned on, the ultra-low frequency is attenuated.
   When the high-pass filter is turned off, the ultra-low frequency is not attenuated.
6. When SPDIF output is selected, 3.5mm coxial output supports PCM up to 768kHz, and DoP DSD up to 256x. (Figure 2) shows the coaxial configuration of the 3.5 plug.
7. Nunchaku can be plug-and-play on smartphones and tablets with Android 5.1 and above (due to the Android device's system or hardware limitation,there may be a low compatibility issue with some smartphones or tables). On some Android devices, it may be necessary to manually turn on the OTG function in the system settings.
8. Please install iBasso UAC APP if changing settings on an Android device is needed.
9. Nunchaku uses a standard UAC 2.0 USB receiver for plug-and-play on Mac and Win10 computers. For WinXP, Win7 and Win8 systems, please download the driver from our website www.iBasso.com. Once properly installed, it can be used as a USB sound card.
10. There is no built-in battery so the Nunchaku receives its power through the USB interface from the master device. The actual power consumption is related to the operation and the device system (music resolution, volume and load being driven). The Nunchaku has dual DAC chips, OPAMPs, and Tubes built-in. It is normal for the Nunchaku to get warm during use.