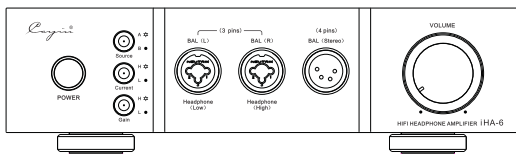


Cayin®



# i HA-6 | HI-FI HEADPHONE AMPLIFIER

Manual

**Thank you sincerely for choosing iHA-6 HiFi Headphone Amplifier.** We have prepared this user manual to help you understand the features and get familiar with the operation of the amplifier. We suggest all customers read through this manual before they start to use the device.

#### Attention

- Please make sure the serial number on the package, chassis and warranty card are intact and identical. In case of damage, missing or tampered on warranty card or serial number, Cayin reserves the right to refuse warranty service for the machine.
- All rights reserved. Reproduction, translation or adoption of N5 documentations or system firmware is prohibited without written approval from Cayin.
- The user manual is a documentation of product based on the specification at the time of print. Cayin reserves the right to change product specification without prior notice.

### **Package Content**

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Please examine the product package, the package should be free from any physical damage or water stain. You should find the following items when you open the package:

1.iHA-6 Headphone Amplifier	1 unit
2.USB flash disk (User Manual inside)	1 unit
3.Replacement Fuse	2 units
4.Warranty Card	1 copy
5.Power Cord	1 piece

Attention: the product package should include only the items in the list.

### **Keypoints of Design**

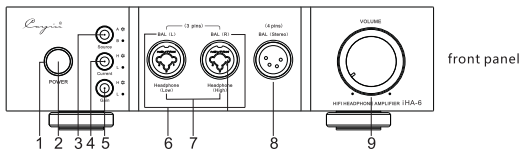
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- Quadruple amplifier circuit with full discrete components and fully-balanced circuit design.
- Independent power supply to Left and Right channel, reduce power interference in left and right channel.
- Innovative Current and Gain control to maximize the compatibility with high or low impedance dynamic headphones and the latest planar headphones.
- Two sets of audio inputs: one for RCA single-end and one for XLR balanced audio.
- Four sets of headphone outputs : two sets of 6.3mm ( High/Low impedance ) TRS, 1 set of twin 3-pins XLR (balanced) and 1 set of 4-pins XLR (balanced).
- Fashionable design, compact and minimal, can easily blend into SOHO or household environment.

## Features

- Push-pull amplification design with high power ultra-low on-resistance power MOSFET at power amplification stage, offers excellent dynamic performance.
- Toshiba audio-grade FET were used in differential input circuit , to ensure common-mode noise and high quality audio performance .
- Premium grade ALPS 4 channel rotary potentiometer imported from Japan directly, durable, reliable and reputable audio quality.
- Extensive protection to amplifier and headphone through comprehensive protection circuit including output DC offset voltage , delay mute when power up, and noise compensation when power down.
- In-house designed premium grade toroidal transformer with low magnetic leakage and high power efficiency.
- High capacitance filter capacitors were used (in excess of 40000uF).
- Solid chassis with aluminum alloy and sand blast finishing , can eliminate exterior interference effectively.

## Front Panel Functional Description



1. Power indicator: indicate the working status of the amplifier.
  - a. Indicator flashing: in the process of initialization
  - b. Indicator always on: machine in regular operation
  - c. Indicator flashing rapidly: machine malfunction
2. POWER On/Off  
Turn on and off the amplifier. Press Down the button to turn on the amplifier, Press again will resume to original level and the amplifier will power off.
3. Source
  - LED lighted up, the amplifier is using Source A, and this is responsible to the AUX (A) input at the back panel.
  - LED off, the amplifier is using Source B, that is responsible to the BAL (B) input at the back panel.
4. Current
  - LED lighted up, the amplifier is at "H" model, meaning the amplifier is operated at high Quiescent Current (static current).

LED off, the amplifier is at “L” mode, meaning the amplifier is operated at low Quiescent Current (static current).

5. Gain

LED lighted up, the amplifier is at “H” mode, meaning the amplifier is operated at high gain.

LED off, the amplifier is at “L” mode, meaning the amplifier is operated at low gain.

6. Dual 3 pins Balanced Headphone connectors

Can work with headphone terminated with TWO 3-pins XLR connectors, with the Left channel XLR plug into BAL (L) connector, and right channel XLR plug into BAL(R) connector.

7. Single-ended Headphone connector

“Low”: can work with headphone terminated with 6.3mm phone connector, recommended for low impedance headphones.

“High” can work with headphone terminated with 6.3mm phone connector, recommended for high impedance headphones.

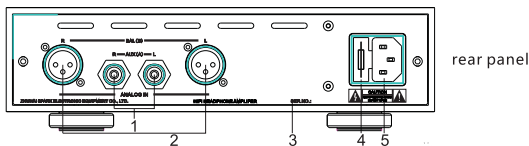
8. 4 pins Balanced Headphone connector

Can work with headphone terminated with a 4-pins XLR connector.

9. Volume Control

Control the volume of the amplifier, turn clockwise to increase volume, turn anti-clockwise to decrease volume.

## Rear Panel Functional Description



1. Single-ended connector (RCA)

Connect a single-ended audio input to the amplifier, please make sure the left and right channel is connected correctly.

2. Balanced connector (XLR)

Connect a balanced audio input to the amplifier, please make sure the left and right channel is connected correctly.

3. Serial number

An unique number for each machine, you need to fill this number onto the product warranty card.

#### 4.FUSE

If in case you need to change the fuse , please resort to replacement fuse with the same specification with the original.

#### 5.Power input connector

**Note:**Please make sure local voltage level is matched with the input level of the amplifier, which indicates on the rear panel. Too low or too high voltage may cause problem. Please contact our company or our local agent if you've found improper voltage.

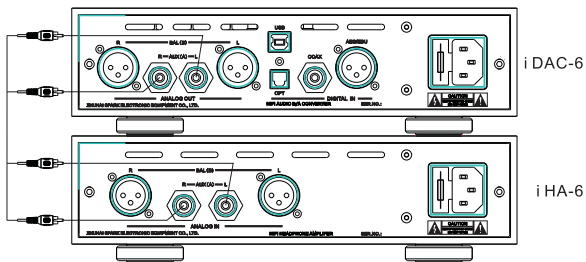
### Setup

#### 1.Connect to power source

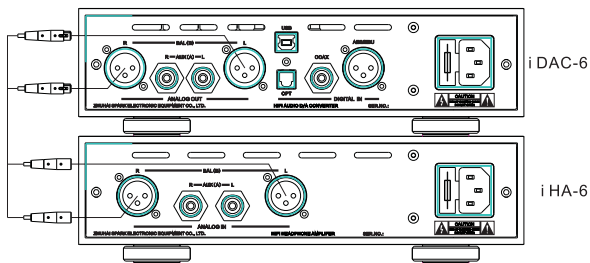
Please make sure local voltage level is matched with the input level of the amplifier, which indicates on the rear panel.

#### 2.Connect to Audio Source

Connect your audio source to the amplifier by an appropriate audio cable. You can choose either BAL or AUX input according to the connection facilitated by your audio source equipment (selectable from the "Source" button on the front panel). You can connect both BAL and AUX if desired.



When connecting a RCA (single-ended) audio cable, please connect the Right channel to the Red connector of the AUX (A) connection, and then the Left channel to the White connector, connect the other side of the audio cable to the RCA output of your source equipment (DAC or CD player) .



When connect a XLR (Balanced) audio cable, insert the male connector to the BAL (B) connection, please make sure Left and Right channel are connected properly. Please refer to the following diagram for detail.

### 3.Connect to Headphone

- Single-ended Headphone

Connect the 6.3mm phone connector of your headphone to the headphone output (connection "7") on front panel. You can select either Headphone "Low" or Headphone "High" according to the impedance of your headphone. Adjust volume to appropriate level before you enjoy music from the amplifier

- Balanced Headphone with 3 pins XLR

Connect the 3pin XLR connector of your headphone to the headphone out (connection "6") on front panel, please make sure the Left and Right channel are connected properly. Adjust volume to appropriate level before you enjoy music from the amplifier.

- Balanced Headphone with 4 pins XLR

Connect the 4pin XLR connector of your headphone to the headphone out (connection "8") on front panel. Adjust volume to appropriate level before you enjoy music from the amplifier.



**Note:**

- If you want to connect a 3.5mm terminated headphone to the amplifier, you need a 3.5mm to 6.3mm adapter (not included in the package).
- Listening through headphones at a high volume for extended periods of time can result in hearing impairments.
- Please do not use headphones when you are in a dangerous environment.
- Please do not use mono (TS) phone plug with this amplifier as this might cause serious damage such as short circuit in the amplifier.

**Basic operation**

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1. Please make sure local voltage level is matched with the input level of the amplifier, which indicates on the rear panel.
  2. Confirm all cables are properly connected and functional
    - 1) Set the volume control at the front panel to the lowest position.
    - 2) Press down the Power button, the amplifier will start up, power indicator will flash as the amplifier entered initialization process.
    - 3) Indicator stay on, the amplifier is ready for operation.
- Note:** Don't remove any audio cable when the amplifier is in normal operation, this might cause damage to the amplifier or other associated equipment.
3. Play music at your source equipment, put on your headphones and turn up the volume, you can enjoy your music now.

**Safety Precautions**

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1. Please make sure local voltage level is matched with the input level of the amplifier, which indicates on the rear panel.
2. Unplug the power cord if you don't use the amplifier for a long period of time, and keep the machine in proper condition.
3. Please handle with care, avoid tempering to the machine.
4. The amplifier will not work appropriately if moisture has developed inside it, please avoid operating the machine until internal moisture has been cleared. Moisture can be caused by placing the amplifier at a location when a heater or steamer has just turned on; moving the machine from a cold environment to a warm location; moving the machine from a chilled (e.g., air conditioned room) to a hot and humidity environment.
5. Don't attempt to service this product yourself. Opening the cover may expose you to electric shock or other hazards.

- 6.The amplifier must be keep away from water dripping or water splitting, don't place any objects filled with liquids such as vases or some others on the top or around.
- 7.Don't attempt to disassembly the machine, all service and maintenance must be conducted by authorized service technician.
- 8.Please disconnect the power cable before you attempt to clean the machine. Please use soft clean cloth to wipe clean the chassis, do not use volatile solution or corrosive cleaning product.
- 9.Place the amplifier at a flat surface, make sure all the four supporting tips are evenly loaded.
- 10.Do not place any flammable material on the amplifier.
- 11.Do not operate the amplifier under direct sunlight or high temperature , will cause serious deviation or even damage to the electronic components.
- 12.The machine will become hot during operation, Please keep the amplifier at a well-ventilated environment and do not cover the amplifier with anything.
- 13.Please Contact your Cayin agent or retail shop, or our after-sales service if the machine is not working properly.

## **Trouble Shooting**

To ensure the amplifier will function at premium condition, please follow the basic operation and safety precaution as advice. Improper operation might lead to malfunction, if you run into trouble as stated below, please check before you panic. Sometimes the problem are related to associated equipment or cables, please also check and make sure everything is in proper condition. Please contact your Cayin agent or retail shop, or our after-sales service if the problem cannot be rectified.

Problem		Cause	Remedy
No sound from headphone after power on	Power Indicator on	No signal input	1.Make sure you have selected the correct source from the front panel. 2. Check if the source equipment work properly.
		Audio cable not connected properly	Connect audio cable properly.
		Headphone not connected	Connect headphone properly.
		Volume at lowest position	Turn up the volume control to appropriate level.



Problem		Cause	Remedy
No sound from headphone after power on	Power Indicator off	Power is not connected	Make sure power cable is properly connected to a power outlet and there is proper power supply from the outlet.
		Main fuse is out	Replace fuse with the same specification with the original.

## Specification

Power Rating	Single-Ended Headphone: 1100mW+1100mW(High Current, RMS,RL=32Ω) 2200mW+2200mW(Low Current, RMS,RL=32Ω)
	Balanced Headphone: 5000mW+5000mW(High Current, RMS,RL=32Ω) 7000mW+7000mW(Low Current, RMS,RL=32Ω)
Frequency Respond	10Hz~80kHz (-0.5dB)
THD+N	≤0.02% (1kHz,RL=32Ω)
S/N	Single-Ended Headphone : ≥105dB (A weighted) Balanced Headphone : ≥110dB (A weighted)
Input Sensitivity	620mV (High Current, High Gain)
Headphone Output	6.35mm TRS x 2 Dual 3pins XLR (Balanced) 4 pins XLR (Balanced)
Power Requirements	Refer To The Indication On The Rear Panel
Max. Power Consumption	60W
Dimension	240x252x69mm(WxDxH)
Weight	Approx. 3.8kg

Zhuhai Spark Electronic Equipment Co., LTD

[www.cayin.cn](http://www.cayin.cn)


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