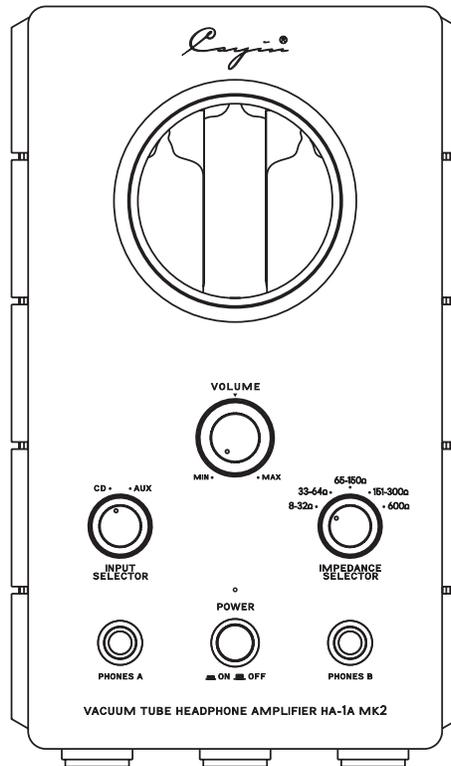


*Cayin*®



# HA-1A MK2 | VACUUM TUBE HEADPHONE AMPLIFIER

User's Manual



Thanks for choosing **CAYIN HA-1A MK2** Vacuum Tube Headphone Amplifier and please read the user's manual carefully before installation and operation.

In order to prevent damage during transportation, the amplifier is packed with protective foams surrounding the tubes. Before installation and operation, please remove these foams to avoid any risks.

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**NOTE:**

**CAYIN HA-1A MK2** Vacuum Tube Headphone Amplifier is designed and manufactured with our original parts and reaching the best results. We are not responsible for problems and damages caused by non-original parts replacement in the amplifier.

## Package Contents

Please carefully check the package first and then open it.

Package contents include:

- |                    |   |
|--------------------|---|
| 1. CAYIN HA-1A MK2 | 1 piece   |
| 2. Users' Manual   | 1 piece   |
| 3. Power cord      | 1 piece   |
| 4. Main Fuse       | 4 pieces(100V~120V:T1AL250VX2; 220V~240V:T500mAL250VX2) |

**Recommendation:**

Keep all packing materials for future use .

**NOTE:**

Please make sure the AC voltage selector on the rear panel is setup correctly for your local power supply voltage . Too low or too high voltage may cause problem. Please contact our company or our local agent if you've found improper voltage.

**All other parts except above are not included.**

## Product Features

- ◆ Deploy Electro-Harmonix EL84EH (Russian) as power tube
- ◆ Deploy 12AU7 as signal tube
- ◆ Deploy NOS 12DT5 as power regulation tube
- ◆ Deploy premium grade Z11 EI-core as power transformer
- ◆ Deploy wide-band premium grade Z11 EI-core output transformer, the unique layer winding technique offer high quality and versatile at the same time
- ◆ Deploy premium grade ALPS-27 rotary potentiometer as volume control
- ◆ Specially designed 5 steps output impedance selection offers precise matching to most headphones available on the market



## Product Features

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- ◆ Designed with commonly available vacuum tubes, allow tube rolling with compatible tubes from different brands and dates, users can fully appreciate the strength of tube amplification.
- ◆ Dedicated implementation of single-ended amplification circuit offer simple, pure and devoted music presentation.
- ◆ Extensive Power Management consideration with separated power supply to signal and voltage amplification, using power regulation tube further isolate the two stage power supply from each other, this can safety the components are operated at the best possible condition, and the audio performance will be significantly enhanced.
- ◆ Equipped with Pre-out connection, making the amplifier can function as an audiophile grade tube preamp with paired with an active speaker or a power amplifier.
- ◆ Two sets of Neutrik 6.35mm stereo headphone output work in parallel, Phone A set for Dynamic presentation, Phone B set for Soft presentation.
- ◆ Design with an innovative circuit layout and highly effective shielding consideration, the components will function at premium environment to ensure high quality audio performance form the amplifier.
- ◆ Optimised air duct cooling system to disperse heat out of the amplifier effectively, ensure the amplifier can work stably for long hours.
- ◆ Deploy 3 independent supporting foot to optimize shock absorption and improve audio performance.

## Safety precautions

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1. Unplug the power cord if you are not going to use the amplifier for an extended period of time, and keep the machine in proper condition
2. The machine will become hot during operation, Please keep the amplifier at a well-ventilated environment and do not cover the amplifier with anything.
3. Do not operate the amplifier when the output is open or shorted, will cause serious damage to the amplifier and associated equipment.
4. Do not attempt to service this product yourself. Opening the cover may expose you to electric shock or other hazards.
5. Do not attempt to disassembly the machine, all service and maintenance must be conducted by authorized service technician.
6. The amplifier must be keep away from water dripping or water splitting, do not place any objects filled with liquids such as vases or some others on the top or around.
7. Please disconnect 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.
8. Please handle with care, do not drop the machine and avoid shock or collision with other hard subjects.

	<b>CAUTION</b> <b>RISK OF ELECTRIC SHOCK</b> <b>DO NOT OPEN</b>	
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- ◆ To reduce the risk of electric shock, do not remove the cover.
- ◆ No user serviceable parts inside. Refer servicing to qualified service personnel.
- ◆ To reduce the risk of fire or electronic shock, do not expose the unit to rain or moisture.

 The lightning flash with arrowhead symbol is intended to alert user to the presence of uninsulated “dangerous voltage” within the product's enclosure that may be of a risk shock to persons.

 The exclamation point is intended to alert user to the presence of important operation and maintenance (servicing) instructions accompanying the appliance.

## Specifications

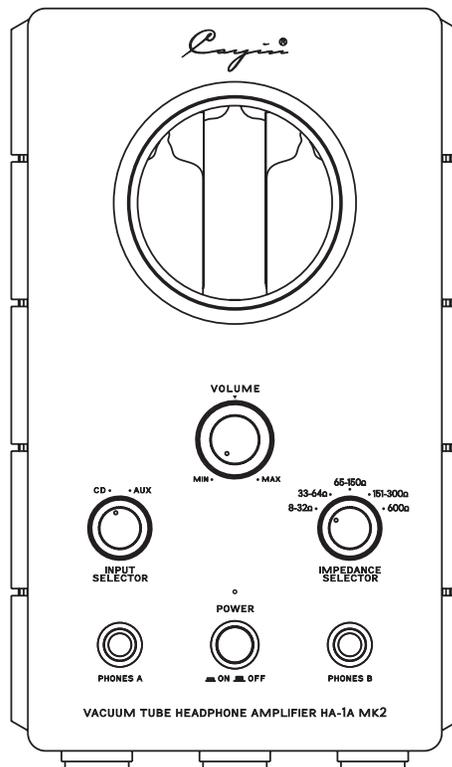
TYPE	ITEM	SPECIFICATIONS
Headphone Output (PHONES A) (PHONES B)	【Power Output】	1400mW+1400mW (@32Ω)    850mW+850mW(@64Ω) 1200mW+1200mW (@150Ω)    2000mW+2000mW (@300Ω) 2200mW+2200mW (@600Ω)
	【Frequency Response】	20Hz~45kHz ±3dB
	【THD】	1%(1kHz)
	【Input Sensitivity】	200mV~440mV
	【S/N Ratio】	100dB ( A-Weighted )
	【Output Impedance】	8~32Ω , 33~64Ω , 65~150Ω , 151~300Ω , 600Ω
PRE-OUT	【Output level】	2V ( MAX 4V )
	【Frequency Response】	10Hz~42kHz ±3dB
	【Input Sensitivity】	420mV
	【THD】	0.5%
	【S/N Ratio】	100dB ( A-Weighted )
OTHER	【Input】	CD,AUX
	【Output】	PRE-OUT
	【WDH】	126.5mm×304mm×215mm
	【Tube】	12AU7×2, EL84EH×2, 12DT5×1
	【Net Weight】	9.5KG
	【Max Power Consumption】	65W
	【Working Condition】	Temperature : 0℃~40℃    Moisture : 20%~80%
	【Storage Condition】	-20℃~70℃    Moisture : 20%~90%



## Maintenance

**NOTE:**

- ◆ Use the soft dry cloth to clean up the chassis regularly.
- ◆ Do not use any chemicals for cleaning.



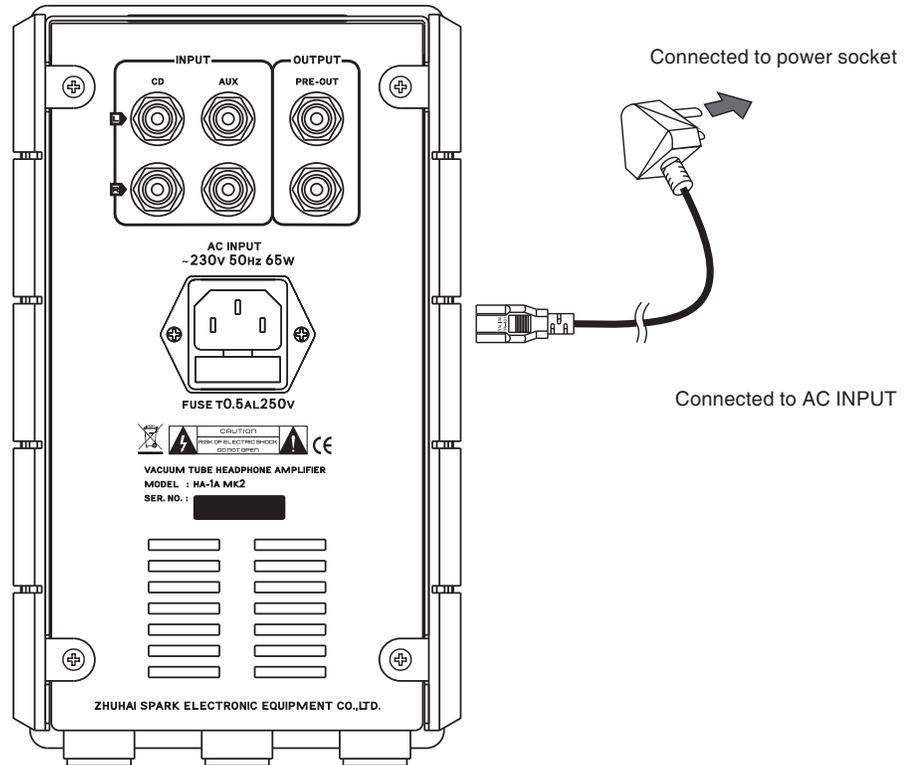
## Warranty Service

- 1.This product is warranted for a period of twelve months beginning from the date of purchase.
- 2.The defective product must be returned to your dealer or our company for repairing when your dealer or our company accepts your requirement.
- 3.The warranty doesn't extend to any product that has been opened by you without permission of our company.

**NOTE:**

The information in this manual is subject to change without further notice.

## Precautions



### Connection of power cord:

Connect the speaker cables and signal cable first and then insert the power cord into the power socket.

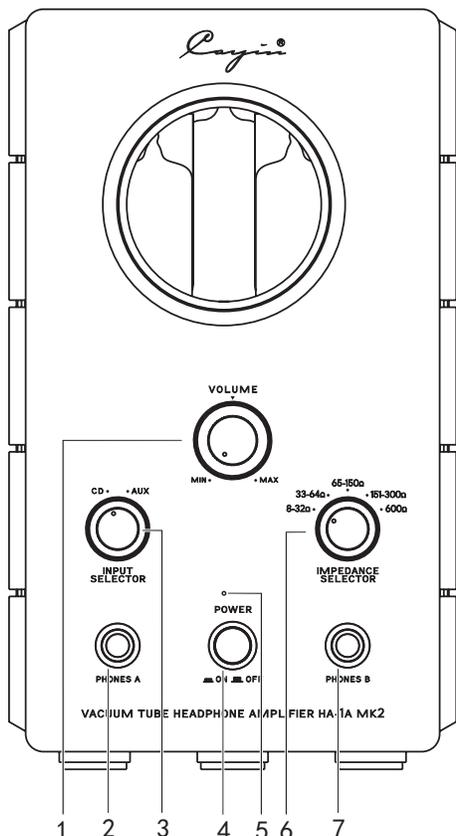
### NOTE:

- ◆ Connect the power only after finishing other connections.
- ◆ It is normal that power transformer becomes hot for extended period of operation.
- ◆ Unplug the power cord if you're not going to use the product for an extended period of time.
- ◆ Please make sure the AC voltage selector is setup correctly for yur local power supply voltage. We are not responsible for damage caused by misuse of unsuitable voltage.



# Front Panel

DRAW ONE : HA-1A MK2 Front Panel



## 1. Volume Control

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

## 2. Phone A

Designed to work with headphones terminated with standard 6.35mm stereo (TRS) connector. Can handle headphone within the range of 8ohm to 600ohm, the actual impedance value can be specified by selecting appropriate range from the Impedance selector.

## 3. Source

The amplifier can connect with two sources (marked as CD and AUX), you can select one source for playback.

## 4. POWER On/Off:

Turn on and off the amplifier. Be reminded to unplug the power cable if the amplifier will not be used for a long time.

## 5. Status indicator

Indicate the working status of the amplifier, when the indicator is always on, the amplifier is in regular operation

## 6. Impedance Selector

Select best matching impedance for your headphone. You can select the best impedance range within 8ohm – 600ohm. You can refer to the impedance value of your headphone and select the nearest impedance range to match up with.

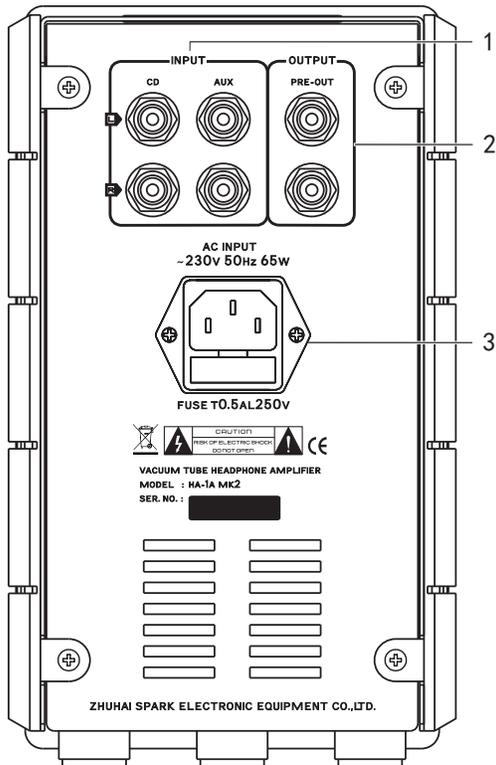
## 7. Phone B

Designed to work with headphones terminated with standard 6.35mm stereo (TRS) connector. Can handle headphone within the range of 8ohm to 600ohm, the actual impedance value can be specified by selecting appropriate range from the Impedance selector.

Note: This amplifier is designed to output at fixed impedance, we do not recommend using Phone A and Phone B concurrently because this might impose negative effect to audio performance.

## Rear Panel

DRAW TWO HA-1A MK2 Rear Panel



### 1.Audio Signal Input (CD, AUX)

Connect output from source equipment such as CD player, DAC to the amplifier.

### 2.Pre-Out

Connect to input connectors of power amplifier or active speaker

### 3.Power Input with Fuse Tray

Connect to AC power outlet

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

Note: Please make sure the AC Voltage Selector is setup correctly for your local power supply voltage.



When you change the AC voltage setting, please replace the fuse with the spare fuse provided in the amplifier package. Incorrect input voltage setting or using incompatible fuse will cause damage to the machine or might even lead to serious household accident. Cayin reserves the right to refuse service or responsibility on related instances.



## Installation

**Carefully read and follow the manual for installation:**

- ◆ Do not place the machine near heat sources such as radiators, heaters or other products that disperse heat.
- ◆ In order to avoid being overheated please keep the amplifier at highly ventilated environment.
- ◆ Do not expose this appliance to rain or moisture.
- ◆ Keep the amplifier in a certain distance so that it can be easily connected.
- ◆ Amplifier should be placed on a flat surface, make sure all four supporting feets are evenly loaded.
- ◆ Keep the amplifier at least 20cm's distance from surrounding walls.

**NOTE:**

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Please make sure the AC voltage selector at the rear panel is setup correctly for your local power supply voltage. Incorrect AC voltage setting might cause serious damage to the amplifier.

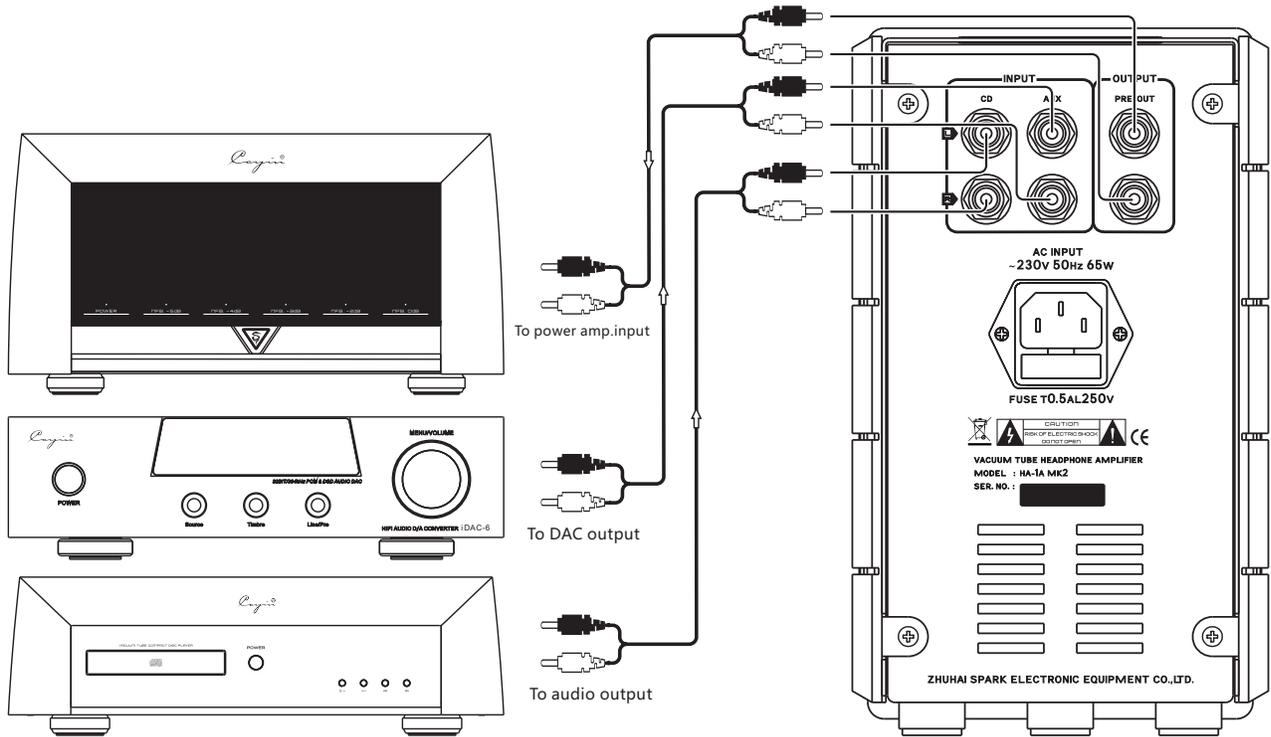
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## Tube Replacement

Tubes for the Machine	Tube Replacement
EL84EH	EL84, 6BQ5, 6P14
12DT5	12DT5
12AU7	12AU7EH, ECC82, E82CC, ECC802S

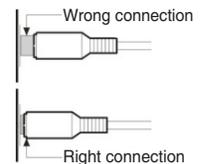
# Audio Connection

Connection method of **CAYIN HA-1A MK2** with other audio equipments for reference only.



## NOTE:

- Please refer to the manuals for connection with other equipments during the installation.
- Do not insert the power cord into the main socket before all other equipments are well connected.
- R refers to right channel while L represents left channel.
- Please take the right guidance for connection as wrong connection may cause noise, downgraded function or damage.
- Do not fasten signal cable together with power cable and speaker cables. It will seriously affect the audio performance.



## Turning On

Before turning on the amplifier please make sure all connections are correct and power supply is stable.

- Turn on the amplifier, the power indicator will turn on and the power indicator will keep flashing.
- The power indicator will become steady(always ON) after 30 seconds. It means that the amplifier is ready for operation. If the power indicator turn off, please turn off the power and contact our local agent or cayin service support.
- Select the correct audio source channel, adjust the volume to appropriate level and you can enjoy you music.

### NOTE:

1. When the audio system operating, don't unplug the signal cable, or it will cause damage to the amplifier and associated equipments.
2. You should wait at least 2 minutes before you turn on the power again, or it will cause damage to the vacuum tubes.

## Small Tips

**Read the Manual** — Please read the user's manual carefully before installation and operation.

**Keep the Manual** — Please keep the manual for future reference.

**Warning Signs** — Don't tear off or rub off the serial number.

**Operation** — Follow the operations as instructed in the Manual.

**Parts** — If you are going to use components/accessories not supplied by our company like power cord, fuses etc please make sure that components/accessories you used are compatible with the safety requirements. Or it will cause fire or electric shock.

**Placement** — Put the amplifier on a flat place. Make sure that it doesn't bring damage to the children, adults and the amplifier itself.

**Power** — Please make sure the local voltage is the same level as indicated on the rear panel.

**Overload** — If the power socket is overloaded with other equipment, it will cause fire or electric shock.

**Warranty Service** — Do not open the product and change the components inside yourself. Opening the cover may expose you to dangerous voltage or other hazards. The warranty doesn't extend to any product that has been opened by unauthorized person.

**Troubleshooting** — If any problems when you are using the product, please check according to following tips to look for the possible reason. Please contact our service support department if you can't solve the problem.



# Troubleshooting

Please follow the instruction in the manual in order to keep the amplifier under proper working condition. If the amplifier is not functioning as intended, please check according to following tip to look for the possible reason.

Problem		Cause	Remedy
No sound from headphone after power on	Power Indicator is OFF.	Power is not connected	Check power cable connection or power outlet connection
		Main fuse is out.	Replace with the same type and value fuse.
	Power Indicator is ON.	NO signal input.	Make sure you have selected the correct source from the front panel
			Check if the source equipment is functioned properly.
		Audio cable has not connected properly	Connect audio cable properly
		Headphone has not connected properly	Connect audio cable properly
	Volume at lowest position	Turn up the volume control to appropriate level	
Sound Distortion	Input signal level too high	Turn down the volume to suitable position	
Noise output	The grounding of input signal cable has not been connected, or bad contact in input signal cable	Replace properly connected input signal cable	
	Components or circuit malfunction	Contact local agent or Cayin service support for maintenance	
Sound stage and imaging are not in proper	Signal input cables are not connected correctly	Make sure all cables are connected as suggested in the manual	

**NOTE:** *Cayin*<sup>®</sup> is the registered trademark of Zhuhai Spark Electronic Equipment Co., Ltd.