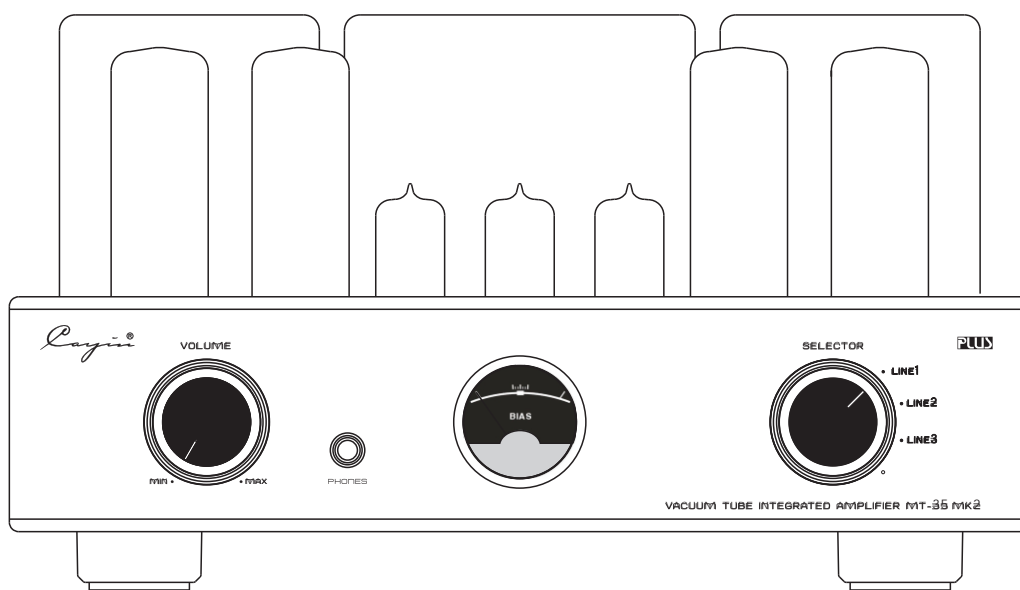


*Rayzi*®



# MT-35 MK2 | Vacuum Tube Integrated Amplifier

**PLUS**

User's Manual



Thanks for choosing **Cayin MT-35 MK2** Vacuum Tube Integrated 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:**

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**Cayin MT-35 MK2** Vacuum Tube Integrated 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.

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## ***Package Contents***

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Please carefully check the package first and then open it.

Package contents include:

- |                    |           |
|--------------------|-----------|
| 1. Cayin MT-35 MK2 | 1 piece;  |
| 2. Main Fuse       | 2 pieces; |
| 3. Power cord      | 1 piece;  |
| 4. User's Manual   | 1 piece;  |

**Recommendation:**

Keep all packing materials for future use .

**NOTE:**

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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.

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



## ***Product Features***

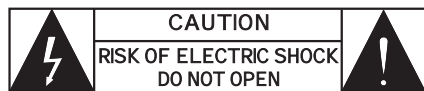
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- ◆ Hand-made construction with the finest point-to-point wiring.
- ◆ Two EI output transformers with wide bandwidth are applied.
- ◆ Specially designed toroid transformer for power supply.
- ◆ 5BK7A tubes are used in the preamp stage.
- ◆ Four EL34 tubes are used for AB1 push-pull amplification.
- ◆ External user Bias Adjustment is accessible with the BIAS meter for monitoring on the top of the amplifier.
- ◆ Headphone output jack has been used.
- ◆ Triode and Ultralinear selection.
- ◆ High-quality Japanese ALPS potentiometer.
- ◆ Equipped with easily-installed tube cover for protection.


## ***Safety precautions***


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1. Unplug the power cord if you are not going to use the product for an extended period of time.
2. The machine will become hot after working for a long time. Please keep the unit's ventilation open and install the amplifier at a well-ventilated place to avoid troubles and fire hazard.
3. Forbidden to operate when the output is open or shorted.
4. Do not attempt to service this product yourself. Opening the cover may expose you to dangerous voltage or other hazards.
5. We are not responsible for any problems caused by checking and opening without permission of our company. For service, Please contact a qualified service technician.
6. Do not place any objects filled with liquids such as vases or some others on the top or around.
7. Clean only with dry cloth.
8. Please move the amplifier carefully not to drop the unit or be subject to other strong shocks.



- ◆ 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

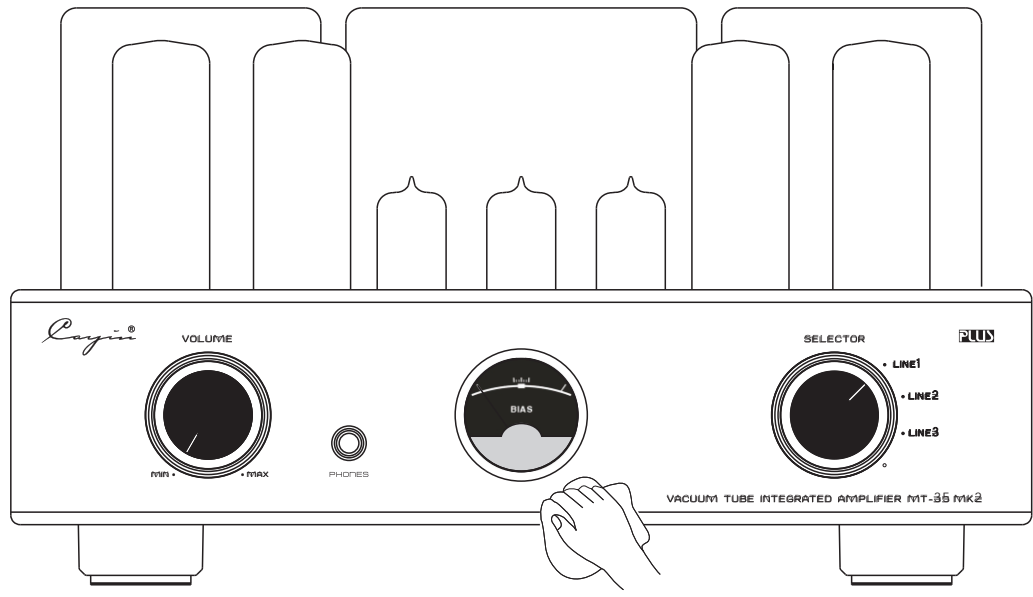
ITEM	SPECIFICATIONS
【Power Output】	TR:18W+18W (RMS Triode mode) UL:35W+35W (RMS Ultralinear mode)
【Frequency Response】	8Hz~55KHz (-3dB)
【THD】	1%(1kHz)
【S/N Ratio】	89dB
【Input Sensitivity】	300mV
【Input Impedance】	100kΩ
【Output Impedance】	4Ω, 8Ω
【Headphone Output】 Impedance	16Ω~300Ω
【Input Connector】	LINE1,LINE2,LINE3
【WxDxH】	326mm×272mm×184mm
【Tube】	12AX7×1、12AU7×2、EL34×4
【Net Weight】	13.5kg
【Power Consumption】	260W
【Working Condition】	Temp : 0°C~40°C Humidity : 20%~80%
【Storage Condition】	Temp : -20°C~70°C Humidity : 20%~90%



## Maintenance

**NOTE:**

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



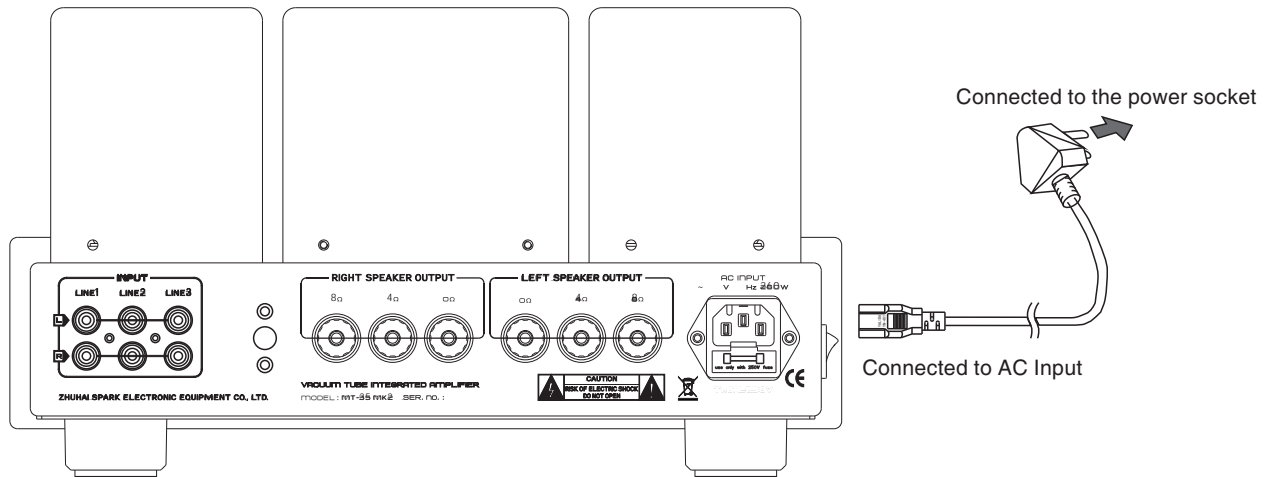
## Warranty Service

- 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 corresponding voltage is the same as required. We are not responsible for damage caused by misuse of unsuitable voltage.



## Front Panel

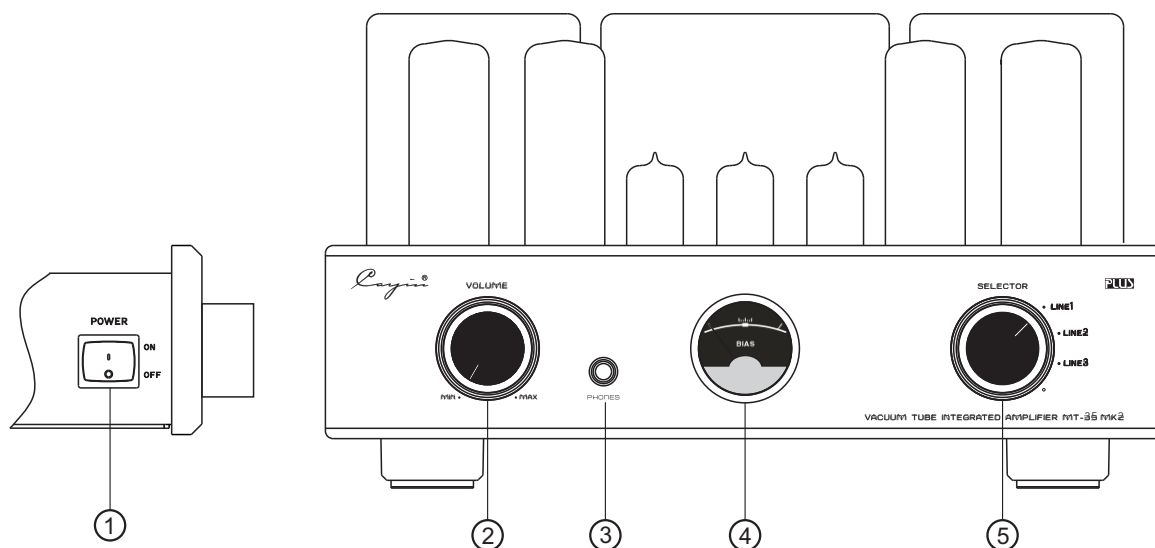


Diagram 1

### 1. Power Switch

Used to switch on/off the amplifier.

### 2. Volume Knob

Used to control volume

### 3. Headphone Socket

Let you enjoy the high-quality music with headphone.

### 4. BIAS Meter

Used to monitor the working current of the power tube.

Backlight of the Meter is on when switching on.

### 5. Input Selector

Used to choose 4 types of audio sources.

You can hear sound from LINE1 when LINE1 indicator is on.

You can hear sound from LINE2 when LINE2 indicator is on.

You can hear sound from LINE3 when LINE3 indicator is on.



## Rear Panel

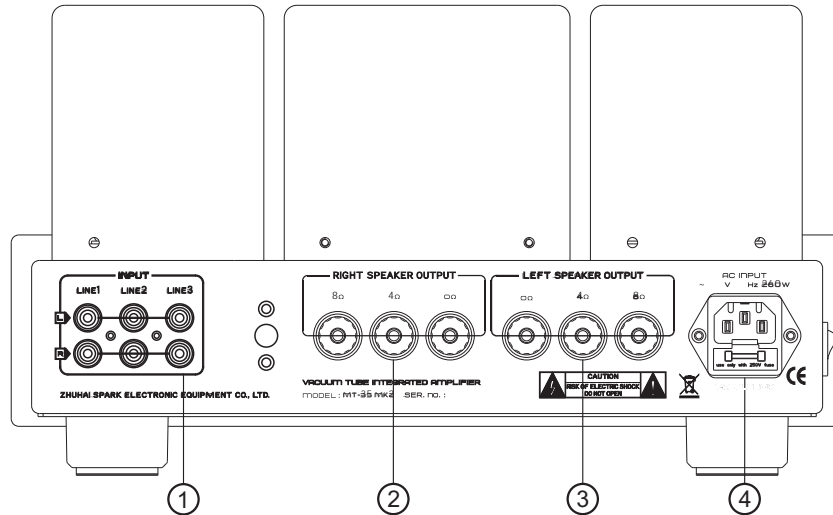


Diagram 2

### 1. Signal Input Terminal

Used for audio source input.

### 2. Right Channel Output

Used to connect with the right channel of speaker.

### 3. Left Channel Output

Used to connect with the left channel of speaker.

### 4. Power Socket with Main Fuse

Main fuse is located just below the power socket.

Replace the fuse with the same type as indicated.



# Top Panel

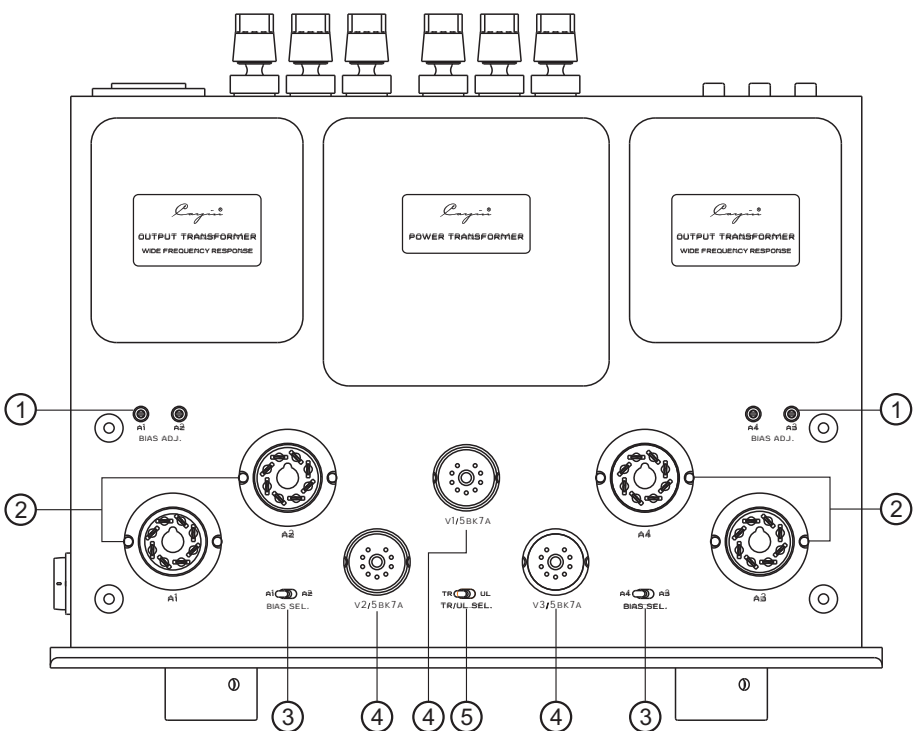


Diagram 3



Diagram 4  
Bias meter when not working

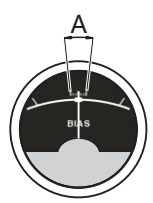


Diagram 5  
Bias meter during working  
Note: When working normally, the pointer should stay within the A zone, still, it would move for the voltage fluctuation.

**1. Bias Adjustment Knob for Power Tubes (A1, A2, A3, A4)**

2. A1, A2, A3, A4: EL34

**3. Bias Selector Switch (A1, A2, A3, A4)**

Used to select corresponding tube for bias adjustment.

4. V1, V2, V3: 5BK7A

**5. Triode/ Ultralinear Indicator**

Used to select Triode/Ultralinear working state.

TR: Triode Operation State;  
UL: Ultralinear Operation State.

**Bias adjustment for the power tube:**

Turn the BIAS SELECTOR Switch to the power tube you are preparing to adjust. Adjust the corresponding BIAS ADJ. small knobs with flat screwdriver, and inspect the BIAS meter on the top panel and make sure the pointer keeps in the center. Bias adjustment for A1, A2, A3, and A4 are the same. After all have been adjusted, do it one more time, to make sure all the bias level of A1, A2, A3, and A4 are the same.

**Sample of Bias adjustment for power tube A1:**

1. Turn the BIAS SELECTOR Switch to A1;
2. Turn the BIAS ADJ. knob A1, until the pointer of the bias meter keeps in the center.

The same for A2, A3, A4.

**NOTE**

- ◆ Be careful of the high temperature of the tubes during operation.
- ◆ Replace the tubes carefully and correctly.
- ◆ Power tubes must be matched for well function.

## Installation

Carefully read and follow the manual for installation:

- ◆ Do not place the machine near heat sources such as radiators, heat registers or other products that produce heat.
- ◆ In order to avoid being overheated please keep the unit's ventilation open.
- ◆ 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 install steadily and make sure all four feet are on the same level.
- ◆ Keep the amplifier over 15cm's distance to the surrounding walls.

### 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 problems or shorten the amplifier's life.

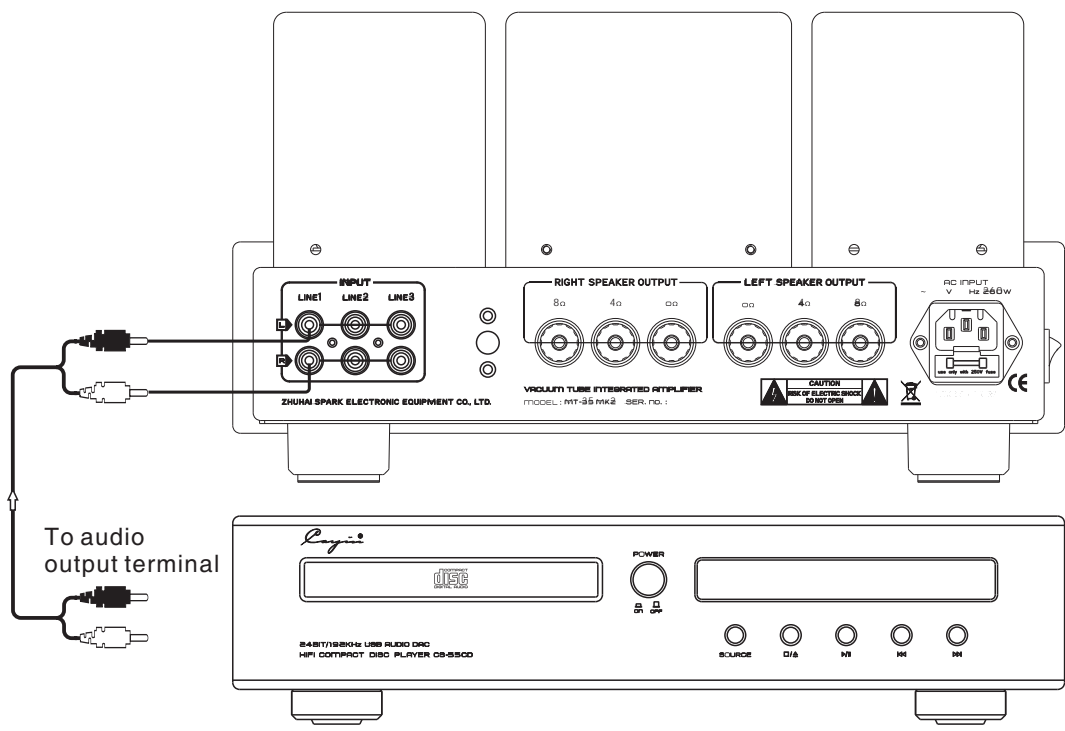
## Tube Replacement

Tubes for the Machine	Tubes Replacement
5BK7A	5BK7-A
EL34	EL34、6CA7、6L6、5881



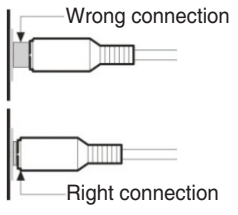
# Audio Connection

Connection method of **Cayin MT-35 MK2** with other audio equipments Take pictures below for your reference.

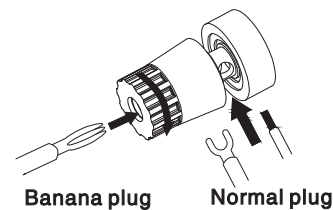
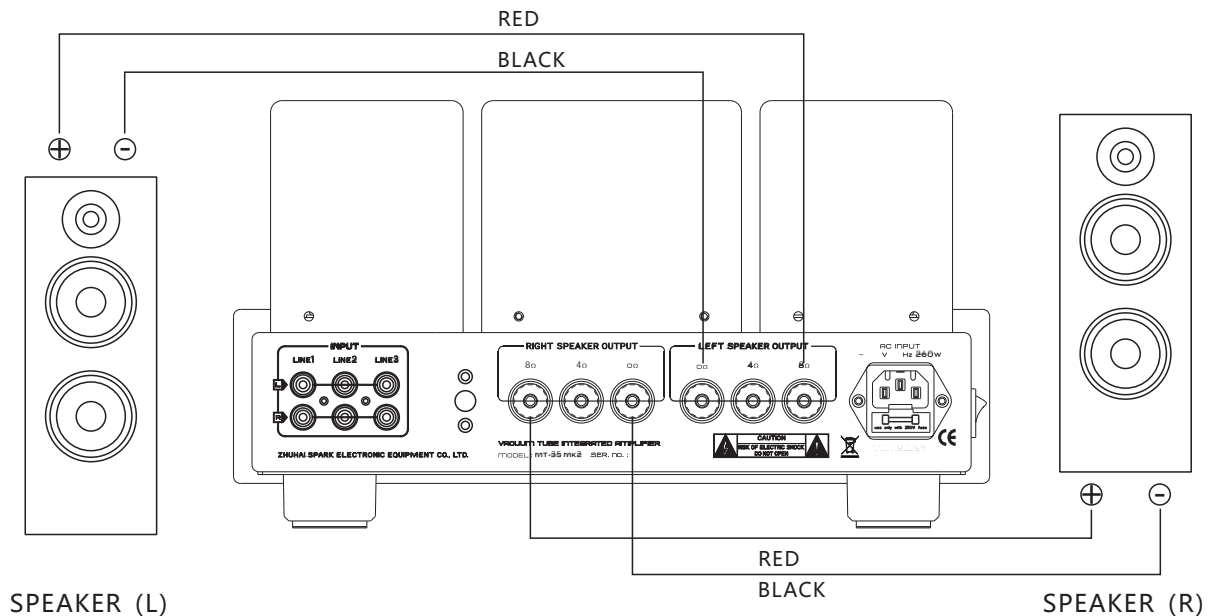


### NOTE:

- Please refer to the manuals of other connected 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, low-grade function or damage.
- Do not fasten signal cable together with power cable and speaker cables. It will worsen the acoustic fidelity.



## Speaker Connection



### Check the impedance of your speakers:

Attach the positive from your speaker to the 4 or 8 ohm terminal and the negative to the 0 ohm terminals separately. If your speakers are 6 ohm, 4 ohm or 8 ohm (recommended) terminal is preferential and it would not cause damage to the amplifier. Connecting the left and right speakers according to the guidance can make sure of the acoustic fidelity.

### Connection of speaker cables:

1. Unscrew the terminal knob
2. Insert the speaker cable
3. Screw the terminal knob

### NOTE:

- Connect the speaker cables with the amplifier after it is well connected with the speakers.
- Connect both of the speakers to make sure of the acoustic fidelity.
- Please notice the signal direction indication of the cables.
- Do not mix up the positive and negative ends of speaker cables or it will cause short circuit.



## Turning On

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

- Turn on the amplifier and the power LED will be on. It shines and indicates that the amplifier is working.
- If the LED is not on please contact with our local agent or our company.
- Select the right audio source channel, adjust the volume to a certain position and then you can enjoy the music you prefer.

### NOTE:

1. When the audio system is under working state, don't unplug the signal cable or speaker cables, or it will cause damage to the amplifier and other equipments.
2. It should at least takes 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**— Do the operations as you are instructed in the Manual.

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

**Placement**— Put the amplifier on a level 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 you without permission of our company.

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

## Troubleshooting

Please follow the instruction in the manual in order to keep the amplifier work in its best state. If wrongly operated and you thought that would be troubles please check according to following tips to look for the exact reasons.

Problem		Cause	Remedy
NO OUTPUT	Backlight of the Meter is Off	Power cord is not well-connected.	Check power cable connection or power outlet connection
		Main fuse is out.	Replace with the same type and value fuse.
		Troubles of inner parts or components.	Please contact with local agents or our company.
	Backlight of the Meter is On	Volume is at ZERO.	Turn up the Volume.
		NO signal input.	Check the function of the sound source.
			Check the input selection and switch to the proper input.
Sound Distortion	High input signal level.	Turn down the volume to suitable position.	
Noise output	Ground of input signal cable is open or bad contact of the input signal cable.	Replace the input signal cable with a new one.	
	Components or circuits are in trouble.	Please contact with local agents or our company.	
Sound field Positioning is not so good.	Signal input cables or speaker cables are wrongly connected.	Reconnect it as suggested in the manual.	

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