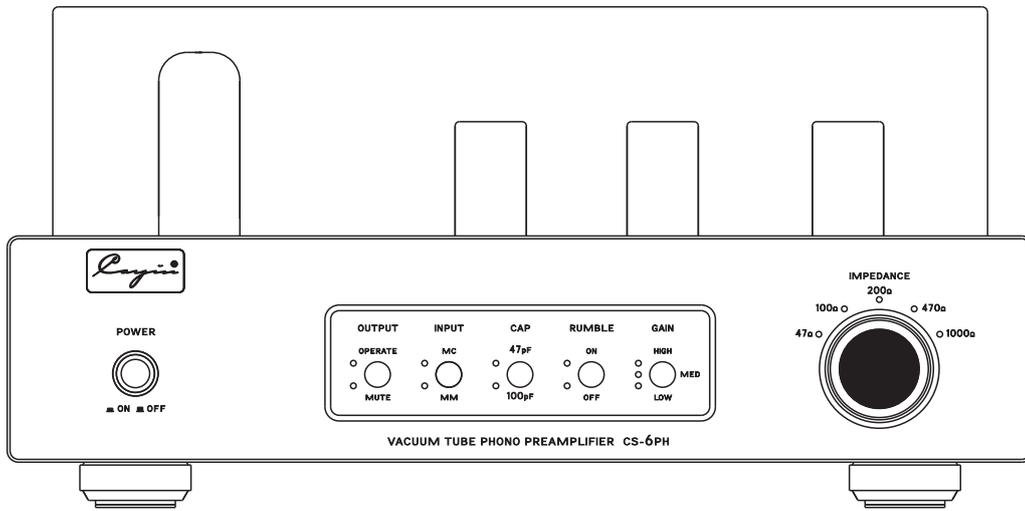


*Rayini*®



# CS-6PH | VACUUM TUBE PHONO PREAMPLIFIER

User's Manual



Thanks for choosing CAYIN CS-6PH Vacuum Tube Phono Preamplifier and please read the user's manual carefully before installation and operation.

## Table of Contents

Table of Contents	1
Package Contents	2
Product Features	3
Safety Precautions	3
Specifications	4
Maintenance	5
Warranty Service	5
Precautions	6
Front Panel	7
Rear Panel	8
Top Panel	9
Installation	10
Tube Replacement	10
Audio Connection	11
Turning on	12
Small Tips	12
Troubleshooting	13

**NOTE:**

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**CAYIN CS-6PH** Vacuum Tube Phono Preamplifier 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 CS-6PH  | 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.
- ◆ Specially designed EI transformer for power supply.
- ◆ Electro Harmonix 6922EH/ECC88 tubes are applied for MC amplification.
- ◆ JJ 12AX7/ECC83 and Electro Harmonix 12AT7EH/ECC81 tubes are applied for MM amplification.
- ◆ Two RCA 22DE4 rectifier tube for rectification.
- ◆ Separate low noise, low impedance filter and voltage regulation circuitry. Pure, low noise and stable power output.
- ◆ Precise RIAA equalizer curve to raise the Dynamic.
- ◆ Unbalance RCA and balance XLR output selection.
- ◆ MM/MC inputs offered gain, impedance, capacitance adjustable. So that CS-6PH Phono amplifier can be compatible with different cartridge.
- ◆ CS-6PH can memorize last operation of the unit once turned off.
- ◆ Soft start function (about 60 seconds).
- ◆ Thickly silver-plated signal cable has been used.
- ◆ 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. Do not attempt to service this product yourself. Opening the cover may expose you to dangerous voltage or other hazards.
4. 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.
5. Do not place any objects filled with liquids such as vases or some others on the top or around.
6. Clean only with dry cloth.
7. 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

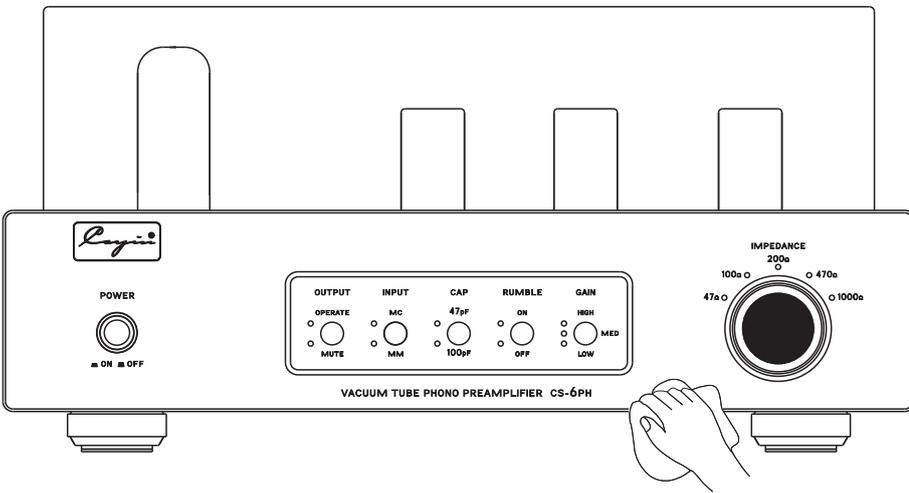
Item	Specification	
	MM	MC
【Output Voltage】	200mV (20V MAX)	200mV (20V MAX)
【Plusgaining】	40dB	57dB/61dB/65dB
【Frequency Response】	+/-0.2dB	+/-0.2dB
【THD】	0.05% (1KHz)	0.1% (1KHz)
【Input Sensitivity】	2.5mV (200mV , 1KHz)	0.12~0.25mV (200mV , 1KHz)
【Input Impedance】	47KΩ	47Ω/100Ω/200Ω/470Ω/1000Ω
【Cap】	47pF/100pF	56pF
【S/N Ratio】	85dB (A-weighted)	70dB (A-weighted)
【Channel separation】	90dB	80dB
【Output Impedance】	200Ω RCA (Unbalance) 、 600Ω XLR (Balance)	
【Input Terminals】	RCA x2	
【Output Terminals】	RCA x1、 XLR x1	
【Tube】	Electro-Harmonix 6922EH/ECC88 x 2、 JJ 12AX7/ECC83 x 2、 Electro-Harmonix 12AT7EH/ECC81 x 2、 RCA 22DE4 x 2	
【WDH】	360mm x 309.5mm x 177mm	
【Net Weight】	11.5KG	
【Fuse】	~ 220V-240V : T500mAL250V; ~ 100V-120V: T1AL250V	
【Max Power Consumption】	62W	
【Working Condition】	Temperature 0 °C~40 °C      Moisture 20%~80%	
【Storage Condition】	Temperature -20 °C~70 °C      Moisture 20%~90%	



## Maintenance

**NOTE:**

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



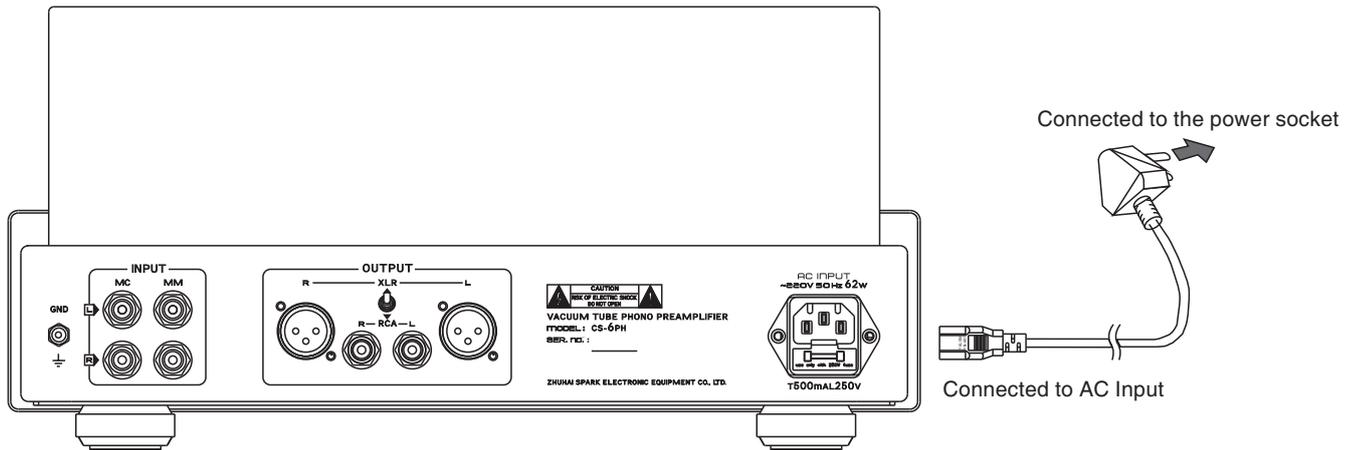
## Warranty Service

- 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:

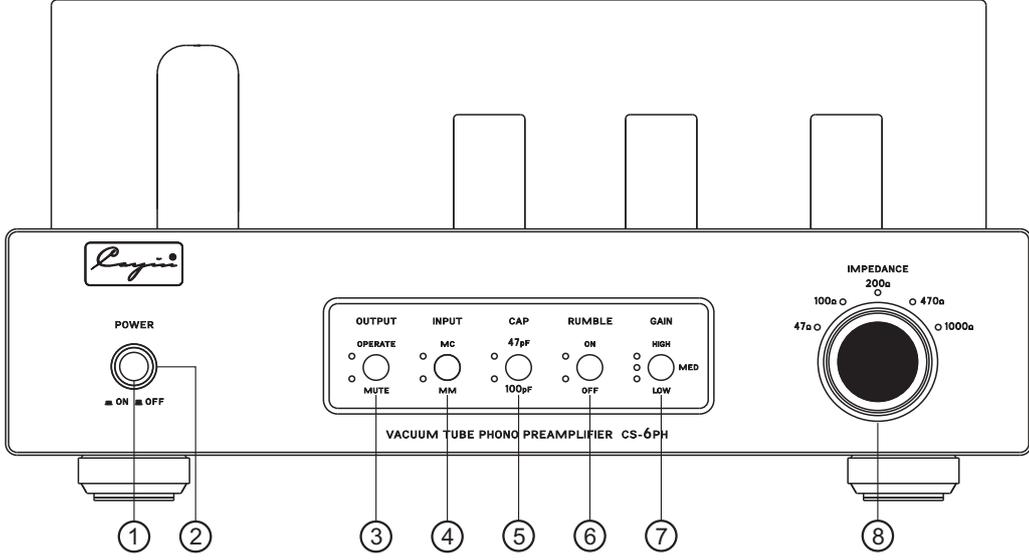
Connect the speaker cables and signal cable first  
and then insert the power cord into the power socket.

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

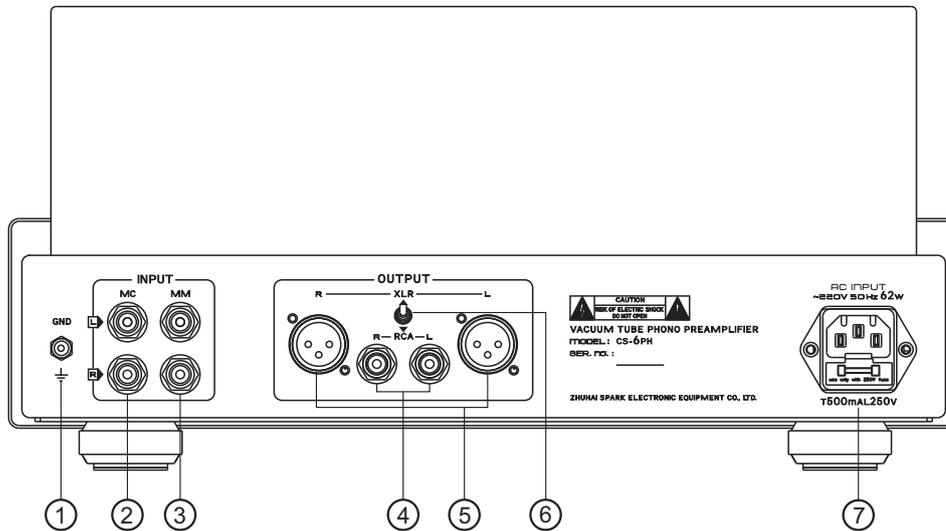


# Front Panel



- ①. **Power On/Off:** Turn on and off the amplifier. Press “down” the button to turn on the amplifier, Press again the button will resume to original position and the amplifier will power off.
- ②. **Power Indicator:** Used to indicate the working state. The indicator will be on when it is working normally. The indicator will flicker for 60 seconds when it delays to work. The indicator will keep flickering when it is at mute state.
- ③. **OUTPUT:** Indicate the operation state of the amplifier. Power LED and operate LED are on when it works normally. Mute LED is on when it is at soft state and mute.
- ④. **INPUT:** Choose MM or MC input.
- ⑤. **CAP:** Choose input capacitance of MM 47pF/100pF.
- ⑥. **RUMBLE:** Switch ON/OFF the low pass filter circuit of the output signal.
- ⑦. **GAIN:** Choose gain of MC output. Selection can be high, MED, and low.
- ⑧. **IMPEDANCE:** Choose the suitable impedance according to the MC cartridge. Cayin CS-6PH has memories and it will default last operation state when turning on.

## Rear Panel



①. **Ground:**

Connect to the GND terminals of turntable.

②. **MC input:**

Connect to MC input source.

③. **MM input:**

Connect to MM input source.

④. **RCA output:**

Connect to unbalance RCA input of power amplifier.

⑤. **XLR output:**

Connect to balance XLR input of power amplifier.

⑥. **RCA/XLR switch:**

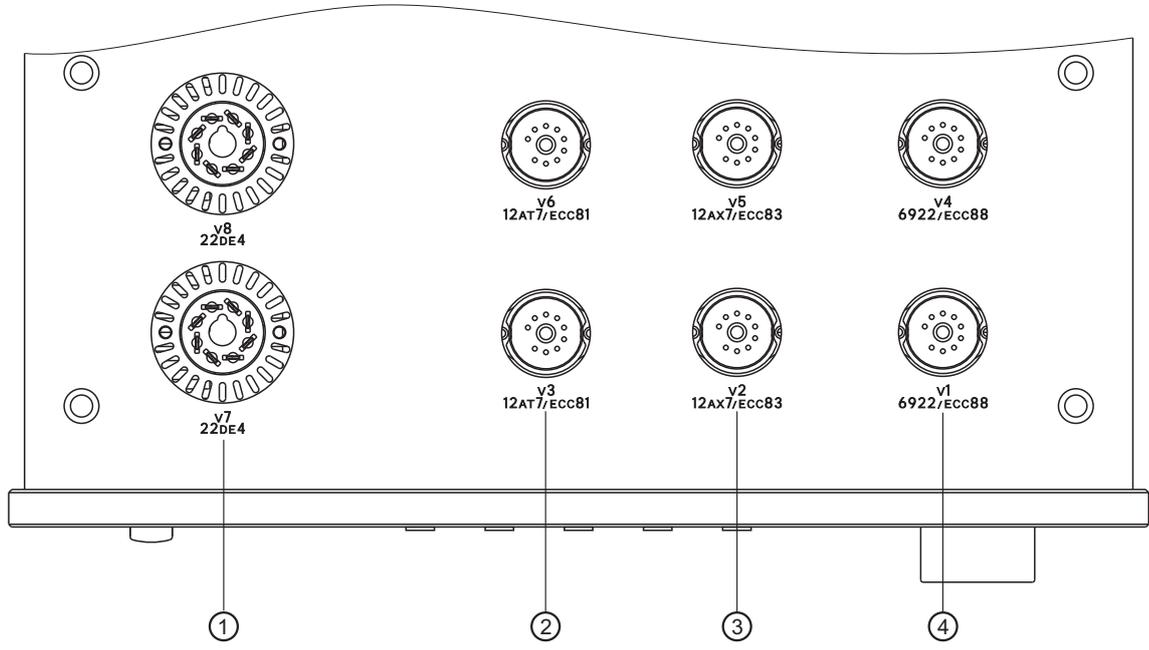
Switch between RCA output and XLR output.

⑦. **Power Socket with Main Fuse:**

Main fuse is located just below the power socket.



# Top Panel



- ①. **V7、V8**: RCA 22DE4
- ②. **V3、V6**: Electro-Harmonix 12AT7EH/ECC81
- ③. **V2、V5**: JJ 12AX7/ECC83
- ④. **V1、V4**: Electro-Harmonix 6922EH/ECC88

**NOTE**

- ◆ Be careful of the high temperature of the tubes during operation.
- ◆ Please replace the power tubes after switch off in 20 minutes, and follow the suggestion to unplug the inset the tubes.
- ◆ 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:

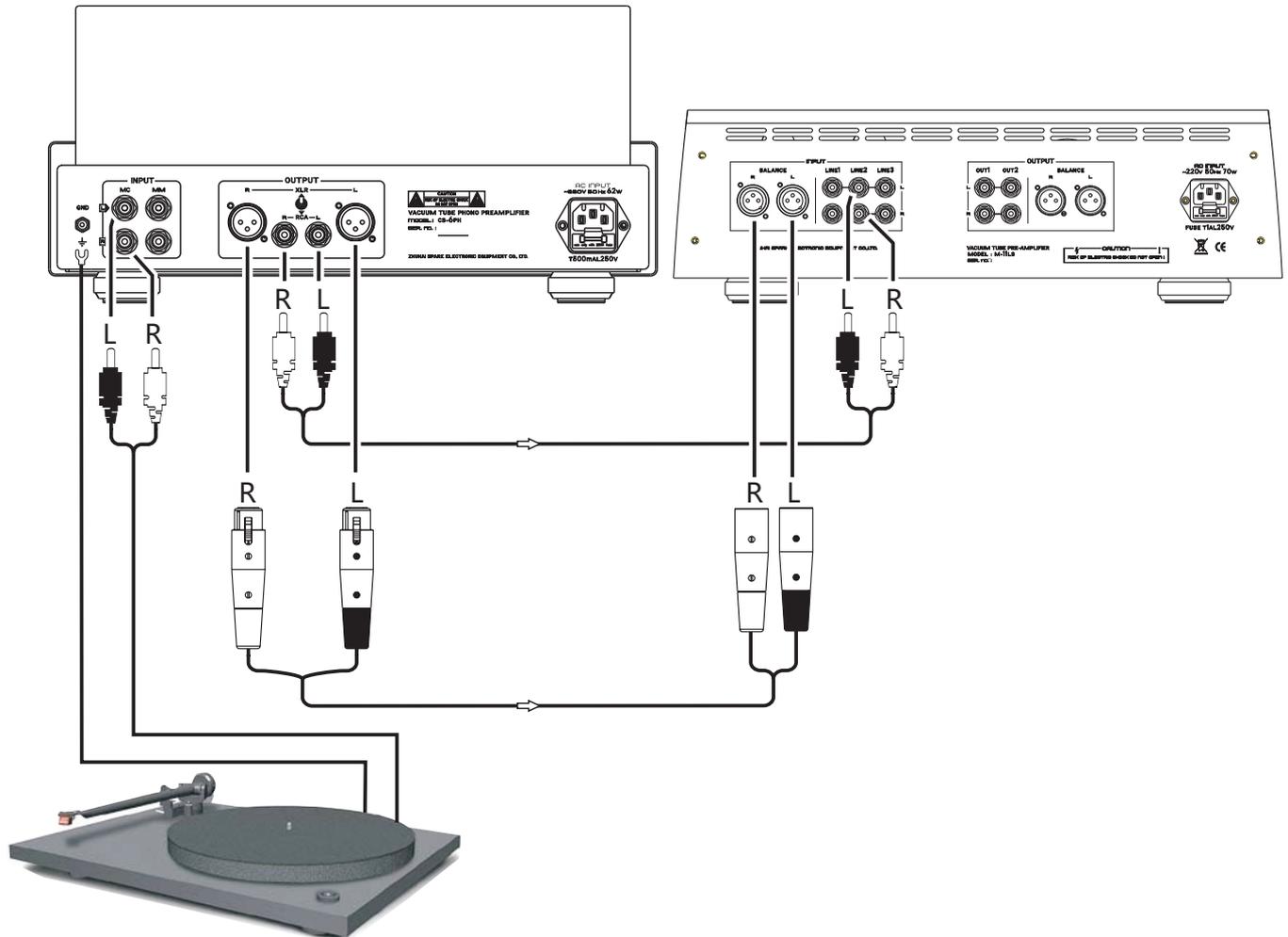
Please make sure local voltage level is matched with the input level of the amplifier, which indicates on the rear panel. Too low or too high voltage may cause problems or shorten the amplifier's life.

## Tube Replacement

Tubes for the Machine	Tubes Replacement
RCA 22DE4	22DE4
JJ 12AX7/ECC83	E83CC、ECC803S、12AX7LPS
Electro-Harmonix 12AT7EH/ECC81	12AT7、E81CC、ECC801S
Electro-Harmonix 6922EH/ECC88	6922、E88CC、CCa、6DJ8、6N11

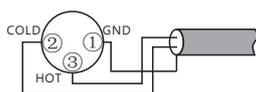
# Audio Connection

Connection method of **CAYIN CS-6PH** with other audio equipments Take pictures below for your reference.

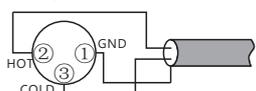


### Balanced Connector:

1. This amplifier uses XLR connectors that are commonly used in professional applications for balanced connections.
2. There are two XLR wiring standards:
  - European standard: pin 1=Ground, Pin 2 = COLD, Pin 3 = HOT



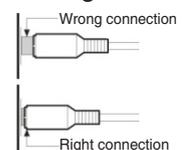
- American standard: pin 1=Ground, Pin 2 = HOT, Pin 3 = COLD



3. This amplifier uses the American standard. When connecting to audio equipment with balanced output wired in European, the playback signal might be in reversed phase. We advise users to maintain the phase of the system correctly.

### Attention to Audio Connection:

1. Please refer to the manual of associated equipment whenever necessary.
2. Do not connect the power cord until all equipment is properly connected.
3. "R" indicates the right channel; "L" indicates the left channel.
4. Please make sure all connectors are securely installed. Bad connection might cause noise and degrade in audio performance, or even damage your equipment.
5. Please do not tie the power cord, audio interconnects, and speaker cable together or run them in parallel because this will produce adverse effects on audio performance.



**Note:** Please make sure + and -, left and right are connected properly.

## Turning On

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

- Turn on the amplifier, the power indicator will be on and the working indicator will keep flickering.
- The working indicator will be on after 60 seconds. It means that the amplifier is working normally. If the working indicator is off, please turn off the power and 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 tip to look for the exact reason.

Problem		Cause	Remedy
NO OUTPUT	Power Indicator 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.
	Power Indicator is ON.	Mute is on (Mute LED lights)	Press output button on the front (Operate button lights)
		NO signal input.	Check the function of the sound source.
	Check the input selection and switch to the proper input.		
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.