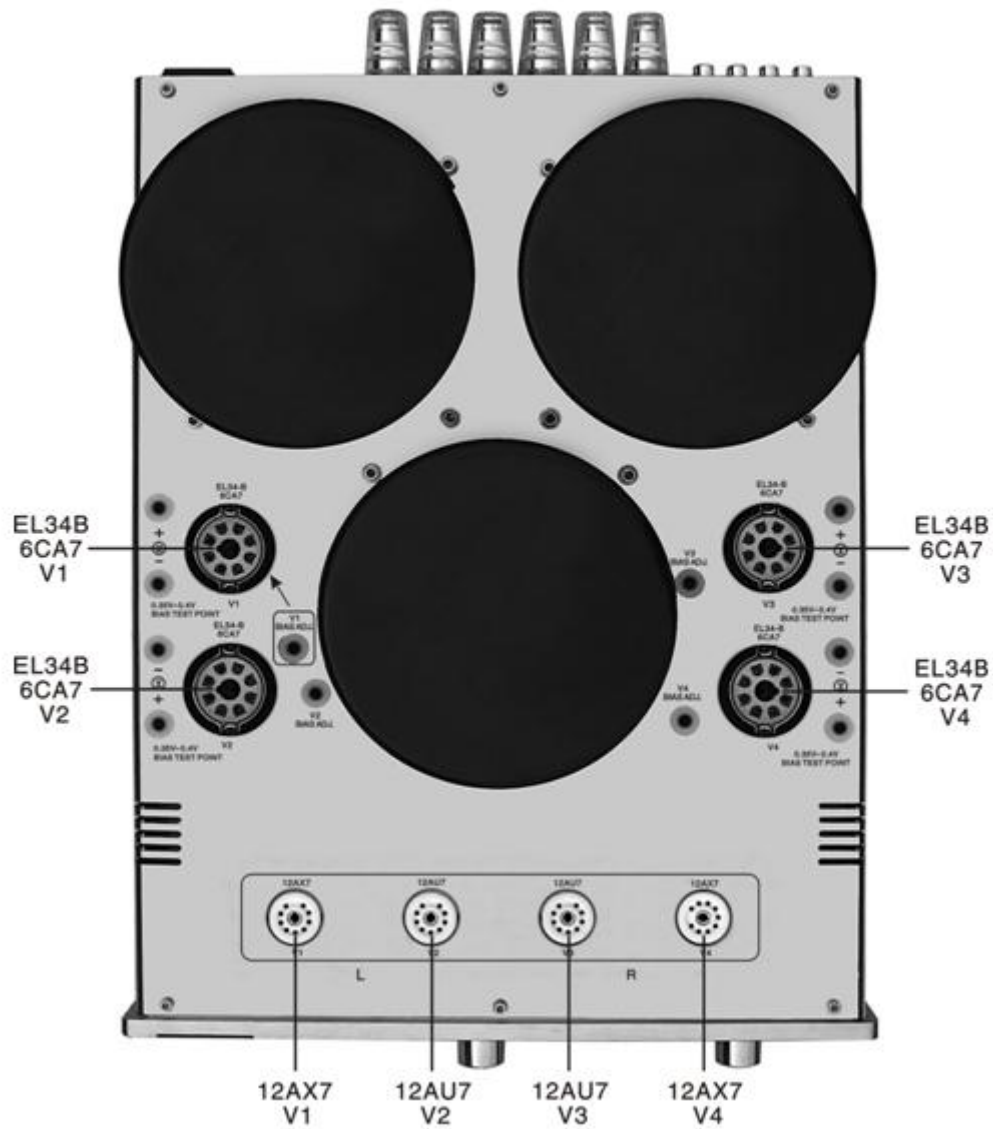


# MC-13S / MC-10T Vacuum Tube Install



**EL34B  
6CA7  
EL34B / 6CA7 Tube Socket**



Vacuum Tube Direction Point

## **Instructions for use**

### ***Foshan Nanhai ya sound hardware Electronics Ltd***

The factory was founded in 1994 Years, covers 5000 Square meters, has been specializing in high-fidelity power amplifier and audio transformers in research and production. Main Hi-Fi tube amplifier (amplifier), electron tube CD, and Hi-Fi tube pure class, before Hi-Fi Power supply filtering, Kara OK Digital reverberation devices, electronic tubes before radio modems, computers, advanced car audio power amplifier audio amplifier, AC-3 Series and other high-end power amplifier. Products are mainly exported to Japan, and Canada and Europe and other developed countries and around the world, and to get credit. The manufacturers equipment, factory equipped with metal chassis stamping workshop, CNC machining workshop, transformer production workshop and screen printing and product assembly plant. Product design processing by electronic engineers and technicians from strictly, this plant product quality to meet domestic and foreign standards.

Our special talents, designers from University of brand-name electronics, sound professional electronics engineer for many years. The factory has passed the national 3 c authentication and the European CE certification, induction of staff professional training, testing equipment, raw materials are imported Japan and the United States, and Germany, and Taiwan and domestic famous raw materials, strict screening, aging, quality first-class. Perfect after-sales service, for many years, has won the Green narrowed from peers and people from all walks of!

Warmly welcome new and old customers come to contact us. Also we can develop according to customer requirements, production of other electronic products.

## **This circuit features**

Very thank you for purchasing our products power amplifier, in order to enable you to get the best results, please be sure to read the following introduction.

1. MC-10T with the latest modified CR-v tube EL-34B strong power amplifier.

MC-13S with the latest modified CR-v tube 6CA7T Strong power amplifier and VU Tables for volume indicates.

2. Selection of the best ultra linear push-pull amplifier circuits, low-frequency drivers feet, rich tone.

3. Preamp for SRPP circuit and "long-tailed" Inverter circuit, making small machines wide frequency response, distortion.

4. Transformers Japan imports audio special silicon steel sheet (0.35mm thick) and oxygen-free copper wire and high strength special multi-layer hierarchical grouping

Winding production process so that the wide frequency response of 5Hz-54 KHz (According to the national standard measurement method), Ensuring that the high, middle and low frequency sound good. Strong permeability.

5. this machine is used in all the foreign famous audio special fever-level of electrolytic capacitors, electrodeless Philips (MKP) capacitors and high quality resistance manufacturing,

Main channels used by special import large volume potentiometer, with quiet music background, low noise, tone dye-free and durable benefits.

## MC-13S Function

### Panel Function Diagram



① Power switch button (POWER)

Use for the power switch on or switch off.

② Signal input selection knob (SELECT)

To choose signal input (AUX1, AUX2, AUX3, and AUX4)

③ Volume indicator VU.

④ Volume control knob (VOLUME)

To control volume, C.W. increase, anticlockwise decrease.

# MC-10T Functions

## Panel Function Diagram



① Volume control knob (VOLUME)

To control volume, C.W. increase, anticlockwise decrease

② Power switch button (POWER)

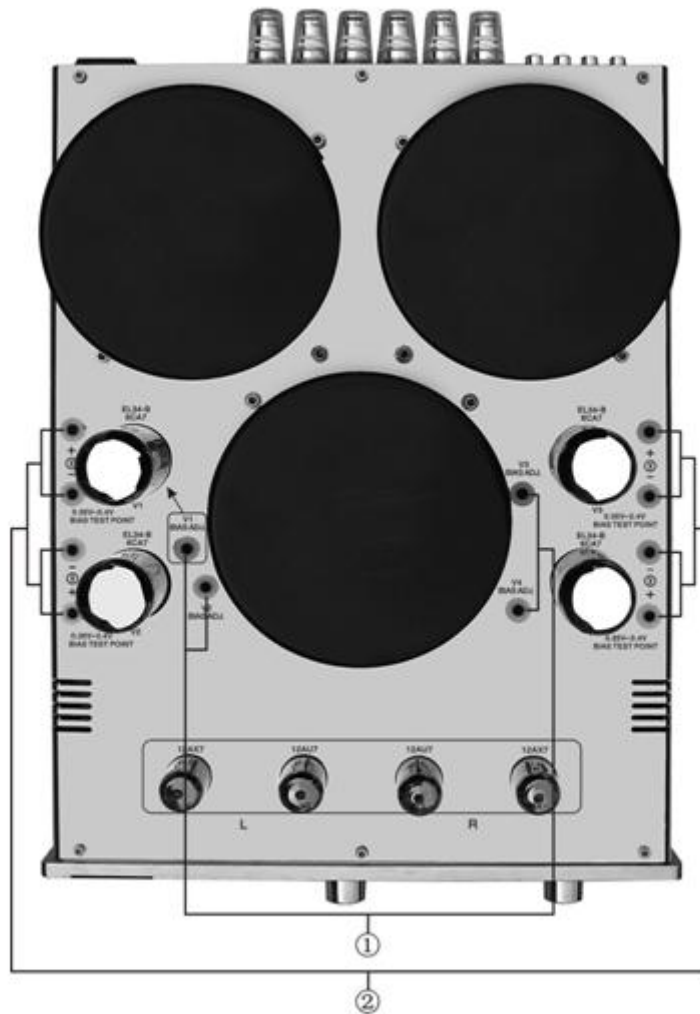
Use for the power switch on or switch off.

③ Signal input selection knob (SELECT)

To choose signal input (AUX1, AUX2, AUX3, and AUX4)

# MC-13S / MC-10T

## Top Plan Function Diagram



① Tube Screen Current measuring holes

**V1      V2      V3      V4**  
**BIAS ADJ.   BIAS ADJ.   BIAS ADJ.   BIAS ADJ.**

Every posterior pole tube corresponds with a group, so there is a total of four groups.

② Tube Screen Current measuring holes



Every posterior pole tube corresponds with a group, so there is a total of four groups.

## INSTRUCTIONS


It's very important to maintain the stability and accuracy of the operating points of the tube amplifier, especially of the power amplifier tube. The screen current changes when the tube gets ageing, or replacing the tube. Break away of the required operating points will influence sound resolution and the stability of the machine. So, please check and adjust the screen current after a long time of use, and it is the same when changing the tube.

## METHODS of MEASUREMENT of the TUBE SCREEN CURRENT

Use a multi-meter to measure. Transfer the multi-meter to volts d.c.1V gear, and the minimum volume of the amplifier, then insert the anode of the multi-meter pen into the positive hole and the cathode into the negative hole respectively. The bias voltage should be about 0.35~0.4V.



## Adjustment Methods of the Tube Screen Current

When replacing the tube, use a multi-meter to see whether there is a deviation from the screen current. It should be about 0.35~0.4V when the standard supply voltage. If you find out a deviation, please use tools to adjust the variable resistance in each hole . The variable resistance increases clockwise, and decreases anti-clockwise. Make sure that the screen current is about 0.35~0.4V with the standard supply voltage. Measure and adjust it once again when the tube is hot enough.

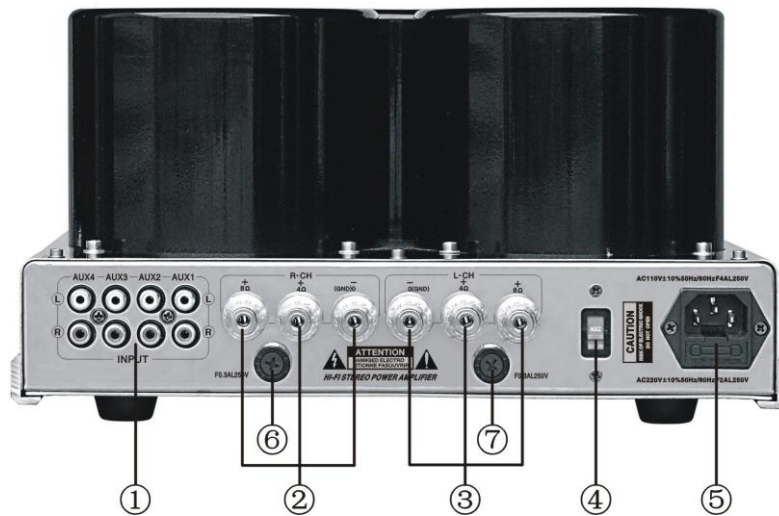
Attention: When the machine voltage is in 220, 230V, 240V, please adjust and measure under the standard power supply.

When the machine voltage is in 100V - 110V, 115V - 120V, please adjust and measure under the standard power supply.

## **NOTICE: Sheath tube into the hole, should be careful in the direction of positioning**

Pre delivery inspection and debugging of the screen current has been carried out by professional staff, and we've scheduled numbers (eg.V1, V2, V3, V4) on the amplifier. So, please operate in strict accordance with the numbers; otherwise, excessive current caused by screen current discrepancy between the tubes will destroy the tube.

## Back Plan Function Diagram



① Signal Input Plughole: AUX1, AUX2, AUX3, AUX4

② Right Channel (R.CH) output terminals (+, -) , they should be connected with the positive pole and negative pole of the speaker terminals respectively; and the output impedances are  $4\Omega - 8\Omega$ .

③ Left Channel (L.CH) output terminals (+, -) , they should be connected with the positive pole and negative pole of the speaker terminals respectively; and the output impedances are  $4\Omega - 8\Omega$ .

④ Voltage Selection Key

**ATTENTION:** The machine is in conformity to two input voltage, please make sure of the input voltage you've chosen before you select the voltage gear.

⑤ Power input socket and fuse

Fuse should be F2.5AL250V (AC 220V / 230V / 240V  $\pm 10\%$  50Hz/60Hz)

Fuse should be F5AL250V (AC 100 / 110V / 115V / 120V  $\pm 10\%$  50Hz/60Hz)

⑥ ⑦ Fuse Base

The fuse should be in F0.5AL250V.

## Electric Performance Index

Output Power: 45W + 45W (8Ω)

Distortion: ≤0.35%

Frequency Response: 5Hz-54KHz (-2dB)

SNR: ≥88dB (A)

Load Impedance: 8Ω—4Ω

Maximum Power Consumption: 220W

Input sensitivity: ≤200mV

Tube: MC-13S

6CA7T × 4 / 12AX7B × 2 / 12AU7 × 2

MC-10T

EL34B × 4 / 12AX7B × 2 / 12AU7 × 2

Gross Weight: about 21kg

Volume: 470mm (L) × 315mm (W) × 175mm (H)

**WARNING:** To avoid fire and electric shock hazard, do not place the machine in the rain or humid environment.

*The machine comes with a one-year guarantee and the tube a two-month guarantee.*

### Attentions



- ① The machine should be placed in ventilated and dry places.
- ② When cleaning, unplug the power socket to prevent electric shock.
- ③ Please use the machine within the specified voltage range.
- ④ Non-professional staff is not allowed to open the cover of the machine.
- ⑤ To avoid short-circuits of the machine and electric shock, make sure that there are not any metal materials and sundries inside the machine.



## Accessories

Operation manual: 1

Power line: 1

Hexagon screwdriver: 1

Tube: 1 set

Warranty card: 1

## Beyond the scope of the warranty

- ① Damage caused by inappropriate operations and use of the machine.
- ② Caused by replacement of the machine parts or arbitrary change of the circuit or blind upgrade.
- ③ Malfunctions caused by drowning, fall and collision.
- ④ The tube breaks collides and the pin of the tube breaks.

## Maintenance regulations

The product comes with one-year guarantee, is a promise to repair it free for a year after purchase according to the date on the invoice. The tube comes with two-month guarantee.

If the local dealer fails to provide you with maintenance services, please contact our factory, you only need to pay for the cost of the components when beyond the guarantee.

| Phenomenon  | Check Points directions   |
|---|---|
| Completely silent                                 | If input signal function switch is correctly selected; backboard wiring is correct; If the signal plug is well connected; If the audio source power is turned on.             |
| The right side of the main speaker does not sound | If the speaker wire is connected or short circuit; If the signal plug is correctly connected or short circuit or open circuit.  |
| The left side of the main speaker does not sound  | If the speaker wire is connected or short circuit; If the signal plug is correctly connected or short circuit or open circuit.  |
| The acoustic image position is not right          | If the anode and the cathode of the speaker and the power amplifier is inversely connected; If the speaker is properly settled or whether you're playing pirated AV products. |

|   |  |
|---|--|
| There are hums or other sounds                                      | If the input signal wire and the plug is well connected; If you're using Unshielded Twisted-Pair UTP, or if there is an electric welder, generator, or motor operating around; if the pin and the socket is not well connected; (you can pull the pin out, clean it and then insert it into the socket again). |
| Power supply cannot be connected;<br>Indicator light does not shine | If the socket is well plugged; If the socket is powered up; If the tube pipe is turned on; If the power button is pressed  |

## WARNIG

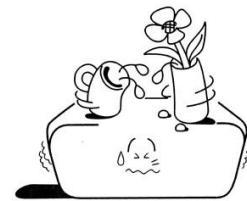
Please turn off the unit, cut off power supply, and pull off the plug from socket while have following cases, and inform dealer or repair department.

- With smoke from, special burnt smell or special sound from.
- Water inside.
- Some metal drop in.
- No sound while at play status.
- Drop down from and case damage.



### •Do not put the vast on top o the unit

Water will cause shorting and damage.



### •Do not let metal drop in the unit

Metal piece drop in from the vent or tray will damage the circuit or cause fire.



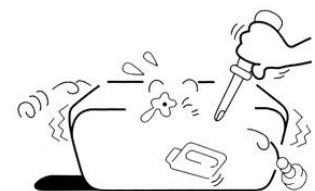
### •Do not put the unit near the wall or other object

Heat will cause fire or damage of the object.



### •Do not discrew the cover

No useful parts inside or will cause shorting.



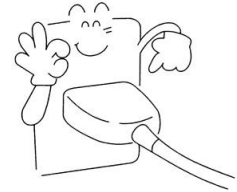
**•Do not damage the power supplying line**

Do not put object on power line, do not cut power line or over pull, do not put near the heater as warmer or electric stove.



**•Connecting power line**

Be sure the plug insert firmly. Do not let all wires cross and be sure enough socket.



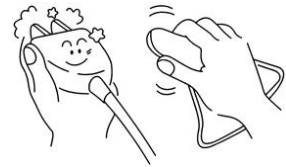
**•Keep avoid moisture**

Avoid water drop in, do not use in bathroom, near water or raining area.



**•Check the socket**

Keep check the socket, clean the dust or it will cause high temperature and cause fire.



**•Thunder avoid**

Please pull off the socket while thunder weather or high voltage will damage the unit.



**•Pull out the power socket**

Do not use to hand with water to touch the power line, do not pull the line.

**Do not put over weight object on top of the unit or will loss balance to drop down.**

**·Volume adjust**

Do not adjust the volume to higher level for a long time, or may damage the circuit or speaker unit. It's better to preset the max volume to a proper level.

**·Put the unit on a stable place**

Do not put the unit on box, shelf or other unstable place.

**·Moving notice**

Be sure cut off the power supply and pull out the socket.

**Specifications and external appearance are subject to change without notice as a result of product improvement.**