

ΨAΘIN®

Owner's Manual

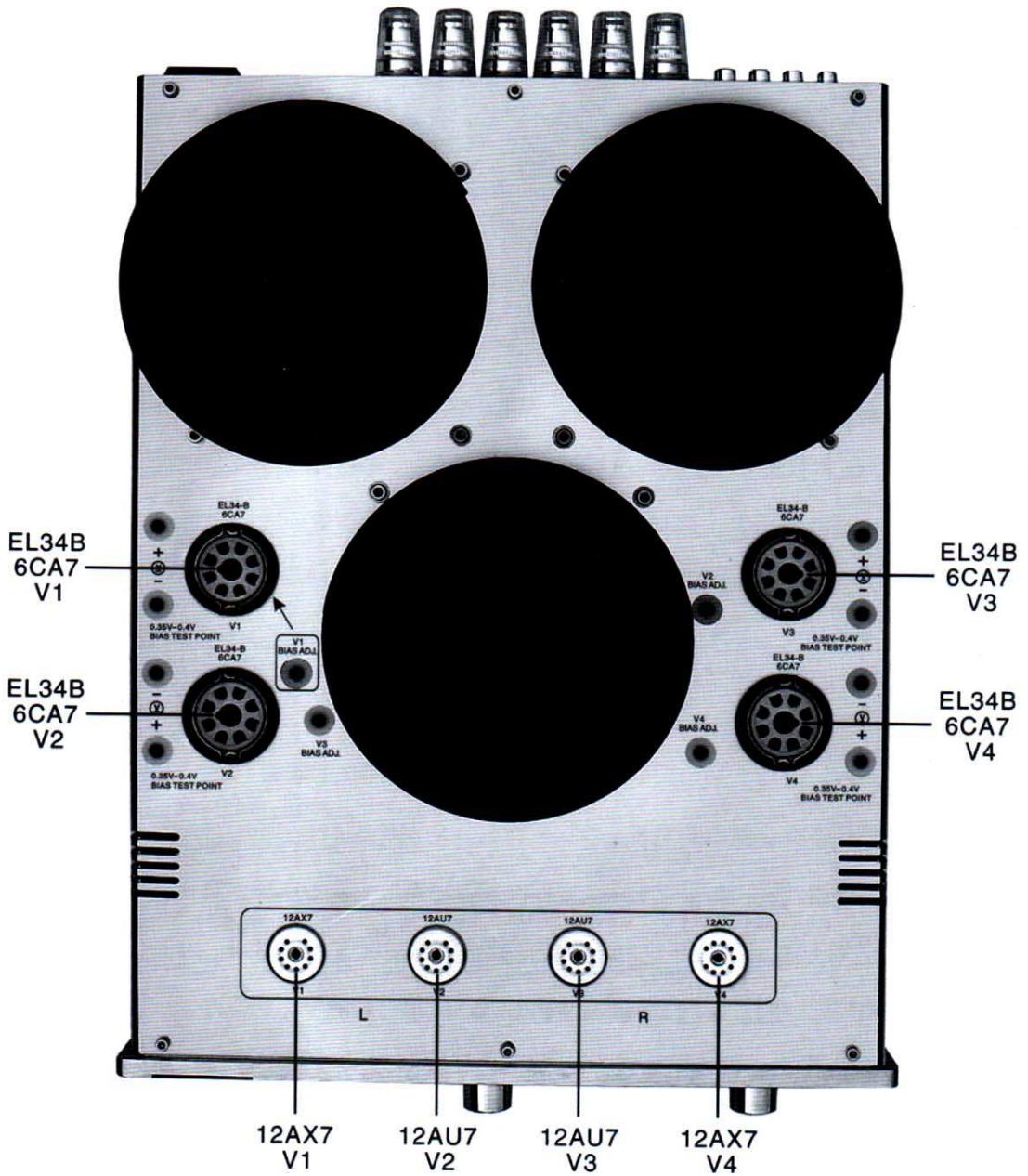
MC-13S

MC-10T

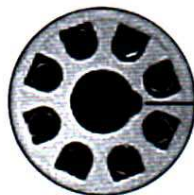
TUBE AMPLIFIER

MC-13S / MC-10T 电子管安装图

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



EL34B 6CA7 电子管座图
EL34B / 6CA7 Tube Socket



佛山市南海雅声五金电子电器有限公司简介

本厂创立于 1994 年，占地 5000 多平方米，多年来一直专业从事高保真功率放大器及音频变压器的研究和生产。主要生产 Hi-Fi 电子管功放(胆机)、电子管 CD、Hi-Fi 电子管纯前级、Hi-Fi 电源滤波、卡拉 OK 前级数码混响器、电子管收音调解器、高级汽车音响功放、电脑音响功放、AC-3 系列等高档次的功率放大器。产品主要销往日本、加拿大及欧美等发达国家及世界各地，并得到好评。本厂配套设备齐全，厂内设有五金机壳冲压加工车间，CNC 数控加工车间，变压器生产车间及丝印和产品组装车间。产品从设计加工生产都经电子工程师和技术人员严格把关，使本厂产品外观工艺质量达到国内及国外一流水平。

本厂特别重视人才，设计人员均来自名牌电子大学，从事音响专业多年的电子工程师。本厂已通过国家 3C 认证和欧洲 CE 认证，员工经专业培训上岗，检测设备齐全，原材料均选用进口日本、美国、德国、台湾及国内名厂原材料，经严格筛选，老化，品质一流。售后服务完善，多年来，一直赢得同行及各界人士的青睐！

热忱欢迎各新老客户来人来函联系，洽谈。另外本厂可按客户要求开发，生产其它的电子产品。

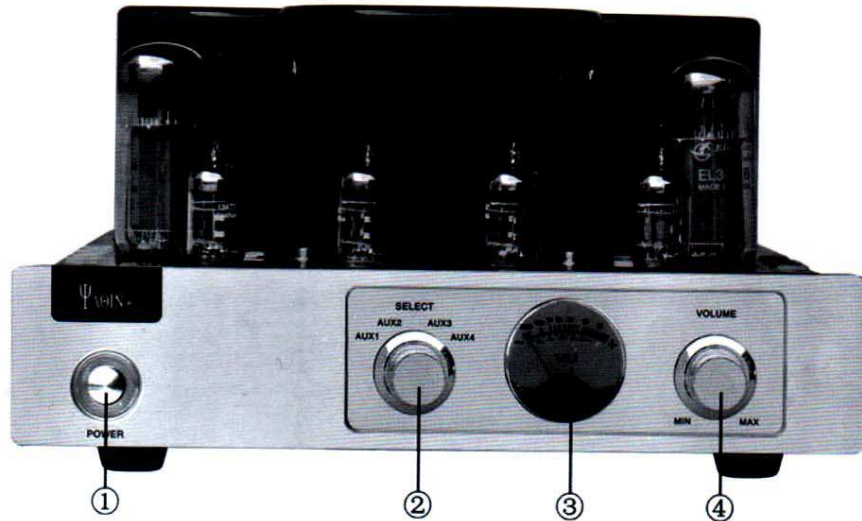
本机电路特点

十分感谢阁下选购本厂产品功率放大器，为了能让您得到最佳的效果，请您务必仔细阅读以下介绍。

1. MC-10T 使用最新改良出口装名管 EL-34B 作强劲功率放大。
- MC-13S 使用最新改良出口装名管 6CA7T 作强劲功率放大及 VU 表作音量大小指示。
2. 选用最优良超线性式的推挽功放电路，使低频推动力足、音色丰富。
3. 前级为 SRPP 放大电路及“长尾式”倒相电路，使本机频响宽、失真小。
4. 变压器采用日本进口音频专用硅钢片(0.35mm 厚)和高强度无氧铜漆包线及特殊多层分层分组的绕制工艺制作，使本机频响宽达 5Hz-54KHz(按国标测量方法)；确保本机高、中、低频音色好通透有力。
5. 本机全部采用国外名厂音响专用发烧级电解电容、无极性飞利浦(MKP)电容器和优质金阻制造，主声道使用进口专用大型音量电位器，具有音乐背景宁静、噪声低，无音染和耐用等优点。

(MC-13S) 正面功能图

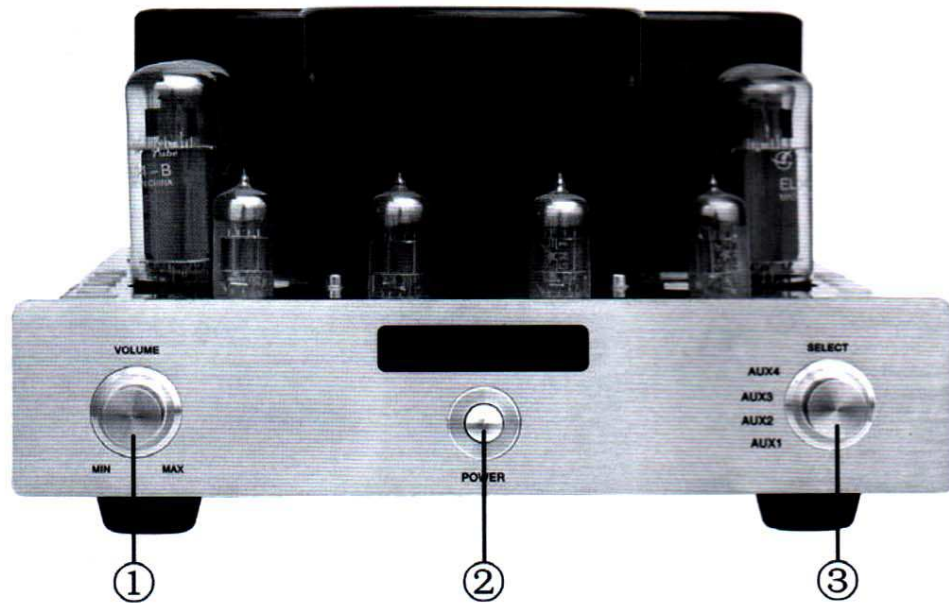
Panel Function Diagram



- ① 电源开关 (POWER)
用于电源开与关
- ② 信号选择旋钮 (SELECT)
用于输入信号的选择 (AUX1、AUX2、AUX3、AUX4)。
- ③ 音量大小指示表
- ④ 音量控制旋钮 (VOLUME)
控制音量的大小，顺时针增大 (MAX)，逆时针减小 (MIN)
- ① Power switch button
Use for the power switch on or switch off
- ② Signal input selection knob
To choose signal input (AUX1、AUX2、AUX3、AUX4)
- ③ Volume VU
- ④ Volume control knob
To control volume, C.W. increase, anticlockwise decrease.

(MC-10T) 正面功能图

Panel Function Diagram



① 音量控制旋钮 (VOLUME)

控制音量的大小，顺时针增大 (MAX)，逆时针减小 (MIN)

② 电源开关 (POWER)

用于电源开与关

③ 信号选择旋钮 (SELECT)

用于输入信号的选择 (AUX1、AUX2、AUX3、AUX4)

① Volume control knob (Volume)

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

② Power switch button

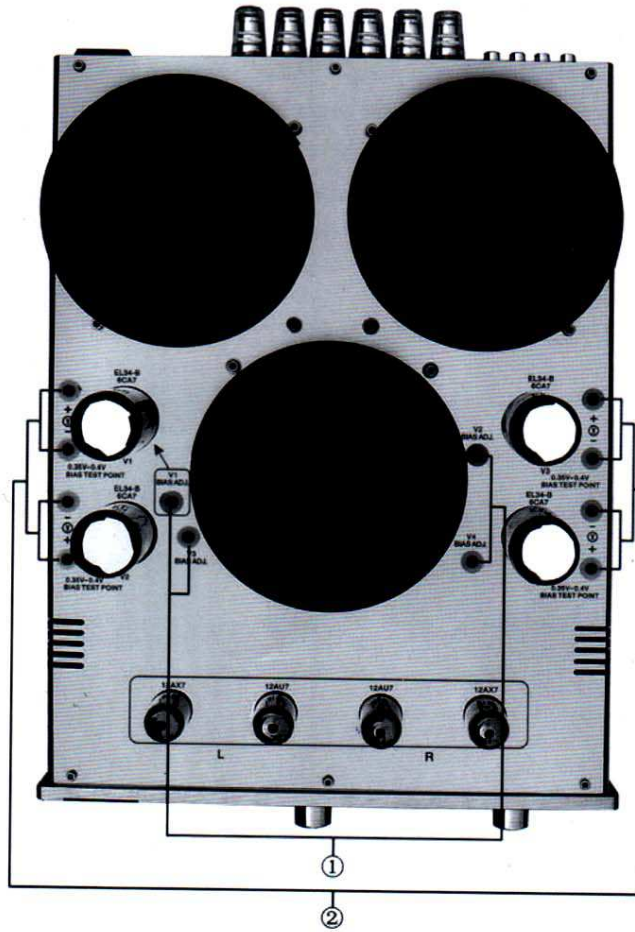
Use for the power switch on or switch off

③ Signal input selection knob

To choose signal input (AUX1、AUX2、AUX3、AUX4)

俯视功能图

Top Plan Function Diagram




- ① 电子管屏极电流调整孔分别为 **V1** **V2** **V3** **V4**
BIAS ADJ. BIAS ADJ. BIAS ADJ. BIAS ADJ.

每个后级管对应各 1 个，共 4 个。

- ② 电子管屏极电流测量孔  每个后级管对应各 1 组，共 4 组。

- 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.

MC-13S / MC-10T 使用说明书


说明

因对于胆机而言，保持工作点的稳定准确是十分重要，尤其是功放管工作点更为重要，随着电子管的老化或更换新的电子管时，屏极电流会产生变化，脱离设计规定的工作点时会直接影响到音色和本机的稳定性，所以更换新的电子管时或使用一段长时间后应检查和调整屏极电流。


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.

电子管屏极电流的测量方法

用户借助万用表进行测量，将万用表调到直流电压 1V 档位，把扩大器音量调到最小，然后把万用表笔正极和负极分别插入  两孔的正极和负极处即可在万用表上测量电压，每个管约为 0.35V-0.4V。

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.


电子管屏极电流的调整方法

用户更换新的电子管时，应借助万用表进行测量四管的屏极电流是否有偏差每个管约为 0.35V~0.4V。如果发现有偏差请使用工具在每组  孔处调整可变电阻，顺时针方向增大，逆时针方向减少，使其四管屏极电流在标准电源电压输入时都约为 0.35V~0.4V。待电子管热透后再重复测量调整即可。

注意：220V、230V、240V 的机型请在标准电源电压 220V、230V、240V 输入时，测量及调整。

100V、110V、115V、120V 的机型请在标准电源电压 100V、110V、115V、120V 输入时，测量及调整。

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 220V、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.

MC-13S / MC-10T 使用说明书

注意：电子管插入电子管座时，应认准定位方向再小心插入

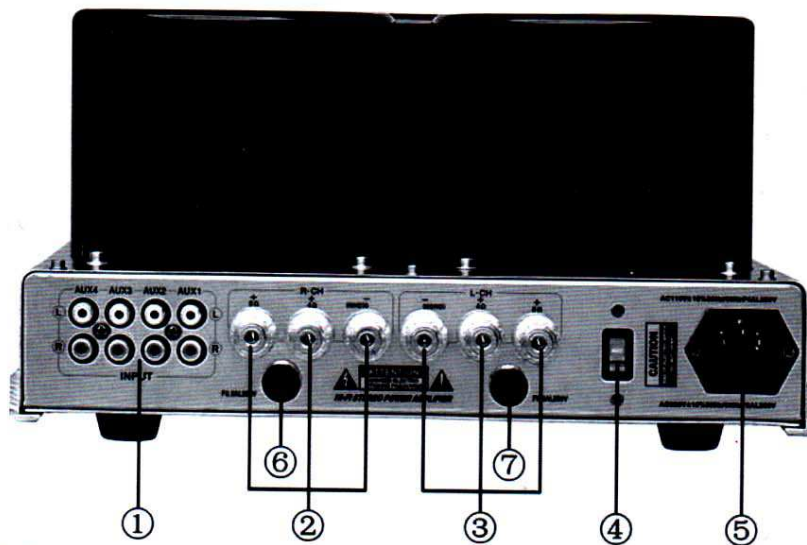
本机屏极电流出厂前已由专业人员严格测量调试已在胆管上编定号码，如(V1, V2, V3, V4)所以使用本机前应准确地按胆管上所编写的号码与机壳上的号码对应(V1, V2, V3, V4)插入，应避免错位插入造成胆与胆之间的屏极电流差别引起某个管电流过大而烧管，造成不必要的损失。

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.

(MC-13S / MC-10T) 后板功能图

Back Plan Function Diagram



- ① 音源输入插孔分别是 (AUX1、AUX2、AUX3、AUX4)
 - ② 右声道 (R·CH) 输出接线柱 (+、-) 极。使用时分别与音箱接线柱 (+、-) 极对应连接，输出阻抗为 $4\Omega - 8\Omega$ 。
 - ③ 左声道 (L·CH) 输出接线柱 (+、-) 极。使用时分别与音箱接线柱 (+、-) 极对应连接，输出阻抗为 $4\Omega - 8\Omega$ 。
 - ④ 电压选择键。
注：本机可使用两种电压，使用时请用户认准输入电压再选择电压档。
 - ⑤ 电源输入插座及保险管。
本插座输入电压为 AC220V / 230V / 240V \pm 10% (50Hz / 60Hz) 时保险管为 F2.5AL250V。
本插座输入电压为 AC100V / 110V / 115V / 120V \pm 10% (50Hz / 60Hz) 时保险管为 F5AL250V。
 - ⑥ ⑦ 电路保险管座
保险管为 F0.5AL250V。
- 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 $4\Omega - 8\Omega$.

MC-13S / MC-10T 使用说明书

- 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 (AC220V / 230V / 240V \pm 10% 50Hz/60Hz)
Fuse should be F5AL250V (AC100 / 110V / 115V / 120V \pm 10% 50Hz/60Hz)
- ⑥ ⑦ Fuse Base
The fuse should be in F0.5AL250V.

电性能指标

输出功率: 45W + 45W (8 Ω)

失真度: $\leq 0.35\%$

频率响应: 5Hz -54KHz (-2dB)

信噪比: $\geq 88\text{dB}$ (A 加权)

负载阻抗: $8\Omega - 4\Omega$

最大电源功耗: 220W

灵敏度: $\leq 200\text{mV}$

电子管: MC-13S

6CA7T \times 4 12AX7B \times 2 12AU7 \times 2

MC-10T

EL34B \times 4 12AX7B \times 2 12AU7 \times 2

毛重: 约 21kg

体积: 长 470mm \times 宽 315mm \times 高 175mm

Electric Performance Index

Output Power: 45W + 45W (8 Ω)

Distortion: $\leq 0.35\%$

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

SNR: $\geq 88\text{dB}$ (A)

Load Impedance: $8\Omega - 4\Omega$

Maximum Power Consumption: 220W

Input sensitivity: $\leq 200\text{mV}$

Tube: MC-13S

6CA7T \times 4 12AX7B \times 2 12AU7 \times 2

MC-10T

EL34B \times 4 12AX7B \times 2 12AU7 \times 2

Gross Weight: about 21kg

Volume: 470mm(L) \times 315mm(W) \times 175mm(H)

MC-13S / MC-10T 使用说明书

警告：为防止火灾或触电危险，切勿将本设备放置在雨淋或潮湿的环境中。

本机保修期为一年，电子管保用二个月

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.

注意事项：⚠️⚠️ 警告！

- ① 不要把本机放置在潮湿的位置，应放置在通风及干燥的地方。
- ② 清洁时把电源插头拔掉，以免触电。
- ③ 请在指定的电压范围内使用。
- ④ 非专业人员禁止打开机盖板。
- ⑤ 请不要让任何金属物品和杂物放入机的内部，以免本机发生短路或触电。

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.

附件

使用说明书：1 本
电源线：1 条
六角螺丝批：1 个
电子管：1 套
保修卡：1 张

Accessories

Operation manual: 1
Power line: 1
Hexagon screwdriver: 1
Tube: 1 set
Warranty card: 1

不保修范围：没有保留和准确填写好保修卡以及撕毁出厂日期、编号、合格证的。

- ① 因不正常操作及使用不当而引起损坏的。
- ② 自行更换机内零件或随意更改电路或盲目升级。
- ③ 入水、跌落、碰撞造成的故障。
- ④ 电子管摔破、碰裂及断脚。

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.

维修条例：如本机出现故障须要维修时，用户应提供本机保修卡以得到优质的售后服务。

本产品实行一年保修，自购买当日票据为准起一年内免费维修。电子管保用二个月。

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.

*** 如当地经销商未能为您提供维修服务时，请与我厂联系，超过保修期我厂收取元件成本费。**

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.

MC-13S / MC-10T 使用说明书

出现现象	检查要点
电源不能接通 指示灯不亮	电源插头是否插好，插座有无电，保险管是否断开，电源开关键是否按下。
完全无声	输入信号功能开关选择是否正确，后板接线是否正确，信号插头是否连接可靠，信号源的电源是否打开。
右边主音箱不响	音箱连线是否断开，或者短路，信号插头连接不正确或信号线是否短路或断路。
左边主音箱不响	音箱连线是否断开，或者短路，信号插头连接不正确或信号线是否短路或断路。
声像位置不对	音箱的 [+] [-] 与功放的 [+] [-] 是否接反，音箱是否安放位置不对，或播放非正版的影音制品。
有交流声或其它声	输入信号线或插头有接触不良，是否使用非屏蔽或屏蔽不好的信号线，附近是否有电焊机、发电机、电动机在工作干扰，节目源本身有噪音，或管与管座松脱或接触不良，（可以将管拔出把管脚清洁干净再重新插进管座）。

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; 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

安全注意事项

SAFETY NOTICE

警告

出现下述情况会引起火灾，触电。这时要立刻关掉本机电源开关，切断电源，并从插座上拔出电源插头，委托经销商进行修理。

- 冒烟，出现异味，异常声响。确认无冒烟后，拿到经销商处进行修理。用户不得自行修理，以免有危险。
- 本机内部进水。
- 本机在收音状态下无声音。
- 异物进入本机内部。
- 外壳跌落损坏。

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.



- **勿将盛有水的容器置于本机之上**
在本机内部进入水的情况下，可能会导致火灾、触电等。



- **Do not put the vast on top o the unit**
Water will cause shorting and damage.

- **勿使异物进入本机**
勿使金属及易燃类异物从本机的通风口进入，以避免引起火灾或触电。



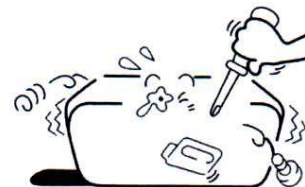
- **Do not let metal drop in the unit**
Metal piece drop in from the vent or tray will damage the circuit or cause fire.

- **勿将本机置于紧靠墙壁处**
请将本机置于墙壁相距至少 10 厘米远处，与其它机器一起放置时也要有一段间隔，以避免内部发热引起火灾。



- **Do not put the unit near the wall or other object**
Heat will cause fire or damage of the object.

- **勿拆卸本机**
勿拆卸本机。擅自拆卸本机可能会导致火灾或触电，请委托经销商对本机进行内部的检查、调节、修理等。



- **Do not discrew the cover**
No useful parts inside or will cause shorting.

MC-13S / MC-10T 使用说明书

- **勿损坏电源线 野蛮的操作易引起电源线的破损。**

切勿在电源线上放置重物。妥善处理裸露电源线。勿强制弯曲电源线。勿强拉或拧电源线。勿将电源线靠近发热器具，如：暖气、电炉等。若电源线损伤，请委托经销商修理。如若继续使用，会导致火灾，触电等现象。



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

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

- **连接电源时应注意**

请按以下几点连接电源，若操作错误会因发热而引起火灾。连接电源线时要将插头插稳。连接电源时勿缠绕电源线。勿使电源线杂乱无章。勿使用多足插座。



- **Connecting power line**

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

- **保持干燥**

应避免使本机滴上或溅上水。勿在浴室、水边、雨中使用本机。

- **Keep avoid moisture**

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

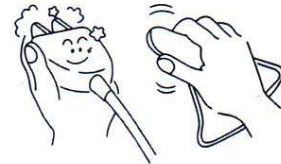


- **电源线插头要定期检修**

应定期拔下电源线插头，清除插头上的灰尘及脏物等，否则有时会因插头上的灰尘或脏物发热而引起火灾。

- **Check the socket**

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



- **打雷时应注意**

禁止触及本机及电源插头以防触电。

- **Thunder avoid**

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



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- **拔电源插头时应注意**

勿用湿手触及电源插头以免触电,当从电源插座上拔出电源插头时,请紧握电源插头,勿拉扯电源线以免损坏电源线而引起火灾,触电等。

- **Pull out the power socket**

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

- **勿将重物置于本机之上**

若将重物置于本机之上,有可能会因失去平衡,坠落而造成损坏。

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

- **音量调节**

由于本机的噪声极低,且动态范围较广,所以用户往往容易将放大器音量调得过高。这样做会使放大器输出负荷过大,而可能造成扬声器的损坏。建议将最大音量设置到合适的水平。

- **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.

- **勿将本机置于不稳定之处**

勿将本机置于盒架等不稳定之处以免落地造成损坏。

- **Put the unit on a stable place**

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

- **搬运时的注意事项**

在搬运本机之前,先切断本机电源,并将电源插座上拔出。

- **Moving notice**

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

* **规格和外观因产品改进若有更改,恕不另行通知**

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

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