
PROFESSIONAL POWER AMPLIFIER

USER MANUAL

*Warning :Before attempting to connect, operate or adjust this Amplifier,
please read these instructuins completely and carefully and save this Manual*

Fig 1: Description of Front Panel /图1 :前面板图

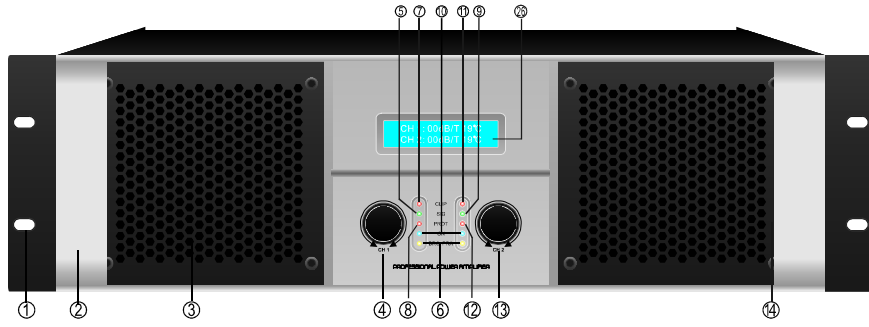


Fig 2: Description of Rear Panel /图2 :后面板图

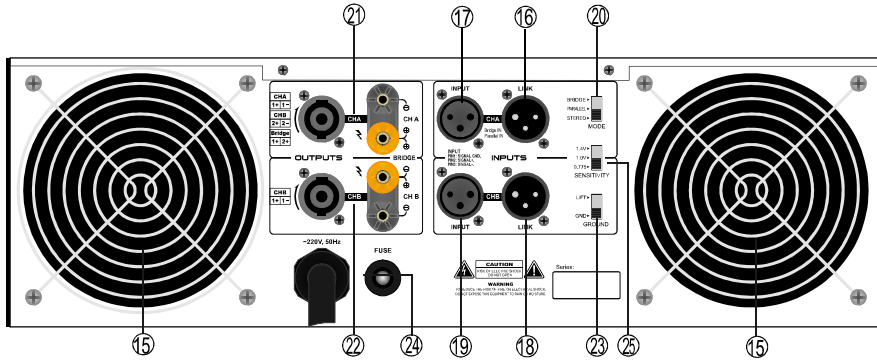


Fig 3: Stereo Mode /图3 :立体声工作模式

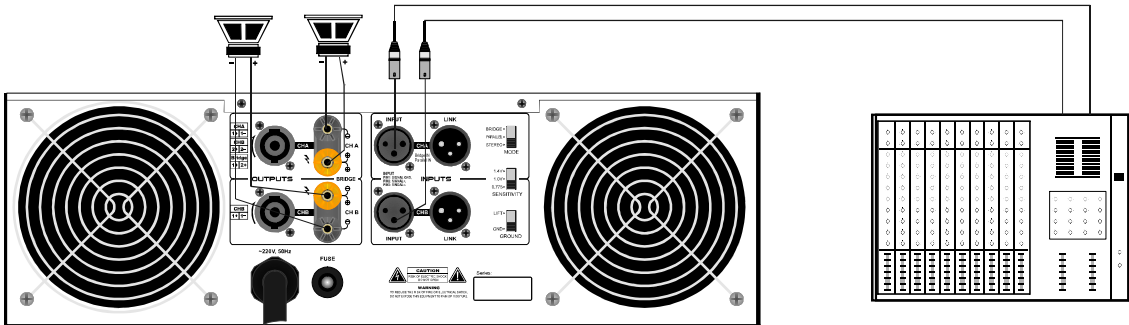


Fig 4: Parallel Mode /图4 : 并联工作模式

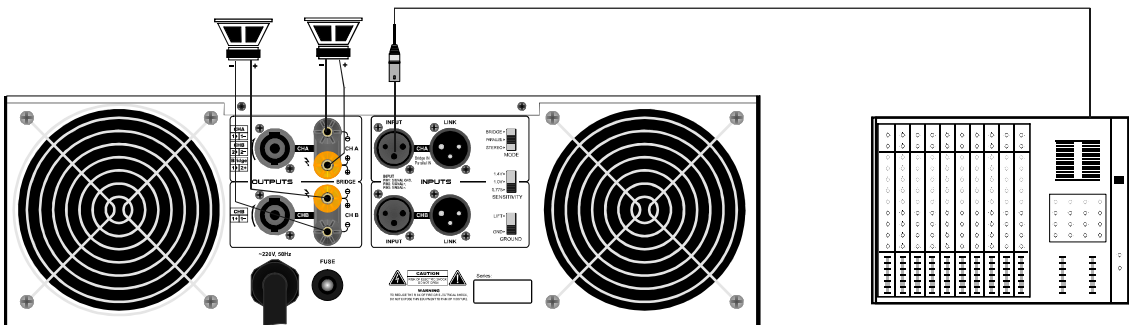


Fig5: Bridge Mode /图5 : 桥接工作模式

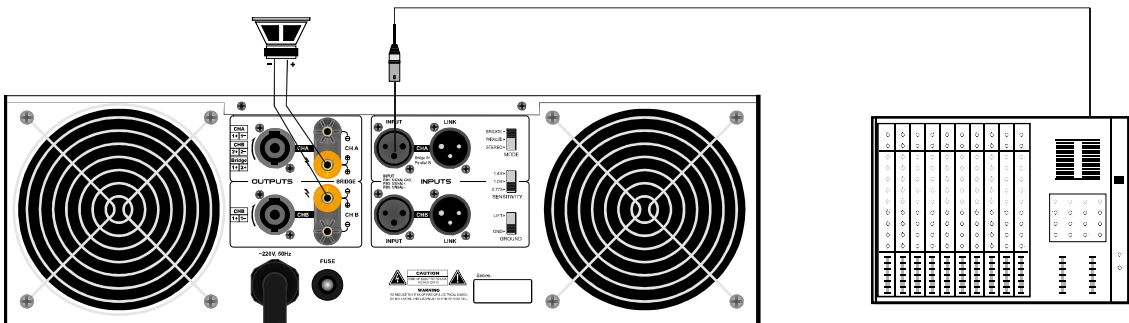


Fig 1: Description of Front Panel /图1 : 前面板图

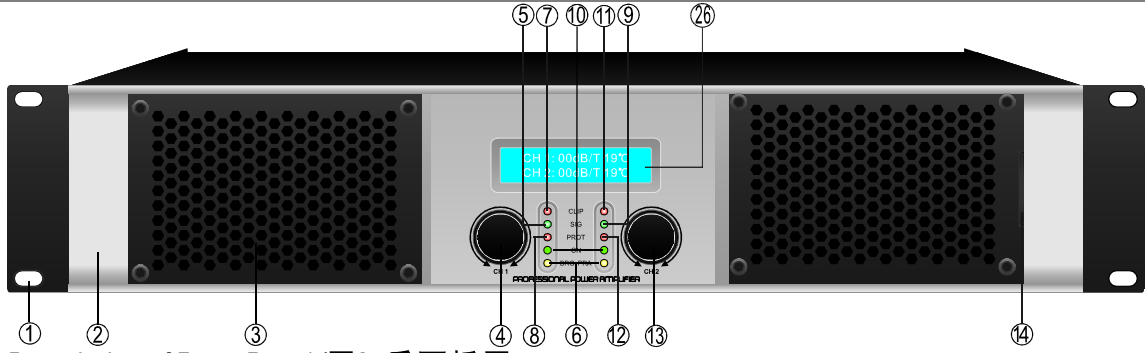


Fig 2: Description of Rear Panel /图2: 后面板图

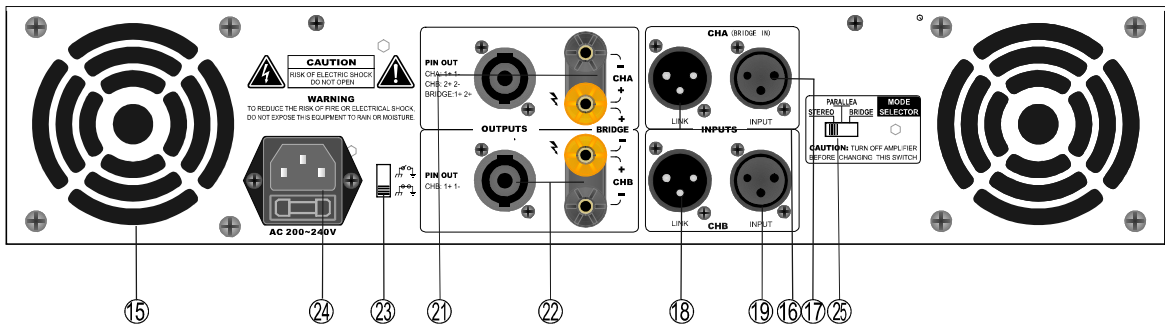


Fig 3: Stereo Mode /图3: 立体声工作模式

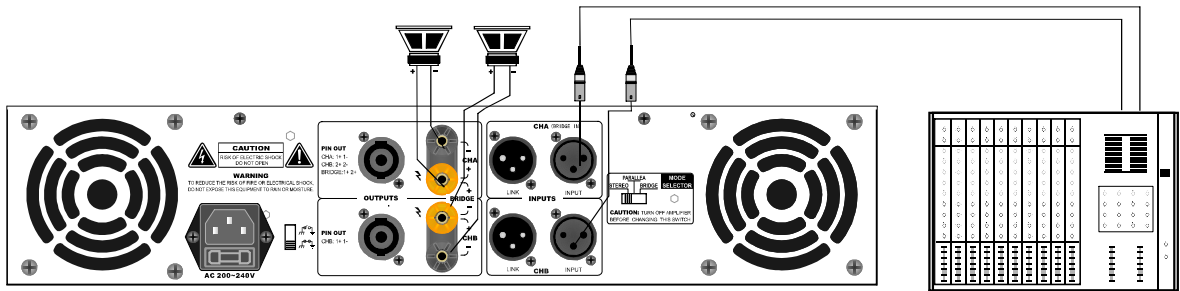


Fig 4: Parallel Mode /图4: 并联工作模式

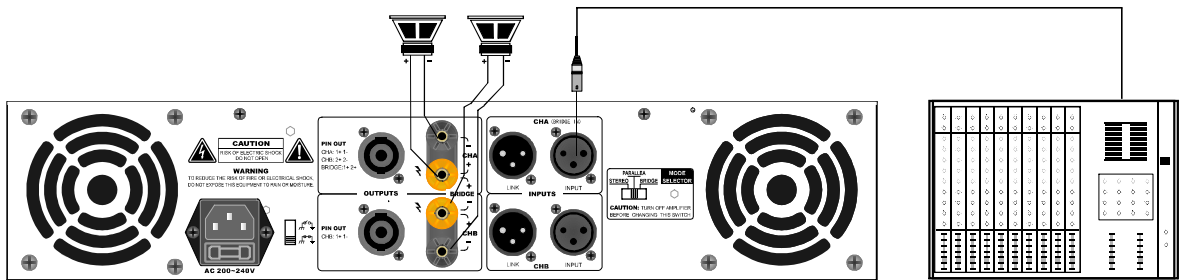
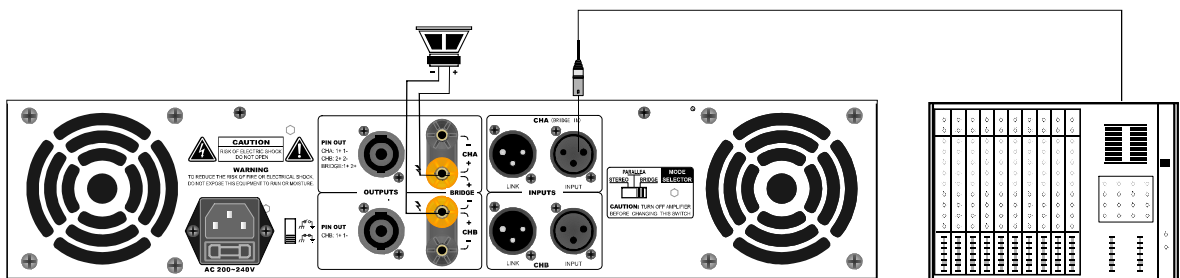


Fig5: Bridge Mode /图5: 桥接工作模式



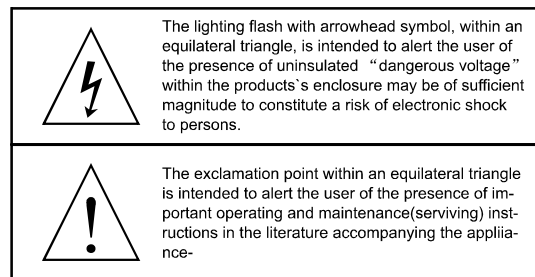
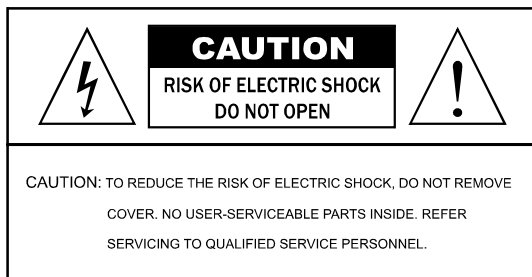
Thank you for your purchase of bestar power amplifier. Please read the manual carefully before using the product, it will give you correct information for the equipments' normal work and extending its life. All of our products are promised one-year quality warranty. Provided any product found quality defect with one year, we will be responsible for repairing or replacing.

The staff of bestar have always been trying to develop their professional audio equipment with high-tech, high performance and competitive price. Up to now, we own 30 different models, covering high, secondly, and low three levels and are able to provide high quality equipments for different kinds of occasions. In the process of research and development, we have been trying to pour high-tech soul into every product, and to create high quality equipments. We have been adopting ISO Quality Guarantee System to supervise every product whether it has conformed with strict and professional requirements, whether it has received perceived perfect after-sales services.

We do that only for one purpose: we hope our customers will really benefit from our high-tech, high-performance and competitive price products, as well as good after services and technical backstopping. We are always doing our best to return our customers for their support to products, we make sure our customers feel they deserve purchasing Jsl professional audio equipment.

Thank you for buying this product, please read through these Operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, Put them Away in a safe place for future reference .

IMPORTANT PRECAUTIONS



1. Read all documentation before operating your equipment. Retain all documentation for further reference.
2. Main voltage must be correct and as same as what printed on the rear of the unit. Damage caused by connection to improper AC voltage is not covered by any warranty.
3. Always operate the unit with the AC ground wire connected to the electrical system ground. Precautions should be taken so that the means of grounding of a piece of equipment is not defected.
4. Connecting amplifier outputs to oscilloscopes or other test equipment while the amplifier is in bridge mode may damage both the amplifier and test equipment.
5. Do not drive the inputs with a signal level greater than required to drive equipment to full output.
6. Do not run the output of any amplifier channel back into another channels input. Do not parallel or series connect an amplifier outputs with any other amplifier output.
7. In system setup, amplifiers output power must be 50%-100% greater than loaded loudspeakers' rate power.
8. Make sure the signal correctly connect to the amplifiers input channel at current input mode.
9. Please turn off the power switch, when pull off the power cord and signal cable or select the input mode switch.
10. In typical use, Please set the volume to 0dB position.
11. Sometime, one signal to more than one amplifier, suggest use signal distributor.
12. Please clean the dust filter every 15 days.

IMPORTANT: Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Front Panel Description(Page1 Fig1:Front panel)

1.Rack mounting ears

Two front panel mounting holes are provided on each mounting ear.

2.Handles

Those handles are used for easy transportation.

3.Fan Exhaust holes

Heated air exits the amplifier through the fan exhaust holes, located on the sides of the amplifier chassis.Be sure not to block these holes, especially when rack-mouting the amplifier.

4.Channel A Volume Control

In stereo mode, this potentiometer allows the adjustment of the channel 2 input level (right channel).

In bridge mode,this potentiometer allows the adjustment of two channels at the same time.

5.Channel A SIGNAL Indicator

The illumination of the LED only indicates a safe operation indicate the signal is exist in channel A.

6.MODE Indicator

In bridge mode, the BRA led indicator is yellow.

In parallel mode, the PARA led indicator is yellow.

7.Channel A CLIP Indicator

Any illumination of the clip indicates a state of over modulation (distortion at extremely high volumes). In this case, check the output signal of your mixer and turn down the input gain control. Please keep in mind that the power amplifier is ready to work.

8.Channel A PROTECT Indicator

When this indicator lights,that means the power amplifier is in the protection mode,Switch off the device and find out the problem. This power amplifier is protected from overheat, overload, short circuit, DC, soft start.

9.Channel B SIGNAL Indicator

The illumination of the LED only indicates a safe operation.lindicate the signal is exist in channel B.

10.POWER Indicator

This indicator lights when the power amplifier on.

11.Channel B CLIP Indicator

Any illumination of the clip indicates a state of over modulation (distortion at extremely high volumes). In this case, check the output signal of your mixer and turn down the input gain control. Please keep in mind that the power amplifier cannot correct any distortion.

12.Channel B PROTECT Indicator

When this indicator lights,that means the power amplifier is in the protction mode, Switch off the device and find out the problem. This power amplifier is protected from overheat, overload, short circuit, DC, soft start.

13.Channel B Volume Control

In stereo mode and parallel mode, this potentiometer allows the adjustment of the channel B input level (left channel). In bridge mode, this potentiometer allows is disabled.

14.Power Switch

Use this Switch to switch your Amplifier on.

When the protect indicator lights off, that means the power amplifier is ready to work.

26.LED Screen

This screen indicates the inside temperature,volume,working pattern and the brand of the amplifier.

Rear Panel Description (Page 1, Fig 2: Rear panel)

15.Fan

The power amplifiers use a forced-aer cooling system to maintain a low even operating temperature.

16.Channel A XLR Input

17.Channel A LINK Output

This XLR input and link output is a balanced. Connect this XLR input to the right output or your mixer.

18.Channel B XLR Input

19.Channel B TRS Input

This XLR input and link output is a balanced. Connect this XLR input to the right output of your mixer.

20.Operation Mode Selector

This switch is used to choose the mode of the power amplifier;
In stereo Mode:2 inputs (channel A and B) and 2 outputs are used.
In parallel Mode:1 input (channel A) and 2 outputs are used.
In bridge Mode: 1 input(channel A) and 1 output (output A+ and B+) are used.

21.Channel A Turn Lock Output And Speaker Output-5WAY

Connect this turn lock output to a speaker. The branching is +1,-1(except in bridge mode where the braching is +1,+2).

22.Channel B Turn Lock Output and Speaker Output-5WAY

Connect this turn lock output to another speaker. The branching is +1,-1.

23.Ground selector

If you have hum or noise in your speaker, put the selector in ON position.

24.AC Cord and AC FUSE

Plug this cord into the power supply socket(before using the amplifier, check if the power is 220V).

25.Input Sensitivity selector

This selector allows to choose the input sensitivity:either 0.775V, 1.0V, 1.4V.

Operation Mode Selection and Connection

Stereo Mode(Page 1 Fig 3:Stereo Mode)

In Stereo Mode, connect the 2 inputs CHB and CHA to your mixer's outputs.
Put the selector on the stereo position.
Output volume can be adjusted by means of the two potentiometers.
Connect the turn lock to the 2 speakers.

Parallel Mode(Page 1 Fig 4: Parallel Mode)

In parallel mode, connect the input CHA to your mixer's outputs.
Put the selector on the parallel position.
Output volume can be adjusted by means of the two potentiometers.
Connect the turn lock to the 2 speakers.

Bridged Mode(Page 1 Fig 3: Bridge Mode)

In bridge mode, connect the input CHA to your mixer's outputs.
Put the selector on the bridge position.
Output volume can be adjusted by with channel A potentiometers.
Connect the channel A turn lock to the speakers.

SAFETY INSTRUCTIONS:

Read all safety instructions before operation amplifier.
Install equipment as follows:

- Install in a flat place, not bending or curved.
- Do not install near water and moisture.
- Place power amplifier away from heat sources, such as radiators or other heat sources.

Keep in mind the following when connecting amplifiers.

- Read the user manual before connecting the amplifier.
- Connect each connection of the amplifier perfectly. If not, it may cause hum, damage, electric shock in case of disconnection .
- To prevent electric shocks, do not open top cover.
- Connect the power cord with safety after check to AC power.

Amplifier Power Ratings and Specifications

Specification	MODEL							
8 Ω stereo power (RMS)	200W	350W	450W	650W	850W	1000W	1200W	1500W
4 Ω stereo power (RMS)	300W	525W	675W	1000W	1275W	1500W	1800W	2250W
8 Ω Bridge power (RMS)	500W	900W	1125W	1625W	2125W	2500W	3000W	3750W
4 Ω Bridge power (RMS)	650W	1100W	1400W	2000W	2600W	3200W	3800W	4600W
INPUT SENSITIVITY	0.775V/1.0/1.4							
FREQUENCY RESPONSE	20Hz-20KHz +0/-0.5dB							
INPUT IMPEDANCE	20K Ω (BALANCE)/10K Ω (UNBALANCE)							
THD+N	<0.02%@8 Ω 1KHz							
Segration Ratio/1KHZ	60dB(8 Ω /1HZ)							
Supply power	220V/50HZ/60HZ							
Slew Factor	20us	20us	20us	20us	20us	20us	20us	20us
Damping Factor	250/8 Ω	250/8 Ω	250/8 Ω	250/8 Ω	250/8 Ω	250/8 Ω	250/8 Ω	250/8 Ω
Supply Power Fuse	6A	8A	12A	15A	20A	25A	25A	25A
S/NRatio (A Weighted)	99dB	99dB	99dB	99dB	99dB	99dB	99dB	99dB
MAX power consumption	1000W	150W	2000W	2600W	3200W	3800W	4500W	5200W
GROSS WEIGHT	16.00Kg	18.00Kg	21.00Kg	23.00Kg	26.00Kg	31.00Kg	34.00Kg	36.00Kg
VOLUME	0.046M3					0.058M3		
PACKING DIMENSIONS	570mm × 550mm × 135mm					570mm × 550mm × 185mm		

NOTE: bestar follows a policy of continuous advancements in development. For this reason specifications may be changed without notified.

WARRANTY CONDITIONS

All bestar products are warranted for a period of one year from all manufactures defects.

The warranty begins when the product is sold to the end-user, and no more than 12 months after the production of the unit.

The warranty is void if there are any sign of the unit, unless authorized by an agent of bestar in writing.

If by chance the unit were to be defective, at that point the client must pre-pay the shipment back to the warranty center with its original package.

The bestar amplifiers have all protections but use can damaged the amplifier and is not covered by the warranty.

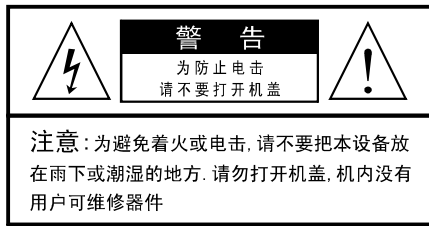
Bestar amplifiers have some mechanical parts, which are not covered by the limited warranty due to the over used.

For any further information of question regarding the bestar amplifier, please contact your distributor or place from which you purchased this product.

感谢您选择本公司的音频产品，在安装、使用前请仔细阅读使用说明书，这会帮助您正确使用本品并延长其使用寿命。如果您未按照本说明书的要求操作本功率放大器而引起的任何人身伤害和财产损失（包括对本说明书误读引起的误操作），厂家将不负任何责任。

请将本说明书保存在一个方便的地方以便于您在需要的时候可以快速方便地查阅。

本厂的产品均提供一年的品质保证，在保修期内若因制造原因导致的质量问题，我们会提供免费维修或者更换服务



安全注意事项

本系列专业功率放大器在设计和生产上都确保使用者人身安全，但不正确使用会有电击或者着火的风险。为确保安全，在安装使用或维修过程中必须遵守以下注意事项：

- ◇为了保证您的人身安全和本产品的正常使用，请您在使用本产品之前务必确认，您准备提供给本产品的电源插座具有已经可靠接地的接地端子。
- ◇雷电可能会对本产品甚至您的人身安全造成伤害，故在雷雨天气，请不要插拔信号线、电源线等可能会与外界连接的导电体。
- ◇在给本产品通电之前，请务必确认你所提供的电源，能够满足在本产品电源输入口附近所标识的输入电源的信息（例如电压、频率、功率等）。
- ◇请将本产品放置于通风状态良好、环境较干燥处使用，禁止在潮湿、通风不畅的环境中使用或者储存。长时间不使用断开本机电源。
- ◇在没有切断系统电源时，请不要拔插机器后部的连接线。
- ◇非专业或者授权人员，禁止开启产品的外壳，否则一切后果自负。
- ◇请将包装材料安全地存放于儿童拿不到的地方，以避免儿童因玩耍塑料袋造成窒息或其它事故。
- ◇请不要将液体或者杂物溅入功率放大器中，也不要将任何物品塞入功率放大器的开口或者通风口处，否则可能导致本产品异常发热甚至导致内部组件的短路而引起火灾或者触电。

注意：为确保安全，避免电击，请合格维修人员进行维修！

简介

本公司一直致力于研发、生产高技术、高可靠性、高性价比的音频产品。到目前为止，具有多种不同规格型号，覆盖高、中、低各档次的产品，凭其优异的性能完全能够满足不同场所、不同层次的使用要求。日常工作中我们严格遵循 ISO9001 国际质量管理体系的要求，规范采购、设计、生产和服务各环节的工作，确保生产的每一台产品符合要求。我们所做的每一项工作都是希望能为用户提供高技术、高可靠性、高性价比的产品和完善的售后服务和强有力的技术支援。我们一直尽最大的努力提供更好的产品和服务来回报用户一直以来对我们的支持。我们也相信用户选择我们的产品是非常正确的选择。

优秀的电路设计、高品质的元器件选用、先进的生产工艺和严格的质量控制毫无疑问是产品优质性能的强有力保证，但同时恶劣多变的工作环境（如工作电压不稳定；使用环境温度较高、潮湿、多尘等）和不正确的使用方法（错误操作和不恰当的工程配套等）也会对设备的长期稳定性能造成不良影响甚至严重损坏。本系列专业功率放大器在设计 and 制造时充分认知这些因素并采用了一系列有针对性的解决措施，使之较其他同类产品有更加优秀的声音还原能力和突出的稳定可靠性能，适用于大型流动演出、乐队表演、DISCO、夜总会等专业场所之扩声系统。其特点如下：

☆控制电路、前置放大器、电压放大级和电流（功率）放大级采用多级独立供电设计，最大程度降低功放各部分电路工作时的相互影响。在提高整机信噪比的同时增强了声音还原能力；

☆能量充足的电源系统（大功率高品质环形变压器、大电流高耐压整流桥、大容量音频专用滤波电容等）既保证了输出功率充沛强劲又使可靠性得到保障，同时使整机信噪比得以改善和提高；

☆保护功能：开关机冲击一直；负载短路、开路、过载保护；过热保护；直流保护；市电开机冲击电流抑制电路（软启动）等系列保护电路确保系统可靠工作并免收意外损坏；

☆采用‘低失真’宽频带‘低噪声及削波失真限制电路设计，因此高音通透亮丽、中音圆润清晰、低音浑厚饱满。削波失真限制电路保证了高质量的声音还原，同时减少系统由于过量驱动时产生的削峰波形对喇叭造成的意外损伤，全面保护用户的设备；

☆功率元件超余量设计、精确的参数计算和智能化的检测保护线路确保功率元件工作在安全区域提高了整机可靠性。

☆备有热敏器件控制的低噪声两速风扇，配合高效率的隧道式铝质散热器，有效降低整机的工作温升并将风扇的工作噪音控制在较低的范围。

前面板功能介绍（参见第1页 图1前面版图）

1、固定孔

将本机安装于标准机柜时，请用螺栓穿过此孔后再拧入机柜相应螺孔。

注意：用螺栓固定时必须在该孔的前后位置安装防护垫，否则会损伤机器前面板，若损伤不在保修之列。

2、把手 移动本机时，可抓住此处小心进行。当没足够把握单独搬起本产品时，不要单独搬运。

3、通风口 为保障整机通风、散热状态良好，请勿堵塞通风口或在其前后放置任何障碍物。

4、CHA音量控制器

在立体声和并接工作模式用于控制CHA的输出音量大小。在桥接状态用于控制桥接输出音量大小。

5、CHA信号指示灯（SIGNAL）

当由CHA输入信号并开启CHA音量旋钮后，该指示灯应间断或持续闪亮，表明已向机器成功输入信号。

6、工作模式指示灯

当后板的模式开关置于并联工作模式（PARALLEL）时，PARL黄色指示灯点亮。

当后板的模式开关置于桥接工作模式（BRIDGE）时，BRL黄色指示灯点亮。

7、CHA削峰指示灯（CLIP）

该指示灯点亮表明功放输出已经削峰（同时表明本机削波失真限制电路开始工作：该电路保证了高质量的声音还原，同时减少系统由于过量驱动产生的削峰波形对喇叭造成的意外损伤）。在功放工作过程中，该灯间或闪烁属于正常情况。但如果该指示灯频繁闪亮或长亮时，为保证性能，您应适量减小输入信号。

8、CHA保护指示灯（PROTECT）

每次开机后改指示灯点亮7秒钟左右后待输出继电器吸合后自动熄灭。使用过程中该指示灯点亮表明本机进入保护状态，此时应关闭电源排除故障后才能重新开机。

注意：当输入信号大于额定输入10dB或以上时，故障指示灯可能会点亮，此时应立即减小输入信号。

9、CHB信号指示灯（SIGNAL）

10、电源指示灯（ON）

当功放电源接通后该指示灯点亮。

11、CHB削峰指示灯（CLIP）

12、CHB保护指示灯（PROTECT）

CHB的信号指示灯、削峰指示灯和保护指示灯相关功能及其说明同CHA。

13、CHB音量控制器

在立体声和并联工作状态用于控制CHB的输出音量大小。

14、电源开关

该开关用于开启或者关闭功率放大器在进行系统连接和功放长期不使用时请断开外部交流电源。

26、LED屏幕

当功放运行时，可显示机内温度、音量大小、工作模式和商标。

后面板功能介绍（参见第1页 图2 后面版图）

15、风机

为保证放大器正常工作，本机设计了先进的自动两级（低速和高速）风冷模式：使用时应随时保持功放通风状态良好，避免因为风

道不畅而导致整机温度异常升高。

16、CHA XLR（卡侬）信号输入插座

17、CHA LINK信号输出插座

将调音台的输出信号通过XLR插座输入到本机的通道A。LINK输出信号可以连接至另一台功放。输入信号可以是平衡或不平衡，平衡连接时输入阻抗通常是20K Ω ，不平衡连接时阻抗为10K Ω 。应根据信号源的具体情况采取合理的连接方式。

注意：如果功放工作在桥接或并接模式时，请注意信号一定要由CHA输入。

平衡、非平衡连接如下图：

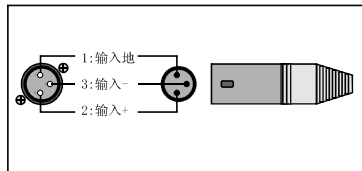


图7. 平衡输入连接方法

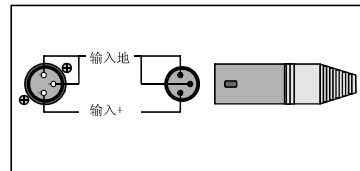


图8. 非平衡输入连接方法

18、CHB XLR（卡侬）信号输入插座

19、CHB LINK信号输出插座

将调音台的平衡输出信号通过XLR插座输入到本机的通道B。

20、工作模式选择开关

用于选择工作模式。本机提供了三种工作模式：并接（PARALLEL）、立体声（STEREO）、桥接（BRIDGE）。本机出厂时该开关置于“STEREO”（立体声）位置。

21、CHA功率输出接线柱/插座

22、CHB功率输出接线柱/插座

本机的每一通道均提供了两种输出连接方式：带锁旋转插座和“5-WAY”扬声器接线柱。具体连接方法见“工作模式选择及安装”和后面板上的相关说明。

23、功放地/交流电源地通断开关

24、交流电源输入线和交流保险座

电源线用于连接~220V电源，务必确认使用的交流电源的电压、功率等与本机标识的电源要求相符。

若需要更换保险管，请根据机器具体型号，使用机器后面板此处或者说明书上明确规定的规格型号。

注意：切勿随意加大保险管值，否则会导致保护功能失效而引起设备损坏！

25、输入灵敏度选择开关

用于选择输入灵敏度，本机提供了0.775V、1V、1.4V三种输入灵敏度选择。

工作模式选择及安装：

在工程应用中用户可根据实际需求选择不同的工作模式。安装时请按照要求选择正确的输入、输出连接方式。由于不正确操作引起的损坏，厂家将不负任何责任。

注意：进行接线操作前，必须先断开交流电源并将音量旋钮置于最小位置，以避免人身伤害和设备损坏。

立体声工作模式（参见第1页 图3：立体声工作模式）

在立体声工作模式必须把工作模式选择开关置于“STEREO”位置；把CHA和CHB的输入端连接到调音台的输出端；功放各通道的红色输出接线柱与音响的正极连接，黑色输出接线柱与音响的负极连接。每个声道独立使用各自的扬声器，并用各自的音量控制旋钮控制其输出音量大小。

注意：不能使每一通道的正负极接线柱短路，也不能使两通道之间的红色接线柱短路。

注意：在立体声工作模式时，不能把两输出端并联，否则会损坏功放！

在并联工作模式必须把工作模式选择开关置于“PARALLEL”位置；把CHA输入端连接到调音台的输出端；功放各通道的红色输出接线柱与音箱的正极连接，黑色输出接线柱与音箱的负极连接；每个声道独立使用各自的扬声器并用各自的音量控制旋钮控制其输出音量大小。

注意：并联工作模式中使用并联输出会产生过热和失真。

桥接工作模式（参见第1页 图5：桥接工作模式）

桥接工作模式（单通道输出）可提供比立体声工作模式（双通道输出）更大的输出功率。

在桥接工作模式必须把工作模式选择开关置于“BRIDGE”位置；把CHA输入端接入端连接到调音台的输出端；把音箱连接到CHA的红色输出接线柱和CHB的红色输出接线柱（两个黑色的接线柱不能使用），或者使用CHA带锁旋转插座的1+和2+输出。并用CHA的音量控制旋钮控制输出音量大小。

安装、使用操作步骤

为确保性能和安全，在使用前请先仔细阅读安装、使用操作步骤，并在进行相关操作时严格执行。

- 1) 选择工作模式后进行正确的输入、输出连线（参照4.工作模式选择及安装）操作；
- 2) 接通脚力电源时请先把音量旋钮调至最小；接通电源后激活指示灯（ON）应点亮；并同时确认保护指示灯（PROTECT）同时点亮，经过约7秒后熄灭，表明输出继电器已经接通；
- 3) 确认连接无误后输入信号，缓慢开启音量旋钮至一定程度后，面板上绿色信号指示灯应点亮；
- 4) 在削峰（CLIP）指示灯闪亮时表示部分输出信号已达到本机最大输出能力。功放正常工作时，削峰指示灯间断闪亮是正常的现象；
- 5) 如削峰指示灯连续闪亮的时间过长，应把音量控制电位器适当调小；
- 6) 接通或者断开交流电源前，请先将音量旋钮关至最小位置后再进行操作。

技术性能参数 技术参数如下表所示：

技术参数	MODEL							
8Ω 立体声输出功率	200W	350W	450W	650W	850W	1000W	1200W	1500W
4Ω 立体声输出功率	300W	525W	675W	1000W	1275W	1500W	1800W	2250W
8Ω 桥接输出功率	500W	900W	1125W	1625W	2125W	2500W	3000W	3750W
4Ω 桥接输出功率	650W	1100W	1400W	2000W	2600W	3200W	3800W	4600W
输入灵敏度	0.775V/1.0/1.4							
频率响应	20Hz-20KHz +0/-0.5dB							
输入阻抗	20KΩ (BALANCE)/10KΩ (UNBALANCE)							
失真度(THD+N)	<0.02%@8Ω 1KHz							
通道隔离度（1KHZ）	60dB(8Ω /1HZ)							
工作电压	220V/50HZ/60HZ							
转换速率	20us	20us	20us	20us	20us	20us	20us	20us
阻尼系数	250/8Ω	250/8Ω	250/8Ω	250/8Ω	250/8Ω	250/8Ω	250/8Ω	250/8Ω
电源保险	6A	8A	12A	15A	20A	25A	25A	25A
信噪比(A计全)	99dB	99dB	99dB	99dB	99dB	99dB	99dB	99dB
最大功率消耗	1000W	150W	2000W	2600W	3200W	3800W	4500W	5200W
毛重	16.00Kg	18.00Kg	21.00Kg	23.00Kg	26.00Kg	31.00Kg	34.00Kg	36.00Kg
体积	0.046M3				0.058M3			
包装尺寸	570mm×550mm×135mm					570mm×550mm×185mm		

技术参数如有更改，恕不另行通知。使用说明书中的内容，如有变动，恕不另行通知。

TWO CHANNEL PROFESSIONAL POWER AMPLIFIER