

USER'S MANUAL

PROFESSIONAL AUDIO POWER AMPLIFIER

If there are changes in technical parameters, please forgive me for not giving notice



CERTIFICATION

Model

QA

Date



Guangzhou Rui Feng Audio Technology Co.Ltd
CUSTOMER SERVICE HOTLINE:400-707-6800

Tel: 86-20 39280288

Fax: 86-20 39280238

Website: //www.lax-pro.com

Address: NO.10 Shilou Section, Shilian Road,
Shilou Town,Panyu District,
Guangzhou City,China 511447



Warranty Card

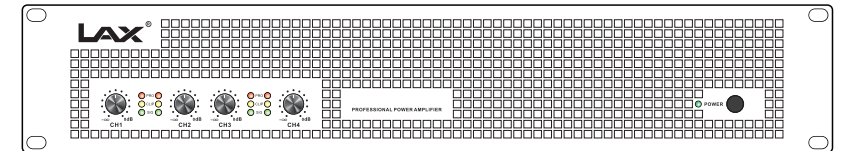
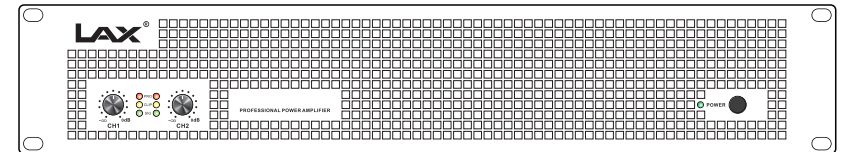
Customer Hot Line:
400-707-6800

LAX C.V. products which produced by RUIFENG Corporation(RUIFENG in brief) are ensured with highquality by strict quality inspection and control before delivery.our will provide warranty according terms mentioned in this warranty card. The warranty is void if warranty card or purchasing invoice is missed.The service is suggested to start by calling our service No.:400-707-680 in advance.

- 一、This warranty is valid within one year form date of sale (except some occasions specially mentioned as below),and covers for manufacturing defects and all matters concerning the workmanship of LAX&C.V. products.
- 二、Warranty period for particular item.
 - 1、offering one month free change service and one year warranty for amplifiers,mixers or processors.
 - 2、Offering three months warranty for which categorized as spare parts:
 - 1.)The voice coil and diaphragm of microphone.
 - 2.)The voice coil and diaphragm of speaker.
- C、RUIFENG willnot be responsible for any warranty if/for:
 - 1、 Non-this company proxy product;
 - 2、 Fake products;
 - 3、 Products without intact number or serial number is changed,deleted or transferred or has not been recorded in the company s record.
- D、Thewarranty becomes void if product problems result from:
 - 1、 improper operation and misuse(overloading or bumed with feedback);
 - 2、 Careless moving.
 - 3、 Terrible conditions(over-higt input voltage and humidity)
 - 4、 Irresisitible situation such as STORMor EARTH QUAKE...etc;
 - 5、 repaired or restructured by unofficial technicians outside RUIFENG ;
 - 6、 Failure assemble/installation from the instructions of manufacturer.
- E、 The warranty applies only on the cost of repair or replacement and does not include the relevant freight charges.
- F、 RUIFENG is not responsible for the loss caused by equipment or component damaging.
- G、 RUIFENG charges reasonably if warranty period expired.
- H、 The warranty card is subject to change without prior notice.

Purchaser Name:		Manufacturer:	
Dealer Name:		Dealer Address:	
		City State ZIP	
Purchase Date:		Model:	
(d) (m) (y)		Serial No.:	
		Invoice No.:	

Add:114 Yushan Rd,panyu,guangzhou,guangdong Province,china Tel:(86 20)84817168



PROFESSIONAL AUDIO POWER AMPLIFIER

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7. SERVICE

This unit has very sophisticated circuitry and should only be serviced by a fully trained technician. This is why each unit bears the following label:



To prevent electric shock, do not remove covers. No user serviceable parts inside. Refer servicing to a qualified technician.

7.1 Worldwide Service

Service may be obtained from your local authorized service center . To obtain service , simply present your sales receipt as proof of purchase along with the defective unit to an authorized service center. They will handle the necessary paperwork and repair. Remember to transport your unit in the original factory packaging.

1. When sending a LAX product to the authorized service center for service, be sure to fill out the service information form that is enclosed at the end of this manual and include it inside your unit's shipping pack. Do not send the service information form separately.
2. To ensure the safe transportation of your unit to the authorized service center, ship it in an original factory-packing container.
3. Do not ship the unit in any kind of rack. Ignoring this warning may result in extensive damage to the unit and the equipment rack. Accessories are not needed. Do not send the instruction manual, cables and any other hardware.



WEEE Mark

If you want to dispose of this product, do not mix with general household waste. There are separate collection systems for used electronic products in accordance with legislation under the WEEE Directive (Directive 2002/96/EC) and is effective only within the European Union.

6. APPENDIX: POWER AMPLIFIER PARAMETER TABLE

	□	□	□	□
THE OUTPUT POWER 1kHz, 1%THD+N				
STEREO 8Ω	4x550W	4x900W	4x1220W	2x1600W
STEREO 4Ω	4x750W	4x1350W	4x1700W	2x2500W
THE BRIDGE MODEL 8Ω	2x1500W	2x2700W	2x4000W	1x5000W
FREQUENCY RESPONSE (1W/8Ω)	20Hz-20kHz, +0/-1dB			
THD+N (Standard Measurement Conditions, 8Ω/1kHz)	≤0.1%			
DAMPING COEFFICIENT	≥250:1			
VOLTAGE GAIN RATED POWER@8Ω/0.775V	x85	x110	x121	x146
THE OUTPUT CATEGORY	Class H			
CONVERSION RATE	20V/μs			
SIGNAL TO NOISE RATIO	≥100dB			
INPUT SENSITIVITY	0.775V / 1.4V			
INPUT IMPEDANCE	20k ohms(Balanced) / 10k ohms (Unbalanced)			
INPUT COMMON-MODE REJECTION RATIO	≥60dB			
DEGREE OF SEPARATION	≥60dB			
INPUT CONNECTOR	Each channel is balanced along the way XLR			
OUTPUT CONNECTOR	Each channel 4-POLE Speakon			
POWER	220V-230V~ 50Hz			
DIMENSIONS (WXDXH)	88x483x426mm 3.5"x19"x16.7"			
NET WEIGHT	19kg	21kg	22kg	24kg
THE WARRANTY	1 year			

NOTE:

this power is measured using a 40mS pulse 1KHz sine wave at 1% total harmonic distortion, with any two channel outputs.

WARRANTY

THE WARRANTY

For a period of one (1) years from the date of delivery to the original purchaser (as shown on the original invoice or sales receipt), LAX INTERNATIONAL GROUP LIMITED of No.114 Yushan Rd,Panyu,Guangdong province,P.R.China (hereinafter"L X") warrants to the ORIGINAL OWNER of each new LAX SERIES product (provided it was purchased at authorized LAX Dealer) that it is free of defects in materials and workmanship and that each product will meet or exceed A all factory published specifications for each respective model. LAX agrees to repair or replace (at its discretion) all defective parts at no charge for labor or materials; subject to following provisions:

WARRANTY VIOLATIONS

LAX shall take no responsibility for repair or replacement as specified under this warranty, if the damaged product has been subject to misuse, accident, neglect or failure to comply with normal maintenance procedures; or if the serial number has been defaced, altered or removed. Nor will LAX accept responsibility for, or resulting from, improper alterations or unauthorized parts or repairs. This warranty does not cover any damage to speakers or any other consequential damage resulting from breach of any written or implied warranty.

LAX WARRANTY PROVISIONS

LAX will remedy any defect, regardless of the reason for failure (except as excluded) by repair, or replacement. LAX will remedy the defect and ship the product within a reasonable time after receipt of the defective product at an LAX Author ized Service Center.

TO OBTAIN WARRANTY SERVICE

In the event that an LAX product requires service, the Owner must contact LAX or an Authorized LAX Service Center to receive an R.A.N. (Return Authorization Number) and instructions on how to return the product to the LAX Authorized Service Center, or to the factory. LAX (or its Authorized Service Center) will initiate corrective repairs upon receipt of the returned product. Please save original carton and all the packing materials in case shipping is required. All products being returned to the factory or service center for repairs must be shipped pre-paid.

If the repairs made by LAX or the LAX Authorized Service Center are not satisfactory, Owner is instructed to give written notice to LAX. If the defect or malfunction remains after a reasonable amount of attempts by LAX to remedy the defect or malfunction, the Owner shall then have the option to elect either a refund or replacement of said LAX product free of charge. The refund shall be an amount equal to but not greater than the actual purchase price, not including any taxes, interest, insurance, closing costs and other finance charges (minus reasonable depreciation on the product) . If a refund is necessary, the Owner must make the defective or malfunctioning product available to LAX free and clear of all liens or other restrictions.

MODIFICATIONS OF EQUIPMENT

LAX reserves the right to modify or change equipment (in whole or part) at any time prior to delivery thereof, in order to include therein electrical or mechanical improvements deemed appropriate by LAX ; but without incurring any liability to modify or change any equipment previously delivered, or to supply new equipment in accordance with any earlier specific specifications.

DISCLAIMER OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

YOU, THE OWNER, ARE NOT ENTITLED TO RECOVER FROM LAX ANY INCIDENTAL DAMAGES RESULTING FROM ANY DEFECT IN THE LAX PRODUCT. THIS INCLUDES ANY DAMAGE TO ANOTHER PRODUCT OR PRODUCT RESULTING FROM SUCH A DEFECT.

WARRANTY ALTERATIONS

No person has the authority to enlarge, amend, or modify this Warranty. This Warranty is not extended by the length of time which the Owner is deprived of the use of product. Repairs and replacement parts provided pursuant to the Warranty shall carry only the non-expired portion of the Warranty.

THIS STATEMENT OF WARRANTY SUPERSEDES ALL OTHERS CONTAINED IN THIS MANUAL

The information furnished in this manual does not include all of the details of design and engineering of this particular product; not does it cover every possible application or situation concerning its usage, which may occur during the installation, operation or maintenance of said our product.

IMPORTANT
THE PRODUCT REQUIRES
CLASS 2 OUTPUT WIRING.



CAUTION

To Prevent Electric Shock, Do Not Remove Top Or Bottom Covers. No User Serviceable Parts Inside. Refer Servicing To Qualified Service Personnel. Disconnect Power Cord Before Removing Rear Panel Cover To Access Gainswitch.

Shock Hazard - Do Not Enter
 Choc Hasard - N°entrent
 Schocke Hazard - Test Nicht
 Betrete
 Urto Hazard - Do Non Entrano



WARNING

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE!

Magnetic Field

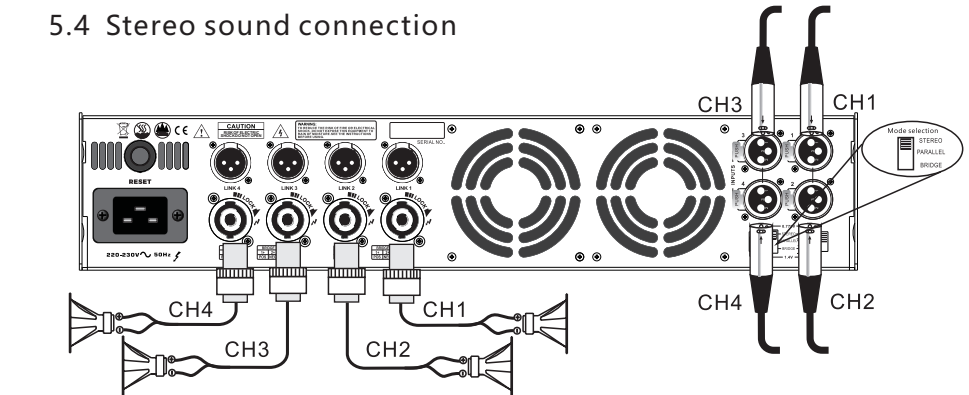
CAUTION: Do not locate sensitive high-gain equipment such as preamplifiers or tape decks directly above or below this unit. Because this amplifier has a high power density, it has a strong magnetic field which can induce hum into unshielded devices that are located nearby. This field is strongest just above and below the unit. If an equipment rack is used, we recommend locating the amplifier(s) at the bottom of the rack and the preamplifier or other sensitive equipment at the top.

The lightning bolt triangle is used alert the user to the risk of electric shock

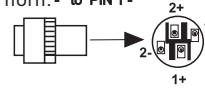
The exclamation point triangle is used to alert the user to important operating and/or maintenance instructions.

Printed on recycled paper.

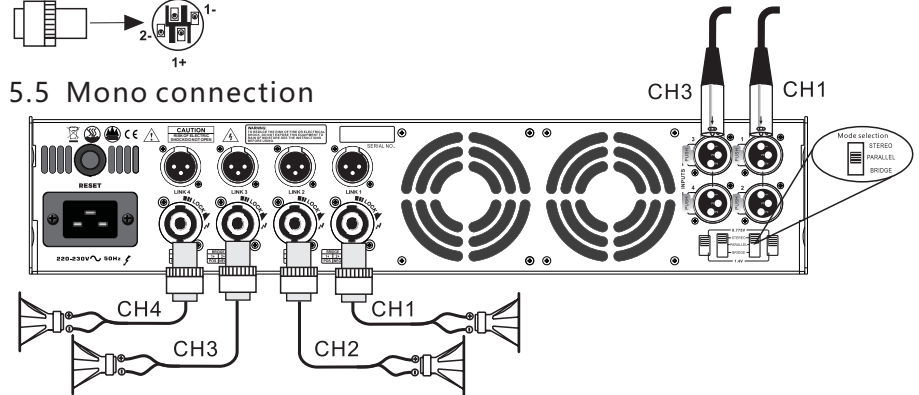
5.4 Stereo sound connection



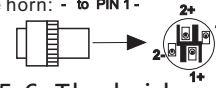
The horn: + to PIN 1+
 The horn: - to PIN 1-



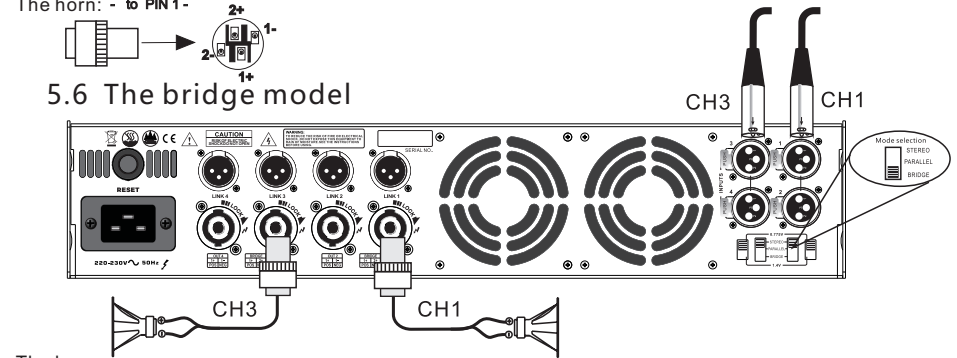
5.5 Mono connection



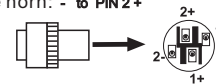
The horn: + to PIN 1+
 The horn: - to PIN 1-



5.6 The bridge model



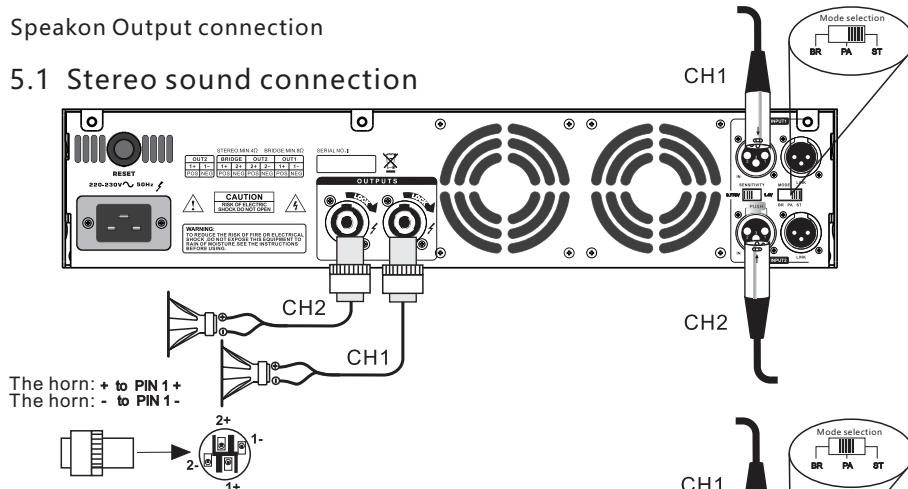
The horn: + to PIN 1+
 The horn: - to PIN 2+



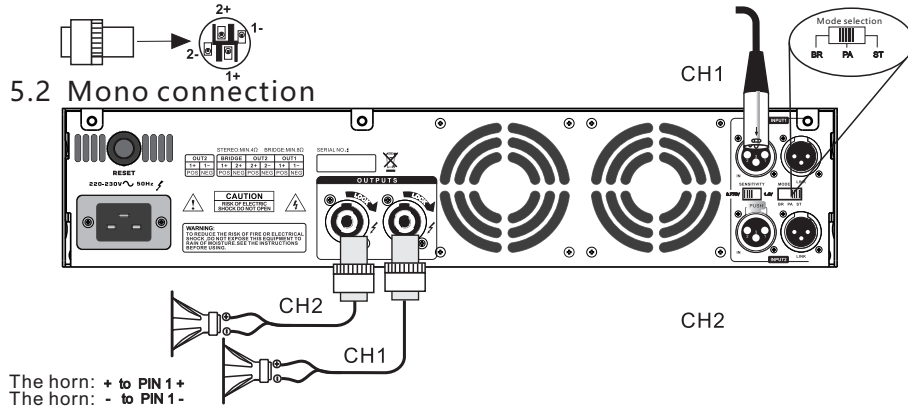
5. CONNECTION MODE

Speakon Output connection

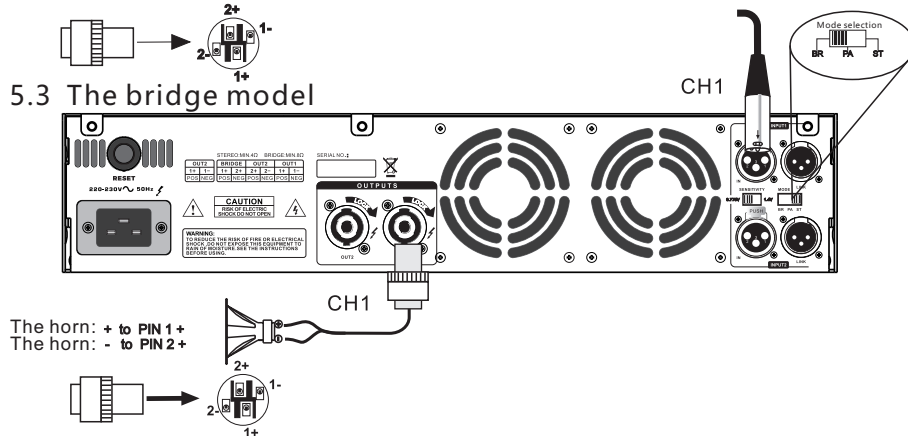
5.1 Stereo sound connection



5.2 Mono connection



5.3 The bridge model



IMPORT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. No jam to the ventilation system of the machine's back panel, pull out the power plug, before clean the machine, scrub it with dry cloths don't scrub it with corrosiveness liquor.
7. Do not block any of the ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus that produce heat.
9. Do not install the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wide than the other. A grounding-type plug has two blades and third grounding prong. The wide blade or the third prong is provided for your safety. When the provided plug does not fit into your outlet, consult an Electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched, particularly at plugs, Convenience at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use power cord from attachments/accessories specified by the manufacturer.
12. Use only with a cart, stand, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally.



The figure shows that the device is only suitable for safe use in areas with an altitude below 2000m.



The diagram indicates that the equipment is only suitable for safe use in non-tropical climates.

1. Welcome!

Thank you very much for choosing LAX professional amplifier! You now possess LAX most advanced power amplifier. Thus, we warmly welcome you in LAX family! Each LAX product has been meticulously designed, please read this manual carefully. It includes important information and help so that you will be able to use your new product in the best way.

1.1 Unpacking and Inspection

It's wise to thoroughly inspect each unit after the product has been removed from the packaging. Please note that you must file a claim directly with the freight company if any damage occurred.

1.2 Product Features

<1> E.I.A international standard (2U) 3.5" (88mm) professional power amplifier case.

<2> Power Supply Design:

Each amplifier includes two groups of independent logic high power supply. With logic power, the product can control and adjust the outputs and the operating voltage in real time. Also, it is able to realize real-time adaptation of the requirements of signals and loads so that in large load conditions, the amplifier can match the power and superheat will not occur.

<3> Signal Limiter:

Each input includes a voltage limiter, by detecting the output signals it controls the input signals and protects the speakers from overheating. In case of superheating of the amplifier, the product will control the input signals automatically to cool down and secure the system.

<4> Professional Speakon socket, suitable for engineering projects and mobile performances.

<5> Aim to be able to withstand long-term bumps, all the parts are specially reinforced.

<6> Integrated steel stamped by precision CNC lathes, possesses extremely robust structure, can endure great instantaneous pressure.

<7> Perfect protection:

This amplifier possesses different types of protections including: DC protection, internal fault protection, input overload protection, RFI filter and output short circuit protection. It does not match the load and high frequency overload protection, radiator and transformer over-temperature protection and input over-current protection (over-current protection switch)

<8> XLR balanced input and output.

<9> Cooling System :

Each channel has two groups of stepless speed fans as its own cooling system. Sealing air goes through the radiator to strengthen heat dissipation as well as avoid the pollution of dust and stage fog to the circuit board.

<10> Perfect Interface :

Signal Input : XLR, input/ parallel signals output

Speaker Output : professional Speakon socket

<11> It is guaranteed for one year.

Note: in order to ensure the best cooling conditions, please clean the power amplifier fan and cooling channel regularly (remove the blockage). In addition, please check whether the openings in front and back of the power amplifier have enough space to allow air circulation. If the power amplifier is installed on the rack, do not cover the rack with a door; The air must have no blocked circulation.

4.3 Input connection

This series of power amplifiers use the rear board input card to connect the input audio signal. There are two connection modes, balanced and unbalanced audio input signal connection. (the power amplifier uses the standard XLR input XLR base. The unused XLR base will be connected to the input end of another power amplifier through the connecting line).

4.4 Output connection

The output of the loudspeaker is connected with a professional output socket,

4.4.1 Mode selection

The three - speed dial selector switches are stereo, mono and bridge. The power amplifier is set in stereo mode.

4.4.2 Stereo mode

In stereo mode, two/four channels work independently. Level adjusting knobs control their respective output levels. A minimum load impedance of 4 ohms per channel is recommended for stereo operation.

4.4.3 Mono mode

When set in mono mode, the signal is input from channel 1 and the output is output from channel 1 and channel 2. The signal is input from channel 3, and the output is output from channels 3 and 4.

4.4.4 Bridge Mode

In bridge mode, the power amplifier can provide more power. The signal is input only from channel 1, and the output is output from channel 1. The signal is input from channel 3 only, and the output is output from channel 3. The output level can be increased or decreased by rotating the potentiometer.

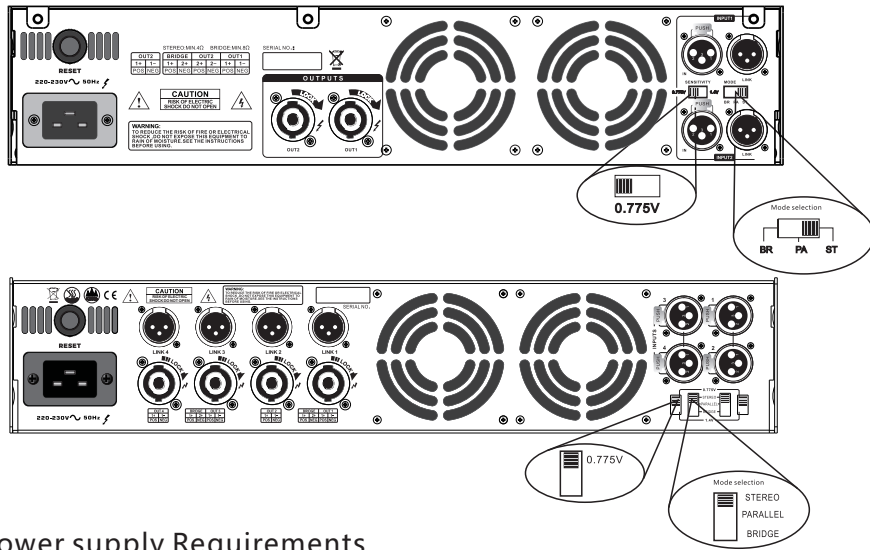
NOTE:

When the power amplifier is operating in bridge mode, the output is connected to an oscilloscope or other detection device. It is possible to damage the power amplifier and detection equipment. An impedance of not less than 8 OHMs is recommended for bridging.

SPECIAL NOTE:

Any output end of the loudspeaker can not be grounded.

4. FACTORY SETTINGS



4.1 Power supply Requirements

Each type of power amplifier has a different power output. Please see the appendix for details. Make sure the grid voltage is correct before connecting the power amplifier. Connecting the power amplifier to a mismatched AC voltage will easily cause damage to the power amplifier.

External power supply requirements are as follows:

220V~230V~50Hz

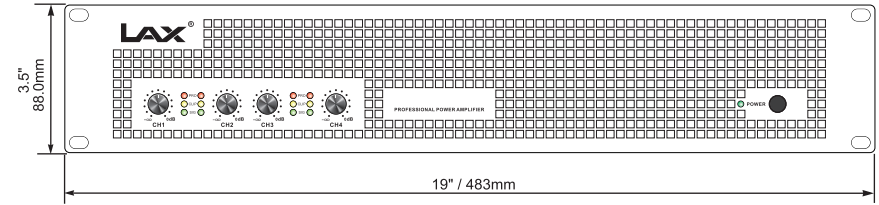
Note: Disconnect the power amplifier from the external power supply before connecting the audio. For extra protection, the level adjustment knob should be turned at the minimum position.

4.2 Cooling systems and requirements

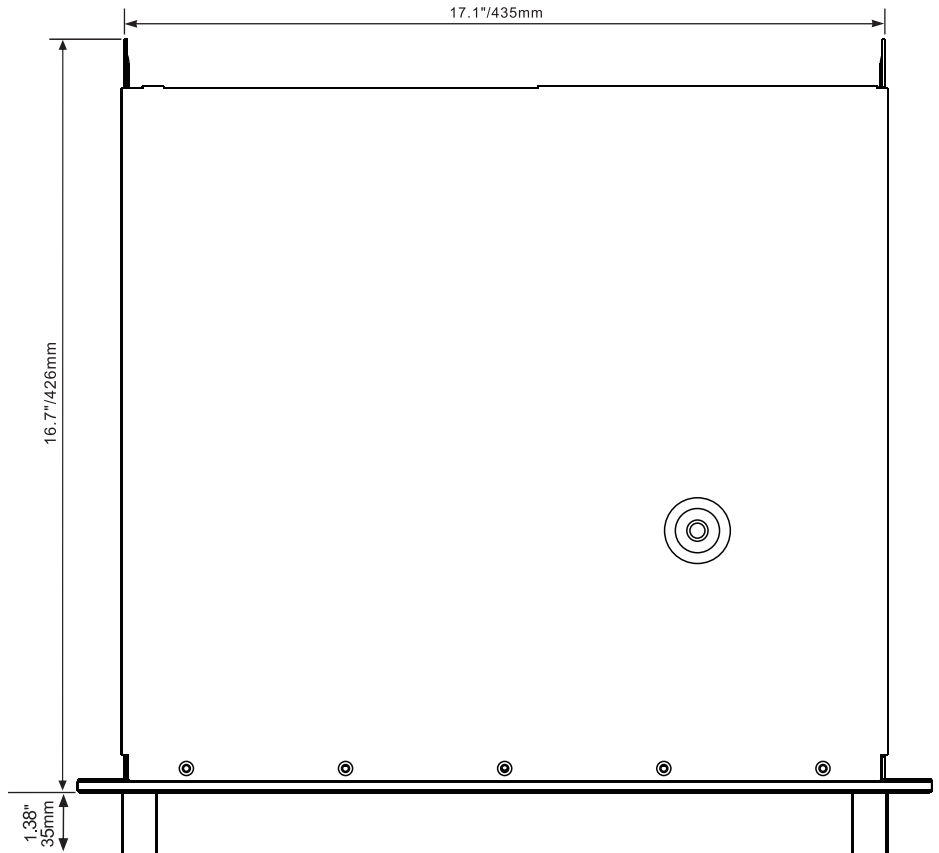
This series of power amplifiers use an independent sealed tunnel and forced air cooling system. The fan is used together with the dense tooth aluminum heat dissipation device to achieve rapid and consistent heat dissipation effect. The air flows through the heat sink in the radiator channel (reducing the temperature of the power tube), and then flows out through the opening of the rear panel. The "intelligent" variable speed DC fan is controlled by the heat sensitive circuit of the radiator. When the power amplifier is turned on, the fan "increases the speed" for a short time and then slows down; This indicates that the thermal circuit is working normally. The fan speed will vary with the temperature of the radiator. Control the noise to a minimum. Under extreme heat load, the fan will force a very large amount of air through the radiator. If the radiator temperature exceeds the maximum allowable temperature, the power amplifier will disconnect the load output.

2. AMPLIFIER VIEWS

2.1 Front View

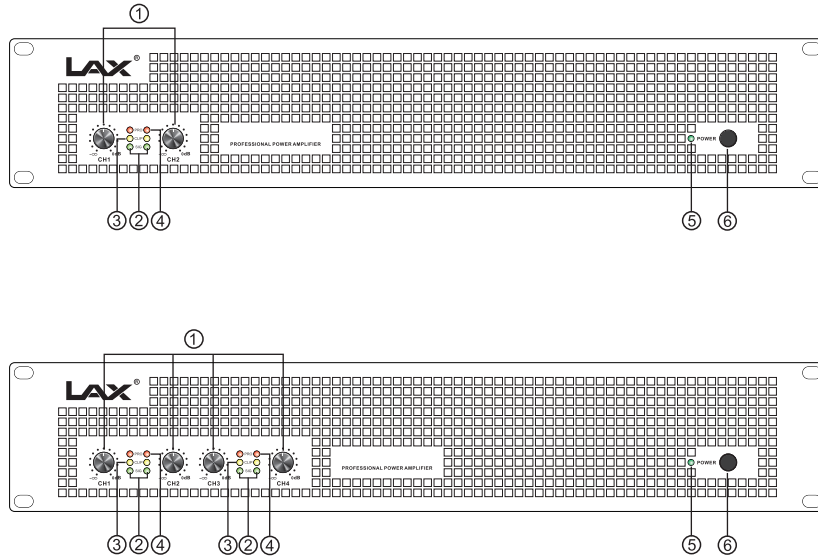


2.2 Rear Panel





3. MAIN OPERATION KEYS AND FUNCTIONS

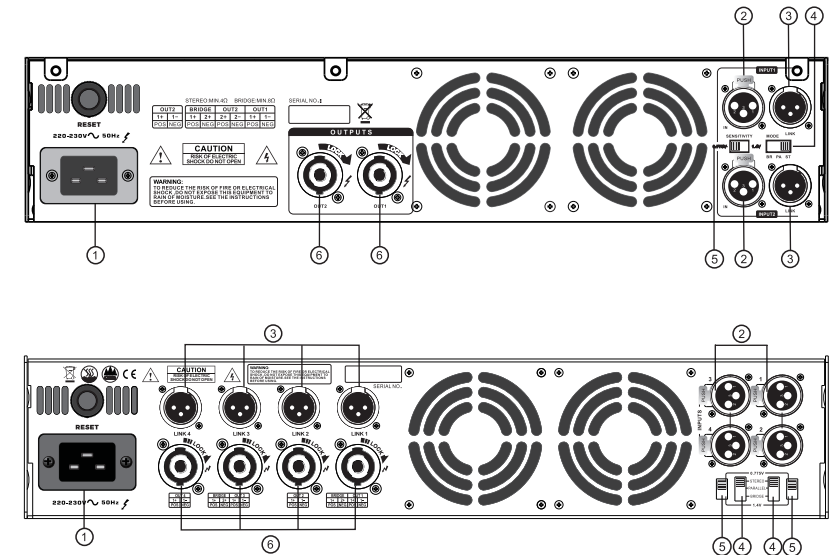
3.1 Front View



3.2 Rear Panel

- 1, Volume knob: can adjust the volume.
- 2, signal lamp: signal light bright display output end audio signal.
- 3, chipper light: chipper light light shows that the output signal has been overloaded, please turn low volume.
- 4, protection light: when the system detects a large infrasonic wave caused by power amplifier overload or output end has DC output or over temperature will close the output module, protect the power amplifier, protection light.
- 5, power supply light: power supply light to show that the power amplifier has been energized.
- 6, power switch: power switch function is to open and close the power amplifier.  Press the power on state,  and press the power off state.

3.1 Rear Panel



1. Power socket.
2. Input cannon block: balanced XLR cannon input impedance is 20K Ω , unbalanced XLR cannon input impedance is 10K Ω . Pin definitions 1: ground, 2: signal +, 3: signal -.
3. Output cannon block: The signal is directly output through Cannon block.
- 4, mode conversion switch: by using this switch you can choose the power amplifier to work in bridge mode, stereo mode or mono mode.
- 5, input sensitivity selector switch: Use this switch can choose sensitivity 0.775V or 1.4V according to different needs, better match with other equipment.
- 6, professional Speakon speaker output socket.