

USER MANUAL



Thank you very much for choosing this professional power amplifier.
Please read this handbook page by page carefully, in order to make the best of it.
The handbook can help you timely when you encounter any problem.

Catelog

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SAFE USE OF EQUIPMENT



• ABOUT THE SAFETY SYMBOLS



The lightning flash with arrowhead symbol, within equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

INSTRUCTIONS FOR THE PREVENTION OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

About WARNING and CAUTION Notices

WARNING	Used for instructions intended to alert the user to the risk of death or severe injury should the unit be used improperly.
CAUTION	Used for instructions intended to alert the user to the risk of injury or material damage should the unit be used improperly. Material damage refers to damage or other adverse effects caused with respect to the home and all its furnishings, as well to domestic animals or pets.

About the Symbols

	The symbol alerts the user to important instructions or warnings. The specific meaning of the symbol is determined by the design contained within the triangle. In the case of the symbol at left, it is used for general cautions, warnings, or alerts to danger.
	The symbol alerts the user to items that must never be carried out (are forbidden). The specific thing that must not be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the unit must never be disassembled.
	The symbol alerts the user to things that must be carried out. The specific thing that must be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the power supply cable plug must be unplugged from the outlet.

Safety Alert

- The ventilation should not be impeded by covering the ventilation openings with items, such as newspapers.
- No naked flame sources, such as lighted candles, should be placed on the apparatus.
- Where the mains plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.

----- ALWAYS OBSERVE THE FOLLOWING -----

WARNING

Do not disassemble or modify by yourself

Do not open (or modify in any way) the unit or its power supply cable.



Do not repair or replace parts by yourself

Do not attempt to repair the unit, or replace parts within it (except when this manual provides specific instructions directing you to do so). Refer all servicing to your retailer.



Do not use or store in the following types of locations

- Subject to temperature extremes (e.g., direct sunlight in an enclosed vehicle, near a heating duct, on top of heat-generating equipment); or are
- Damp (e.g., baths, washrooms, on wet floors); or are
- Exposed to steam or smoke; or are
- Subject to salt exposure; or are
- Humid; or are
- Exposed to rain; or are
- Dusty or sandy; or are
- Subject to high levels of vibration and shakiness; or are
- In a place near cooking utensils where the unit may be subjected to soot, smoke, fume or heat.



Do not place in an unstable location

Make sure you always have the unit placed so it is level and sure to remain stable. Never place it on stands that could wobble, or on inclined surfaces.



Use only the supplied power cord

Use only the attached power-supply cord. Also, the supplied power cord must not be used with any other device.



Do not bend the power cord or place heavy objects on it

Do not excessively twist or bend the power cord, nor place heavy objects on it. Doing so can damage the cord, producing severed elements and short circuits. Damaged cords are fire and shock hazards!



Avoid extended use in high volume

The sound pressure level produced by this equipment is used together with speaker would probably cause permanent hearing loss, please don't operate this equipment under high volume level for a long time. If you feel hearing loss or tinnitus, you should immediately stop using the equipment and see a doctor quickly.



Dangerous voltage

The lightning flash with arrowhead symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



SAFE USE OF EQUIPMENT

WARNING

Don't allow foreign objects or liquids to enter unit; never place containers with liquid on unit

Do not place containers containing liquid on this product. Never allow foreign objects (e.g., flammable objects, coins, wires) or liquids (e.g., water or juice) to enter this product. Doing so may cause short circuits, faulty operation, or other malfunctions.



Turn off the unit if an abnormality or malfunction occurs

Immediately turn the unit off, remove the power supply cable from the outlet, and request servicing by your retailer:

- The power supply cord, or the plug has been damaged; or
- If smoke or unusual odor occurs; or
- Objects have fallen into, or liquid has been spilled onto the unit; or
- The unit has been exposed to rain (or otherwise has become wet); or
- The unit does not appear to operate normally or exhibits a marked change in performance.



Adults must provide supervision in places where children are present

When using the unit in locations where children are present, be careful so no mishandling of the unit can take place. An adult should always be on hand to provide supervision and guidance.



Do not drop or subject to strong impact

Protect the unit from strong impact. (Do not drop it!)



WARNING

Do not share an outlet with an unreasonable number of other devices

Do not force the unit's power-supply cord to share an outlet with an unreasonable number of other devices. Be especially careful when using extension cords-the total power used by all devices you have connected to the extension cord's outlet must never exceed the power rating (watts/amperes) for the extension cord. Excessive loads can cause the insulation on the cord to heat up and eventually melt through.



Check the voltage of your local mains supply

The power cord should not be connected to a direct current (DC).



The apparatus shall be connected to a MAINS socket outlet with a protective earthing connection.



The external wiring connected to Speaker terminals requires installation by an instructed person or the use of ready made leads or cords.



Use this unit at an elevation lower than 2,000 meters.



CAUTION

Place in a well ventilated location

The unit should be located so their location or position does not interfere with their proper ventilation.



Manage cables for safety

Try to prevent cords and cables from becoming entangled. Also, all cords and cables should be placed so they are out of the reach of children.



Avoid climbing on top of the unit, or placing heavy objects on it

Never climb on top of, nor place heavy objects on the unit.



CAUTION

Do not connect or disconnect the power cord with wet hands

Never handle the power supply cable or its plugs with wet hands when plugging into, or unplugging from, an outlet or this unit.



Disconnect everything before moving the unit

Before moving the unit, disconnect the power supply cable and all cords coming from external devices.



Unplug the power cord from the outlet before cleaning

Before cleaning the unit, turn it off and unplug the power supply cable from the outlet.



Unplug the power cord from the outlet before repairing

Before repairing the unit, turn it off and unplug the power supply cable from the outlet.



Keep small items out of the reach of children

To prevent accidental ingestion, always keep them out of the reach of small children.



When unusing the unit for an extended period of time

When you leave your home for a long period of time, turn OFF the power and remove the power supply cable from the AC outlet. This will prevent from unexpected accident and fire.



The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.



If the power plug or appliance coupler as a disconnect device, the disconnect device should maintain a convenient operation.



IMPORTANT NOTES, MAIN FEATURES

Important notes

1. Power Supply

- ◆ Do not connect this unit to same electrical outlet that is being used by an electrical appliance that is controlled by an inverter or a motor (such as a refrigerator, washing machine, microwave oven, or air conditioner). Depending on the way in which the electrical appliance is used, power supply noise may cause this unit to malfunction or may produce audible noise. If it is not practical to use a separate electrical outlet, connect a power supply noise filter between this unit and the electrical outlet.
- ◆ To prevent malfunction and equipment failure, always make sure to turn off the power on all your equipment before you make any connections.

2. Placement

- ◆ Using the unit near other equipment containing large power transformers) may induce hum. To alleviate the problem, change the orientation of this unit; or move it farther away from the source of interference.
- ◆ This device may interfere with radio and television reception. Do not use this device in the vicinity of such receivers.
- ◆ Noise may be produced if wireless communications devices, such as cell phones, are operated in the vicinity of this unit. Such noise could occur when receiving or initiating a call, or while conversing. Should you experience such problems, you should relocate such wireless devices so they are at a greater distance from this unit, or switch them off.
- ◆ Do not expose the unit to direct sunlight, place it near devices that radiate heat, leave it inside an enclosed vehicle, or otherwise subject it to temperature extremes. Excessive heat can deform or discolor the unit.
- ◆ When moved from one location to another where the temperature and/or humidity is very different, water droplets (condensation) may form inside the unit. Damage or malfunction may result if you attempt to use the unit in this condition. Therefore, before using the unit, you must allow it to stand for several hours, until the condensation has completely evaporated.
- ◆ Depending on the material and temperature of the surface on which you place the unit, its rubber feet may discolor or mar the surface. You can place a piece of felt or cloth under the rubber feet to prevent this from happening. If you do so, please make sure that the unit will not slip or move accidentally.
- ◆ Do not put anything that contains water on this unit. Also, avoid the use of insecticides, perfumes, alcohol, nail polish, spray cans, etc., near the unit. Swiftly wipe away any liquid that spills on the unit using a dry, soft cloth.

3. Maintenance

- ◆ For everyday cleaning wipe the unit with a soft, dry cloth or one that has been slightly dampened with water. To remove stubborn dirt, use a cloth impregnated with a mild, non-abrasive detergent. Afterwards, be sure to wipe the unit thoroughly with a soft, dry cloth.
- ◆ Never use benzine, thinners, alcohol or solvents of any kind, to avoid the possibility of discoloration and/or deformation.

4. Any other notes before using

- ◆ Use a reasonable amount of care when using the unit's buttons, sliders, or other controls; and when using its jacks and connectors. Rough handling can lead to malfunctions.
- ◆ Never strike or apply strong pressure to the display.
- ◆ When disconnecting all cables, grasp the connector itself—never pull on the cable. This way you will avoid causing shorts, or damage to the cable's internal elements.
- ◆ When you need to transport the unit, package it in the box (including padding) that it came in, if possible. Otherwise, you will need to use equivalent packaging materials.
- ◆ Some connection cables contain resistors. Do not use cables that incorporate resistors for connecting to this unit. The use of such cables can cause the sound level to be extremely low, or impossible to hear. For information on cable specifications, contact the manufacturer of the cable.

5. Notes before connection

- ◆ Please cut down the power when connecting.
- ◆ Input and output connector on the amplifier, black stands for cathode. Red stands for anode. Please confirm that the connection of the cathode and anode is right and fastness.
- ◆ Fix-up the connector. The ill connection may lead no voice output, or noise.
- ◆ Please hold the connector of the cable when pull out the power connector from the power socket.

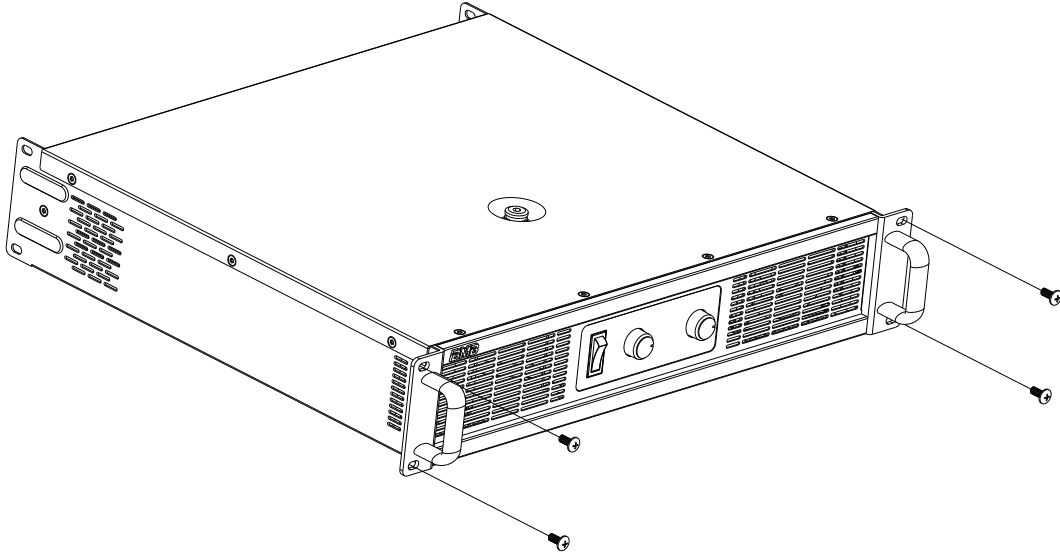
Main characteristic

- ◆ 2 output modes: stereo, bridge.
- ◆ 2U body is easy to install.
- ◆ Balanced XLR input, low distortion
- ◆ Perfect protection circuit to effectively reduce the damage rate caused by improper use.
- ◆ The maximum volume of each channel is set independently.
- ◆ LED light instructions, simple and clear.

EQUIPMENT INSTALLATION

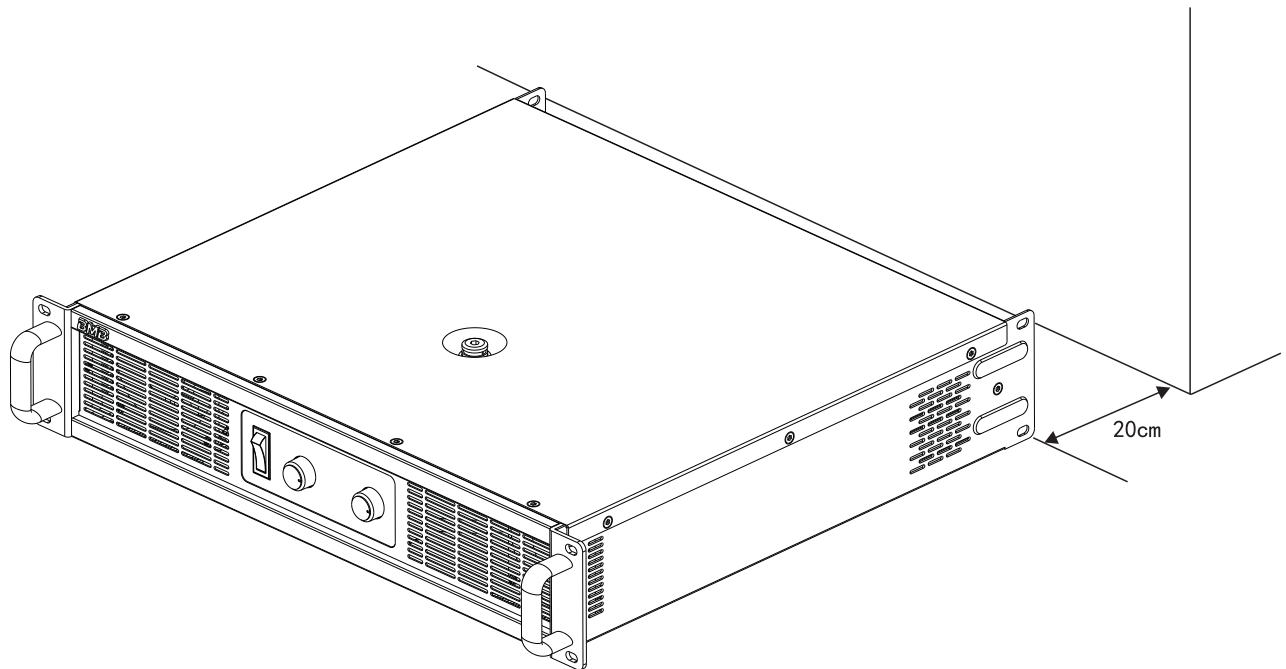
Equipment cabinet installation

Lift the power amplifier handle and place the power in the cabinet. After the stability is established, screw the screw holes on the wrists on both sides of the front panel of the amplifier and the corresponding screw holes on the cabinet to fix the power amplifier on the cabinet (see the following figure).

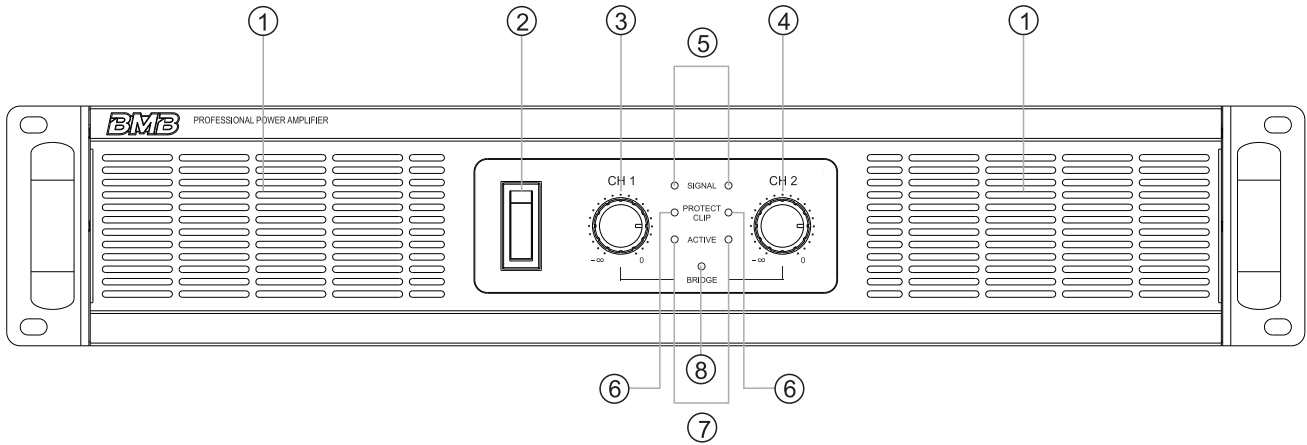


Placement position

In order to ensure the normal ventilation of the air outlet of the cooling fan, place the amplifier in a ventilated environment. The front and rear boards of the amplifier should be at least 15-20cm away from the wall or other objects.



FRONT-PANEL INTRODUCTION



① Thermal grill

The air inlet required for heat dissipation of the amplifier should not be blocked.

Note: It is not possible to reach into the grille.

② POWER switch

Press to turn on the power, press to cut off the power.

③ CH1 volume knob

Clockwise rotation, volume increase; counterclockwise rotation, volume reduction. Use this knob to adjust the volume under bridge function.

④ CH2 volume knob

Rotate clockwise to increase volume; counterclockwise to decrease volume. The knob is invalid under bridge function, please turn to the minimum volume.

⑤ SIGNAL light

Audio signal input indicator.

⑥ PROTECT/CLIP light

1. Lights up after power on for 3-5 seconds.

2. When the signal light flashes, it means that the output signal is distorted and the volume should be turned down.

Note: Do not use for a long period of time when the light is blinking or long-lit.

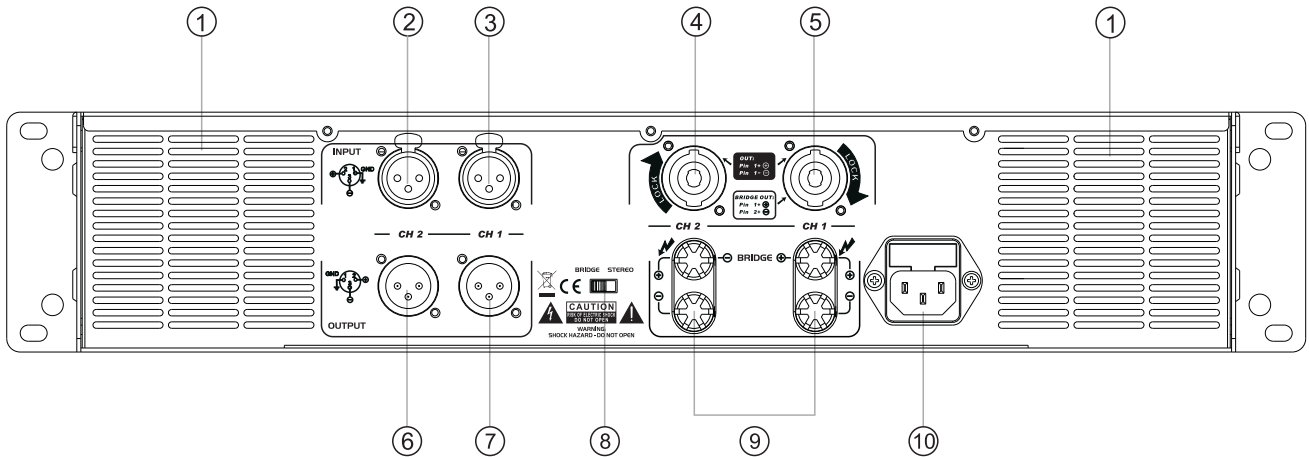
⑦ ACTIVE light

Power amplifier normal work indicator.

⑧ BRIDGE light

Bridge indicator lights when the amplifier is using the bridging function.

REAR-PANEL INTRODUCTION



① Vents

Cooling fan outlet (Do not block and stick in objects).

② CH2 Balanced signal input interface (Cannon female interface)

Connects input right channel sound signal in STEREO stereo mode.

③ CH1 Balanced signal input interface (Cannon female interface)

Connects input left channel sound signal in STEREO stereo mode.
BRIDGE bridge mode, connect input mono sound signal.

④ CH2 NL4 SPEAKON output interface(1+, 1-)

CH2 amplified signal output interface, connect speakers or speakers.

⑤ CH1 NL4 SPEAKON output interface(1+, 1-)

CH1 amplified signal output interface, connect speakers or speakers.

Note: The impedance of CH1 channel and CH2 channel NL4 SPEAKON output interface to speaker or speaker is 4-16Ω in STEREO(1+,1-) mode and 8-16Ω in BRIGE(1+,2+) mode.

⑥ CH2 Balanced signal input interface (Cannon female interface)

This interface directly outputs the CH2 channel input signal without power amplification and is used for the serial connection of multiple power amplifiers.

⑦ CH1 Direct signal output interface (Cannon male interface)

This interface will output the amplifier's CH1 channel input signal without power amplification, and it can be used in series connection of multiple amplifiers.

⑧ Channel mode switch

You can choose to switch to either STEREO or BRIDGE. (Specific operations will be mentioned later)

Note: The STEREO/BRIDGE switch can only be adjusted when the unit is switched off; non-professionals must not use BRIDGE bridge mode.

⑨ CH1, CH2 Terminal output interface

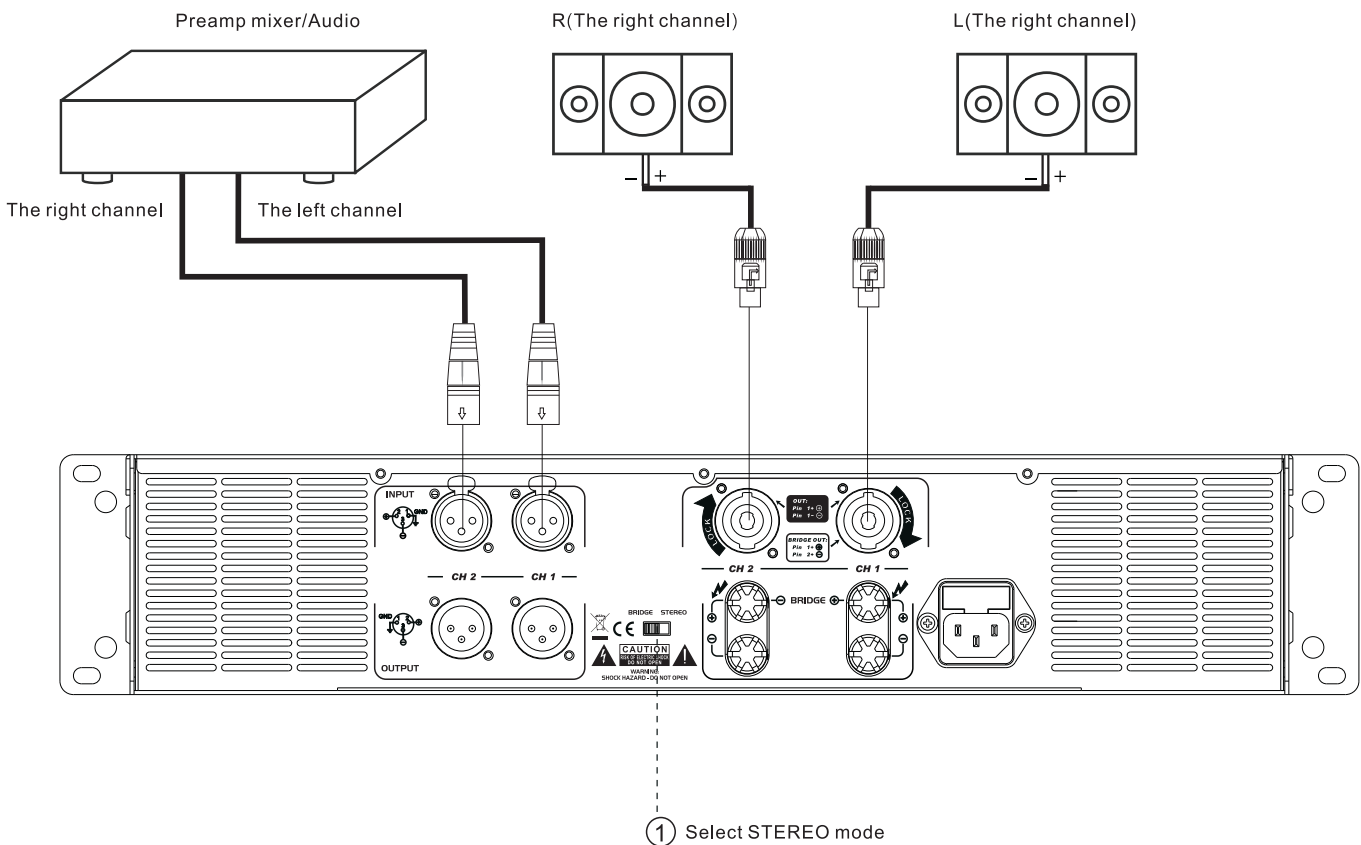
The terminal output connector of the channel (parallel to the SPEAKON connector) has a positive terminal (red) and a negative terminal (black). The bridge mode is connected to the CH1 and CH2 terminals.

⑩ AC power input interface (220-240V 50/60Hz)

SYSTEM CONNECTION

The stereo

The stereo amplifiers, is recorded audio stereo signal source by the front-end processor, power amplifier, speakers and other equipment of the sound system for the replay, to a certain extent, reducing the dimensional feeling and administrative levels of sound.



The stereo connection method is:

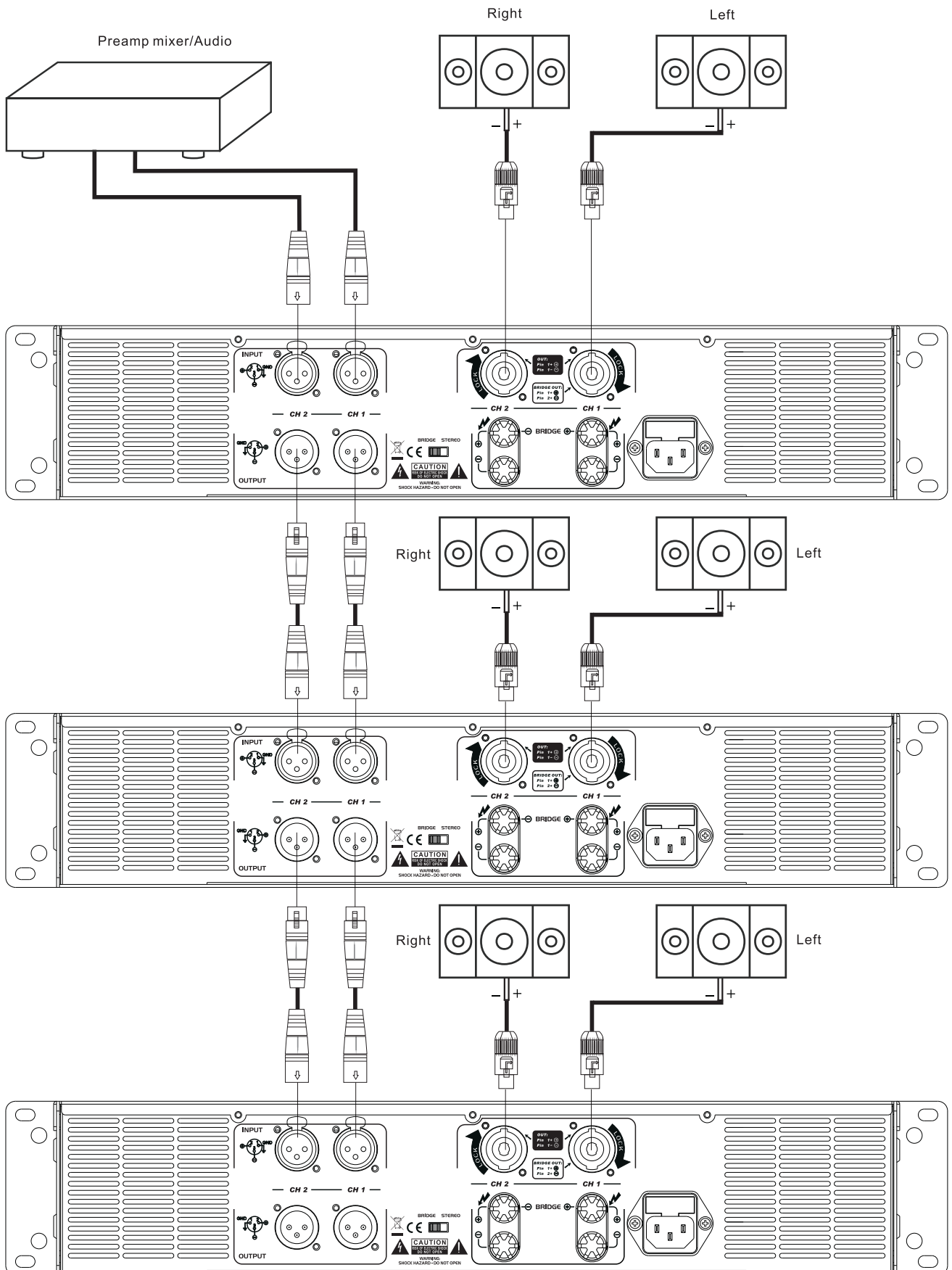
When the channel signal mode switch on the rear panel of the amplifier is in STEREO file (1 in the figure above), that is when the amplifier is in stereo mode, the XLR connector is used to connect the left (L) channel of the stereo audio source to the amplifier. CH1 channel input interface, connecting the right (R) channel of the stereo source to the CH2 channel input of the amplifier.

Use the NL4 SPEAKON speaker cable to connect the amplifier's CH1 channel NL4 SPEAKON output connector to the left channel speaker; use the NL4 SPEAKON speaker cable to connect the amplifier's CH2 channel NL4 SPEAKON output connector to the right channel speaker (as shown above).

Note: Please turn the potentiometer counterclockwise to the minimum volume before turning on/off the wire, or shut down the operation.

SYSTEM CONNECTION

Multiple amplifiers connection



SYSTEM CONNECTION

Other connection methods (bridging use)

Bridging Help

When used in bridging the Amplifier, as shown:

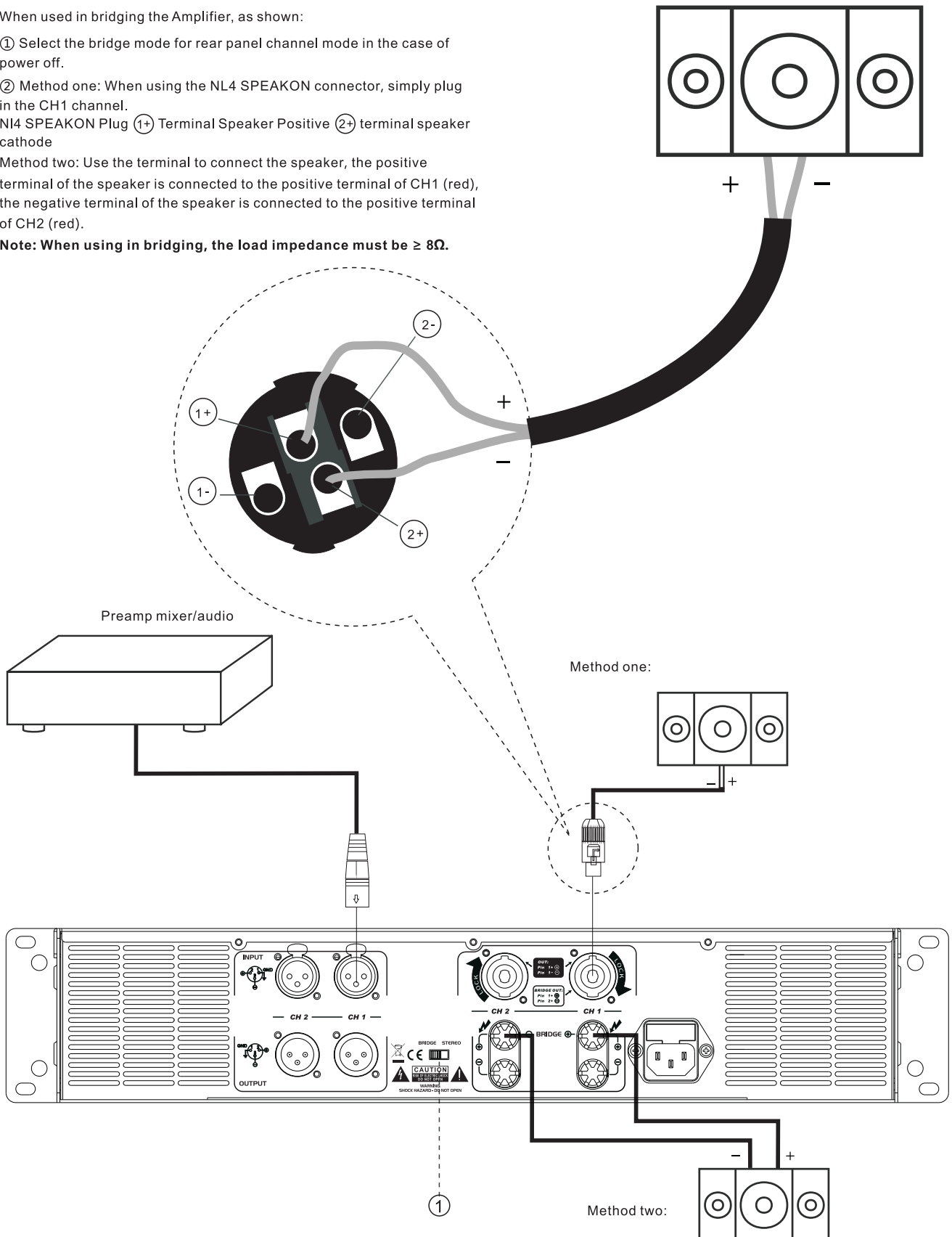
① Select the bridge mode for rear panel channel mode in the case of power off.

② Method one: When using the NL4 SPEAKON connector, simply plug in the CH1 channel.

NL4 SPEAKON Plug ①+ Terminal Speaker Positive ②- terminal speaker cathode

Method two: Use the terminal to connect the speaker, the positive terminal of the speaker is connected to the positive terminal of CH1 (red), the negative terminal of the speaker is connected to the positive terminal of CH2 (red).

Note: When using in bridging, the load impedance must be $\geq 8\Omega$.



SYSTEM CONNECTION CONSIDERATIONS

1. XLR interface connections

XLR male plug can be inserted into the XLR female interface of device directly. When unplugged, you need to press the PUSH switch of XLR female connectors and you can unplug the XLR male plug; XLR female plug can be inserted into the XLR male interface of device directly. The plug switch will automatically lock; When unplugged, you need to press the female plug switch and you can unplug the XLR female plug.

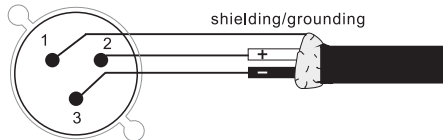
XLR terminal connection method

Balance connection : Terminal-1 blocked or grounded, Terminal-2 connect the anode, Terminal-3 connect the cathode

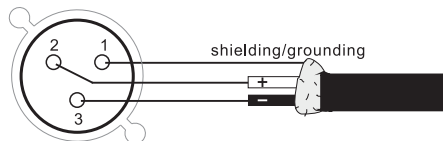
Unbalance connection: Terminal-1&3 blocked or grounded, terminal-2 connect the anode(like the following picture).

① Balance the connection

Cannon male

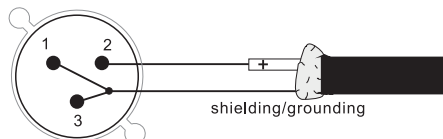


Cannon female

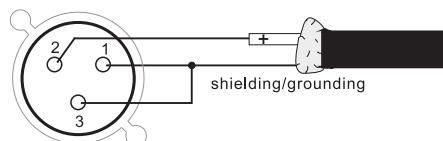


② Unbalance the connection

Cannon male



Cannon female

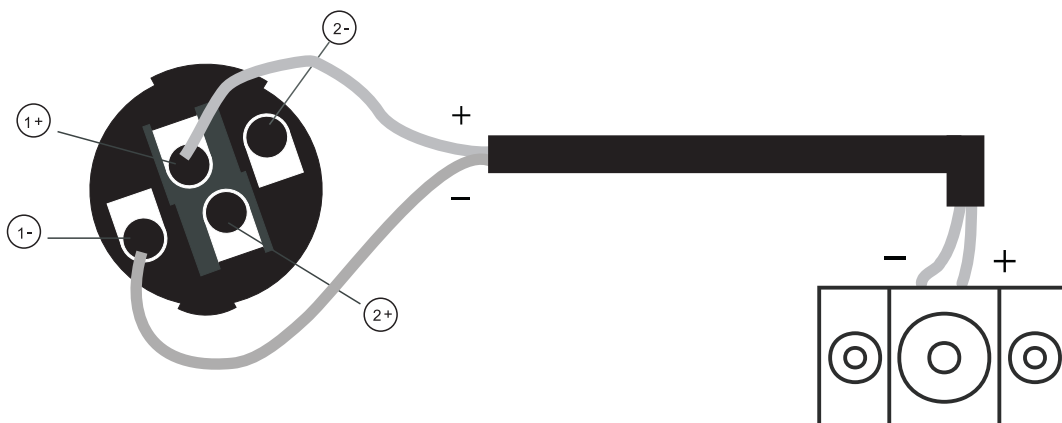


2. NL4 SPEAKON interface connection

The NL4 SPEAKON plug socket after insert clockwise in position, NL4 SPEAKON plug switch will automatically lock;

When you push down the NL4 SPEAKON plug switch, NL4 SPEAKON plug can be pulled out after counterclockwise rotation.

When the amplifier is in STEREO mode, SPEAKON connection method for (+) terminal of plug connect speakers anode, (-) terminals connect speaker cathode (as picture-1 showing); When the amplifier in BRIDGE mode, SPEAKON connection method for the (+) terminal of plug connect speakers the anode, (+) terminal connect speakers cathode(as picture-2 showing). (see the BRIDGE method)



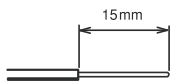
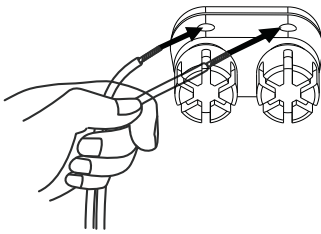
SYSTEM CONNECTION CONSIDERATIONS

3. The use of the parallel interface and terminal connection

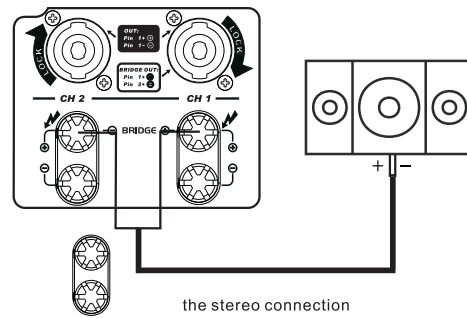
The terminal is parallel to the NI4 SPEAKON interface. When use terminal connection, you can choose one kind to proceed connection between the equipment and speaker or speakers.

As shown in figure, unscrewed the terminal, insert one end of the stripped speaker wire into the wire hole, then tighten the terminal.

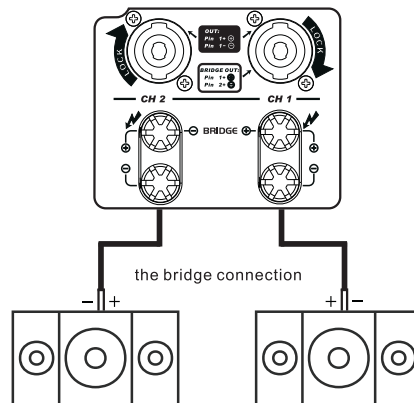
When use terminal connections, bridge connection and stereo connection method were shown as the picture on the right.



Before connection, first stripped wire ends with pliers sheath length 15mm.



the stereo connection

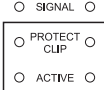
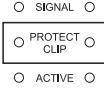


the bridge connection

4. The correct switching devices

After the system is properly connected, please switch machine in normal order when using. Namely along the signal previous to back stage one by one to open the device level, against the direction of the signal from the rear stage one by one to turn off the device.

TROUBLESHOOTING

Fault	Possible Causes	Workaround
Power is turned on but no sound	• Volume knob may be set at the minimum	• Adjusted to the appropriate volume
	• Speaker wires off	• Connect the speaker wires correctly
	• Speaker wire breakage	• Repair wire breakage
	• speaker wires is shorted	• Repair short circuit
	• Should be connected equipment off	• Devices are properly connected
	• Mode has been selected BRIDGE	• Re-select the stereo mode
	• Overcurrent protection causes the	• Power off, reboot
	• No signal input	• Check and connect the audio equipment
Abnormal sound speaker or speakers	• Left and right channels reversed	• Left and right channels properly connected
Only one speaker with sound	• A channel volume is too small	• Increase the volume of the
 <p>PROTECT/CLIP, ACTIVE Long light, amplifier no output</p>	• Short circuit protection amplifier or amplifier temperature is too high for temperature protection	• Turn the knob to a minimum and restart the machine. If the fault is not eliminated, it may be temperature protection. The amplifier needs to be turned on for a period of time and will return to normal after a few minutes.
 <p>Only PROTECT/CLIP light is on, other lights are off, power amplifier has no output</p>	• Amplifier transformer protection	• Rest automatically after standing for 1 hour

AUTOMATIC POWER AMPLIFIER PROTECTION

1. Short circuit protection

The amplifier detects the real-time current through the sampling resistor. Take the CH1 channel as an example. When the CH1 channel of the amplifier is short-circuited or current overloaded, the amplifier will be automatically protected when the short-circuit or over-current occurs. The output will be cut off and the PROTECT/CLIP indicator will light up. The protection will not be automatically restored. After the fault is cleared, the power amplifier will return to normal. The same applies to the CH2 channel.

2. DC protection

When the power amplifier CH1 channel outputs DC power, the amplifier will perform DC protection and cut off the output. At the same time, the PROTECT/CLIP light will turn on. This protection will not recover automatically. After the fault is removed, the power amplifier will return to normal. The same applies to the CH2 channel.

SALES SERVICE

- (1) this device as it is found to have defects, your local dealers will charge a fee for you to repair and replace defective parts according to your request.
- (2) When you ask your local dealer for repairs before, first check the "Troubleshooting" chapter, and further examination.

Dealers Things to know:

If your customer put forward service requests , first check the following:

- determine the details of the fault
- check all wires and connection
- Whether the source of the device connected to this unit is normal
- will remind customers operating system considerations and use regulations

USER STYLE

- Although Kara OK builds character on the assumption that the correct use of time and place, otherwise, may sometimes disturb others. Please imagine for your neighbors.
- If you drunkenly singing, karaoke OK the volume may be too high. Even small voice will become harsh, especially in the silence of the night. Therefore, please pay special attention to volume levels, especially at night. To prevent sound leakage, you better please close the window, note that the user grace, in order to maintain a comfortable living environment.



INTELLECTUAL PROPERTY RIGHTS

- According to intellectual property law, broadcasting, music source, such as music cassettes, videotapes, CD, etc., are to be protected.
- In addition to their own enjoyment, but for commercial purposes, distribute or lease the music source, or sell to others, are required to obtain consent of the owner of intellectual property.
- The device is in accordance with the relevant product safety regulations, with a harmless material.

For China

Hazardous substances contained in the product description

The information describes in respect of the company's products contained in the specific hazardous substances and their safety. This information applies to March 1, 2007 after the products manufactured by the Company.

Environmental and practical terms



This flag applies to domestic sales in China's electronic information products, which means that environmental protection use period of years. The so-called environmentally friendly and practical terms is defined from the date of manufacture of the prescribed period, the product will not contain harmful substances cause environmental pollution, not to persons, property caused serious adverse effects. Environment-friendly products and practical terms only follow instructions, the proper use of the product under conditions to be effective. Improper useful, will result in the risk of leakage of harmful substances.

Name and content of product of toxic and hazardous substances or elements

Names of Parts	toxic and hazardous substances or elements					
	Pb	Hg	Cd	Cr(VI)	PBB	PBDE
Shell	×	○	○	○	○	○
Electronic components(printed circuit boards)	×	○	×	○	○	○
Accessories(power cord, AC adapter)	×	○	○	○	○	○

- : Indicates that the hazardous substance in all homogeneous materials of the part of the content follow SJ/TI1363-2006 standard limit requirement.
- ×: Indicates that the hazardous substance in at least one of the homogeneous materials of the part of the content beyond SJ, T11363-2006 standard limit requirement. Because according to the existing technical level, there is little substance to replace it.

TECHNICAL PARAMETERS

DAD-500/DAD-950

Professional power amplifier parameters table

Parameter items	Standard conditions	DAD-500	DAD-950
Stereo mode	8Ω 1kHz	≥ 500W	≥ 950W
	4Ω 1kHz	≥ 700W	≥ 1200W
Bridge Mode	8Ω 1kHz	≥ 1000W	≥ 1800W
Sensitivity	8Ω 1kHz	530mV	650mV
Frequency Response	20Hz-20kHz	±0.3dB	±0.3dB
Total Harmonic Distortion	@ 8Ω, 1kHz	0.02%	0.02%
Signal to Noise Ratio	A-weighted	≥ 103dB	≥ 105dB
Intermodulation distortion	@ 8Ω, 60Hz-7kHz	< 0.05%	< 0.05%
Damping coefficient	@ 100Hz, 8Ω	≥ 250	≥ 250
Voltage gain	@ 8Ω 1kHz	40±2dB	40±2dB
Channel separation	@ 8Ω 1kHz	≥ 85dB	≥ 85dB
Input Impedance	@ 1kHz balance	20kΩ	20kΩ
Power consumption	AC power specifications	220V-240V 50/60Hz	
	Consumed power	1900W	3000W
Structure diagram			
Product dimensions	W * D * H	482mmx423mmx89mm	
Packaging dimensions	W * D * H	568mmx538mmx160mm	
Net weight		19kg	22kg
Gross Weight		22kg	25kg

* Specifications are subject to change without notice.

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