MH SERIES

NEW GENERATION OF AMPLIFIERS

USER MANUAL

LYNX pro-audio

V.25.01

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CE

CE CERTIFICACTION, EUROPEAN PRODUCT

CONTENTS

WELCOME

Just contact the new amplifiers MH, the second generation of high-efficiency Class H circuits.

Before working with the amplifier we recommend that you read this manual, in its pages you will find instructions for use, programming examples and practical advice that will be of great help.

This MH amplifier become a working tool of great value, providing the user with the best solutions in the market with the highest level of accuracy and a host of features for the professional.

We hope that as a user you will be completely satisfied. We are sure that the MH amplifier will meet your expectations and make it easier for you to get the most out of your system.

IMPORTANT SAFETY INSTRUCTIONS

The CE mark of the **MH** amplifier shows that it is verified and tested to accomplish the European Norms and International Norms about Electromagnetic Compatibility and Electrical Safety.

CE

Radiated Emisions :	EN55013-1 (1996)
RF Immunity:	EN55103-2 (1996)
Electical Safety:	EN60065 (1993)
	IEC65 (1985) and emendation 1, 2 and 3

This product also meets the specifications of the following safety directives:

Low Voltage Directive 73/23/EEC
EMC Directive 89/336/EEC

EUROPEAN PRODUCT

Product Developed and Manufactured in the European Union.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

The symbols shown above are internationally accepted symbols that warn of potential hazards with electrical products. The lightning flash with arrowpoint in an equilateral triangle means that there are dangerous voltages present within the unit. The exclamation point in an equilateral triangle indicates that is necessary for the user to refer to the owner's manual.

Warning :

Do not expose the amplifier to humidity and dust.
Do not take off the top cover.
Do not handle internal elements to avoid electrical shock.
Use only power cords in good condition.

Power/ power cable

- You only can use the rated voltage specified by this equipment. The required voltage is printed on the nameplate of the device.

- Do not put the power cable near a heat source such as a heater or radiator. Do not bend or damage the power cord excessively. Do not press heavy objects on it. Do not put it on the surface that may be stepped on or may be crushed.

- Be sure to connect to a suitable power outlet with a protective earth connection. Improper grounding may cause electric shock.

Do not disassemble

- Do not disassemble or modify this product. This device does not contain any user-serviceable parts. Failure to do so may result in fire, electric shock, on malfunction. If you find any improper operation, please stop using it immediately and have the qualified technicians perform maintenance and repair.

Connection

- Turn off the power switches of all devices before connecting the device to other devices. Turn all volume to a minimum before turning the power switch on or off for all devices.

- Only user the speaker cable when connecting the speakers to the speaker jack. Using other types of cables may result in fire.

- Do not put the device in a place where it may be exposed to corrosive gases or salty air. Failure to do so may result in malfunction of the equipment.

Operating Carefully

- When turning on the audio system, please turn on the device last to avoid damage to the amplifier.

- Condensation can occur in the device due to rapid, drastic changes in ambient temperature. Using this unit in the event of condensation is completely dry.

- Do not insert your fingers or hands into any gaps.

Unpacking the MH

Before unpacking your new amplifier, verify that the box does not show any damage or deformation. If this happens, please claim the damage to your fordwarder. Once unpacked and verified its correct operation, keep the original box in case you need to ship it back to your provider.

Placement position

- Be sure to unplug all the connecting cables before moving the amplifier.

- When setting up the device, make sure that the AC outlet you are using is within easy reach. If a problem or malfunction occurs, disconnect the power switch immediately and unplug it from the power outlet. Even if the power switch is turned off, there is minimal current to the product. When you are not using the product for a long time, be sure to unplug the power cord from the AC outlet.

- To avoid deformation of the operator panel or damage to internal components, do not put the amplifier in an evironment where there is a lost of dst, vibration, extreme cold or heat /such as in direct sunlight, near a heater or in a car under the scorching sun).

- Do not put the amplifier in an unstable location as it may cause to suddenly fall over.

- Do not block the ventilation holes. This unit has ventilation holes on the front/back to prevent excessive temperature inside the unit. Special care should be taken not to put the amplifier sideways or upside down. Poor ventilation can cause overheating and can damage equipment or even cause a fire.

- Do not use the amplifier near televisions, radios, stereos, mobile phones, or the other electronic devices. This can cause noise in the device itself as well as in the TV or radio near the device.

- If you install the device in an EIA standard bay, read “Precautions when stalling the device with the bay”. Poor ventilation can cause overheating and can damage equipment, cause malfunctions, and even cause a fire.

Precautions when installing the device with the bracket

- This unit can operate normally within the ambient temperature range of 0-40°C. If you only install the device in a EIA standard bay, you can install multiple devices without leaving space between the devices. If this unit is installed in a EIA standard bay together with other types of equipment, the heat generated by other equipment may cause the internal temperature of the rack to rise, resulting in the unit not working properly. To ensure that no heat builds up inside the unit, the following conditions must be observed when installing it in the bracket.

- It this unit is installed in a bracket open and leave a 10 cm or greater distance between the bracket and the wall or ceiling to ensure adequate ventilation. If the back of the bracket cannot be left open, a commercially available fan assembly or forced air circulation system must be installed on the bracket. If the fan assembly is already installed, closing the back of the bracket may result in better cooling. For more information, see the operating instructions that came with the bay system or fan assembly.

- The terminal marked with the symbol “ ⚡ “ is a warning of danger, and the external wires connected to these terminals need to be installed by an electrician, or it’s the warning for use a ready-made lead or flexiable cord.

1.- INTRODUCTION

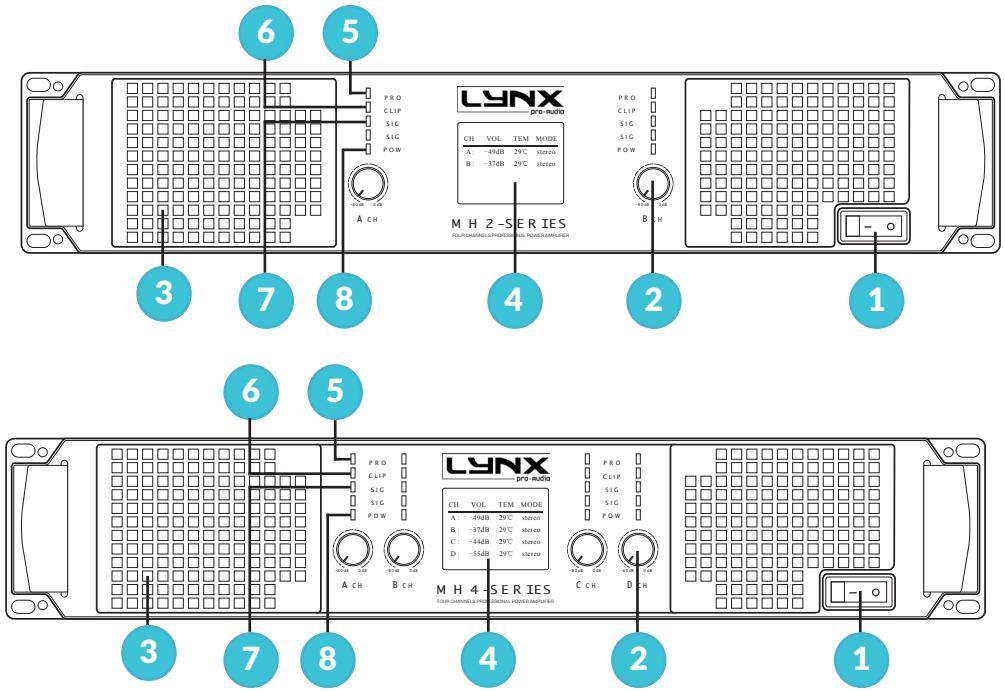
The MH series incorporates the second generation of high-efficiency Class H circuits. This series include two-channel amplifiers (MH-2) and four-channel amplifiers (MH-4), offering a wide power range and flexibility to match various speaker systems.

It features a 2.4-inch display that allows real-time monitoring of the amplifier's status. The optimised design ensures a higher signal-to-noise ratio, meeting the requirements of high-standard projects.

Additionally, it includes multiple protection systems against distortion of less than 0.5%, short circuits, voltage extremes, overload, overheating, and DC, ensuring natural and reliable sound.

2. CONTROLLER AND FUNCTIONS

MH frontal panel description



01. POWER BUTTON

Used to turn the power on or off.

02. VOLUME KNOB

Adjust the volume between -80 <0dB.

03. AIR INLET

Air inlet of the cooling fan. Make sure not to block the air inlet.

04. LCD DISPLAY

Display the volume operating temperature.

WARNING

To ensure that the speaker does not emit loud noise, turn on the source device, turn on the mixer and processor, and finally turn on the power to the amplifier. When the system is turned off, please reverse the order.

LED light status indication

This indicator lights up when the power is turned on.

05. “PROTECT” Indicator

Two Red LED, one for each channel, illuminate when the cooling system is fault or short out.

06. “CLIP” Indicator

Two Red LED, one for each channel, illuminate when the channel’s output is being overdriven.

07. “SIGNAL” Indicator

Two Green LED, one for each channel, illuminate when there is input signal.

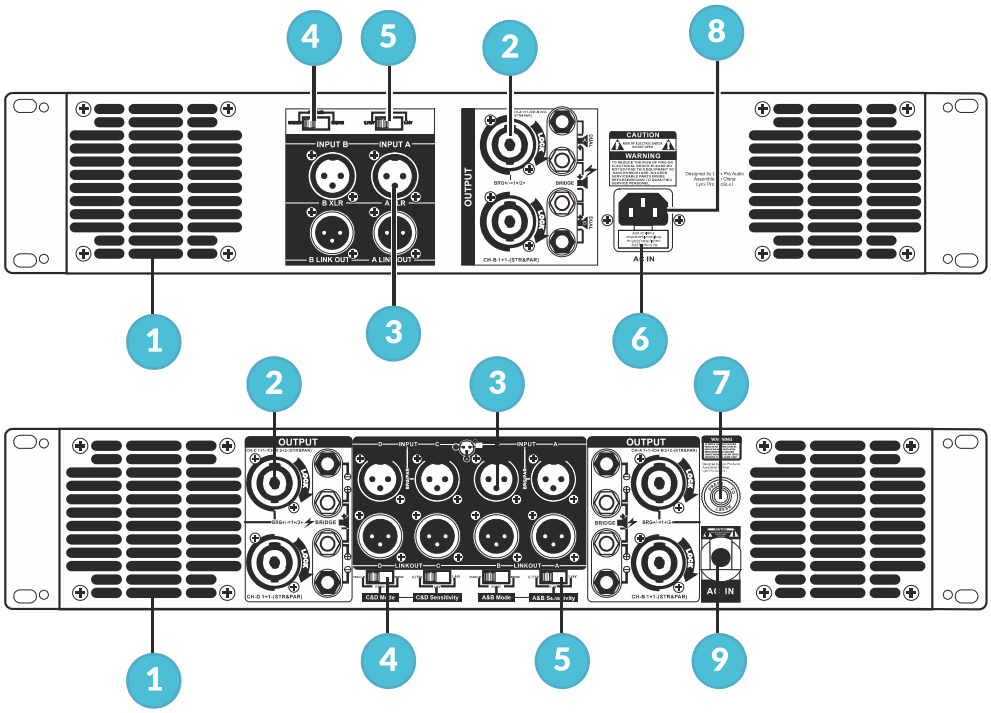
08. “POWER” Indicator

Two Blue LED, one for each channel, illuminate when the Power Button is on.

NOTICE

When the machine is used for a period of time, turn off the power, the CLIP indicator will light up for a few seconds it will the slowly stop. This is normal, because the large electrolytic capacitor is discharging, so please do not open the machine under any circumstances. Cover and don’t touch the internal components of the machine to avoid casualties!

MH back panel description



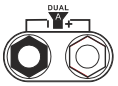
01. FAN

Fan outlet. Blowing from the front to the back for heat dissipation, making sure not to block the air inlet.

02. AUDIO OUTPUT A/B/C/D INTERFACE

Two types of connections to the speaker output port are also provided for Channel A/ Channel B/ Channel C / Channel D.


Speakon Output


Binding Post Output

NOTICE

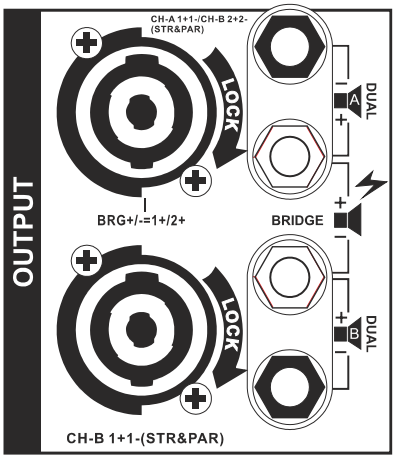
Do not touch the port or the metal part of the wire that is connect to the port. If the speakers are connected to multiple interfaces on the same channel, it will form a well connection, please ensure that the total impedance on the speakers to be connected is not too low. Please be careful not to connect or touch it by mistake.

Speakon output configuration for the amplifier:

1. Channel A (CHA): The output signal for Channel A is routed through poles +1 and -1 on the Speakon connector. This independent channel is ideal for two-way or bi-amplification setups.

2. Channel B (CHB): Channel B (CHB) is routed through the +2 and -2 poles on the same Speakon connector as Channel A, allowing both CHA and CHB signals to be transmitted through a single four-pole Speakon cable from Output A. Additionally, Channel B's output is available through the +1 and -1 poles of the Speakon connector, which is advantageous in multi-way configurations.

3. Bridge Mode: In bridge mode, both channels combine to deliver increased power, using poles +1 and +2 from A speakon. This configuration doubles the output voltage, suitable for high-power applications and low-impedance loads, such as subwoofers. Ensure that the connected load can handle the additional power to prevent damage.



NOTICE

Always check speaker polarity and load capacity in high-demand configurations to maintain system integrity.

03. AUDIO INPUT A/ B/ C/ D INTERFACE

XLR 3- pin audio input interface (INPUT' A&B&C&D)

04. WORKING MODE

STEREO/ BRIDGE/ PARALLEL

05. INPUT SENSIVITY

0.775V / 1.0V / 1.44V

06. FUSE

Protects the machine when a short circuit occurs.

07. CIRCUIT BREAKER

Provides overload protection

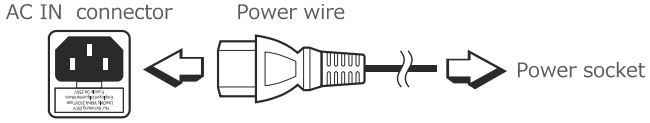
08. AC IN CONNECTOR

For power wire in 220V 50Hz

09. POWER WIRE

Power wire 220V 50Hz

Connect the power wire to the (AC IN) connector



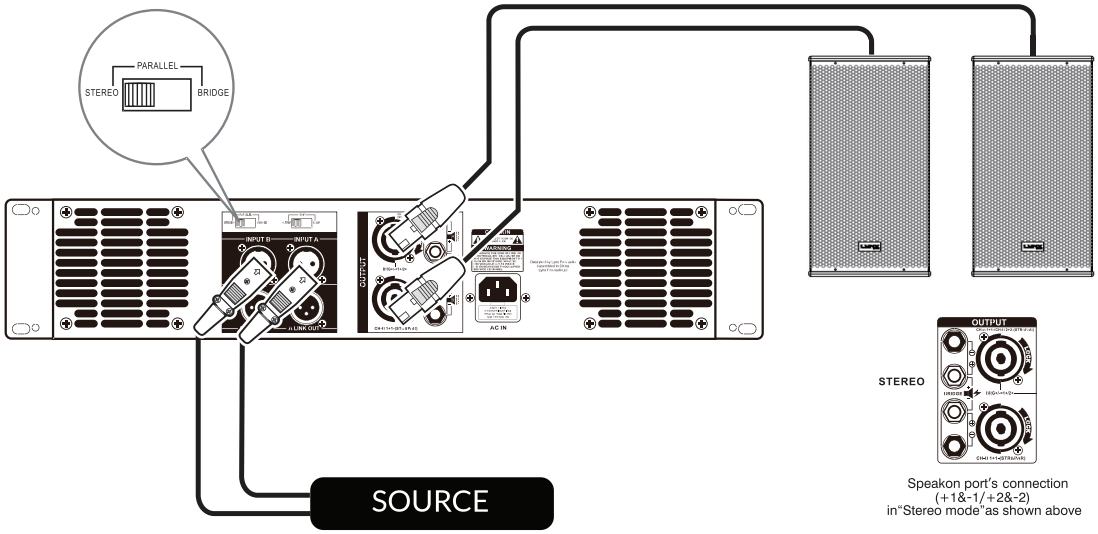
3. APPLICATIONS

2CH power amplifier mode installation

STEREO MODE

This mode is factory default settings, defaults to stereo mode before it leaves the amplifier factory.

1. Confirm stereo mode again, as shown “STEREO”.
2. Link the XLR interface for signal input, as shown.
3. Connect the speakers through a speakon, the specific connection as shown below.

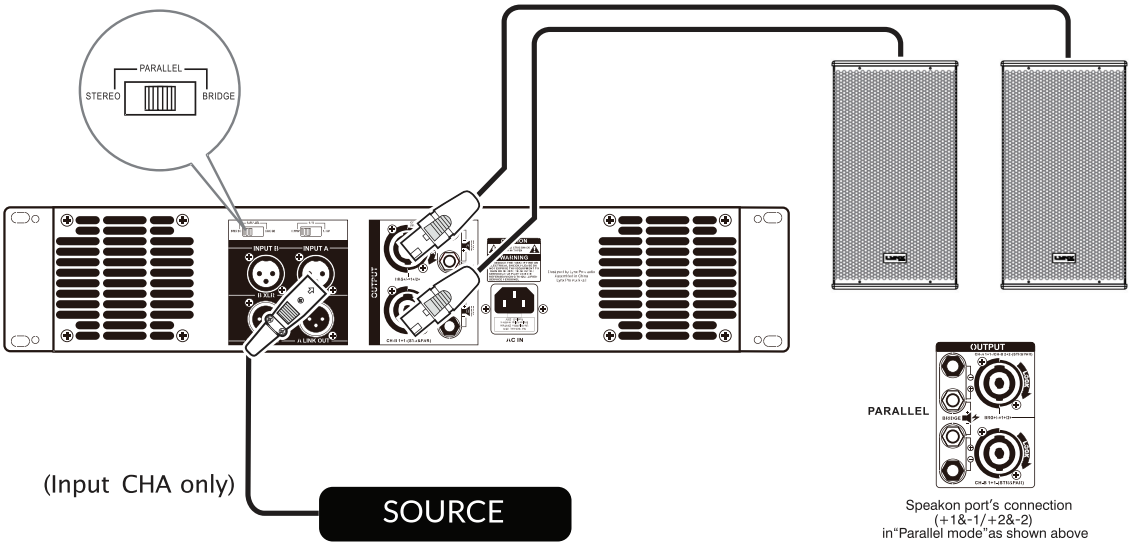


Speakon port’s connection
(+1&-1/+2&-2)
in“Stereo mode”as shown above

⚠ Note: Please read the instruction carefully and follow the corresponding instructions before you operate the power amplifier, thank you.

PARALLEL MODE

1. Confirm stereo mode again, as shown “PARALLEL”.
2. Link the XLR interface for signal input, as shown.
3. Connect the speakers through the speakon, the specific connection as shown below.

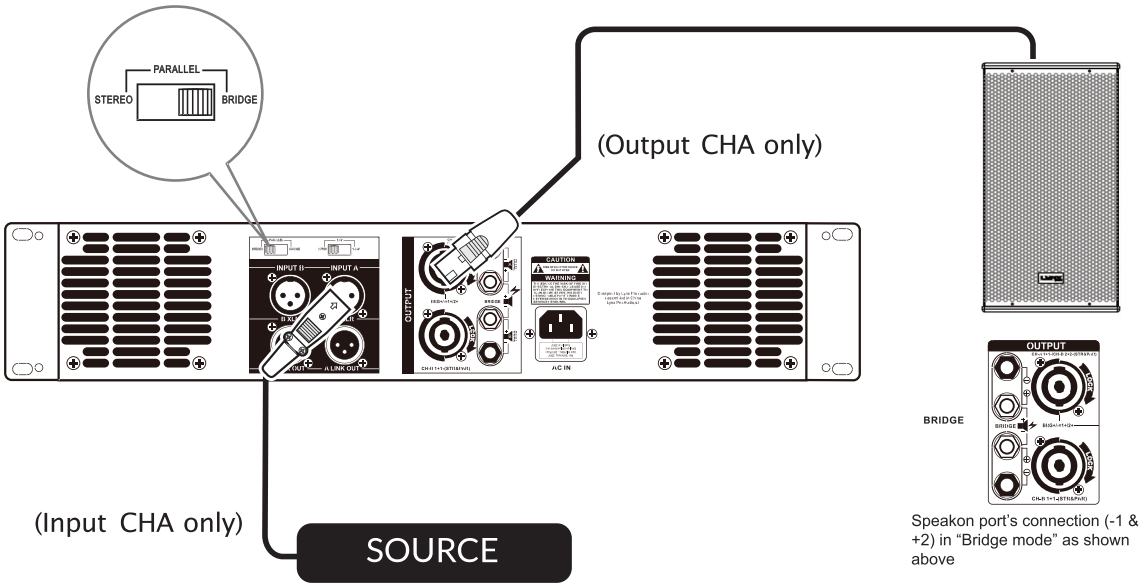


Speakon port’s connection
(+1&-1/+2&-2)
in“Parallel mode”as shown above

BRIDGE MODE

This mode can get more power by single channel, which is twice as many as single channel. And also used according to the actual situation.

1. Confirm it set by bridge mode already, as shown “BRIDGE”.
2. Connect the speakers through the speakon before connecting, please pay attention on the internal connection way of the speakon port, is different from Stereo mode/ Parallel mode.



Speakon port’s connection (-1 & +2) in “Bridge mode” as shown above

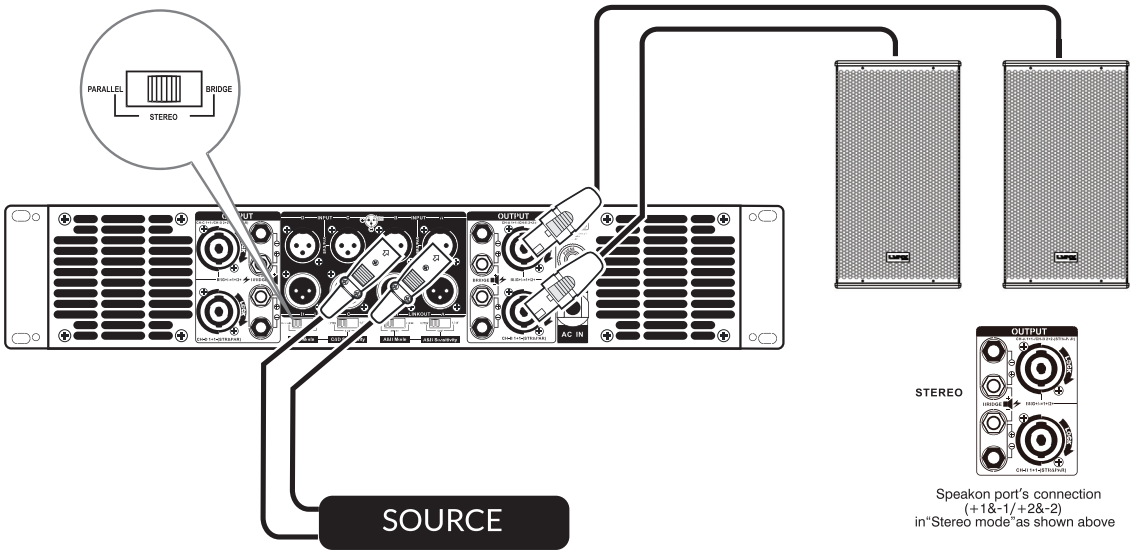
⚠ Note: Please read the instruction carefully and follow the corresponding instructions before you operate the power amplifier, thank you.

4CH power amplifier mode installation

STEREO MODE

This mode is factory default settings, defaults to stereo mode before it leaves the amplifier factory.

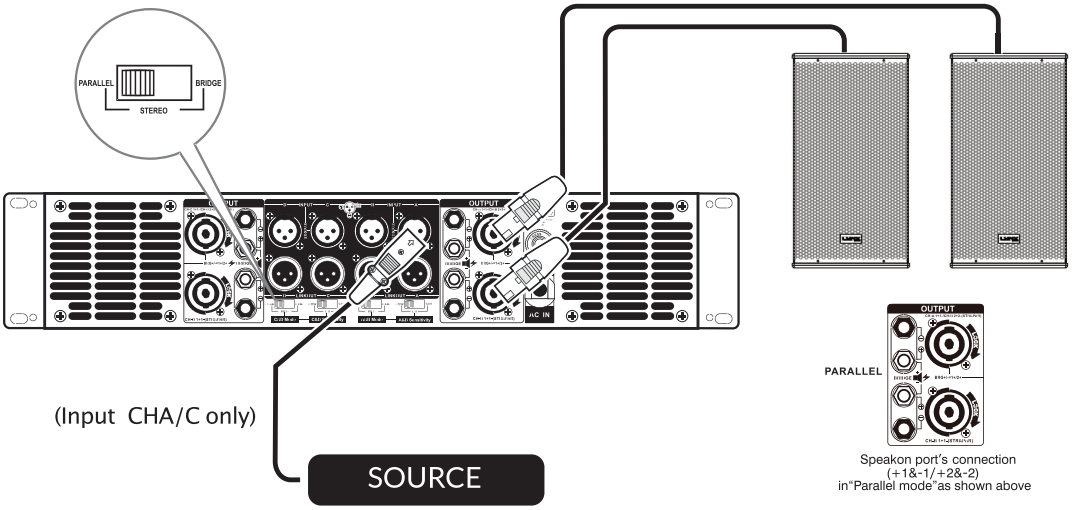
1. Confirm stereo mode again, as shown “STEREO”.
2. Link the XLR interface for signal input, as shown.
3. Connect the speakers through the Speakon, the specific connection as shown below.



Speakon port’s connection (+1&-1/+2&-2) in“Stereo mode”as shown above

PARALLEL MODE

1. Confirm stereo mode again, as shown “PARALLEL”.
2. Link the XLR interface for signal input, as shown.
3. Connect the speakers through the speakon, the specific connection as shown below.

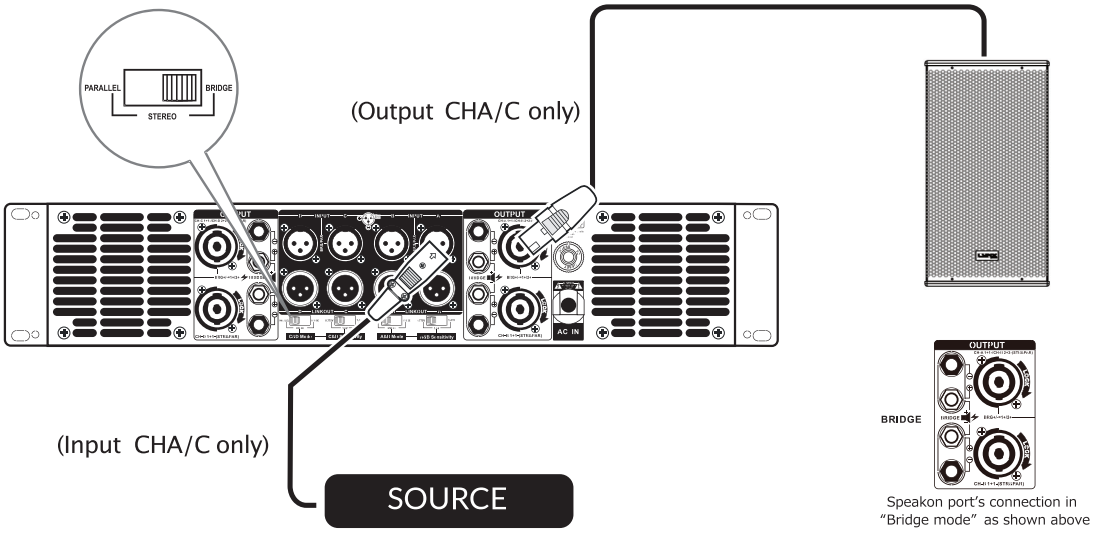


⚠ Note: Please read the instruction carefully and follow the corresponding instructions before you operate the power amplifier, thank you.

BRIDGE MODE

Bridge mode can get more power by single channel, which is twice as many as single channel. And also used according to the actual situation.

1. Confirm it set by bridge mode already, as shown “BRIDGE”.
2. Connect the speakers through the speakon before connecting, please pay attention to the internal connection way of the speakon port, is different from Stereo mode/ Parallel mode.

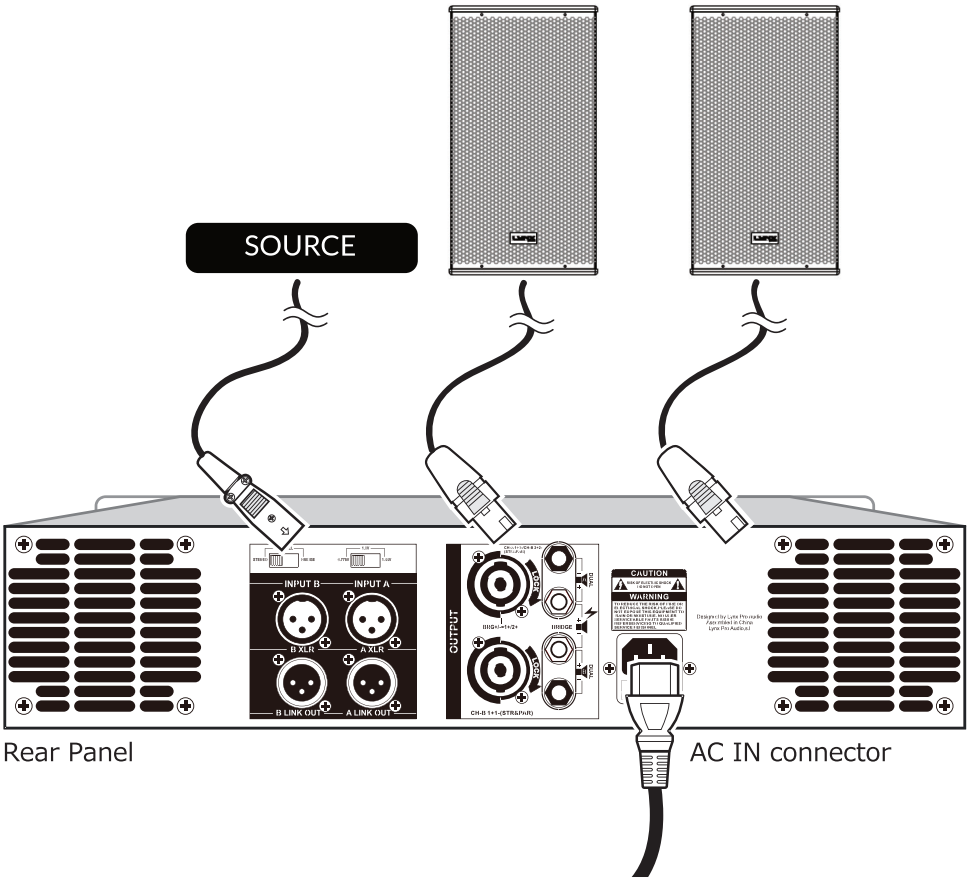


4. CONNECT THE POWER WIRE TO THE [AC IN] CONNECTOR

Professional power amplifier and power sequence

Connect the power wire to the power sequency socket interface

Use 220V AC, always use a three-pin socket when using, please use the power correctly!



⚠WARNING

To ensure that the speaker does not emit loud noise, turn on the source device and then turn on the mixer and processor. Finally turn on the power amplifier. When the system is turned off, Please reverse the order.

5. TECHNICAL SPECIFICATIONS

	MH2- 1500	MH2- 3200	MH4- 4000	MH4- 5200
Output Power **@ 2 Ohms** **@ 4 Ohms** **@ 8 Ohms** **Bridge @ 4 Ohms** **Bridge @ 8 Ohms**	2 x 900 W 2 x 750 W 2 x 600 W 1 x 1800 W 1 x 1500 W	2 x 2200 W 2 x 1600 W 2 x 1000 W 1 x 4400 W 1 x 3200 W	4 x 1300 W 4 x 1000 W 4 x 800 W 2 x 2600 W 2 x 2000 W	4 x 1600 W 4 x 1300 W 4 x 1000 W 2 x 3200 W 2 x 2600 W
Frequency Response **Bandwidth ± 0.25dB**	20 Hz - 20 KHz			
Phase response **1 W 20Hz-20KHz**	±15 deg			
Total harmonic distortion **20Hz-20KHz**	<0.05%			
Damping factor **20-500 Hz @8Ω**	>700			
Crosstalk 20Hz - 1KHz	>75 dB			
Sensitivity **Rated power**	0.775V / 1.0V / 1.44V	0.775V / 1.0V / 1.44V	0.775V / 1.0V / 1.44V	0.775V / 1.0V / 1.44V
Signal to Noise Ratio	>100dB			
Operating Voltage (50-60Hz)	230V AC 50Hz / 60Hz			
Dimensions **W x H x D (mm)**	483 x 88 x 430/400		483 x 88 x 500/470	
Weight	15,7 Kg	19,5 Kg	24,8 Kg	25,5 Kg
Protections	Soft-start, Mute transient on/off, Overheating, DC, RF, Short circuit, Power overload			

LYNX PRO AUDIO GUARANTEE

Lynx products are guaranteed against every kind of manufacturing fault 2 year after the date of sale. When products are under guarantee, the repairing and the free supplying of the device parts in order to correct any kind of defect are guaranteed by Lynx Pro Audio S.L. In the case that the product could not be returned to the factory for checking and repairing, Lynx Pro Audio S.L. would supply all the necessary parts.

Lynx Pro Audio S.L. is not responsible for any damage or defect caused during the transport or caused by an undue or improper handling by a non-authorized person during the life of this guarantee.

All our products go through rigorous testing and quality controls. We guarantee the characteristics described here within and their quality against any fabrication defect.

The user loses all warranty rights if he incorporates or carries out any modification to the product, if he uses it outside of the stated safe working loads or does not secure the system properly using all the pins in their corresponding holes.

For any question regarding the product, the user must quote the model and serial number.

WEEE Declaration: Electrical and electronic equipment must be disposed of separately from normal waste at the end of its operational lifetime. Please dispose of this product according to the respective national regulations or contractual agreements. If there are any further questions concerning the disposal of this product please contact Lynx Pro Audio S.L.

CE

DECLARATION OF CONFORMITY

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Lynx Pro Audio S.L. declares that MH series are in conformity with the following EC directives:

Low Voltage Directive	2014/35/UE
Electromagnetic Compatibility EMC	2014/30/UE
RoHS Directive	2011/65/UE
RAEE (WEEE)	2012/19/UE

In accordance with Harmonized European Norms:

EN 60065:2014	Audio, video and similar electronic apparatus. Safety requirements
EN 60065:2002	Audio, video and similar electronic apparatus. Safety requirements
EN 55103-1:1996	Electromagnetic compatibility. Product family standard for audio, video, audiovisual and entertainment lighting control apparatus for professional use. Part 1: Emission.
EN 55103-2:1996	Electromagnetic compatibility. Product family standard for audio, video, audiovisual and entertainment lighting control apparatus for professional use. Part 2: Immunity.

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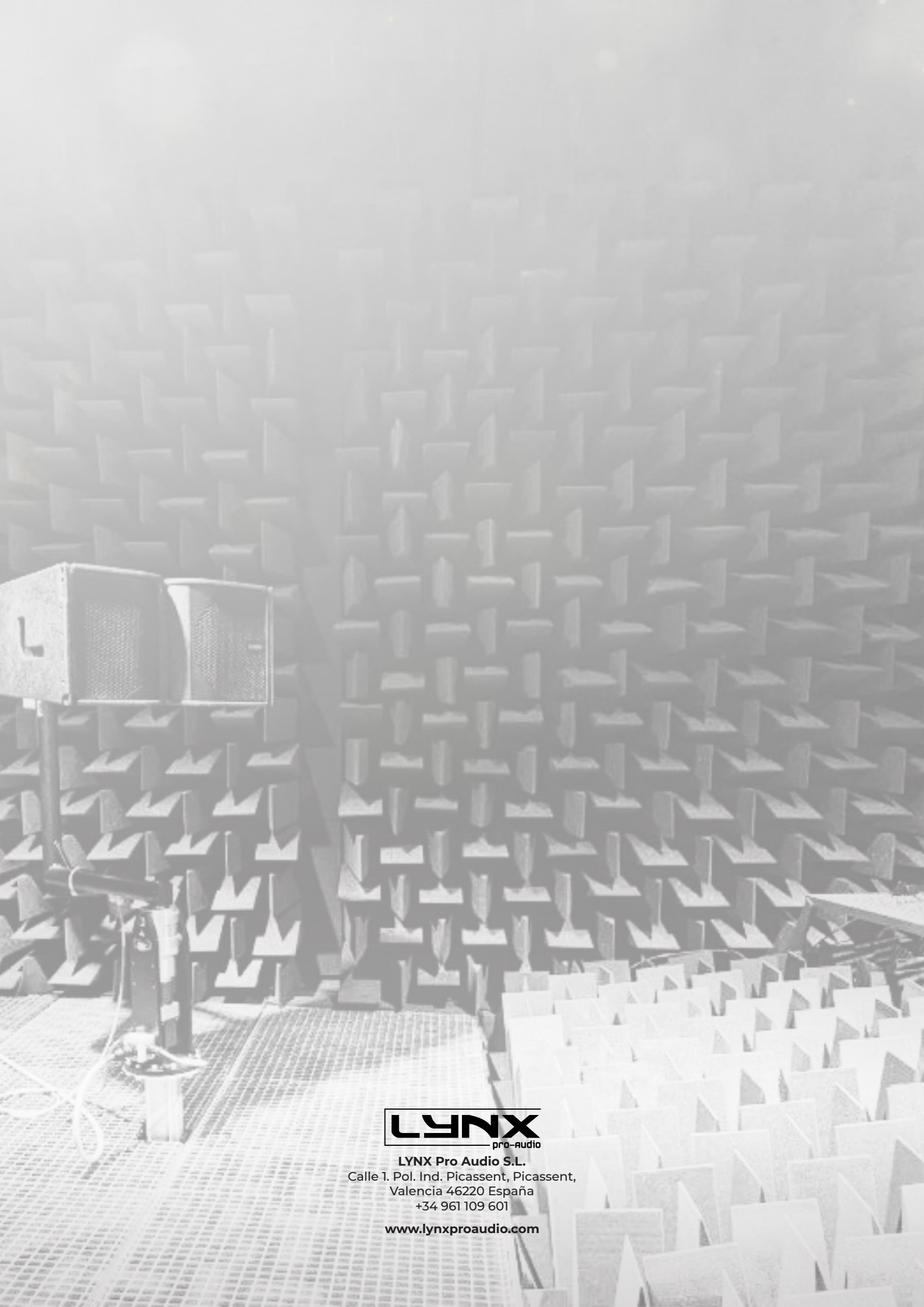

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