

AMP.4H SERIES

100 V LINE AMPLIFIERS - 4 CHANNELS

1 - Safety information

Important safety information



This unit is intended for indoor use only. Do not use it in a wet, or extremely cold/hot locations. Failure to follow these safety instructions could result in fire, electric shock, injury, or damage to this product or other property.



Any maintenance procedure must be performed by a CONTEST authorised technical service. Basic cleaning operations must thoroughly follow our safety instructions.



This product contains non-isolated electrical components. Do not undertake any maintenance operation when it is switched on as it may result in electric shock.

Symbols used



This symbol signals an important safety precaution.



The WARNING symbol signals a risk to the user's physical integrity. The product may also be damaged.



The CAUTION symbol signals a risk of product deterioration.

Instructions and recommendations

1 - Please read carefully :

We strongly recommend to read carefully and understand the safety instructions before attempting to operate this unit.

2 - Please keep this manual :

We strongly recommend to keep this manual with the unit for future reference.

3 - Operate carefully this product :

We strongly recommend to take into consideration every safety instruction.

4 - Follow the instructions:

Please carefully follow each safety instruction to avoid any physical harm or property damage.

5 - Avoid water and wet locations :

Do not use this product in rain, or near washbasins or other wet locations.

6 - Installation :

We strongly encourage you to only use a fixation system or support recommended by the manufacturer or supplied with this product. Carefully follow the installation instructions and use the adequate tools.

Always ensure this unit is firmly fixed to avoid vibration and slipping while operating as it may result in physical injury.

7 - Ventilation :

The cooling vents ensure a safe use of this product, and avoid any overheating risk. Do not obstruct or cover these vents as it may result in overheating and potential physical injury or product damage. This product should never be operated in a closed non-ventilated area such as a flight case or a rack, unless cooling vents are provided for the purpose.

8 - Heat exposure :

Sustained contact or proximity with warm surfaces may cause overheating and product damages. Please keep this product away from any heat source such as a heaters, amplifiers, hot plates, etc...

9 - Electric power supply :

This product can only be operated according to a very specific voltage. These information are specified on the label located at the rear of the product.



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



WARNING : This unit contains no user-serviceable parts. Do not open the housing or attempt

any maintenance by yourself. In the unlikely even your unit may require service, please contact your nearest dealer.

In order to avoid any electrical malfunction, please do not use any multi-socket, power cord extension or connecting system without making sure they are perfectly isolated and present no defect.



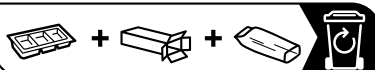
Sound levels

Our audio solutions deliver important sound pressure levels (SPL) that can be harmful to human health when exposed during long periods. Please do not stay in close proximity of operating speakers.

Recycling your device



- As HITMUSIC is really involved in the environmental cause, we only commercialise clean, ROHS compliant products.
- When this product reaches its end of life, take it to a collection point designated by local authorities. The separate collection and recycling of your product at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment.



10 - Power cords protection:

Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at lugs, convenience receptacles and the point where they exit from the fixture.

11 - Cleaning precautions :

Unplug the product before attempting any cleaning operation. This product should be cleaned only with accessories recommended by the manufacturer. Use a damp cloth to clean the surface. Do not wash this product.

12 - Long periods of non use :

Disconnect the unit's main power during long periods of non use.

13 - Liquids or objects penetration :

Do not let any object penetrate this product as it may result in electric shock or fire. Never spill any liquid on this product as it may infiltrate the electronic components and result in electric shock or fire.

14 - This product should be serviced when :

Please contact the qualified service personnel if :

- The power cord or the plug has been damaged.
- Objects have fallen or liquid has been spilled into the appliance.
- The appliance has been exposed to rain or water.
- The product does not appear to operate normally.
- The product has been damaged.

15 - Inspection/maintenance :

Please do not attempt any inspection or maintenance by yourself. Refer all servicing to qualified personnel.

16 - Operating environment :

Ambient temperature and humidity: +5 - +35°C, relative humidity must be less than 85% (when cooling vents are not obstructed).

Do not operate this product in a non-ventilated, very humid or warm place.

2 - Introduction

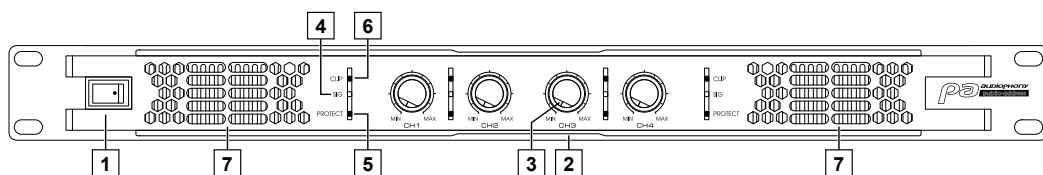
The AMP150.4H, AMP300.4H, and AMP500.4H are compact and powerful Class D 4-channel high-voltage amplifiers. They deliver 150W, 300W, and 500W respectively on a 70V or 100V line per output. They feature per-channel volume control and LED indicators (signal, clip, and protection). The input and output connections are equipped with Euroblock connectors.

Package contents:

- The amplifier
- A CE power cable
- Four rubber feet
- The user manual

3 - Device presentation

Front panel



1 Power button

Turns the amplifier on and off.

2 Volume control potentiometers

These potentiometers allow you to adjust the input signal level for each channel.

3 POWER/PRIOR LEDs

The green LED lights up when the amplifier is switched on. The orange LED lights up when the amplifier has priority.

4 Signal LEDs

These green LEDs light up when a signal is present on the relevant channel.

5 PROTECT LEDs

Under normal operating conditions, these LEDs do not light up. If they do light up, this indicates that the amplifier is in protection mode due to overheating or a short circuit.

Notes :

- It is normal for the PROTECT LED to light up for a few seconds when the amplifier is switched on.
- If the PROTECT LED remains lit, switch off the amplifier, wait for it to cool down, and check the wiring.
- If it remains lit when switched on, even though the amplifier is not warm and all the wiring is correct, consult a specialist technician.

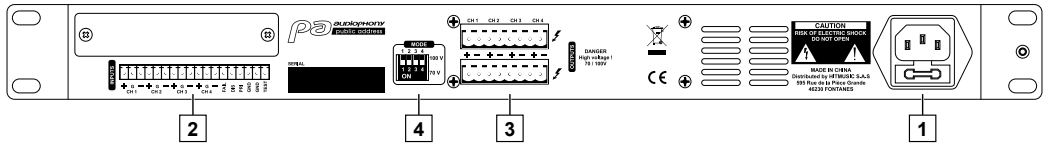
6 CLIP LEDs

These LEDs light up to indicate that the signal level is too high.

7 Air intake openings

AMP series amplifiers use an internal variable-speed cooling fan to draw air through the front grille to maintain normal operating temperatures, even under extreme conditions. Please keep these vents clear and free of obstructions at all times to ensure adequate cooling.

Back panel

**1 Power input with fuse**

Connect the supplied IEC cord to this input and connect it to the mains after checking the voltage supplied. If necessary, replace the fuse with one of the same type and rating.

2 Euroblock input connectors

+ : Positive signal from a symmetrical source or positive signal from an asymmetrical source.

G : Ground

- : Negative signal from a symmetrical source. Not connected in the case of an asymmetrical source.

Channels 2, 3, and 4 are connected in the same way.

FAIL : This output can be used to connect an indicator light that signals amplifier failure. The voltage available at this output in the event of failure is 5V.

DIS : When this terminal is connected to earth via a dry contact, the amplifier is deactivated. All PROTECT LEDs will then light up.

You can then proceed to connect the loudspeakers.

PRI : When this terminal is connected to ground via a dry contact, the TEST input becomes the priority. All PRIOR LEDs light up red.

GND : Ground pins for control inputs (DIS and PRI) and the TEST input.

TEST : Input for connecting a line-level signal. This input becomes the priority input when the PRI terminal is connected to ground.

3 Output terminals

Connect your speakers or ceiling speakers to these terminals.



Dangerous voltage
The speaker lines must be connected to the amplifier last.
Turn on the amplifier when the installation is complete and checked.

4 Output voltage selector

These selectors allow you to choose the output voltage between 70 V and 100 V for each channel.

4 - Usage

Use high-quality cables to connect your speakers.

To avoid short circuits, check that the cable strands are properly twisted or tinned before connecting them to the output terminals.

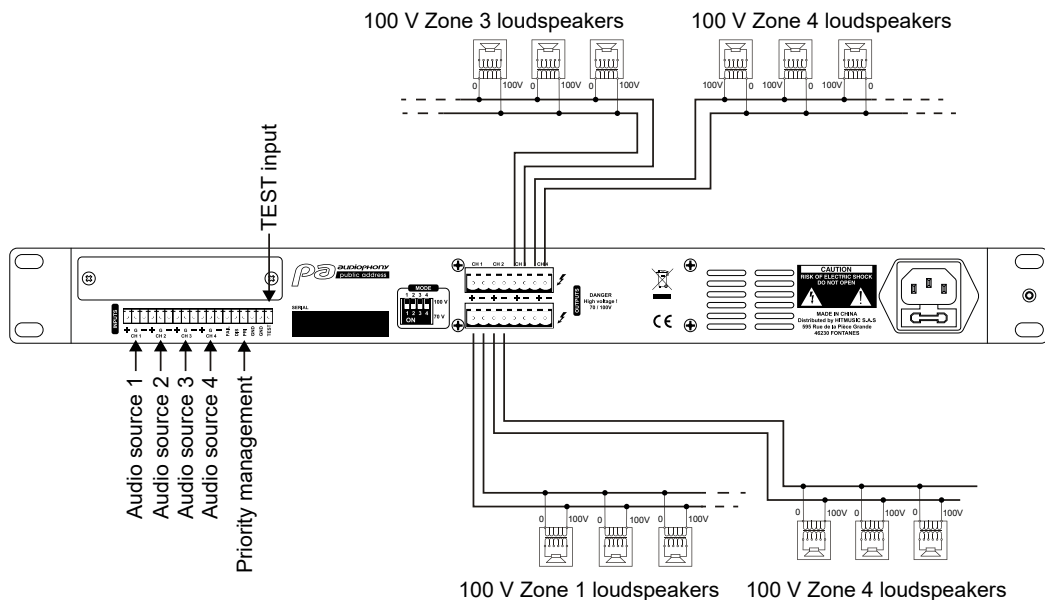
When connecting your speakers to the amplifier, be sure to observe the polarities.

Connect speakers equipped with transformers to the + and - output terminals.

The two output blocks are wired in parallel. Take care to distribute the connected speakers so that the total power of all speakers does not exceed the maximum power of the amplifier.



Multi-channel amplifiers must be loaded according to their specifications. Refer to the detailed characteristics of each amplifier in section 6.



Caution: The total power of all speakers connected to an output must not exceed the maximum power of the amplifier. See detailed specifications.



Dangerous voltage

The loudspeaker cables must be connected to the amplifier last. Switch on the amplifier once installation is complete and has been checked.



5 - Wiring details

Below is a table showing the correspondence between the distance between the amplifier and the speakers and the cable cross-section, in order to avoid deteriorating the signal quality.

Maximum length of the 100 V line			
Power	Minimum impedance	Installed cable section	
		1,5 mm²	2,5 mm²
150 W	67 Ω	800 m	1300 m
300 W	33.5 Ω	400 m	700 m
500 W	20 Ω	180 m	350 m

Note: Never use shielded cable to carry the power signal.

6 - Detailed specifications

		AMP150.4H	AMP300.4H	AMP500.4H
ELECTRICAL SPECIFICATIONS				
Power (100V)	2 active channels	2 x 150 Watts	2 x 300 Watts	2 x 480 Watts
	4 active channels	4 x 135 Watts (74 Ω)	4 x 270 Watts (37 Ω)	4 x 400 Watts (25 Ω)
Power (70V)	2 active channels	2 x 150 Watts	2 x 300 Watts	2 x 480 Watts
	4 active channels	4 x 135 Watts (36 Ω)	4 x 270 Watts (18 Ω)	4 x 400 Watts (12 Ω)
Input sensitivity		0.9~1.1V (0±1dBV)		
Input impedance		20 KΩ symétrique / 10 KΩ asymétrique		
Voltage gain (100V)		40 dB		
Frequency response		100 Hz - 15 KHz		
Signal-to-noise ratio		> 95dB		
T.H.D+N		< 0.1%		
Damping factor		> 200		
Output voltages		70V / 100V		
Power circuit		Class D switching power supply		
Power supply		AC220-240V, 50/60Hz		
Protections		Short circuits / Open circuit / Thermal / Limiter / Ultrasound and radio frequencies		
Indicators		SIGNAL : Green LED CLIP : LED rouge POWER : LED verte PROTECTION : LED rouge		

CARACTÉRISTIQUES PHYSIQUES			
Connections	1 Euroblock input and 2 Euroblock outputs FAIL, DIS, PRI, GND and TEST control connectors		
Settings	On/Off switch and volume controls on front panel / Voltage selector switch on rear panel		
Cooling	By ventilation; 62.5 dB @1 m		
Dimensions (L x D x H)	483 x 44 x 360 mm		
	19" 1U		
Net weight	5,4 Kg	6,2 Kg	6,3 Kg

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