



FORCE 700

POWER AMPLIFIER



USER'S MANUAL

Important Safety Instructions



This symbol, wherever used, alerts you to the presence of un-insulated and dangerous voltages within the product enclosure. These are voltages that may be sufficient to constitute the risk of electric shock or death.



This symbol, wherever used, alerts you to important operating and maintenance instructions.

POWER SUPPLY

Ensure that the insource voltage (AC outlet) matches the voltage rating of the product. Failure to do so could result in damage to the product and possibly the user. Unplug the product before electrical storms occur and when unused for long periods of time to reduce the risk of electric shock or fire.

EXTERNAL CONNECTION

Always use proper ready-made insulated mains cabling (power cord). Failure to do so could result in shock/death or fire. If in doubt, seek advice from a registered electrician.

DO NOT REMOVE ANY COVERS

Within the product are areas where high voltages may present. To reduce the risk of electric shock do not remove any covers unless the AC mains power cord is removed. Covers should be removed by qualified service personnel only. No user serviceable parts inside.

FUSE

To prevent fire and damage to the product, use only the recommended fuse type as indicated in this manual. Do not short-circuit the fuse holder. Before replacing the fuse, make sure that the product is OFF and disconnected from the ACD outlet.

PROTECTIVE GROUND

Before turning the unit on, make sure that it is connected to Ground. This is to prevent the risk of electric shock. Never cut internal or external Ground wires. Like wise, never remove Ground wiring from the Protective Ground Terminal.

OPERATING SAFETY INSTRUCTIONS

Read these instructions. Follow all instructions. Keep these instructions. Do not discard. Heed all warnings. Only use attachments/accessories specified by the manufacturer.

POWER CORD AND PLUG

Do not tamper with the power cord or plug. These are designed for your safety. Do not remove Ground connections! If the plug does not fit your AC outlet seek advice from a qualified electrician. Protect the power cord and plug from any physical stress to avoid risk o electric shock. Do not place heavy objects on the power cord. This could cause electric shock or fire?

SERVICING

Refer all servicing to qualified service personnel only. Do not perform any servicing then those instructions contained within this User's Manual

DISPOSAL



This symbol indicates that the disposal of this product is submitted to local regulations. Please contact your local dealer.

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Introduction

Thank you for purchasing Audiopole **FORCE 700**. This professional class-D amplifier can deliver 700 W and weighs only 4.5 kg.

STEREO mode is a standard stereo amplifier that delivers 2 x 200 W / 8 Ohms or 2 x 350 W / 4 Ohms. The BRIDGE mode allows you to get 700 W / 8 Ohms securely. Finally, the PARALLEL mode allows to amplify a mono source using the resources of amplification of the 2 channels. The device features a choice of connectors that adapt easily to most of uses. So the balanced XLR inputs are doubled by unbalanced RCA jacks and the speaker outputs have secure SPEAKON terminals.

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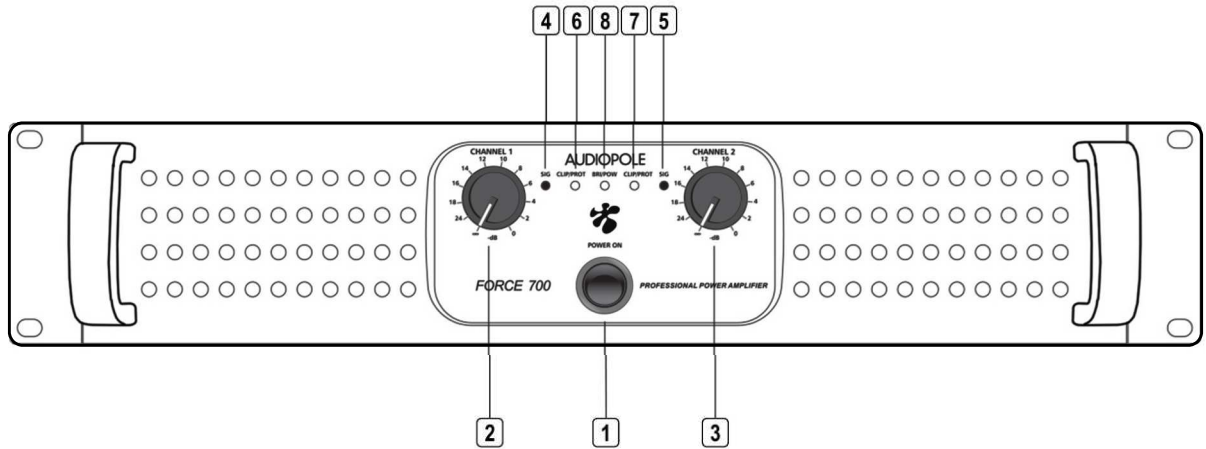
Features

- 2 x 350 W / 4 Ohms, 2 x 200 W / 8 Ohms
- 700 W / 8 Ohms (BRIDGE mode)
- Class-D amplification
- Weight 4.5 kg
- 3 operation modes: STEREO - BRIDGE - PARALLEL
- Balanced XLR inputs, unbalanced RCA inputs
- SPEAKON and Output screw terminals
- 2U rack

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Controls & Settings

Front Panel



1 – POWER

Power ON/OFF switch. Before any action, turn the potentiometers (2) and (3) to maximum attenuation ($-\infty$). The start is protected by a 7 second delay.

2 – CHANNEL 1

Channel 1 input signal attenuator.

Increasing the level is done by turning the knob in a clockwise direction.

3 – CHANNEL 2

Channel 2 input signal attenuator.

4 – SIG

Channel 1 signal indicator.

The intensity of the Green Led varies depending on the level of the input signal.

5 – SIG

Channel 2 signal indicator.

6 – CLIP/PROT

Channel 1 clipping signal.

The red Led, provides information about the state of the input signal. Normally, it should illuminate only occasionally. If the light stays on, the input level is too important and there is a risk of distortion. So adjust the level with the attenuators (2) and (3) or decreases the source volume.

7 – CLIP/PROT

Channel 2 clipping signal.

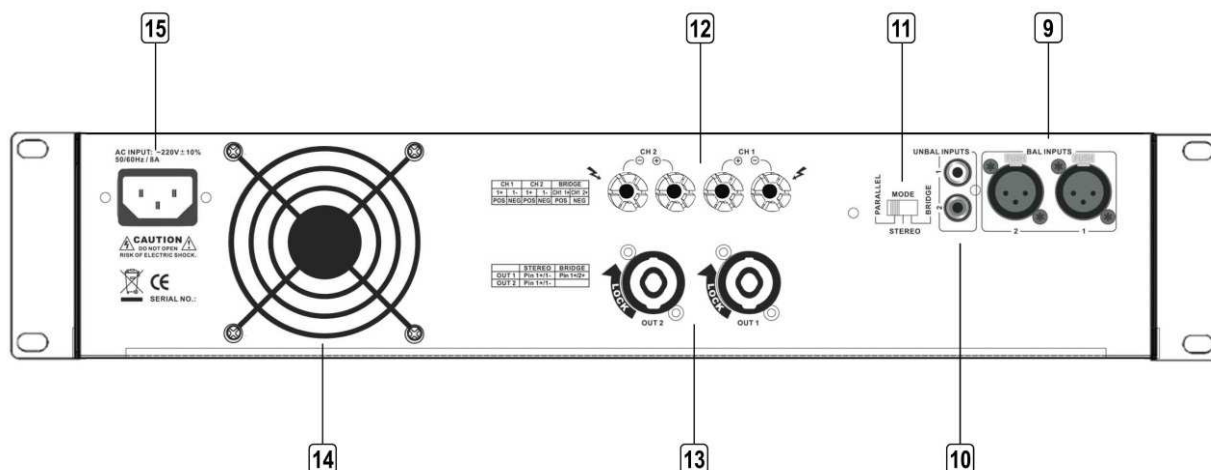
8 – BRI POW

BRIDGE mode indicator power.

The two-color LED lights up green when the amplifier is powered; It turns red when the BRIDGE mode is switched on.

3 Controls and Settings

Back Panel



9 – BAL INPUTS

XLR balanced inputs 1 and 2

10 – UNBAL INPUTS

RCA unbalanced inputs 1 and 2

11 – MODE

Mode selector: PARALLEL – STEREO – BRIDGE, (see chapter 4).

Any action on this switch must be carried out with the amplifier off.

12 – OUT

Speaker outputs on screw terminals.

Check the cables tightness before use.

13 – OUT

SPEAKON outputs.

Do not use the binding posts and SPEAKON outputs simultaneously.

14 – Cooling fan

Do not obstruct the air input and exit of the amplifier cooling. Any impediment to the free movement of air in the amplifier may cause a failure not covered by the warranty.

15 – AC INPUT

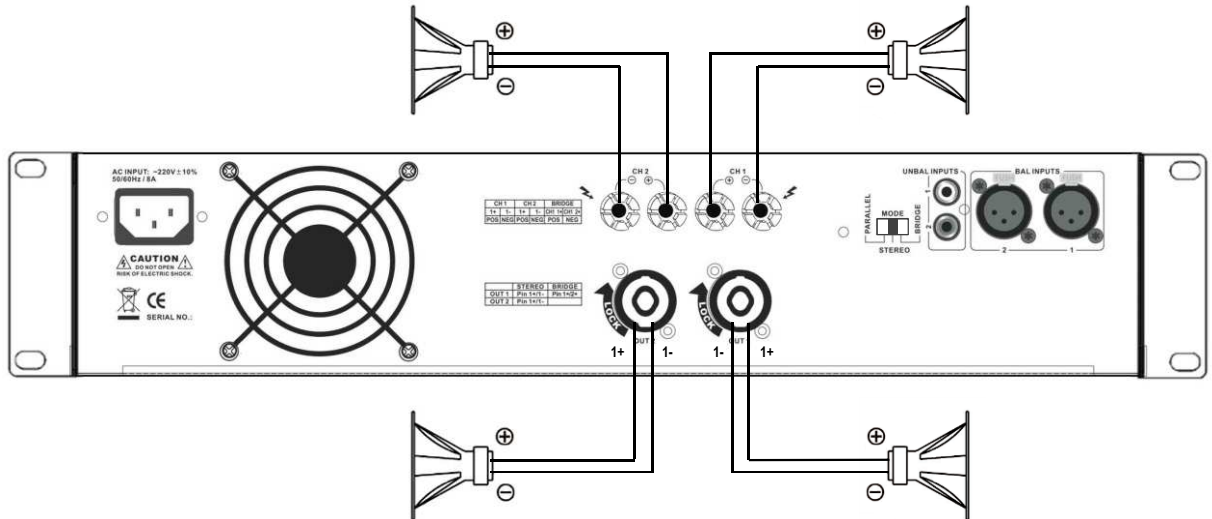
Plug in the mains cable. Before any connections make sure that the power cable is not damaged. The connection to the mains supply must have an earth connection. The mains voltage supplied must conform with the electrical characteristics of the appliance (see chapter 8).

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Operation Modes

STEREO Mode

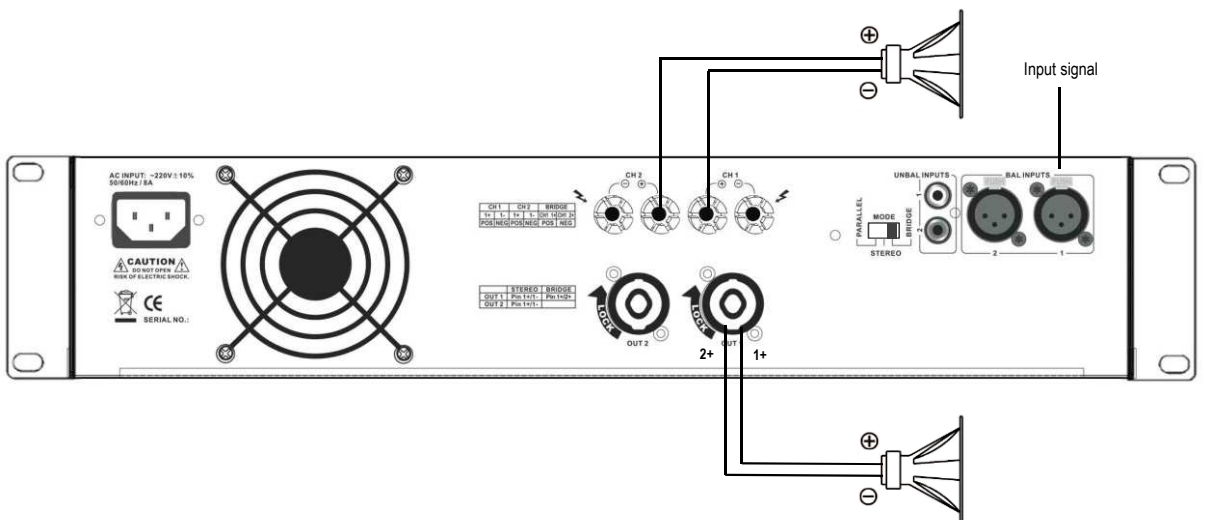
This is the standard mode: both channels functioning independently, the attenuators (2) and (3) respectively controlling each channel input level. The recommended nominal load impedance is 8 or 4 Ohms per channel. The speakers are connected to terminals or to the SPEAKON output connectors as shown in the figure below.



BRIDGE Mode

It is a monophonic mode, both channels work with the same signal input, but in phase opposition. It follows a voltage output multiplied by two, and therefore issued two times more power on double load impedance. ONLY channel 1 is used. The input signal is connected to input 1, both volume controls on the front panel must be positioned on the same value: position 0 dB is recommended (at bottom right).

Be careful, speakers are connected to the red terminals 1+ and 2+ from the SPEAKON channel 1 connector. Check that the load impedance is not less than 8 Ohms (see Chapter 7)

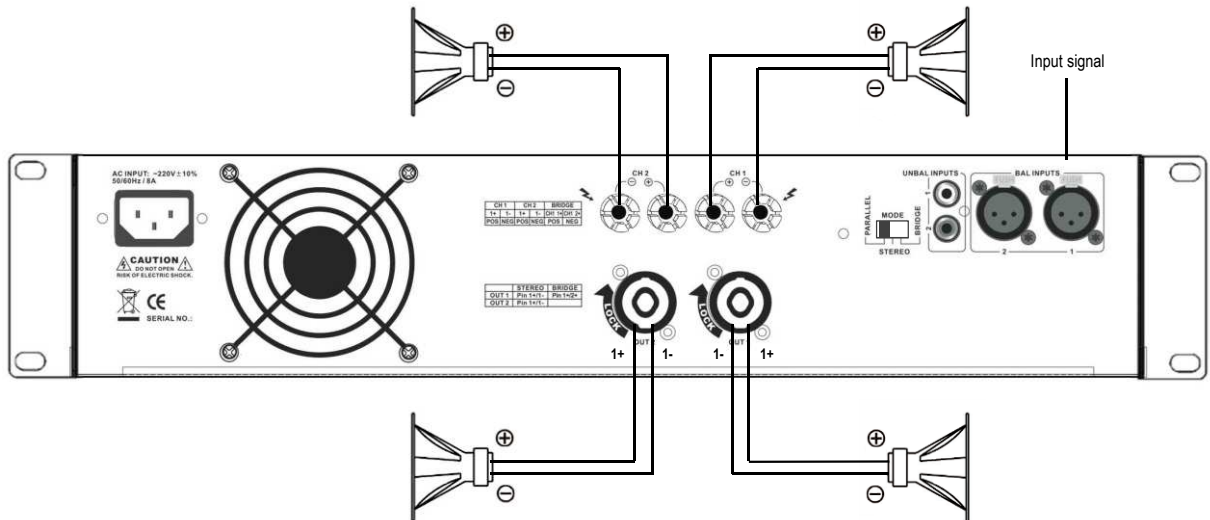


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Operation Modes

PARALLEL mode

In this mode the two channels of the amplifier receive the same signal connected to the input 1, two attenuators (2) and (3) remaining active. The speaker outputs use identical to Stereo mode wiring.



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Installation Tips

In case of installation in cabinet or rack, ensure the ventilation requirements. The depth of the unit is 277 mm. The dimensions in height is 2 units rack (89 mm).

Do not position audio high-gain equipment like preamplifiers or recorders just above or below the amplifier. Despite the protections of the radiation device, magnetic fields can induce hum in unscreened ancillary equipment. Do not obstruct the inputs and exits of air for the cooling of the amplifier. Any impediment to the free movement of air in the amplifier may cause a failure not covered by the warranty.

The operation of the amplifier in an environment where the air is confined or polluted requires frequent internal cleaning. Smoke and dust particles accumulated inside the appliance can cause failures not covered by the warranty. This cleaning should be done by qualified personnel.

Before any work on the wiring, be sure to turn the control knobs fully counterclockwise and turn off the amplifier.

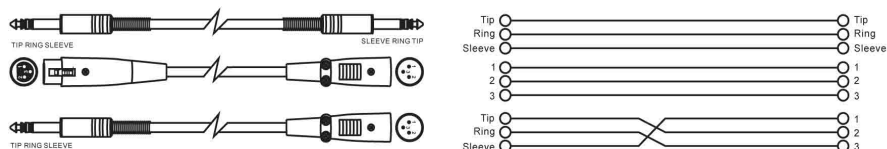
Only use good quality speaker cables, unshielded.

Use good quality audio cables, shielded, for inputs. A balanced or unbalanced type connection is feasible.

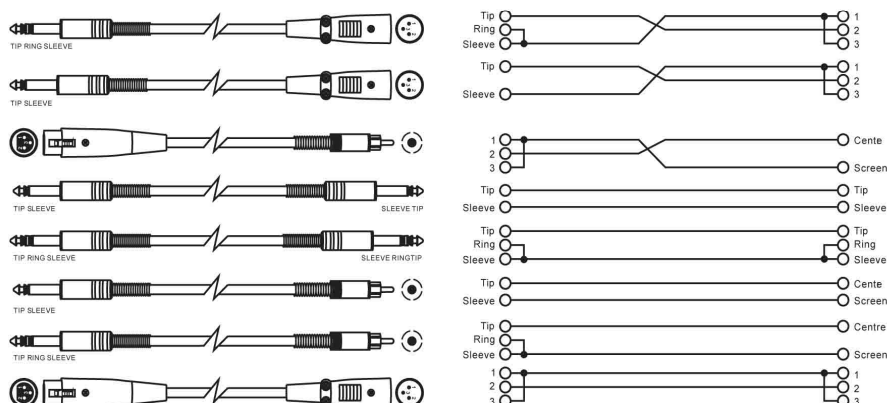
6 Connectors

Available on FORCE 700, input connectors are balanced (XLR) and unbalanced (RCA). Cables and fact sheets related to connecting to other equipment must therefore be of the same nature. Are listed below types of cords found in trade with their electrical connection diagram.

Balanced cables



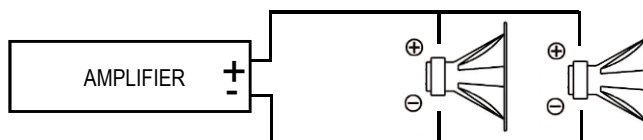
Unbalanced cables



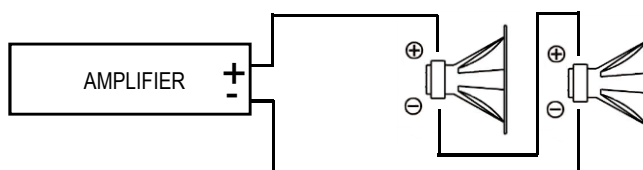
7 Impedance Load

When connecting multiple speakers or speakers on the same channel, various types of connection are possible. The type of installation changes the impedance of the load applied to the amplifier. Generally, when this impedance decreases the power increases. It is therefore possible to obtain a greater power, but this is limited by the characteristics of the amplifier. Knowledge of the load impedance is therefore crucial in order to not cause trouble.

Parallel connection



Serial connection



7 Impedance Load

The table below gives the value of the impedance of the realized mounting. It only includes the most frequently encountered cases.

Speaker impedance	Speakers number(*)	Final Impedance PARALLEL	Final Impedance SERIAL
16 Ohms	2	8 Ohms	32 Ohms (not recommended)
	4	4 Ohms	64 Ohms (not recommended)
8 Ohms	2	4 Ohms	16 Ohms
	4	2 Ohms (do not use)	32 Ohms (not recommended)
4 Ohms	2	2 Ohms (do not use)	8 Ohms
	4	1 Ohm (do not use)	16 Ohms

(*) Speakers are considered as all identical

8 Technical Specifications

RMS Power per channel	8 Ohms : 200 W 4 Ohms: 350 W 8 Ohms : 700 W (BRIDGE mode)
Amplification	Class-D
TDH	0,05 %
S/N	> 67 dB
Slew rate	5 V / μ s
Damping factor	300
Operating modes	STEREO / PARALLEL / BRIDGE
Crosstalk	> 46 dB
Start delay	7 sec
Input sensivity	0,8 V
Frequency Response 20 – 20 kHz	< \pm 0,25 dB
Input Connectors	<ul style="list-style-type: none"> • XLR balanced • RCA unbalanced
Output connectors	<ul style="list-style-type: none"> • Screw terminals • SPEAKON
Soft start	Yes
Power Supply	220 V \pm 10%, ~ 50/60 Hz
Dimensions (L x P x H)	483 x 277 x 89 mm
Weight	4.5 kg

9 Malfunctions

Some occasional problems are very often linked to handling errors. By checking the points listed below, it will be possible to find without difficulty, solutions to fix potential malfunctions. If problems persist, consult a dealer or a AUDIOPOLE Authorized Service Center.

Symptom	Cause	Solution
No power	<ul style="list-style-type: none">The mains cable is not properly connected.The power switch is not in the correct position.	<ul style="list-style-type: none">Reconnect the power cord.Turn ON the device
No sound	<ul style="list-style-type: none">The volume is at a minimum.The speakers are not connected.	<ul style="list-style-type: none">Adjust the volume.Connect speakers
Sound distortion	Inappropriate input signal level	Adjust levels and gains and the Equalization of the other equipment.
Hum	Bad ground or faulty power supply.	Check the mains voltage and the earth connection.

10 Warranty

This device is warranted parts and labor against any manufacturing defects for a period of two years from the date of purchase by the first user.

Conditions

1. The unit has been installed and implemented by observing the safety instructions in this operating manual.
2. The device was not diverted from its destination, either voluntary or accidental, and suffered no deterioration or modification other than those described here or explicitly authorized by AUDIOPOLE.
3. All modifications or repairs have been carried out by an authorized service station.
4. The defective product must be returned with the dealer who made the sale or to an authorized service station with proof of purchase.
5. The device was properly packaged to avoid damage in transport.



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