

Audiant 100p Stereo Power Amplifier

Owners Manual



 **PERREAUX**

Important Safety Instructions

Explanation of symbols used in this manual or on the rear of the device:



This symbol is intended to alert the user to the presence of uninsulated dangerous voltages within the enclosure of sufficient magnitude to cause electric shock.



This symbol is intended to alert the user to the presence of important operation, maintenance and servicing information in the instruction and service manuals.

Caution

- To reduce the risk of electric shock, do not remove the cover.
- No user serviceable parts inside.
- Refer servicing to qualified service personnel.
- Replace the mains fuse in the plug with one of the same type and rating.
- Disconnect supply cord before changing fuse.

Warning

To reduce the risk of fire or electric shock, do not expose this device to rain or moisture. Shock hazard - do not open.

Mains Plugs

- This device is supplied with a non-rewireable mains plug for the intended country.
- Replacement mains leads can be obtained from your Perreux dealer. Should you need to change the plug please dispose of it carefully.
A plug with bared conductors is dangerous if engaged in a live socket.
- The Brown wire must be connected to the Live (Line) supply pin.
- The Blue wire must be connected to the Neutral supply pin.
- The Green/Yellow wire must be connected to the Earth (Ground) supply pin.
- Please contact your dealer or a competent electrician if you are in any doubt.
- Refer to the rear of the product for fuse and mains voltage information.



This product is designed to comply with international directives on the Restriction of Hazardous Substances (RoHS) in electronic equipment. The wheeled bin logo indicates compliance and that these products must be recycled or processed as according to these directives.



General Safety Instructions

All safety and operation instructions should be read carefully before the 100p is operated. Keep the Owners Manual in a safe place for future reference.

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use the device near water, for example near a bathtub, kitchen sink, in a wet basement, near a swimming pool, etc.
- Clean only with a dry cloth.
- Mounting to a wall or ceiling should be via a heavy-duty bracket or shelf designed for audio equipment use.
- The device should be situated away from heat sources such as radiators, stoves, or other appliances that produce excessive amounts of heat.
- DO NOT place the device directly onto carpeted surfaces.
- Avoid exposing the device to extremely high or low temperatures.
- The device should be connected to a mains power supply only of the type described in the operating instructions, and/or as marked on the rear of the unit.
- DO NOT defeat the safety earth of the grounding type mains plug, severe injury or death may result. If the provided plug does not fit into your outlet, contact your dealer or consult an electrician.
- The power cord should be routed so that it is not likely to be walked on or pinched by items placed on or against it.
- Unplug the device during lightning storms or when unused for long periods of time.
- DO NOT let objects or liquids fall into the device, expose the device to dripping or splashing or place a vessel containing liquid on top of the device.
- Keep this device out of reach of children.
- DO NOT operate the device with the cover removed.
- DO NOT bypass any fuse, replace only with the value and type specified.
- DO NOT attempt to repair the device. In the event of a problem, please contact your Perreaux dealer.
- DO NOT operate this product in an explosive atmosphere.



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Introduction

Thank you for choosing this Audiant 100p Stereo Power Amplifier. We sincerely hope it provides you with many years of music listening pleasure.

The Audiant 100p is a stereo power amplifier capable of delivering 100W per channel; it incorporates fully balanced input circuitry, a high-current power supply and MOSFET output transistors – providing low distortion, high dynamic range and a sound which is open, detailed and transparent.

With balanced (XLR) and unbalanced (RCA) inputs, the Audiant 100p is compatible with almost all possible preamplifiers or source components with a volume control and ensures you get the best sound quality possible.

Designed with today's high definition landscape in mind, the Audiant 100p allows the superior detail, dynamics and transparency of high resolution music to be realised to its full potential.

The high noise rejection of the fully balanced input circuit prevents external noise from degrading the audio signal – revealing the smallest details and exposing all of your music's hidden subtleties.

Our unique power isolation system uses a separate transformer secondary and filtered power supply to isolate the sensitive input and voltage stages from noise and variations of the high-current output stage; providing unrivalled clarity and transparency that remains uncluttered and smear-free when the music gets busy.

With sophisticated protection circuitry you can rest easy knowing your investment will give a lifetime of music listening pleasure, while the inverted monocoque construction provides unprecedented mechanical stability and solid foundations for a great sounding amplifier.

The Audiant 100p Stereo Power Amplifier is the perfect partner for the Perreux Audiant DP32 DAC preamplifier. Whether as part of a complete Audiant system or as the power amplifier in your existing system, the 100p will reconnect you with your MUSIC.

Thank you for taking the time to read this manual; we do recommend you keep it for future reference.

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Martin van Rooyen,
Perreux Managing Director
and the Perreux design team



Installation

Unpacking

The Audiant 100p is supplied with the following accessories:

- Mains lead
- This manual

We recommend you retain the packaging for reuse in case you need to transport the unit at a later date.

Placement

Your Audiant 100p Stereo Power Amplifier should generally be placed close to your preamplifier keeping interconnect cabling short. Although when using balanced interconnects, the amplifier may be placed further away from the preamplifier without degrading the sound.

Ventilation Requirements

Your Audiant 100p requires dissipating considerable power in the form of heat. It should be placed in a position that does not restrict the airflow around it.

Allow at least 80mm (3 inches) above and to each side of the unit and mount the Audiant 100p on a flat surface for air circulation to allow heat to dissipate.

Do not place directly onto a carpeted surface as it will reduce air circulation and the heat will not dissipate as intended.

If the device is used in a cabinet, air must be able to flow through. An enclosed cabinet will severely restrict heat dissipation.

Ensure that nothing is placed above or below the unit that might block or restrict the vents.

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If the Audiant 100p has inadequate ventilation and/or is played very enthusiastically for a period of time, its temperature may rise above the designated operating level and the over-temperature protection will trip (see Protection System section).

Other Devices

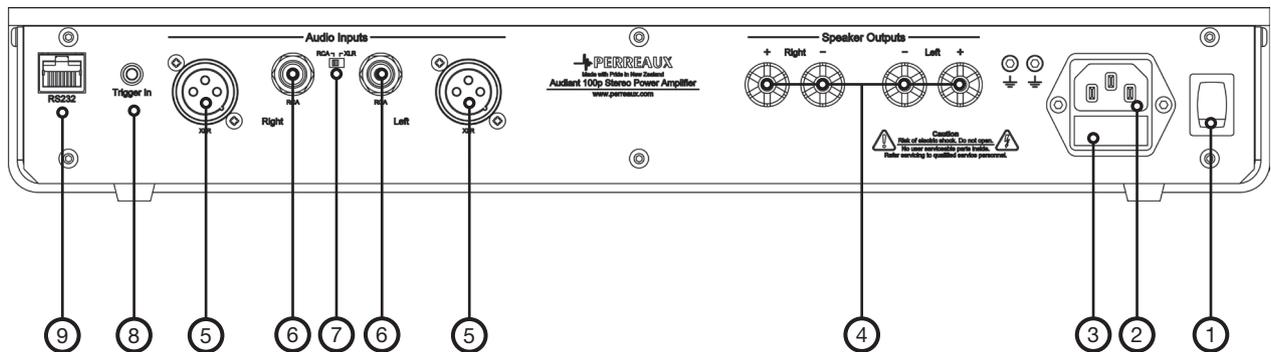
Ideally, your Audiant 100p Stereo Power Amplifier should not be located directly above or adjacent to other heat-producing products such as radiators, other power amplifiers, etc. If multiple amplifiers are being used and space is restricted, placing them side by side is preferable to stacking.

Do not place another device directly on top of the Audiant 100p, it will restrict heat dissipation and prevent the heat sink from operating as designed.

It is advisable to position your Audiant 100p away (and if possible, connected to a power socket on a different circuit) from powerful electrical or electronic products such as TV sets, computers, cookers, fridges etc. This will prevent the possibility of the strong electrical and electromagnetic emissions or interference given off by such devices adversely affecting the performance of your amplifier.



Connecting - Rear Panel



Important:

Before making any connections, switch off the mains power to all components in your system.

1 Power On/Off

The Power switch turns power to the unit on and off.

2 Mains Power Socket

The Mains Power Socket is used with the removable mains power cord to supply your Audiant 100p Stereo Power Amplifier with power.

Before connecting the 100p to the mains power, please check the voltage label on the rear panel to ensure that your amplifier conforms to the power supply in your area. Never attempt to connect the unit to an incorrect voltage – severe damage may result.

Note: The unit must always be earthed when connected to mains power. Use the earthed, moulded mains lead supplied. Never use an unearthed mains plug, socket or adaptor with this unit. The mains lead supplied may be fitted with a fused plug, depending on local regulations. If this is the case, always replace this fuse with another of the same type and rating.

3 Mains Fuse

The mains fuse is user serviceable, and should always be replaced with the same type and rating (see Technical Specifications section).

Ensure your Audiant 100p is disconnected from the mains power before attempting to change the fuse.

Note: Fuses do not usually blow without a reason. Any doubts about fuse failure should be conveyed directly to your Perreaux dealer.

4 Speaker Outputs

These speaker terminals are for connecting loudspeakers. Connect the wires from your left channel loudspeaker to the LEFT + & - terminals, and the wires from the right channel loudspeaker to the RIGHT + & - terminals. In each case, the red terminal is the positive output and the black terminal is the negative output.

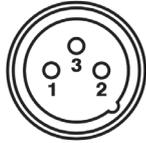
Care should be taken to ensure no stray strands of wire short the speaker outputs together. Please ensure that the loudspeaker terminals have been tightened to provide a good electrical connection. It is possible for the sound quality to be affected if the screw terminals are loose.



5 Balanced Inputs

The balanced (XLR) inputs accept analogue audio signals from preamplifiers with balanced outputs.

The pin assignments of the balanced XLR input connectors are:



- Pin 1: Shield
- Pin 2: +ve signal (hot)
- Pin 3: -ve signal (cold)

Please refer to the owner's manual of your preamplifier to verify that the pin assignments of the output connectors correspond as above. If this is not the case, wire the cables so that the appropriate preamplifier output pin connects to the equivalent 100p input pin.

Note: These inputs are for analogue audio signals only. They should not be connected to the AES/EBU digital output of a CD player or any other digital device.

6 Unbalanced Inputs

The unbalanced (RCA) inputs accept analogue audio signals from preamplifiers with single-ended outputs.

Note: These inputs are for analogue audio signals only. They should not be connected to the digital output of a CD player or any other digital device.

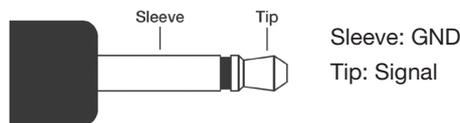
7 Input Switch

This switch is used to select the 'XLR' (balanced) or 'RCA' (unbalanced) inputs.

8 Trigger Input

The trigger input allows the Audiant 100p to be brought in and out of standby by a remotely connected device; for example, another audio component or a home automation system. The trigger input uses a mono 3.5mm (1/8") plug and accepts voltages of 0V DC up to 12V DC. A trigger voltage between 3V and 12V DC will bring the amplifier out of standby and it will enter standby when the trigger voltage is 0V DC.

The trigger input plug must meet the specifications shown below:

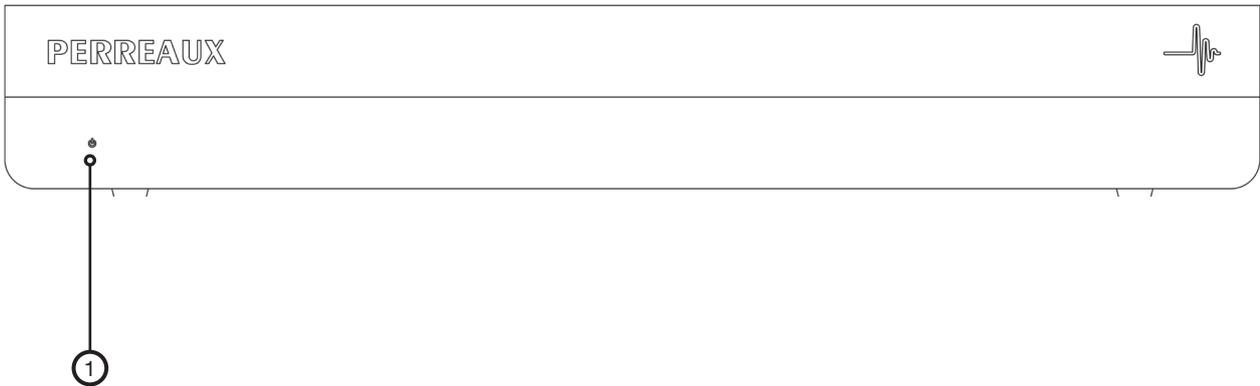


9 RS232 Port

The RS232 port allows external serial control of the Audiant 100p for custom install use. A full command set is available on the Perreux website. This port can also be used by authorised Perreux service personnel for software updates. The Coax Input is for connecting coaxial digital sources, such as CD players, music streamers etc.



Operation - Front Panel



1 Standby Button

The Standby Button switches the unit between Standby mode (indicated by dim standby LED) and On (indicated by bright standby LED). Standby is a low-power mode where the power consumption is less than 1 Watt. The unit should be left in Standby mode when not in use.



Protection System

Your Audiant 100p stereo power amplifier is designed to give a lifetime of music listening pleasure, employing protection systems to ensure lasting reliability and give you confidence that your investment will provide lifelong trouble-free enjoyment.

The protection system comprises of five main protection methods. In all instances the protection state will be indicated by the standby LED flashing. Power to the amplifier will need to be cycled, by the standby button or power switch, to reset the protection state.

DC Offset Detection

The DC offset detection system offers loudspeaker protection if the output of the amplifier goes to a high DC voltage.

Over-Temperature Detection

The over-temperature detection system constantly monitors the heat generated by the output MOSFETs. If the monitored temperature reaches 80°C (176°F) the output to the speakers will be disconnected to stop the temperature from rising further.

An over-temperature condition is normally caused by a combination of high listening levels, low impedance or low sensitivity speakers.

Fuse Fail Detection

The fuse fail detection system monitors the internal DC rail fuses. If any of the fuses should fail, output to the speakers is disconnected to protect the speakers and amplifier from damage.

Fuses normally blow for a reason. Any doubts about fuse failure should be conveyed directly to your Perreux dealer.

9 AC Fail Detection

The AC fail detection system monitors the AC voltage on the main power transformer. If for any reason the AC mains voltage is lost, e.g. power failure or tripped circuit breaker, the speakers are immediately disconnected from the amplifier before the amplifier loses power.

Over-Current Detection

The over-current detection system ensures the output devices are constantly operating within their safe operating limits and provides a fast response to temporary overload conditions. When an over-current condition is detected the output to the speakers is disconnected to isolate the amplifier from potential damage.

An over-current condition can occur due to a short across the speaker terminals, a speaker driver/crossover fault or excessive current demand due to low impedance speakers or excessive volume levels.



Care and Maintenance

Notes: Always switch the unit off and remove the power cord from the rear of the unit before attempting to clean your Audiant 100p Stereo Power Amplifier in the manner described below.

Never apply liquid directly to the unit.

Never use abrasives.

Never rub in a circular motion.

Front Panel and Cover

The front panel and cover feature a durable, high-quality anodised finish. To remove finger marks and dirt, simply rub the surface with a soft cloth.

If the dirt is not removed, use a small quantity of isopropyl alcohol on a clean cloth and rework the effected area.

Troubleshooting

There is no power

Ensure the AC power cord is connected securely.

Ensure the mains plug is fully inserted into the wall socket and is switched on.

Check the mains fuse of the unit.

Check fuse in the mains plug or adaptor.

There is no sound

Check that the source component is properly connected.

Check that the source component is playing.

There is no sound on one channel

Check interconnects.

There is a loud buzz or hum

Ensure no interconnects are loose or defective.

Ensure that your tape deck/turntable is not too close to the amplifier.

There is weak bass or diffused stereo imaging

Ensure the speakers are wired in the correct polarity, the +ve terminal of the loudspeaker should connect to the +ve speaker output terminal of the amplifier, and likewise, -ve to -ve.

The Standby LED is flashing

The protection system of the amplifier has tripped and needs to be reset (see Protection System section).



Technical Specifications

All specifications are accurate at the time of printing. Perreux Industries Ltd. reserves the right to adjust specifications without notice.

All specifications measured at 240V after a 10 minute warm up period using an Audio Precision ATS-2 Audio Analyser. Measurements taken at 65kHz bandwidth, unless specified otherwise.

Inputs

Audio Inputs:	1 Balanced/Unbalanced (<i>selectable</i>)
Input Impedance:	
Balanced	20k Ω
Unbalanced	47k Ω
Input Sensitivity:	
Balanced	1.0Vrms
Unbalanced	0.5Vrms
Trigger Input:	1 mono 3.5mm ($\frac{1}{8}$ ") jack
OFF voltage	0VDC
ON voltage	3-12VDC

Amplifier

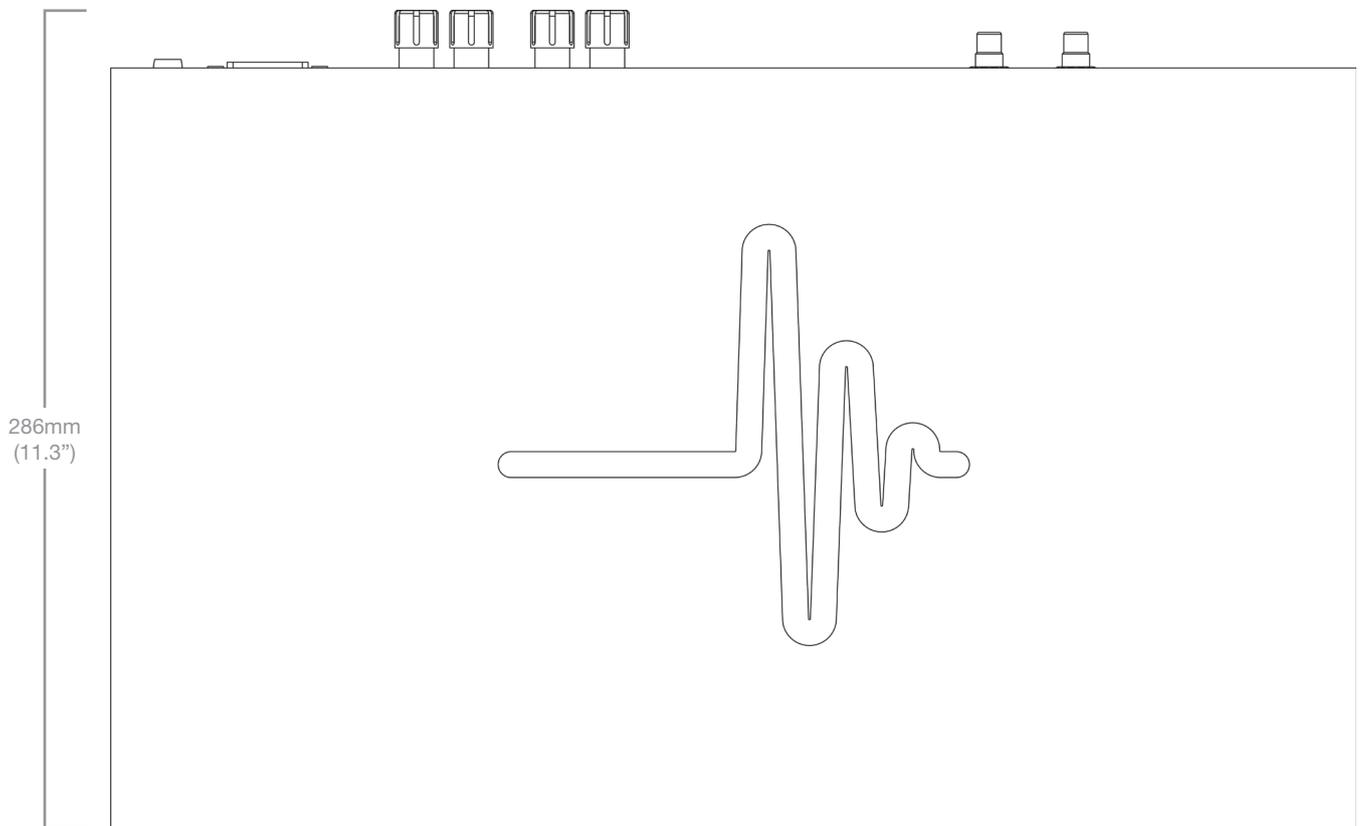
Power Output (<i>per channel, <0.1% THD+N, both channels driven</i>):	100Wrms into 8 Ω 145Wrms into 4 Ω
Total Harmonic Distortion (THD+N):	
Typically:	0.001% @ 1kHz into 8 Ω
20Hz to 20kHz:	<0.02% into 8 Ω
Frequency Response:	± 0.1 dB, 20Hz to 20kHz
Signal to Noise Ratio (<i>un-weighted</i>):	120dB, ref. 100W into 8 Ω
Damping Factor:	400 @ 1kHz, ref. 8 Ω
Gain:	
Balanced	29.1dB
Unbalanced	35.1dB
Channel Separation:	
Typically	120dB @ 1kHz, ref. 100W into 8 Ω
20Hz to 20kHz	better than 110dB, ref. 100W into 8 Ω
Shunt Voltage Regulators:	Yes
Power Supply Filtering:	Yes
Protection Circuitry:	Yes
Audio Grade Signal Capacitors:	Yes

General

Power Consumption:	
Standby	<1W
Idle	60W
Maximum (145W into 4 Ω)	670W
Mains Fuse Rating:	
100VAC – 120VAC	6A (<i>slow blow</i>)
220VAC – 240VAC	4A (<i>slow blow</i>)
Dimensions:	
Width	431mm (17.0")
Depth	286mm (11.3")
Height	67mm (2.6")
Weight:	12.0kg (26.4lb)



Physical Dimensions







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