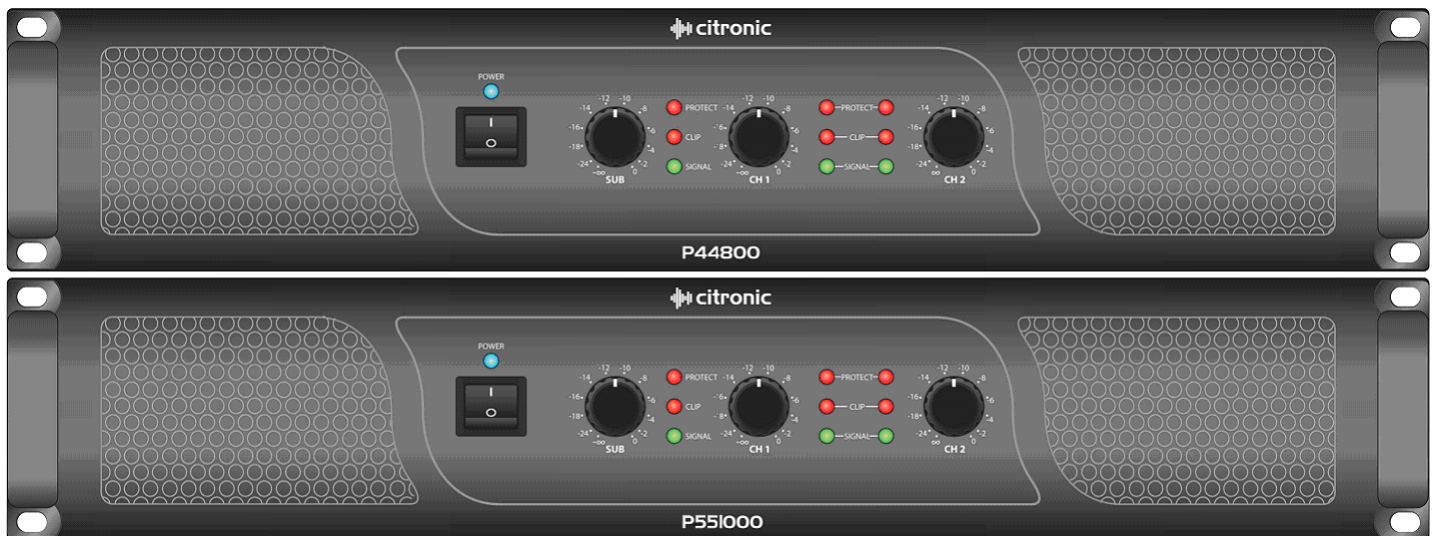


P-SERIES

2.1 POWER AMPLIFIER

Order ref: 172.248, 172.249

User Manual



Introduction

Thank you for choosing the Citronic P-series 3-way power amplifier as part of your sound reinforcement system. This high output amplifier is designed to offer high quality, dependable service for mobile and installed systems. Please read this manual fully and follow the instructions to achieve the best results with your new purchase and to avoid damage through misuse.

Warning

To prevent the risk of fire or electric shock, do not expose any of the components to rain or moisture. If liquids are spilled on the casing, stop using immediately, allow unit to dry out and have checked by qualified personnel before further use. Avoid impact, extreme pressure or heavy vibration to the case
No user serviceable parts inside – Do not open the case – refer all servicing to qualified service personnel.

Safety

- Check for correct mains voltage and condition of IEC lead before connecting to power outlet
- Ensure speaker leads are good condition with no short connections or damaged plugs
- Check impedance of speaker loads do not exceed the minimum stated load for the amplifier
- Do not allow any foreign objects to enter the case or through the ventilation grilles

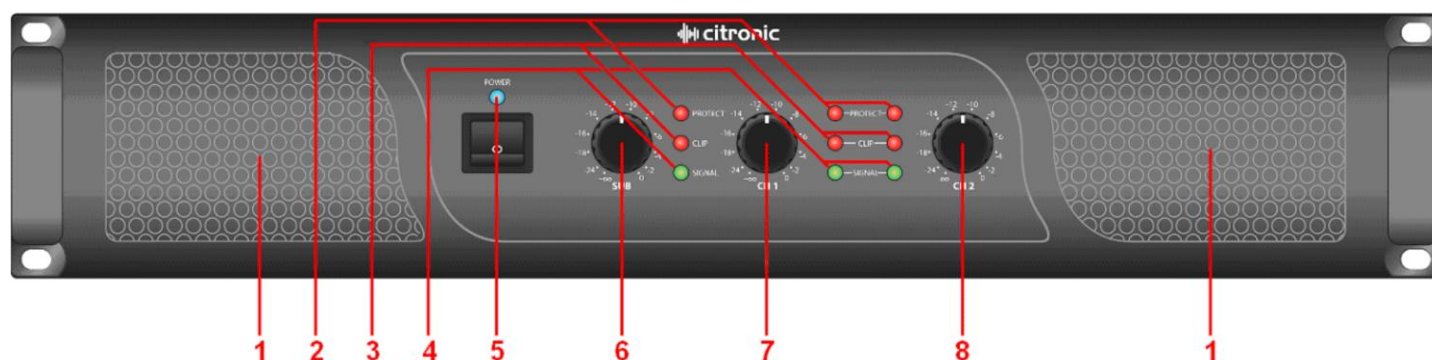
Placement

- Keep out of direct sunlight and away from heat sources
- Keep away from damp or dusty environments
- When rack-mounting, ensure adequate support for the base of the amplifier and firm fixings for the front
- Ensure adequate air-flow and do not cover cooling vents at the front and rear of the amplifier
- Ensure adequate access to controls and connections

Cleaning

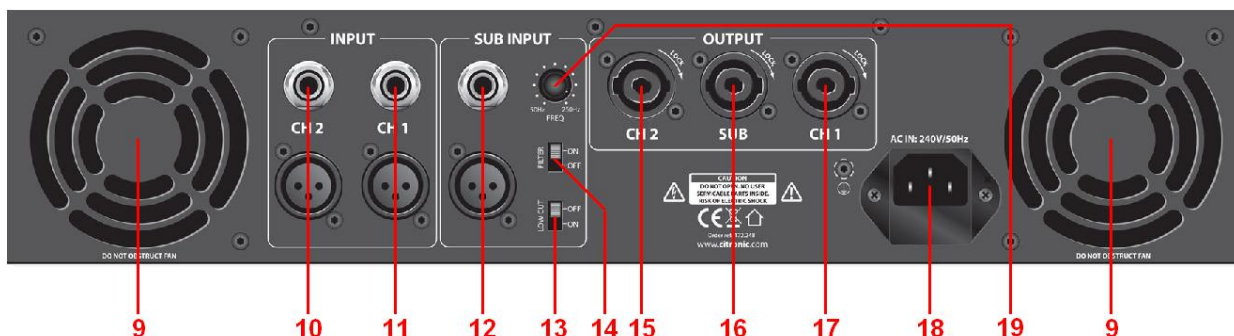
- Use a soft cloth with a neutral detergent to clean the casing as required
- Use a vacuum cleaner to clear ventilation grilles of any dust or debris build-ups
- Do not use strong solvents for cleaning the unit

Front Panel



1. Cooling vents
2. Protect LED indicators
3. Clip LED indicators
4. Signal LED indicators
5. Power switch and LED
6. SUB level control
7. CH1 level control
8. CH2 level control

Rear Panel



9. Cooling fan vents
10. CH2 jack and XLR parallel inputs
11. CH1 jack and XLR parallel inputs
12. SUB jack and XLR parallel inputs
13. LOW CUT on/off switch
14. FILTER on/off switch
15. CH2 output (SPK)
16. SUB output (SPK)
17. CH1 output (SPK)
18. IEC mains inlet and fuse
19. SUB cutoff frequency control

Operation

The stereo outputs (CH1 and CH2) should be connected to mid-top or full range speaker cabinets. Minimum impedance for each stereo output should be no lower than 4Ω.

The SUB output is specifically designed to power a sub cabinet

Alternatively, 2 sub cabinets may be connected in parallel, provided that the total load is no lower than 4Ω

Connect speaker cabinets to channel outputs using good quality leads and ensure that the combined load on each channel is no lower than 4Ω
(for speaker loads connected in parallel, $8\Omega + 8\Omega = 4\Omega$)

Connect each signal input from mixer or other line level source via the XLR or jack connectors on the rear panel using good quality signal leads.

A LOW CUT switch is provided on the rear panel, which removes the very lowest frequencies which may be inefficient for speaker drivers to reproduce, wasting power on inaudible output

The SUB output has a filter facility, which can be switched on via the FILTER switch

When this is switched in, the SUB input is inactive and the SUB amplifier is fed from the CH1 and CH2 inputs (merged together) and the filter removes all of the signal above a cutoff frequency, allowing only low frequencies to be amplified

The cutoff frequency may be adjusted between 50Hz and 250Hz via the FREQ rotary control

A recommended start point is mid-way (approximately 150Hz) - this can be adjusted later as required

Jack and XLR inputs for each channel are wired in parallel, allowing the signal to be carried forward to further amplifiers if necessary (if the input is XLR, the jack may be used as a signal output and vice versa)

Connect the amplifier to the mains outlet, making sure that the IEC lead is earthed, in good condition and connected securely.

With channel gain controls turned fully down, switch on the power to the amplifier. This unit has a "soft-start" function which makes some checks before engaging power to the amplifiers, which may take a few seconds.

With mixer (or other signal source) levels turned down, gradually increase the amplifier's channel level controls to the required level (normally full) and then gradually increase the signal level from the mixer or sound source until sound can be heard through the speakers and then continue increasing up to the required level.

During use, green "SIGNAL" LEDs will illuminate to show when a signal is present and red LED "CLIP" LEDs illuminate if the output is reaching clip level. If the red CLIP LEDs illuminate more than very briefly, reduce the volume until they hardly light up at all.

If the internal protection circuitry detects a fault in the speakers or amp, the channel(s) will enter Protect Mode and red "PROTECT" LEDs will illuminate on the front panel to show this. Switch the amplifier off and check the entire system (including leads) before powering up again. If still in Protect Mode, seek advice from qualified service personnel.

Before powering down, turn the channel gain controls fully down to avoid loud noises when switching off.

Specifications

Model	P44800	P551000
Power supply	240Vac 50Hz (IEC)	
CH1 and CH2 power RMS @ 8Ω	2 x 250W	2 x 350W
SUB power RMS @ 8Ω	500W	700W
CH1 and CH2 power RMS @ 4Ω	2 x 400W	2 x 550W
SUB power RMS @ 4Ω	800W	1000W
Input : Line	3 x XLR + 6.3mm jack	
Input impedance (bal/unbal)	40k Ohms / 20k Ohms	
Frequency response	10Hz - 50kHz (-2dB)	
SUB filter cutoff frequency	50Hz - 250Hz	
THD + N	0.04%	
Slew rate	6.5V/usec	
S/N ratio	-86dBm	
Controls	3 x channel level, LOW CUT on/off, FILTER on/off, FREQ	
Speaker outputs	CH1, CH2 and SUB SPK connectors	
Circuit protection	Short-circuit, DC, overload, soft-start	
Dimensions	483 x 439 x 88mm	
Weight	21kg	23kg

Troubleshooting

No power light on front panel switch	Ensure IEC inlet is connected to mains and lead is in good condition
	Ensure mains outlet is switched on
Power light is on but no other LEDs and no output	Check input signal and connection leads
	Ensure channel gain controls are not turned fully down
Power light and Signal LEDs are lit but no output	Check speaker cabinets are in good working order
	Check speaker leads are in good condition and connected properly
"PM" (Protect Mode) LED is lit and there is no output	Switch off and disconnect from mains
	Check speakers are in good working order and not shorted out (using a multi-tester)
	After checking all connected items, power up again
	If still in Protect Mode, switch off again and refer to qualified service personnel
SUB output has "muffled" mid frequencies	Ensure cooling vents are clear and amplifier is not overheated
SUB input is inactive	Switch on FILTER and adjust FREQ control for subs that have no built-in crossovers
SUB output has quiet output with FILTER on	If the FILTER is switched in, the signal is only fed from CH1 and CH2 inputs
	If FREQ is set too low, there may be quiet output, adjust the control to improve output
Output is very distorted and "CLIP" LEDs are lighting	Switch off FILTER for better output to subs with built-in crossovers
	Check the speaker impedance is not below 4 Ohms per channel
	Turn down the input level from audio source
Output is working but at very low level	Turn down channel gain controls
	Ensure input source is at line level
	Increase input level from audio source
	Turn up channel gain controls