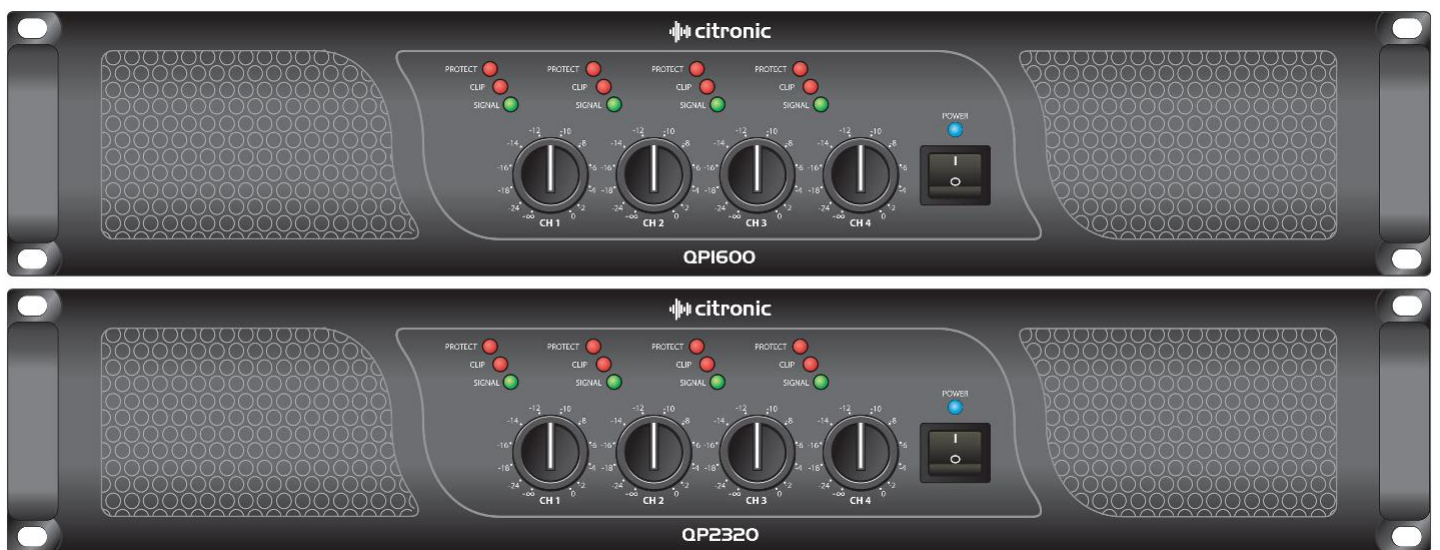# QP1600/QP2320

QUAD POWER AMPLIFIERS

Order ref: 172.241, 172.243

User Manual

## Introduction

Thank you for choosing the Citronic QP-series quad power amplifiers as part of your sound reinforcement system. These high output amplifiers are 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
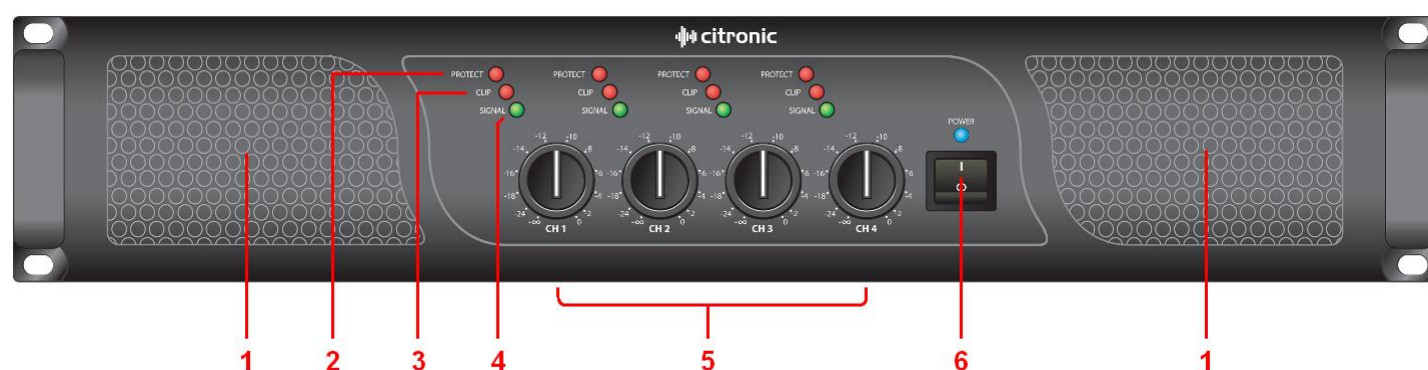- Do not allow any foreign objects to enter the case or through the ventilation grilles

## 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
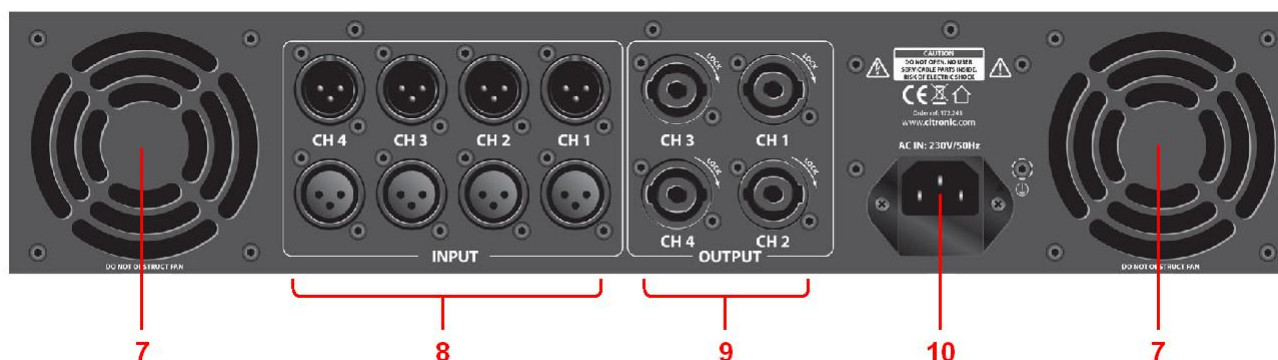- Ensure adequate access to controls and connections

## 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. Channel gain controls

# Rear Panel



7. Cooling fan vents
8. Parallel input and output XLRs (balanced)
9. Speaker output connectors
10. IEC mains inlet and fuse

## Operation

Determine how the system is to be connected. This quad amplifier may be treated as 2 stereo amplifiers, a stereo subs + stereo mid-tops amplifier or a 4-zone mono system.

Connect speaker cabinets to channel outputs using good quality leads and ensure that the combined load on each channel is no lower than 2Ω
(for speaker loads connected in parallel, 4Ω + 4Ω = 2Ω... or even... 8Ω + 8Ω + 8Ω + 8Ω = 2Ω)

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

If the signals are to be cascaded onto other amplifiers, connect these via the XLR line parallel signal outputs. These are simply connected in parallel together with the relative inputs.

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 gain 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.