



# QX-4300 USER MANUAL





## PRODUCT OVERVIEW

The Quest Engineering QX-4300 is a 4 channel 1RU power amplifier suited for any application requiring superior performance and reliability. Ideal for multiple zone applications providing commercial sound installations with clean and reliable power. The QX-4300 provides 300 watts per channel of operation into 4 and 8 ohm loads, delivering full channel power to either low- or high-impedance loads. High and Low pass filters, limiters and standby are available per channel with fast 1ms wake up time. For high end commercial, AV or domestic applications, the QX range of amplifiers provide superior class D performance with proven reliability without compromise.

## SAFETY PRECAUTIONS

- Please read the instructions in this section carefully before use.
- Ensure all instructions in this manual are observed as all information contained within is very important.
- It is also highly recommended that this manual is retained for future reference.

## SAFETY SYMBOL & MESSAGE CONVENTIONS

The safety symbols described are used in this manual to prevent bodily injury and property damage which could result from mishandling. Before operating this product, please read this manual first, in full so you that you are thoroughly aware of any risks.



**Indicates a potentially hazardous situation which, if mishandled, could result in serious personal injury or death.**

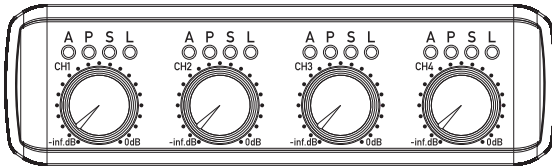


## GENERAL CAUTION

- Do not expose the unit to any moisture whether rain, water, or other liquids. Exposure to moisture could result in damage to internal components or electrocution\circuit failure.
- Do not cut, kink, or otherwise damage or modify speaker cable. Ensure a speaker cable with a core diameter of at least 0.75mm<sup>2</sup> is used for specified performance.
- Do not install or place speaker cables or this device near heaters, high traffic areas or any area where the cables or device can be damaged.
- Avoid installing or mounting speaker boxes, amplifiers, electronics or cabling in unstable locations.
- In the event of storms and/or lightning, ensure all devices are disconnected from mains power in order to prevent damage to any of the units in the system.
- When cleaning the unit, ensure it has been disconnected from any power source and that only a dry cloth is used. Do not use any aerosol or liquid-based cleaners.
- Ensure all electronics are electronically grounded (earthed) to a safety ground terminal in order to avoid electric shock. Do not ground any device to a gas pipe as this may result in fire.
- Servicing of all electronics should only be carried out by a certified Quest technician. Please consult your original place of purchase to find the location of your nearest Quest service centre.
- When installing amplifiers and/or other electronics only use the hardware specifically designed for this product.



## FRONT PANEL CONTROLS



**CH1**  
**CH2**  
**CH3**  
**CH4**

Rotary gain control

**A**

Blue: Amplifier active

Orange: Amplifier is in standby mode

**P**

Orange: Amplifier is in protect mode

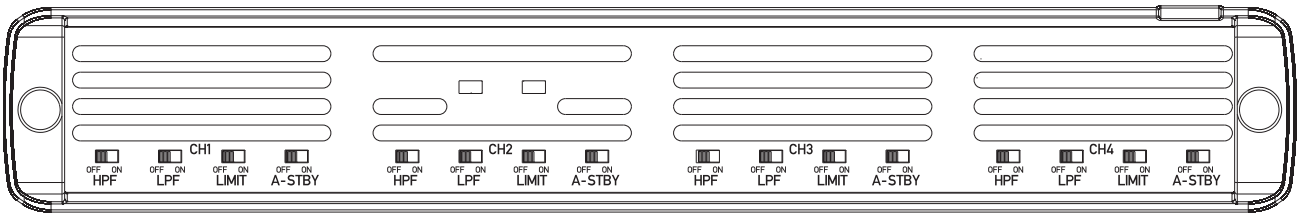
**S**

Green: Signal is detected

**L**

Orange: Amplifier is limiting signal or muted if in standby mode

Red: Amplifier is clipping



**HPF**

Off: Amplifier passing full range signal

On: 80Hz High Pass Filter Active (24dB/Oct)

**LPF**

Off: Amplifier passing full range signal

On: 100Hz Low Pass Filter Active (24dB/Oct)

**LIMIT**

Off - Amplifier will not limit

On - Amplifier will limit to prevent clipping

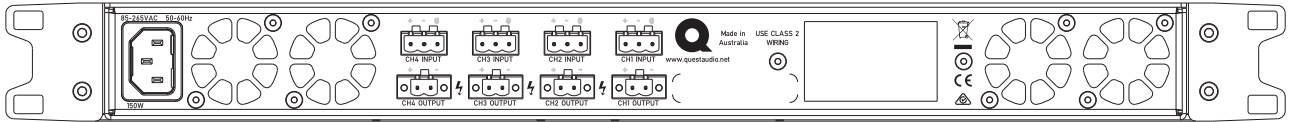
**A-STBY**

Off - Amplifier will not enter power saving mode

On - Amplifier will enter sleep mode after 25 minutes of no signal



## REAR PANEL CONNECTIONS



**CH1 Input**

**CH2 Input**

**CH3 Input**

**CH4 Input**

Phoenix/Euroblock

**CH1 Output**

**CH2 Output**

**CH3 Output**

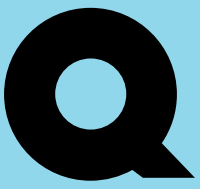
**CH4 Output**

Phoenix/Euroblock

**Mains Connection**

IEC

**Blank Plate for Expansion Module (optional)**



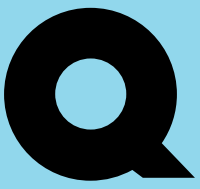
## BASIC OPERATION GUIDELINES

Due to the advanced power saving feature of the QX-4300, the amplifier has been designed to power from the mains with no additional switch. The amplifier has a removable grille on the front panel. The grille is held in place magnetically and can easily be removed without tools to access controls to engage a number of modes which are described in the next section. High Pass and Low Pass filters can also be activated to provide basic frequency dividing functions, these are most commonly used in a system with sub-woofers.

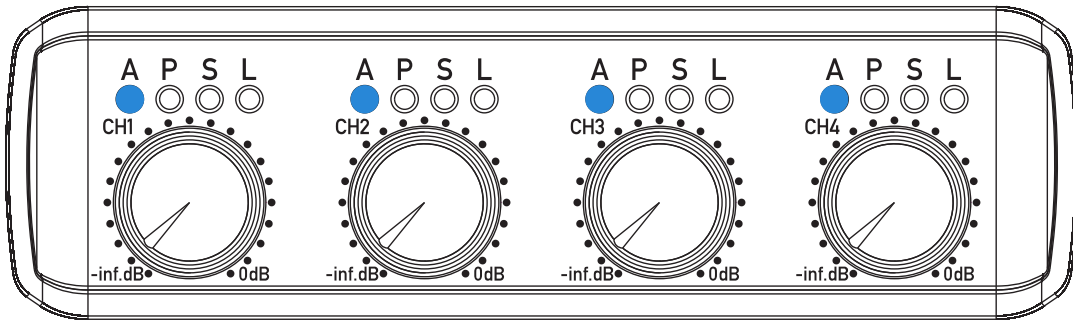
To avoid harm to connected speakers it is important to not clip the amplifier for extended period of times. Clipping occurs when the input signal is excessive and overloads the input or output of the amplifier. To avoid clipping reduce the level of the input. The amplifier has a selectable limit option which can be engaged to help avoid clipping and it is recommended that this mode is used if the potential exists for extended periods of clipping.

The amplifier has a protection circuit which activates when a fault condition exists. The LED will stay illuminated until the fault is resolved. The protection circuit activates to help prevent damage to the amplifier and connected speakers. Common causes can be shorted wiring or faulty speakers. If the Protect light illuminates disconnect the amp from power and then disconnect the speakers. Reconnect the amp to mains and check the status of the protect LED, if the LED has not turned back on then check the speakers and cabling for faults.

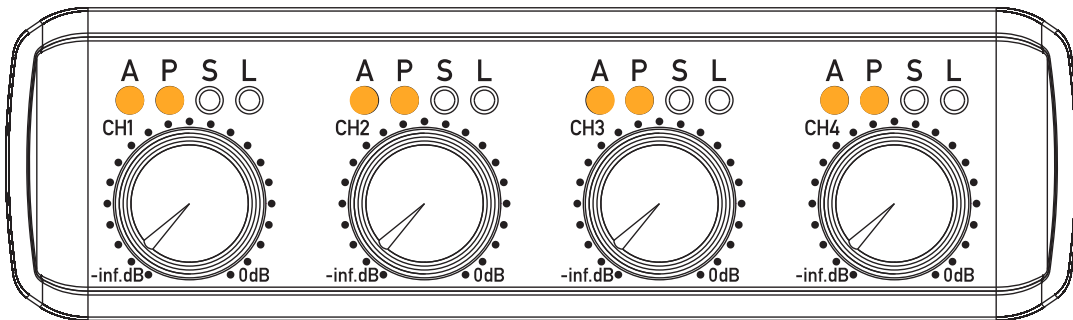
The QX-4300 is not designed to run Bridge mode, it is capable of running high or low impedance loads on each individual channel. If Bridge mode is required another model from the Quest Engineering range should be selected.



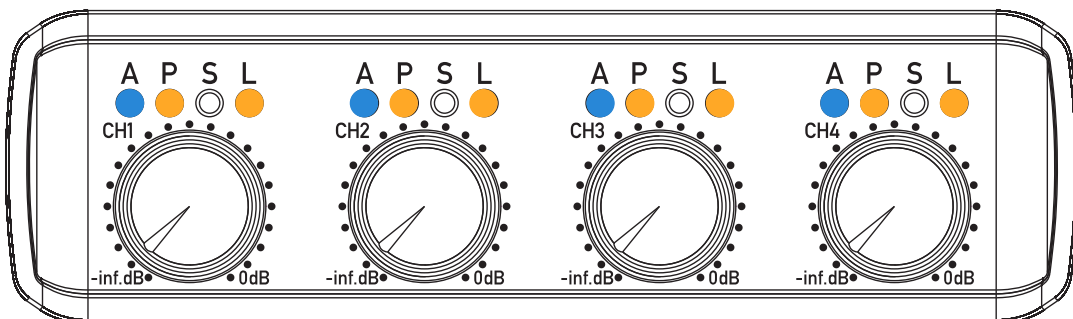
## OPERATION MODES



Active Mode is indicated by a Blue LED, the amplifier is connected to power and ready to pass signal.



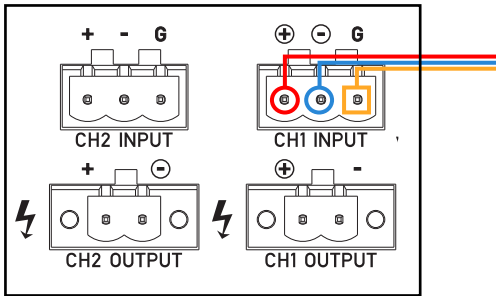
The Orange LED indicates the amplifier is in Standby, a power saving mode. This mode can be enabled by toggling the under panel A-STBY switch from Off to On. In this mode if no signal is detected for 25 mins the amplifier will "sleep" and wake within 660ms of detection of signal.



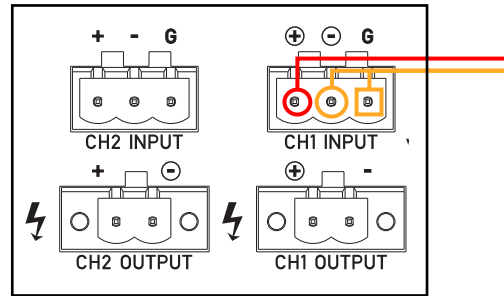
Mute mode puts the amp into a "light sleep" and occurs when the Standby option has been selected and no signal has been detected for 10mins, if the amplifier detects signal it will wake within 1ms. When no signal has been detected for 25 mins full sleep mode will activate.



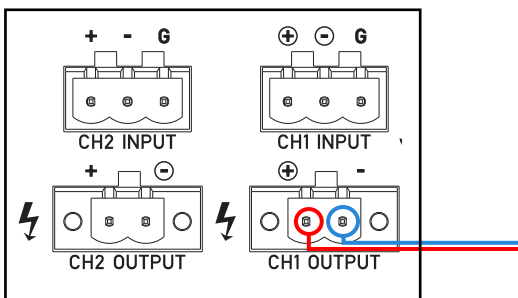
## INPUT/OUTPUT WIRING



Balanced Input Wiring



Unbalanced Input Wiring



Output Wiring





## SPECIFICATIONS

MODEL	PER CHANNEL			
	80hm	40hm	70V (220hm)	100V (330hm)
<b>LOAD</b>				
<b>Maximum Dynamic Power (@1kHz, 1% THD)</b>	4x 550W	4x 550W	4x 550W	4x 550W
<b>Maximum Continuous Power (@1kHz, 1% THD)</b>	4x 280W	4x 260W	4x 250W	4x 240W

<b>Frequency Response</b>	20-20kHz (+/-0.3dB)
<b>Peak Output Current</b>	25A
<b>Dynamic Range</b>	104dB (A-weighted)
<b>Noise Level</b>	-67dBu (A-weighted)
<b>Distortion (1kHz@1W/80hm)</b>	0.006%
<b>Distortion (1kHz@50W/80hm)</b>	0.006%
<b>Crosstalk (1kHz@1W/80hm)</b>	-80dB
<b>Gain</b>	32dB
<b>Maximum Input Level</b>	+24dBu
<b>Input Type</b>	Analogue Balanced 3-pin Phoenix (5.08mm pitch) + Optional Expansion Module
<b>Input Sensitivity</b>	+4dBu
<b>Input Impedance</b>	10kOhm
<b>Output Resistance</b>	43.6mOhm
<b>Front Controls</b>	Volume Adjust, 80Hz HPF Enable, 100Hz LPF Enable, Limiter Enable, Auto-Standby Enable
<b>Indicators (LEDs)</b>	Blue/Orange      Active/Standby
	Orange            Protection
	Green              Signal Detection
	Orange/Red      Limiter/Clip
<b>Cooling</b>	Fan cooled, temperature dependent

<b>Features</b>	Wake On Music, Auto-Mute (1ms wake-up), Limiting on High Temperature
<b>Amplifier Protection Systems</b>	Thermal protection, Over-Current Protection, DC Protection, HF Protection
<b>Mains Input Voltage Range</b>	85VAC - 265VAC
<b>Standby Power Consumption</b>	4.8W
<b>Muted Power Consumption</b>	16W
<b>Idle Power Consumption</b>	28W
<b>Standard Power Consumption (Pink Noise@ 1/8th Rated Power, 80hm)</b>	150W
<b>Output Connector</b>	2-pin Phoenix (5.08mm pitch) with a screw lock
<b>Mains Connector</b>	Standard IEC C14
<b>Dimensions (H x W x D)</b>	44 x 482 x 344 mm (1.75 x 19 x 13.5")
<b>Weight</b>	5.9kg (13 lbs)
<b>Accessories</b>	Mains Cable, Feet, User Manual, Phoenix Plugs

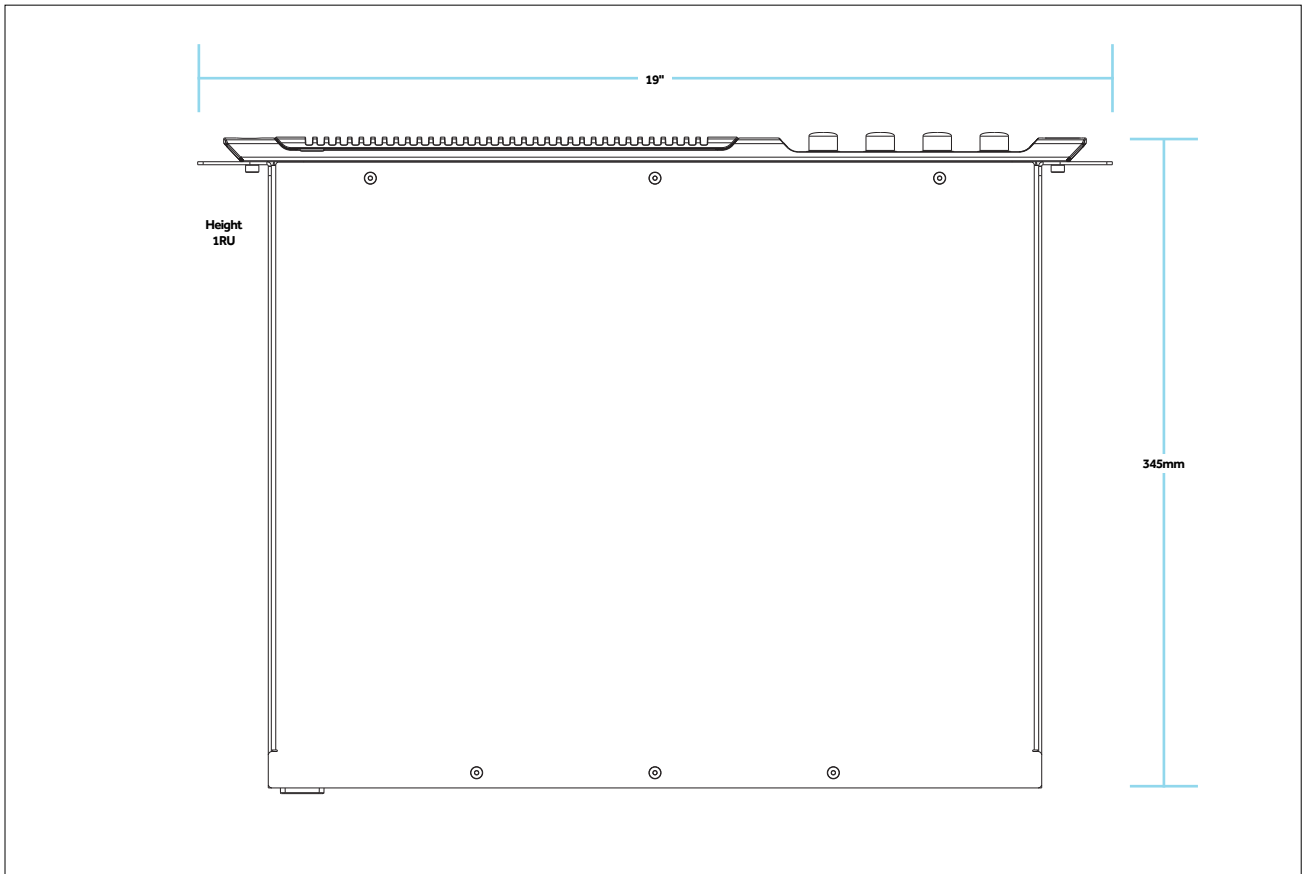
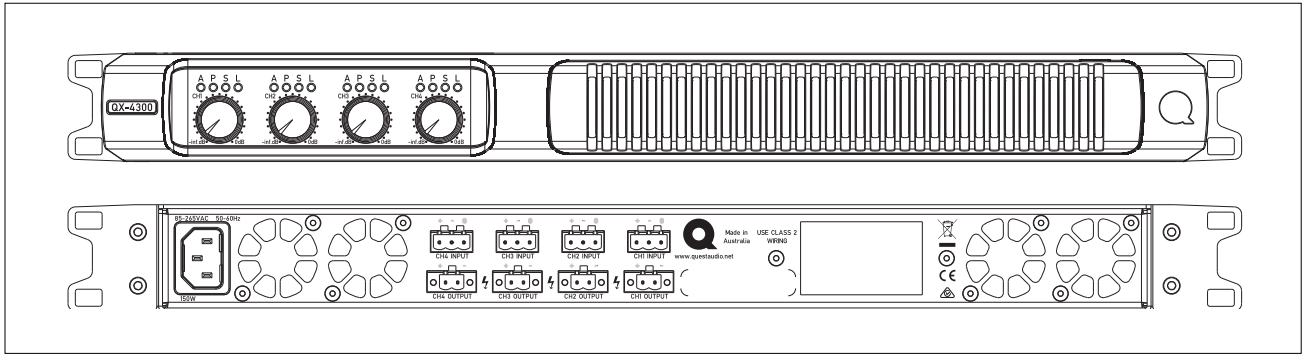
\* All specifications were measured at 240VAC

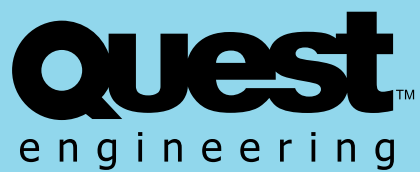
\*\* Quest Engineering reserves the right to make changes in specifications, or products without prior notice.

\*\*\* The figures shown above are 'real world', usable specifications and are conservative as a result. Quest Engineering does not believe in portraying misleading or exaggerated specifications.



## TECHNICAL DRAWINGS





## **REGISTER YOUR PRODUCT**

Thank you for choosing Quest. Please take the time to complete your product registration.

Registering your Quest Engineering product will:

- Confirm your warranty
- Register your product
- Protect your new product

## **REGISTER ONLINE**

**[questaudio.net/warranty-reg/](http://questaudio.net/warranty-reg/)**

For spare parts and service,