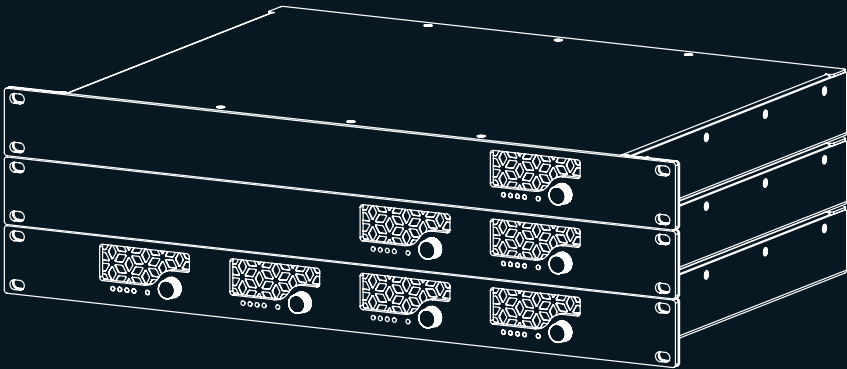




QX-280
SERIES



QX-280 Series Owner's Manual

Product Overview

The QX-280 Series Amplifiers are a high channel density, 1RU, high fidelity solution for high and low impedance distributed audio systems.

Available as a single, two or four channel variant; the QX-280 Series is the ideal component for audio visual installations, multi-channel systems, or distributed consumer/commercial applications. The transformerless speaker outputs deliver full range audio to all impedance loads from 4Ω up to 70/100V systems. Each amplifier channel has a switchable 80Hz 4th order Butterworth High-Pass filter located on the rear of the amplifier, and a volume control that can be accessed directly from the front panel.

Each channel also includes a selectable Automatic Standby function. This is located on the rear of the amplifier, and will mute that particular channel after 10mins of no audio signal presence. After 30mins that channel will enter a sleep mode, which allows individual channels to draw less than 0.5W of mains power.

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.



WARNING

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, otherwise damage or modify speaker cable. Ensure a speaker cable with a core diameter of at least 1.5mm is used for correct 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 (per channel)

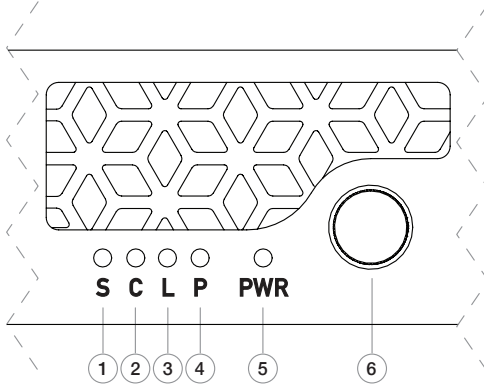


Figure 1.00

- ① Audio Signal Indicator
- ② Amplifier Clip Indicator
- ③ Limiter Active Indicator
- ④ Amplifier Protect Indicator
- ⑤ Amplifier Power Indicator
- ⑥ Rotary Gain Control

Rear Panel Connections & Controls (per channel)

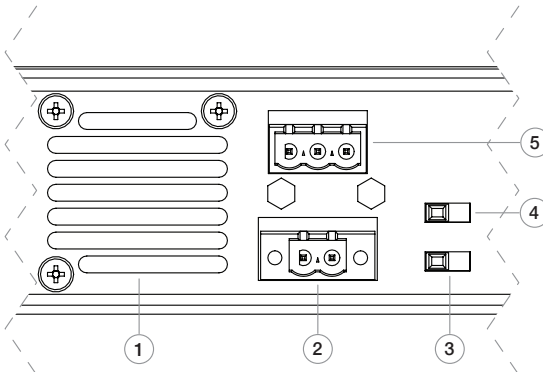


Figure 1.01

- ① Cooling Fan Exhaust
- ② Speaker Output Connector
- ③ 80Hz High Pass Filter Enable
- ④ Auto Standby Enable
- ⑤ Audio Signal Input Connector

Input Signal Wiring Examples

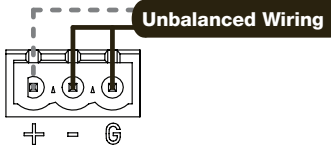


Figure 2.00

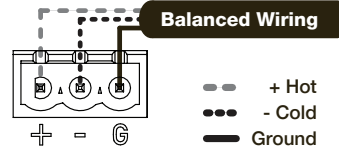
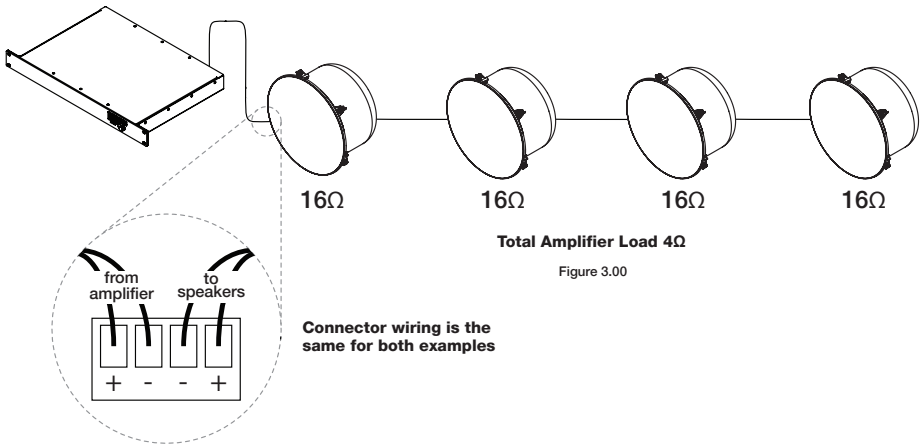


Figure 2.01

Amplifier Wiring Examples

Parallel Wiring



70/100V System (example shows 30W tap settings)

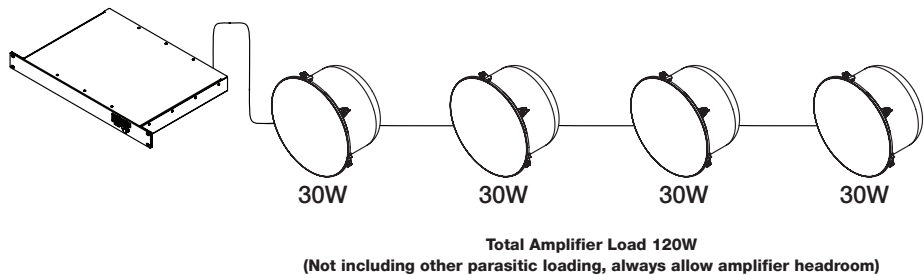


Figure 3.01

Front Panel LED Indicators



Figure 4.00

Audio Signal is Present

This LED will illuminate when the amplifier detects an audio signal.



Figure 4.01

Amplifier Channel is Clipping

If the amplifier is clipping, this LED will illuminate.

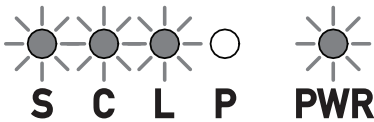


Figure 4.02

Limiter is Active

When the amplifier reaches the point of clipping, the limiter LED will illuminate. This indicates the limiter circuit is reducing the audio input signal, in an attempt to stop the signal from clipping.

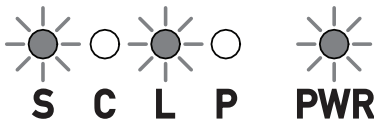


Figure 4.03

Amplifier Channel is Thermally Limiting

If the amplifier reaches a critical temperature level, the limiter circuit will activate in an attempt to keep the amplifier temperature within its limits.

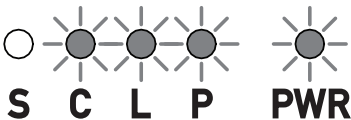


Figure 4.04

Amplifier Channel is Muted

If Auto-Standby is enabled via the switch on the rear panel, the amplifier will enter a mute state after no audio signal has been present for ~10mins.



Figure 4.05

Amplifier Channel is in Standby Mode

If Auto-Standby is enabled via the switch on the rear panel, the amplifier will enter a standby state after no audio signal has been present for ~30mins. This mode enables that respective amplifier channel to draw <0.5W of mains consumption during a standby state.

Technical Specifications ^{*per channel}		
Peak Output Current	25A	
THD+N (1kHz @ 1W / 1kHz Rated Power)	0.022% / 0.015%	
Dynamic Range	119dBA	
Output Resistance (1kHz)	43.6mΩ	
Peak Output Voltage (unloaded)	±140V	
Power Output	4Ω	280W
	8Ω	245W
	70V	250W
	100V	240W
DC Offset	±7mV	
Frequency Response	±0.1dB 20Hz - 20kHz (1st order 22kHz LPF)	
Voltage Gain (@ 1kHz)	32dB	

Mechanical Specifications			
Net Weight	QX1280 - 4.5kg	QX2280 - 4.9kg	QX4280 - 5.7kg
Gross Weight	QX1280 - 7.1kg	QX2280 - 7.5kg	QX4280 - 8.3kg
Dimensions (H x W x D)	44 x 485 x 304mm		
Input Connections	3-Way 5.08mm Captive Screw Connector		
Output Connections	2-Way 5.08mm Locking Captive Screw Connector		
Mains Power Connection	IEC C14		
Mains Input Voltage	85 - 265VAC		

* 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.

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- REGISTER YOUR PRODUCT
- PROTECT YOUR NEW PRODUCT

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