CXD Series

CXD4.5

The power amplifier shall be a four-channel system-processing amplifier providing total power of up to 5000 W (continuous). The amplifier shall utilize Flexible Amplifier Summing Technology to distribute its power across one, two, three, or four channels. The amplifier shall be capable of operation at both low impedance (2, 4, or 8 ohms) and direct drive high impedance (70 or 100 V). The amplifier shall incorporate Intrinsic Correction processing to optimize the sonic performance of QSC loudspeakers by compensating for non-linearities in loudspeaker array and horn design.

The power amplifier shall have an input impedance of 10k (balanced or unbalanced) and a maximum input level of 3.88 V (1.2V setting) or 12.28 V (3.9 V setting). The power amplifier shall meet the following performance criteria: typical distortion at 8 Ohms of 0.01 to 0.03%; maximum distortion (4 - 8 Ohms) of 1%; frequency response at 8 Ohms of 20 Hz to 20 kHz (+0.2 db / -0.7 db); noise at -109 db (weighted output muted); gain of 38.4 db (on 1.2V setting); damping factor of greater than 150.

The amplifier shall provide four channels of full-function onboard loudspeaker DSP with crossover and parametric EQ filters, RMS and Peak limiting, alignment delay, and dynamics processing. The amplifier shall be able to store 50 user configurations as presets, and shall include 20 modifiable factory presets. A built-in preset wizard shall enable loudspeaker selection from a list of speaker models.

The amplifier shall combine a class-D power amplifier with a custom power stage utilizing a purpose-built MOSFET output device that provides high voltage operation without the need for a full bridge output. The amplifier shall utilize a low-weight, high-efficiency PowerLight universal switchmode power supply for operation at 100 to 240 VAC, 50 or 60 Hz. The power supply shall incorporate Power Factor Correction (PFC) to align the current waveform with the AC mains voltage waveform. The amplifier shall offer multi-stage sleep modes.

The amplifier front panel shall provide a Channel Select and Mute buttons, Input and Output LED Metering, a 400 x 240 TFT color display, navigation buttons, an LED power button/indicator, a control knob, and cast aluminum handles. Amplifier connections shall include four Phoenix connector inputs and four touch-proof Phoenix connector outputs. The amplifier shall also provide GPIO terminals enabling system supervision and providing the ability to utilize contact closures to set the amps into standby or recall specific presets as well as providing a heartbeat output for Life-Safety supervision.

The amplifier shall be 3.5 in (89 mm) high, 19 in (483 mm) wide, and 16 in (406 mm) deep. The amplifier shall have a net weight of 22 lb (10 kg).

The multi-channel system-processing amplifier shall be the QSC CXD4.5.