

# CX4

## F E A T U R E S



**Automatic Two-Speed, High Efficiency Fan Cooling—For Quiet Normal Operation with Maximum Cooling on Demand**

**Rear-to-Front Air Flow—Keeps Equipment Racks Cool**

**Front Panel Status LED's—Indicate Clip and Power**

**Rear Panel Detented Gain Controls—For Security and Resetability**

**Detachable Euro-Style Barrier Strip Input—Easy and Economical Connections**

**Double Thickness Rack Ears—For Extra Strength**

**Covered Barrier Strip Output Connections—Meets Safety Agency Requirements**

The CX4 amplifier is ideal for use in any permanently installed sound system. Designed to meet the specialized needs of high power, high quality audio systems, the CX4 offers the features requested most by contractors and installers from around the world. Rear panel gain controls offer extra security and front panel status LEDs offer easy indication of the amplifier conditions. Per channel power ratings of 150 watts at 8 ohms, 225 watts at 4 ohms and

350 watts at 2 ohms make the CX4 an economical choice for direct output applications that don't require the output transformers of the CX4T. The CX4 resides in a rugged two rack-space steel chassis approximately 17.9 inches deep. High output power, high thermal capacity and rugged reliability make the CX amplifiers ideal for any high performance sound system installation.

| LOAD                 | OUTPUT POWER         |               |
|----------------------|----------------------|---------------|
|                      | 20Hz-20kHz, 0.1% THD | 1 kHz, 1% THD |
| <b>Stereo (W/Ch)</b> |                      |               |
| 8Ω                   | 150 watts            | 170 watts     |
| 4Ω                   | 225 watts            | 250 watts     |
| 2Ω                   |                      | 350 watts*    |
| <b>Mono-Bridged</b>  |                      |               |
| 16Ω                  | 300 watts            | 340 watts     |
| 8Ω                   | 450 watts            | 500 watts     |
| 4Ω                   |                      | 700 watts*    |

*\*typical*



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CX Series

## POWER OUTPUT

|  |     |
|--|-----|
| Direct output, watts per channel, both channels driven |     |
| 8Ω, 20 Hz-20 kHz, 0.1% THD                             | 150 |
| 8Ω, 1 kHz, 1% THD                                      | 170 |
| 4Ω, 20 Hz-20 kHz, 0.1% THD                             | 225 |
| 4Ω, 1 kHz, 1% THD                                      | 250 |
| 2Ω, 1 kHz, 1% THD*                                     | 350 |

|                              |     |
|------------------------------|-----|
| Direct Outputs, bridged mono |     |
| 8Ω, 20 Hz-20 kHz, 0.1% THD   | 450 |
| 4Ω, 1 kHz, 1% THD*           | 700 |

\*typical

**DISTORTION** SMPTE-IM, less than 0.05%

**FREQUENCY RESPONSE** 20 Hz-20 kHz, +0.2 dB

**DAMPING FACTOR** 200

**NOISE** 100 dB below rated output (20 Hz to 20 kHz)

**VOLTAGE GAIN** 35x (31 dB)

**INPUT SENSITIVITY, VRMS**  
for rated power, 8Ω 0.96

**INPUT IMPEDANCE** not less than 20 Kohms

## CONTROLS

Front: AC Switch  
Rear: Ch.1 and Ch. 2 Attenuator Knobs  
(11 detents: 0, -2, -4, -6, -8, -10, -12, -14, -18, -24, off)

## FRONT PANEL/INDICATORS (per channel)

CLIP: Red LED  
POWER: Green LED

## REAR PANEL/CONNECTORS (each channel)

Input: Euro-style detachable header  
Output: Covered barrier strips

**COOLING** 2-speed fan, with back-to-front air flow

## AMPLIFIER PROTECTION

Output Averaging™ short circuit protection, open circuit, ultrasonic, RF, thermal muting  
Stable into reactive or mismatched loads

**LOAD PROTECTION** Turn-on/turn-off muting, DC-fault

**OUTPUT CIRCUIT TYPE** Class AB complementary linear stage

**POWER REQUIREMENTS:** 100, 120, 220-240 VAC, 50/60 Hz

## POWER CONSUMPTION

Normal operation: 1/8 power @ 4Ω per channel  
Worst case continuous program: 1/3 power @ 2Ω per channel  
Maximum: full power @ 2Ω per channel  
Multiply current by 0.5 for 220-240 VAC operation

## DIMENSIONS

Faceplate Width Standard 19" (48.3 cm) Rack Mounting  
Chassis Depth 17.9" (45.5 cm) deep (to rear support ears)  
Faceplate Height 3.5" (13.3 cm)

**WEIGHT** Shipping—36 lb; 16.4 kg; Net—30 lb; 13.6 kg

## ARCHITECT'S AND ENGINEER'S SPECIFICATIONS

The amplifier shall contain all solid-state circuitry, using complementary silicon output devices in a Class AB output circuit. The amplifier shall operate from 50-60 Hz AC power, with internal taps for selecting voltages 100,120, or 220-240 VAC. The amplifier shall operate from a normal household AC outlet, drawing less than 500 VA when driven with random program material at 1/8 rated power into four ohm loads. The amplifier shall be supplied with a single molded AC cord having an appropriate AC plug for the intended operating voltage.

The amplifier shall employ forced-air cooling with a two speed fan for minimum acoustic noise. Air flow shall be from rear to front to avoid temperature rise inside the rack. Rack mounting shall be possible without clearance necessary between amplifiers for ventilation. The amplifier shall be capable of continuous operation at 1/8 power, into four-ohm loads, for ambient temperatures up to 104 F (40 C).

The amplifier shall contain two independent channels, with separate AC transformer secondaries, power supplies, and protection systems. All protection systems shall be self resetting upon removal of fault, and the remaining channel shall continue to operate. Each channel shall have independent protective circuitry against open circuit, short circuit, or mismatched loads. Each channel shall monitor temperature of its heat sink and shall trigger fan speed boost, and if necessary, signal muting to pre-



vent excessive temperature rise. Each channel shall have on-off muting, acting for three seconds after turn-on, and within 1/4 second after turn-off or loss of AC power. Each channel shall have DC fault protection for the load. Fault fuses shall be adequately large to prevent nuisance blowing at any output power the amplifier is capable of delivering.

Each channel shall have the following controls and displays: A rear panel Gain control and front panel displays consist of a green LED power-on indicator and a red LED showing true amplifier clipping. The output connectors for each channel shall be shrouded barrier strip connectors. The standard input panel shall provide detachable Euro-style header connections for each channel. Inputs shall be electronically balanced, with a minimum impedance of 10 kilohms per side, and a common mode rejection of at least 50 dB from 20 Hz to 20 kHz.

Each channel shall be capable of meeting the following performance criteria with both channels driven: Sine-wave output power of 150 watts into eight ohms, and 225 watts into four ohms, 20 Hz to 20 kHz, with less than 0.1% THD. Frequency response at 3 dB below rated power shall be within +0.2. dB. The voltage gain shall be 35, equivalent to 31 dB, and the input sensitivity shall be 0.96 V<sub>rms</sub>. The signal to noise ratio over the range of 20 Hz to 20 kHz shall exceed 100 dB. IHF damping factor shall exceed 200.

The amplifier chassis shall occupy two rack spaces, with provision for securing the rear corners. Depth from mounting surface to tips of rear supports shall be 17.9" (45.5 cm).

Weight shall not exceed 30 lbs. (13.6 kg). The amplifier shall be the QSC Audio Products Model CX4.