



## GXD Series

Professional Power Amplifiers

### GXD 4 | GXD 8

#### Features

- High peak output power with up to 1600 Watts from the GXD 4 and a whopping 4500 Watts from the GXD 8.
- The GXD amplifiers offer speaker tunings to maximize the performance of the QSC E Series loudspeakers.
- Power levels matched to the most popular loudspeakers and optimized for maximum real-world headroom into 4Ω and 8Ω speaker systems.
- Class-D output stage with a universal power supply for high performance and efficiency.
- Extensive and powerful loudspeaker processing built in. Includes High & Low-Pass filters, 4-band PEQ, Limiting, and Delay.
- Inputs: Parallel XLR and 1/4" TRS connectors for compatibility with any source while providing convenient loop-thru capability.
- Precision rotary encoders for gain and DSP parameter control.
- Outputs: Professional binding post and NL4 connectors (compatible with NL2) provide for mono and bi-amp speaker connections.
- Digital Limiting automatically protects the amplifier from damage due to temperature rise or overdrive.
- Adjustable speaker protection to match your loudspeaker's power and impedance.
- Front panel LEDs indicate signal presence, input overload, and amplifier clipping.



As part of the E Series Entertainment System, the GXD amplifiers are ideal for entertainment and production applications. With integral signal processing and outstanding performance, the GXD amplifiers express all the hallmarks of the QSC brand - professional audio quality and long-term reliability. Add contemporary styling, multiple routing options, light weight, digital signal processing and advanced protection circuitry, and the GXD Series clearly represents real value – something everyone can use.

The GXD series is optimized for use with 8 and 4 ohm loudspeaker loads. GXD amplifiers deliver just the right amount of power to the most popular speakers used by entertainers and production professionals.

#### The Right Power

There's a GXD amplifier within 1dB of the ideal power for your speaker system.

Best practice is to use an amplifier capable of delivering approximately twice the loudspeaker's rated power capacity. Too little amplifier and the speakers won't deliver everything they're capable of and the risk of destructive amplifier clipping is increased. Too much power probably means unnecessary amplifier expense.

To determine the power points for the GXD series, QSC examined the loudspeakers most widely used for sound reinforcement by musicians, DJs and production professionals. Overall, these speakers are equipped with woofers that fall into a couple of categories of continuous power capacity - low-power drivers that can handle 150 - 250 watts, and mid to high-power drivers rated around 250-400 watts. Single woofer loudspeaker systems using these drivers

will typically have an impedance of 8Ω. Dual woofer loudspeakers will, of course, have power ratings that are two times that of the single woofer model and an impedance that is half that of single-woofer models.

#### Digital Signal Processing

The GXD amplifiers are unlike other amps in this category that provide little more than a front panel screen to control the same functions that have been under rear-panel, DIP switch control for decades. The GXD amps bring full-function loudspeaker processing capability to a new price point with all the processing necessary to get the most from a loudspeaker system. The DSP section includes High and Low-Pass filters (24dB LR), 4-band parametric equalizer, signal alignment delay, and RMS/Peak speaker protection limiting. Twenty presets for selected typical systems are provided as generic "starting points" are included. To further prove the point, the GXD amplifiers come pre-loaded with QSC E Series loudspeaker tunings, enabling a simple connect and play system that maximizes the performance of the system.

#### Digital Limiting

The most common cause of loudspeaker failure is amplifier clipping. The digital limiter used in the GXD amplifiers is set to prevent the amplifier from being driven into clipping while delivering the maximum usable output. In addition to amplifier limiting it also provides smart speaker protection by simply setting the loudspeaker's continuous power and impedance (4Ω and 8Ω), and selecting whether Mild, Medium or Aggressive protection is desired.

| Model | 8Ω Power /Channel | 4Ω Power /Channel | Max Total Peak Power |
|-------|-------------------|-------------------|----------------------|
| GXD 4 | 400 Watts         | 600 Watts         | 1600 Watts           |
| GXD 8 | 800 Watts         | 1200 Watts        | 4500 Watts           |

# GXD Details

|                                              | GXD 4                                                                                                                                                                                                                                                                                            | GXD 8            |
|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| Stereo Mode - Watts per channel              |                                                                                                                                                                                                                                                                                                  |                  |
| 8 $\Omega$ dynamic, both channels driven     | 600 Watts                                                                                                                                                                                                                                                                                        | 1500 Watts       |
| 4 $\Omega$ dynamic, both channels driven     | 800 Watts                                                                                                                                                                                                                                                                                        | 2250 Watts       |
| 8 $\Omega$ continuous, both channels driven  | 400 Watts                                                                                                                                                                                                                                                                                        | 800 Watts        |
| 4 $\Omega$ continuous, both channels driven  | 600 Watts                                                                                                                                                                                                                                                                                        | 1200 Watts       |
| Distortion (typical)                         |                                                                                                                                                                                                                                                                                                  |                  |
| 1 kHz at full rated power                    | < 1% THD                                                                                                                                                                                                                                                                                         |                  |
| Signal to Noise (A-weighted, 20 Hz – 20 kHz) | 100 dB                                                                                                                                                                                                                                                                                           |                  |
| Input Sensitivity                            | 1.2 Vrms, 3.9 Vrms                                                                                                                                                                                                                                                                               |                  |
| Voltage Gain (8 $\Omega$ )                   | 33.5 dB                                                                                                                                                                                                                                                                                          | 36.5 dB          |
| Output Circuitry                             | Class D                                                                                                                                                                                                                                                                                          | Class D          |
| Power Requirements: 1/8 power at 4 $\Omega$  |                                                                                                                                                                                                                                                                                                  |                  |
| - 100 Vac                                    | 3.4 Amps                                                                                                                                                                                                                                                                                         | 6.2 Amps         |
| - 120 Vac                                    | 2.9 Amps                                                                                                                                                                                                                                                                                         | 5.6 Amps         |
| - 230 Vac                                    | 1.6 Amps                                                                                                                                                                                                                                                                                         | 3.2 Amps         |
| Frequency Response (20 Hz – 20 kHz)          | +0.7 dB, -0.8 dB                                                                                                                                                                                                                                                                                 |                  |
| Dynamic Headroom (4 $\Omega$ )               | 1.25 dB                                                                                                                                                                                                                                                                                          | 2.73 dB          |
| Damping Factor                               | 100                                                                                                                                                                                                                                                                                              |                  |
| Input Impedance ( $\Omega$ )                 | 20k (balanced), 10k (unbalanced)                                                                                                                                                                                                                                                                 |                  |
| Maximum Input Level                          | +23.5 dBu                                                                                                                                                                                                                                                                                        |                  |
| Input Connectors (each channel)              | 3-pin XLR/F / 1/4" TRS, balanced                                                                                                                                                                                                                                                                 |                  |
| Output Connectors (each channel)             | NL4 (Channel 1 - 1+/-, Channel 2 - 2+/-), binding posts                                                                                                                                                                                                                                          |                  |
| Amplifier and Load Protection                | Short circuit, open circuit, thermal, RF protection<br>Load protected against DC faults                                                                                                                                                                                                          |                  |
| Front Panel Controls and Indicators          | 2 x Rotary Encoders<br>3 x Operational buttons (HOME, ENTER, EXIT)<br>2 x Green Signal LEDs, indicate signal presence<br>2 x Red A/D Clip LEDs, indicate input over-drive and/or amplifier current clipping<br>Blue Power LED ring, AC on<br>2.12" x 1.0", 256 x 128 pixel LCD                   |                  |
| DSP Functions                                | High Pass Filter, 4th order LR, adjustable Frequency 20 Hz to 4 kHz<br>Low Pass Filter, 4th order LR, adjustable Frequency 60 Hz to 4 kHz<br>4-band PEQ, with variable Frequency, Gain, and Bandwidth<br>Peak Limiter, with Power, Aggressiveness, and Impedance selection<br>Delay 50 msec max. |                  |
| Dimensions (HWD)                             | 3.5" (2 RU) x 19" x 10.2" (89 mm x 483 mm x 259 mm)                                                                                                                                                                                                                                              |                  |
| Weight - Net                                 | 11.3 lb (5.1 kg)                                                                                                                                                                                                                                                                                 | 13.2 lb (6.0 kg) |
| Weight - Shipping                            | 15.4 lb (7.0 kg)                                                                                                                                                                                                                                                                                 | 17.3 lb (7.8 kg) |
| Agency Approvals                             | UL, CE, RoHS/WEEE compliant                                                                                                                                                                                                                                                                      |                  |
| Carton and Contents                          | Power cable, and quick start guide                                                                                                                                                                                                                                                               |                  |

Specifications subject to change without notice.



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