XTi SERIES

XTi 4000

Architectural & Engineering Specifications

XTi 4000

The Crown® XTi 4000 power amplifier shall be a solid-state two-channel model with a switch-mode universal power supply.

The outputs shall be usable as stereo or bridged-mono modes of operation. The bridged-mono mode shall bridge the outputs to provide increased output voltage.

The amplifier shall contain controlled slew-rate voltage circuitry to protect it against radio frequency interference burnouts. It shall also be protected from current overload at its output stage. The slew rate of the amplifier shall be greater than 30 volts per microsecond in stereo mode.

The amplifier shall temporarily go into a standby mode if its power transformer becomes excessively hot and shall automatically resume normal operation once it has cooled to a safe operating temperature.

Front-panel controls shall include a power on/off switch, a detented input level control for each channel and three buttons for menu navigation of the front-panel LCD screen.

The front panel have have the following indicators:
Signal Indicator: Green LED, one per channel, flashes when a very low-level signal is present at input. May be used for troubleshooting cable runs. –10 Indicator: Green LED flashes when output signal exceeds –10 dB below clip. –20 Indicator: Green LED flashes when output signal level exceeds –20 dB below clip. Ready Indicator: Green LED, one per channel, illuminates when the amplifier is ready to produce audio. Clip Indicator: Red LED, one per channel, turns on at the threshold of audible distortion. Thermal Indicator: Red LED, one per channel, illuminates under Fault or excessive temperature conditions. Power Indicator: Blue LED illuminates when the amplifier has been turned on and has power.

The rear panel shall have the following connectors:
AC Line Connector: NEMA 5-15P (15A). Input Connector: XLR, one per channel. Link/Out Connector: Loop-thru signal from input connector for linking to another amplifier, one per channel. Output Connectors: Two Neutrik® Speakon® NL4MP (mates with NL4FC) output connectors. Channel-1 Speakon® shall be wired with Ch. 1 and Ch. 2 outputs for use with optional single 4-conductor cable. Two binding post outputs (in parallel with Speakon® connectors). HiQnet USB Connector: Type B, connects to a HiQnet network.

The power amplifier shall meet or exceed the following power criteria: 650 watts into 8 ohms and 1,200 watts into 4 ohms. 2-ohm power: 1,600 watts with 1% THD. Power output in bridge-mono mode: 3,200 watts into 4 ohms with 1% THD, and 2,400 watts into 8 ohms.

The amplifier shall meet or exceed the following performance criteria: Voltage Gain at 1kHz, 8 ohm rated output: 34.2 dB. Frequency Response: ±0.25 dB from 20 Hz to 20 kHz at 1 watt into 4 ohms. Phase Response (at 1 watt, 20 Hz to 20 kHz): ±15°. Load Impedance: Safe with all types of loads. Rated for 2-8 ohms in Stereo mode, 4-16 ohms in Bridge-Mono mode. Sensitivity: 1.4V. Signal to Noise Ratio (below rated 1 kHz power at 8 ohms): 105 dB (A weighted). Damping Factor: Better than 500 from 20 Hz to 500 Hz. Crosstalk: > 80 dB below rated power, 20 Hz to 1 kHz. Common Mode Rejection (CMR): > 45 dB from 20 Hz to 1 kHz. Input Stage: Input shall be electronically balanced and shall employ precision 1% resistors. Input Impedance (nominal): 20 k ohms balanced and 10 k ohms unbalanced. Maximum Input Signal: +22 dBu typical. AC Line Current: 8.0A. At idle, the amplifier shall draw 90 watts or less. Operating Temperature: 0° C to 40° C at 95% relative humidity (non-condensing).

The amplifier shall include Digital Signal Processing with these functions: EQ: 4-band paragraphic per channel, boost/cut +/- 12 dB. Also adjustable high and low shelving filters. Filters: Highpass and lowpass per channel. Butterworth 6/12/18/24 dB per octave. High and low shelving filters, one per channel. Delay: For signal alignment of driver; 5 mS total delay Subharmonic Synthesizer: Adds low-frequency content. Output Limiter: Prevents clipping. Presets: 10 user speaker presets.

The amplifier shall be safe when driving any kind of load—even highly reactive ones.

AC line voltage and frequency configurations available shall be 100V, 120V, 220-240V, 50/60 Hz.

The amplifier shall have a rugged steel chassis coated with environmentally friendly powder. The amplifier shall be fan-cooled.

The dimensions of the amplifier shall allow for 19 inch (48.3 cm) EIA standard (RS-310-B) rack mounting. The amplifier shall be 3.5 inches (8.9 cm) tall and 12.25 inches (31.11 cm) deep behind mounting surface.

The amplifier shall weigh 17 lb pounds (7.7 kg).

The amplifier shall be designated the Crown XTi 4000.

PRELIMINARY

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