



# 7301 POWER AMPLIFIER

## Product Description

The Crest Audio 7301 is a two rack space, compact power amplifier specifically designed for use in bi-amplified systems, including stage monitor, studio monitor and front-of-house applications. The low frequency channel (Ch. A) utilizes class H operation, which increases efficiency and yields higher output power on the low end. The high frequency channel (Ch. B) utilizes class AB operation which is optimized for precise reproduction of mid and high-frequency signals.

For bi-amped systems, the Crest Audio 7301 is unmatched in quality, efficiency and sonic accuracy. When used in combination with a crossover (including those available in the Crest Audio Octal Socket Accessory line), the 7301 becomes a complete bi-amplification system, in a space-efficient package.

The 7301 is fully compatible in design with the other Crest Audio Professional Series amplifiers, Octal Socket Accessories, and the NexSys® computer controlled audio system.

## Design and Construction

The no-compromise approach in the 7301's electrical design and mechanical construction provides the ultimate in reliability and performance. Only high-grade components are used for the modular sub-assemblies in this ultra-strong, steel single piece chassis.

## 7301 Features

- Crest Audio's legendary "overbuilt" power supply
- Toroidal power transformer
- Latest generation of high-speed, wide-bandwidth output devices
- Tunnel cooling with back-to-front air flow
- Dual, variable speed DC fans
- High thermal mass heat sinks
- Balanced XLR inputs
- 5-way output binding post connectors
- Rear panel ground lift jumper
- 7301 protection circuitry:
  - Clip Limiting prevents speaker damage with gentle gain reduction at clip threshold.
  - IGM (Instantaneous Gain Modulation) monitors connected loads to detect conditions that may overstress output devices, allowing safe operation into nominal 2Ω impedances.
  - AutoRamp gradually increases gain to attenuator setting level when amplifier is turned on.
  - Other protection circuitry: comprehensive thermal management, and short circuit, DC voltage, turn-on/off transient, current inrush and sub/ultrasonic input protection.
- Recessed, stepped attenuators
- Front panel circuit breaker/power switch
- Modular construction
- Full five-year warranty (USA, Canada, U.K. & many other countries).



Crest Professional Series Amplifiers are fully compatible with the NexSys Computer-Controlled Audio system.



Power Specifications	Both ch. @ 4Ω	Lows @ 2Ω / Highs @ 4Ω	Lows @ 4Ω / Highs @ 8Ω	Lows @ 8Ω / Highs @ 16Ω
High Frequency Power @ 1kHz, <0.05% THD	940 Watts	990 Watts	940 Watts	670 Watts
Low Frequency Power @ 100Hz, <0.1% THD	240 Watts	220 Watts	125 Watts	95 Watts

Figures are Watts per channel, both channels driven.



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## SPECIFICATIONS

	<b>Lows @ 100Hz, &lt;0.1% THD+N</b>	<b>Highs @ 1kHz, &lt;0.05% THD+N</b>
<b>Both Channels @ 4Ω</b>	940W	240W
<b>Lows @ 2Ω, Highs @ 4Ω</b>	990W	220W
<b>Lows @ 4Ω, Highs @ 8Ω</b>	940W	125W
<b>Lows @ 8Ω, Highs @ 16Ω</b>	670W	95W
<b>Max RMS Output Voltage (each channel)</b>	83V(Low Ch.) 49V(High Ch.)	
<b>Peak Output Voltage (each channel)</b>	117V(Low Ch.) 69V(High Ch.)	
<b>Frequency Response (+0 / -0.3dB, 1W/8Ω)</b>	20 Hz-20 kHz, -3dB @ 53kHz	
<b>Power Bandwidth (rated power at 4Ω, 1% THD+N)</b>	20 Hz-20 kHz, +0/-0.2dB	
<b>Protection Circuitry</b>	Clip Limit, IGM, AutoRamp, High Temp, short-circuit, DC voltage, turn-on/off transient, sub/ultrasonic input.	
<b>THD+N (rated power at 4Ω, 1kHz)</b>	<0.02% @ 800W (Low Ch.); 200W ( High Ch.)	
<b>Damping Factor (10-400Hz at 8Ω)</b>	400:1	
<b>Input CMRR (1kHz)</b>	>60 dB	
<b>Input Sensitivity (8Ω)</b>	1.53V RMS (Low ) .79V RMS (High )	
<b>Voltage Gain</b>	X40	
<b>Input Impedance (balanced)</b>	>20kΩ	
<b>Hum and Noise ("A" weighted, full power, 4Ω)</b>	> -100 dB	
<b>Crosstalk ("A" weighted, full power, 4Ω)</b>	> -60dB	
	<b>Class</b> H (Low Channel); AB (High Channel)	
<b>Input Connectors (per channel)</b>	Female XLR (pin 3+), Octal Socket	
<b>Output Connectors (per channel)</b>	5-way output binding posts	
<b>Filter Storage</b>	80,000 μF	
<b>Power Supply (factory configured)</b>	100V-240V, 50-60Hz	
<b>Idle Current Draw (120V)</b>	1.2A	
<b>1/8 Power Curr. Draw (typical music, 120V/4Ω)</b>	7.0A	
<b>1/3 Power Curr. Draw (continuous music, 120V/4Ω)</b>	12.25A	
<b>Max Curr. Draw (circuit breaker rating, 120V/4Ω)</b>	21.0A	
<b>Thermal Emissions (1/8 Power, 4Ω)</b>	2300 BTU/hr	
<b>Thermal Emissions (1/3 Power, 4Ω)</b>	3700 BTU/hr	
<b>Cooling</b>	Rear to front tunnel heatsink, 2 variable speed DC fans	
<b>Controls</b>	Front panel: 2 attenuators, circuit breaker/power switch; Rear panel: signal ground lift jumper.	
<b>LED Indicators (per channel)</b>	Clip/Limit, Signal, Temp/DC, Active	
<b>Construction</b>	16 ga. steel chassis, 0.187" (5mm) aluminum front panel	
<b>Dimensions (Height x Width x Depth)</b>	3.5"x19"x15" (16" to rear ears) 89mm x 483mm x 381mm (406mm to rear ears)	
<b>Gross Weight, Net Weight</b>	57 lbs. (25.88 kg.), 52 lbs. (23.60 kg.)	
<b>Warranty</b>	5 years, parts and labor†	

### Architect's & Engineer's Specifications

The monitor amplifier shall consist of two dissimilar channels; one of class H operation and modulated power supply (ch. A). and one of class AB operation (ch. B). The class H channel shall deliver a minimum of 940 watts at 4 ohms with both channels driven (@ 100Hz, <0.1% THD+N). The class AB channel shall deliver a minimum of 240 watts at 4 ohms with both channels driven (@ 1kHz, <0.05% THD+N).

The amplifier shall be rear-to-front tunnel-cooled, with two variable-speed DC fans.

The amplifier shall have circuitry to protect itself and the speaker load from output short circuits, DC voltage on outputs, and thermal overload. The amplifier shall include circuitry to gradually increase gain to attenuator setting levels when the amplifier is turned on, and circuitry for impedance sensing and clip limiting.

The amplifier shall have a voltage gain of X40 with an input sensitivity of 1.53V (low channel) and .79V (high channel) for rated power at 4 ohms. The hum and noise level shall be greater than 100 dB below rated output, "A" weighted. The frequency response shall be greater than 20Hz-20kHz, +0, -3dB (1W/8Ω).

The amplifier shall operate at 100-240V, 50-60 Hz AC (configured at factory). Maximum current draw at 120V shall be no greater than 21A, both channels driven continuously into a 4 ohm resistive load.

The amplifier front panel shall include Active, Temp/DC, Signal Present and Clip/Limit LED indicators for each channel, a combination power switch/magnetic circuit breaker and recessed and detented gain pots.

Rear panel input connectors shall be XLR type, one female per channel. Output connectors shall be 5-way binding posts, two pair per channel. A signal/ground lift jumper shall be provided.

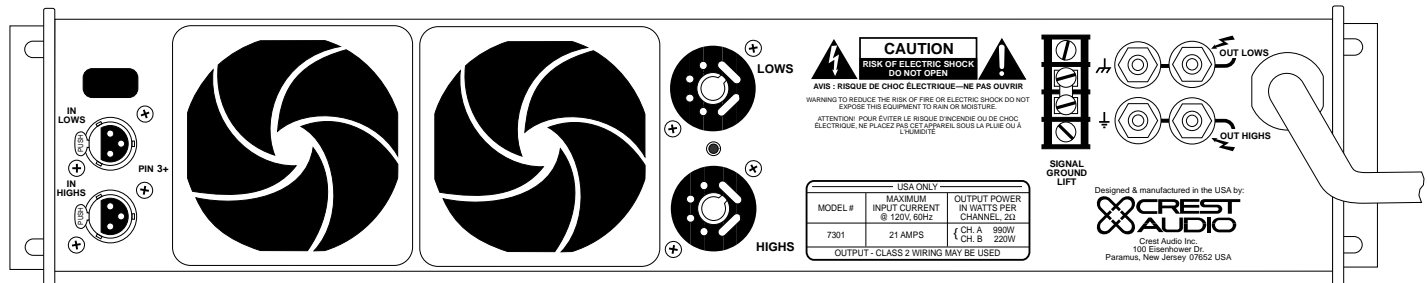
A rear-panel AC mains cord having an appropriate AC plug for the intended operating voltage shall be provided (market dependent).

The packaging of the amplifier shall allow for standard rack mounting without requiring space between similar units. Dimensions shall be 3.5" (89mm) high x 19" (483mm) wide x 15" (381mm) deep. It shall weigh 52 lbs. (23.60kg) net. The amplifier shall be designated the Crest Audio Model 7301.

† USA, Canada, U.K., and many other countries. Power figures are watts per channel, both channels driven. Crest Audio reserves the right to make improvements in manufacturing or design which may affect specifications. Crest Audio specification literature is available in downloadable PDF file format; visit our website at <http://www.crestaudio.com>. ©1997 Crest Audio Inc. 5/21/97



### Rear View



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