



# 9001 POWER AMPLIFIER

## Product Description

The Crest Audio 9001 is a high-power amplifier designed to meet the most stringent needs of professional use in concert touring, high quality sound reinforcement, and professional fixed installations.

The 9001 incorporates Crest Audio's Power Density™ engineering design philosophy, providing users with more substantial power and increased headroom for a given size than comparable amplifiers.

A three rack-space amplifier, the 9001 uses forced-air to cool channel heat sinks mounted in a back-to-back tunnel configuration. Stereo, parallel, and bridged mono operating modes can be chosen with a rear-panel Mode Select switch. Actively balanced female XLR input connections and single-screw solderless output connectors are provided for each channel. The 9001 is fully compatible with the other Crest Audio Professional Series amplifiers, Octal Socket Accessories and the NexSys® computer-controlled audio system.

## Design and Construction

The 9001 is built exclusively in Crest Audio's own USA manufacturing facility, with internal components selected for premium quality and proven durability. Each modular subassembly is pre-tested, and the assembled 9001 receives a rigorous "hot room" burn-in before thorough final checkout on precision test equipment.

The no-compromise approach in the 9001'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, 12 gauge steel single-piece chassis.

## 9001 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
- Variable speed DC fan
- High thermal mass heat sinks
- Balanced XLR inputs
- Single screw solderless output connectors
- Stereo/Parallel/Bridged Mono mode selector switch
- Rear panel ground lift jumper
- 9001 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	8Ω Stereo	4Ω Stereo	2Ω Stereo	8Ω Bridged	4Ω Bridged
1kHz, 0.02% THD+N	1200 W	2200 W	3300 W	4400 W	6600 W
20Hz-20kHz, 0.1% THD+N	1100 W	2050 W	3000 W	4100 W	6000 W

Figures are Watts per channel, both channels driven.



# 9001 POWER AMPLIFIER

## SPECIFICATIONS

	1kHz, <0.02% THD+N	20Hz-20kHz, <0.1% THD+N
8Ω Stereo Power	1200W	1100W
4Ω Stereo Power	2200W	2050W
8Ω Bridged Mono Power	4400W	4100W
2Ω Stereo Power	3300W	3000W
4Ω Bridged Mono Power	6600W	6000W
Max RMS Output Voltage (each channel)	114V	
Peak Output Voltage (each channel)	161V	
Frequency Response (+0 / -0.3dB, 1W/8Ω)	20 Hz-20 kHz, -3dB @ 53kHz	
Power Bandwidth (rated power at 4Ω, 1% THD+N)	20 Hz-20 kHz, +0/-0.2dB	
Protection Circuitry	Clip Limit, IGM, AutoRamp, High Temp, short-circuit, DC voltage, turn-on/off transient, sub/ultrasonic input.	
THD+N (rated power at 4Ω, 1kHz)	<0.02%	
SMPTE IMD (rated power at 8Ω, 60Hz & 7kHz)	0.05%	
Damping Factor (10-400Hz at 8Ω)	200:1	
Input CMRR (1kHz)	>60 dB	
Input Sensitivity (rated power at 4Ω)	2.26V RMS	
Voltage Gain	X40	
Input Impedance (balanced)	>20kΩ	
Hum and Noise ("A" weighted, full power, 4Ω)	> -100 dB	
Crosstalk ("A" weighted, full power, 4Ω)	> -60dB	
Class	H	
Input Connectors (per channel)	Female XLR Input (pin 3+), Octal Socket.	
Output Connectors (per channel)	Single screw solderless copper output lugs.	
Filter Storage	46,000 μF	
Power Supply (factory configured)	100V-240V, 50-60Hz	
Idle Current Draw (120V)	2.0A	
1/8 Power Curr. Draw (typical music, 120V/4Ω)	16.2A	
1/3 Power Curr. Draw (continuous music, 120V/4Ω)	30.0A	
Max Curr. Draw (circuit breaker rating, 120V/4Ω)	65.0A	
Thermal Emissions (1/8 Power, 4Ω)	3850 BTU/hr	
Thermal Emissions (1/3 Power, 4Ω)	7700 BTU/hr	
Cooling	Rear to front tunnel heatsink, variable speed DC fan, 140 CFM max.	
Controls	Front panel: 2 attenuators, circuit breaker/power switch; Rear panel: mode switch, signal ground lift jumper.	
LED Indicators (per channel)	Clip/Limit, Signal, Temp/DC, Active	
Construction	12 ga. steel chassis, 0.187" (5mm) aluminum front panel	
Dimensions (Height x Width x Depth)	5 1/4" x 19" x 19.5", 133mm x 483mm x 496mm	
Gross Weight, Net Weight	115 lbs (52.21 kg.), 110 lbs (49.94 kg.)	
Warranty	5 years, parts and labor†	

† 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

### Architect's & Engineer's Specifications

The power amplifier shall consist of 2 channels and deliver a minimum of 1100 watts at 8 ohms, 2050 watts at 4 ohms and 3000 watts at 2 ohms; per channel, both channels driven, 20Hz-20kHz, <0.1% THD+N. In bridged (mono) mode, it shall deliver a minimum of 4100 watts at 8 ohms, and 6000 watts at 4 ohms, 20 Hz-20kHz, <0.1% THD+N.

The amplifier shall be rear-to-front tunnel-cooled, with a variable-speed (140 CFM max) DC fan.

The amplifier shall have circuitry to protect itself and the speaker load from output short circuits, DC voltage on outputs, and thermal overload. It shall have RMS clip limiting and impedance sensing circuitry. Output relays shall protect the speakers from any type of amplifier failure.

The amplifier shall have a voltage gain of X40 with an input sensitivity of 2.26V for rated power at 4 ohms. The hum and noise level shall be greater than 100 dB below rated output, "A" weighted. The amplifier shall have a class H output stage with a modulated power supply. The frequency response shall be greater than 20Hz-20kHz, +0, -3dB (1W/8Ω).

The amplifier shall operate at either 100, 120, 220, or 240 volts, 50-60 Hz AC (configured at factory). Maximum current draw at 120V shall be no greater than 65A, both channels driven continuously into 4 ohm resistance.

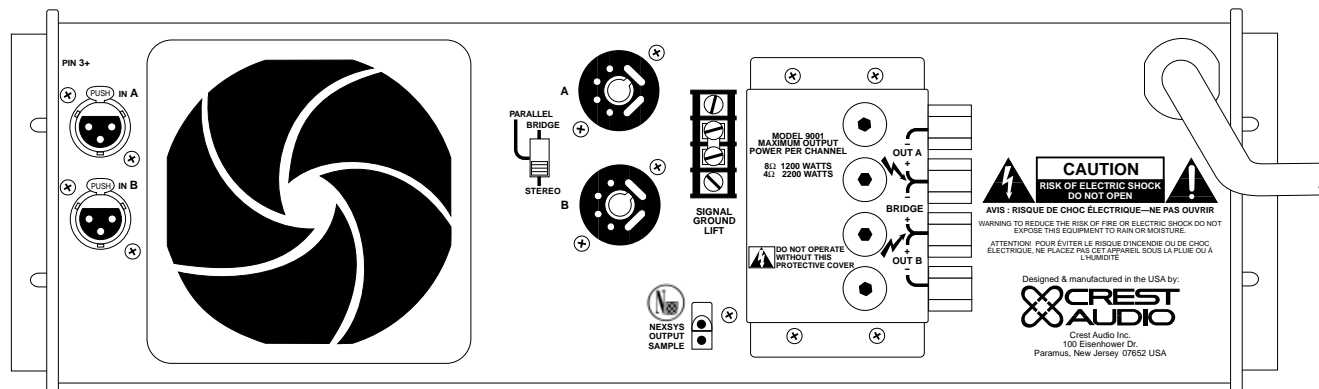
The amplifier front panel shall include Active, Temp/DC, Signal Present and Clip/Limit LED indicators for each channel, a combination power switch/magnetic circuit breaker and recessed and detented gain pots.

Rear panel input connectors shall be XLR type, one female per channel. Output connectors shall be single screw solderless copper lug type, two 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 19" (483mm) wide, 5.5" (133mm) high and 15" (381mm) deep. It shall weigh 110 lbs. (49.94kg) net. The amplifier shall be designated the Crest Audio Model 9001.

### Rear View



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