



10001 POWER AMPLIFIER

Product Description

The Crest Audio 10001 is an extremely high-power amplifier designed to meet the most stringent needs of professional use in concert touring, high quality sound reinforcement, and professional fixed installations.

Crest Audio's Power Density™ engineering philosophy allows the 10001 to have one of the highest power-to-weight ratios available at any price, while maintaining superior performance. The 10001 is fully compatible in design with the other Crest Audio Professional Series amplifiers, Crest Audio's Octal Socket Accessories, and the NexSys® computer-controlled audio system.

A four rack-space amplifier, the 10001 uses forced-air to cool channel heat sinks mounted in a back-to-back tunnel configuration. Stereo, parallel, and bridged mono modes are chosen with a rear-panel Mode Select switch. Actively balanced XLR input connections and solderless output connectors are provided for each channel.

Design and Construction

The 10001 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 10001 receives a rigorous "hot room" burn-in before thorough final checkout on precision test equipment.

The no-compromise approach in the 10001'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.

10001 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
- 10001 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 switches
- 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	2Ω Stereo	1Ω Stereo	4Ω Bridged	2Ω Bridged
20Hz-20kHz, 0.1% THD+N	3500W	5000W	7000W	10,000W
Typical Music Program Material	5000W	7500W	10,000W	15,000W

Figures are Watts per channel, both channels driven.



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SPECIFICATIONS

	20Hz-20kHz, <0.1% THD+N	Typical Music Prog. Material
2Ω Stereo Power	3500W	5000W
1Ω Stereo Power	5000W	7500W
4Ω Bridged Mono Power	7000W	10,000W
2Ω Bridged Mono Power	10,000W	15,000W
Max RMS Output Voltage (each channel)	105V	
Peak Output Voltage (each channel)	150V	
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/-0.2 dB	
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)	580:1	
Input CMRR (1kHz)	>60 dB	
Input Sensitivity (rated power at 4Ω)	2.24V 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	29,200 μF	
Power Supply (factory configured)	100V-240V, 50-60Hz	
Idle Current Draw (120V)	2.0A per line cord	
1/8 Power Curr. Draw (typical music, 120V/4Ω)	13.0A per line cord	
1/3 Power Curr. Draw (continuous music, 120V/4Ω)	25.0A per line cord	
Max Curr. Draw (circuit breaker rating, 120V/4Ω)	35.6A per line cord	
Thermal Emissions (1/8 Power, 4Ω)	4450 BTU/hr	
Thermal Emissions (1/3 Power, 4Ω)	7908 BTU/hr	
Cooling	Rear to front tunnel, variable speed DC fan, 235 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, 0.075" (1.9mm) aluminum front panel	
Dimensions (Height x Width x Depth)	7" x 19" x 20.5" (19.5" to end of rear ears), 178mm x 483mm x 521mm (496mm to back of rear ears)	
Gross Weight, Net Weight	145 lbs (65.83 kg.), 137 lbs (62.20 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 3500 watts at 2 ohms, 5000 watts at 1 ohms; per channel, both channels driven, 20Hz-20kHz, <0.1% THD+N. In bridged mode, it shall deliver a minimum of 7000 watts at 4 ohms, and a minimum of 10,000 watts at 2 ohms, 20 Hz-20kHz, <0.1% THD+N.

The amplifier shall be rear-to-front tunnel-cooled, with a variable-speed 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.

In stereo or parallel operation, the amplifier shall have a voltage gain of X40 with an input sensitivity of 2.23V for rated power at 4 ohms. The hum and noise level shall be greater than 100 dB below rated output, "A" weighted. Intermodulation distortion shall be less than 0.02% from 250 milliwatts to full rated power. 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 35.6A per line cord, both channels driven continuously into 2 ohm resistance.

The amplifier front panel shall include Active, Temp/DC, Signal Present and Clip/Limit LED indicators for each channel, two combination power switch/magnetic circuit breakers 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.

The amplifier shall have two (2) three-conductor AC power cords.

The packaging of the amplifier shall allow for standard rack mounting without requiring space between similar units. Dimensions shall be 19" (483mm) wide, 7" (178mm) high and 20.5"(521mm) deep. It shall weigh 137lbs. (62.20kg) net. The amplifier shall be designated the Crest Audio Model 10001.

Rear View

