



# 4601 POWER AMPLIFIER

## Product Description

The Crest Audio Model 4601 power amplifier is a compact, medium-power amplifier designed to meet the demands of concert touring, studio monitoring, high-quality sound reinforcement, and professional installations.

Crest Audio developed this model in conjunction with the biggest names in touring sound. These amplifiers meet the specific demand for medium-power amplifiers with full-range capabilities, but optimized for mid- and high-frequency applications. The output section operates purely in Class AB, with no dynamic switching of supply rail voltages. The result is the cleanest, most transparent mid- and high-frequency audio power imaginable from amplifiers that never compromise quality.

A forced-air configuration is used to cool channel heat sinks mounted in a back-to-back tunnel arrangement. An actively balanced female XLR input connection, Octal Socket, and 5-way output binding posts are provided for each channel.

The 4601 is fully compatible in design with other Crest Audio Professional Series amplifiers, Octal Socket Accessories, and the NexSys® computer-controlled audio system.

## Design and Construction

The 4601 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 4601 receives a rigorous "hot room" burn-in before thorough final checkout on precision test equipment.

Only high-grade components are used for the modular sub-assemblies in this ultra-strong, steel single piece chassis.

## 4601 Features

- Crest Audio's legendary "overbuilt" power supply
- Toroidal power transformer
- Latest generation of high-speed, wide-bandwidth output devices
- Twin 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
- Stereo/Parallel/Bridged Mono mode selector switch
- Rear panel ground lift jumper
- 4601 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.
  - 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
- 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	8Ω Bridged
1kHz, 0.012% THD+N	350W	485W	925W
20Hz-20kHz, 0.05% THD+N	300W	425W	825W

Figures are Watts per channel, both channels driven.



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## SPECIFICATIONS

	1kHz, <0.012% THD+N	20Hz-20kHz, <0.05% THD+N
8Ω Stereo Power	350W	300W
4Ω Stereo Power	485W	425W
8Ω Bridged Mono Power	925W	825W
Max RMS Output Voltage (each channel)	59V	
Peak Output Voltage (each channel)	83.4V	
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)	<0.012%	
SMPTE IMD (rated power at 8Ω, 60Hz & 7kHz)	<0.1%	
Damping Factor (10-400Hz at 8Ω)	400:1	
Input CMRR (1kHz)	>60 dB	
Input Sensitivity (rated power at 4Ω)	1.03V 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	AB	
Input Connectors (per channel)	Female XLR (pin 3+), Octal Socket	
Output Connectors (per channel)	5-way output binding posts	
Filter Storage	40,800 μF	
Power Supply (factory configured)	100V-240V, 50-60Hz	
Idle Current Draw (120V)	1.1A	
1/8 Power Curr. Draw (typical music, 120V/4Ω)	7.3A	
1/3 Power Curr. Draw (continuous music, 120V/4Ω)	11.1A	
Max Curr. Draw (circuit breaker rating, 120V/4Ω)	18.0A	
Thermal Emissions (1/8 Power, 4Ω)	2576 BTU/hr	
Thermal Emissions (1/3 Power, 4Ω)	3443 BTU/hr	
Cooling	Rear to front tunnel heatsink, 2 variable speed DC fans	
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	16 ga. single piece steel chassis, .187" (5mm) alum. front panel	
Dimensions (Height x Width x Depth)	3.5"x19"x15" (16" to rear ears) 89mm x 483mm x 381mm (406mm to rear ears)	
Gross Weight, Net Weight	48.0 lbs (21.79 kg.), 43.0 lbs (19.52 kg.)	
Warranty	5 years, parts and labor†	

### Architect's & Engineer's Specifications

The power amplifier shall have two channels. Each channel shall deliver a minimum of 300 watts at 8 ohms and 425 watts at 4 ohms; 20Hz - 20kHz, <0.05% THD+N. In bridged mode, it shall deliver 825 watts at 8 ohms, 20Hz 20kHz, <0.05% THD+N.

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

It shall have circuitry to protect itself and the speaker load from output short circuits, DC voltage on outputs, and thermal overload. The amplifier 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 1.03V for rated power at 4 ohms. The hum and noise level shall be at least 100 dB below rated output, "A" weighted. SMPTE IMD shall be less than 0.1% at rated power, 60Hz and 7kHz. The amplifier shall have a class AB output stage with a modulated power supply. The frequency response shall be greater than 20Hz-20kHz, + 0, -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 shall not exceed 18 amperes at 120VAC or 11 amperes at 240VAC, (limited by front panel breaker for bench tests), with both channels driven continuously into a 4 ohm resistor.

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 inputs shall be actively balanced and have female XLR-type, 3-pin connectors (pin 3+). Output connectors shall be 5-way output binding posts. Octal sockets for optional accessory modules and a signal/ground lift jumper shall be provided.

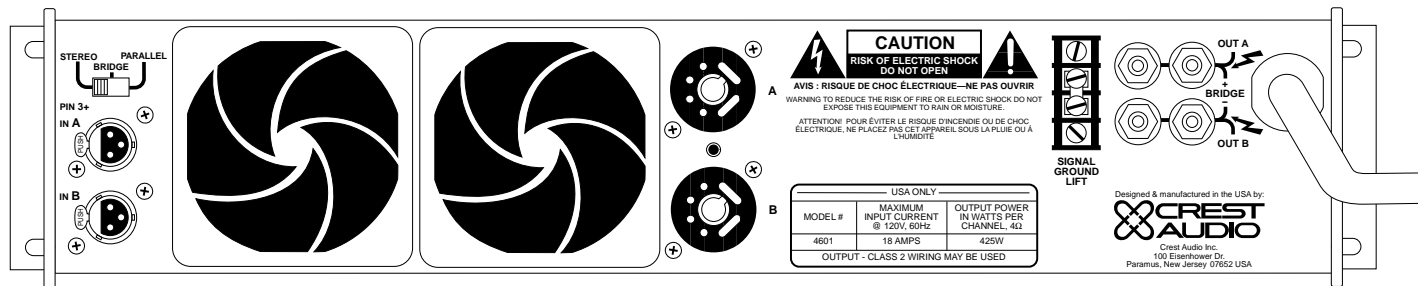
A rear-panel AC mains cord having an appropriate AC plug for the intended operating voltage shall be provided (market dependent).

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. The amplifier shall have a net weight of 43.0 lbs. (19.52kg). The amplifier

† 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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Crest Audio Inc.  
100 Eisenhower Dr., Paramus NJ 07652 USA  
TEL: 201.909.8700 FAX: 201.909.8744  
<http://www.crestaudio.com>