



HD4 POWER AMPLIFIER

Product Description

The Crest Audio HD4 professional power amplifier is designed to achieve unsurpassed sonic performance and long-term reliability—even when operating under extreme stress—in touring or fixed installation applications.

Absolute sonic accuracy is the hallmark of every Crest amplifier. Bass is solid and defined to the limits of audibility, with ample current reserves delivered by an “over-engineered” power supply and advanced Class AB output circuit design. Wide-bandwidth output devices assure detailed, transparent high frequency response. And, thanks to Crest’s exclusive IGM circuit, the HD4 will drive 2Ω loads safely without compromise in performance.

Construction and Quality Control

The HD4 is built exclusively in Crest’s own USA manufacturing facility, with internal components selected for premium quality and proven durability. Each modular subassembly is pre-tested, and the assembled HD4 receives a rigorous “hot room” burn-in before thorough final checkout on precision test equipment.

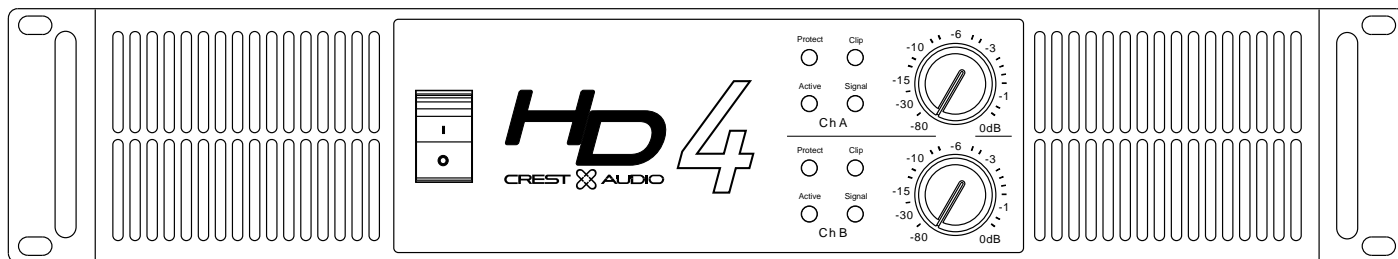
Power Specifications:

Other HD Series Power Amplifiers

4Ω Stereo	HD2	HD6	HD9	HD12	HD18
1kHz, .01% THD+N	250 W	600 W	900 W	1200 W	1800 W
20Hz-20kHz, 0.1% THD+N	200 W	500 W	800 W	1100 W	1700 W

HD4 Features

- Crest’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
- Massive, extruded aluminum heat sinks
- Balanced XLR and 1/4-inch (TRS) inputs
- 5-Way binding post outputs
- Stereo/Parallel/Bridged Mono mode selector switch
- Ground lift switch
- TourClass® protection circuits:
 - ACL (Active 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.
 - TourClass also includes comprehensive thermal management, and short circuit, DC voltage, turn-on/off transient, current inrush and sub/ultrasonic input protection.
- Input sensitivity selection
- Recessed, stepped attenuators
- Front panel magnetic circuit breaker switch
- Modular construction
- Three-year warranty (parts and labor)



Power Specifications	8Ω Stereo	4Ω Stereo	2Ω Stereo	8Ω Bridged	4Ω Bridged
1kHz, 0.01% THD+N	250 W	435 W	500 W	830 W	1100 W
20Hz-20kHz, 0.1% THD+N	245 W	400 W	450 W	800 W	900 W

Figures are Watts per channel, both channels driven.



HD4 POWER AMPLIFIER SPECIFICATIONS

	1kHz, 0.01% THD+N	20Hz-20kHz, 0.1% THD+N
8Ω Stereo Power	250W	245W
4Ω Stereo Power	435W	400W
2Ω Stereo Power	500W	450W
8Ω Bridged Mono Power	830W	800W
4Ω Bridged Mono Power	1000W	900W
Max RMS Output Voltage (each channel)	58V	
Peak Output Voltage (each channel)	82V	
Frequency Response (+0 / -0.3dB, 1W/8Ω)	20Hz-20kHz, -3dB @ 135kHz	
Power Bandwidth (rated power at 4Ω, 1% THD+N)	20Hz-20kHz, -9dB/+ .5dB	
TourClass® Protection	ACL, IGM, AutoRamp, short circuit, DC voltage, turn-on/off transient, current inrush, sub/ultrasonic input.	
THD+N (rated power at 4Ω, 1kHz)	<0.01%	
SMPTE IMD (rated power at 8Ω, 60Hz & 7kHz)	<0.01%	
Damping Factor (10-400Hz at 8Ω)	550:1	
Input CMRR (1kHz)	> - 60dB	
Input Sensitivity (rated power at 8Ω)	0.775V standard (see table below)	
Voltage Gain	X61 standard (see table below)	
Input Impedance (balanced/unbalanced)	>20kΩ/>10kΩ	
Hum and Noise ("A" weighted, full power, 4Ω)	-105dB	
Crosstalk ("A" weighted, full power, 4Ω)	> - 60 dB	
Class	AB	
Input Connectors (per channel)	Female XLR (pin 2+, dealer configurable for pin 3+), TRS (tip+)	
Output Connectors (per channel)	5-way output binding posts or Speakon connectors (market dependent)	
Filter Storage	27,200 μF	
Power Supply (factory configured)	100V-240V, 50-60Hz	
Idle Current Draw 120V	1.4A	
1/8 Power Curr. Draw (typical music, 120V/4Ω)	6.8A	
1/3 Power Curr. Draw (continuous music, 120V/4Ω)	10.0A	
Max Curr. Draw (circuit breaker rating, 120V/4Ω)	15A	
Thermal Emissions (1/8 Power, 4Ω)	2030 BTU/hr	
Thermal Emissions (1/3 Power, 4Ω)	2726 BTU/hr	
Cooling	Back-to-front via 2 rear panel mounted variable-speed DC fans (filters removable without tools)	
Controls	Front Panel: 2 attenuators Rear Panel: signal ground lift switch, mode select switch	
LED Indicators (per channel)	Clip/Limit, Signal, Temp/DC, Active	
Construction	Steel chassis, 16 gauge. Double thickness in rack ear areas.	
Dimensions (Height x Width x Depth)	3.5" x 19" x 18" / 89 x 483 x 457mm	
Gross Weight, Net Weight	46 lbs. / 20.88 kg., 41 lbs. / 18.61 kg.	
Warranty	3 years, parts & labor	

Architect's & Engineer's Specifications

The power amplifier shall have two channels. At 8 ohms, 20Hz - 20kHz, 0.1% THD+N, it shall deliver a minimum of 245 Watts per channel. At 4 ohms, 20Hz - 20kHz, 0.1% THD+N, it shall deliver a minimum of 400 watts per channel. In bridged mono mode with an 8 ohm load, 20Hz - 20kHz, 0.1% THD+N, it shall deliver a minimum of 800 watts.

Two rear panel mounted variable speed DC fans (filters detachable without tools) shall provide back to front air flow through the chassis.

The amplifier shall have circuitry to protect itself from output short circuits, thermal overload or other adverse load conditions. The amplifier shall protect speaker loads from DC voltage on outputs. The amplifier shall have active clip limiting and impedance sensing circuitry. Output relays shall protect the speakers from amplifier failure.

Each channel shall have a standard (factory-set) input sensitivity of 0.775 Volts, and shall be fitted with an internal jumper which allows the gain to be altered to X20 or X40. The hum and noise level shall be 105 dB below rated output, "A" weighted. SMPTE IMD shall be less than 0.01% at rated power, 60Hz and 7kHz. The amplifier shall have a class AB output stage. The frequency response shall be 20Hz-20kHz, +0, -0.3dB at rated power.

The amplifier will operate at 100V-240V, 50-60 Hz AC (configured at factory). Maximum current draw shall not exceed 15 amperes at 120VAC (limited by front panel breaker for bench tests).

Front panel indicators shall include Active, Protect, Signal, and Clip LED's for each channel. Front panel attenuators shall be recessed and detented.

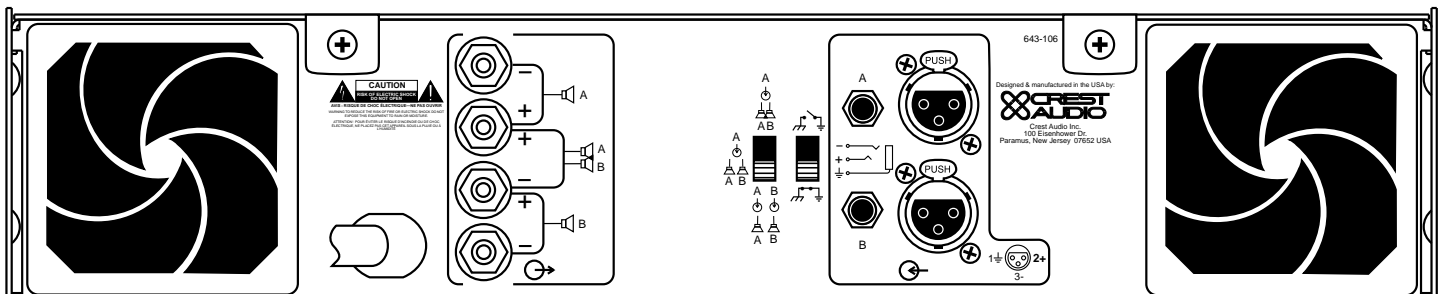
Rear panel input connectors shall be female TRS and XLR type, internally dealer-configurable for pin 2 (factory setting) or pin 3 positive. Output connectors shall be 5-way output binding posts. A ground lift switch and a Stereo/Parallel/Bridged Mono mode operation switch shall be provided.

A rear-panel IEC AC mains socket (with power cord) or single AC mains cord having an appropriate AC plug for the intended operating voltage shall be provided (market dependant).

The packaging of the amplifier shall allow for standard rack mounting without requiring space between similar units. Optional rack mount handles will be available. Dimensions shall be 19" (483mm) wide, 3.5" (89mm) high and 18" (457mm) deep. The amplifier shall weigh 43 lbs. (19.52 kg.) net, and shall be designated the Crest Audio model HD4.

Dealer-Configurable Gain/Sensitivity Options	Factory Standard	Gain	Sens
	Option 1	X40	1.12V
	Option 2	X20	2.24V

Rear View



Power figures are watts per channel, both channels driven. Crest Audio reserves the right to make improvements in manufacturing or design which may affect specification. Crest Audio specification literature is available in electronic form to qualified users. Contact Crest Audio Inc. for more information. © 1997 Crest Audio Inc.

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