



# HD18 POWER AMPLIFIER

## Preliminary Product Description

The Crest Audio HD18 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. The HD18 provides high power output coupled with true clarity, and is well-suited for high-powered subwoofers and passive full range systems.

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 H circuitry. Wide-bandwidth output devices assure detailed, transparent high frequency response. And, thanks to Crest’s exclusive IGM circuit, the HD18 will drive 2Ω loads safely without compromise in performance.

## Construction and Quality Control

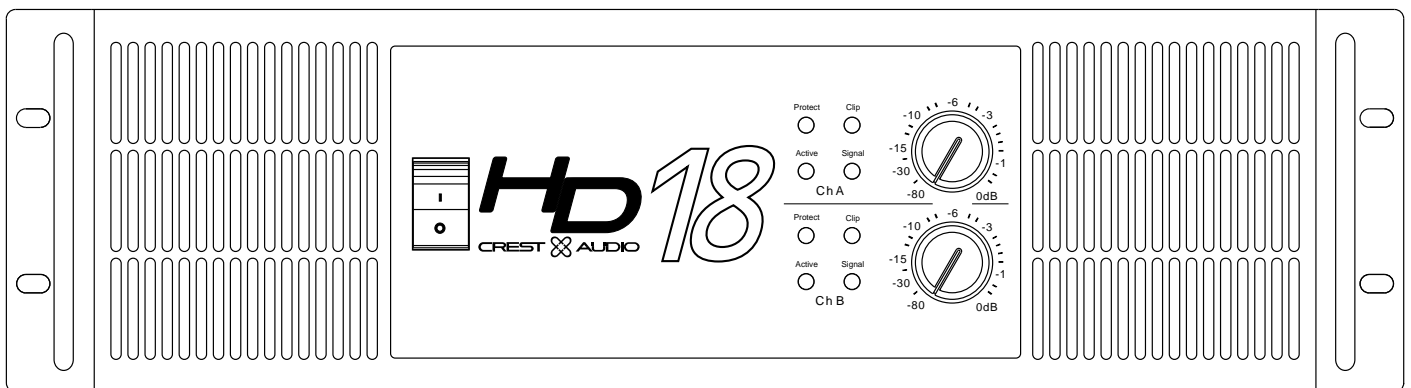
The HD18 is built exclusively in Crest’s own USA manufacturing facility, with internal components selected for premium quality and proven durability. Each modular subassembly is pre-tested, and once assembled, the HD18 receives a rigorous “hot room” burn-in before thorough final pre-shipment checkout on precision test equipment.

## HD18 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
- 2 pair of 5-Way Binding Post Outputs
- External switches for stereo/parallel/bridged mono mode, Pin 2/3 hot (+), ground lift, and gain/input sensitivity
- TourClass® protection circuits:
  - ACL (Active Clip Limiting) prevents speaker damage with gentle gain reduction at clip threshold.
  - IGM (Instantaneous Gain Modulation) monitors speaker 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 protection also includes comprehensive thermal management, short circuit, DC voltage, turn-on/off transient, current inrush and sub/ultrasonic input protection.
- Recessed, stepped attenuators
- Front panel circuit breaker switch
- Modular construction
- Three-year warranty\*

## Power Specs: Other HD Series Power Amplifiers

4Ω Stereo	HD2	HD4	HD6	HD9	HD12
1kHz, 0.01% THD+N	250 W	435 W	600 W	900 W	1200 W
20Hz-20kHz, 0.1% THD+N	200 W	400 W	500 W	800 W	1100 W



Power Specifications	8Ω Stereo	4Ω Stereo	2Ω Stereo	8Ω Bridged	4Ω Bridged
1kHz, 0.01% THD+N	1000 W	1800 W	2500 W	3600 W	5000 W
20Hz-20kHz, 0.1% THD+N	950 W	1700 W	2400 W	3400 W	4800 W

Figures are Watts per channel, both channels driven.



# HD18 POWER AMPLIFIER

## SPECIFICATIONS

	<b>1kHz, 0.03% THD+N</b>	<b>20Hz-20kHz, 0.1% THD+N</b>
<b>8Ω Stereo Power</b>	1000W	950W
<b>4Ω Stereo Power</b>	1800W	1700W
<b>2Ω Stereo Power</b>	2500W	2400W
<b>8Ω Bridged Mono Power</b>	3600W	3400W
<b>4Ω Bridged Mono Power</b>	5000W	4800W
<b>Max RMS Output Voltage (each channel)</b>	99V	
<b>Peak Output Voltage (each channel)</b>	140V	
<b>Frequency Response (+0 / -0.3dB, 1W/8Ω)</b>	20Hz-20kHz, -3dB @ 150kHz	
<b>Power Bandwidth (rated power at 4Ω, 1% THD+N)</b>	20Hz-20kHz, -2dB/+2dB	
<b>TourClass® Protection</b>	ACL, IGM, AutoRamp, short circuit, DC voltage, turn-on/off transient, current inrush, sub/ultrasonic input.	
<b>THD+N (rated power at 4Ω, 1kHz)</b>	<0.03%	
<b>SMPTE IMD (rated power at 8Ω, 60Hz &amp; 7kHz)</b>	<0.01%	
<b>Slew Rate</b>	25V/μs	
<b>Damping Factor (10-400Hz at 8Ω)</b>	800:1	
<b>Input CMRR (1kHz)</b>	> -70dB	
<b>Input Sensitivity (rated power at 8Ω)</b>	.775V standard (switchable; see table below)	
<b>Voltage Gain</b>	X115 standard (switchable; see table below)	
<b>Input Impedance (balanced/unbalanced)</b>	>20kΩ/>10kΩ	
<b>Hum and Noise ("A" weighted, full power, 4Ω)</b>	-115dB	
<b>Crosstalk ("A" weighted, full power, 4Ω)</b>	> -80dB	
<b>Class</b>	Class H	
<b>Input Connectors (per channel)</b>	Female XLR (pin 2+, switchable for pin 3+), TRS (tip+)	
<b>Output Connectors (per channel)</b>	2 pair of 5-way output binding posts	
<b>Filter Storage</b>	144,000 μF	
<b>Power Supply (factory configured)</b>	100V-240V, 50-60Hz	
<b>Idle Current Draw 120V</b>	3.0A	
<b>1/8 Power Curr. Draw (typical music, 120V/4Ω)</b>	12.0A	
<b>1/3 Power Curr. Draw (continuous music, 120V/4Ω)</b>	25.0A	
<b>Max Curr. Draw (circuit breaker rating, 120V/4Ω)</b>	36.0A	
<b>Thermal Emissions (1/8 Power, 4Ω)</b>	7125 BTU/hr	
<b>Thermal Emissions (1/3 Power, 4Ω)</b>	9450 BTU/hr	
<b>Cooling</b>	Back-to-front via 2 rear panel mounted variable-speed DC fans (filters removable without tools)	
<b>Controls</b>	Front Panel: 2 attenuators; Rear Panel Switches: signal ground lift, mode select, gain select, XLR input pin 2/3 hot (+)	
<b>LED Indicators (per channel)</b>	Clip/Limit, Signal, Temp/DC, Active	
<b>Construction</b>	Steel chassis, 16 gauge. Double thickness in rack ear areas.	
<b>Dimensions (Height x Width x Depth)</b>	5.25" x 19" x 18" / 133 x 483 x 457mm	
<b>Gross Weight, Net Weight</b>	82 lbs. (37.23 kg.), 77 lbs. (34.96 kg.)	
<b>Warranty</b>	3 years	

### Gain/Sensitivity Options

Factory Standard	Gain	Sens
Option 1	X115	.775V
Option 2	X40	2.24V
	X20	4.47V

### 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 950 watts per channel. At 4 ohms, 20Hz - 20kHz, 0.1% THD+N, it shall deliver a minimum of 1700 watts per channel. In bridged mono mode with an 8 ohm load, 20Hz - 20kHz, 0.1% THD+N, it shall deliver a minimum of 3400 watts.

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.

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

Each channel shall have a standard (factory-set) input sensitivity of .775 volt, and shall be fitted with an external switch which allows the gain to be altered to X20 or X40. The hum and noise level shall be 115 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 H output stage. The frequency response shall be 20Hz-20kHz, +0, -0.3dB (1W 8Ω).

The amplifier will operate at 100V-240V, 50-60 Hz AC (configured at factory). Maximum current draw shall not exceed 36 amperes at 120VAC (limited by front panel breaker).

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

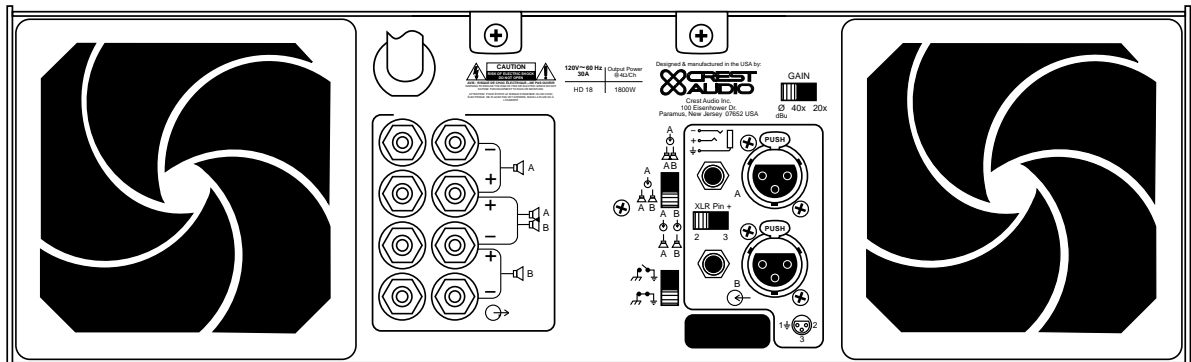
Rear panel input connectors shall be female TRS, and XLR type, rear-panel switchable for pin 2 (factory setting) or pin 3 positive. Output terminations shall be 2 pair of 5-way output binding posts. Rear panel switches for ground lift, Stereo/Parallel/Bridged Mono mode, XLR polarity and gain selection shall also be provided.

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

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, 5.25" (133mm) high and 18" (457mm) deep. The amplifier shall weigh 77 lbs. (34.96 kg.) net, and shall be designated the Crest Audio model HD18.

### 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 downloadable PDF format; visit our website at: <http://www.crestaudio.com>. ©1997 Crest Audio Inc.



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