



# CKS400 POWER PROCESSING AMPLIFIER

## Product Description

The Crest Audio CKS400 Power Processing amplifier is designed specifically for the unique requirements of high-quality commercial and industrial sound installations. Design goals met by the CKS400 include exceptional sonic accuracy, high efficiency, minimum power consumption, comprehensive loudspeaker protection, and the ability to handle extended duty cycles.

In addition, the CKS400 incorporates Crest Audio’s proprietary modular approach to input/output and external control configuration. We call this concept Power Processing. Through the provision of three plug-in module bays, these amplifiers offer exceptional flexibility with integral signal processing, load monitoring, and either local or system-wide computer control via Crest Audio’s NexSys® network.

The CKS400 amplifier is manufactured exclusively in Crest Audio’s own USA plant, using only the highest quality components. Key sub-assemblies are individually pre-tested, and all units are rigorously “burned-in” before final checkout on precision test equipment.

## CKS400 Features

- **Sequential Turn-On/Off (STO).** Standard system uses any +8 to +18VDC source and contact closure.
- **PowerSave.** Reduces power consumption at idle by turning off the bias circuit (and fan if heat sink temperature is below allowed threshold) when no signal present at input.
- **3 Module Bays.** Unique chassis construction provides three separate bays into which a diverse range of space-saving and cost effective Input Processing, Network and Power/Output modules can be fitted. By combining multiple processing and control functions in the amplifier, CKS Series Power Processing amplifiers significantly save on installation costs versus conventional outboard processing.
- **Cool Operation.** High thermal mass heat sinks, with high-efficiency variable speed fan. Front panel mounted filter for easy maintenance.
- **“Overbuilt” Power Supply.** In the Crest tradition, the power supply is “over-engineered” for ample current reserves to meet demanding load conditions.
- **More Transistors.** More output devices than comparably-powered competitive models to provide wider safe operating area and lower heat generation.
- **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 difficult loads.
  - **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.
- **Selectable input sensitivity/voltage gain (internal jumpers)**
- **UL certification**
- **Front panel status indication**
- **Rear panel attenuators with removable knobs**
- **Barrier strip input and output connectors**
- **Optional input isolation transformers**
- **Front panel label area**
- **Full five-year warranty\***



Power Specifications	8Ω Stereo	4Ω Stereo
20Hz - 20kHz, 0.1% THD+N	200W	300W
1kHz, 0.01% THD+N	255W	320W



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## SPECIFICATIONS

	<b>1kHz, 0.01% THD+N</b>	<b>20Hz-20kHz, 0.1% THD+N</b>
<b>8 Ohm Stereo Power</b>	255W	200W
<b>4 Ohm Stereo Power</b>	320W	300W
<b>Max RMS Output Voltage (each channel)</b>	45V	
<b>Peak Output Voltage (each channel)</b>	64V	
<b>Frequency Response (+0 / -0.3dB, 1W/8Ω)</b>	10Hz-20kHz, -3dB @ 148kHz	
<b>Power Bandwidth (rated power at 4Ω, 1% THD+N)</b>	10Hz - 20kHz, +0/-0.2 dB	
<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>	<0.01%	
<b>SMPTE IMD (rated power at 8Ω, 60Hz &amp; 7kHz)</b>	<0.1%	
<b>Damping Factor</b>	300:1	
<b>Input CMRR (1kHz)</b>	>60 dB	
<b>Input Sensitivity (rated power at 8Ω)</b>	1.0V	
<b>Standard Voltage Gain</b>	X40 (jumper-selectable for X20 or .775V sens.)	
<b>Input Impedance (balanced/unbalanced)</b>	>20kΩ/>10kΩ	
<b>Hum and Noise ("A" weighted, full power, 4Ω)</b>	-105 dB	
<b>Crosstalk ("A" weighted, full power, 4Ω)</b>	>-60dB	
<b>Class</b>	AB	
<b>Input Connectors (per channel)</b>	Rear-panel barrier strip input, 4-pin Phoenix sequential turn-on/off connector on standard CC-STL module	
<b>Output Connectors (per channel)</b>	Rear-panel barrier strip output	
<b>Filter Storage</b>	8200 μF	
<b>Power Supply (factory configured)</b>	100V-240V, 50-60Hz	
<b>Idle Current Draw 120V</b>	.7A (PowerSave active)	
<b>1/8 Power Curr. Draw (typical music, 120V/4Ω)</b>	5.8A	
<b>1/3 Power Curr. Draw (cont. music, 120V/4Ω)</b>	8.6A	
<b>Max Curr. Draw (circuit breaker rating, 120V/4Ω)</b>	12A	
<b>Thermal Emissions (1/8 Power, 4Ω)</b>	2120 BTU/hr	
<b>Thermal Emissions (1/3 Power, 4Ω)</b>	2820 BTU/hr	
<b>Cooling</b>	Variable speed, front panel mounted fan, front-to-side airflow	
<b>Controls</b>	3-position front panel On/Remote/Off switch, two rear-panel channel attenuators, AC mains circuit breaker	
<b>LED Indicators (per channel)</b>	Signal, ACL (one per ch.) Protect, Active	
<b>Construction</b>	Steel chassis, 16 gauge. Double thickness in rack ear areas.	
<b>Dimensions (Height x Width x Depth)</b>	3.5" x 19.0" x 17.13" / 89 x 483 x 435mm	
<b>Gross Weight, Net Weight</b>	35.44 lbs. (16.09 kg), 30.44 lbs. (13.82 kg)	
<b>Warranty</b>	5 years*	

### Architect's & Engineer's Specifications

The power amplifier shall consist of 2 channels and deliver a minimum of 200 watts at 8 ohms, 300 watts at 4 ohms; per channel, both channels driven, 20Hz-20kHz, 0.1% THD+N.

A variable speed fan, with the ability to completely turn off under appropriate ambient temperature conditions, shall provide air flow through the chassis from front to both sides.

The amplifier shall have circuitry to protect itself and the speaker load from output short circuits, DC voltage on outputs, and thermal overload. The amplifier shall include circuitry to gradually increase gain to attenuator setting levels when amplifier is turned on, and circuitry for impedance sensing and active clip limiting.

The amplifier shall include an energy saving feature which shall automatically remove the output stage bias current when the amplifier is in an idle condition.

The amplifier shall have a voltage gain of X40, or a voltage gain of X20, or an input sensitivity of 0.775V, for rated power at 4 ohms, internally jumper-selectable. The hum and noise level shall be greater than 105dB below rated output, "A" weighted. 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 at rated power. The amplifier shall operate at either 100, 120, 220, 230, or 240 volts, 50-60 Hz AC (configured at factory). Maximum current draw at 120V shall be no greater than 12A, both channels driven continuously into 4 ohm resistive loads.

Front panel LED indicators shall include Active, Protect, Signal Present, and ACL (Clip Limiting) LEDs for each channel. The power switch shall have three positions; one to permit power up from a remote location, one to permit local power up, and an 'off' position. The fan filter shall be front panel mounted, with no tools required for removal.

The rear panel shall be configured with three openings or bays which will accept plug-in modules used to accomplish input signal processing, network control, remote sequential turn-on/off and other related functions. The output module shall be fitted with the following connectors: 5mm, 4-pin Phoenix for sequential turn-on/off wiring, and an output barrier strip with 0.438" (11mm) screw spacing, and 0.320" (8mm) lug space. The input module shall be fitted with an input barrier strip connector with 0.320" (8mm) screw spacing, and 0.270" (7mm) lug space, and two individual channel attenuators with removable knobs.

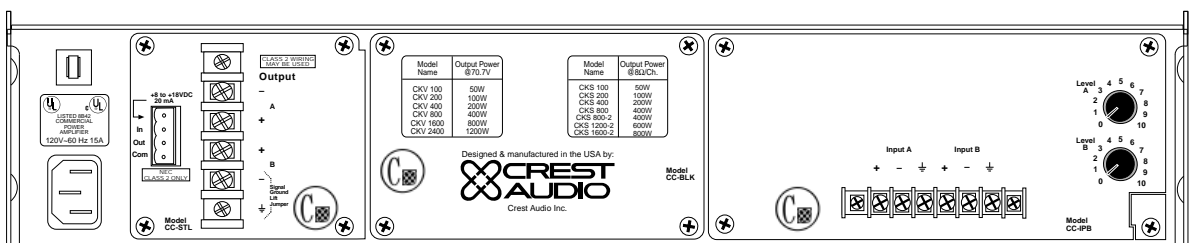
A user re-settable AC mains circuit breaker and an IEC AC mains socket shall be provided on the rear panel. A single AC mains cord having an appropriate AC plug for the intended operating voltage shall be provided.

The packaging of the amplifier shall allow for standard rack mounting without requiring space between similar units. Dimensions shall be 19" (483mm) wide, 3.5" (89mm) high and 17.13" (435mm) deep. It shall weigh 30.44 lbs. (13.82 kg) net. The amplifier shall be designated the Crest Audio model CKS400.

\*USA, Canada, United Kingdom, 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 specification. Crest Audio specification literature is available in electronic form to qualified users. Contact Crest Audio Inc. for more information. ©1996 Crest Audio Inc.

### Rear View



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