

CPA900 power amplifier



description

The Crest Audio CPA900 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 H circuitry. Wide-bandwidth output devices assure detailed, transparent high frequency response. And, thanks to Crest's exclusive IGM circuit, the CPA900 will drive 2Ω loads safely without compromise in performance.

Construction and Quality Control

The CPA900 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 CPA900 receives a rigorous "hot room" burn-in before thorough final check-out on precision test equipment.

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 1/2-inch (TRS) inputs
- five-way binding post outputs or Speakon™ connectors (market dependent)
- stereo/parallel/bridged mono mode selector switch
- ground lift switch
- input sensitivity selection
- recessed, stepped attenuators
- front panel circuit breaker switch
- modular construction
- five-year warranty*

power specifications: other CPA Series power amplifiers

4Ω stereo	CPA400	CPA600	CPA1200	CPA1800
1kHz, 0.01% THD+N	435w	600w	1200w	1800w
20Hz-20kHz, 0.1% THD+N	400w	500w	1100w	1700w

TourClass® protection circuits

ACL ACTIVE CLIP LIMITING prevents speaker damage by providing gentle gain reduction at the clipping threshold.

IGM INSTANTANEOUS GAIN MODULATION monitors speaker loads to detect conditions that may overstress output devices, allowing safe operation into difficult impedances.

AUTORAMP gradually increases gain to the attenuator level-settings when the amplifier is turned on.

Protection features include: SHORT CIRCUIT, DC VOLTAGE, COMPREHENSIVE THERMAL MANAGEMENT, CURRENT IN-RUSH TURN-ON/OFF TRANSIENT, AND SUB/ULTRASONIC INPUT.



power specifications

CPA900

1kHz, 0.01% THD
20Hz-20kHz, 0.1% THD+N

8Ω stereo

600w
550w

4Ω stereo

900w
800w

2Ω stereo

1000w
900w

8Ω bridged

1800w
1600w

4Ω bridged

2000w
1800w

Power figures are watts per channel, both channels driven.



specifications

CPA900 power amplifier

	1kHz, 0.1% THD+N	20Hz–20kHz, 0.1% THD+N
stereo power 8Ω	600W	550W
	4Ω	900W
	2Ω	1000W
bridged mono power 8Ω	1800W	1600W
	4Ω	2000W
maximum output voltage	82V rms, 116V peak each channel	

frequency response 1W @ 8Ω	20Hz–20kHz, +0 / -0.3dB, -3dB@135kHz
power bandwidth rated power @ 4Ω, 1% THD+N	20Hz–20kHz, -2dB/ +.84dB

THD+N	<0.01% rated power @ 4Ω, 1kHz
SMPTE IMD	<0.01% rated power @ 8Ω, 60Hz and 7kHz
damping factor	700:1 10–400Hz @ 8Ω

input CMRR	>60dB @ 1kHz
input sensitivity rated power @ 8Ω	.775V standard, (switchable; see table below)
voltage gain	X86.5 standard, (switchable; see table below)
input impedance	>20kΩ balanced, >10kΩ unbalanced
hum and noise	-105dB, A-weighted full power @ 4Ω
crosstalk	> -60dB A-weighted full power @ 4Ω

class	H	
power supply	100–240 vac @ 50–60Hz factory configured	
circuit breaker rating 4Ω	21A @ 120V	
current draw 1/8 power, 4Ω	<8.6A @120V	
	1/3 power, 4Ω	<16.0 @120V
	at power-up	<21.0A @120V
	at idle	<2.0A @120V
peak current draw	21A	

thermal emissions 1/8 Power, 4Ω	3250 BTU/Hr
	1/3 Power, 4Ω
cooling	back-to-front via two rear-mounted variable-speed DC fans (filters removable without tools)

input connectors	female XLR pin 2+ dealer-configurable for pin 3+ TRS (tip+)
output connectors	speakon connectors or five-way output binding posts
controls	front panel: two attenuators, rear panel: signal ground-lift switch, mode select switch
LED indicators	ACL, SIGNAL, TEMP/DC: active
TourClass® protection	ACL, IGM, AUTORAMP, SHORT CIRCUIT, DC VOLTAGE, TURN-ON/-OFF TRANSIENT, CURRENT IN-RUSH, SUB/ULTRASONIC INPUT

construction	steel chassis, 16-gauge double thickness in rack-ear areas
dimensions	3.5" x 19" x 18" 89mm x 483 x 457mm height x width x depth
weight	gross: 52lbs 23.60kg
	net: 47lbs 21.33kg
warranty	five years* USA, Canada, United Kingdom, and many other countries

architect's specifications

The power amplifier shall have two channels. At 8Ω, 20Hz - 20kHz, 0.1% THD+N, it shall deliver a minimum of 550 watts per channel. At 4Ω, 20Hz - 20kHz, 0.1% THD+N, it shall deliver a minimum of 800 watts per channel. In bridged mono mode with an 8Ω load, 20Hz - 20kHz, 0.1% THD+N, it shall deliver a minimum of 1600 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 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 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 21 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 terminations shall be 5-way output binding posts or Speakon output connectors (market dependent). A ground lift switch and a Stereo/Parallel/Bridged Mono mode operation switch shall be provided.

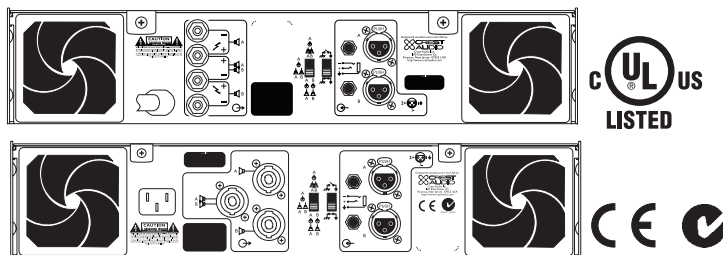
A rear-panel IEC AC mains socket (with power cord) or single AC mains cord having an appropriate AC plug for the intended operating voltage shall be provided (market dependent).

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 47 lbs. (21.33 kg.) net, and shall be designated the Crest Audio model CPA900.

rear view CPA900

Power figures are watts per channel, both channels driven.

*Three-year Warranty with two additional years, if Registration Card is sent to Crest Audio.



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Crest Audio specification literature is available in downloadable PDF format at our website <http://www.crestaudio.com>

Crest Audio reserves the right to make improvements in manufacturing or design which may affect specification.

dealer-configurable gain/ sensitivity options

	gain	sens
factory standard	x86.5	.775V
option 1	x40	1.66V
option 2	x20	3.32V



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