

CPA600 power amplifier



description

The Crest Audio CPA600 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 CA6 will drive 2Ω loads safely without compromise in performance.

Construction and Quality Control

The CPA600 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 CPA600 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 | CPA900 | CPA1200 | CPA1800 |
|------------------------|--------|--------|---------|---------|
| 1kHz, 0.01% THD+N | 435w | 900w | 1200w | 1800w |
| 20Hz-20kHz, 0.1% THD+N | 400w | 800w | 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

CPA600

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

8Ω stereo

400w
350w

4Ω stereo

600w
500w

2Ω stereo

750w
600w

8Ω bridged

1200w
1000w

4Ω bridged

1500w
1200w

Power figures are watts per channel, both channels driven.



specifications

CPA600 power amplifier

architect's specifications

The power amplifier shall have two channels. At 8Ω, 20Hz - 20kHz, 0.1% THD+N, it shall deliver a minimum of 350 watts per channel. At 4Ω, 20Hz - 20kHz, 0.1% THD+N, it shall deliver a minimum of 500 watts per channel. In bridged mono mode with an 8Ω load, 20Hz - 20kHz, 0.1% THD+N, it shall deliver a minimum of 1000 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 18 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 44.0 lbs. (19.98 kg.) net, and shall be designated the Crest Audio model CPA600.

| | 1kHz, 0.1% THD+N | 20Hz-20kHz, 0.1% THD+N |
|------------------------|---------------------------------|------------------------|
| stereo power 8Ω | 400W | 350W |
| | 4Ω 600W | 500W |
| | 2Ω 750W | 600W |
| bridged mono power 8Ω | 1200W | 1000W |
| | 4Ω 1500W | 1200W |
| maximum output voltage | 73V rms, 103V peak each channel | |

| | |
|--|--------------------------------------|
| frequency response 1W @ 8Ω | 20Hz-20kHz, +0 / -0.3dB, -3dB@135kHz |
| power bandwidth rated power @ 4Ω, 1% THD+N | 20Hz-20kHz, -1.1dB/ +.0dB |

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

| | |
|------------------------------------|---|
| input CMRR | >60dB @ 1kHz |
| input sensitivity rated power @ 8Ω | .775V standard, (switchable; see table below) |
| voltage gain | X68 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 | 36A @ 120V | |
| current draw 1/8 power, 4Ω | <6A @120V | |
| | 1/3 power, 4Ω | <13.0 @120V |
| | at power-up | <18.0A @120V |
| | at idle | <1.6A @120V |
| peak current draw | 18A | |

| | |
|---------------------------------|---|
| thermal emissions 1/8 Power, 4Ω | 2630 BTU/Hr |
| | 1/3 Power, 4Ω 3713 BTU/Hr |
| cooling | back-to-front via two rear-mounted variable-speed DC fans (filters removable without tools) |

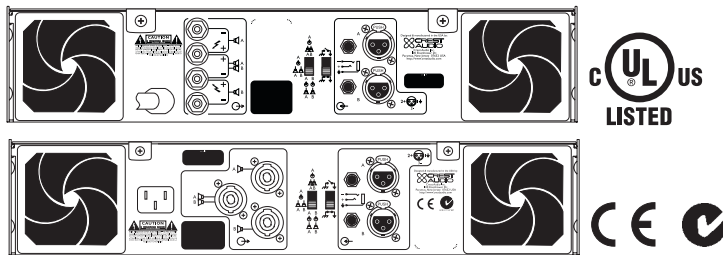
| | |
|-----------------------|--|
| input connectors | female XLR pin 2+ dealer-configurable for pin 3+ TRS (tip+) |
| output connectors | speakon connectors or five-way output binding posts |
| controls | front panel: two attenuators, |
| | rear panel: signal ground-lift switch, mode select switch |
| 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: 49lbs 22.25kg |
| | net: 44lbs 19.98kg |
| warranty | five years* USA, Canada, United Kingdom, and many other countries |

rear view CPA600

Power figures are watts per channel, both channels driven.

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



Power figures are watts per channel, both channels driven.
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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 | x68 | .775v |
| option 1 | x40 | 1.32v |
| option 2 | x20 | 2.65v |



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