

HPA 502 **NEW**

100 Watt Two Channel Half Rack Power Amplifier

UNIQUE FEATURES

- 50 watts rms per channel into 4 or 8 ohms
- Two channel output for stereo or dual zone applications
- Independent level control for each channel

**HPA 1001-70V** **NEW**

70 Volt 100 Watt Mono Half Rack Power Amplifier

UNIQUE FEATURES

- 100 watts rms output for 70 volt speaker systems
- **Input summing** — Actively sums incoming left and right channel signals for mono amplification.
- **High pass filter** — This switch selectable filter rolls off frequencies below 80 Hz to prevent saturation of speaker transformers.

**COMMON FEATURES**

- **Inputs: Balanced or unbalanced stereo on a captive screw connector**
- **Speaker Outputs: Screw-lock, 5 mm captive screw connector**
- **Professional grade amplifier design:**
 - Less than 0.05% Total Harmonic Distortion plus Noise
 - Better than 100 dB Signal-to-Noise
- **ENERGY STAR® qualified amplifier** — The HPA 502 and HPA 1001-70V are energy efficient products to help meet green building requirements for low power consumption and reduced operating costs.
- **Highly efficient Class D amplifier design** — The HPA 502 and HPA 1001-70V generate substantially less heat than conventional amplifier designs, making them ideal for installation in equipment racks and lecterns with very limited ventilation. They consume 8 watts when idle and less than 1 watt in standby mode.
- **Extron Patented CDRS™ - Class D Ripple Suppression** — A patented, exclusive technology from Extron that eliminates the high frequency switching ripple and EMI emissions found in typical Class D amplifiers. CDRS enables Extron power amplifiers to be situated near wireless A/V devices without RF interference.
- **Convection cooled** — The HPA 502 and HPA 1001-70V are convection cooled without the need for fans, ensuring quiet, reliable operation.
- **Plenum rated when used with optional Flexible Conduit Adapter Kit, part # 70-228-02** — The HPA 502 and HPA 1001-70V meet UL 2043 for smoke and heat release for installation within a plenum airspace above a drop ceiling. Above-the-ceiling placement conceals the amplifier to prevent theft, and is convenient for installing equipment when space inside the room is limited.
- **Compact 1U, half rack width metal enclosure** — With the capability to deliver full-sized amplifier power in half the size of many conventional amplifiers, the HPA 502 and HPA 1001-70V reduce rack space requirements for many installations.
- **Auto-standby with fast power-up** — The HPA 502 and HPA 1001-70V automatically enter into a standby mode after one hour of inactivity, dramatically reducing power consumption. They quickly return to full power status upon signal detection.
- **Rear panel detented level controls** — Provide attenuation of input signals for setting proper audio system gain staging. They are located on the rear panel to prevent users from tampering with level adjustments.
- **Multiple protection circuits** — Activate during excessive clipping, thermal overload, or DC faults to prevent damage to the amplifier and speakers.
- **Remote standby port** — Enables the HPA 502 and HPA 1001-70V to be remotely powered down when not in use, reducing operating cost.
- **Remote volume and mute control port** — In basic installations without third-party control systems, this port allows the HPA 502 and HPA 1001-70V to be remotely controlled using the optional Extron VCM 100 Series volume and mute or VC 50 volume controllers.
- **Screw-lock, 5 mm captive screw speaker connectors** — Enables simple, secure connections with 22 to 14 AWG speaker cables.
- **Front and rear-mounted signal and protection indication LEDs** — Provide convenient indication of amplifier operation from both sides of an equipment rack.
- **Internal international power supply** — The 100-240VAC, 50/60 Hz, universal power supply provides worldwide power compatibility.

MODEL	VERSION DESCRIPTION	PART #
HPA 502	100 Watt Two Channel Power Amplifier.....	60-849-01
HPA 1001-70V	70 Volt 100 Watt Mono Power Amplifier.....	60-850-01

OPTIONAL ACCESSORIES	MODEL DESCRIPTION	PAGE	PART #
Flexible Conduit Adapter Kit	Flexible Conduit Adapter Kit for PS 123 & HPA Series Amplifiers	page 140	70-228-02
RSU 129	1U 9.5" Deep Universal Rack Shelf Kit	page 819	60-190-01
RSB 129	1U 9.5" Deep Basic Rack Shelf	page 820	60-604-01
SPK 18 cable-25'	Pre-cut Speaker Cable.....	page 735	26-627-25
VC 50	Volume Control Wall Plate	page 674	70-530-02
VCM 100 AAP	Volume and Mute Controller - AAP Module	page 674	70-396-11
VCM 100 MAAP	Volume and Mute Controller - MAAP Module	page 674	70-397-11
SI 26X	Two-Way Open Back Ceiling Speakers	page 653	42-067-03
SI 26CT	Two-Way Ceiling Speakers with 8" Back Can and Transformer.....	page 652	42-070-03
SI 26W	Two-Way In-Wall Speakers with 6.5" Woofer	page 654	42-068-03
SI 26	Two-Way Surface Mount Speakers with 6.5" Woofer.....	page 648	42-072-02

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HPA 502, HPA 1001-70V

DESCRIPTION

The Extron **HPA 502** and **HPA 1001-70V** are compact power amplifiers designed for installation in racks and lecterns. These ENERGY STAR® qualified amplifiers feature a highly efficient Class D amplifier design with patented CDRS™ - Class D Ripple Suppression technology from Extron that eliminates EMI emissions and interference with wireless AV equipment. This high efficiency allows the amplifiers to be convection cooled without the need for fans and operate in environments with little or no ventilation. These professional grade amplifiers deliver more than 100 dB signal-to-noise ratio, unweighted and THD + Noise of less than 0.05%. With a compact, plenum-rated 1U, half rack width enclosure, the HPA 502 and HPA 1001-70V deliver ample power output for speaker systems in classrooms, meeting rooms, boardrooms, and commercial environments.

The HPA 502 and HPA 1001-70V are ENERGY STAR qualified amplifiers and energy efficient products to help meet green building requirements. They consume just 8 watts when idle and less than 1 watt in standby mode. The HPA 502 and HPA 1001-70V enter into standby after one hour of inactivity, or when the standby port is triggered. Additionally, both amplifiers are plenum-rated, allowing for a concealed installation above a drop ceiling to prevent theft while providing convenient placement of AV equipment.

HPA 502

The HPA 502 two channel amplifier delivers 50 watts rms per channel into 4 or 8 ohms for amplification of voice or program audio content to stereo program speakers, or two sets of distributed ceiling speakers in a dual zone application.

HPA 1001-70V

The HPA 1001-70V delivers 100 watts rms for 70 volt constant voltage speaker distribution systems for voice reinforcement and PA - public address applications.

The HPA 502 and HPA 1001-70V accept balanced and unbalanced input signals and include detented level controls located on the rear panel to prevent tampering. These controls allow for proper audio system gain structure, or setting individual levels for each zone. Remote control capability is available for volume adjustment and muting. Additionally, both amplifiers include multiple protection circuits that activate when an abnormal condition, such as excessive clipping or overheating, is detected.

SPECIFICATIONS

AUDIO

Voltage gain

HPA 502	16x (24 dB)
HPA 1001-70V	57x (35 dB)

AUDIO INPUT

Number/signal type

HPA 502	1 stereo or 2 mono, balanced/unbalanced
HPA 1001-70V	1 stereo/mono, balanced/unbalanced

Connectors (1) 3.5 mm captive screw connector, 5 pole

Impedance >10k ohms unbalanced/balanced, DC coupled

Nominal level +4 dBu (1.23 Vrms), balanced

Maximum level	+20 dBu (7.75 Vrms), balanced
Input sensitivity	
HPA 502	+4 dBu (1.23 Vrms)
HPA 1001-70V	+4 dBu (1.23 Vrms) if driven by one input -2 dBu (0.615 Vrms) if both inputs are summed

Stereo channel separation

HPA 502

CMRR

NOTE: 0 dBu = 0.775 Vrms, 0 dBV = 1 Vrms, 0 dBV = 2 dBu

AUDIO OUTPUT

Number/signal type

HPA 502

HPA 1001-70V

Connectors

HPA 502

HPA 1001-70V

Minimum load impedance

HPA 502

HPA 1001-70V

Amplifier type

Class D

Continuous power output with a full load and 1% THD at 1 kHz

HPA 502

HPA 1001-70V

Frequency response

20 Hz to 20 kHz, ±1 dB

THD + Noise

70 V (HPA 1001-70V)

S/N

>100 dB (unweighted)

Damping factor (HPA 502 only)

>100 @ 8 ohms

High pass filter

(HPA 1001-70V only)

80 Hz, 12 dB per octave (switch selectable)

CONTROL/REMOTE — AMPLIFIER

Control port

(1) 3.5 mm captive screw connector, 5 pole

Pin configuration

1 = +10 VDC, 2 = volume/mute - variable voltage, 3 = GND

Volume control voltage range

0 V (mute) to 10 V (maximum volume)

Standby power control

4 = GND, 5 = standby

GENERAL

Power

100 VAC to 240 VAC, 50/60 Hz, internal

Typical

20 watts

Quiescent

8 watts

Standby

<1 watt (triggered by contact closure or after 1 hour with no signal)

Storage: -40 to +158 °F (-40 to +70 °C) / 10% to 90%, noncondensing

Operating: +32 to +122 °F (0 to +50 °C) / 10% to 90%, noncondensing

Convection, unvented, with internal heat sinks

Cooling

Protection

Clip limiting, thermal, short circuit, DC output

Indication

Limiter/Protect LED indicates the onset of clip limiting, thermal cycling, short circuit, or DC output protection

Rack mount

Yes, with optional 1U, 9.5" deep rack shelf, part #60-190-01 (RSU 129)

or #60-604-01 (RSB 129)

Also furniture mountable with optional brackets

Enclosure type

Metal

Enclosure dimensions

1.7" H x 8.7" W x 9.5" D (1U high, half rack wide)

4.3 cm H x 22.1 cm W x 24.1 cm D

Product weight

2.5 lbs (1.1 kg)

Shipping weight

7 lbs (4 kg)

Vibration

ISTA 1A in carton (International Safe Transit Association)

Listings

UL, CUL

UL rated for use in plenum airspaces: meets UL 2043 for heat and smoke

release; meets UL 60950 and UL 6500 for safety.

Compliances

CE, FCC Class A, VCCI, AS/NZS, ICES, ENERGY STAR® qualified amplifier

MTBF

30,000 hours

Warranty

3 years parts and labor

NOTE: All nominal levels are at ±10%. Specifications are subject to change without notice.

