

PA™ 150 power amplifier

description

The PA 150 is a rugged, medium-power amplifier with features that make it stand alone in the industry. It's a rack-mountable unit which occupies only one rack space, and yet packs a 75 W RMS per channel punch into 4, 8, or 16 Ohms. It's selectable; a feature seldom found on the typical solid state amp. In bridge mode, this unit delivers 150 W RMS into 8, 16, and 32 Ohms. You might ask why 32 Ohms; that's the load impedance for a 150 Watt, 70 Volt distribution system. There's no fan in this unit to make noise. Adequate cooling is provided by two massive heat sinks. Each channel is protected from excessive operating temperatures with a thermal/fault system that is automatic, and only activates under extreme conditions.

The PA 150 has an exclusive SPS compression system that senses conditions which might overload the amplifier and activates compression circuitry when clipping is imminent. This technique utilizes every precious Watt available to power transformer with three different voltage taps. The rear panel three-position selector switch then gives this amp the impedance selection capability by changing the internal "rail" operating voltages. Toroidal power transformers offer very high efficient operation (cool), have very low magnetic fields (hum), and are relatively small in size (weight).

All controls are located on the rear panel, and each channel is equipped with a separate level control. The inputs are electronically balanced. Both input and output are accessed via barrier strips.

High slew rate, high damping factor, low distortion, and awesome features make the PA 150 the obvious choice for most demanding commercial/professional applications and permanent installations.

features

- 19" rack-mountable
- one rack space
- 75 W RMS per channel
- 150 W RMS bridge mode
- selectable 4, 8, or 16 Ohms
- SPS™ compression on each channel
- electronically balanced inputs
- convection cooled

front panel

- heavy-duty rocker power switch
- LED power indicator
- SPS activation LED on each channel

rear panel

- barrier strip inputs
- barrier strip outputs
- detented 1 dB level controls
- stereo/bridge mode switch
- impedance selector switch
- ground lift switch



PA 150 amplifier specifications

PA 150 power amplifier preliminary specifications

Characteristics (@ 120 V AC, 60 Hz) [impedance selector setting]

output power (typical value)	stereo mode, both channels driven	
	4 Ohms, 1 kHz, 1% THD - 85 W RMS/channel (4 Ohms) 8 Ohms, 1 kHz, 1% THD - 85 W RMS/channel (8 Ohms) (25 V) 16 Ohms, 1 kHz, 1% THD - 85 W RMS/channel (16 Ohms)	
	bridge mode, mono	
	8 Ohms, 1 kHz, 1% THD - 170 W RMS (4 Ohms) 16 Ohms, 1 kHz, 1% THD - 170 W RMS (4 Ohms) 32 Ohms, 1 kHz, 1% THD - 170 W RMS (16 Ohms) (70 V)	
rated output power	stereo mode, both channels driven	
	4 Ohms, 20 Hz to 20 kHz, 0.1% THD - 75 W RMS per channel (4 Ohms) 8 Ohms, 20 Hz to 20 kHz, 0.07% THD - 75 W RMS per channel (8 Ohms) (25 V) 16 Ohms, 20 Hz to 20 kHz, 0.05% THD - 75 W RMS per channel (16 Ohms)	
	bridge mode, mono	
	8 Ohms, 20 Hz to 20 kHz, 0.1% THD - 150 W RMS (4 Ohms) 16 Ohms, 20 Hz to 20 kHz, 0.07% THD - 150 W RMS (8 Ohms) 32 Ohms, 20 Hz to 20 kHz, 0.05% THD - 150 W RMS (16 Ohms) (70 V)	
distortion	stereo mode, both channels driven 20Hz to 20 kHz, at rated power and load below 0.1% (4 Ohms) below 0.07 (8 Ohms) below 0.05% (16 Ohms)	
input sensitivity and impedance	input attenuator set FCW, at rated power and load 0.7 V RMS (-3 dBV) (4 Ohms) 1.0 V RMS (0 dBV) (8 Ohms) 20 kilohms (28 dB gain)	
slew rate (typical value)	stereo mode, each channel: bridge mode, mono:	15 Volts per μ Sec 30 Volts per μ Sec
frequency response (typical value)	stereo mode, both channels driven ± 1 dB, 1 W RMS at rated load 10 Hz to 40 kHz ± 2 dB, at rated power and load 20 Hz to 20 kHz	
damping factor (typical value)	stereo mode, both channels driven, at rated load, 1 kHz greater than 100 (4 Ohms) greater than 200 (8 Ohms) greater than 400 (16 Ohms)	
hum and noise	stereo mode, both channels driven below rated power, unweighted 97 dB (4 Ohms) 100 dB (8 Ohms) 103 dB (16 Ohms)	
power consumption	stereo mode, both channels driven at rated power and load 2.5 A at 120 V AC	
dimensions and weight	height:	1.75" (4.4 cm)
	width:	19" (48.3 cm)
	depth:	8" (20.3 cm)
	weight:	22 lbs. (10.0 kg)

Preliminary Specs

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

Architectural and Engineering Specifications

The amplifier shall have two channels, each capable of producing an output of more than 75 Watts RMS into 4, 8, or 16 Ohm loads, both channels operating from 20 Hz to 20 kHz continuously at less than 0.1% THD. In bridge mode, the amplifier shall be capable of producing an output of more than 150 W RMS into 8, 16, or 32 Ohm loads, operating from 20 Hz to 20 kHz continuously at less than 0.1% THD. Full output shall be achieved by an input signal of not more than 1.0 V RMS (0 dBV) per channel. Each channel shall be equipped with unique compression circuitry that electronically senses the onset of clipping and engages a specially designed circuit which virtually eliminates the possibility of driving the amplifier into clipping or distortion. An LED shall indicate when this patented SPS™ compression is activated.

Each channel shall have a +0, -1 dB frequency response from 10 Hz to 40 kHz at 1 W RMS into 4 Ohms and a +0, 0.2 dB frequency response from 20 Hz to 20 kHz at 75 W RMS into 4 Ohms, and shall have a slew rate of at least 15 Volts per microsecond. The total harmonic distortion shall be less than 0.1% at 75 W RMS into 4 Ohms from 20 Hz to 20 kHz, and the hum and noise shall be at least 100 dB below full rated output power measured 20 Hz to 20 kHz with a 600 Ohm input termination.

The amplifier shall be stable into any load configuration with any combination of open or grounded input connections. It shall be short, mismatch, or open-circuit proof. It shall have massive aluminum heat sinks that are convection cooled and a thermal shutdown system to protect the amplifier from over-temperature operation. This thermal protection system shall be automatic and self-resetting.

The amplifier shall have all input and output patching capabilities on the rear panel. Each amplifier channel shall have an input barrier strip and an output barrier strip. Further, each channel shall contain a detented level control offering 1 dB per detent attenuation. Additionally the back panel shall contain switches for stereo/bridge select, impedance selection and ground lift.

The front panel features shall include a rocker mains switch, an LED power indicator, and dual LED SPS activation indicators.

The unit shall be rack-mountable in a standard 19" rack requiring 1 3/4" height (one rack space). The unit weight shall be 22 lbs., with dimensions 19" wide x 1 3/4" high x 8" deep. The amplifier shall operate on a 120 V AC, 50/60 Hz, and consume 300 Watts. The published specifications shall be met or exceeded.