

PA-151 *Linear Power Amplifier*



State of the art linear technology and features you won't find on any other commercially available small amplifier.

GENERAL DESCRIPTION

The Labworks PA-1519 Linear Power Amplifier is a high quality, air-cooled, direct-coupled audio amplifier primarily intended for use with small vibration systems.

To insure long term reliability, PA-151 Amplifiers come equipped with protection from both over current and over temperature. External interlock capabilities as well as voltage and current bar graphs to monitor output are also incorporated in the design. An oversized heat sink

allows continuous operation at maximum output. Both DC and AC coupled signal inputs are provided as well as a signal output voltage proportional to output current

Although this amplifier has been designed to directly drive low impedance loads, it can be used in any application requiring continuous duty high quality audio power. PA-151 amplifiers are designed for stand-alone desktop mounting, optional 19 in. rack mount brackets are available. Selectable Voltage or Current Source output modes accomodates all types of vibration testing applications. The amplifier can operate on 100, 115, 200 or 230V, 48 to 60 Hz power

Switch selectable dual internal rail voltage allows this amplifier to be optimally matched to most low impedance loads. This feature reduces the heat dissipated with high current loads reducing heat sink temperatures and output stage dissipation for dependable operation.

FEATURES

- 180 VA, Linear Output
- Voltage or Current Source
- Convection Cooled, no Fan
- Direct coupled for DC operation
- DC-20,000 Hz Frequency Range
- V / I Signal Output
- Output Voltage and Current Meters
- External and Internal Interlock
- Dual Rail Voltage & Soft Start Circuitry



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PA-151 SPECIFICATIONS*

Output voltage (continuous) 1.0 Hz to 20 KHz open circuit 4Ω load 2Ω load 1Ω load DC to .10 Hz open circuit 4Ω load 2Ω load 1Ω load	High/Low rail voltage 26.4 / 23.0 V rms 22.5 / 19.5 14.5 / 14.5 6.0 / 7.5 31.5 / 28.5 Vdc/pk 30.0 / 27.0 21.0 / 21.0 5.4 / 6.4	Resolution Peak voltage Average current Accuracy (voltage & current)	10% of full scale 10% of full scale ±15% absolute
Random voltage output 2.5 sigma peak volts open circuit 4Ω load 2Ω load 1Ω load 3.0 sigma peak volts open circuit 4Ω load 2Ω load 1Ω load	14.8 / 13.4 V rms 13.7 / 12.0 12.2 / 9.2 6.9 / 6.6 12.4 / 11.2 V rms 11.4 / 10.4 10.2 / 7.6 5.8 / 5.5	Interlock circuit Type Response time Action Reset Indicator	<1 Vdc= fault or switch 3 ms. max Output drives to ground Gain pot full down Flashing Interlock light
Maximum continuous dissipation Ambient Temp =	40°C 180W 50 90 60 0	Cooling Self protection Line protection	Natural convection Over current, over temp. Hi & Lo line on-board replaceable Line fuses
Frequency response (DC coupled input) DC to 10 KHz DC to 20 KHz AC coupling @ 1.0 Hz	-1.0 dB -3.4 -0.5	Input power Voltage Frequency	250 VA max 100, 115, 200 or 230 V 48 to 62 Hz
Slew rate Harmonic distortion (10V, 1000 Hz)	1.5 V/μsec <1% @ 2 Ω	Dimensions w/Optional rack mt. brackets	3.5" H x 17" W x 10" D 3.5" H x 19" W x 10" D
Signal/noise ratio (ref 15V out)	73 dB	Weight	19 lbs
Input impedance DC coupled AC coupled	10K Ω 47 uF in series with 10k Ω	*Specifications subject to change. Consult factory for latest specifications.	
DC offset Voltage gain Voltage source regulation	6 mV max 25 (28 dB) max <0.1 dB (∞- 2Ω load), 30 Hz/10 V rms		
Front panel controls Front panel indicators Front panel metering Type	Power switch, Gain adjust, V / I Source Mode Select Internal power, interlock trip, Amplifier ready (2) 9 segment vertical bar graphs		
Scale, non-enumerated Voltage Current	0-20 V peak 0-8 A avg		

PERFORMANCE GRAPHS

