

Power Amplifier



Model HTA250A

- Features**
- Power MOSFET circuitry
 - Capable of continuous operation at rated output power
 - Frequency response ± 1 dB, 20 - 20,000 Hz at full rated output
 - Distortion less than 0.5% THD, 20 - 20,000 Hz
 - Multiple output voltages/impedances available
 - Automatic overload protection
 - UL listed

Description

The Bogen HTA250A Power Amplifier is a high-performance unit employing Power MOSFET technology. The unique characteristics of Power MOSFETS make them ideally suited to power amplifier design, providing far superior performance and reliability compared to other types of transistors. They offer higher efficiency, reduced heat, simpler overall design, reduced size and weight.

The Model HTA250A supplies 250 watts (rms continuous output) at less than 0.5% total harmonic distortion from 20 to 20,000 Hz. An input signal of only 500mV is required for full rated output. The input impedances are: high-impedance (50,000 ohms) unbalanced; low impedance (500/600 ohms, balanced or unbalanced) with optional accessory transformer Model TL600. Line bridging can be achieved with optional transformer Model TL100. Residual hum and noise is at least 90 dB below rated output and the output regulation is better than 2 dB from no load to full load.

The HTA250A can drive a variety of load impedances. Outputs include 4 ohms, 8 ohms, 25VCT

and 70 volts. The amplifier is capable of safely driving any recommended load continuously. The HTA250A is thermally protected to prevent damage due to excessively high temperatures; however, the amplifier will deliver the full rated output continuously, even at $+49^{\circ}\text{C}$ ($+120^{\circ}\text{F}$). Additional failure-preventive devices include overload limiting, short circuit protection, and a Slo-Blo fuse.

Electronic shutdown circuitry is automatically activated if an overload or short occurs and a front panel overload shutdown LED illuminates. Once the cause has been rectified, the unit automatically resets. The power on/off switch, located on the front panel, illuminates when power is on. The rear panel contains an input level control, input and output connections, the AC line fuse, and an auxiliary receptacle. A low-cut filter switch is located internally.

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**Technical
Specifications**

Rated Output Power:	250 watts rms
Total Harmonic Distortion:	Less than 0.5%, 20 - 20,000 Hz
Frequency Response:	±1 dB, 20 - 20,000 Hz at full rated output
Input Sensitivity:	High impedance, 500mV; Low impedance balanced, with optional transformer, 150mV
Hum and Noise:	90dB below rated output
Output Loads:	4 ohms, 8 ohms, 25VCT (2.5 ohms), 70V (20 ohms)
Output Regulation:	Better than 2 dB from no load to full load
Input Impedances:	Hi-Z, 50,000 ohms unbalanced; Lo-Z, 600 ohms, balanced or unbalanced, and 1:1 bridging with optional plug-in transformers
Low-Cut Filter:	-10 dB @ 100 Hz
Controls & Indicators:	Front panel illuminated power and shutdown LED indicators Rear Panel Input level control, Slo-Blo fuse Internal Low-Cut filter switch
Power Requirements:	120V AC, 60 Hz, 520 watts @ Full Rated Output (Idle, 60W)
Overload Protection:	Electronic overload protection Electrical 7A Slo-Blo Fuse Thermal 105° C (220° F) Thermostat
Operating Temperature Range:	-20°C (-4°F) to +49°C (+120°F) at rated output
Auxiliary Receptacle (not switched):	Three-wire grounded*, 300 watts maximum
Dimensions (without removable feet):	19" W x 11" D x 5-1/4" H (48.3 x 27.9 x 13.3 cm)
Finish:	Black
Weight:	50 lb. (22.7 kg)
Accessories:	Model TL600, line-matching transformer; Model TL100, 1:1 line-matching transformer

*This receptacle will be grounded only if the power amplifier has been grounded properly.

**Architect
and Engineer
Specifications**

The power amplifier shall be a Bogen Model HTA250A or approved equivalent using power MOSFET circuitry.

The amplifier shall deliver an audio output of 250 watts (rms continuous). Total harmonic distortion shall be less than 0.5% at the 250-watt rating over the frequency range of 20 to 20,000 Hz. The rated output shall be obtained with an input that is not greater than 500mV (rms). Hum and noise shall be at least 90 dB below rated output. The frequency response, when measured at full rated output, shall be flat within ±1dB, 20 to 20,000 Hz.

The amplifier shall provide either balanced or unbalanced constant-voltage outputs of 25 VCT and 70 volts, plus 4 and 8 ohm balanced or unbalanced outputs. Output regulation shall be within 2dB from no load to full load.

The amplifier shall provide an input of 50,000 ohms unbalanced high impedance, or 600 ohms balanced or unbalanced low impedance, or line bridging with optional accessory plug-in transformers. Overall gain shall be adjustable by means of a single level control located on the rear panel. An internal low-cut filter (-10dB @ 100Hz) shall also be provided. The front of the amplifier shall contain an illuminated on/off power switch. The amplifier shall incorporate electronic shutdown circuitry which shall activate whenever an overload or short occurs on the output of the amplifier. A

front panel overload shutdown LED shall illuminate to indicate the discontinuance of power output; the circuitry shall automatically restore power output once the cause of the shutdown condition has been removed.

The amplifier shall operate from a 120 VAC, 60 Hz source and shall consume 60 watts or less at idle and 520 watts at full rated output. The amplifier shall have thermostatic control to prevent operation at excessive ambient temperatures. The amplifier also shall include electronic overload limiting, short-circuit protection and a 7-amp Slo-Blo fuse.

The amplifier shall have a standard EIA 19-inch front panel suitable for rack mounting. The amplifier shall be 19" wide, 5-1/4" high and 11" deep, finished in black and shall weigh 50 lb.

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