

# Power Amplifiers

## Models HTA125A and HTA250A



- Features**
- Power MOSFET circuitry
  - Capable of continuous operation at rated output power
  - Frequency response  $\pm 1$ dB, 20 to 20,000 Hz at full rated output
  - Distortion less than 0.5% THD, 20 to 20,000 Hz
  - Multiple output voltages/impedances available
  - Automatic overload protection
  - Listed to UL Standard 60065 for US and Canada

**Description** The Bogen HTA Power Amplifier Series are high-performance units employing Power MOSFET technology. The unique characteristics of Power MOSFET circuitry 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 HTA125A Model supplies 125 watts and the HTA250A Model 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 (50k 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 amps can drive a variety of load impedances. Outputs include 4 ohms, 8 ohms, 25VCT and 70 volts. The amplifiers are capable of safely driving any recommended load continuously. The HTA Series amps are thermally protected to prevent damage due to excessively high temperatures. 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 the 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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Specifications subject to change without notice.

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## Technical Specifications

<b>Rated Output Power:</b>	<i>HTA125A: 125W; HTA250A: 250W</i>
<b>Total Harmonic Distortion:</b>	Less than 0.5%, 20 to 20,000 Hz at full rated output
<b>Frequency Response:</b>	±1 dB, 20 to 20,000 Hz at full rated output
<b>Input Sensitivity:</b>	Hi-Z, 500mV; Lo-Z balanced, with optional transformer, 150mV
<b>Hum and Noise:</b>	90 dB below rated output
<b>Output Loads:</b>	4 ohms, 8 ohms, 25V, 25VCT, 70V
<b>Output Regulation:</b>	Better than 2 dB from no load to full load
<b>Input Impedances:</b>	Hi-Z, 50k ohms unbalanced; Lo-Z, 600 ohms, balanced or unbalanced, and 1:1 bridging with optional plug-in transformers
<b>Low-Cut Filter:</b>	-10 dB @ 100 Hz
<b>Controls &amp; Indicators:</b>	Front Panel — Illuminated On/Off power switch and overload shutdown LED Rear Panel — Input level control, Slo-Blo fuse Internal — Low-Cut filter switch
<b>Power Requirements:</b>	<i>HTA125A: 120V~, 60 Hz, 3.1A, 260 watts @ Full Rated Output (Idle 45W)</i> <i>HTA250A: 120V~, 60 Hz, 5.5A, 520 watts @ Full Rated Output (Idle 60W)</i>
<b>Thermal Emissions (full power):</b>	<i>HTA125A: 426.9 BTU/hr.; HTA250A: 939.2 BTU/hr</i>
<b>Overload Protection:</b>	Electronic overload protection Electrical: <i>HTA125A: 4A Slo-Blo Fuse; HTA250A: 7A Slo-Blo Fuse</i> Thermal: Thermostat
<b>Auxiliary Receptacle (not switched):</b>	Three-wire grounded*, 300 watts maximum
<b>Dimensions (without removable feet):</b>	19" W x 5-1/4" H x 11" D (48.3 x 13.3 x 27.9 cm)
<b>Front Panel Dimensions:</b>	19" W x 5-1/4" H (48.3 x 13.3 cm)
<b>Finish:</b>	Black
<b>Product Weight:</b>	<i>HTA125A: 36 lb. (16.3 kg); HTA250A: 50 lb. (22.7 kg)</i>
<b>Regulatory Approvals:</b>	Listed to UL Standard 60065 for US and Canada
<b>Accessories:</b>	Model TL600, 600-ohm 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 HTA Series Model** or approved equivalent using power MOSFET circuitry.

The amplifier shall deliver an audio output of 125 watts (HTA125A) or 250 watts (HTA250A) (RMS continuous). Total harmonic distortion shall be less than 0.5% at the 125-watt or 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 amplifiers shall provide either balanced or unbalanced constant-voltage outputs of 25V, 25 VCT, and 70V, plus 4- and 8-ohm balanced or unbalanced outputs. Output regulation shall be within 2 dB from no load to full load.

The amplifiers shall provide an input of 50k 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 amplifiers shall contain an illuminated ON/OFF power switch.

The amplifiers shall incorporate electronic shutdown circuitry which shall activate whenever an overload or short occurs on the output of the amplifiers. 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 amplifiers shall operate from a 120 VAC, 60 Hz source. The HTA125A shall consume 45 watts or less at idle and 260 watts at full rated power. The HTA250A shall consume 60 watts or less at idle and 520 watts at full rated output. The amplifiers shall have thermostatic control to prevent operation at excessive ambient temperatures. The amplifier also shall include electronic overload limiting, short-circuit protection and a 4-amp Slo-Blo fuse on the HTA125A or a 7-amp Slo-Blo fuse on the HTA250A.

The amplifiers shall have a standard EIA 19-inch front panel suitable for rack mounting. The amplifiers shall be 19" wide, 5-1/4" high and 11" deep, finished in black and shall weigh 36 lb. (HTA125A) or 50 lb. (HTA250A).