

# Power Amplifier



## Models HTA125A

### 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

### Description

The Bogen HTA Professional Series Power Amplifiers are high-performance units employing state-of-the-art Power MOSFET technology. The 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 afford higher efficiency, reduced heat, simpler overall design, reduced size and weight.

The Model HTA125A supplies 125 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 an optional transformer Model TL100. Residual hum and noise is at least 90dB below rated output and the output regulation is better than 2dB from no load to full load.

The HTA125A can drive a variety of load imped-

ances: outputs include 4 ohms, 8 ohms, 25VCT and 70 volts. It is capable of safely driving any recommended load continuously. The HTA125A is thermally protected to prevent damage due to excessively high temperatures; however, the amplifier will deliver the full rated power output continuously, even at +131°F (+55°C). Additional failure protection devices include electronic overload limiting, short circuit protection, and a Slo-Blo fuse.

Electronic shutdown circuitry is automatically activated if an overload or short circuit 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 the 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

<b>Rated Output Power:</b>	125 WRMS
<b>Total Harmonic Distortion:</b>	Less than 0.5%, 20 to 20,000 Hz at full rated output
<b>Frequency Response:</b>	±1dB, 20 to 20,000 Hz at full rated output
<b>Input Sensitivity:</b>	Hi-Z, 500mV; Lo-Z balanced, with optional transformer, 100mV
<b>Hum and Noise:</b>	90dB below rated output
<b>Output Loads:</b>	4 ohms, 8 ohms, 25VCT (5 ohms), 70V (40 ohms)
<b>Output Regulation:</b>	Better than 2dB from no load to full load
<b>Input Impedances:</b>	Hi-Z, 50,000 ohms unbalanced; Lo-Z, 600 ohms, balanced or unbalanced, and 1:1 bridging with optional plug-in transformers
<b>Low-Cut Filter:</b>	-10dB @ 100 Hz
<b>Controls &amp; Indicators:</b>	<i>Front Panel</i> — Illuminated on/off power switch and overload shutdown LED <i>Rear Panel</i> — Input level control, Slo-Blo fuse <i>Internal</i> — Low-Cut filter switch
<b>Power Requirements:</b>	120V AC, 60 Hz, 260 watts @ Full Rated Output (Idle 45W)
<b>Overload Protection:</b>	Electronic overload protection Electrical — 4A Slo-Blo Fuse Thermal — 220°F — 105°C Thermostat
<b>Operating Temperature Range:</b>	-4°F (-20°C) to +131°F (+55°C) at rated output
<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>Weight:</b>	36 lbs. (16.3 kg)
<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 Model HTA125A or approved equal solid-state amplifier incorporating state-of-the-art MOSFET power transistors. Amplifiers utilizing conventional or bipolar power transistors shall not be acceptable.

The amplifier shall deliver an audio output of 125 watts (RMS continuous). The total harmonic distortion shall be less than 0.5% at the 125-watt rating over the frequency range of 20 to 20,000 Hz. The rated output shall be obtained with an input signal that is not greater than 500 millivolts (RMS). Hum and noise shall be at least 90dB below rated output. The frequency response, when measured at full rated output, shall be flat within ±1dB, from 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-ohm balanced/unbalanced low impedance, or line bridging with an optional accessory plug-in transformer. Overall gain shall be adjustable by

means of a single level control located on the rear panel. An internal low-cut filter (-10dB @ 100 Hz) also shall be provided. The front of the amplifier shall contain an illuminated on/off power switch. The amplifier shall incorporate electronic shutdown circuitry that shall activate whenever an overload or short circuit 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 120V AC, 60 Hz source and shall consume 45 watts or less at idle and 260 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 4 amp Slo-Blo fuse.

The amplifier shall have a standard EIA 19-inch front panel suitable for rack mounting. The amplifier shall be 19" W x 5-1/4" H x 11" D, finished in black and shall weigh 36 lbs.

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