



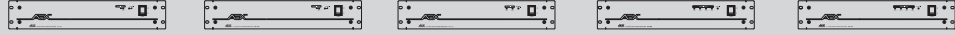
The PB 1000 Series Audio Power Amplifiers are completely engineered with the latest advancement in audio technology. Vast improvements were made to the sonic performance and operation stability with current and thermal protection circuitry. The power amplifiers provide wide frequency response, low THD level and high S/N ratio. The PB 1000 Series is also incorporated with toroidal transformer technology which reduces electromagnetic noise and improves power efficiency.

The audio power amplifiers feature 2 inputs; Program Input and Priority Input. The Priority Input which is used during emergency paging will automatically override the Program Input, usually used for announcements and background music. There are 5 models in the PB 1000 Series Audio Power Amplifier; PB 1406 (4 x 60W), PB 1412 (4 x 120W), PB 1024 (1 x 240W), PB 1224 (2 x 240W), PB 1048 (1 x 480W). All models can operate on both AC mains power or a backup 24 Vdc power source, providing continuous uninterruptible operation even during a power failure.

- Rated power output : PB 1406 (4 x 60W), PB 1412 (4 x 120W), PB 1024 (1 x 240W), PB 1224 (2 x 240W), PB 1048 (1 x 480W).
- Low THD+N (less than 1%).
- Wide frequency response from 40 Hz to 18 kHz.
- Improved audio circuitry and power supply design for better sonic performance and power efficiency, creating less noise and heat generation.
- Robust design for uninterrupted operation, incorporating an improved circuit overload with load isolation and overheat protection.
- Friction-less Maglev technology fan cooled for long lifespan, low acoustic noise level and high temperature endurance.
- 0 dB balanced line input for Program and Priority Inputs with muting of Program Input when Priority Input is activated.
- Built-in relay for the purpose of overriding audio attenuator during emergency.
- Operates on both 240 Vac, 50 Hz mains or 24 Vdc battery supply.



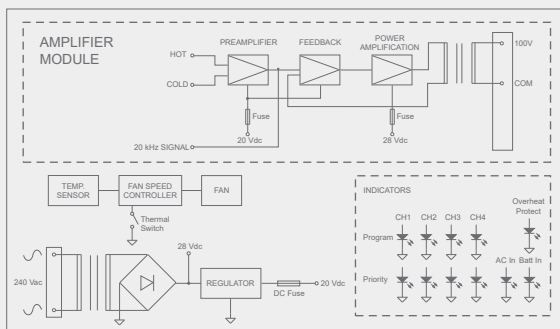
**PB 1024**  
**PB 1048**  
**PB 1224**  
**PB 1406**  
**PB 1412**



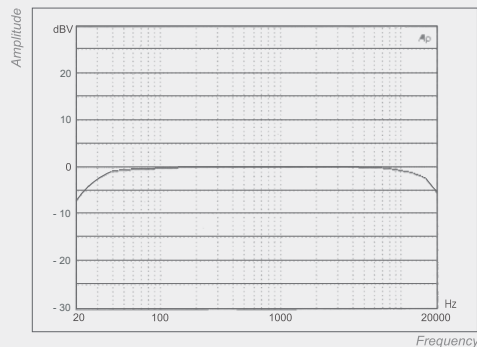
### Technical Specifications

	PB 1024	PB 1048	PB 1224	PB 1406	PB 1412
Rated Output Power	1 x 240 W rms	1 x 480 W rms	2 x 240 W rms	4 x 60 W rms	4 x 120 W rms
Frequency Response at rated output	40 Hz to 18 kHz				
Total Harmonic Distortion	less than 1% (at rated output, f=1 kHz)				
Signal-to-Noise Ratio	Better than 90 dB (IEC A)				
Input Connections	1 Program and 1 Priority Terminal (RJ 45)				
Input Level	0 dB				
Input Impedance	10 kΩ (balanced)				
Load Impedance	42 Ω	21 Ω	42 Ω	167 Ω	84 Ω
Power Consumption	320 VA	640 VA	640 VA	320 VA	640 VA
Power Requirement	220~240 Vac mains 50/60 Hz or 24 Vdc				
Dimension (W x H x D)	483 x 87 x 270 mm	483 x 87 x 395 mm	483 x 87 x 395 mm	483 x 87 x 470 mm	483 x 87 x 470 mm
Weight	12.2 kg	20.0 kg	21.2 kg	17.6 kg	23.2 kg
Operation Temperature	-10°C to 40°C				
Storage Temperature	-40°C to 70°C				
Relative Humidity	< 95%				

### Block Diagram



### Frequency Response



### Engineers' Specifications

The audio power amplifier shall have 2 balanced line level inputs (Program & Priority) with adjustable gain. The total harmonic distortion at rated output shall be less than 1% at 1 kHz, and frequency response shall be 40 to 18 kHz. The unit shall consist of a Class AB transistor drive circuit with current overloading and thermal overloading cut off. The unit shall be fan cooled with a friction-less fan design and integrated with output transformer(s) designed for 100V line distributed speaker system. It shall deliver amplification power for 1 x 240 W

rms (PB 1024) / 1 x 480 W rms (PB 1048) / 2 x 240 W rms (PB 1224) / 4 x 60 W rms (PB 1406) and 4 x 120W rms (PB 1412). The unit's power supply shall feature a toroidal power transformer for optimum efficiency and operate off mains supply or 24 Vdc battery backup supply. The unit shall be 19" rack mountable with dimensions not exceeding 483 x 87 x 270 mm (PB 1024) / 395 mm (PB 1048, PB 1224) / 470 (PB 1406, PB 1412) and weigh not exceeding 13 kg (PB 1024) / 21 kg (PB 1048) / 22 kg (PB 1224, PB 1406) / 24 kg (PB 1412).

