TECHNICAL DATA

PowerShare PS404D adaptable power amplifier

PROFESSIONAL



Product Description

Put the power where you need it. PowerShare amplifiers deliver outstanding audio performance and reliability with patented technologies inherited from the field-proven PowerMatch line — now with added flexibility. Using innovative technology, the PowerShare PS404D shares power across all output channels and delivers 400 watts for installed applications. This means you can distribute the total 400 watts asymmetrically across all outputs or use any individual output to deliver full power. And with support for both low- and high-impedance loads up to 100V, it's easy to adapt PowerShare amplifiers to a wide range of applications. ControlSpace Designer software allows for Ethernet-based configuration and quick setup of external control options. With onboard Dante® audio networking, you have the flexibility to place PowerShare amplifiers away from source locations and closer to loudspeakers. This unique set of features and technologies makes PowerShare one of the most versatile, high-performance amplifiers available today.

Key Features

PowerShare Technology — Distribute the total 400 watts asymmetrically across all outputs using patented PowerShare technology, which allows each output to deliver full power. Instead of selecting amplifier power based on the needs of the largest zone, you now have the freedom to use total amplifier power in any application. This enables more flexibility during the initial design, or later on-site when making unplanned changes that take advantage of surplus power.

Load-independent Outputs — Configure any channel for low-impedance (4-8 Ω) or high-impedance (70/100V) applications without bridging or using jumpers.

Integrated Dante Audio Networking — Support four audio input channels from a Dante network and mix onboard analog inputs with digital Dante inputs as selected in ControlSpace Designer software.

Dual Feedback Loop System — Improve performance and reliability. The Dual Feedback Loop system, inherited from the field-proven Bose PowerMatch amplifier line, allows for continuous monitoring and control of both the current and voltage delivered to each output load. This combination provides improved linearity and lower distortion while protecting loudspeakers.

ControlSpace Networking — Configure using ControlSpace Designer software for inclusion into larger networked audio systems where end-user controllers and scheduling events can control amplifier parameters.

Integrated Loudspeaker Processing — Adjust various parameters using ControlSpace Designer software: nine-band PEQs, matrix mixing, crossover, limiters, delay, mute/output polarity, and more.

Auto-standby Mode — Save power — PowerShare amplifiers can be configured to automatically enter standby mode when the audio signal falls below a set threshold, then wake when audio returns.

Applications

Designed for a wide range of applications, including:

- Performing arts venues
- Places of worship
- Conference centers
- Retail stores
- Restaurants and bars
- Hospitality venues

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Technical Specifications

POWER RATING	
Amplifier Power	4 x 100 W (THD+N < 0.04%, 1 kHz, 4-8 Ω, 70/100V)
Maximum Power per Channel	400 W @ 4-8 Ω, 70/100V
Gain (Low-Z mode)	30.2 dB
Gain (70V mode)	35.0 dB
Gain (100V mode)	38.0 dB

AUDIO PERFORMANCE	
Frequency Response	4-8 Ω: 20 Hz – 20 kHz (+/- 0.5 dB @ 1 W); 70/100V: Same as 4-8 Ω with 50 Hz high-pass filter
Channel Separation (Crosstalk)	> 85 dB @ 1 kHz, > 65 dB @ 20 kHz
Signal to Noise Ratio	100 dB (at rated power, A-weighted)

AUDIO INPUTS	ANALOG	DANTE
Input Channels	4 balanced	4 digital
Connectors	12-pin Euroblock	RJ-45 (primary)
Input Impedance	20 kΩ	
Maximum Input Level	20 dBu (at 12 dBu sensitivity setting)	
Sensitivity	4 / 12 dBu (low / high sensitivity)	

AUDIO OUTPUTS	ANALOG
Outputs	4
Connectors	8-pin inverted Euroblock

INTEGRATED DSP	
A/D and D/A Converters	24-bit / 48 kHz
Processing Functions	Matrix mixer, loudspeaker EQ, real-time 9-band PEQ, Vpeak/Vrms limiters, delay, band pass, mute/output polarity inversion
Audio Latency	< 1 ms (Analog input to analog loudspeaker output)

INDICATORS AND CONTROLS	
Power LED	Solid green: Power is on. Blinking green: Unit is in standby mode. Solid amber: Thermal fault. Solid red: Supply fault.
Input Signal LED	Green: Signal present. Amber: Input is near clipping. Red: Input is clipping. Solid red: Indicates a fault.
Output Limit LED	Amber: Amplifier limiting an output. Blinking red: Amplifier muted. Solid red: Indicates a fault.
Controls, Front Panel	Power On/Off
Controls, Rear Panel	Output attenuators

ELECTRICAL		
Mains Voltage	100 VAC – 240 VAC (±10%, 50/60 Hz)	
AC Power Consumption	120 VAC: 14 W (Standby), 500 W (Max)	230 VAC: 14 W (Standby), 500 W (Max)
Mains Connector	Standard IEC (C14)	
Maximum Inrush Current	14.14 A (230 VAC / 50 Hz), 8.04 A (120 VAC / 60 Hz)	
Protections	High temperature, output short, extra high frequency (EHF), excessively low or high AC line voltage	

PHYSICAL	
Dimensions (H x W x D)	44 mm x 483 mm x 414 mm (1.7 in x 19.0 in x 16.3 in)
Shipping Weight	7.8 kg (17.2 lb)
Net Weight	6.4 kg (14.1 lb)
Cooling System	Microprocessor controlled, variable speed fans, left to right air flow

GENERAL	
Inputs (Control)	Mute input control

For additional specifications and application information, please visit PRO.BOSE.COM. Specifications subject to change without notice.

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1. **POWER SWITCH** – ON/OFF AC power.
2. **POWER LED**
   - Solid green LED indicates the unit is ON.
   - Blinking green LED indicates the unit is in low-power mode.
   - Solid amber LED indicates an over-temperature fault.
   - Solid red LED indicates a power supply fault.
3. **INPUT 1, 2, 3, 4 SIGNAL LED** – Each LED operates independently.
   - Green LED indicates signal is present.
   - Amber LED indicates signal is near clipping.
   - Red LED indicates clipping.
   - LEDs will display solid red if a power supply fault is detected.
4. **OUTPUT 1, 2, 3, 4 LIMIT LED** – Each LED operates independently.
   - LED is amber when the amplifier is limiting the corresponding output due to exceeding the specified loudspeaker Vpeak or Vrms limits.
   - If the sum of the amplifier outputs exceeds 400 watts, then the amplifier will limit all outputs equally, and all LEDs will show limiting simultaneously.
   - LEDs will display solid red if an amplifier, power supply, or EHF fault is detected.
   - LEDs will blink red when all outputs are muted.



1. **NETWORK PORTS** – Supports both ControlSpace network control and Dante digital audio networking. Two port modes support switched and isolated operation as listed on the back panel.
2. **NETWORK SPEED INDICATOR LED** – Yellow (1 Gb), green (100 Mb).
3. **LINK/ACT INDICATOR LED** – Solid green (link established), flashing green (data activity).
4. **ANALOG INPUTS** – Balanced 12-pin Euroblock line-level input connector.
5. **MUTE** – Contact closure connection where a short across the mute connector will mute all outputs. Mute polarity can be inverted with the ControlSpace Designer software.
6. **RESET BUTTON** – Sets all system parameters back to factory default.
7. **OUTPUT ATTENUATION 1, 2, 3, 4** – Output attenuators for each output. Turn the controls clockwise to decrease attenuation and counter-clockwise to increase attenuation.
8. **OUTPUT** – Inverted eight-pin Euroblock connector for loudspeaker connections. Each channel can deliver up to 400 watts regardless of load into 4 Ω, 8 Ω, 70V, or 100V. Outputs are not bridgeable.
9. **AC INLET** – Removing the AC cord when the amplifier is on is equivalent to powering down using the front panel power switch, and is an acceptable power-down method.

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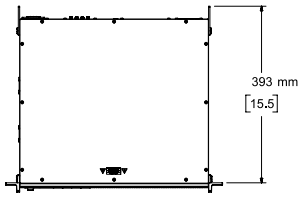
AC Current Draw and Thermal Dissipation Information

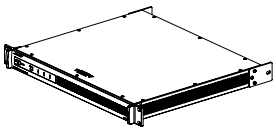
Amplifier rated channel power is 400 W, distributed across four outputs for the PS404D.

PS404D AC Current Draw and Thermal Dissipation (120 VAC, 60 Hz)						
Test Signal & Power Level	**Load Configuration (All channels driven)**	**Total Audio Output, W**	**Line Current, A**	**Thermal Dissipation, Max**		
				Watts	**BTU/hr**	**kCal/hr**
Power On, Idling		0	0.63	76	258	65
1/8th Rated Power IEC268 Bandlimited Pink Noise	4-8 Ω	50	1.25	100	341	86
1/8th Rated Power IEC268 Bandlimited Pink Noise	70/100V	50	1.20	94	321	81
1/3rd Rated Power IEC268 Bandlimited Pink Noise	4-8 Ω	133	2.10	119	406	102
1/3rd Rated Power IEC268 Bandlimited Pink Noise	70/100V	133	2.00	107	365	92
PS404D AC Current Draw and Thermal Dissipation (230 VAC, 50 Hz)						
Test Signal & Power Level	**Load Configuration (All channels driven)**	**Total Audio Output, W**	**Line Current, A**	**Thermal Dissipation, Max**		
				Watts	**BTU/hr.**	**kCal/hr.**
Power On, Idling		0	0.33	76	259	65
1/8th Rated Power IEC268 Bandlimited Pink Noise	4-8 Ω	50	0.66	102	347	88
1/8th Rated Power IEC268 Bandlimited Pink Noise	70/100V	50	0.60	88	300	76
1/3rd Rated Power IEC268 Bandlimited Pink Noise	4-8 Ω	133	1.10	120	409	103
1/3rd Rated Power IEC268 Bandlimited Pink Noise	70/100V	133	1.00	97	331	83

Mechanical Diagrams

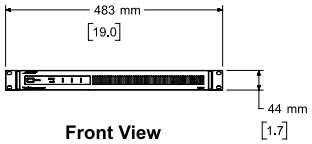


Top View

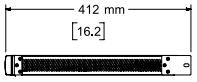




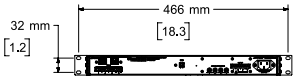
Left View



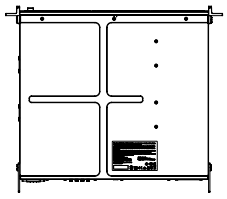
Front View



Right View
DIMENSIONS APPLY TO BOTH SIDES



Rear View



Bottom View

NOTES:
1. DIMENSIONS ARE IN MILLIMETERS OVER INCHES

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Safety and Regulatory Compliance

The PowerShare PS404D adaptable power amplifier complies with CE requirements and is UL listed according to UL60065 (8th edition) and CAN/CSA C22.2 No. 60065-16; CB approved, according to IEC60065 (8th edition), including group and national differences. This model also complies with FCC Part 15B Class A, ICES-003 Class A, EN55032:2012, EN55103-2:2009, CISPR 13: Ed. 5.0 (2009-06), and CISPR-32 requirements. The product must be used indoors. It is neither designed nor tested for use outdoors, in recreational vehicles, or on boats.

Product Codes

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US-120V	813375-1310
EU-230V	813375-2310
JP-100V	813375-3310
UK-230V	813375-4310
AU-240V	813375-5310

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