

# PowerShare PS602P adaptable power amplifier

**BOSE**



TECHNICAL DATA SHEET

## Product Description

Bose PowerShare PS602P adaptable power amplifier delivers 600 watts for portable applications. Through patented technology, total amplifier power is shared across all output channels, allowing installers the freedom to utilize power where needed. With support for both low- and high-impedance loads up to 100V, PowerShare amplifiers adapt to a wide range of applications. Onboard configurable loudspeaker processing eliminates the need for an additional signal processor in many installations, while outstanding audio performance and reliability are assured with patented technologies inherited from the field-proven PowerMatch® line. This unique set of features and technologies makes PowerShare one of the most versatile high-performance amplifiers available.

## Key Features

- **PowerShare Technology** – Patented PowerShare technology allows the total 600 watts of power to be shared asymmetrically across all outputs, as each output is capable of delivering full power. Instead of selecting amplifier power based on the needs of the largest zone, installers now have the freedom to use total amplifier power in the 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** – Each channel can be configured for low-impedance (4-8  $\Omega$ ) or high-impedance (70/100V) applications without bridging, use of jumpers, or software settings.
- **DFL™ System** – The Dual Feedback Loop system, inherited from the field-proven Bose PowerMatch® amplifier line, improves performance and reliability through 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.
- **Integrated Loudspeaker Processing with Optional PowerShare Editor Configuration** – For applications requiring additional signal processing the PowerShare Editor Software offers real-time selection and control of Bose loudspeaker EQs, 9-band PEQs, standard mixing, crossover, delay, and mute/output polarity through a USB connection. For basic setups without a PC, rear-panel settings allow installers to recall Bose loudspeaker equalization and protection per output channel. These features eliminate the need for an external signal processor in many applications.

- **Auto-Standby** – Designed to save power consumption when not in use. 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
- Houses of worship
- Conference centers
- Retail stores
- Restaurants and bars
- Hospitality venues

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## Technical Specifications

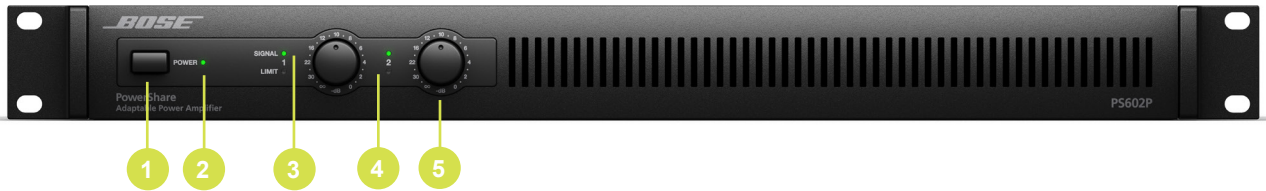
<b>Power Rating</b>	
Amplifier Power	2 x 300 W (THD+N < 0.04%, 1 kHz, 4-8 Ω, 70/100V)
Maximum Power per Channel	600 W @ 4-8 Ω, 70/100V
Gain (Low-Z mode)	44 dB, RCA (unbalanced) inputs; 32 dB, XLR/TRS (balanced) inputs
Gain (70V mode)	47 dB, RCA (unbalanced) inputs; 35 dB, XLR/TRS (balanced) inputs
Gain (100V mode)	50 dB, RCA (unbalanced) inputs; 38 dB, XLR/TRS (balanced) inputs
<b>Audio Performance</b>	
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)
<b>Audio Inputs</b>	
Input Channels	2 unbalanced, 2 balanced
Connectors	Stereo RCA, XLR/TRS
Input Impedance	10 kΩ (RCA), 20 kΩ (XLR/TRS)
Maximum Input Level	20 dBu (at 12 dBu sensitivity setting)
Sensitivity	-10 / -2 dBV, RCA inputs; 4 / 12 dBu, XLR/TRS inputs (low / high sensitivity)
<b>Audio Outputs</b>	
Outputs	2
Connectors	NL4 & binding posts
<b>Integrated DSP</b>	
A/D and D/A Converters	24-bit / 48 kHz
Processing Functions	Standard mixer, loudspeaker EQ, 9-band PEQ, Vpeak/Vrms limiters, delay, band pass, mute/output polarity inversion
Loudspeaker Presets	Flat, DS16, DS40, DS100, FS3B, 402, 802, MA12EX, RMU105 and RMU108
Audio Latency	1 ms (any input to speaker output)
<b>Indicators and Controls</b>	
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, Output Level Control
Controls, Rear Panel	Amplifier mode DIP switches, loudspeaker EQ dials
<b>Electrical</b>	
Mains Voltage	100 VAC – 240 VAC (±10%, 50/60 Hz)
AC Power Consumption	120 VAC: 79 W (Standby), 124 W (Max)   230 VAC: 88 W (Standby), 184 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
<b>Physical</b>	
Dimensions (H x W x D)	44 mm x 483 mm x 414 mm (1.7" x 19.0" x 16.3")
Shipping Weight	6.9 kg (15.3 lb)
Net Weight	5.5 kg (12.2 lb)
Cooling System	Microprocessor controlled, variable speed fans, left to right air flow
<b>General</b>	
Inputs (Control)	USB input for configuring the amplifier with PowerShare Editor software. Mute input control.

For additional specifications and application information, please visit [pro.bose.com](http://pro.bose.com). Specifications subject to change without notice

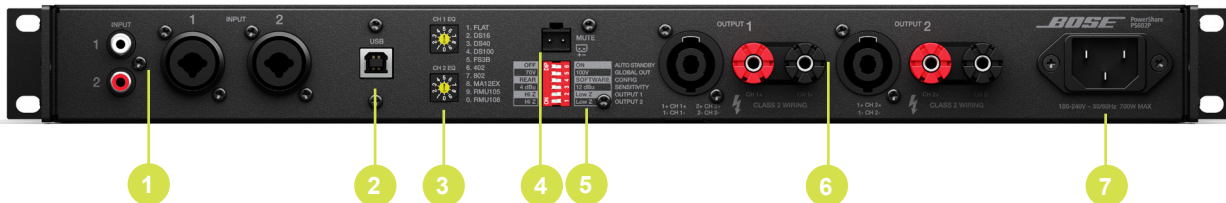
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- 1 **POWER switch** – ON/OFF AC power.
- 2 **Power LED**
  - Solid green LED indicates the unit is ON.
  - Blinking green LED indicates the unit is in low-power mode.
  - Solid amber LED indicates an over-temperature fault.
  - Solid red LED indicates a power supply fault.
- 3 **INPUT 1 & 2 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 LIMIT LED** – Each LED operates independently.
  - LED is amber when the amplifier is limiting the corresponding output due to exceeding the specified loudspeaker  $V_{peak}$  or  $V_{rms}$  limits.
  - If the sum of the amplifier outputs exceeds 600 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.
- 5 **OUTPUT 1 & 2 LEVEL Control** – Output attenuator for each output. Turn the controls clockwise to decrease attenuation and counter-clockwise to increase attenuation.



- 1 **INPUT 1 & 2** – Balanced XLR/TRS and unbalanced RCA line-level input connectors.
- 2 **USB** – Connect the amplifier to a PC using a USB connection. This allows you to use the PC-based PowerShare Editor software to configure the advanced features of the amplifier.
- 3 **CHANNEL 1 & 2 EQ** – Each dial provides loudspeaker equalization presets per channel: DS 16, DS 40, DS 100, FS3B, 402, 802, MA12EX, RMU105, and RMU108. Use the Flat setting for FS3 Systems.
- 4 **MUTE** – Contact closure connection where a short across the mute connector will mute all outputs. Mute polarity can be inverted with the PowerShare Editor software.
- 5 **DIP SWITCHES** – A bank of switches used to set amplifier configuration.
- 6 **OUTPUT 1 & 2** – NL4 and binding post connectors for loudspeaker connections. Each channel can deliver up to 600 watts regardless of load into 4  $\Omega$ , 8  $\Omega$ , 70V, or 100V. Outputs are not bridgeable.
- 7 **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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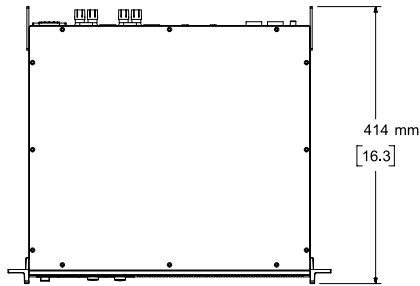


## AC Current Draw and Thermal Dissipation Information

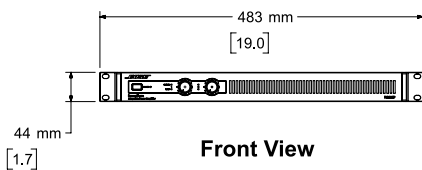
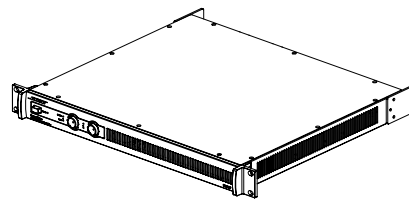
Amplifier rated channel power is 600 W, distributed across two outputs for the PS602P.

PS602P 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	0.7	79	270	68
1/8th Rated Power IEC286 Bandlimited Pink Noise	4-8 Ω	75	1.5	110	374	94
1/8th Rated Power IEC286 Bandlimited Pink Noise	70/100V	75	1.4	91	312	79
1/3rd Rated Power IEC286 Bandlimited Pink Noise	4-8 Ω	200	2.7	124	433	107
1/3rd Rated Power IEC286 Bandlimited Pink Noise	70/100V	200	2.7	122	415	105
PS602P 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	0.4	88	301	76
1/8th Rated Power IEC286 Bandlimited Pink Noise	4-8 Ω	75	0.8	106	361	91
1/8th Rated Power IEC286 Bandlimited Pink Noise	70/100V	75	0.8	99	339	85
1/3rd Rated Power IEC286 Bandlimited Pink Noise	4-8 Ω	200	1.4	123	420	106
1/3rd Rated Power IEC286 Bandlimited Pink Noise	70/100V	200	1.7	184	628	158

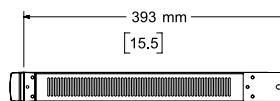
## Mechanical Diagrams



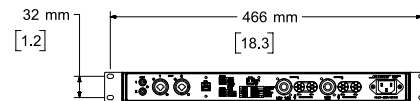
Top View



Front View



Right View



Rear View

DIMENSIONS APPLY TO BOTH SIDES

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## Safety and Regulatory Compliance

The PowerShare PS602P adaptable power amplifier complies with CE requirements and is UL listed according to UL60065 (7th edition) and CAN/CSA C22.2 No. 60065-03; CB approved, according to IEC60065 (7th edition), including group and national differences. This model also complies with FCC Part 15B Class A (10-1-2014), EN55103-1:2009 +A1:2012, EN55103-2:2009, and CISPR 13: Ed. 5.0 (2009-06) requirements. The product must be used indoors. It is neither designed nor tested for use outdoors, in recreational vehicles, or on boats.

## Product Codes

PowerShare PS602P adaptable power amplifier

US-120V	743376-1410
EU-230V	743376-2410
JP-100V	743376-3410
UK-230V	743376-4410
AU-240V	743376-5410

## Accessories

PowerShare Editor software