

PowerShare PS602

adaptable power amplifier

BOSE

PROFESSIONAL



Product Description

Bose PowerShare PS602 adaptable power amplifier delivers 600 watts for fixed-install 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 and direct access to zone controllers eliminate 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 Ω) 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, matrix 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.
- **ControlCenter Zone Controller Accessories** - Bose ControlCenter CC-1 zone controllers can be directly attached for remote adjustment of amplifier outputs, further extending stand-alone amplifier 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

POWER RATING	
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, Euroblock (balanced) inputs
Gain (70V mode)	47 dB, RCA (unbalanced) inputs; 35 dB, Euroblock (balanced) inputs
Gain (100V mode)	50 dB, RCA (unbalanced) inputs; 38 dB, Euroblock (balanced) inputs

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	
Input Channels	2 unbalanced, 2 balanced
Connectors	Stereo RCA, 3-pin Euroblock
Input Impedance	10 kΩ (RCA), 20 kΩ (Euroblock)
Maximum Input Level	20 dBu (at 12 dBu sensitivity setting)
Sensitivity	-10 / -2 dBV, RCA inputs; 4 / 12 dBu, Euroblock inputs (low / high sensitivity)

AUDIO OUTPUTS	
Outputs	2
Connectors	2-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
Loudspeaker Presets	Flat, DS16, DS40, DS100, FS3B, 402, 802, MA12EX, RMU105 and RMU108
Audio Latency	< 1 ms (any input to speaker 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	Amplifier mode DIP switches, loudspeaker EQ dials, output attenuators

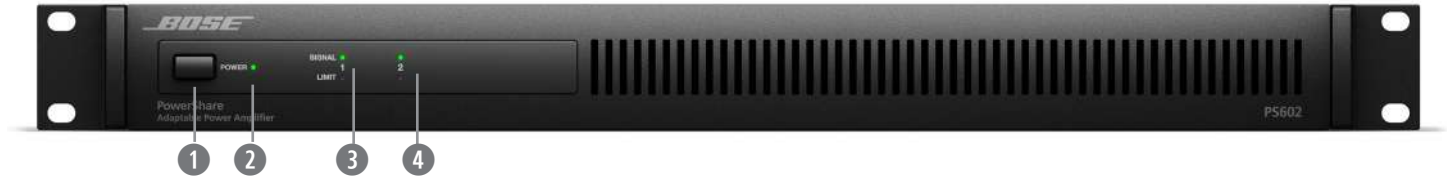
ELECTRICAL	
Mains Voltage	100 VAC - 240 VAC (±10%, 50/60 Hz)
AC Power Consumption	120 VAC: 14 W (Standby), 700 W (Max) 230 VAC: 14 W (Standby), 700 W (Max)
Mains Connector	Standard IEC (C14)
Maximum Inrush Current	14.14 A (230 VAC / 50 Hz), 8.04 A (120 VAC / 60 Hz)
Protections	High temperature, output 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" 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

GENERAL	
Inputs (Control)	RJ-45 remote input for volume control using the CC-1 ControlCenter zone controllers, or for connection to the CV41. USB input for configuring the amplifier with PowerShare Editor software. 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 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.



- 1 INPUT 1 & 2** - Balanced 3-pin Euroblock 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 CONTROLCENTER** - RJ-45 input connector for Bose CC-1 ControlCenter zone controllers or CV41 4-to-1 converter only.
- 5 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.
- 6 DIP SWITCHES** - A bank of switches used to set amplifier configuration.
- 7 OUTPUT ATTENUATION 1 & 2** - Output attenuators for each output. Turn the controls clockwise to decrease attenuation and counter-clockwise to increase attenuation.
- 8 OUTPUT** - Two inverted 2-pin Euroblock connectors for loudspeaker connections. Each channel can deliver up to 600 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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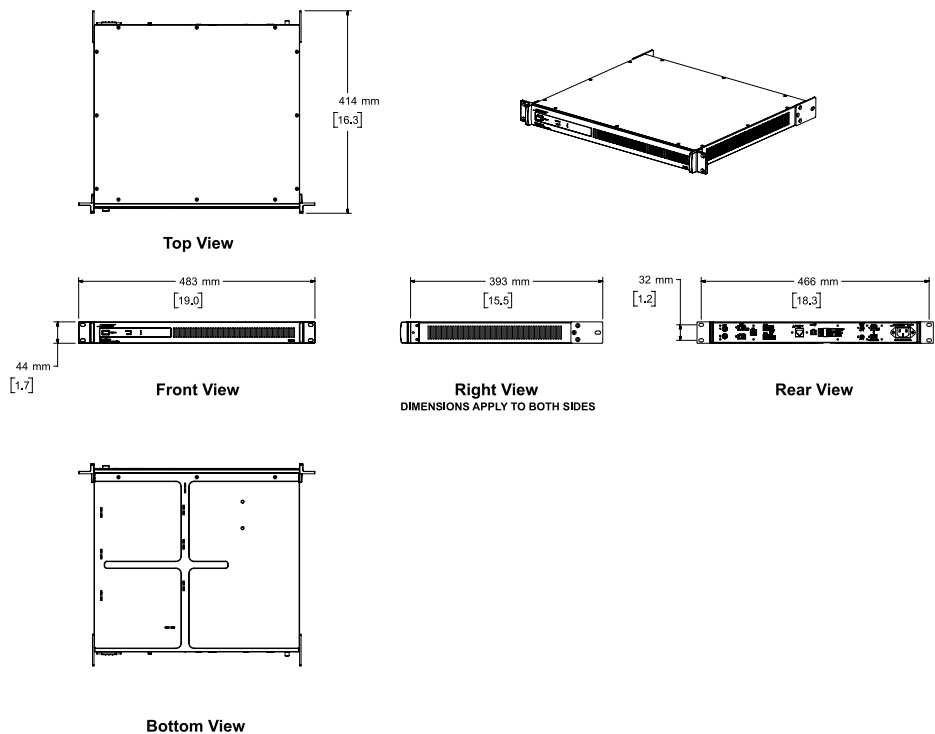
AC Current Draw and Thermal Dissipation Information

Amplifier rated channel power is 600 W, distributed across both outputs for the PS602.

PS602 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	0.37	44	151	38
1/8th Rated Power IEC268 Bandlimited Pink Noise	4-8 Ω	75	1.36	88	301	76
1/8th Rated Power IEC268 Bandlimited Pink Noise	70/100V	75	1.20	69	235	59
1/3rd Rated Power IEC268 Bandlimited Pink Noise	4-8 Ω	200	2.70	124	423	107
1/3rd Rated Power IEC268 Bandlimited Pink Noise	70/100V	200	2.42	90	308	78

PS602 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	0.22	51	173	44
1/8th Rated Power IEC268 Bandlimited Pink Noise	4-8 Ω	75	0.67	79	270	68
1/8th Rated Power IEC268 Bandlimited Pink Noise	70/100V	75	0.59	61	270	52
1/3rd Rated Power IEC268 Bandlimited Pink Noise	4-8 Ω	200	1.50	145	495	125
1/3rd Rated Power IEC268 Bandlimited Pink Noise	70/100V	200	1.30	99	338	85

Mechanical Diagrams





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Safety and Regulatory Compliance

The PowerShare PS602 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, 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	743375-1410
EU-230V	743375-2410
JP-100V	743375-3410
UK-230V	743375-4410
AU-240V	743375-5410

Accessories

ControlCenter CC-1 zone controller

US-Black	768932-0110
US-White	768932-0210
EU-Black	768932-2110
EU-White	768932-2210
JP-Black	768928-3110
JP-White	768928-3210

ControlCenter CV41

4-to-1 converter	768928-0010
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PowerShare Editor software