



BOSE P2600A PowerSpace Versatile Power Amplifiers Instruction Manual

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BOSE P2600A PowerSpace Versatile Power Amplifiers



Please read and keep all safety and use instructions

This product is intended for installation by professional installers only! This document is intended to provide professional installers with basic installation and safety guidelines for this product in typical fixed-installation systems. Please read this document and all safety warnings before attempting installation.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Safety Symbols

These symbols on the product mean the following:

- This symbol on the product means there are important operating and maintenance instructions in this guide.
- This symbol on the product means there is uninsulated, dangerous voltage within the product enclosure that may present a risk of electrical shock.

WARNINGS/CAUTIONS

- All Bose products must be installed in accordance with local, state, federal and industry regulations. It is the installer's responsibility to ensure installation of the loudspeakers and mounting system is performed in accordance with all applicable codes, including local building codes and regulations. Consult the local authority having jurisdiction before installing this product.
- Do not mount the product in locations where condensation may occur.
- This product is not intended for installation or use in indoor water facility areas (including, without limitation, indoor pools, indoor water parks, hot tub rooms, saunas, steam rooms and indoor skating rinks).
- Do not expose this product to dripping or splashing, and do not place objects filled with liquids, such as vases, on or near the product.
- To reduce the risk of fire or electrical shock, do not expose this product to rain, liquids or moisture.
- Keep the product away from fire and heat sources. Do not place naked flame sources, such as lighted candles, on or near the product.
- Do not place or install the bracket or product near any heat sources, such as fireplaces, radiators, heat registers or other apparatus (including amplifiers) that produce heat.
- Due to ventilation requirements, do not place the product in a confined space such as in a wall cavity or in an enclosed cabinet.
- Do not make unauthorized alterations to this product.
- Do not use a power inverter with this product.
- Do not use in vehicles or boats.
- Provide an earth connection or ensure the socket outlet incorporates a protective earthing connection before connecting the plug to the mains socket outlet.
- Dansk: Apparatets stikprop skal tilsluttes en stikkontakt med jord, som giver forbindelse til stikproppens jord.
- Suomi: Laite on liitettävä suojamaadoituskoskettimilla varustettuun pistorasiaan.
- Norsk: Apparatet må tilkoples jordet stikkontakt.
- Svenska: Apparatens skall anslutas till jordat uttag.
- Where the mains plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.
- Only use the mounting hardware recommended by the rack manufacturer.
- Avoid touching uninsulated wiring or wiring terminals. This product's audio wiring terminals carry voltage that can result in discomfort upon contact.

Regulatory Information

CAN ICES-3 (A)/NMB-3(A)

This device complies with part 15 of the FCC Rules and with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense. Changes or modifications not expressly approved by Bose Corporation could void the user's authority to operate this equipment.

WARNING: This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures. Shielded cables are required to maintain regulatory compliance. This product meets all EN55103-2 immunity requirements for E2 electromagnetic environment.

Initial turn on inrush current:

- P21000A: 13.7 A (230 VAC 50 Hz), 7.6 A (120 VAC 50 Hz)
- P4300A/P2600A: 14.4 A (230 VAC 50 Hz), 7.6 A (120 VAC 50 Hz)

Inrush current after AC mains interruption of 5 seconds:

- P21000A: 8.2 A (230 VAC 50 Hz), 5.4 A (120 VAC 50 Hz)
- P4300A/P2600A: 9.6 A (230 VAC 50 HZ), 6.1 A (120 VAC 50 Hz)

This product conforms to all applicable EU directive requirements. The complete declaration of conformity can be found at: www.Bose.com/compliance This product conforms to all applicable Electromagnetic Compatibility Regulations 2016 and all other applicable UK regulations. The complete declaration of conformity can be found at: www.Bose.com/compliance This symbol means the product must not be discarded as household waste, and should be delivered to an appropriate collection facility for recycling. Proper disposal and recycling helps protect natural resources, human health and the environment. For more information on disposal and recycling of this product, contact your local municipality, disposal service, or the shop where you bought this product.

China Restriction of Hazardous Substances Table

Names and Contents of Toxic or Hazardous Substances or Elements						
	Toxic or Hazardous Substances and Elements					
Part Name	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent (CR(VI))	Polybrominated Biphenyl (PBB)	Polybrominated diphenylether (PBDE)
PCBs	X	O	O	O	O	O
Metal Parts	X	O	O	O	O	O
Plastic Parts	O	O	O	O	O	O
Speakers	X	O	O	O	O	O
Cables	X	O	O	O	O	O
This table is prepared in accordance with the provisions of SJ/T 11364. O: Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement of GB/T 26572.						
X: Indicates that this toxic or hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement of GB/T 26572.						

Taiwan Restriction of Hazardous Substances Table

Equipment name: PowerSpace Amplifiers P2600A, P21000A, and P4300A, Type designation: 803286, 803287, 803288

Restricted substances and its chemical symbols						
Unit	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent chromium (Cr +6)	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
PCBs	—	○	○	○	○	○
Metal Parts	—	○	○	○	○	○
Plastic Parts	○	○	○	○	○	○
Speakers	—	○	○	○	○	○
Cables	—	○	○	○	○	○
Note 1: “○” indicates that the percentage content of the restricted substance does not exceed the percentage of reference value of presence.						
Note 2: The “—” indicates that the restricted substance corresponds to the exemption.						

Date of Manufacture: The eighth digit in the serial number indicates the year of manufacture; “7” is 2007 or 2017.

China Importer: Bose Electronics (Shanghai) Company Limited, Level 6, Tower D, No. 2337 Gudai Rd. Minhang District, Shanghai 201100

UK Importer: Bose Limited Bose House, Quayside Chatham Maritime, Chatham, Kent, ME4 4QZ, United Kingdom

EU Importer: Bose Products B.V., Gorslaan 60, 1441 RG Purmerend, The Netherlands

Mexico Importer: Bose de México, S. de R.L. de C.V. , Paseo de las Palmas 405-204, Lomas de Chapultepec, 11000 México, D.F. For importer & service information: +5255 (5202) 3545

Taiwan Importer: Bose Taiwan Branch, 9F-A1, No. 10, Section 3, Minsheng East Road, Taipei City 104, Taiwan.



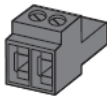
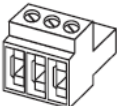
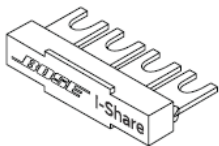

Phone Number: +886-2-2514 7676

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Warranty Information

This product is covered by a limited warranty. For warranty details, visit [PRO.BOSE.COM](https://www.pro.bose.com).

Package Contents

Accessories		P2600A	P21000A	P4300A
	AC power cord	1	1	1
	Cat 5e cable (1 m / 3 ft)	1	1	1
	2-pin Euroblock connector (black)	1	1	1
	3-pin Euroblock connector (green)	2	2	4
	I-Share jumper	1	1	2
	Terminal fork (14-16 gauge)	5	5	10

Technical Information

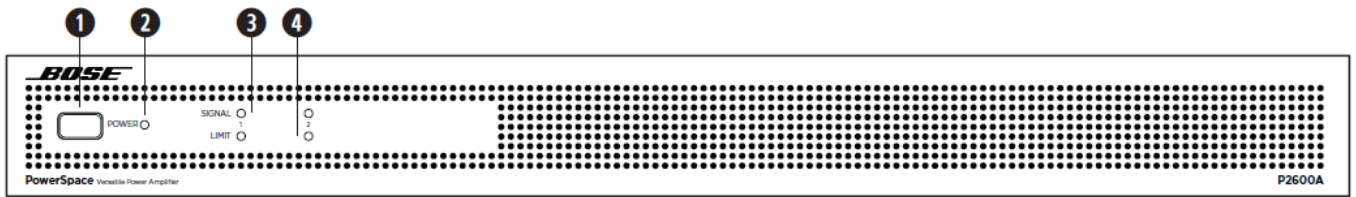
For additional technical information including specifications, block diagrams, and AC current draw statistics, please visit the PowerSpace product page on PRO.BOSE.COM.

Power Rating	P2600A	P21000A	P4300A
Amplifier Power	2 × 600 W (THD+N < 0.04%, 1 kHz, 4–8Ω, 70/100V)	2 × 1000 W (THD+N < 0.04%, 1 kHz, 4–8Ω, 70/100V)	4 × 300 W (THD+N < 0.04%, 1 kHz, 4–8Ω, 70/100V)
I-Share Mode Power	1 × 1200 W (2–4Ω, 70/100V)	1 × 2000 W (2–4Ω, 70/100V)	2 × 600 W (2–4Ω, 70/100V) (Each channel pair can be I-S hared)
Gain (Low-Z mode)	35 dB	37 dB	32 dB
Gain (70V mode)	35 dB	35 dB	35 dB
Gain (100V mode)	38 dB	38 dB	38 dB
Physical			
Operational temperature range		100 V to 264 VAC: +40 °C to 0 °C	
Storage temperature range		+70 °C to –40 °C	
Dimensions (H × W × D)	44 mm × 483 mm × 414 mm (1.7 in × 19.0 in × 16.3 in)		
Net Weight	6.2 kg (13.7 lb)	6.6 kg (14.6 lb)	6.6 kg (14.6 lb)
Shipping Weight	8.2 kg (18.1 lb)	8.6 kg (19.0 lb)	8.6 kg (19.0 lb)

Product Details

PowerSpace P2600A/P21000A

Front Panel



q Power swit	ch: In/Out standby mode.	
w Power LED	: Power or fault state indication.	White (solid): Power is on
		White (blinking): Unit is in standby mode
		Red (solid): Power supply fault
		Red (blinking): Thermal fault
e Input Signa	I LED: Each LED operates independently.	Green: Signal present
		Amber: Input is near clipping
		Red: Input is clipping
r Output Lim	it LED: Each LED operates independently.	Amber: Amplifier limiting an output
		Red (both solid): Amplifier fault
		Red (blinking): Outputs are muted

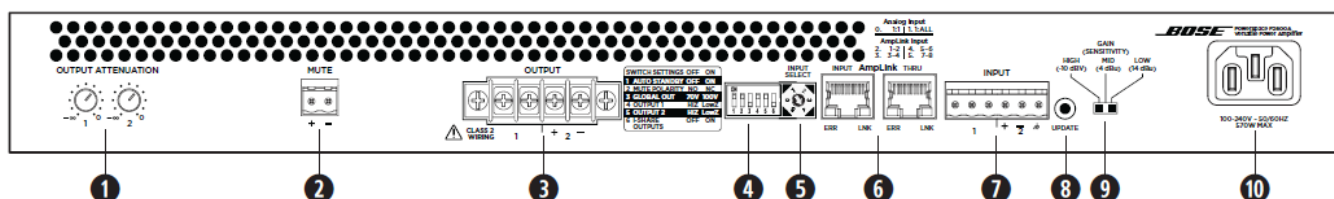
Faults Only

	Power Supply Fault*	Thermal Fault	Amplifier Fault
Power LED	Solid red	Blinking red	—
Limit LEDs	—	All solid red	All solid red

Except for AC loss

If a power supply or amplifier fault cannot be cleared, then the amplifier needs to be replaced.

Rear Panel



1. Output Attenuation controls: Output attenuation controls for each output. Turn the controls clockwise to decrease attenuation and counter-clockwise to increase attenuation. The attenuator must be at 0 dB attenuation for the respective output to reach rated power.
2. Mute: Normally open or normally closed dry contacts can mute all outputs. Mute polarity can be inverted by a DIP switch.
3. Output terminal block: 4-terminal block connector for loudspeaker connections. Each channel can deliver up to 600 watts (P2600A) or up to 1000 watts (P21000A) regardless of load into 4 Ω , 8 Ω , 70V, or 100V. Outputs can be I-Shared.
4. DIP switches: A bank of switches used to set amplifier configuration.
 1. Auto Standby: If enabled (On), the amplifier goes into lower-power mode after 20 minutes without an input signal. If in lower-power mode and an audio signal is detected, the amplifier will automatically wake and amplify audio within one second. The default position is Off.
 2. Mute Polarity: Switch mute polarity between NO (normally open) or NC (normally closed). NO is the default position.
 3. Global Out: Sets the output capability to 70V or 100V for all outputs that have their DIP switch set to Hi-Z. In 70V Hi-Z mode and Low-Z mode, 100 VP and 70 VRMS limiters are automatically loaded. In 100V Hi-Z mode, 100 VRMS limiters are automatically loaded.
 4. Output 1: Select 70/100V high-impedance output (Hi-Z) or 4–8 Ω low-impedance output (Low-Z) for Output 1.
 5. Output 2: Select 70/100V high-impedance output (Hi-Z) or 4–8 Ω low-impedance output (Low-Z) for Output 2.
 6. I-Share 1 & 2: Deliver 2 \times channel power by combining the current of Outputs 1 & 2. While the amplifier is off or in Standby mode, set this DIP switch to On and install the included jumper across the four-output terminals. Then wire the loudspeaker load to the amplifier using terminals 1+ and 1– (or 2+ and 2–).
5. Input Select control: Dial selects if analog or AmpLink audio inputs are used. The default state is analog 1:1.
6. AmpLink ports: Input RJ-45 connector that receives up to eight digital channels from a Bose AmpLink product. The amp also supports a Thru path for daisy-chaining all eight digital audio channels to up to eight other Bose

Amplink products, at a maximum distance of 10 meters between products.

7. Analog Input: Line-level input for balanced analog audio signals.
8. Update port: Used for firmware updates.
9. Gain/Sensitivity switch: Slide switch to set global gain/sensitivity setting to high gain (≈10 dBv sensitivity), mid gain (4 dBu sensitivity), or low gain (14 dBu sensitivity).
10. Power input: Power cord connection (IEC 60320-C14 inlet). Removing the power cord when the amplifier is on is an acceptable power- down method.

PowerSpace P4300A

Front Panel



q Power swit	ch: In/Out standby mode	
w Power LED	: Power or fault state indication.	White (solid): Power is on
		White (blinking): Unit is in standby mode
		Red (solid): Power supply fault
		Red (blinking): Thermal fault
e Input Signa	I LED: Each LED operates independently.	Green: Signal present
		Amber: Input is near clipping

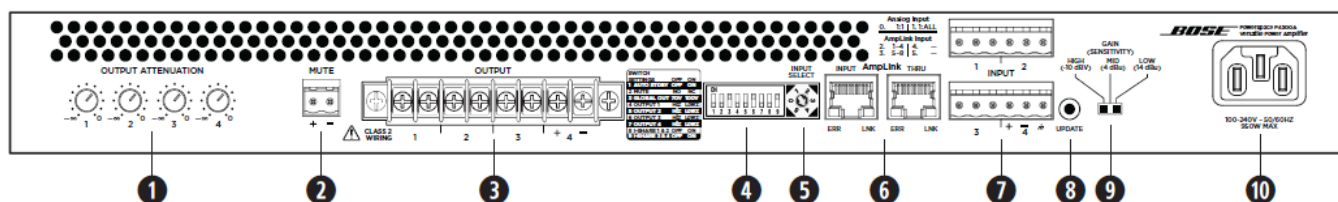
		Red: Input is clipping
r Output Lim	it LED: Each LED operates independently.	Amber: Amplifier limiting an output
		Red (solid): Ch 1 & Ch 2 amplifier A fault Ch 3 & Ch 4 amplifier B fault
		Red (all solid): Thermal fault
		Red (blinking): Outputs are muted

Faults Only

	Power Supply Fault*	Thermal Fault	Amplifier Fault
Power LED	Solid red	Blinking red	—
Limit LEDs	—	All solid red	Ch 1 & 2 solid red, Amplifier A Ch 3 & 4 solid red, Amplifier B

*Except for AC loss If a power supply or amplifier fault cannot be cleared, then the amplifier needs to be replaced.

Rear Panel



1. Output Attenuation controls: Output attenuation controls for each output. Turn the controls clockwise to decrease attenuation and counter-clockwise to increase attenuation. The attenuator must be at 0 dB attenuation for the respective output to reach rated power.

2. Mute: Normally open or normally closed dry contacts can mute all outputs. Mute polarity can be inverted by a DIP switch.
3. Output terminal block: 8-terminal block connector for loudspeaker connections. Each channel can deliver up to 300 watts regardless of load into 4 $\hat{I}\odot$, 8 $\hat{I}\odot$, 70V, or 100V. Each output pair can be I-Shared.
4. DIP switches: A bank of switches used to set amplifier configuration.
 1. Auto Standby: If enabled (On), the amplifier goes into lower-power mode after 20 minutes without an input signal. If in lower-power mode and an audio signal is detected, the amplifier will automatically wake and amplify audio within one second. The default position is Off.
 2. Mute Polarity: Switch mute polarity between NO (normally open) and NC (normally closed). NO is the default position.
 3. Global Out: Sets the output capability to 70V or 100V for all outputs that have their DIP switch set to Hi-Z. In 70V Hi-Z mode and Low-Z mode, 100 VP and 70 VRMS limiters are automatically loaded. In 100V Hi-Z mode, 100 VRMS limiters are automatically loaded.
 4. Output 1: Select 70/100V high-impedance output (Hi-Z) or 4–8 Ω low-impedance output (Low-Z) for Output 1.
 5. Output 2: Select 70/100V high-impedance output (Hi-Z) or 4–8 Ω low-impedance output (Low-Z) for Output 2.
 6. Output 3: Select 70/100V high-impedance output (Hi-Z) or 4–8 Ω low-impedance output (Low-Z) for Output 3.
 7. Output 4: Select 70/100V high-impedance output (Hi-Z) or 4–8 Ω low-impedance output (Low-Z) for Output 4.
 8. I-Share 1 & 2: Deliver 2 \times channel power by combining the current of Outputs 1 & 2.
 9. I-Share 3 & 4: Deliver 2 \times channel power by combining the current of Outputs 3 & 4.
5. Input Select-control: Dial selects if analog or AmpLink audio inputs are used. The default state is analog 1:1.
6. AmpLink ports: Input RJ-45 connector that receives up to eight digital channels from a Bose AmpLink product. The amp also supports a Thru path for daisy-chaining all eight digital audio channels to up to eight other Bose AmpLink products, at a maximum distance of 10 meters between products.
7. Analog Input: Line-level input for balanced analog audio signals.
8. Update port: Used for firmware updates.
9. Gain/Sensitivity switch: Slide switch to set global gain/sensitivity setting to high gain (–10 dBv sensitivity), mid gain (4 dBu sensitivity), or low gain (14 dBu sensitivity).
10. Power input: Power cord connection (IEC 60320-C14 inlet). Removing the power cord when the amplifier is on is an acceptable power-down method.

Setting Up a PowerSpace Amplifier

1. Starting with the amplifier power Off, set the rear-panel switches as needed for the application. Then make all required power and audio connections.
2. Press the Power switch on the front panel to power the amplifier On.
3. Depending on the loudspeakers you are configuring with your PowerSpace amplifier, do one of the following:
 - If all outputs are set to drive 70/100V high-impedance loudspeakers, rotate each corresponding Output Attenuation control to 0 dB attenuation. Set each loudspeaker tap to the appropriate setting. Based on the total loudspeaker tap settings, the amplifier will deliver the required power to each output, up to the

rated channel power. For examples, see the PowerSpace Application Guide at PRO.BOSE.COM.

- If all outputs are set to drive 4–8Ω low-impedance loudspeakers, rotate each Output Attenuation control until the desired levels are reached. Play a signal containing the highest normal program or pink noise input level. Ensure the material is near the input sensitivity for best noise performance. Observe the Output Limit LED for the output being adjusted. If the signal level is higher than the protection limit for the loudspeaker, the Output Limit LED will light amber. Increase the attenuation until the Output Limit LED does not light, or only occasionally lights. For examples, see the PowerSpace Application Guide at PRO.BOSE.COM.
4. Since each output is configurable to drive either high-impedance or low-impedance loudspeakers, the amplifier can support mixed-impedance installations. In this setup, first configure the high-impedance channels before configuring the low-impedance channels.
 5. When setting up the amplifier, monitor the Input Signal LEDs for input clipping and the Output Limit LEDs for output limiting to ensure the amplifier is working within proper operating conditions. Make adjustments if necessary.

Technical Considerations

Adjusting the Output Attenuation control of a single channel does not affect the level of other channels. Each channel will limit to its rated power. If the continuous power demand remains too high, the amplifier will gradually limit to an average of 1/3 power continuously.

There are multiple ways to adjust output power in a PowerSpace amplifier application:

- Adjust input signal level relative to the sensitivity setting of the amplifier.
- Adjust the Output Attenuation controls of the amplifier.
- Adjust the transformer tap settings of any connected high-impedance loudspeakers.

Setup Placement

CAUTION: This product is not intended for installation or use in indoor water facility areas (including, without limitation, indoor pools, indoor water parks, hot tub rooms, saunas, steam rooms and indoor skating rinks).

CAUTION: Do not mount the product in locations where condensation may occur.

Importance of Proper Ventilation

For placement of the amplifier, keep the following in mind:

- Make sure that air can circulate freely from front to back for adequate ventilation. There are vents on the front, back, and sides of the amplifier.
- Do not cover or block amplifier vents.
- Make sure the chassis is protected from heat and kept away from direct heat sources, such as heating vents and radiators.

CAUTION: Due to ventilation requirements, do not place the product in a confined space such as in a wall cavity or in an enclosed cabinet. Do not allow the chassis to exceed the maximum operating temperature of 40 °C (104 °F). Be aware of conditions in an enclosed rack that may increase the temperature above room-ambient conditions. If the amplifier becomes too hot, it will go into a thermal protection mode and mute all outputs.

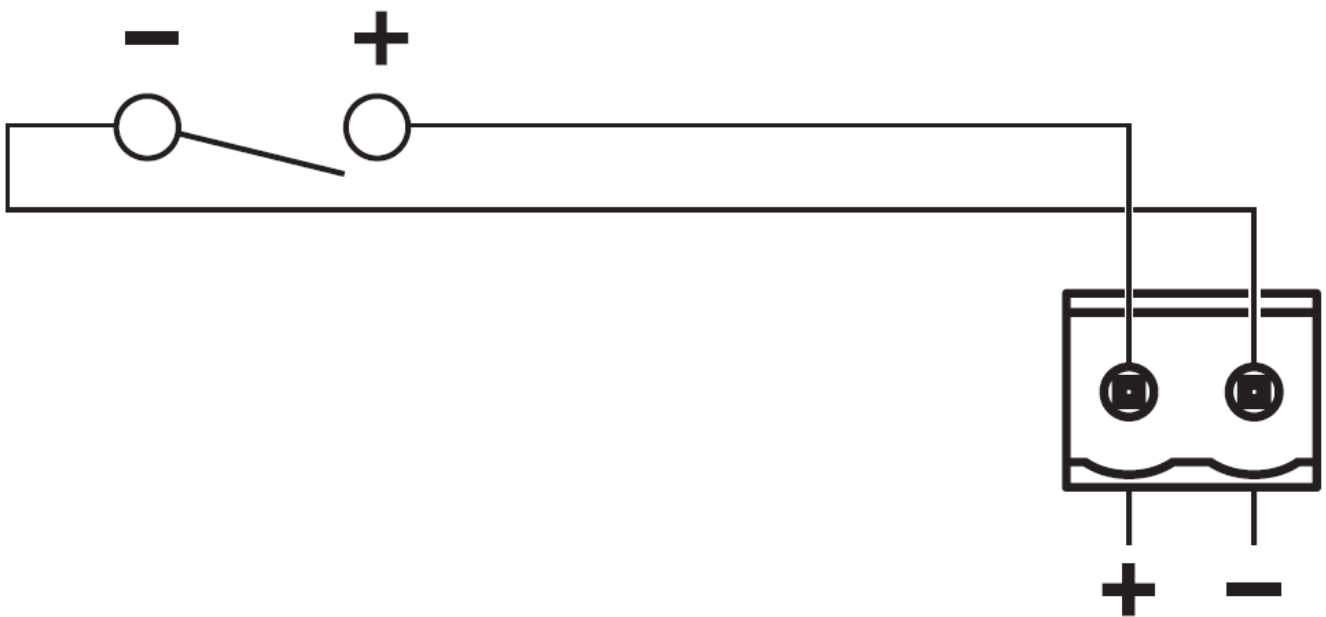
Rack Mounting

PowerSpace amplifiers are designed to standard 48-centimeter (19-inch) rack equipment, occupying one rack-unit (RU) in height (4.4Â cm/1.7 in), requiring a mounting depth of 40.6 centimeters (16.0 inches) from the front rack rail. Use four fasteners with washers (not supplied) to mount the amplifier front panel rack ears to the equipment rack rails.

CAUTION: Only use the mounting hardware recommended by the rack manufacturer.

CAUTION: Do not place or install the bracket or product near any heat sources, such as fireplaces, radiators, heat registers or other apparatus (including amplifiers) that produce heat.

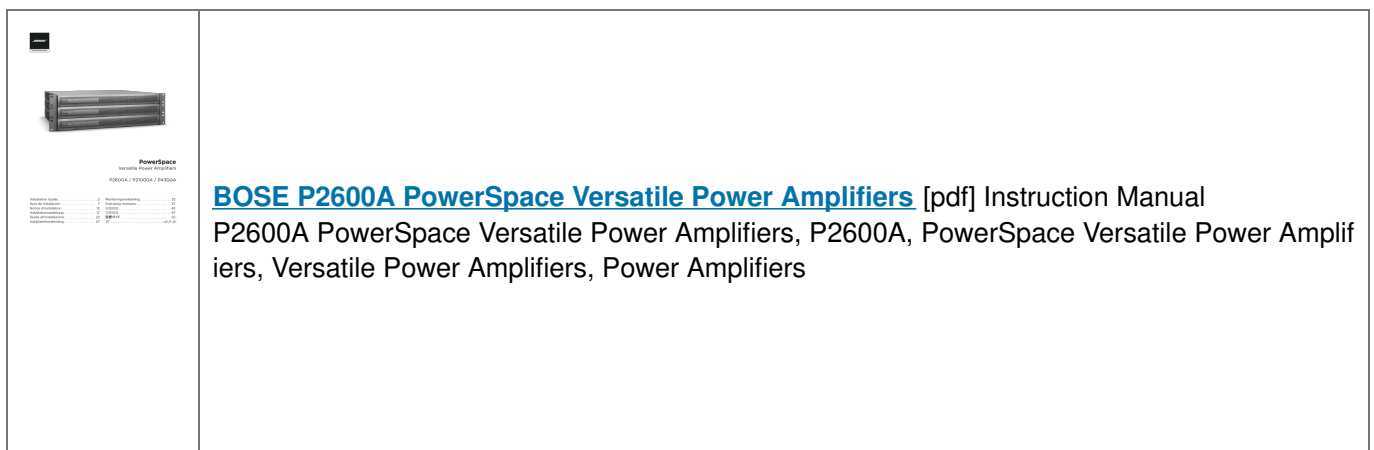
Mute with Standard Contact Closure



The amplifier is designed to mute all outputs either when the Mute contacts are shorted together, or when the Mute contacts are opened, depending on the amplifier configuration. The default state is Normally Open (NO), where a short across the Mute connector will mute all outputs. You can use the Mute DIP switch to invert the mute polarity to Normally Closed (NC), where an open circuit across the Mute connector will mute all outputs.

Note: All Output Limit LEDs will blink red when the amplifier is muted from the rear panel Mute connector.

Documents / Resources



References

-  [Bose Professional](#)
-  [Bose European Union Regulatory and Compliance Information](#)

Manuals+.