




## **PowerSpace** Versatile Power Amplifiers

P4300+ / P4150+


## 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.




**CAUTION**  
RISK OF ELECTRICAL SHOCK  
DO NOT OPEN



To reduce the risk of electric shock, do not remove cover (or back). No user-serviceable parts inside. Refer servicing to qualified personnel.





### WARNINGS/CAUTIONS



-  Contains small parts which may be a choking hazard. Not suitable for children under age 3.
-  Use at altitude less than 2000 meters only.
- 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 stikkroppens jord.
- Suomi: Laite on liitettävä suojamaadoituskoskettimilla varustettuun pistorasiaan.
- Norsk: Apparatet må tilkoples jordet stikkontakt.
- Svenska: Apparaten 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:

P4300+/P4150+: 14.1 A (230 VAC 50 Hz), 8.1 A (120 VAC 50 Hz)

Inrush current after AC mains interruption of 5 seconds:

P4300+/P4150+: 9.2 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](http://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 |  |              |              |                     |                               |                                     |
|---|--|--------------|--------------|---------------------|-------------------------------|-------------------------------------|
| Part Name   | Toxic or Hazardous Substances and Elements |              |              |                     |                               |                                     |
|   | Lead (Pb)                                  | Mercury (Hg) | Cadmium (Cd) | Hexavalent (Cr(VI)) | Polybrominated Biphenyl (PBB) | Polybrominated diphenylether (PBDE) |
| PCBs  | X  | 0            | 0            | 0                   | 0                             | 0                                   |
| Metal Parts   | X  | 0            | 0            | 0                   | 0                             | 0                                   |
| Plastic Parts   | 0  | 0            | 0            | 0                   | 0                             | 0                                   |
| Speakers  | X  | 0            | 0            | 0                   | 0                             | 0                                   |
| Cables  | X  | 0            | 0            | 0                   | 0                             | 0                                   |

This table is prepared in accordance with the provisions of SJ/T 11364.  
 0: 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 P4300+ and P4150+, Type designation: 803289, 810965 |  |              |              |                            |                                |                                       |
|---|--|--------------|--------------|----------------------------|--------------------------------|---------------------------------------|
| Unit  | Restricted substances and its chemical symbols |              |              |                            |                                |                                       |
|   | Lead (Pb)                                      | Mercury (Hg) | Cadmium (Cd) | Hexavalent chromium (Cr+6) | Polybrominated biphenyls (PBB) | Polybrominated diphenyl ethers (PBDE) |
| PCBs  | -  | o            | o            | o                          | o                              | o                                     |
| Metal Parts   | -  | o            | o            | o                          | o                              | o                                     |
| Plastic Parts   | o  | o            | o            | o                          | o                              | o                                     |
| Speakers  | o  | o            | o            | o                          | o                              | o                                     |
| Cables  | -  | o            | o            | o                          | o                              | o                                     |

**Note 1:** "o" 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, Part C, Plant 9, No. 353 North Riyang Road, China (Shanghai) Pilot Free Trade Zone

**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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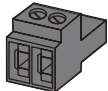
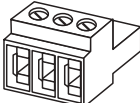
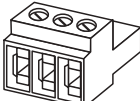
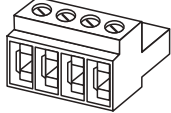
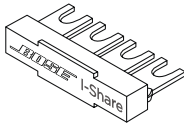
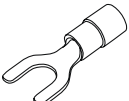
Bose Corporation Headquarters: 1-877-230-5639

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### Warranty Information

This product is covered by a limited warranty. For warranty details, visit [PRO.BOSE.COM](http://PRO.BOSE.COM).

## Package Contents

|   | Accessories                        | P4300+ | P4150+ |
|---|------------------------------------|--------|--------|
|    | AC power cord                      | 1      | 1      |
|    | 2-pin Euroblock connector (black)  | 1      | 1      |
|    | 3-pin Euroblock connector (green)  | 3      | 3      |
|    | 3-pin Euroblock connector (orange) | 2      | 2      |
|   | 4-pin Euroblock connector (green)  | 1      | 1      |
|  | I-Share jumper                     | 2      | 2      |
|  | Terminal fork<br>(14-16 gauge)     | 10     | 10     |

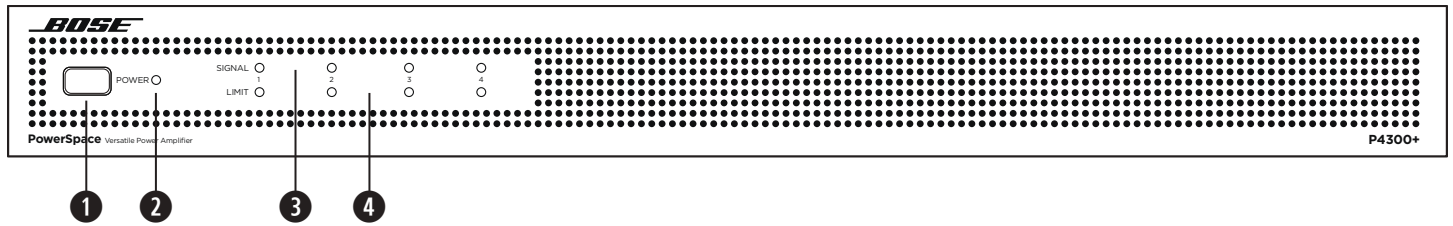
## Technical Information

For additional technical information including specifications, block diagrams, and AC current draw statistics, please visit the PowerSpace product page on [PRO.BOSE.COM](http://PRO.BOSE.COM).

| Power Rating                  | P4300+   | P4150+   |
|-------------------------------|--|--|
| Amplifier Power               | 4 × 300 W<br>(THD+N < 0.04%, 1 kHz, 4-8Ω, 70/100V)               | 4 × 150 W<br>(THD+N < 0.04%, 1 kHz, 4-8Ω, 70/100V)               |
| I-Share Mode Power            | 2 × 600 W (2-4Ω, 70/100V)<br>(Each channel pair can be I-Shared) | 2 × 300 W (2-4Ω, 70/100V)<br>(Each channel pair can be I-Shared) |
| Gain (Low-Z mode)             | 32 dB  | 29 dB  |
| Gain (70V mode)               | 35 dB  | 35 dB  |
| Gain (100V mode)              | 38 dB  | 38 dB  |
| <b>Physical</b>               |  |  |
| 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                    | 6.6 kg (14.6 lb)   |  |
| Shipping Weight               | 8.6 kg (19.0 lb)   |  |

# PowerSpace P4300+/P4150+

## Front Panel



|                            |   |
|----------------------------|---|
| <b>1 Power switch:</b>     | In/Out standby mode.  |
| <b>2 Power LED:</b>        | Power or fault state indication.<br><b>White (solid):</b> Power is on<br><b>White (blinking):</b> Unit is in standby mode<br><b>Red (solid):</b> Power supply fault<br><b>Red (blinking):</b> Thermal fault   |
| <b>3 Input Signal LED:</b> | Each LED operates independently.<br><b>Green:</b> Signal present<br><b>Amber:</b> Input is near clipping<br><b>Red:</b> Input is clipping   |
| <b>4 Output Limit LED:</b> | Each LED operates independently.<br><b>Amber:</b> Amplifier limiting an output<br><b>Red (solid):</b> Ch 1 & Ch 2 amplifier A fault<br>Ch 3 & Ch 4 amplifier B fault<br><b>Red (all solid):</b> Thermal fault<br><b>Red (blinking):</b> Outputs are muted |

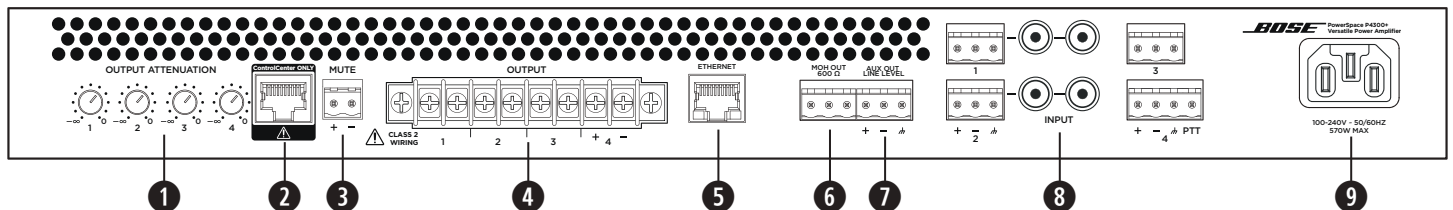
### Faults Only

|                   | Power Supply Fault* | Thermal Fault | Amplifier Fault  |
|-------------------|---------------------|---------------|--|
| <b>Power LED</b>  | Solid red           | Blinking red  | —  |
| <b>Limit LEDs</b> | —                   | All solid red | Ch 1 & 2 solid red, Amplifier A<br>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



- 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.
- ControlCenter port:** RJ-45 input connector for CC-1, CC-2, CC-3 ControlCenter analog zone controllers or CV41 4-to-1 converter only.
- Mute port:** Normally open or normally closed dry contacts can mute all outputs. Mute polarity can be inverted in the configuration utility.
- Output terminal block:** 8-terminal block connector for loudspeaker connections. Each channel can deliver up to 300 watts (P4300+) and up to 150 watts (P4150+) regardless of load into 4Ω, 8Ω, 70V, or 100V. Each output pair can be I-Shared with an added jumper. Wire the **I-Share 1 & 2** loudspeaker load to the amplifier using terminals 1+ and 1- (or 2+ and 2-). Wire the **I-Share 3 & 4** loudspeaker load to the amplifier using terminals 3+ and 3- (or 4+ and 4-).
- Ethernet port:** Connect amplifier to a network switch or laptop Ethernet port to configure via the PowerSpace configuration utility.
- Music-on-hold:** Dedicated 600-ohm music-on-hold output.
- Auxiliary Output:** Line-level auxiliary output.
- Input:** **Inputs 1 & 2** support balanced line-level inputs (Euroblock) or unbalanced inputs (RCA) The RCA inputs are each summed to mono. **Inputs 3 & 4** are balanced inputs, and **Input 4** also supports either a 600-ohm telephone paging input or a PTT/VOX dynamic microphone input.
- Power input:** Power cord connection (IEC 60320-C14 inlet). Removing the power cord when the amplifier is on is equivalent to powering down using the front panel power switch, and is an acceptable power-down method.

## Setting Up a PowerSpace Plus Amplifier

- Starting with the amplifier power **Off**, make all required network, then audio, then network connections.
- All configuration is done within the PowerSpace configuration utility:  
**Note:** The PowerSpace configuration utility is compatible only with Google Chrome, Mozilla Firefox, Microsoft Edge, and Internet Explorer.
  - Visit [bosepro.link/psaw](http://bosepro.link/psaw) and download the **Discovery Tool** application.
  - Connect your computer directly to the **Ethernet** port of your amplifier or via a network switch.
  - Open and run the **Discovery Tool** application.
  - Press the **Power** switch on the front panel to power the amplifier **On**.
  - In the application, click **Refresh**. The IP address of each amplifier in the network will appear in the window.

- F. Click **Configure** (You can also enter the IP address manually into your web browser and click **Enter**). The PowerSpace configuration utility will appear in the browser window.  
**Note:** To learn more, access the help system from within the interface of the PowerSpace configuration utility.
3. If using ControlCenter analog zone controller(s) for remote control, rotate each **Output Attenuation** control fully clockwise to 0 dB attenuation. This enables each zone controller to attenuate over the full range. To have the zone controller operate across a limited range, increase the output attenuation as needed by rotating the **Output Attenuation** control counter-clockwise.
  4. Depending on the loudspeakers you are configuring with your PowerSpace amplifier, do one of the following:
    - A. 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**.
    - B. 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**.
  5. 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.
  6. 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  $\frac{1}{3}$  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 fit standard 48-centimeter (19-inch) rack equipment, occupying one rack-unit (RU) in height (4.4 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.

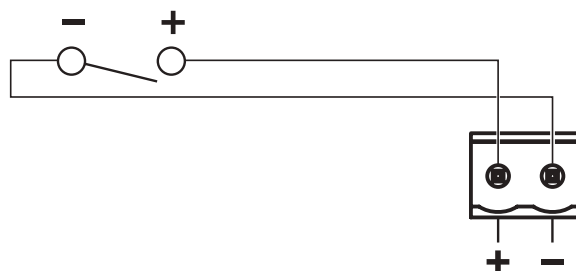


**CAUTION:** Do not place or install the bracket or product near any heat sources, such as fireplaces, radiators, heat registers or other apparatus (including amplifiers) that produce heat.

### 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. Mute polarity can be inverted in the configuration utility.

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



### ControlCenter Analog Zone Controllers

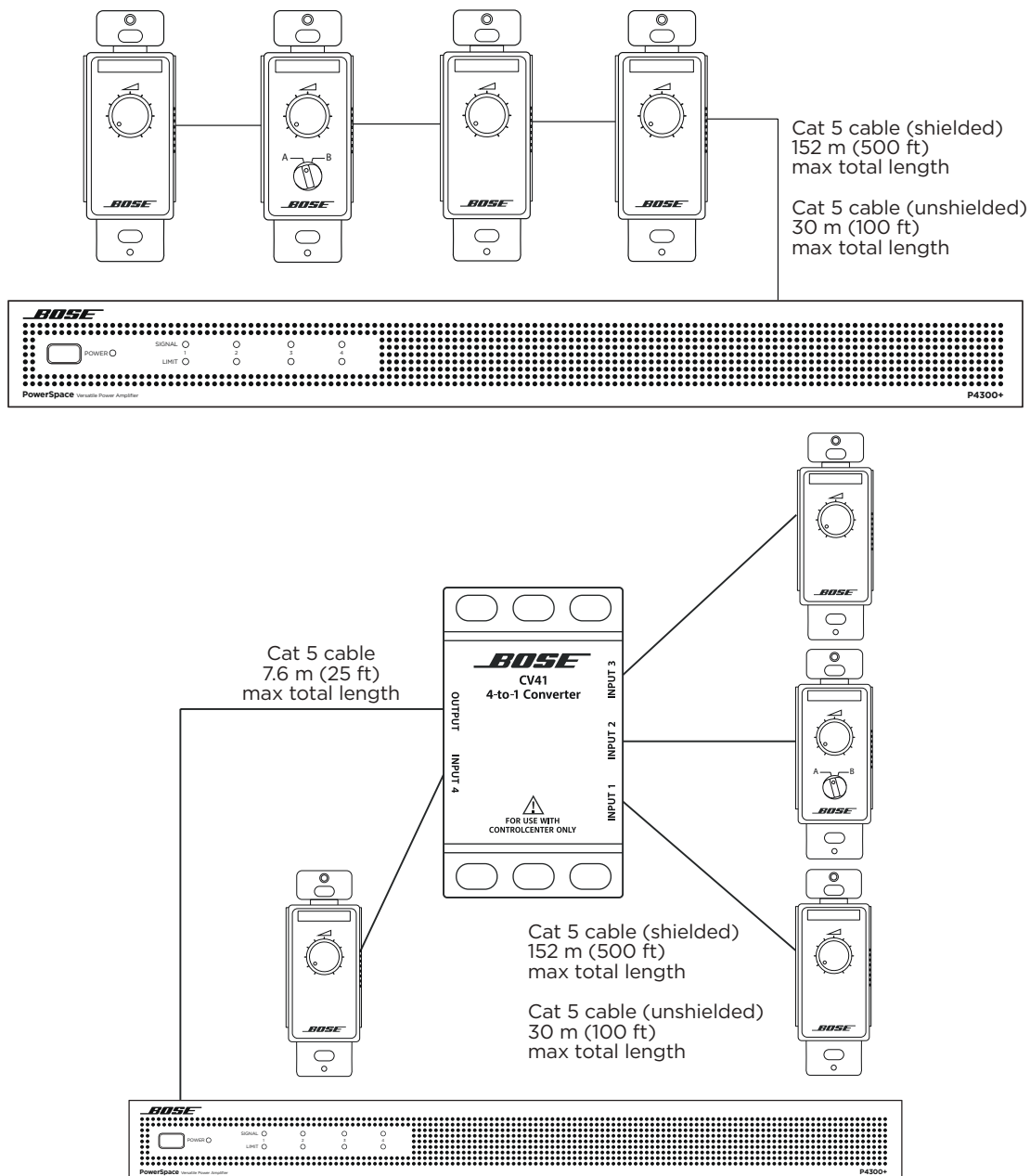
Remotely control the volume of PowerSpace P4300+ and P4150+ with Bose ControlCenter analog zone controllers (CC-1, CC-2, and CC-3). Use CC-1 for volume control and use CC-2 and CC-3 for volume and source control. Connect your zone controller(s) to your amplifier via the **ControlCenter** port.

CC-1 and CC-2 controllers can be combined through either daisy-chaining or through a Bose CV41 4-to-1 converter. Only one CC-3 can be connected at a time and cannot be used with the CV41 and cannot be daisy-chained with any other controller. See the table below for CC-1 and CC-2 combinations.

| Number of each type of remote |   | CC-2      |   |   |
|-------------------------------|---|-----------|---|---|
|                               |   | 0         | 1 | 2 |
| CC-1                          | 0 | No remote | X | X |
|                               | 1 | X         | X | X |
|                               | 2 | X         | X | O |
|                               | 3 | X         | X | O |
|                               | 4 | X         | O | O |

**Note:** An "X" indicates that the combination is possible. An "O" indicates that the combination is not possible.

See the below examples of connecting four CC-1s via daisy-chaining or via CV41 connection.





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