BOSE

PROFESSIONAL

PowerShareX
Adaptable Power Amplifiers

PSX1204D
PSX2404D
PSX4804D

Installation Guide

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.

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.

This symbol on the product means earth/ground connection.

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.

This product contains magnetic material. Consult your physician on whether this might affect your implantable medical device.

- All Bose Professional 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 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 make unauthorized alterations to this product.
- 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: 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.
- Only use attachments/accessories specified by the manufacturer.
- Avoid touching uninsulated wiring or wiring terminals. This product's audio wiring terminals carry voltage that can result in discomfort upon contact.
- This product is for indoor use only.
- To reduce the risk of electric shock, do not attempt to open any part of the unit. No user-serviceable parts inside. Refer servicing to qualified service personnel.
- Connection to the mains shall be done only by an electrotechnical skilled person according to the national requirements of the countries where the unit is sold.
- Do not use this amplifier if the electrical power cord is frayed or broken.
- To avoid electrical shock, do not touch any exposed speaker wiring while the amplifier is operating.
- Do not spill water or other liquids into or on the amplifier.
- The device must be powered exclusively by earth connected mains sockets in electrical networks compliant to IEC 364 or similar rules.
- Disconnect the AC mains source before attempting to clean any part of the amplifier.
- Bose Professional recommends plugging the amplifier to a 16 A-rated socket outlet, C or D curve, 10 kA sectioning breaker.
- Output terminals are hazardous: Wiring connection to these terminals requires installation by an instructed person and the use of ready-made leads.
- Properly fit the AC mains plug to the amplifier inlet. Before powering this amplifier, verify that the correct voltage rating is being used.
- Take care to lock the output terminal before switching the device on.
- Verify that your mains connection is capable of satisfying the power ratings of the device.
- No naked flame sources such as lighted candles should be placed on the amplifier.
- The testing signals might cause loudspeaker impairments.
- To prevent injury, this apparatus must be securely rack mounted in accordance with the installation instructions.
- This equipment shall be mounted at a maximum height of two meters.
- The manufacturer cannot be held responsible for damages caused to persons, things, or data due to an improper or missing ground connection.
- It is absolutely necessary to verify these fundamental requirements of safety and, in case of doubt, require an accurate check by qualified personnel.

Product Ratings

	Input Voltage	Frequency	Current or Power
PSX1204D:	100–240 V	50/60 Hz	600 W
PSX2404D:	100–240 V	50/60 Hz	600 W
PSX4804D:	100–240 V	50/60 Hz	1100 W

Regulatory Information

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

This device complies with part 15 of the FCC Rules. 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 Professional 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.

This product meets all EN55103-2 immunity requirements for E2 electromagnetic environment.

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: Amplifier		Type designation: PSX1204D, PSX2404D, PSX4804D			
	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; "2" is 2012 or 2022.

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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ControlSpace and PowerMatch are trademarks of Transom Post OpCo LLC.

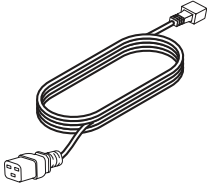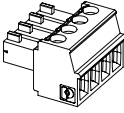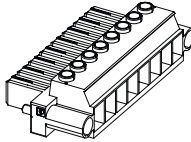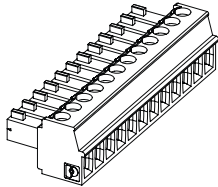Dante® is a registered trademark of Audinate Pty Ltd.

Bose Corporation, Framingham, MA 01701, U.S.A. 1-877-230-5639

Warranty Information

This product is covered by a limited warranty.
For warranty details, visit **BoseProfessional.com/Warranty**.

Package Contents

AC power cord	4-pin Euroblock connector	8-pin Euroblock connector	12-pin Euroblock connector
×1	×1	×1	×3

Technical Information

For additional technical information including specifications, block diagrams, and AC current draw statistics, please visit the PowerShareX product page on **BoseProfessional.com**.

	PSX1204D	**PSX2404D**	**PSX4804D**
Amplifier Power	4 × 300 W	4 × 600 W	4 × 1200 W
Operating Temperature Range	0 °C to 35 °C		
Storage Humidity	10% to 85% humidity		
Dimensions (H × W × D)	44.5 mm × 483.0 mm × 358.0 mm (1.75 in × 19.02 in × 14.09 in)		
Net Weight	7.0 kg (15.4 lbs)		

ControlSpace Designer

Before configuring your PowerShareX amplifiers, download the latest version of ControlSpace Designer at **BoseProfessional.com**.

If all the network connections and settings are done correctly, ControlSpace Designer should automatically identify the PowerShareX amplifier on the network.

Connect the PowerShareX to the ControlSpace network, power on the amplifier, and open ControlSpace Designer to discover, update, and configure the amplifier.

For full details on using ControlSpace Designer to configure, control, and monitor the amplifier or systems built with Bose Professional networked system electronics, consult the ControlSpace Designer help system.

Setup Placement

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.
- Secure both front and rear brackets to the rack.
- Connect the AC Mains connector to a circuit breaker.
- Install the amplifier far from EMF-emitting devices.
- Avoid placing the amplifier close to heat generating sources.

Rack Mounting

⚠ **CAUTION:** *Leave 1 RU of space between every collection of four amplifiers to guarantee adequate air flow.*

⚠ **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 35 °C (95 °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.*

PowerSpaceX 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 35.8 centimeters (14 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.

Cooling

- The ventilation openings must not be impeded by any item, keep a distance of at least 50 cm from the front and rear ventilation openings of the amplifier.
- PowerShareX amplifiers implement a forced-air cooling system to maintain constant operating temperatures. Air enters from the front panel, exiting at the back of the amplifier.
- The cooling system features variable-speed DC fans controlled by the heat-sink mounted sensors. This ensures that fan noise and internal dust accumulation are kept to a minimum.
- In the rare event of overheating, sensing circuits shut down all channels until the amplifier cools down to a safe operating temperature. Normal operation is resumed automatically without the need for user intervention.
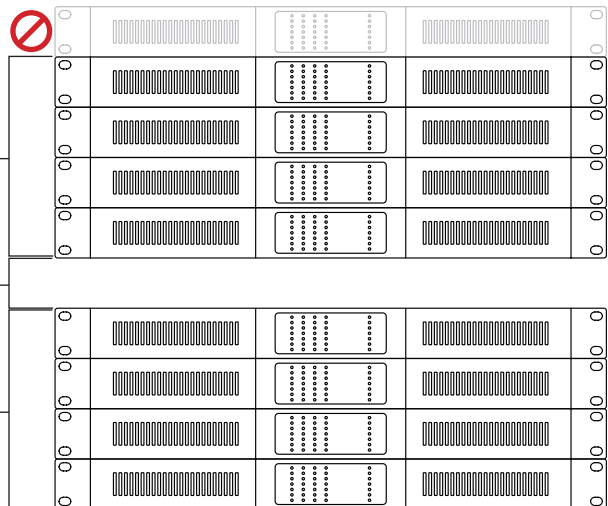
PowerShareX PSX1204D/PSX2404D/PSX4804D

Front Panel (cover removed)
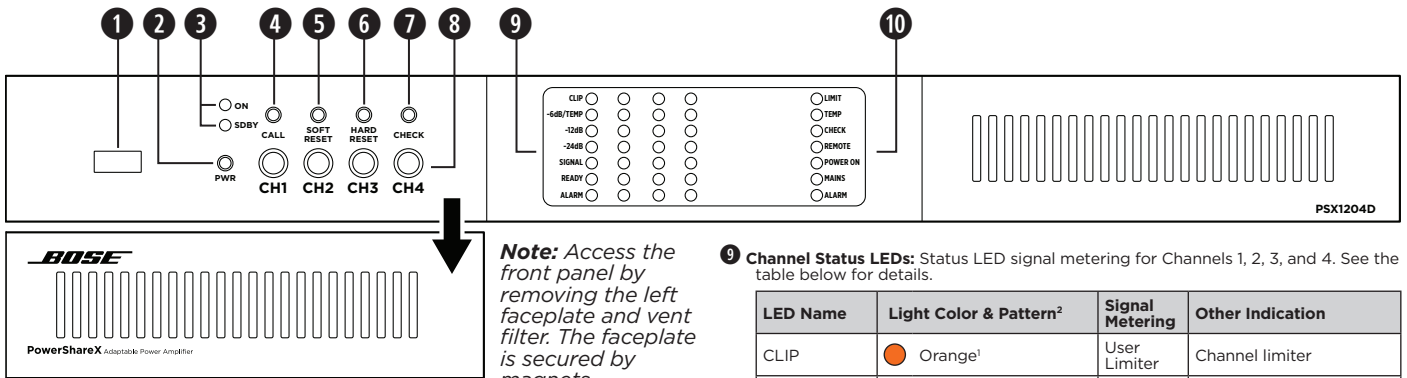
Note: Access the front panel by removing the left faceplate and vent filter. The faceplate is secured by magnets.

❶ Service port: For service only.

❷ Power button: To switch between system **On** and **Standby** mode, press and hold for three seconds. If desired, the operating condition can be modified by the **GPI/Remote** (Remote On/Off).

❸ Operating Mode LEDs: The LED will light green to indicate whether the amplifier is **On** or in **Standby** mode.

LED	Light Color & Pattern	Indication
ON	⚫ Off	Amplifier is powered off
ON	🟢 Solid green	Amplifier is powered on
SDBY	⚫ Off	Amplifier is powered on
SDBY	🟠 Solid orange	Amplifier is in standby mode
SDBY	🟠 Blinking orange	Amplifier is in auto-standby mode
SDBY	🟠 Blink "counter" (pattern of blinks)	Error code; contact Bose Professional technical support

❹ Callback button: Reserved for future use.

❺ Soft Reset button: Resets network parameters to default settings (DHCP). Press and hold for three seconds.

❻ Hard Reset button: Restarts amplifier. Settings and loudspeaker EQs/presets are unaffected. Can be used to cycle power when rear panel is inaccessible. Press and hold for three seconds.

*Note: To reset the amplifier to factory settings (DHCP), press and hold both the **Soft Reset** and **Hard Reset** buttons for three seconds. This removes loudspeaker EQs/presets and resets any adjusted settings.*

❼ Self Check button: For service only.

❽ Channel Attenuation controls: Attenuation controls for the output level of each channel. This affects analog inputs, Dante inputs, and pink-noise generator. Turn the controls clockwise to decrease attenuation and counter-clockwise to increase attenuation. Output level can also be adjusted with ControlSpace Designer.

*Note: The attenuation control is in series with the **Remote Level** connector to limit the output volume regardless of any remote adjustment.*

❾ Channel Status LEDs: Status LED signal metering for Channels 1, 2, 3, and 4. See the table below for details.

LED Name	Light Color & Pattern[2]	Signal Metering	Other Indication
CLIP	🔴 Orange[1]	User Limiter	Channel limiter
–6dB/TEMP	🟡 Solid yellow	–6 dB	Thermal warning; thermal is protection engaged
–6dB/TEMP	🟡 Steady flashing yellow	–6 dB	Standby
–12dB	🟢 Green	–12 dB	—
–24dB	🟢 Green	–24 dB	—
SIGNAL	🟢 Solid green	–60 dB	Signal presence
SIGNAL	🟢 Blinking green	–60 dB	Channel is muted
READY	🟢 Solid green	—	Channel is ready
READY	🟢 Blinking green	—	Amplifier is in auto-standby
ALARM	🔴 Solid red	—	Channel fault

**❿ System Status LEDs:** System status indicators. See the table below for details.

LED Name	Light Color & Pattern[2]	Indication
LIMIT	🟠 Pulse flashing orange	Breaker Save is enabled
LIMIT	🟠 Solid orange	Breaker Save is limiting power draw
TEMP	🟡 Solid yellow	Thermal warning; thermal is protection engaged
CHECK	🟠 Solid orange	System is self-checking
CHECK	🟠 Blinking orange	Self-check is complete
CHECK	🟠 Fast-blinking orange	Self-check is unavailable
REMOTE	🟢 Solid green	Reserved for future use
REMOTE	⚫ Off	—
POWER ON	🟢 Solid green	System is ready
POWER ON	⚫ Off	System is off
MAINS	🟢 Solid green	AC mains voltage is within operating range
MAINS	⚫ Off	Under-voltage
MAINS	🟢 Pulse-flashing green	Over-/under-voltage warning
MAINS	🟢 Fast-blinking green	Over-voltage
MAINS	🟢 Blinking green	Blown mains fuses
ALARM	🔴 Solid red	PSU fault or critical faults

Notes:

1. Does not indicate signal clipping. View channel limiter activity in ControlSpace Designer while on-line for channel limiting indication.
2. Timing patterns of System Status and Channel Status LEDs:

Lighting	Timings	Behavior
Pulse flashing	100 ms on 400 ms off	
Steady flashing	100 ms on 900 ms off	
Fast blinking	100 ms on 100 ms off	
Blinking	500 ms on 500 ms off	

Rear Panel
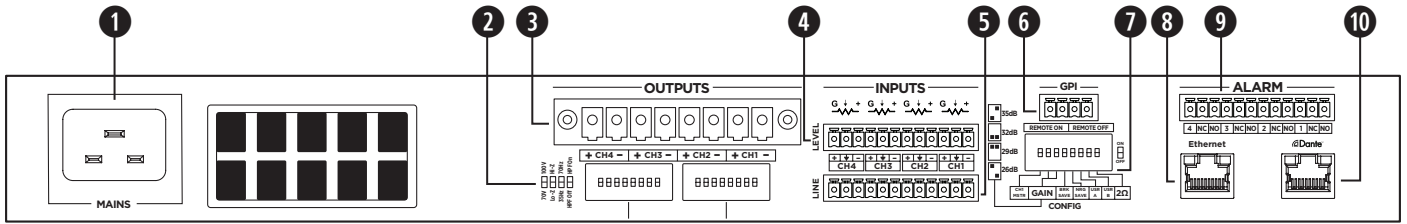
① **Power input:** Power cord connection. Removing the power cord when the amplifier is on is an acceptable power-down method.

② **Output Configuration DIP switches:** Any mixed configuration of low and high impedance output loads can be made using the four switches for each channel.

70V/100V: Switch the channel output operation between 70 volts and 100 volts.

Lo-Z/Hi-Z: Switch the channel output impedance between low impedance and high impedance.

35Hz/70Hz: Switch the high pass filter frequency between 35 Hz and 70 Hz.

HPF Off/HPF On: Activate or deactivate the channel output high-pass filter. Recommended for 70V/100V outputs if software bandpass high-pass is not engaged.

③ **Output connector:** An eight-terminal connector for loudspeaker connections. Each channel can deliver up to 300 watts (PSX1204D), 600 watts (PSX2404D), or 1200 watts (PSX4804D) of symmetrical power.

④ **Remote Level connector:** The level of each channel can be adjusted remotely by a remote level control (linear 10 kΩ potentiometer) connected to the input **LEVEL** connector for that channel. Connect to Channel 1 and set CH1 MSTR DIP switch to On to control all four channels from one controller. Alternatively, to enable remote level adjustment of two or three channels simultaneously, connect the potentiometer's resistive variable pin to multiple channels in parallel (refer to the example diagram where the potentiometer is controlling Channels 1–3). The remote level controls are in series with the **Channel Attenuation** controls.

Note: ControlCenter CC-1, CC-2, and CC-3 are not compatible with PowerShareX amplifiers.

⑤ **Line Input connector:** Line-level input for balanced analog audio signals.

⑥ **GPI/Remote connector:** Remote on and off control. Both pair of terminals respond to the differential voltage between the contacts: a voltage difference between 5 VDC and 24 VDC triggers the control. Remote off can be used to mute the amplifier. The terminals act differently depending on the actual state of the amplifier:

Voltage applied to contacts

Current State	Change	Result State	Remote On	Remote Off
Amplifier is in **Standby**	V ≥ 5V applied to **REMOTE ON** only	Amplifier exits standby; **ON** LED lights solid green	Vdiff ≥ 5V	Vdiff < 3V
Amplifier is **On**	V ≥ 5V applied to **REMOTE OFF** only	Amplifier enters standby; **SDBY** LED lights solid orange **–6dB/TEMP** LED steady flashes yellow	Vdiff < 3V	Vdiff ≥ 5V
Amplifier is in either state	V ≥ 5V applied to **REMOTE ON** and **REMOTE OFF** simultaneously	Amplifier exits standby; **ON** LED lights solid green; If amplifier is already on, no change	Vdiff ≥ 5V	Vdiff ≥ 5V
	V < 3V applied to **REMOTE ON** and **REMOTE OFF** simultaneously	No change	Vdiff < 3V	Vdiff < 3V

⚠ **CAUTION:** *Any voltage exceeding 28 VDC may damage the input circuitry.*

⑦ **System Configuration DIP switches:** DIP switches to control overall system output and performance.

Input Gain Selection				CH1 Master	BRK Save	NRG Save	2Ω
26 dB	29 dB	32 dB	35 dB				
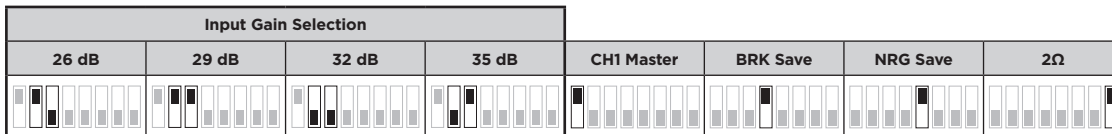
CH1 MSTR: When the **CH1 MSTR** switch is **OFF**, remote-level potentiometers work independently for each channel. When the **CH1 MSTR** switch is **ON**, the remote-level potentiometer of Channel 1 acts as a master level, controlling the volume of all four channels.

GAIN: Adjust the global input gain sensitivity to 35 dB, 32 dB, 29 dB, or 26 dB by following the configuration diagrams on the rear of the amplifier. This feature is designed to match the voltage of the input signal. PowerShareX amplifiers ship with gain sensitivity set to 32 dB by default.
Note: For most situations, leave this set to 32 dB gain. The 35 dB gain setting is similar to PowerMatch 8500N (36 dB). Analog gain sensitivity cannot be further adjusted through ControlSpace Designer. Digital input sensitivity can also be adjusted through ControlSpace Designer.

BRK SAVE (Breaker Save): Switch to **ON** when (1) the power grid is unable to provide enough current to continuously drive the loads, or (2) when at least one of the amplifiers connected to the same outlet can reach the critical power absorption of the line. When activated, the **Breaker Save** halves the maximum continuous current absorption from the mains, which reduces the available output power. This will be indicated by the **LIMIT System Status LED** on the front panel. This will affect overall performance of the amplifier.

NRG SAVE (Energy Save): The power supply unit allows a reduction in power consumption when the input signal falls under a defined threshold. When **ON**, **Energy Save** is active on each channel independently. If the signal is absent for more than 30 minutes on all channels, auto standby is applied and the main PSU is turned off to further conserve energy (Time out time is selectable via ControlSpace Designer). Normal operation resumes immediately upon detecting a signal.

Note: USR A, USR B, and USR C (PSX4804D only) are unavailable.

2Ω: PowerShareX amplifiers are optimized for working with 4Ω output loads, but the **2Ω** switch allows loads down to 2Ω. Switch to **ON** to activate an operating condition that optimizes the performance with very low loads by limiting the maximum output voltage to 85 V$_{peak}$ per channel. This affects all output channels set to match low impedance (i.e. in Lo-Z configuration). For optimal 2Ω performance, switch the **Lo-Z/Hi-Z Output Configuration DIP** to **Lo-Z** for all channels.
Note: PSX1204D and PSX2404D only. PSX4804D can also handle 2Ω loads without the use of a DIP switch.

⑧ **Ethernet port:** RJ45 connector. Remotely control the amplifier via an Ethernet connection through a personal computer and ControlSpace Designer software.

⑨ **GPO/Alarm connector:** There are general-purpose output connections for each channel: one Normally Open (**NO**), one Normally Closed (**NC**), and one channel number connection that acts as a ground (**1**–**4**). At least two connections are required to report and detect a change (e.g., **3** and **NC**). When the amplifier is in normal operating condition, the NO contacts are closed and the NC contacts are open. These contacts are toggled to indicate a potentially dangerous fault, unsafe operating condition, or any fault preventing normal output channel operation, including the following:

|	
Across all channels:	No AC mains (i.e. system shutdown). Thermal stress: the system temperature is too high and the thermal protection is engaged. Amplifier is in standby mode.
Affected channels only:	Short circuit in output wiring: either the loudspeaker or the line is in short. Alarm is sent out the specific output channel with the short circuit event.

NC/NO connections of multiple channels can be combined if needed. See ControlSpace Designer for additional alarm and monitoring options.

⑩ **Dante port:** RJ45 connector. PowerShareX accepts four input streams from the Dante* connection through the Dante port. Use a computer running Dante Controller to implement a Dante network. **Dante Controller** is a software application that manages devices on the network.

Single Ended

Bridged

Remote Level

(Or Master)

Remote Level Connector

10 kΩ
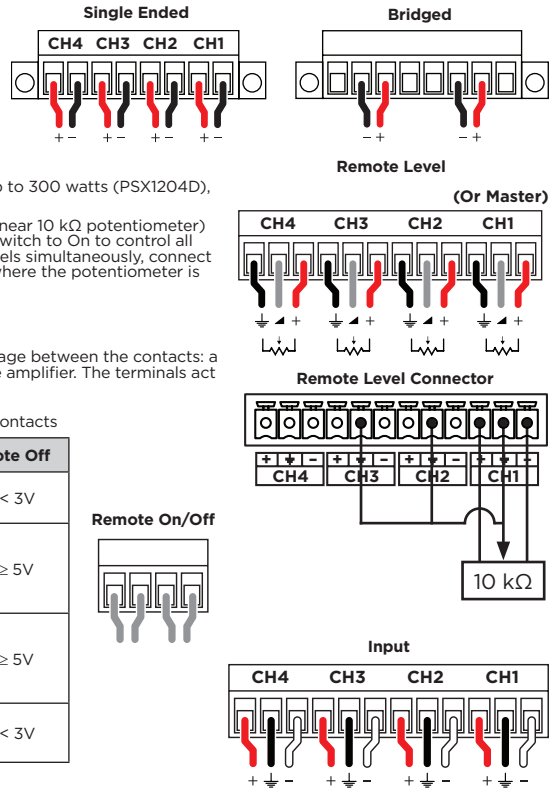
Input

Analog Input to Achieve Full Scale

	PSX1204D	PSX2404D	PSX4804D
Input sensitivity @ 8 Ω with 26 dB Gain	2.48 V$_{RMS}$	3.54 V$_{RMS}$	4.91 V$_{RMS}$
Input sensitivity @ 8 Ω with 29 dB Gain	1.76 V$_{RMS}$	2.51 V$_{RMS}$	3.48 V$_{RMS}$
Input sensitivity @ 8 Ω with 32 dB Gain	1.24 V$_{RMS}$	1.78 V$_{RMS}$	2.46 V$_{RMS}$
Input sensitivity @ 8 Ω with 35 dB Gain	0.88 V$_{RMS}$	1.26 V$_{RMS}$	1.74 V$_{RMS}$

Alarm

Remote On/Off
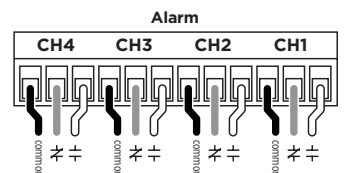
Setting Up a PowerShareX Amplifier

1. Make all output and input audio connections.
2. Connect your computer to your amplifier's **Ethernet** port using a Cat 5e cable, or use a network switch.
3. Connect Dante network audio to the amplifier's **Dante**® port.
4. Ensure all **Channel Attenuation** front panel controls are fully clockwise or at their desired levels. This affects analog, Dante, and pink noise levels.
5. Configure your loudspeakers by adjusting the **Output Configuration DIP** switches and the **System Configuration DIP** switches to the desired parameters for your installation.
    A. Use the PowerShare Design Tool (found at **BoseProfessional.com**) to help plan your system design.
    B. If outputs are set to drive 70V/100V Hi-Z loudspeakers, ensure **Channel Attenuation** control is fully clockwise to 0 dB attenuation. Set each loudspeaker tap to the appropriate setting. Based on the total loudspeaker tap settings, the amplifier will adapt and deliver the required power to each output. The total amplifier wattage can be distributed in any way across all amplifier outputs.
    C. Since each output is configurable to drive either Hi-Z or Low-Z loudspeakers, the amplifier can support mixed-impedance installations. In this setup, first configure the Hi-Z channels before configuring the Low-Z channels.
6. Configure any remote controls using the **Remote Level** connector.
    A. If using a potentiometer for remote control, rotate each **Channel Attenuation** control fully clockwise to 0 dB attenuation. This enables each controller to attenuate over the full range. To have the controller operate across a limited range, increase the attenuation as needed by rotating the **Channel Attenuation** control counter-clockwise.

Note: There is no ground switch or terminal on PowerShareX amplifiers. The unit's signal grounding system is automatic. In order to limit hum and/or interference entering the signal path, use balanced input connections.

7. Connect power cable to the amplifier and connect it to an appropriate power source.
8. Start ControlSpace Designer on your computer and configure each signal processing block as required for the application. See the ControlSpace Designer help system for details. By default, sources are configured for analog inputs and must be changed to digital if Dante network audio is desired. ControlSpace Designer can be used to select an input type.
9. If the amplifier is in **Standby**, press and hold the **Power** button for three seconds to turn on the amplifier.
10. When setting up the amplifier, monitor the Limit indicators for each channel in ControlSpace Designer (while amplifier is on-line) and the **System Status LEDs** on the front amplifier for operating faults. Make adjustments if necessary.

Technical Considerations:

When a loudspeaker EQ is selected in ControlSpace Designer, the appropriate crossover and V_{Peak} and V_{RMS} limiters for that loudspeaker are automatically loaded.

Adjusting the **Channel Attenuation** control of a single channel does not affect the level of other channels. The only exception is if the amplifier is attempting to deliver more than the total amplifier wattage. If the total amplifier power is exceeded, the amplifier will limit all outputs simultaneously and equally until the demand is reduced. If the demand remains too high, the amplifier will gradually limit power.

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

*   Adjust input signal level relative to the sensitivity setting of the channel.
*   Adjust the Matrix level in ControlSpace Designer.
*   Adjust the output levels in ControlSpace Designer.
*   Adjust the **Channel Attenuation** controls of the amplifier.
*   Adjust the limiter settings for each output using ControlSpace Designer.

    ⚠️ **CAUTION:** *Increasing the voltage to a level higher than the preset may damage the loudspeaker.*

*   Adjust the transformer tap settings of any connected Hi-Z loudspeakers.
*   Mute analog outputs with the **GPI/Remote** connector, switching the amplifier to standby.
*   If combining with PowerMatch PM8500N, add 1.5 ms latency to PowerMatch to match the increased latency of PowerShareX.
*   To set amplifier for Auto Standby, use the **NRG Save** DIP switch and select Auto Standby in ControlSpace Designer.

Networking

PowerShareX amplifiers have two RJ45 Ethernet ports: the **Ethernet** port is for network communication/control; the **Dante** port is for Dante streaming audio. Two separate Cat 5e cables are needed to use both ports. PowerShareX amplifiers do not support bridging with a single cable.

IP Addressing

Factory default network settings are DHCP.

If using a DHCP server, it is recommended to turn on and connect the DHCP server to the network before powering on the amplifier to ensure a valid IP address is acquired.

A static IP is recommended and can be configured though ControlSpace Designer. The amplifier and ControlSpace Designer must belong to the same subnet to be discovered and configured though ControlSpace Designer.

If a DHCP server is not present while the amplifier boots, the amplifier will be configured with a link local address in the 169.254.0.0/16 subnet.

Care & Maintenance

When cleaning the amplifier, keep the following in mind:

*   Use a dry cloth to clean the chassis and the front panel.
*   Vent filter cleaning should be scheduled in accordance with the dust levels in the amplifier's operating environment.
*   In order to clean the vent filters remove the front panel faceplates by pulling them away from the amplifier to disengage the magnets. Use compressed air to remove dust from the filters, or wash them with clean water. Let the filters dry thoroughly before reinstalling them.

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