



# PowerShareX PSX1204D/PSX2404D/PSX4804D

## Frequently Asked Questions (FAQ)

This document supplements the PowerShareX installation guide, the ControlSpace Designer help file, and PowerShareX training modules in the Bose Professional learning center.

Comprehensive training is available at [BoseProfessional.com/resources/learning-center](https://BoseProfessional.com/resources/learning-center).

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## Dante & Redundancy Questions

<p><b>Can PowerShareX amplifiers be set to a fully redundant mode in Dante Controller? How do I send in primary and secondary Dante RJ-45 cables to PowerShareX amplifiers like I did with PowerMatch amplifiers or ControlSpace EX/ESP processors?</b></p>	<p>PowerShareX amplifiers do not support two fully independent Dante connections because each amplifier has only one Dante input port. The other RJ-45 port is for Ethernet/data only and cannot be configured as a secondary Dante port.</p> <p>Instead, ControlSpace Designer 5.13 (and later) has a backup strategy feature to enable failover to other Dante channels and/or analog channels (there are four levels with complete adjustability). This backup strategy feature can solve redundancy needs for many projects and venues.</p>
<p><b>I am using two ControlSpace EX-1280C devices that both appear as “Up to Date” in the Hardware Manager in ControlSpace Designer, but the latest Dante firmware version appears to be different for each device. Why?</b></p>	<p>This means one EX-1280C is using a Brooklyn II module while the other is using a Brooklyn 3 module. Their functionality is identical.</p> <p>ControlSpace Designer 5.13 includes the latest Dante firmware for Brooklyn II as 3.03 and for Brooklyn 3 as 4.0.</p>
<p><b>Can the analog or Dante inputs on PowerShareX amplifiers be converted to Dante outputs on the network to be accessed by any Dante-equipped amplifier on the same network?</b></p> <p><b>In other words, can the PowerShareX amplifier effectively work as an input expansion module on the Dante network?</b></p>	<p>No, PowerShareX amplifiers are not capable of this.</p>
<p><b>Can I do Dante Dynamic Routing with PowerShareX amplifiers?</b></p>	<p>PowerShareX amplifiers do not support Dante outputs or Dante flow transmitting channels (TX).</p> <p>Each PowerShareX amplifier has four Dante inputs and two Dante flow receiving channels (RX).</p>

<b>When using the backup strategy feature, how can I make the pilot tone fail over to the second, third, or fourth priority audio?</b>	Set every priority in that row to receive the pilot tone signal. Priority 2, 3 and 4 must also receive a pilot tone within the frequency and threshold parameters as Priority 1 for the active source to move to Priority 2, 3 or 4.
<b>Why can't I see my device that's enrolled in a domain?</b>	Enroll ControlSpace Designer manually into the same domain.
<b>Do PowerShareX amplifiers support AES67?</b>	Yes, use Audinate's Dante Controller software to enable this.

## 2 Ω Questions

<b>How do I set the PowerShareX amplifier to 2 Ω mode?</b>	Use the <b>2 Ω DIP switch</b> on the rear panel and set it in ControlSpace Designer in the <b>Properties</b> window of the PSX1204D and PSX2404D (not available for PSX4804D).
<b>Are there tradeoffs to setting the amplifier in 2 Ω mode (when applicable)?</b>	To support very-low-impedance loads, when 2 Ω mode is enabled, output voltage is limited to 85 V peak per channel for low-impedance channels.
<b>Why does PSX4804D not have a 2 Ω switch?</b>	The PSX4804D does not require any specific action to enter 2 Ω mode because it can handle a 2 Ω load without changing any settings.
<b>When/why would I use 2 Ω feature with Bose Professional loudspeakers?</b>	For example, using four DesignMax DM8C loudspeakers in parallel in low-impedance mode with PSX2404D creates a 2 Ω load.

## 16 Ω Questions

<b>Are low-impedance 16 Ω loads supported?</b>	Yes. If using our PowerShareX Design Tool 1.0.2, try using a single FreeSpace FS2C/FS2P/FS2SE or DesignMax DM2C-LP, and you can observe the amplifier supporting a single 16 Ω speaker. A single FreeSpace FS2C/FS2P/FS2SE is rated at 16 Ω (nominal impedance, transformer bypassed) and 16 W.
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## Standby & Remote On/Remote Off Questions

<b>How do I wake a PowerShareX amplifier from standby mode from only one input channel?</b>	A signal sent over any input channel will wake the PowerShareX amplifier from standby mode.
<b>Can I set which input channels wake a PowerShareX amplifier from standby mode?</b>	No, you cannot specify a channel. A signal sent over any input channel will wake the PowerShareX amplifier from standby mode.
<b>How quickly will a PowerShareX amplifier wake from standby mode?</b>	Less than 2 milliseconds.
<b>How do I put multiple PowerShareX amplifiers in and out of standby mode?</b>	You can use the auto-standby feature.
<b>How do I set a PowerShareX amplifier's auto-standby mode?</b>	Use the <b>NRG SAVE DIP switch</b> on the rear panel and set it in ControlSpace Designer in the <b>Properties</b> window of the PowerShareX amplifier.
<b>Are the auto-standby settings of a PowerShareX amplifier different from those of the PowerMatch amplifiers?</b>	Yes. For PowerMatch amplifiers, the maximum length of signal absence is 12 hours. For PowerShareX amplifiers, the maximum length is 1 hour.

**Do the Power/Standby button (on the front panel) and Toggle Standby option (in ControlSpace Designer software) work when the amplifier's GPI/Remote On/Remote Off connectors (on the rear panel) are being used?**

No. If a device is using the **GPI/Remote On/Remote Off** connectors, the Power/Standby button and Toggle Standby option are ignored.

**How many PowerShareX amplifiers can I send GPIO remote on/off commands to at once?**

The ControlSpace EX-1280 processor has 5 control output connections, so you could connect up to 5 PowerShareX amplifiers directly to each processor connection and remotely them power on/off.

To accomplish this for more than 5 amplifiers, you would need a third-party relay device.

Alternatively, you can wake the amplifiers from standby mode using an incoming signal on any input channel. You can use the auto-standby feature to set all amplifiers to enter standby mode after a signal absence of up to 1 hour.

**Can I put a PowerShareX amplifier into/out of standby mode using timers?**

No, though this may be possible by using the **GPI Remote On/Remote Off** connectors instead:

You can create a timer for a ControlSpace EX-1280/EX-1280C processor and connect its **Control Outputs** to the **GPI/Remote On/Remote Off** connection on the PowerShareX amplifier. (You can daisy-chain to multiple amplifiers.)

## Control Questions

**Can I use ControlSpace Remote, CC-1D/CC-2D/CC-3D, CC-16, or CC-64 controllers with a PowerShareX amplifier without a DSP?**

Not currently. Those controllers will be supported in ControlSpace Designer 5.15 and later, but a ControlSpace EX/ESP processor will be required.

<b>Can I use ControlSpace Designer to assign parameter sets to control PowerShareX amplifiers so the controls work when the design is offline and without a host computer?</b>	Not currently. This will be supported in ControlSpace Designer 5.15 and later. Note that a ControlSpace EX/ESP processor will be required.
<b>Can I use the Bose Professional CC-1 with the VCA level inputs on the rear of PowerShareX amplifiers?</b>	No, you would need to use a third-party VCA 10 kΩ controller.
<b>Does PowerShareX support timers to change source selection and gain levels?</b>	Not currently. This will be supported in ControlSpace Designer 5.15 and later. Note that a ControlSpace EX/ESP processor will be required.
<b>How do I support larger systems with a third-party processor and multiple PowerShareX amplifiers? How can I control and monitor the amplifiers?</b>	A Q-SYS plugin and UDP control protocol guide are available <a href="#">here</a> .
<b>Do you support Q-sys 3<sup>rd</sup> party monitoring/control?</b>	Yes, a Q-SYS plugin is available <a href="#">here</a> .
<b>Can I control PowerShareX with other 3<sup>rd</sup> party Control?</b>	Yes, a UDP control protocol guide is available <a href="#">here</a> . Additionally, ControlSpace Designer 5.15 will include an updated serial control protocol guide.

## General Hardware & Software Questions

<b>How often should I clean the vent filters on PowerShareX amplifiers?</b>	Clean them when they're dirty. To do this, remove the front-panel faceplates by pulling them away from the amplifier to disengage the magnets, use compressed air to remove dust or wash them with clean water, and then let the filters dry thoroughly before reinstalling them.
<b>Are bridged outputs wired differently than mono outputs?</b>	Yes, see the online installation guide for more information.

<p><b>Do I need to bridge two channels to use a 70V/100V line with PowerShareX amplifiers?</b></p>	<p>No.</p>
<p><b>What should I use to size my circuit for PowerShareX amplifiers?</b></p>	<p><b>PSX1204D:</b> 600 W per amplifier  <b>PSX2404D:</b> 600 W per amplifier  <b>PSX4804D:</b> 1100 W per amplifier</p> <p>The power rating is on the bottom panel of the amplifier.</p>
<p><b>What is the 1/8-power thermal dissipation data?</b></p>	<p>See <a href="#">Appendix A</a> of this document.</p>
<p><b>What is the 1/3-power thermal dissipation data?</b></p>	<p>We do not provide 1/3-power thermal dissipation data for Bose Professional PowerShareX amplifiers. We provide 1/8-power data as it represents a ~9 dB crest factor (<math>10 \cdot \log_{10}(1/8) = 9</math> dB, which is still very compressed but conceivable). We believe no audio source, speech or music, would realistically require 1/3-power—amplifiers will never require this current or produce this thermal load. It is not a real-world condition.</p>
<p><b>What do the 4 front -panel ‘CLIP’ LEDs indicate?</b></p>	<p>Unlike PowerMatch, these “clip” LED turns on every time any of the channel’s user limiters are engaged. Designers should try to stay always below limiting so the clip LED should not be steadily on during normal usage.</p>
<p><b>What does the amplifier’s front-panel Limit LED indicate? Is it the same as PowerMatch Limit LED?</b></p>	<p>The Limit LED on a PowerShareX amplifier indicates different conditions than that of the PowerMatch amplifier:</p> <ul style="list-style-type: none"> <li>Flashing: Breaker save is enabled</li> <li>Solid on: Breaker save is limiting power draw (halves the power consumption)</li> </ul> <p>Note that there is no front-panel LED indication for input clipping.</p>

<p><b>How do I access the front-panel input attenuation controls and what do they adjust?</b></p>	<p>Remove the left front-panel faceplate by pulling it away from the amplifier to disengage the magnets.</p> <p>The attenuation controls adjust the output level of each channel. This affects the analog inputs, Dante inputs, and pink-noise generator.</p>
<p><b>What does the rear-panel 35Hz/70Hz DIP switch do?</b></p>	<p>This switch sets the high-pass filter to 35 Hz or 70 Hz. The filter is a second-order Butterworth, 12 dB/octave. Note that this is applied in addition to any software preset selections, so in most cases this will be off.</p>
<p><b>Is there any indicator on the amplifier's front panel that it is connected to ControlSpace Designer software?</b></p>	<p>No.</p>
<p><b>How do I know if an input is clipping?</b></p>	<p>Please refer to the device block in the ControlSpace Designer software.</p>
<p><b>Is the PowerShareX amplifier's pink noise different from a ControlSpace EX processor's on-board noise?</b></p>	<p>Yes, the PowerShareX amplifier's pink noise sounds different as its file is looped after a shorter duration.</p>
<p><b>Do any analog sensitivity settings of a PowerShareX amplifier match those of a PowerMatch amplifier?</b></p>	<p>No, but ControlSpace Designer 5.13 and later include analog and digital trim with many adjustments to achieve the desired signal level.</p>
<p><b>I have a system of eight PowerMatch PM8500N amplifiers and need to replace one of them with a PowerShareX PSX4804D. What do I need to do to use the new amplifier?</b></p>	<p>Add a delay of 1.5 milliseconds to all the other PowerMatch PM8500N amplifiers to match the increased latency of PowerShareX. Then reload any Bose Professional speaker PEQ presets to the PowerShareX amplifier (do not copy and paste them). Perform any other programming (array EQ, matrix changes, etc.) needed to get similar results.</p>
<p><b>Do loudspeakers sound the same on mono channels as they do on bridged channels?</b></p>	<p>There may be slight variations in frequency response between bridged and mono modes of any power amplifier.</p>



<p><b>Is the input latency the same on PowerShareX amplifiers as on PowerMatch or PowerShare amplifiers?</b></p>	<p>PowerShareX has an additional 1.5 milliseconds of latency compared to PowerMatch or PowerShare amplifiers.</p>
<p><b>How does the PowerShareX amplifier manage the latency between the analog signal and the digital input signals?</b></p>	<p>There is no difference in latency between the analog and digital input signals of PowerShareX amplifiers. They have a 2.5 millisecond fixed-latency architecture.</p>
<p><b>How do I switch between analog and digital input types on a PowerShareX amplifier?</b></p>	<p>Use ControlSpace Designer software to do this. Note that cannot change the input type while offline except automatically via the backup strategy feature (i.e., one input type failing over to another type).</p>
<p><b>In ControlSpace Designer, are the EQ device blocks for PowerShareX amplifiers the same as those for PowerMatch and PowerShare amplifiers?</b></p>	<p>If you are using Bose Professional speaker EQ presets, PowerShare, PowerShareX, and PowerMatch amplifiers will all have the frequency response, but there are slight differences in some device blocks that could affect manual EQ works:</p> <p style="padding-left: 40px;">The PowerShareX PEQ (before the Array EQ) is 8-band, whereas the PowerMatch PEQ is 5-band and the PowerShare PEQ is 9-band.</p> <p style="padding-left: 40px;">All PowerShareX EQs (bandpass, PEQ, speaker EQ) have a minimum gain of -15 dB and a maximum gain of +15 dB, whereas other Bose Professional processors and smart amplifiers have a gain range of -20 dB and +20 dB.</p> <p style="padding-left: 40px;">The -6 dB slope option is not available on PowerShareX high-pass and low-pass filters.</p>
<p><b>Are limiter options for PowerShareX amplifiers the same as those of PowerMatch amplifiers?</b></p>	<p>PowerShareX amplifier limiters have a minimum threshold of 10 V, whereas limiters for PowerMatch amplifiers and other Bose Professional smart amplifiers and processors have a 0.5 V minimum threshold.</p>

<p><b>What is the new V Clip limiter in ControlSpace Designer 5.12 and later?</b></p>	<p>The V Clip limiter has a fixed attack time of 0.3 milliseconds with a lookahead of 0.3 milliseconds. It functions similarly to the PowerMatch/PowerShare V Peak limiter. A combination of clip and peak limiting is used on most Bose Professional loudspeaker presets with PowerShareX amplifiers to achieve the best results. V Clip, V Peak, or both options must be enabled.</p> <p>In ControlSpace Designer 5.13 or later, the V Clip limiter is completely editable for custom presets.</p>
<p><b>How do I set a PowerShareX amplifier to restore the settings last pushed from ControlSpace Designer when restarting (like ControlSpace EX/ESP-880A processors and PowerShare amplifiers)?</b></p>	<p>This is not supported. PowerShareX amplifiers will always restore the last settings, not a previously pushed state.</p>
<p><b>Can PowerShareX amplifiers use the interactive tuning feature in ArmoníaPlus software?</b></p>	<p>Not currently.</p>
<p><b>Can I support EN 54-16 projects and PAVA systems with PowerShareX amplifiers?</b></p>	<p>We expect to have EN 54-16/PAVA support for PowerShareX amplifiers in 2025.</p>
<p><b>Can I support larger systems with one Bose Professional processor (acting as RTC) with 40 PowerShareX amplifiers?</b></p>	<p>Yes. There are no known issues with using this many PowerShareX amplifiers. We have tested 40 PowerShareX on one project file without encountering any issues while performing firmware updates or going online/offline for project changes.</p>
<p><b>Do PowerShareX amplifiers support active damping control?</b></p>	<p>Not currently.</p>
<p><b>Do PowerShareX amplifiers have the same delay time as previous Bose Professional amplifiers?</b></p>	<p>No, the maximum delay time is 2 seconds for PowerShareX amplifiers and 3 seconds for PowerMatch amplifiers.</p> <p>If you need more delay, use ControlSpace EX/ESP processors or third-party processors.</p>

<b>How can I select a signal generator sound other than pink noise?</b>	<p>Pink noise is the only option. For other types of noise, use ControlSpace EX/ESP processors.</p> <p>PowerShareX amplifiers have an onboard pilot tone generator intended for use with the advanced alarms: pilot tone load and pilot tone voltage. The pilot tones are sine waves at 20 Hz – 22 kHz and at the end of the signal path.</p>
<b>Can I group device blocks across multiple PowerShareX amplifiers in ControlSpace Designer software?</b>	Yes.
<b>How do I assign array EQ and 9-band PEQ to multiple output channels in ControlSpace Designer software?</b>	Group the channels and adjust the EQ of any of those output channels. Those changes will be applied to other channels in the group.
<b>How do you adjust analog input gain?</b>	Use the rear-panel <b>gain DIP switches</b> and/or the analog trim control in ControlSpace Designer 5.13 or later.
<b>Do PowerShareX amplifiers have fixed channel sizes (e.g., 300W per channel)?</b>	No. Power-sharing technology enables you to load channels asymmetrically. If you want to see how the amplifier would perform if using all channels symmetrically, refer to the online technical data sheet.
<b>Can I review error logs stored on PowerShareX amplifiers?</b>	Not currently.
<b>How do I sum fault alarms from four outputs into one?</b>	You can do this with wires or with third-party controls.
<b>How do I use pilot tone alarms and nominal impedance alarms?</b>	See the training video available in the <a href="#">learning center</a> .
<b>Where are features like all-pass filters, band-pass filters, raised-cosine EQ, FIR support available in ArmoníaPlus?</b>	All-pass and band-pass filters are not used in Bose Professional loudspeaker presets. We do not support FIR filter setting and import or raised-cosine EQ.

**Can PowerShareX amplifiers monitor live impedance (measure load test panel with “capture”) while online like PowerMatch amplifiers could?**

Yes, this feature is available in ControlSpace Designer 5.13 and later.

## Appendix A: AC Current Draw & Thermal Dissipation Information

Power & Thermal		PSX1204D	PSX2404D	PSX4804D	
@ 115 V	Idle	Power	31.1 W	31.1 W	31.3 W
		Current Draw	0.45 A <sub>RMS</sub>	0.45 A <sub>RMS</sub>	0.47 A <sub>RMS</sub>
		Thermal Loss	106 BTU/h (27 kcal/h)	106 BTU/h (27 kcal/h)	107 BTU/h (27 kcal/h)
	1/8 Power @ 4Ω	Power	227 W	405 W	823 W
		Current Draw	2.1 A <sub>RMS</sub>	3.7 A <sub>RMS</sub>	7.7 A <sub>RMS</sub>
		Thermal Loss	261 BTU/h (66 kcal/h)	360 BTU/h (91 kcal/h)	760 BTU/h (192 kcal/h)
@ 230 V	Idle	Power	31.5 W	31.5 W	31.6 W
		Current Draw	0.25 A <sub>RMS</sub>	0.25 A <sub>RMS</sub>	0.27 A <sub>RMS</sub>
		Thermal Loss	107 BTU/h (27 kcal/h)	107 BTU/h (27 kcal/h)	108 BTU/h (27 kcal/h)
	1/8 Power @ 4Ω	Power	251 W	405 W	840 W
		Current Draw	1.4 A <sub>RMS</sub>	2.1 A <sub>RMS</sub>	4.3 A <sub>RMS</sub>
		Thermal Loss	344 BTU/h (87 kcal/h)	360 BTU/h (91 kcal/h)	818 BTU/h (206 kcal/h)