PCH X2

Active Stereo DI Isolator

USER MANUAL

strymon®

WELCOME TO PCH X2

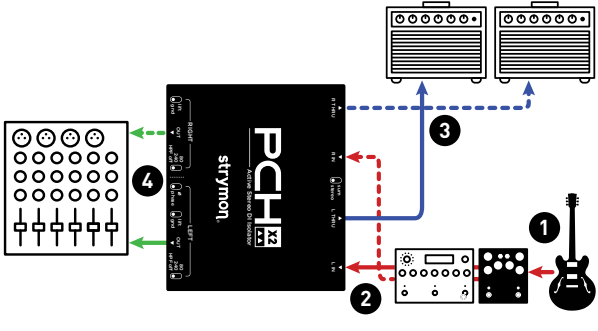
The Strymon® PCH X2 is a phantom powered, actively isolated direct interface (DI). PCH X2 is designed to provide optimized impedance and noise-free signal routing of your mono or stereo instrument, pedalboard, or other audio sources to a mixing console, audio interface, amplifier, or other external equipment.

Live Setup: Using PCH X2 with an Instrument and Pedalboard

Minimize the volume on all devices before making your connections.

1. Connect your guitar into a pedalboard containing an amp + cab simulation pedal or modeling device (such as Strymon Iridium).
2. Connect the 1/4" output of your pedalboard to PCH X2's Left IN. For stereo, connect to both PCH X2's Left and Right IN. See SUM/STEREO additional routing options.
3. Connect PCH X2's respective Left THRU and/or Right THRU Outs to the input of your guitar/bass amps for stage monitoring. Or, connect the THRU Outs to other unbalanced input gear, such as effects, 1/4" FRFR amp inputs, etc.
4. PCH X2 requires 48V phantom power for each of its left and right channels. Mute the input channels you intend to use on the mixer before connecting each PCH X2 XLR OUT to its XLR inputs. Once connected, enable the mixer's phantom power for each channel, then unmute the channels.

Verify that PCH X2's power LEDs for each left and right channel in use are lit, indicating they are both receiving phantom power. Then, slowly increase the volume on your devices to your preferred levels.



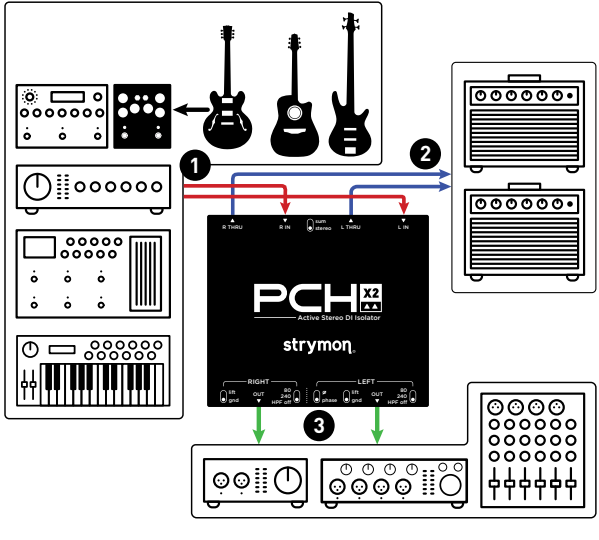
SETUP EXAMPLES

Live, Studio, and Home Setup

PCH X2 can be used for optimal connectivity with a variety of mono and stereo audio gear for performing, recording, and practicing.

Before making any connections, make sure all volume levels on your input and monitoring devices are muted.

1. Connect your instruments: a guitar, bass, piezo pickup/acoustic instrument, amp + cab pedal/modeling device, keyboard, etc., to PCH X2's Left or Right IN, or to the Left and Right INs for stereo input. See SUM/STEREO additional routing options.
2. Connect PCH X2's Left THRU Out to the input of your guitar or bass amplifier, 1/4" FRFR amp input, or other unbalanced input gear. If using both INs, connect each respective THRU Out to separate amplifiers.
3. PCH X2 requires 48V phantom power. Mute the input channels on the mixer or interface before connecting PCH X2 to its XLR inputs. Once connected, enable the mixer or interface's phantom power and then unmute the input channels in use.
   - Slowly increase the volume on all devices.
   - Set PCH X2's HPF switch to 80 or 240 to reduce low-end rumble or muddiness as needed.
   - Set PCH X2's LIFT/GND switches to LIFT if experiencing ground hum.



ABOUT PCH X2

A direct interface (DI) device is an essential tool for connecting an unbalanced and/or high impedance instrument, such as a guitar, bass, piezo pickup-equipped instrument, pedalboard, or keyboard, to a low impedance audio system, including a mixing desk, preamp, recording interface, or other balanced XLR input gear.

While many DI boxes are basic passive units that dutifully convert a 1/4" unbalanced input to a balanced, low impedance XLR output, the Strymon **PCH X2 Active DI Isolator** includes two high headroom, buffered 1/4" inputs for exceptional sound clarity and minimal distortion. Audio transformers additionally isolate your signals, reducing interference and noise. With flexible mono or stereo I/O, PCH X2 accommodates both high and low impedance sources and outputs, making it a highly adaptable solution for a variety of stage, studio, and rehearsal configurations.

PCH X2's high impedance 1/4" inputs and buffered low impedance XLR output allow for long cable runs with retained clarity and minimal noise. At the same time, the inputs are split to the Left and Right THRU outputs for routing to amplifiers and other unbalanced input gear, providing seamless integration into your rig, either as stereo or optionally summed to mono. Additionally, a switchable High Pass Filter provides reduced low-end rumble and muddiness on the XLR Outs.

FEATURES

PCH X2 is conveniently powered by 48V phantom power provided from external gear via each of its XLR connections, eliminating the need for a standalone power supply or batteries. Its compact size and rugged construction make it ideal for your gig bag, ensuring you're always prepared for any setup.

1/4" Ins

Two buffered, unbalanced inputs for instruments, pedalboards, modelers, or other mono or stereo audio sources. Connect using shielded instrument cables.

- High input impedance provides compatibility with both active and passive signal sources
- High headroom eliminates clipping

1/4" THRU Outs

Two unbalanced, passive outputs, ideal for routing each input signal to an amp, additional effects, or other gear. Connect using shielded instrument cables.

When using both inputs, the signal can be summed to the Left THRU and Left XLR Out, or routed as stereo to the Left and Right THRU and XLR Outs via the Sum/Stereo switch.

FEATURES

XLR OUT

Left and Right active XLR outputs, balanced for optimal signal clarity with low distortion, even with long cable runs to stage or studio gear. Isolated for exceptional low-noise operation.

- Switchable High Pass Filter for each XLR Out offers Off, 80Hz, or 240Hz settings for low end frequency reduction. (See the HPF - Frequency Response graph.)
- Ground lift allows ground disconnect on the XLR to reduce hum or unwanted noise
- Phase switch allows inverting the Left XLR Out to eliminate phase issues

Phantom Power

PCH X2 utilizes standard 48V phantom power for each of its Left and Right XLR Out connections. Phantom power is commonly offered via the XLR input channels of mixing desks, preamps, and interfaces.

- Power LEDs indicate each channel's phantom power state
- No additional power adapter or batteries required

SPECIFICATIONS

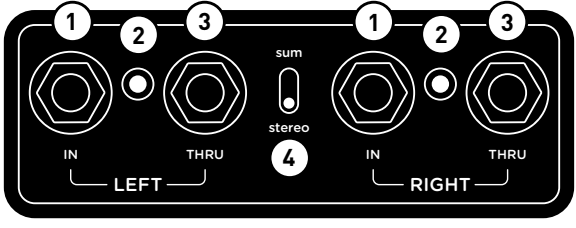
INPUTS	
Input Impedance:	2 MΩ, when SUM enabled: 4 kΩ
Max. Input Level:	+20.5dBu

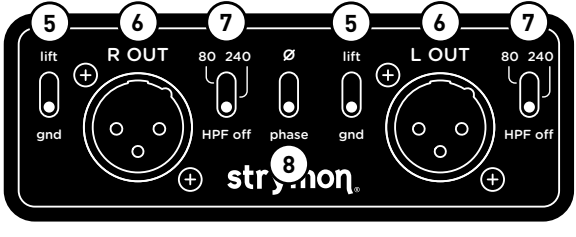
THRU OUTPUTS	
Gain, Relative to Input:	+0dB, when SUM enabled: -6dB
Output Impedance:	1K SUM enabled

XLR OUTPUTS	
Gain, Relative to Input:	-20dB, when SUM enabled: -26dB per input
Output Impedance:	100 Ω, when SUM enabled: 100 Ω
Max. Output Level:	+0.5dBu
Frequency Response:	+/- 0.25dB, 20Hz - 30kHz (13.6K load, HPF off) +/- 0.5dB, 10Hz - 80kHz (13.6K load, HPF off) +/- 0.5dB, 20Hz - 20kHz (600 Ω load, HPF off)

POWER SUPPLY	
Current Requirement:	5mA @ +48VDC (per channel)

CONTROLS AND CONNECTIONS





1. **IN LEFT/RIGHT** 1/4" unbalanced, high impedance, buffered inputs. Connect a guitar, bass, keyboard, amp+cab simulation pedal, or modeler. Use either input for a single mono source, or both inputs for a stereo source, or two independent mono sources.

2. **POWER LED LEFT/RIGHT** Lit brightly for each PCH X2 channel when powered on. Left and Right channels each require 48V phantom power for their use.

3. **THRU LEFT/RIGHT** 1/4" unbalanced, passive outputs. Pass your input to an amplifier (or two amps for stereo), effects, or other devices. See SUM/STEREO for signal routing options.

4. **SUM/STEREO** Configures the inputs as either summed or stereo.
   - **sum**: Merges Left and Right inputs. The summed signal is routed to the Left Thru and Left XLR output.
   - **stereo:** Discretely routes each Left & Right In to the respective Left & Right THRU and XLR outputs. Use the **stereo** setting for either one stereo source or two independent mono sources.

5. **LIFT-GND RIGHT/LEFT** Set to lift (up position) the ground for either XLR Out if experiencing hum.

CONTROLS AND CONNECTIONS

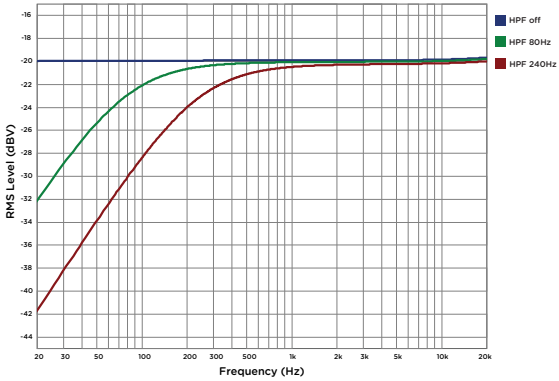
6. **OUT RIGHT/LEFT** Balanced XLR, low impedance, active outputs. Connect to a mixing desk, preamp, or other low impedance gear for low noise/distortion routing of the source inputs. See SUM/STEREO for signal routing options.

   PCH X2 requires 48V phantom power for each XLR connection to power the corresponding channel. Mute the input channels of your mixing desk or other devices before connecting to PCH X2's XLR Outs, then raise the volume slowly.

7. **HPF RIGHT/LEFT** Set the desired High Pass Filter option on each channel (see the HPF Frequency Response graph):
   - **off** (down position) to bypass the filter
   - **240** (middle position) to reduce frequencies below 240Hz
   - **80** (up position) to reduce frequencies below 80Hz

8. **PHASE** Set to **Ø** (up position) if encountering phase issues with the left and right signals. This inverts the phase of the Left XLR output.

HPF - Frequency Response



SUPPORT

Additional Product Information: strymon.net/support/PCHX2

Questions & Technical Support: support@strymon.net

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