

(As an option, the P•3A may be 192KHz enabled on a 192KHz source, by switching to I²S Direct Mode, thus bypassing the CS8420 input receiver, currently limited to a maximum sample rate of 96KHz. Please contact us for the upgrade. Users of modified units may engage 192KHz Direct Mode by selecting the I²S input, pressing and holding the Input selection button for more than two seconds, then releasing it. The Program LED 3 will light indicating I²S Direct Mode selection. To remove I²S Direct Mode, once again press and hold the input button for more than two seconds.)

Enjoy your listening.

Specifications

Inputs	I ² S, AES/EBU, Coaxial S/PDIF, TosLink
Input impedance	75 Ohms
Outputs	Coaxial RCA pair
Output impedance	100 Ohms
Output voltage	2.5 Volt
Input bit resolution	16–24 Bit
Output bit resolution	16, 18, 20, 24 Bit (selectable)
Input sample rate	8KHz–108KHz (optional 192KHz via I ² S input)
Switches	Input Selection & Output Program (multi-function)
Power requirements	9VAC@1.8A
Size	5.5" x 8.25" x 1.75"
Weight	4 lbs
Orientation	Horizontal or Vertical



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P•3A Operating Instructions



Thank you for purchasing the Perpetual Technologies P•3A.

The P•3A is an extraordinary value in advanced Digital-to-Analog Conversion. Featuring a state-of-the-art DAC chipset, the P•3A offers reference-level audio performance in a contemporary, compact format. The P•3A is able to convert inputs from 16-Bit / 44.1KHz through 24-Bit / 192KHz and can upsample all inputs to 96KHz. The P•3A forms an integral part of the enthusiast's modern high-fidelity system.

Product Description

The P•3A is based on the same chassis and control format as the Perpetual Technologies P•1A Digital Correction Engine, and is the perfect companion. The P•3A DAC is the only out-board DAC capable of extracting every benefit the P•1A has to offer. The P•3A is based on the latest-generation Crystal Semiconductors CS4397 chipset and CS8420 input receiver. The CS 8420 accepts up to 96KHz S/PDIF-encoded datastreams while the I²S input may accept 24-Bit / 192KHz data. Contact the factory to enable DSD (Sony® SACD).

In addition to advanced digital-to-analog conversion, the P•3A also includes a sophisticated upsampling routine which samples to as high as 96KHz. Four inputs are provided: one I²S via an Audio Alchemy standard, 5-pin mini-DIN, a single S/PDIF via coax, one AES/EBU via balanced XLR, and one optical TosLink. Engaging the P•3A's I²S Direct Mode setting bypasses the input receiver and allows the P•3A to throughput up to 24-Bit / 192KHz. A single pair of single-ended outputs are driven by a high-current, Class-A output stage using Burr-Brown OPA134 devices.

Contents

In the box you should find:

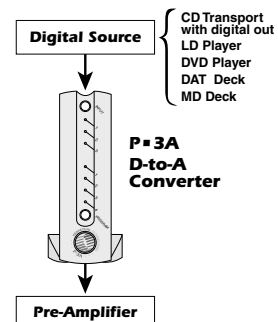
- The P•3A
- The Operating Instructions booklet and Warranty Card
- An I²S cable
- A detachable power supply
- A pair of metal feet for vertical use
- Four small, stick-on rubber feet for optional horizontal installation



Adding the Feet

To use the P•3A vertically, expose one of the sticky surfaces of the double-sided mounting tape inside each metal foot, then carefully slide the feet onto the bottom of the chassis near the front and rear. The outer edges of the feet should be about 1/2-inch from the outboard edge of the dark grey chassis. The logo on the front panel goes to the bottom. (See photo to left)

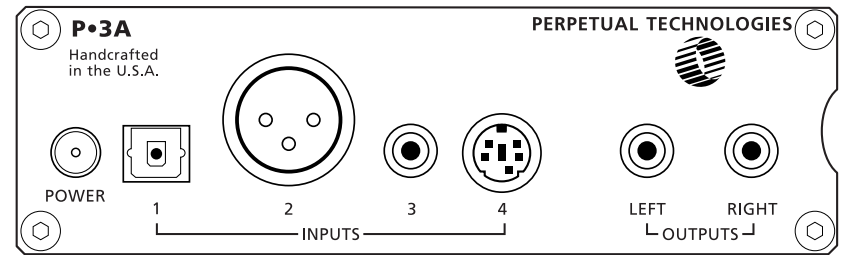
To use the P•3A horizontally, use the four small rubber feet provided. Place one near each corner on the broad bottom side of the chassis. To determine top/bottom orientation, look at the back panel or be sure the front panel logo is on the right. (See photo to the right)



Making Connections

The P•3A connects like any typical DAC, between a digital source and your preamplifier. As a precaution, be sure the power to the P•3A is disconnected before making any signal connections.

If you are using a P•1A Digital Correction Engine, connect it between the digital source and the P•3A. (See your P•1A Operating Instructions for more information.)



First, Connect the Inputs

The P•3A has four digital inputs: An I²S via a 5-pin mini-DIN connector conforming to the Audio Alchemy standard, a coaxial S/PDIF via an RCA connector, AES/EBU on an XLR connector, and an optical Toslink.

Connect your digital source to the P•3A using your highest-quality digital interconnect cable. Premium quality cables will be available via our website.

Then, Connect the Output

Analog data is output from the P•3A via a pair of RCA connectors. Connect the output of the P•3A to your preamp, integrated amplifier, or directly to a power amp with level control.

Finally, Connect the Power

Place the power supply in a suitable location and run the output cable to the P•3A. Firmly press the connector into the POWER jack on the back of the P•3A, and then attach the power cord to an AC mains. Once installed in your system, we recommend you leave the P•3A powered all the time.

Answers to many installation questions may also be found on our website – we suggest you start with the FAQ (Frequently Asked Questions) page.

Buttons and the Indicator LEDs

Program Button:

- Momentarily press & hold the button*
- 1 – Green – Absolute phase uninverted
 - 1 – Red – Absolute phase inverted
- ### Program Display:
- 2 – Green – 96KHz (typical operation)
 - 2 – Red – 44.1KHz
 - 2 – Orange – 48KHz
 - 2 – Off – 192KHz
 - 3 – Green – I²S Direct

Input Button:

- Momentarily press & hold the button*
- 1 – TosLink
 - 2 – AES/EBU
 - 3 – COAX
 - 4 – I²S
- (LOCKED Green, UNLOCKED Red)

(continues over)

