

Noise Engineering

Sinc Pravus

Quad offset and mult in 4 HP

Overview

Type	Quad offset
Size	4 HP
Depth	.9 inches
Power	2x5 Eurorack
+12V	50mA
-12V	50mA
+5V	0mA

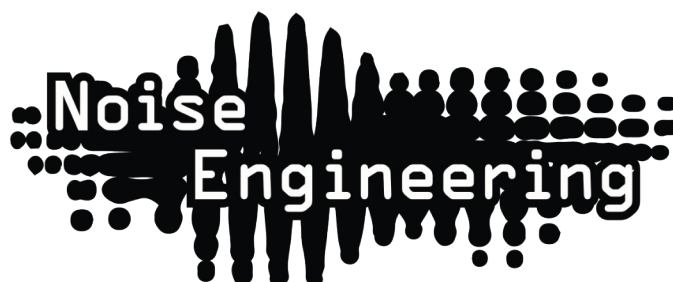
Sinc Pravus is a 4 HP quad offset. Each channel is controlled by a dedicated potentiometer with an LED for monitoring signal outputs. The input jacks are normaled from top to bottom so it can act as a mult and offset the same signal by different amounts. Its offset range can be set with a back-panel switch to either ± 5 or ± 10 volts. With nothing patched to the inputs, the channels can be used as DC-voltage generators, especially useful for controlling multiple CV destinations with a single parameter. Sinc Pravus is a workhorse in 4 HP.

Etymology

Sinc - from Old English sinc: "treasure"

Pravus - from Latin: "crooked"

"Crooked treasure"



Power

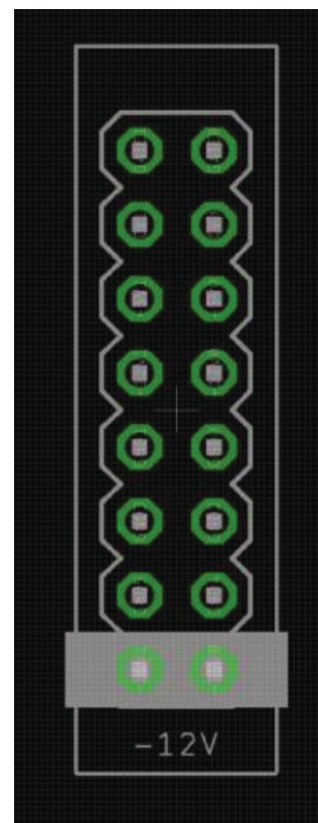
To power your Noise Engineering module, turn off your case. Plug one end of your ribbon cable into your power board so that the red stripe on the ribbon cable is aligned to the side that says -12v and each pin on the power header is plugged into the connector on the ribbon. Make sure no pins are overhanging the connector! If they are, unplug it and realign.

Line up the red stripe on the ribbon cable so that it matches the white stripe and/or -12v indication on the board and plug in the connector.

Screw your module into your case BEFORE powering on the module. You risk bumping the module's PCB against something metallic and damaging it if it's not properly secured when powered on.

You should be good to go if you followed these instructions. Now go make some noise!

A final note. Some modules have other headers -- they may have a different number of pins or may say NOT POWER. In general, unless a manual tells you otherwise, DO NOT CONNECT THOSE TO POWER.



Warranty

Noise Engineering backs all our products with a product warranty: we guarantee our products to be free from manufacturing defects (materials or workmanship) for one year from the date a new module is purchased from Noise Engineering or an authorized retailer (receipt or invoice required). The cost of shipping to Noise Engineering is paid by the user. Modules requiring warranty repair will either be repaired or replaced at Noise Engineering's discretion. If you believe you have a product that has a defect that is out of warranty, please contact us and we will work with you.

This warranty does not cover damage due to improper handling, storage, use, or abuse, modifications, or improper power or other voltage application.

All returns must be coordinated through Noise Engineering; returns without a Return Authorization will be refused and returned to sender.

Please contact us for the current rate and more information for repairs for modules that are not covered by our warranty.

Interface

Knobs 1-4

Bipolar controls to set offset amount; above 12:00 the offset is positive, and below 12:00 the offset is negative.

LEDs 1-4

Status indicators for their respective channels. Positive voltage is green, negative voltage is red. Duplicates information given by potentiometer position when nothing is plugged into inputs.

In 1-4

CV inputs. Ins are normaled from top to bottom so that the module can be used as a mult; normaling is broken when inputs are patched (allowing for use as two 1-to-2 mults, or a 1-to-3 mult and a single offset).

Out 1-4

CV outputs.

Back panel switch

This changes the offset range of all 4 channels of SP. In the bottom position the offset range is $\pm 5V$; in the top position the offset range is $\pm 10V$.

Patch Tutorial

Offsets are generally used to change the minimum voltage that a CV signal reaches.

For example, if you have a bipolar signal like an LFO and want to use it with a unipolar CV input, patch it into a channel of Sinc Pravus and adjust the offset until the output only shows a positive (green) signal.

By patching a CV signal through an attenuator like Sinc Defero and then into a channel of Sinc Pravus, you attain complete control of the minimum and maximum voltages of a modulation signal.

This technique is also useful when modulating modules whose potentiometers act as attenuators over their CV inputs.

Offsets can also be used as macro controls: patch a channel of Sinc Pravus into a mult, patch the outputs of that mult to a few CV destinations in your system, and use the offset control on SP to move them all at once.

If you have a signal that you want to offset different amounts and send to different CV destinations, patch it into the 1 input of SP, and patch the four outputs to your desired CV destinations. The inputs of SP normal down, and each copy can be offset by different amounts using the potentiometers.

Input and output voltages

Sinc Pravus can be used with any Eurorack CV signal. It can output signals from $\pm 10V$.



Design Notes

We have wanted to do a simple utility like this for a few years. A few years ago, we prototyped a more complicated take on this that we really liked but it required some kind of ridiculous circuitry and parts and when we got a build quote on it, we realized there was no way we could bring it to market, so we canned the concept for a bit.

Our need to have something like this on our workbenches (and desire for it in our cases) didn't go away though and the parts shortage showed no signs of abating. As we pondered what we could do with what we had, Sinc Pravus was an obvious fit if we could make it work so earlier this year we put our noggins together. We agreed that we could do what we needed in 4 HP with a more reasonable complement of parts at a more reasonable price.

The first version had some really silly problems. You may know that Noise Engineering modules don't typically go to $\pm 10V$: and indeed, despite our best efforts, the first prototype was problematic in that range. Everything else worked swimmingly, but when we tested the 10V, we had a pretty big droop problem.

It didn't take long to sort out the issue, and fortunately, we were able to prototype in place: Kris ripped off the op amp in question and then with a few lifted pins and wires and other doodads, Bob's your uncle, we solved the problem. Poor Markus had to do a bit of driving back and forth during the testing of this module (okay, twice. They had to go to Casa NE twice. But you know, LA traffic.).

An updated schematic later and we were ready to get SP out the door. It's a simple little module but it was a nice reminder that the unexpected can pop up and show you what you don't know. We hope it finds a place in your system.