Noise Engineering
Seca Ruina
Multiband distortion drive.
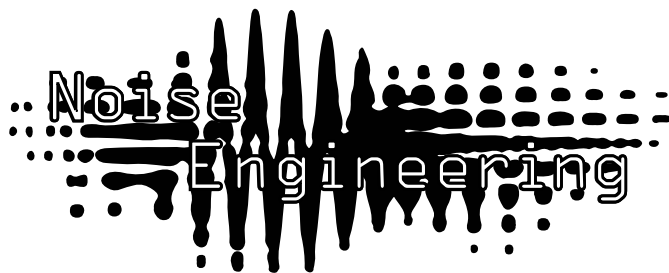
Overview

| Type	Multiband distortion/VCA
Size	6HP Eurorack
Depth	.8 Inches
Power	2x5 Eurorack
+12 mA	85 mA
-12 mA	80 mA

Distortion is fun, but it's even better when you split it up across the frequency spectrum. Seca Ruina takes an input, splits it up into three frequency bands, and lets you drive them into annihilation. SR includes a bypassable VCA on the output and CV over individual band and universal drive amount. With individual outputs for each band, you can process each band further externally. So much potential in only 6hp!

Etymology
Seca -- from Latin secare: "to cut"
Ruina -- from Latin: "destruction"

"Cut and destroy"
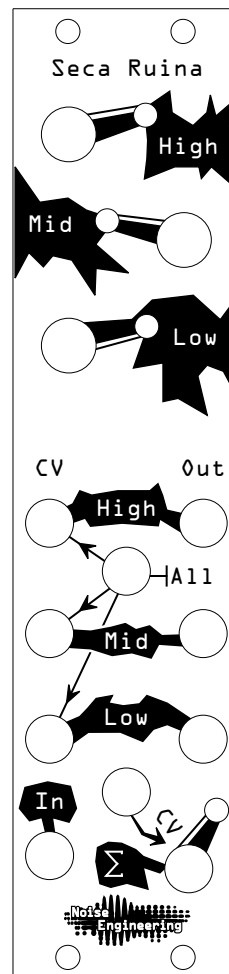
Power

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.

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.
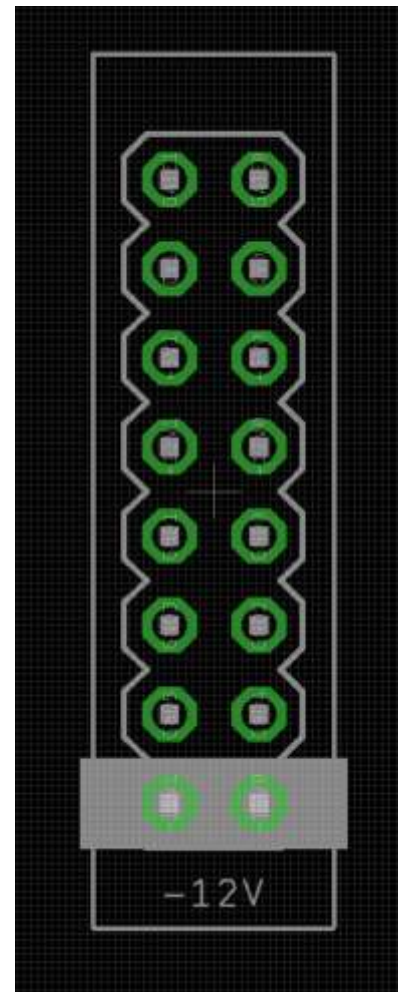
Warranty

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 of the original retail purchase (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.

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

Interface

High/Mid/Low jack and knob:
Drive amount for each band. Knob acts as an offset for CV.
High/Mid/Low CV in:
CV input controlling drive amount for each band.
All:
CV over high, mid, and low drive amount simultaneously.
High/Mid/Low out:
Individual outputs of each band.
In:
Audio input.
Sum (Sigma) out:
Sum of all three outputs.

Patch Tutorial

Patch 1:
Input a simple waveform to the Audio in. Connect the Sum out to your mixer and tweak the knobs to hear how SR can make even simple sounds exciting.
Patch 2:
Input a more complex sound like a drum loop or melody line and tweak the drive amounts to completely badassify your input!
Patch 3:
Patch a free-running oscillator like Loquelic Iteritas to the input. Set the drive amounts to taste, then patch an envelope to the Sum CV input. This makes SR into a VCA and creates a complete voice.

Input voltages

All CV inputs on SR use a range of 0 - 5v.

Design Notes

SR was one of the early distortion module ideas we had in the distortion-of-the-month plan. It was initially a 4hp module and had no CV. We pretty rarely want to make a module larger unless we really think it increases the value and utility of the module a lot. But we got the first prototype in hand and realized that in this case, CV was key to the module. We revised and added the CV jacks, adding 2hp to the footprint.

The next version still didn't perform perfectly so there was a little more circuit tweaking -- it took a few clever workarounds but once we had it, we were happy. That turned into the module you hold today and became the basis for some future modules we have planned.