

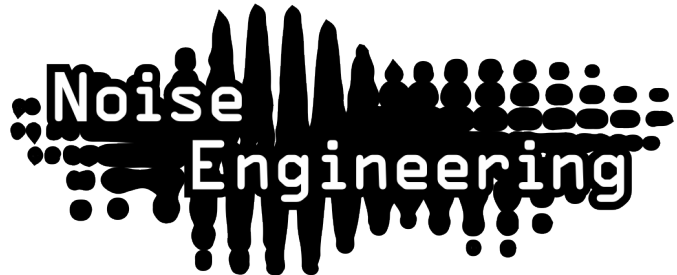
# Noise Engineering

## Ruina Versio

Stereo distortion with wavefolding, octavizing, phase shifting, multiband saturation, notch filtering, and DOOM.

### Overview

Type	Stereo distortion
Size	10 HP
Depth	1.5 inches
Power	2x5 Eurorack
+12V	70mA
-12V	70mA
+5V	0mA



Ruina Versio answers the age-old question: how many different types of distortion can we fit on a single module? The answer is a lot, as it turns out. Need a wavfolder? We got a wavfolder. Want some multiband distortion? Of course you do! And that's not even including the DOOM parameter!

We also decided that Smoosh was a parameter we needed in our lives: press it and add 128dB of drive. Yes, you read that right: 128dB. Why have SOME drive when you can have ALL the drive?

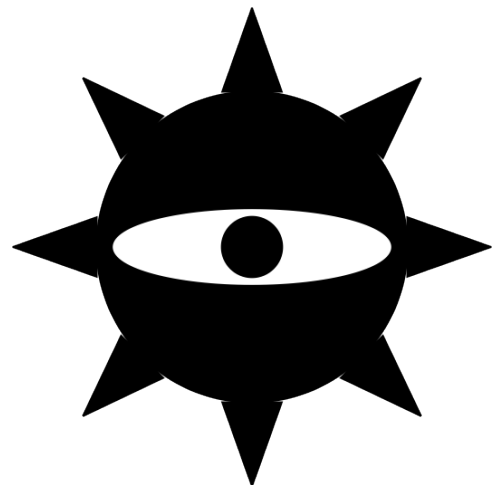
Not only is RV a unique distortion, it's a stereo DSP platform. A simple USB connection allows you to update RV to a variety of firmwares. Open-source support is available, too, which allows you to write your own firmware! All info can be found on the [World of Versio page here](#).

### Etymology

Ruina -- from Latin: "destruction"

Versio -- from Latin: "versatile"

"Versatile Destruction"



# Power

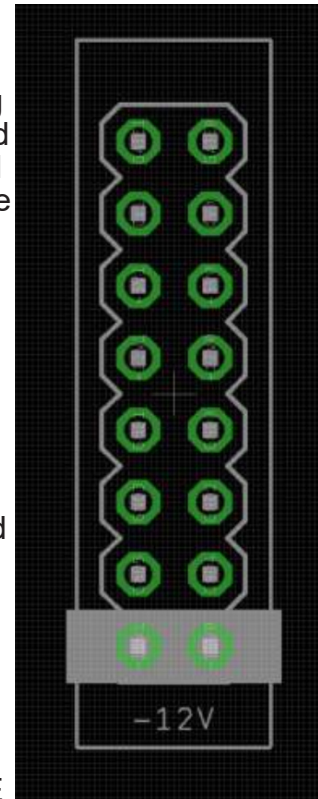
To power your Noise Engineering module, turn off your case. Plug one end of your ribbon cable into your power board so that the red stripe on the ribbon cable is aligned to the side that says -12v and each pin on the power header is plugged into the connector on the ribbon. Make sure no pins are overhanging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

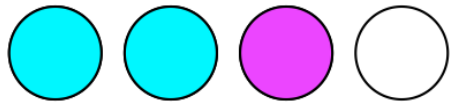
This warranty does not cover damage due to improper handling, storage, use, or abuse, modifications, or improper power or other voltage application.

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.

## Color code

On boot, the RV's LEDs will shine with this color pattern to indicate that it is running the current RV firmware:



## Input and Output Voltages

All CV inputs expect 0-5 V. All pots act as offsets and sum with the input CV. The FSU gate input responds to signals above +2 V. The audio inputs clip around 16 V peak to peak.

## Interface

**Blend:** Dry/wet balance control. When turned fully left, the unmodified input signal is passed through. Fully right, only the processed signal is heard. Points in the middle give you a mix of both.

**Fold:** Wavefolder, based on the Noise Engineering Infinifolder that appears on many modules like the Basimilus Iteritas Alter.

**Center:** Width and position of the multiband saturator center band.

**DOOM:** Doom is a suboctave chorus. Imagine it like a suboctave generator, but evil: as you turn it up, the louder the suboctave is, and the more out-of-tune it becomes. In the top quarter of the knob, overtone buzz is added to the suboctave chorus.

If you've ever wanted to emulate a swarm of bees descending on your waveforms, this is the knob for you.

**Phase:** Phase shifts the left and right signals to create stereo width and/or phasing effects.

**Drive:** Multiband saturator, inspired by our Seca Ruina module. Emphasizes the four different bands, isolating the lowest when turned fully counterclockwise and the highest turned fully clockwise. Blends through low, low-mid, high-mid, and high bands at other settings.

**8vize:** A full-wave rectification distortion, inspired by our Pura Ruina module.



# Interface (cont.)

**UND/X/OVR:** Sets the signal flow:

- **UND:** Fold -> DOOM -> Rectify -> Saturate
- **X:** Fold -> Saturate -> Rectify -> DOOM
- **OVR:** Fold -> DOOM -> Rectify -> Saturate -> Fold (again)

**OFF/ON/TRK:** Notch filter:

- **OFF:** Off.
- **ON:** Fixed-frequency notch at 1kHz.
- **TRK:** Tracks the frequency of the Center knob.

**Smooch:** Press or trigger with a gate for 128dB of gain.

**In L/In R:** Audio input. If R is not patched, the signal from L is normaled to both inputs.

**Out L/Out R:** Stereo output pair.



# Patch Tutorial

## First patch

Start by patching a saw wave into the L input, and patching the Out L and R jacks to your mixer. Set Center, Drive, Phase, and 8vize to 12:00. Set Doom and Fold fully counterclockwise, and Blend fully clockwise. Set both switches to the leftmost position. This is the least distorted that RV will get... it's all destruction from here.

Start by playing with Fold, Doom, Drive, and 8vize: these are the main controls for the four types of distortion on RV.

Try different Phase settings to change the phasing of your signal and add stereo width.

Center and the OFF/ON/TRK switch change the frequencies emphasized and cut in your signal.

Try different UND/X/OVR settings for different signal chains and distortion flavors.

Lastly, hit Smooch and really annihilate your signal.

# Patch Tutorial (cont.)

## Drum Crusher

Use RV to spice up your drum loops: start with Blend at 12:00 and Fold and Doom fully counterclockwise. Start by using Drive, Center, and 8vize to spice things up... and hit Smoosh to add some squish. Past that, try out all the other knobs and settings and really destroy your percussion completely.

## Smoosh sequencing

Smoosh sounds awesome when triggered with gate and trigger patterns: try it on simple waveforms to create an enveloping effect. Or, try distorting some drums and mult one of your drum triggers to Smoosh. Or, use random triggers to spice up any distorted patch.

# Updating Firmware

Any Versio module can accept any Versio firmware. All Versio module firmwares can be updated by the user via our [Customer Portal](#). Go to the Customer Portal to check out alternate firmwares including Desmodus, Imitor, Ampla, and many more coming soon. Transform your module into a reverb, delay, and so much more with the click of a button. Change it back whenever you like.

Go to [portal.noiseengineering.us](http://portal.noiseengineering.us)

To update the firmware on your Versio:

1. Turn off the power to your case and unscrew Versio.
2. Remove the power connector on the back of Versio.
3. Plug a micro USB connector into the port on the pack of the module, and the other end into your computer.
4. Follow the instructions in the flash app.

# Design Notes

In 2019, we released five analog distortions, which we jokingly called the “Distortion of the Month.” All good things come to an end, and we had to stop putting out distortions for a while, despite having many more ideas. We expected that we would release several in 2020. That...didn't happen.

During the onslaught of 2019 releases, we had a lot of people asking if we were ever going to do a stereo distortion (with one really fantastic person buying two of, I think, every distortion we did that year so he could get stereo going!). The answer was an unequivocal yes but here it is 2021 and we haven't gotten these out yet.

This is not the stereo distortion we had in mind when we promised all those awesome people that one was coming (that's still coming though!). One day, Stephen just started maniacally putting distortions together in software and we had way more fun with it than we expected. He would put up a new version for us to test and the company Slack would degenerate into ridiculous recordings and exclamations of joy. And always, we had Markus (and the voice of Matt Lange in our ear) saying MORE DISTORTION. Would you believe that 128dB gain on the Smoosh button was a compromise?

Ruina Versio is unapologetically digital. It's 10hp, unlike our small, simple, analog ones we were doing in 2019. But it is, if you will excuse the term, badass and hardcore. It's more distortion than we've ever dreamed of putting together, but it's more fun than we expected it would ever be. Enjoy.

## Special Thanks

All the people who asked for stereo distortions, and especially Dave Skipper.

Matt Lange for being our distortion inspiration, always.

