Noise Engineering

Ruina

Versatile stereo multi-distortion with wavefolding, octavizing, phase shifting, multiband saturation, filtering, and DOOM


User Guide

Welcome to Ruina.

Ruina is a creative stereo distortion built on digital distortion algorithms: no emulations here. Intuitive and fully automatable controls make it easy to get a gentle, nuanced color, to obliviate a signal, or to dial in anything in between. Don't feel like tweaking the parameters? Ruina comes with tons of presets to fit any need.

Ruina has a wavefolder, a multiband saturator, a chaotic suboctave generator, octavizer, and phase shifter. It also features a notch or bandpass filter with adjustable tracking, and a control to set the order of the distortions in the signal flow to further customize your sound. Last but not least, Overdrive adds up to 128x gain for maximal destruction.

Run any sound through Ruina for warm, lush distortion, or crank the sliders to unleash complete destruction. With seven distortion types, it's easy to turn your sounds into something new and unique with Ruina.
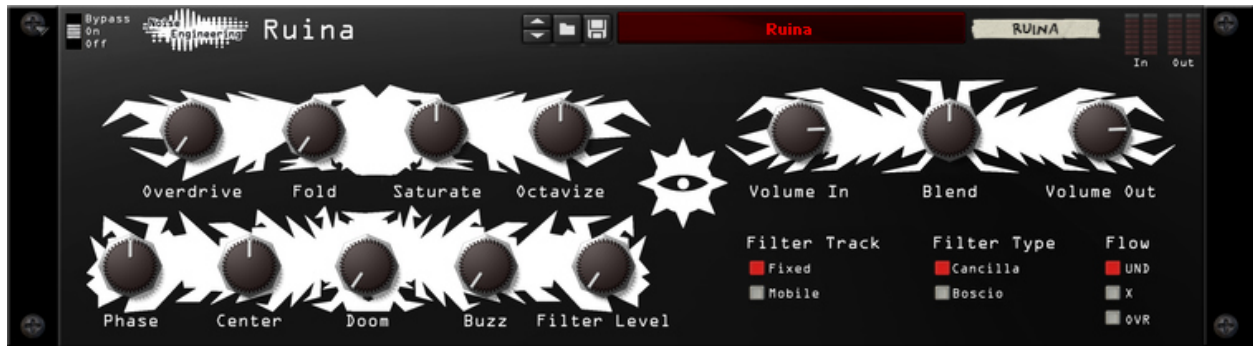
Tone parameters

Overdrive: Amount of gain (up to 128x) added to a signal before it hits the rest of the distortion types.

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

Saturate: Multiband saturator, inspired by our analog Seca Ruina distortion module. Emphasizes the four different bands, isolating the lowest when fully left and the highest when turned fully right. Blends through low, low-mid, high-mid, and high bands at other settings.

Octavize: A full-wave rectification distortion, inspired by our analog Pura Ruina distortion module.

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

Center: Width and position of the multiband-saturator center band, and of the filter when set to "Mobile".

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.

Buzz: Adds overtone buzz to a signal, creating width and high-frequency content.

Filter Level: Sets the intensity of the filter.

Volume In: Input audio level.

Blend: Dry/wet balance control. When 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.

Volume Out: Master output level.

Filter Track: Sets the filter to a fixed frequency or to follow the frequency of the Center parameter.

Filter Type: Changes the filter from a notch in "Cancilla" mode and a resonant and aggressive bandpass filter in "Boscio" mode.

Flow: Changes the signal chain of the distortion.

- **UND**: Fold -> DOOM -> Octavize -> Saturate

- **X**: Fold -> Saturate -> Octavize -> DOOM

- **OVR**: Fold -> Doom -> Octavize -> Saturate -> Fold (again)
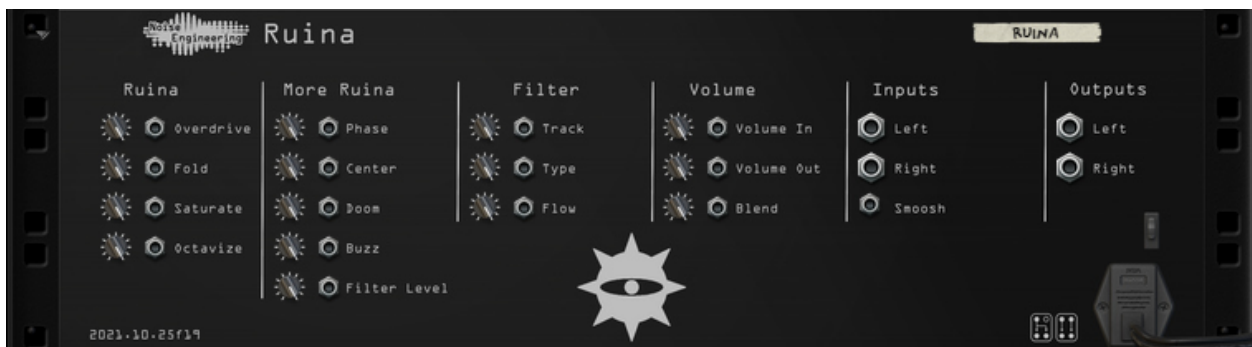
Back Panel

Back-panel knobs act as attenuators for all inputs.

Inputs

Left/Right: Audio inputs. For mono operation, patch signals to L.

Smoosh: Gate input. Adds 128dB of gain when triggered.

Outputs

Left/Right: Stereo audio outputs.

About the Preset Names

Our names are a bit unusual. It's true. Product names, preset names... Let us explain.

At Noise Engineering, we think it's our job to make the tools, but not our job to tell you how to use them. Often, when products are described by a specific function (e.g., "drum module"), people grab the product for that function...and then don't explore what it can do beyond that space. Our synths are designed to be versatile and not serve a single function, and our effects are generally non-standard.

So you'll find that our product names are deliberately created to not tell you what to do with them. You decide how they best fit your workflow. Is this one for percussion? Is it smooth? Is it harsh? Is it for all your pads?

We give each Rack Extension a load of presets meant to hit a wide range of sounds so that you can have a quick taste. We started out with descriptive names like everyone else uses...and then realized that even within the team, people had different perceptions of sounds and how we would name them. And so we went back to our core practice of making the tool and not telling you how to use it: we chose not to be prescriptive.

So, about those preset names.

We are a small team of nerds. And faced with a daunting task like naming 1,000 presets for a single device, we do what we do best: we automate. We briefly considered using a dictionary, but if you've ever read a dictionary (at least one of us has), you'll know there are some words in there that at least one of our users is bound to not want popping up in their session. So we did a workaround. Stephen, our chief noisemaker and also head engineer, went to the nerdiest resource he could find: the IETF, or the Internet Engineering Task Force. They produce documents for voluntary Internet standards. They are technical and cover things like Network File Systems, MD5, ISCSI, Secure Shell-2, and others. Want a nerdy list? Check it out here.

The Requests for Comments series contains technical and organizational notes about the Internet. So we grabbed some of those and made our own dictionary. If some of the presets have very weird terms -- there is probably an esoteric technical meaning to it. If Joseph or some other name pops up, you can thank them for their contribution to trying to make the Internet a slightly more sane place. Of course there was still the occasional questionable word here or there, so we went in and made a few adjustments. You may one day find a preset with the name Puppies_rainbows or with Unicorn in the name. You can thank Kris for that.

We randomly selected names from this list. These presets were then organized into categories. Each Rack Extension has its own theme, including articles of clothing, keyboard keys, and tea. Have fun with them and explore. We hope that our products will help unleash your creativity and help inspire you to think outside the box...and then get back in.

About NE

Noise Engineering is located in Los Angeles, California. We started around 2014 when Chief Noisemaker Stephen McCaul wanted a hobby for his off time from his day job and started making Eurorack modules in a spare bedroom at home. One thing led to another and a couple of years later, he and wife Kris Kaiser quit their day jobs and took the company full time. Noise Engineering has since grown in size and has established itself as a well-regarded and innovative synthesizer brand, with products in Eurorack, 5U, and multiple software platforms.

Special Thanks

Mattias Häggström Gerdt

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

Matt Lange for being our distortion inspiration, always.

Beta Testers

joeyluck	Skullture
dioxide	NisseJ
Loque	EpiGenetik
aeox	Lincolnjet
tl3ss	saibotsemaj
NaviRetlav	