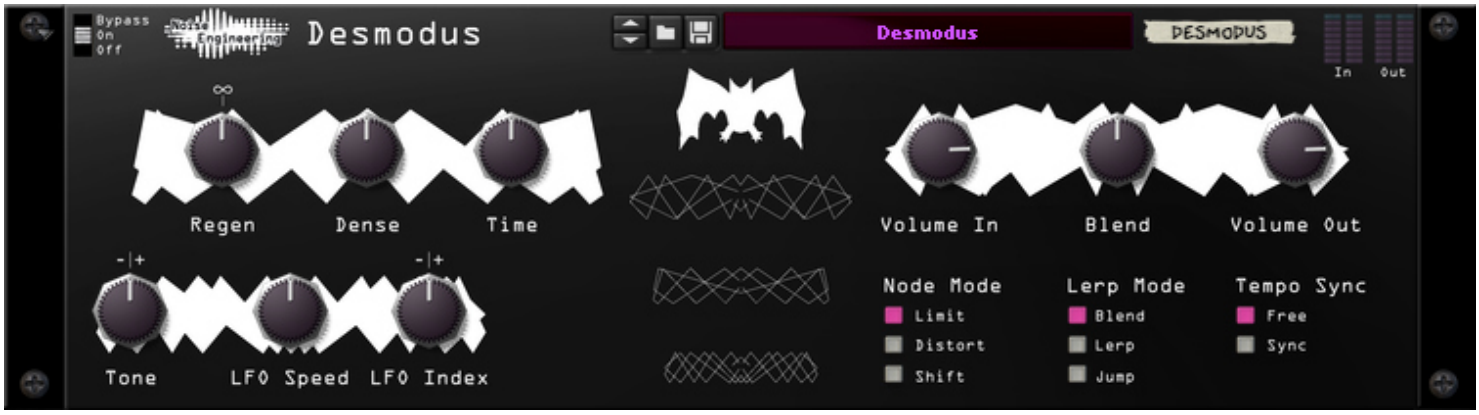
Noise Engineering

Desmodus

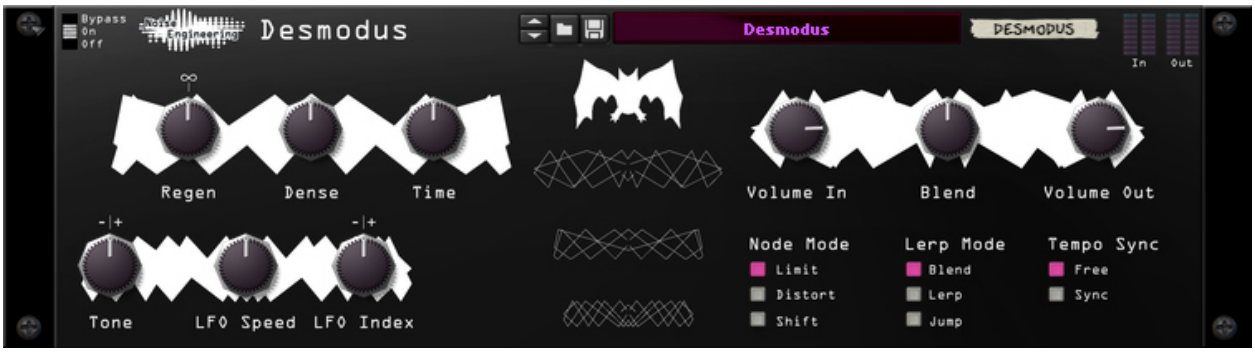
Synthetic tail-generator reverb and atmospheric-creation tool



User Guide

Welcome to Desmodus.

Desmodus is Noise Engineering's take on a reverb. This is a true stereo in/stereo out effect. Less of a room simulator and more of a synthetic tail generator with features designed for sound design and performance, the parameters on Desmodus allow you to take the effect from a delay to a beautiful reverb to an uncanny, nightmarish atmosphere with the change of a few parameters. Desmodus isn't a reverb: it's an instrument on its own that's designed to be played.



Tone parameters

Regen: Sets the amount of feedback in the reverb tank. Regen controls a wide range of tones and behaviors. All the way to the left, feedback is minimized. To the left of center, Desmodus generates shorter reverbs, emulating smaller synthetic spaces. Past 50%, the reverb reaches 100% feedback, creating spaces with an infinite tail. Past 75%, the reverb tails are ducked by new sounds at the input, creating sidechain-type effects.

Dense: Sets the spacing of the delay lines. At minimum the effect sounds more like a delay; to the right, the delays are smeared into reverb.

Time: Sets the delay time of the reverb.

Tone: Controls a filter in the reverb tank. This is a bipolar control: moving the parameter to the left controls a lowpass filter, and to the right controls a highpass filter. In the center, the filter is disabled.

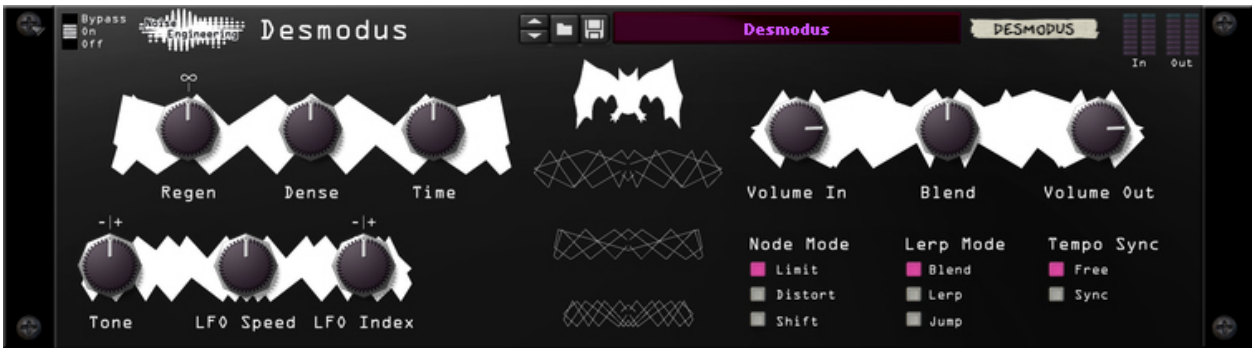
LFO Speed: Sets the speed of the internal LFO. The LFO modulates the delay lines; modulation amount is controlled by the Index parameter.

LFO Index: Sets the amount of LFO sent to the delay lines that make up the reverb. This is a bipolar control: in the center the LFO is disabled. To the left, the LFO modulates the delay lines randomly. To the right, the LFO modulates the delay lines with a sine wave. The Speed parameter controls the rate of the LFO.

Volume In: Controls the level of sound coming into the Desmodus.

Blend: Controls the dry/wet balance. 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: Sets the output level of the Rack Extension.



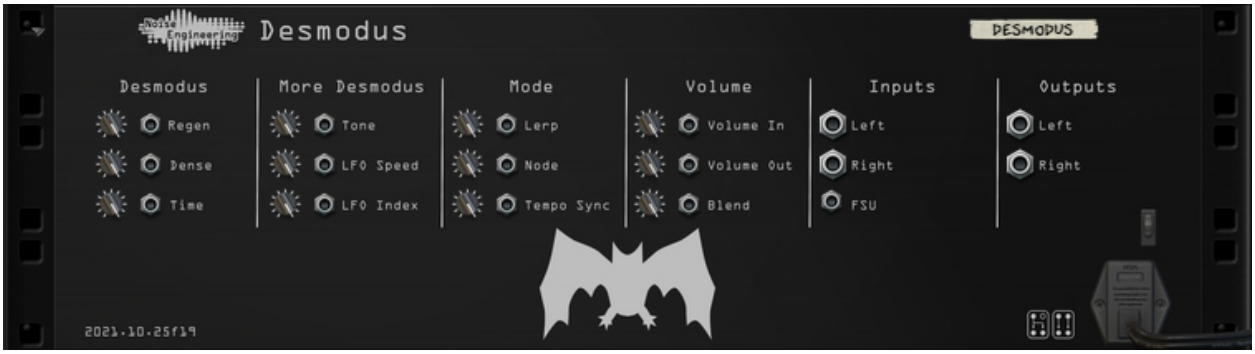
Node Mode: Sets the reverb style.

- **Limit**: A clean reverb, using limiting within the reverb tank to contain feedback.
- **Distort**: Similar to limit, but instead of limiting within the reverb tank, slight saturation is applied for a more distorted sound. This is a very subtle distortion: to hear it clearly, set the Regen parameter to about 80%.
- **Shift**: A demonic pitch-shifting algorithm. Adds a one-octave pitch shift that feeds back into the input.

Lerp Mode: Changes how the delay lines respond when the controls are automated.

- **Blend**: Crossfades the delay times for smoother changes.
- **Lerp**: Slowly changes delay line length, has audible pitch shift effects due to the delay lines changing length.
- **Jump**: Quickly changes delay line length, for audible and fast changes.

Tempo Sync: Sets whether the delay lines are clocked freely or synced to Reason's clock. When synced, the Time knob acts as a clock divider/multiplier.



Back Panel

Back-panel knobs act as attenuators for all inputs.

Inputs:

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

FSU: Gate input. Mutes the input to the reverb and maxes out the feedback amount.

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

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