Noise Engineering

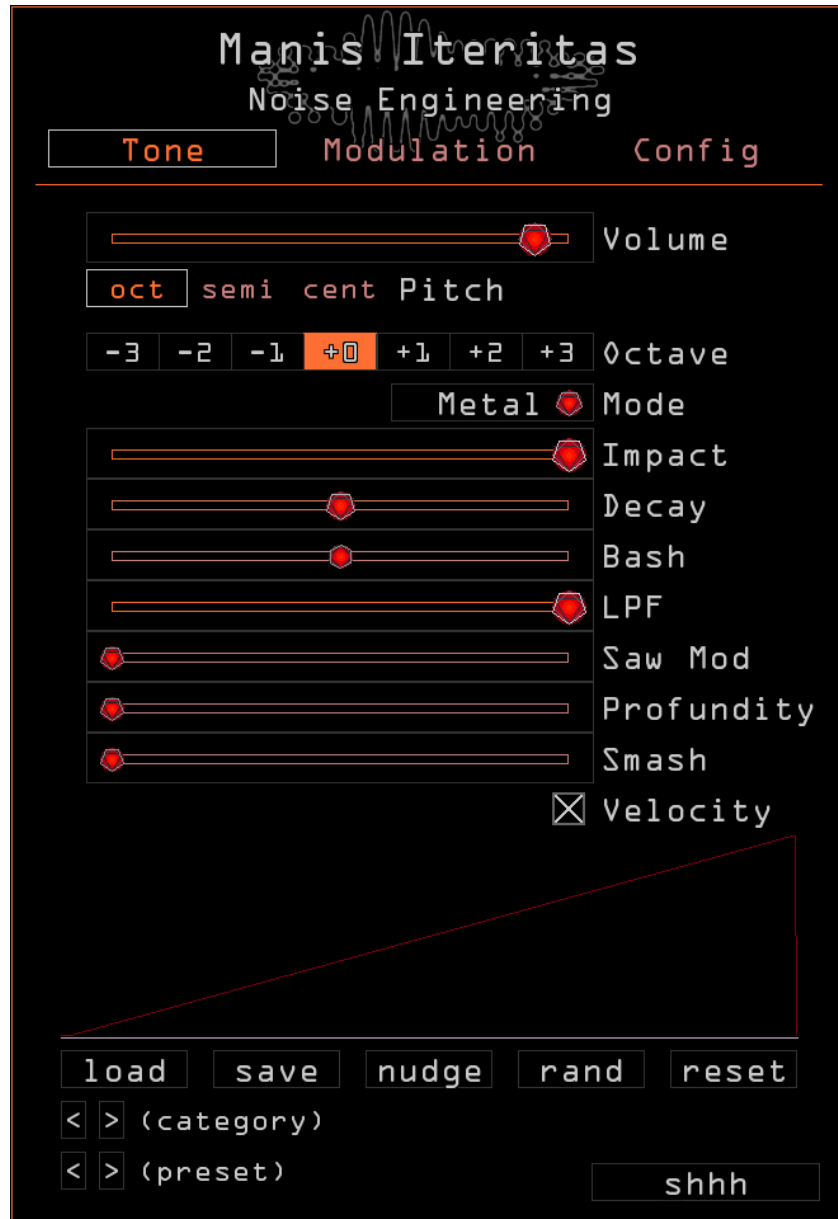# Manis Iteritas

Tough, hard-hitting, or sparkly and beautiful: Manis Iteritas is a one-of-a-kind synth that fits into any track.

Manis Iteritas
Noise Engineering

| Tone | Modulation | Config |

Volume

oct semi cent Pitch

| -3 | -2 | -1 | +0 | +1 | +2 | +3 | Octave

Metal Mode

Impact

Decay

Bash

LPF

Saw Mod

Profundity

Smash

☒ Velocity

| load | save | nudge | rand | reset |

< > (category)

< > (preset)

shhh

User Guide

Welcome to Manis Iteritas.

Manis Iteritas is a shapeshifter: this synth uses saw waves to realize almost anything from alien percussion, to unique melodic parts, and to otherworldly sounds and sound effects. Built on the concepts of additive, subtractive, and FM synthesis, and drawing inspiration from our hardware Eurorack module of the same name, Manis Iteritas is a phenomenal complement to the Basimilus Iteritas percussion synthesizer. Because it comes from the world of hardware, it's designed to be played with, tweaked, and modulated, and to make sure you have fun doing it.

Gritty and dark or beautiful and sweet: saw your way to new sonic dimensions with Manis Iteritas.

A portion of the proceeds of every Manis Iteritas sold will be contributed to pangolin conservation through Savepangolins.org. Buy a plugin, feel good about yourself!

Installation

Windows

Log into portal.noiseengineering.us

Navigate to the "Plugins" tab, and click the link that says "Click here to download the installer for NE Products (W64)"

Double-click the downloaded file to run it.

NE Products will use your web browser to authenticate your plugins. Log into your Portal account on the webpage that opens if prompted, then return to NE Products.

Click on "Update plugins for [email]".

Close NE Products, run your DAW, and your plugins will appear!

Mac

Log into portal.noiseengineering.us

Navigate to the "Plugins" tab, and click the link that says "Click here to download the installer for NE Products (OSX)"

When the download completes, open the installer file and follow the instructions.

Open NE Products. On Mac, it can be found with Finder in Applications or with Spotlight.

NE Products will use your web browser to authenticate your plugins when you run it. Log into your Portal account on the webpage that opens if prompted, then return to NE Products.

Click on "Update plugins for [email]".

Once plugins are installed, the message at the top of the screen will display "Your plugins are up to date."

Close NE Products, run your DAW, and your plugins will appear!

Uninstallation

Run NE Products again, and click "Uninstall Plugins."

If you'd like to also remove their preset files, click "Uninstall Plugins and Presets."

Doing this removes all presets in the factory directories, **including user-created presets,** so please copy any files you'd like to save to a different location before performing this action.

Manis History

Manis Iteritas started as a Eurorack module. Two friends of Noise Engineering, Matt Lange and Anthony Baldino loved our module Basimilus Iteritas, but wanted a version that was unapologetically aggressive. This sounded like a fun idea, and a couple days after our first chat we had enough ideas to give it a try. The first changes were simple. Move to sawtooth only, make the fold into something far more harsh, allow routing of the amplitude envelope to the tone parameters, and add sample-rate modulation for a detuned sound. Another early add-on was a second distortion-like thing that would eventually become sawmod. Matt's feedback on this version was that it met the goal of being aggressive but lacked a lot of subtlety. Anthony made the suggestion that a filter might be a good addition to help tame the sound. We weren't convinced, but once Stephen worked through the technical details, he was able to implement our first variable-sample-rate filter.

We knew we were closer, but we weren't there yet, and so we spent considerable time working on expanding the tone space to have more variety of sounds that were more easily controlled. As we finalized the module, we toyed with the timbres we were getting and were so happy to discover the range of harsh and aggressive, fulfilling Matt and Anthony's initial request, but also a complex range of lush, beautiful, and soft, almost piano-like timbres too.

Now, you get the sound of the Eurorack module with the power of the DAW: presets, MIDI control, polyphony, automation, and a virtually unlimited number of instances.

No pangolins were harmed in the creation of this synthesizer.

Shortcuts

Cmd/Ctrl+Click or Cmd/Ctrl+Mouse wheel
For finer control, hold Cmd (Mac) or Ctrl (PC) while moving a parameter.
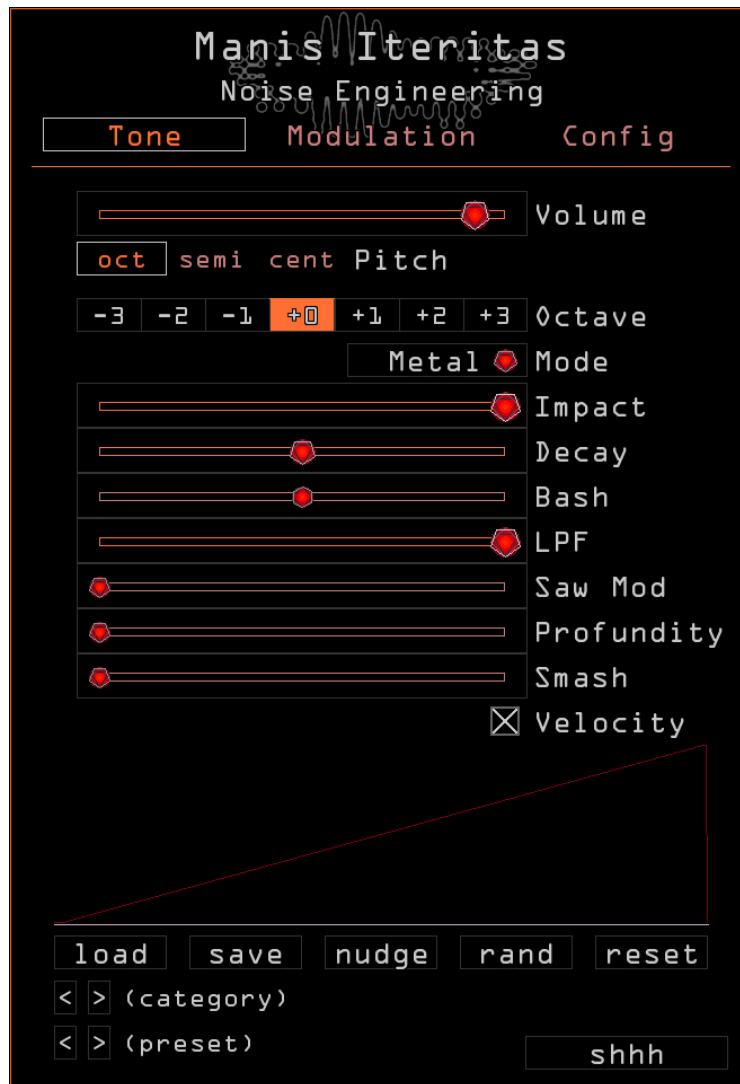
Double click
Resets any parameter to its default state.

Scroll
Hover over any parameter and scroll to adjust. Scroll+Cmd (Mac) or Scroll+Ctrl (PC) give finer control.

All of these work to edit step levels in LFO Step shape as well.

Tone page

Volume
Sets the output level of the plugin.

Pitch
Right-click to bring up the modulation window for broad-range pitch modulation.

oct
Changes the pitch of the oscillator by octaves.

semi
Changes the pitch of the oscillator by semitones.

cent
Changes the pitch of the oscillator by cents.

Mode

Selects the mode:

- Skin: Six-oscillator additive
- Liquid: Six-oscillator additive with pitch envelope
- Metal: Two 3-operator phase-modulated oscillators

See Tone Generation for more information.

Impact

Controls how impactful the start of notes are.

Decay

Sets the decay time for all oscillators.

Bash

Routes the envelope to Smash, Profundity, and LPF. This slider is bipolar: center is off, right of center applies positive modulation, and left of center applies negative modulation.

LPF

Two pitch-tracking 2-pole non-resonant filters. To the left only very low frequencies pass; all the way to the right the filteris bypassed.

Saw Mod

Creates an effect that sounds similar to PWM or hard sync.

Profundity

As the Profundity slider is turned up, additional out-of-phase oscillators are added for a chorus effect, and the synth is detuned.

Smash

A gnarly wavefolder-inspired distortion effect.

Velocity

Toggles whether or not the synth's dynamics change based on MIDI velocity.

Presets

Presets are stored in the computer's file system, and the controls below allow for modification and navigation through the files and folders of presets. You can create a new preset "Category" by creating a subfolder in the preset directory, and saving new presets within it.

load
Load a preset.

save
Save a new preset.

< > (category)
Loads the next/previous folder of presets in the preset directory.

< > (preset)
Loads the next/previous preset.

nudge
Applies a small amount of randomization all tonal parameters and modes. Randomization can be bypassed per control in their individual modulation menus. Useful for creating slight variations of sounds.

rand
Completely randomizes all tonal parameters and modes. Randomization can be bypassed per control in their individual modulation menus. Use this to create inspiring new sounds and ideas.

reset
Resets all parameters to their default settings.

shhh
Panic button; ends all notes.

Modulation

All plugins feature a comprehensive routing system making use of a variety of modulation types and sources. When modulation is enabled on a parameter, a box showing the range of enabled modulation will appear, and a small indicator will move within the range box showing the exact position of the modulation.
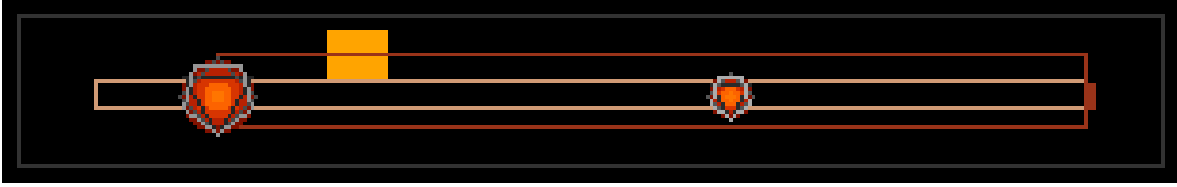
Types of modulation

Parameters can be modulated from a variety of sources:

LFOs
Four onboard LFOs that offer a variety of modes, from simple waveforms to envelopes to step sequencers. More detail on LFO modes can be found in the section below titled "Modulation page."

Mac 1-4
Macros. Four macro sliders can be assigned to any number of parameters. The macros can in turn be mapped to MIDI controllers, automated, or modulated with other LFOs.

Note
Changes value based on what note is currently played; the note range can be changed in Modulation > Other.

Env
Envelope. The onboard dynamics envelope of the synth.

Vel
MIDI note velocity.

Off V
MIDI note off velocity.

Press
MIDI channel pressure.

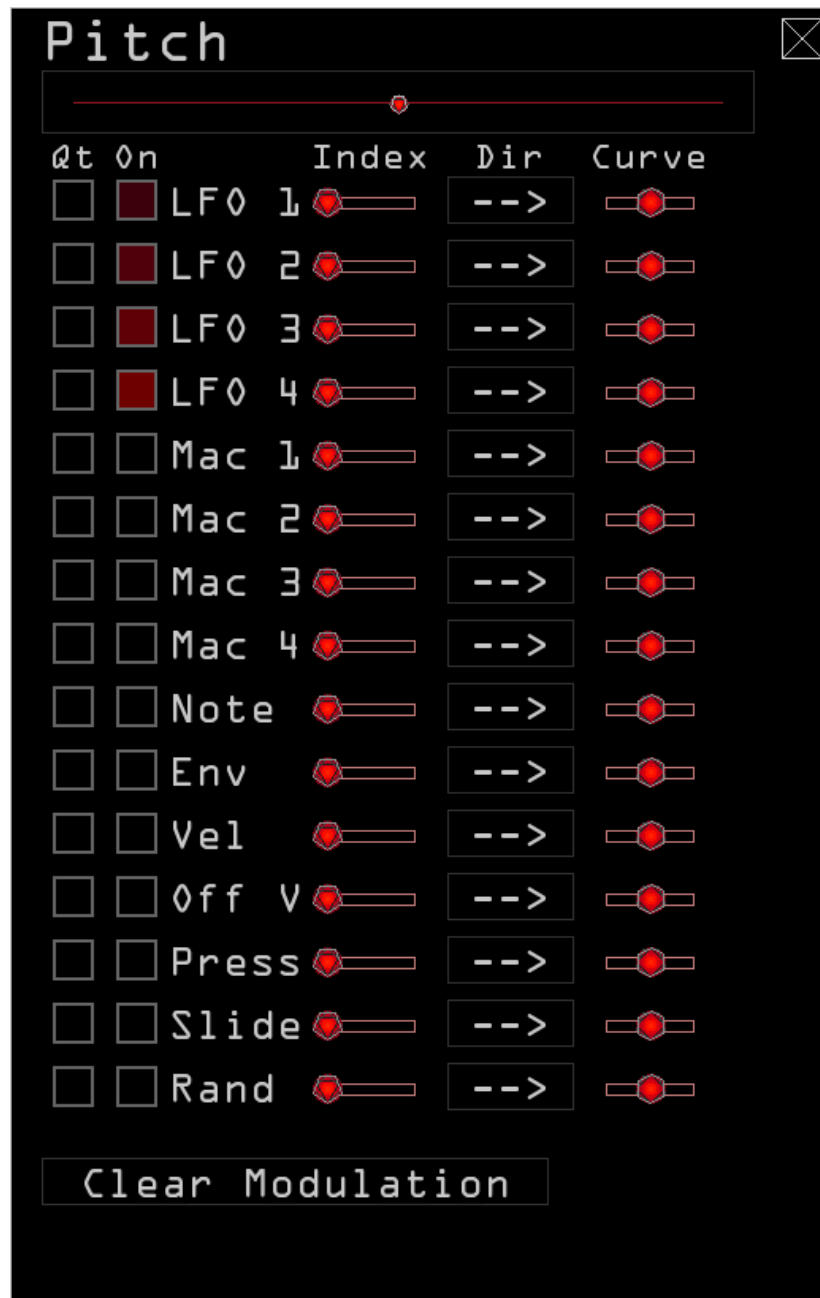**Slide**
MIDI slide parameter

Rand
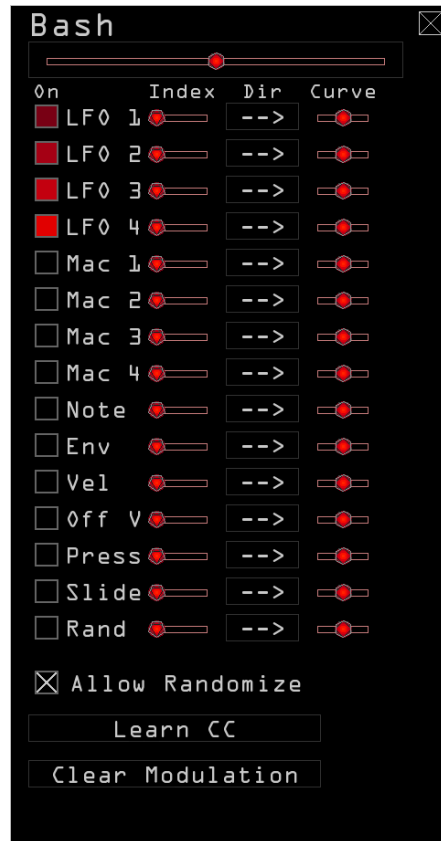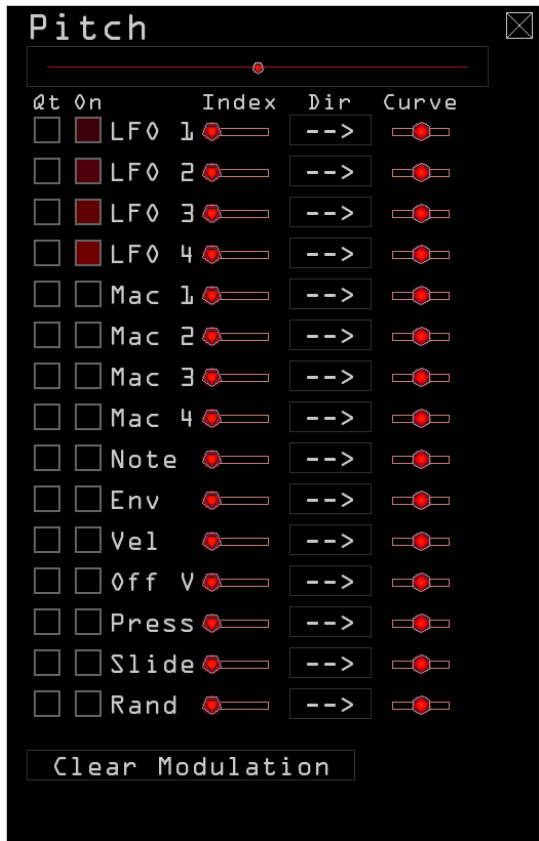A polyphonic random value generated each time a note is played.

Learn CC (only visible when MIDI Learn is checked on the Config > Controls page)
Parameters can be assigned to MIDI CC.

Modulation Assignment

When a parameter is right-clicked (Control+click on Mac), a context menu appears with modulation routing options:

Pitch

Qt	On		Index	Dir	Curve
☐	■	LFO 1		-->	
☐	■	LFO 2		-->	
☐	■	LFO 3		-->	
☐	■	LFO 4		-->	
☐	☐	Mac 1		-->	
☐	☐	Mac 2		-->	
☐	☐	Mac 3		-->	
☐	☐	Mac 4		-->	
☐	☐	Note		-->	
☐	☐	Env		-->	
☐	☐	Vel		-->	
☐	☐	Off V		-->	
☐	☐	Press		-->	
☐	☐	Slide		-->	
☐	☐	Rand		-->	

Clear Modulation

Bash

On		Index	Dir	Curve
■	LFO 1		-->	
■	LFO 2		-->	
■	LFO 3		-->	
■	LFO 4		-->	
☐	Mac 1		-->	
☐	Mac 2		-->	
☐	Mac 3		-->	
☐	Mac 4		-->	
☐	Note		-->	
☐	Env		-->	
☐	Vel		-->	
☐	Off V		-->	
☐	Press		-->	
☐	Slide		-->	
☐	Rand		-->	

☒ Allow Randomize

Learn CC

Clear Modulation

Parameter slider

A copy of the parameter being modulated, for easy adjustment.

Qt (pitch only)

Toggles whether incoming modulation directly affects pitch (unchecked), or is constrained to only play in-tune notes (checked).

On

Each modulation source has a checkbox; when checked, modulation from that source is enabled.

Index

Sets the amount of modulation from a particular source. Fully left, modulation is bypassed.

Dir

Direction. Sets the polarity and inversion of incoming modulation.

    --> unipolar: modulates from the point selected on the parameter up to the level indicated by the Index setting

    <-> bipolar: modulates around the center point set by the parameter

    <-- inverted unipolar: opposite modulation from unipolar

    >-< inverted bipolar: opposite modulation from bipolar

Curve

Each modulation source has a Curve slider that changes how modulation affects the parameter. In the center, modulation is linear, and the parameter movement matches incoming modulation exactly. To the right modulation is more logarithmic, and to the left more exponential.

Allow Randomize

When checked, this parameter can be randomized when "rand" (Tone page) is clicked.

Learn CC

Click this to enable MIDI CC learn on a parameter. Move a parameter on your MIDI controller and the plugin will exit learn mode and the parameter will now respond to that CC. If clicked by mistake, click "waiting on CC" to exit learn mode. Click "forget CC" to remove an assignment.

Clear modulation (only visible when MIDI Learn is checked on the Config > Controls page)
Resets modulation checkboxes, amounts, direction, and curve. Does not affect CC assignments.

Modulation Page

Click the sections in the left column to navigate to that page and edit modulator settings.

The MODS page shows the modulator settings, and the ROUTE page shows modulation assignments for the selected modulator.
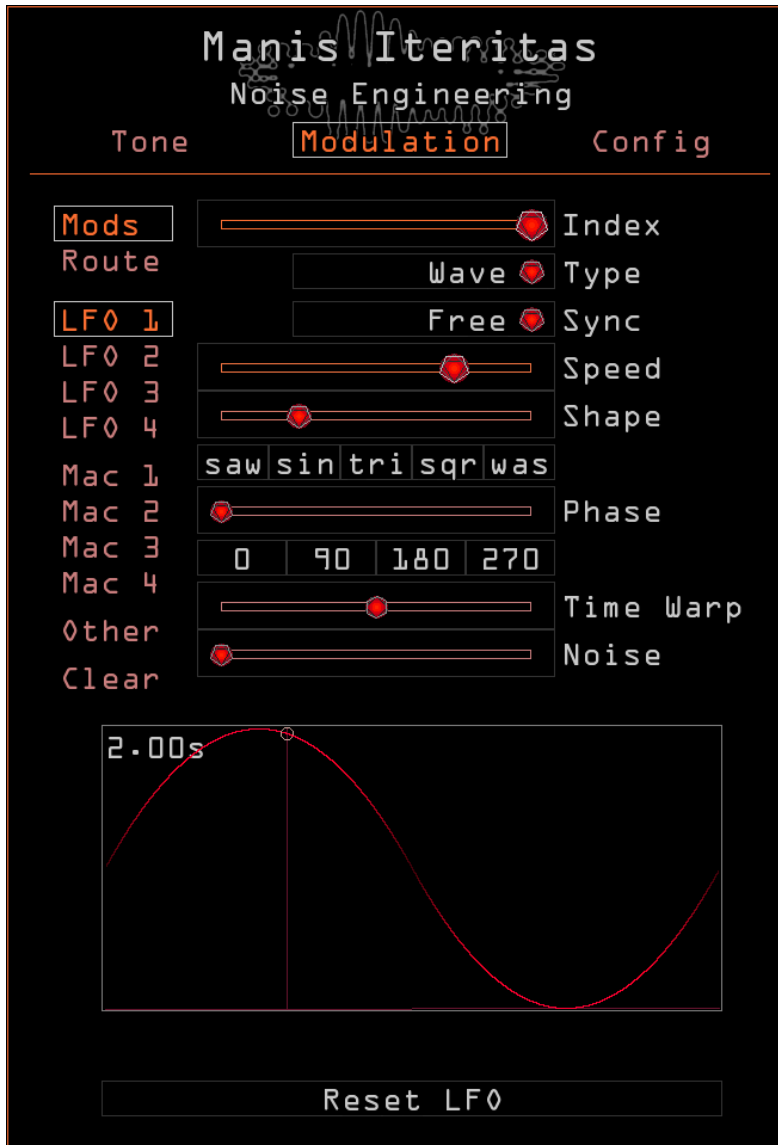
LFO 1-4

Index
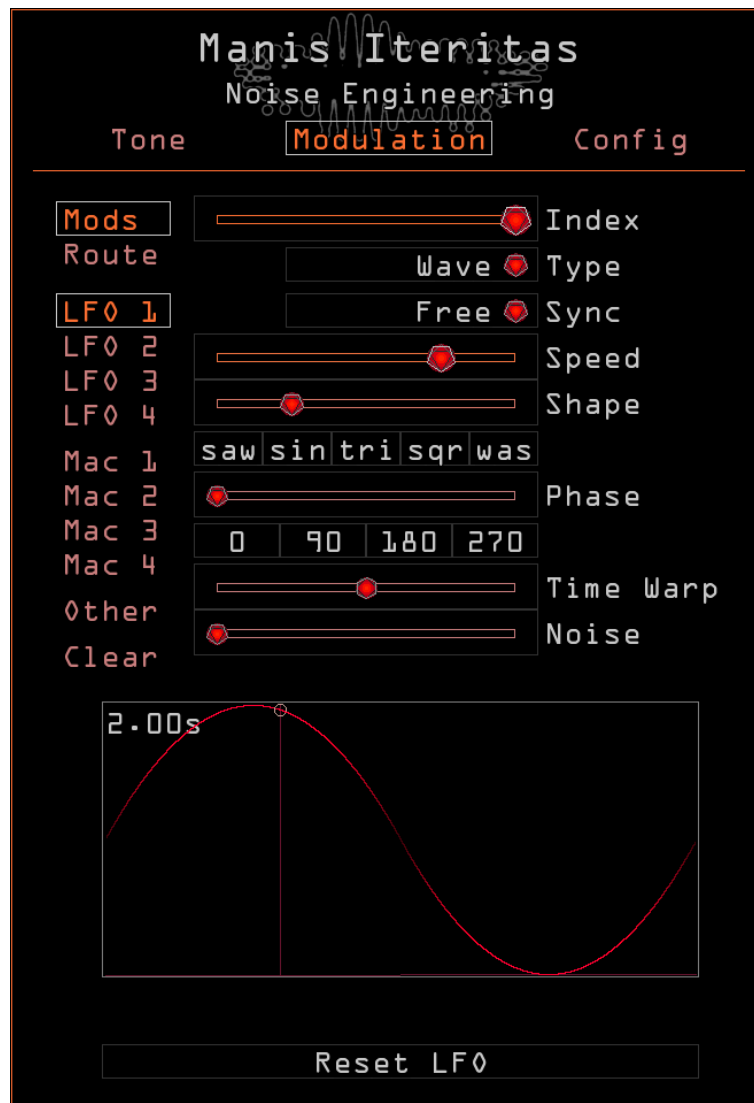Sets the modulation range of the LFO.

Type
Sets the type of LFO. Options include Wave, Step, and ADR, described in detail in the sections below.

Reset LFO
Resets the LFO back to its default state, respecting Type.

Type: Wave

Sync

Sets the source of timing for the modulator.

- **Free:** A single completely freerunning LFO; never resets.
- **Transport:** Speed is set in seconds, but the LFO follows the transport of the DAW.
- **Tempo:** A single LFO that is synced to the DAW's tempo and transport.
- **Poly Free:** Each note played gets its own LFO; LFOs are reset at the start of each note.
- **Poly Tempo:** A tempo-synced LFO is created per note; LFOs reset at the start of each note.

Speed/Beats

Sets the rate of the LFO. In unsynced modes, this is a slider that sets the rate in seconds. In synced modes (Tempo and Poly Tempo), this is a fraction that sets the rate in beats (for example, 4/1 would be equal to 1 bar in 4/4 meter). If a synced mode is selected, the rate can be doubled or halved with the *2 and /2 buttons respectively.

Shape
Morphs between different waveforms.

saw/sin/tri/sqr/was
Selects a shape preset for the waveform. Choose saw, sine, triangle, square, or inverted saw.

Phase
Changes the starting point of the wave.

0/90/180/270
Selects a preset for the phase of the waveform.

Time Warp
Skews the timing of the waveform.

Noise
Adds randomness to the waveform.

Color (only visible when Noise is above minimum)
Changes the intensity of randomness added to the waveform.

Type: Step

Sync

Sets the source of timing for the modulator.

- **Free:** A single completely freerunning LFO; never resets.
- **Transport:** Speed is set in seconds, but the LFO follows the DAW's transport.
- **Tempo:** A single LFO that is synced to the DAW's tempo and transport.
- **Poly Free:** Each note played gets its own LFO; LFOs are reset at the start of each note.
- **Poly Tempo:** A tempo-synced LFO is created per note; LFOs reset at the start of each note.

Loop

Repeats infinitely when checked, or plays once when unchecked.

Speed/Beats

Sets the rate of the sequencer. In unsynced modes, this is a slider that sets the rate in seconds. In synced modes, this is a fraction that sets the rate in beats (for example, 4/1 would be equal to 1 bar in 4/4 meter). If a synced mode is selected, the rate can be doubled or halved with the *2 and /2 buttons respectively.

Count

Sets the steps in the sequencer; the up and down arrows change the count by one, and the *2 and /2 buttons respectively double or halve the count.

Smooth

Adjusts how smooth the transition between steps is.

Time Warp

Skews the timing of the sequencer.

Random

Adds per-step randomization to the sequence.

Graph

Edit your sequence here by clicking and dragging or use the preset buttons:

- **rand:** Randomizes the sequence entirely.
- **nudg:** Slightly changes the values of each step.
- **up:** Generates an ascending pattern across the steps.
- **dn:** Generates a descending pattern across the steps.
- **ud:** Creates a triangle pattern across the steps.
- **du:** Creates an inverted triangle pattern across the steps.

Type: ADR
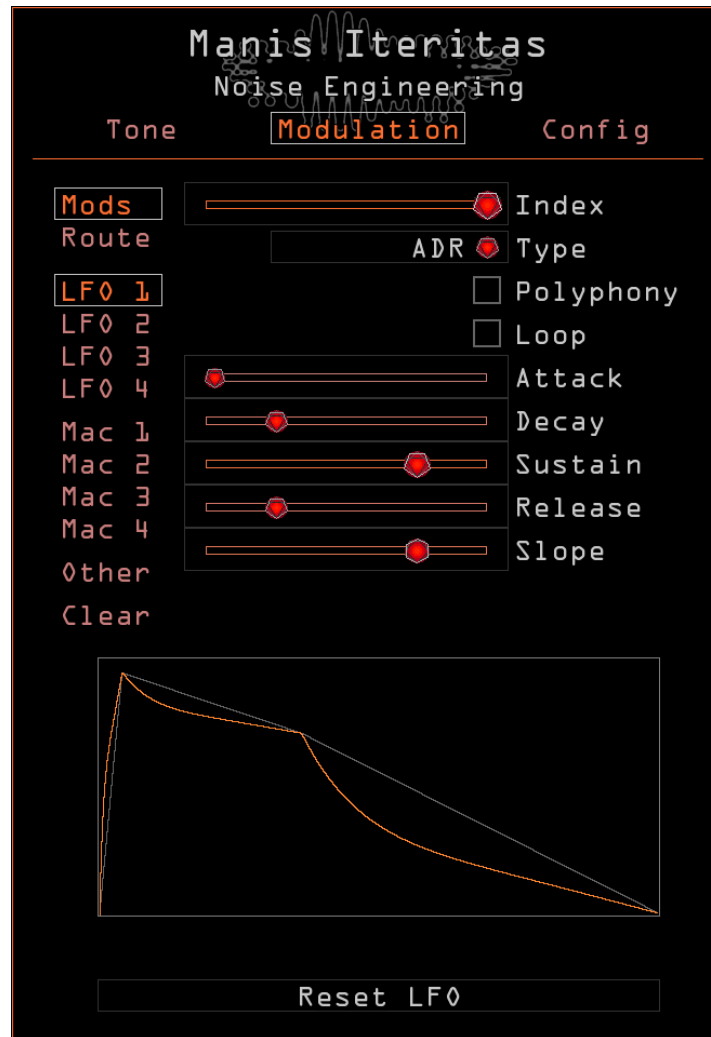
Polyphony

When checked, a new envelope is created for each voice. When unchecked, a single envelope is generated for all voices.

Loop

When set to once, the envelope goes through a single cycle per note press. When set to loop, the envelope will loop as long as a note is playing.

Attack

Controls the attack time for the envelope; this sets the amount of time it takes the envelope to go from minimum to maximum.

Decay

Controls the decay time for the envelope; this sets the amount of time it takes the envelope to go from the peak reached in the Attack stage to the level set in the Sustain stage.

Sustain

Sets the sustain level of the envelope; this is the level the envelope reaches after the Attack and Decay stages before moving to the Release stage.
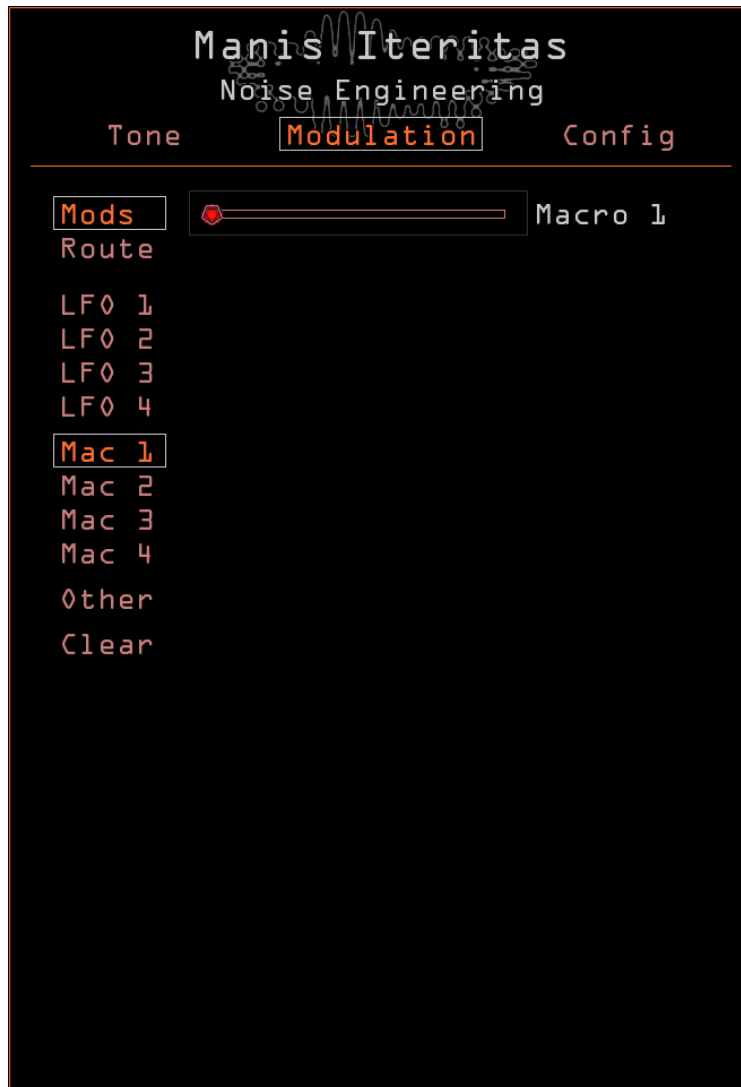
Release

Sets the release time for the envelope; this is the amount of time it takes the envelope to go from the Sustain level to minimum.

Slope

Sets the curve of the envelope with linear in the center.

Macro

Manis Iteritas
Noise Engineering

Tone   Modulation   Config

Mods   [slider]   Macro 1
Route

LFO 1
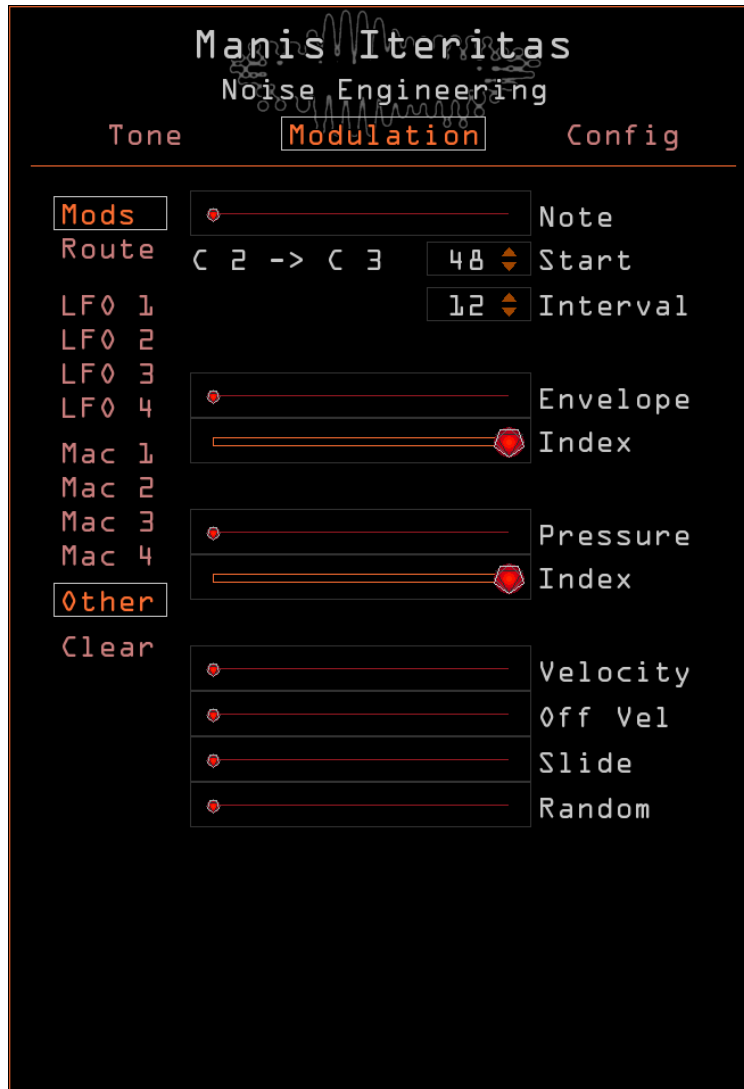LFO 2
LFO 3
LFO 4

Mac 1
Mac 2
Mac 3
Mac 4

Other

Clear

Mac 1-4
Four sliders that can be assigned to any number of other parameters, and modulated by LFOs or MIDI CCs.

Other

```
          Manis Iteritas
        Noise Engineering

    Tone    Modulation    Config
  ─────────────────────────────────

  ┌──────┐  ⬦─────────────── Note
  │ Mods │
  └──────┘
   Route    ( 2 -> ( 3   ┌ 48 ⬦┐ Start
                         └ 12 ⬦┐ Interval
   LFO 1
   LFO 2
   LFO 3     ⬦─────────────── Envelope
   LFO 4     ─────────────⬠  Index

   Mac 1
   Mac 2
   Mac 3     ⬦─────────────── Pressure
   Mac 4     ─────────────⬠  Index
  ┌──────┐
  │ Other│
  └──────┘
   Clear     ⬦─────────────── Velocity
             ⬦─────────────── Off Vel
             ⬦─────────────── Slide
             ⬦─────────────── Random
```

Note
Indicates the current Note modulator value.

Start
Sets the lowest note in the Note modulator range. Notes below this give the minimum value.

Interval
Sets the highest note in the Note modulator range. Notes above this give the maximum value.

Envelope
Indicates the current Envelope modulator value.

Index
Sets the range of the Envelope modulator.

Velocity
Indicates the current Velocity modulator value.

Off Vel

Indicates the current Release Velocity modulator value.

Pressure

Indicates the current Pressure modulator value. DAW must be MPE compatible.

Index
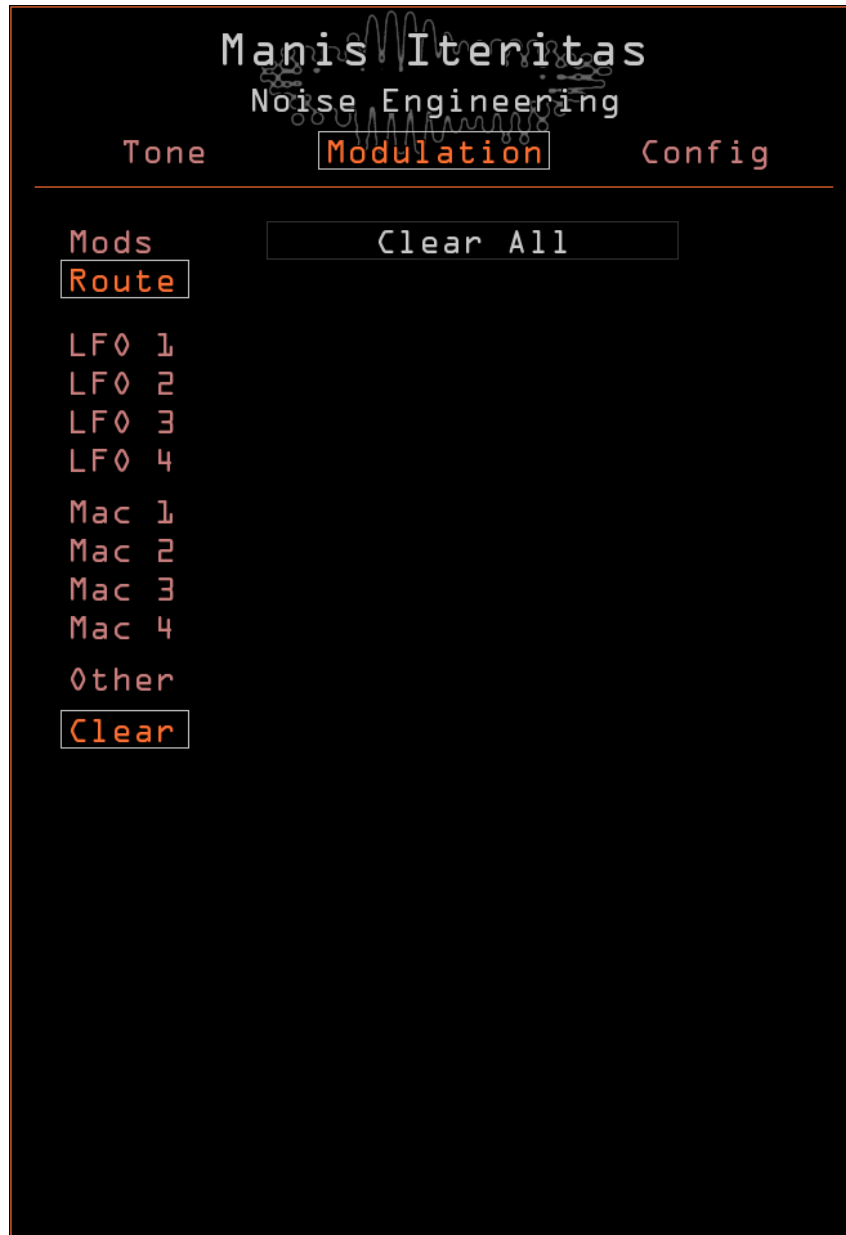
Sets the range of the Pressure modulator.

Slide

Indicates the current Slide modulator value. DAW must be MPE compatible.

Random

Indicates the current random modulator value.

Clear

```
          Manis Iteritas
          Noise Engineering
    Tone      Modulation      Config
  _____

  Mods          [    Clear All    ]
  [Route]

  LFO 1
  LFO 2
  LFO 3
  LFO 4

  Mac 1
  Mac 2
  Mac 3
  Mac 4

  Other

  [Clear]
```

This page is home to the "Clear All" button. Clicking this removes all modulation routings from the patch. Use it wisely.

Route Page

Find the parameters assigned to a modulator on its routing page. For instance, if LFO 1 is modulating Attack, click LFO 1 and ROUTE to view the modulation settings for Attack (and any other LFO 1 modulated parameters).

Manis Iteritas
Noise Engineering

Tone   **Modulation**   Config

| Mods | Voice 🔴 Group |
| **Route** | Octave 🔴 Param |

| **LFO 1** | Add Route | Clr Routes |
| LFO 2 | Add Rand |
| LFO 3 |
| LFO 4 |

Qt On Index Dir Curve

☐ ☒ 🔴 `<->` 🔴 Pitch

☒ 🔴 `-->` 🔴 LPF

Mac 1
Mac 2
Mac 3
Mac 4

Other

Clear

Group

Selects a category of parameters, grouped by location in the interface. For example, the LPF parameter appears in the Manis group.

Param

Selects a parameter from the current Group category.

Add Route

Adds modulation routing for the selected parameter from the selected modulator.

Clr Routes

Click twice to remove all modulation assignments for the current modulator. To remove a single assignment simply uncheck the On box.

Add Rand

Adds a random modulation destination.

Qt (pitch only)

Toggles whether incoming modulation directly affects pitch (unchecked), or is constrained to only play in-tune notes (checked).

On

Each modulation source has a checkbox; when checked, modulation from that source is enabled. When unchecked on this page, it is removed.

Index

Sets the amount of modulation from a particular source. Fully left, modulation is bypassed.

Dir

Direction. Sets the polarity and inversion of incoming modulation:

--> unipolar; modulates from the point selected on the parameter up to the level indicated by the Index setting

<-> bipolar; modulates around the center point set by the parameter

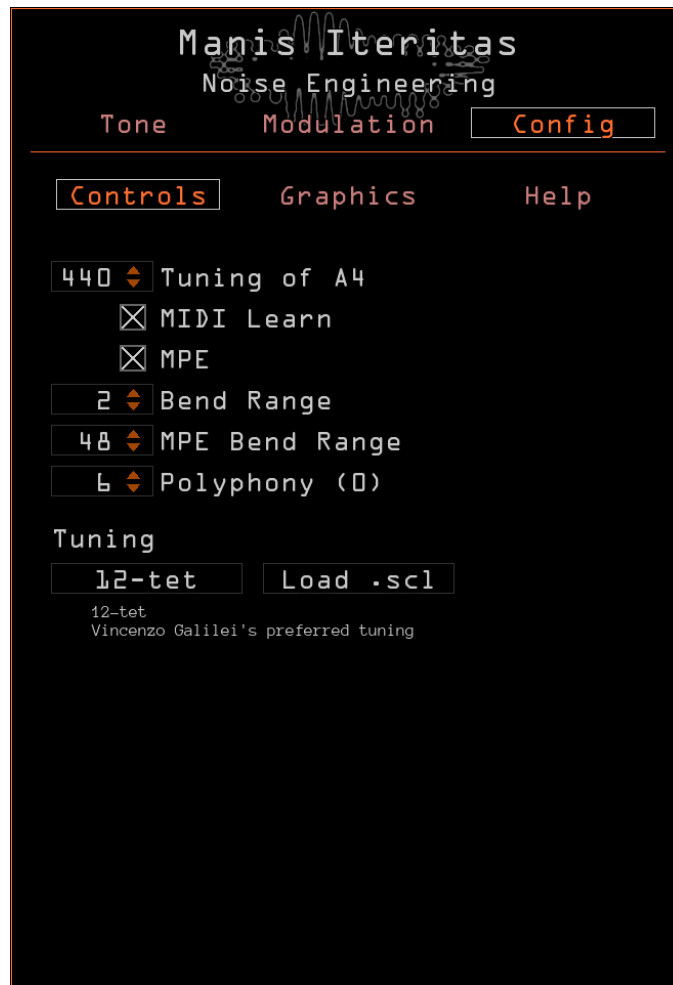**<--** inverted unipolar; opposite modulation from unipolar

>-< inverted bipolar; opposite modulation from bipolar

Curve

Each modulation source has a Curve slider that changes how modulation affects the parameter. In the center, modulation is linear, and the parameter movement matches incoming modulation exactly. To the right modulation is more logarithmic, and to the left more exponential.

Config Page

Manis Iteritas
Noise Engineering

Tone   Modulation   Config

Controls   Graphics   Help

440 ⬍ Tuning of A4
⊠ MIDI Learn
⊠ MPE
2 ⬍ Bend Range
48 ⬍ MPE Bend Range
6 ⬍ Polyphony (0)

Tuning

12-tet   Load .scl

12-tet
Vincenzo Galilei's preferred tuning

Controls

Tuning of A4
Offsets the base pitch of the synthesizer; defaults to contemporary "concert pitch" (A=440hz).

MIDI Learn
Enables internal MIDI learn for most parameters.

MPE
Configures the plugin to expect MPE messages.

Bend Range
Sets the pitch bend range in semitones.

MPE Bend Range
Sets the MPE pitch bend range in semitones.

Polyphony
Sets the maximum number of simultaneous voices the plugin can play.

Tuning
The "12-tet" button sets the pitch scaling of the plugin to the default twelve-tone equal temperament tuning. The "load scl" button allows the user to load Scala files for different tuning systems.
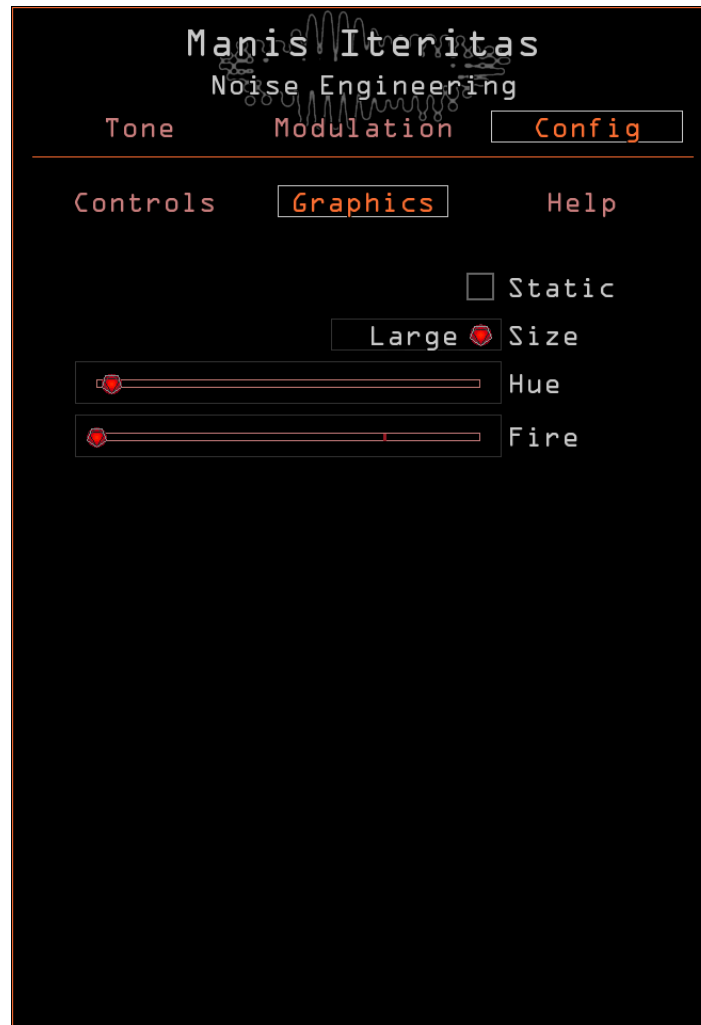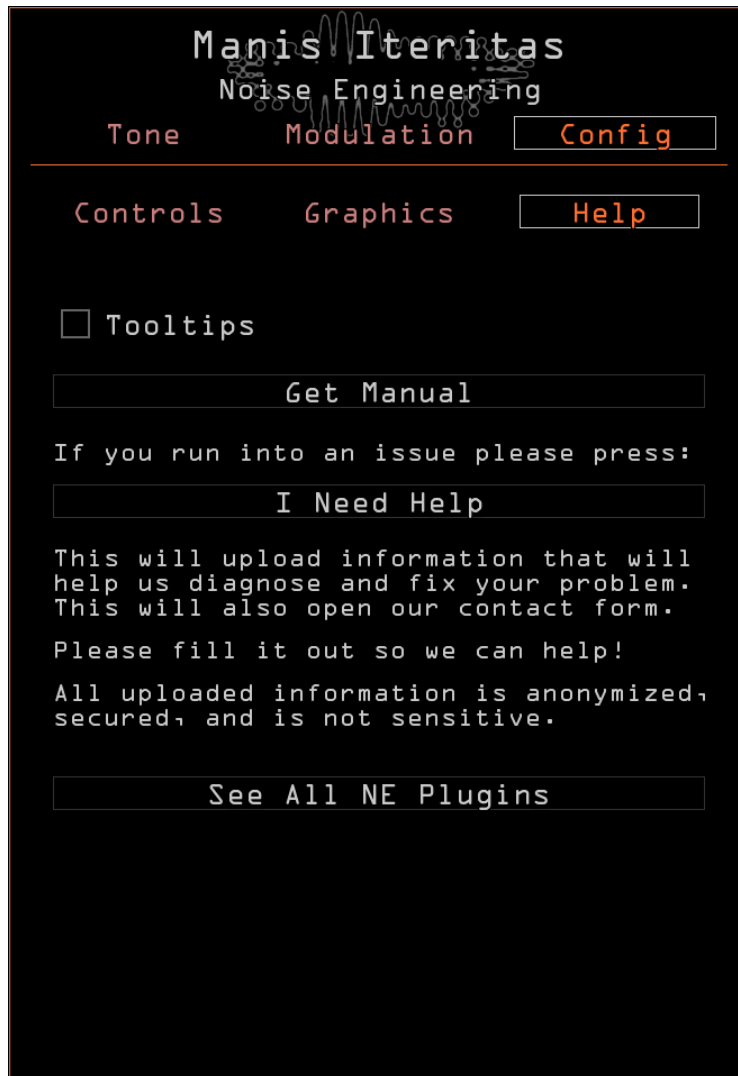
Graphics

Static
Adds some retro flare to the GUI.

Size
Sets the size of the plugin window.

Hue
Sets the color scheme of the plugin.

Fire
Adds some attitude to the plugin GUI.

Help

Get Manual
Opens the plugin product page.

I Need Help
Uploads anonymized system information used for troubleshooting and opens the support form. If you're having an issue please press this button and fill out the form to tell us what the problem is!

You can also always reach us at noiseengineering.us/pages/contact

Drop us a line and we'll get back to you within two business days.

See All NE Plugins
Opens the plugin shop. Check out all the Noise!

Tone Generation

At first glance, the architecture of Manis Iteritas is similar to the Basimilus Iteritas. In Skin and Liquid modes, there are six oscillator/ envelope pairs that are added together. In Metal mode, there are phase-modulated oscillator/envelope chains. Metal mode differs in Manis Iteritas by having two sets of three sequentially modulated oscillators rather that one set of six. Metal mode also waveshapes the output of the oscillators by summing two sawtooth waves of the same frequency to give a waveform somewhere between a sawtooth and a square.
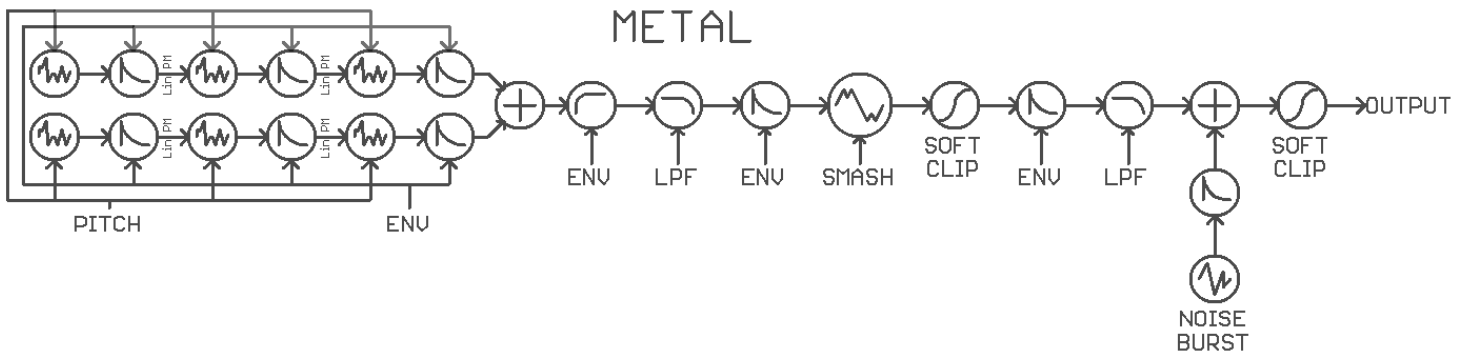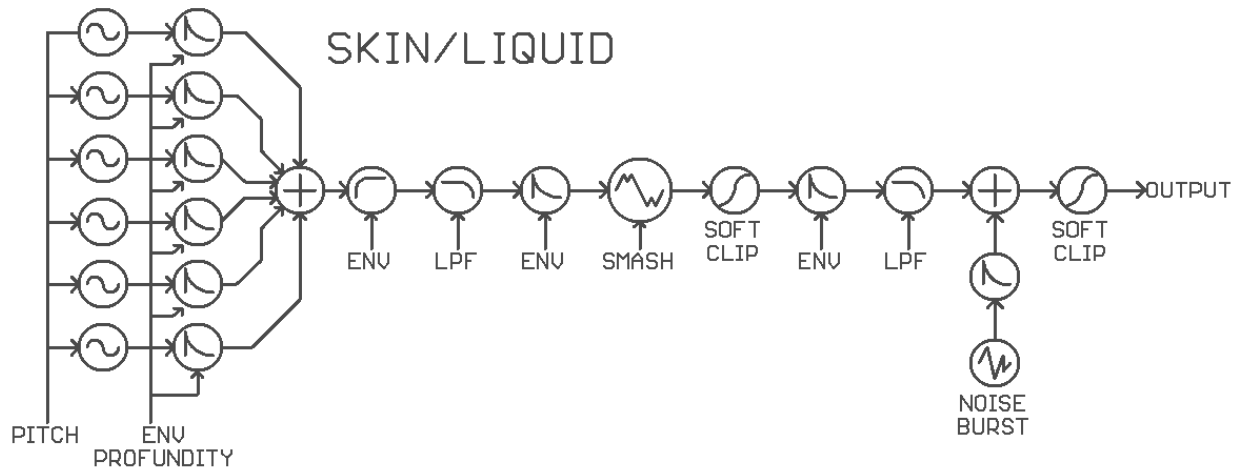
Conservation

Manis is Latin for ghosts of the dead, which is a pretty good descriptor for the sounds we get out of that beast...but it is also part of the scientific name for a critically endangered scaly mammal from Asia called a pangolin. Pangolins are threatened by wildlife poachers and traffickers. We decided this was an easy connection for us to make in our quest to support science and conservation.

Noise E is proud to be a founding business partner with Save Pangolins, a globally recognized pangolin conservation organization. We've committed to donate a portion of the proceeds from every MI sold to pangolin conservation. That means you can pat yourself on the back for buying Manis Iteritas, knowing you're doing some good in the world! Want to know more about what you can do? Check out the Save Pangolins website: www.savepangolins.org

Plugin Locations

Plugin presets install to:

Windows: C:\Users\Public\Documents\Noise Engineering\

Mac: /Users/[name]/Library/Audio/Presets/Noise Engineering/

Noise Engineering plugins are installed to the default locations for the specified plugin formats. In a majority of cases, plugins will not need to be moved. In the rare instance that you need to move your VST plugins, find them in the following locations.

Windows: C:/Program Files/Common Files/VST3/Noise Engineering/

Mac: /Library/Audio/Plug-Ins/VST3/

Note that AU and AAX plugins cannot be moved. For reference, they are installed here:

Mac AU: /Library/Audio/Plug-Ins/Components/

Mac AAX: /Library/Application Support/Avid/Audio/Plug-Ins/Noise Engineering/

Windows AAX: C:/Program Files/Common Files/Avid/Audio/Plug-Ins/Noise Engineering/

Preset Names

Plugin preset names are often weird. It's true. But you may find ours a little strange. Let us explain.

At Noise Eng, we are a small team of nerds. And faced with a daunting task like names for 500 presets for a single plugin, 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 plugin. 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 contain 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. Now you may one day find a preset with the name Puppies_rainbows or with Unicorn in the name. You can thank Kris for that. Did we miss a questionable word you think we should take out? Get in touch and let us know!

And the categories? During early beta test (alpha beta?), one of our great testers let us know that some of the category names seemed like they were meant to be descriptive, but then were somewhat misleading. He was completely right, so we took a look at this and decided to revise. One thing we think about a fair amount here at Noise Engineering is creativity. In particular, we don't like telling people how to use something. This is part of why we name our products as we do (but that's a story for another day), and we decided to apply the same logic to the plugin categories. But we wanted to bring our normal sense of play to it so you'll find that each plugin has the presets categorized as themes suggested by the team here.

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.

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