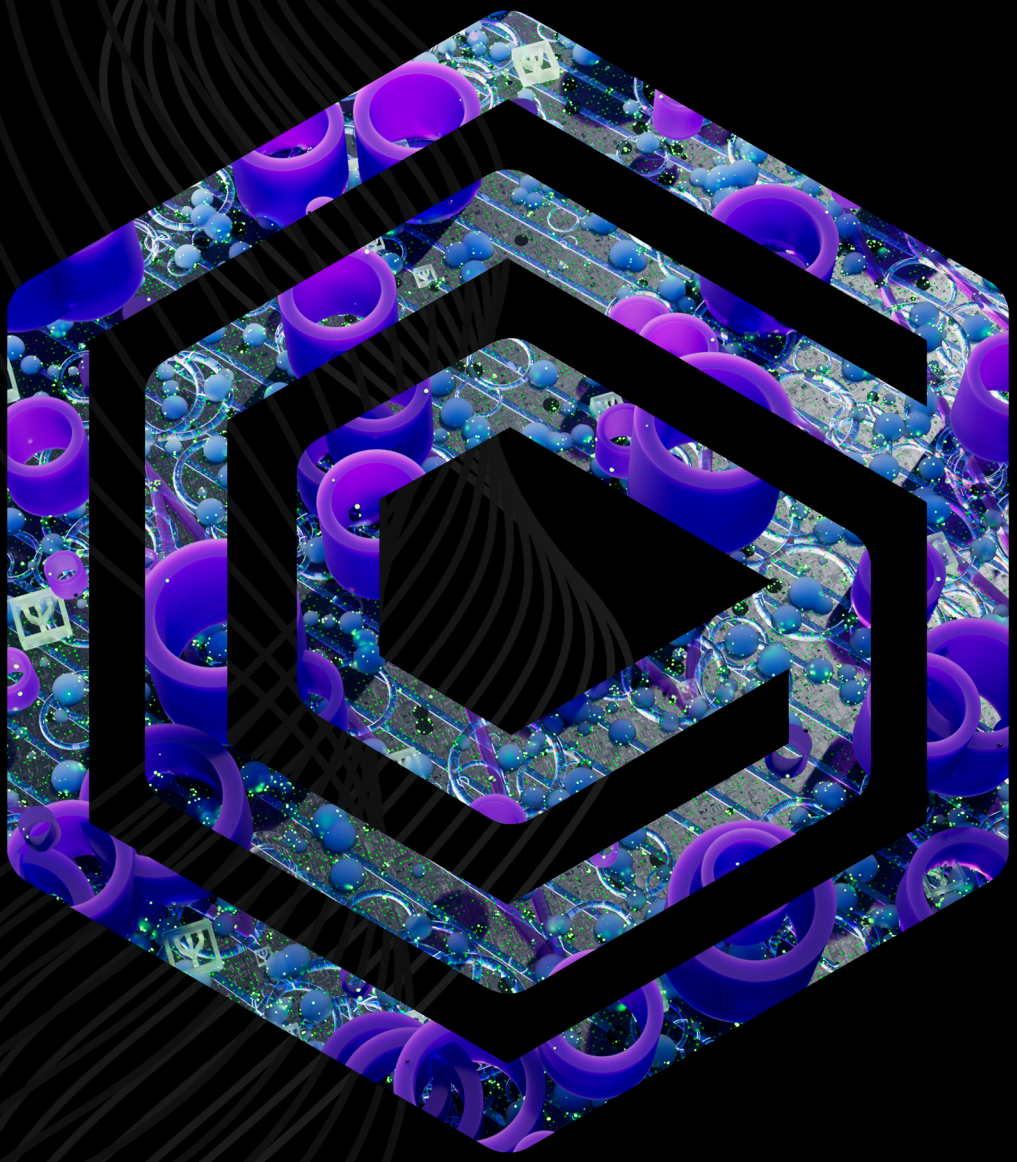
GLITCHMACHINES®



USER GUIDE

PALINDROME

PALINDROME // CREDITS

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Ivo Ivanov
2D logo by Ben Hook

LEGAL:

Glitchmachines ® https://glitchmachines.com

⚠ *This symbol refers to important technical info*

💡 *This symbol refers to a tip, idea or side note*

SETUP:

⚠ *This is a **VST3 / AU** plugin. Your DAW must be compatible with **VST3 / AU***

⚠ *Necessary changes in the code between plugin versions can break backwards compatibility. If upgrading from a previous version, we suggest backing up all DAW sessions accordingly (prior to running the new installers) to ensure that they stay intact.*

⚠ *Palindrome is a **stereo** plugin; be sure that you are instantiating it on a stereo track.*

1. Unpack the PALINDROME.zip file
2. Via the PALINDROME_INSTALLERS folder, run the installer for your system.
    a) **Windows Users**: now that our plugins are in a single format on Windows (VST3) the installer no longer necessitates destination options. The plugin files will automatically be installed in the correct system subfolders.
    b) **Mac Users:** Note that there is a separate installer for the factory presets, which you should run if you wish to install the presets on your system. If you encounter a preset installation error, we are aware of this potential issue and we have put together comprehensive instructions on how to resolve this. Please download them here: MAC PRESET HELP
3. Manually place the **entire** PALINDROME_SAMPLES folder in any location of your choosing such as an internal or external hard drive where you store your samples.
4. Launch your **VST3** or **AU** DAW and load PALINDROME on an Instrument Track.
5. Follow the prompt and point to the location of the **PALINDROME_SAMPLES** folder.
    - Upon first launch, you will see a popup that prompts you to point to the PALINDROME_SAMPLES folder on your system. Palindrome will remember this path so that your presets & samples can load properly. Should the folder ever need to be moved, simply navigate to the Configuration Menu (gear icon in footer) and use the "**change sound library path**" command to point to the folder in its new location.
6. To operate the plugin, you must trigger it via MIDI (i.e. keyboard or other controller)
7. Load some of the factory presets to confirm that you hear audio - you're all set!

If you require tech support, you may reach us at: glitchmachines.sales@gmail.com

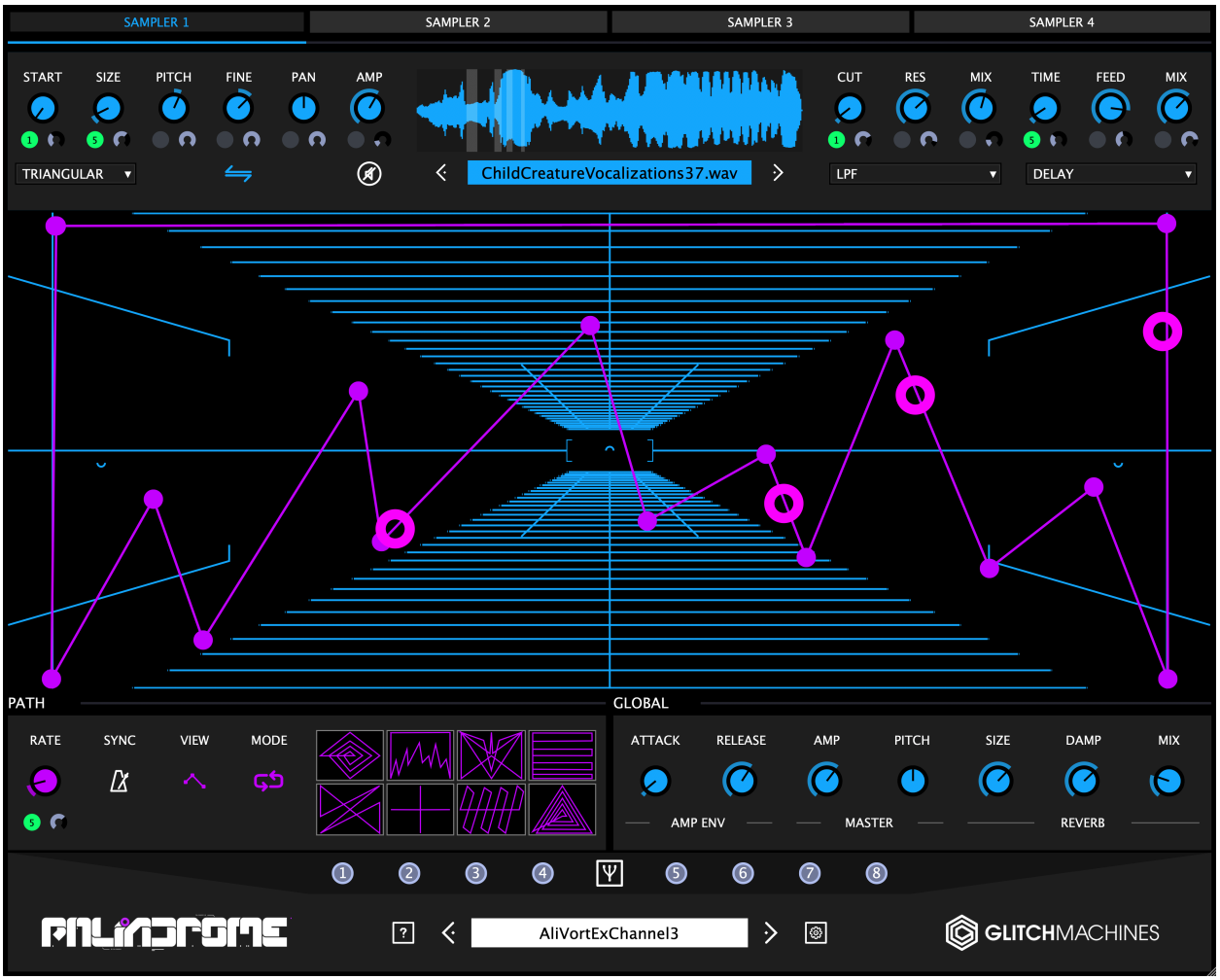
PALINDROME SYNOPSIS:

Palindrome is a granular morph plotting sampler geared toward electronic music production and experimental sound design.

The basic concept behind Palindrome is to fuse four granular samplers with a coordinate plotting grid and complex modulation sources in order to facilitate the creation of morphing sound effects and unusual instrument patches.

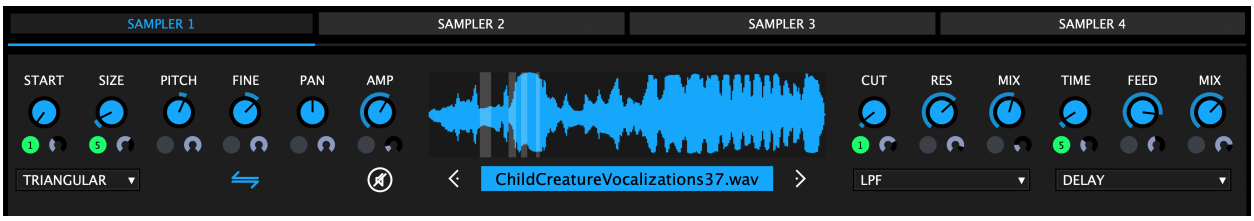
With its 4 granular samplers, morph-plotting system, 8 multi-breakpoint modulation envelopes, dual effects processors per sampler, shape presets, 4-note polyphony, deep randomization system, global reverb, 1.4GB sample library and numerous factory presets, Palindrome brings sound designers a powerful new sound sculpting tool.

PALINDROME INTERFACE:

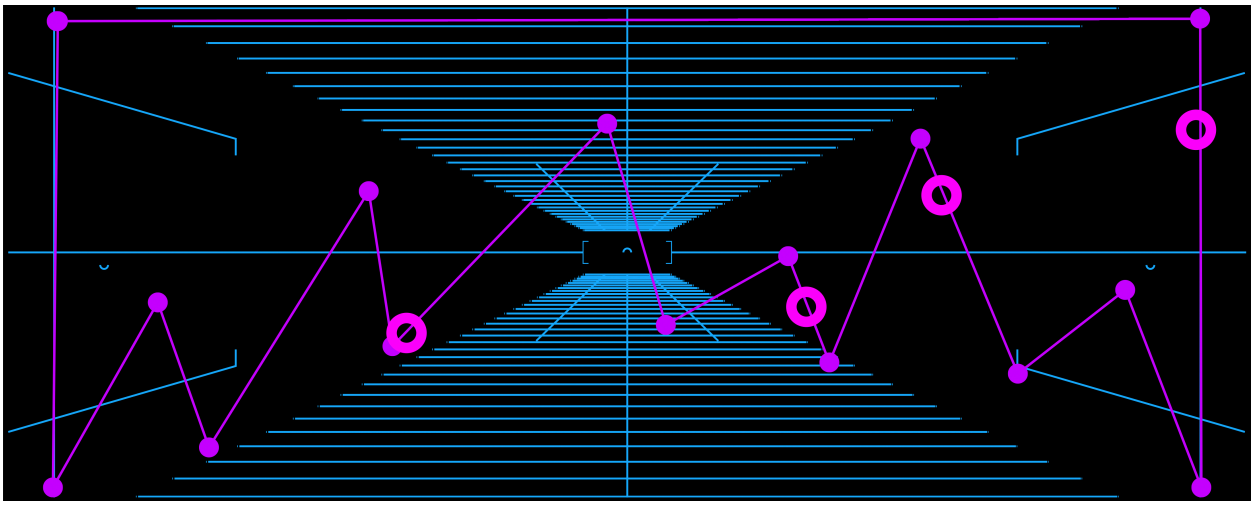


Palindrome's user interface is split into four main sections:

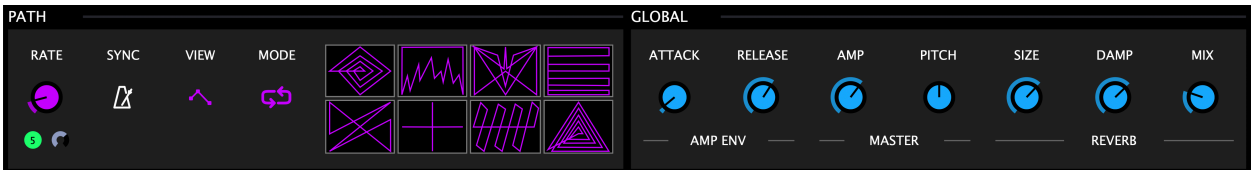
- **SAMPLER MODULES** - 4 main sound generators with two FX inserts each



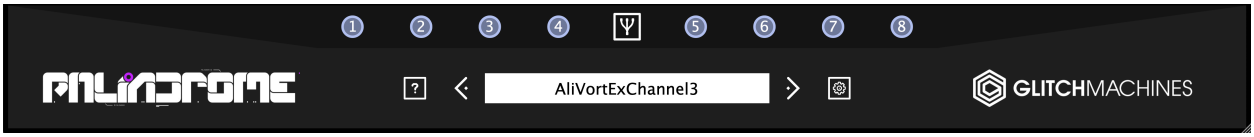
- **GRID SECTION** - area where the path is drawn and visualized in real-time



- **PATH & GLOBAL CONTROLS** - access to all path and global parameters

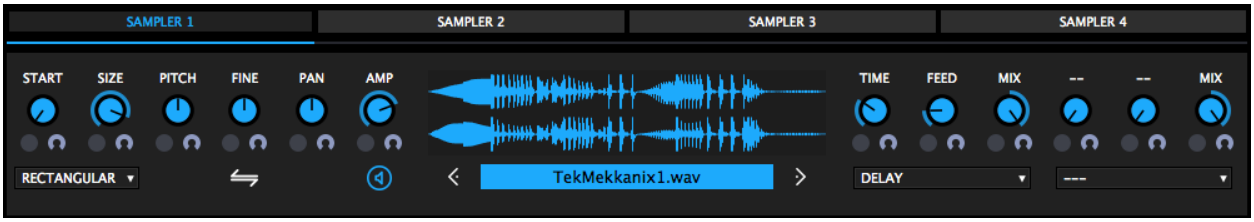


- **FOOTER SECTION** - access to envelopes, randomizer, presets, config menu

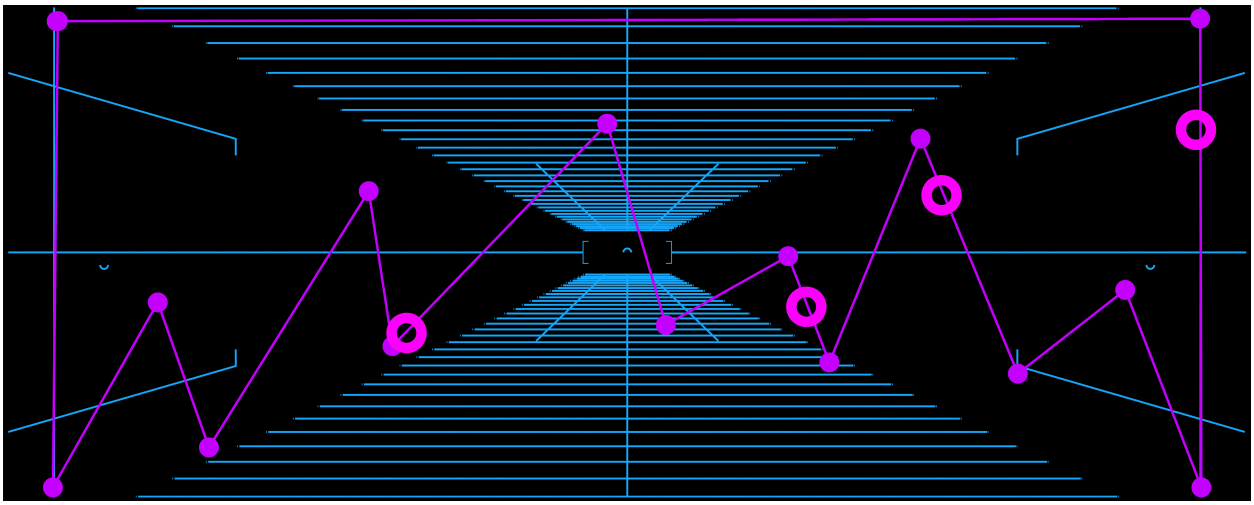


PALINDROME OVERVIEW:

At the heart of Palindrome are 4 granular samplers which feature new algorithms not available in our other sampler plugins. Each sampler includes a variety of sculpting options, all of which are viable modulation targets. In addition to this, each sampler features the ability to integrate up to two insert effects, which are also assignable as modulation targets. The insert effects include three filter types, two distortion types, ring modulation and delay.

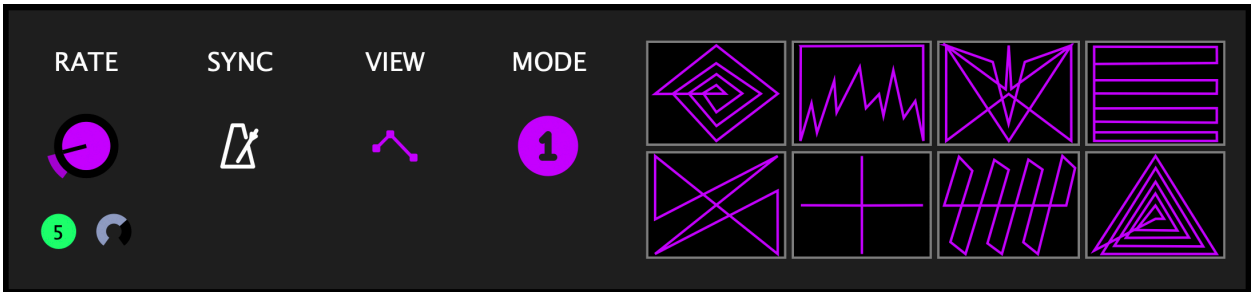


In the center of Palindrome's UI lies the plotting grid. The grid is a charting framework where you plot up to 16 points that determine the trajectory of a playhead. The grid coordinates of the playhead will determine which sampler outputs are currently audible. As the playhead travels along the path and over the grid zones, Palindrome will smoothly morph between the corresponding sampler outputs using a bilinear interpolation algorithm.



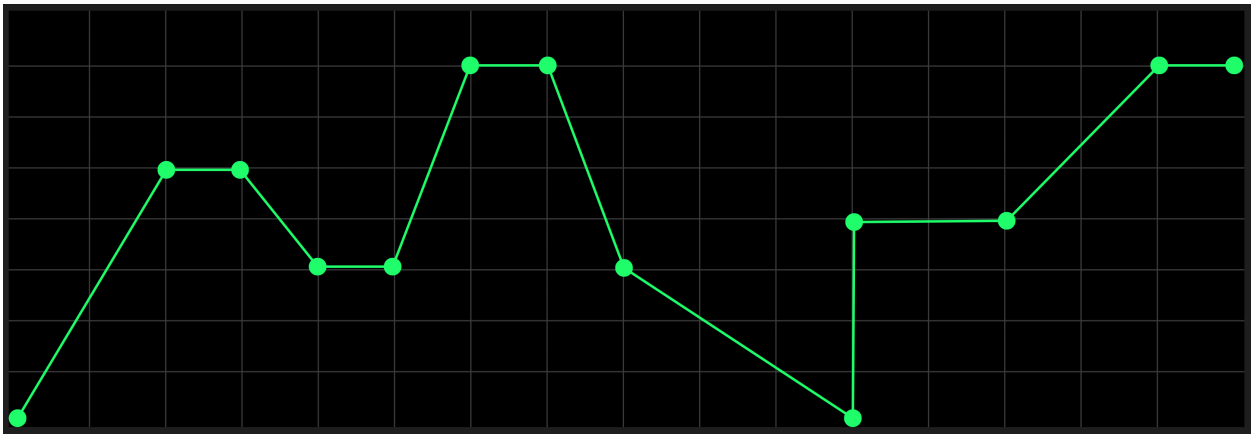
Palindrome's 4 voice polyphony allows you to trigger notes polyphonically which results in up to 4 active simultaneous playheads. Since you can play Palindrome in real time, you can use this behavior to create elaborate cascading sounds and syncopated rhythmic passages by offsetting the timing of the triggers.

Several directional modes are available that alter the way the playhead travels along the path. The default one-shot mode is useful in situations where more focused behavior is necessary and length or timing are a factor. Alternatively, you may choose any of the loop modes when cyclical travel or scattered randomization are preferred.



You can also alter the speed (rate) at which the playhead travels along the path. The path rate is a viable modulation target that can be used to juxtapose even more interesting animations such as expanding & contracting motions and flutter effects.

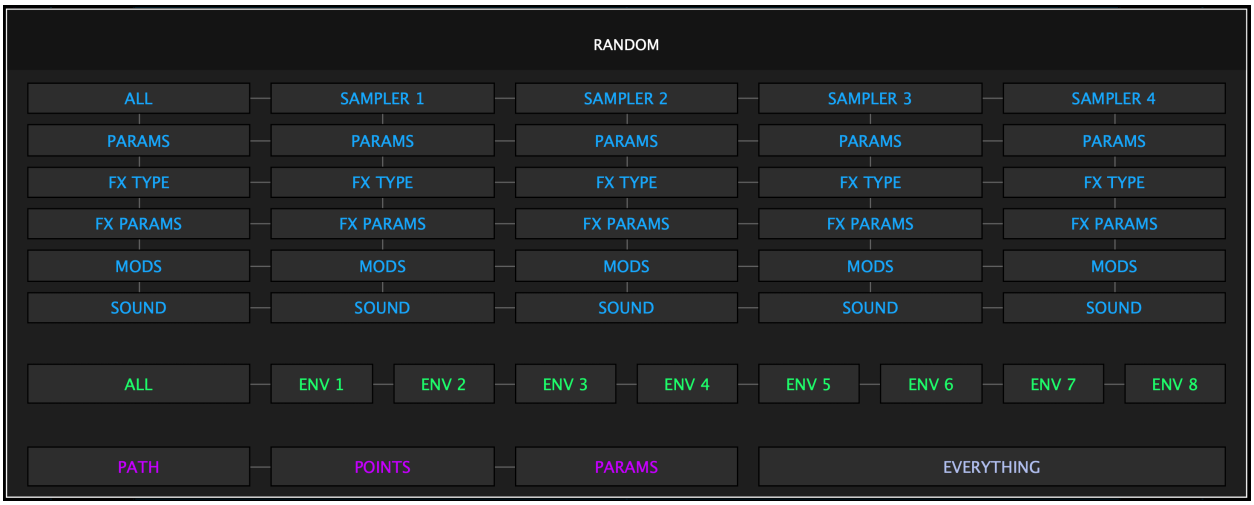
Rather than using standard LFOs for modulation, 8 multi-breakpoint modulation envelopes are available to facilitate the creation of intricate modulation shapes. These envelopes maximize the plugin's ability to animate a large quantity of parameters since a single source can be assigned to numerous destinations simultaneously.



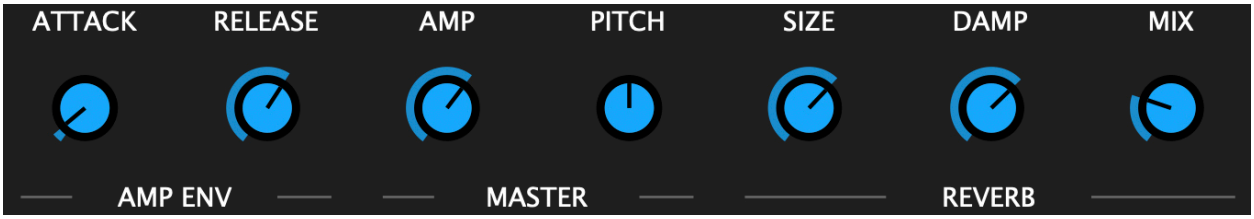
Each of the 8 envelopes feature individual grid lanes, where you can draw custom modulation shapes with up to 16 breakpoints. Each envelope includes dedicated rate and loop parameters to further expand its capabilities. These envelopes make it possible to create anything from simple cyclical shapes to extremely elaborate and slowly evolving modulations.

Assignments are made easily by dragging the desired envelope's corresponding numbered dot and dropping it onto the desired parameter's mod assignment slot. Assignment slots with corresponding modulation depth dials appear next to all parameters that are viable modulation targets.

Beneath all of the up-front features, we've included a comprehensive Random section where you can randomize nearly all of the plugin's parameters in isolation and/or randomize various groups of parameters simultaneously. This section quickly yields interesting results and is specifically designed for situations where you are either in a hurry to dial in a quantity of interesting results or simply lacking inspiration.



Last but not least, the Global section allows you to sculpt the combined output of the plugin by giving you global envelope, pitch and output parameters. We've also included a master reverb which can be applied to add a polish to Palindrome's master output.

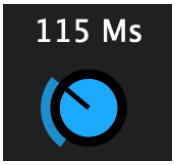


COLOR CODING:

The 4 UI colors are designated to the following sections / functions:

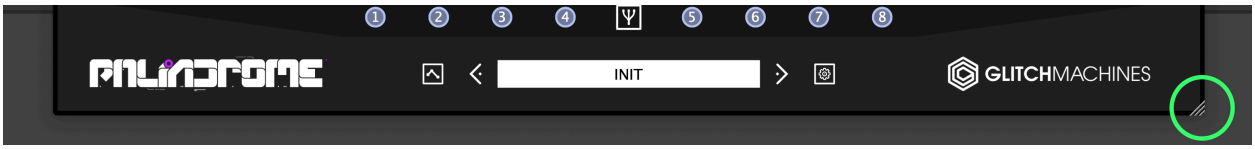
- FUCHSIA : Path & Shape Parameters
- GREEN : Envelope Editor & Assignments
- BLUE : Samplers & Global
- LIGHT BLUE : Envelope Sources & Mod Depths

VALUE DISPLAY:



Parameters that may require precise adjustments have been equipped with a parameter value display. To reveal the current value of such parameters, click on the corresponding knob. Likewise, as you adjust the relevant parameter, its value will appear in place of its label.

SCALABLE INTERFACE:



You may scale the Palindrome interface by dragging the bottom-right corner of the window until you reach the desired proportions. This setting is automatically saved and the plugin will launch with the set dimensions until altered.

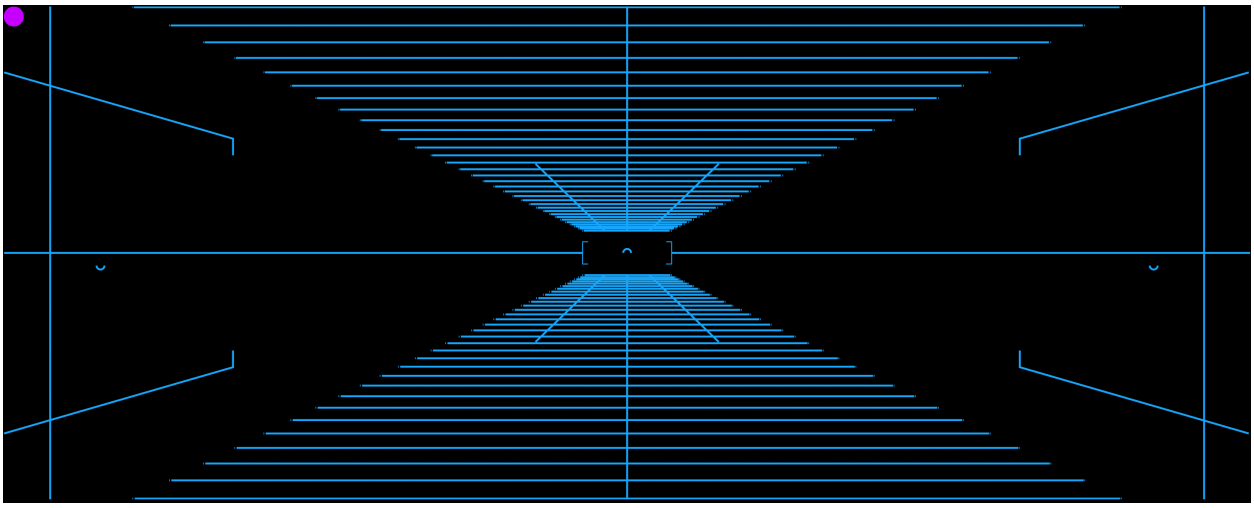
Should the interface ever exceed the boundaries of your screen, you can trash the preferences to reset its dimensions. To do this, navigate to the preferences via the Global Menu option and trash the corresponding file before relaunching the plugin.

INIT ALL CONTROLS *Init All Controls* in the Config Menu allows you to reset your patch

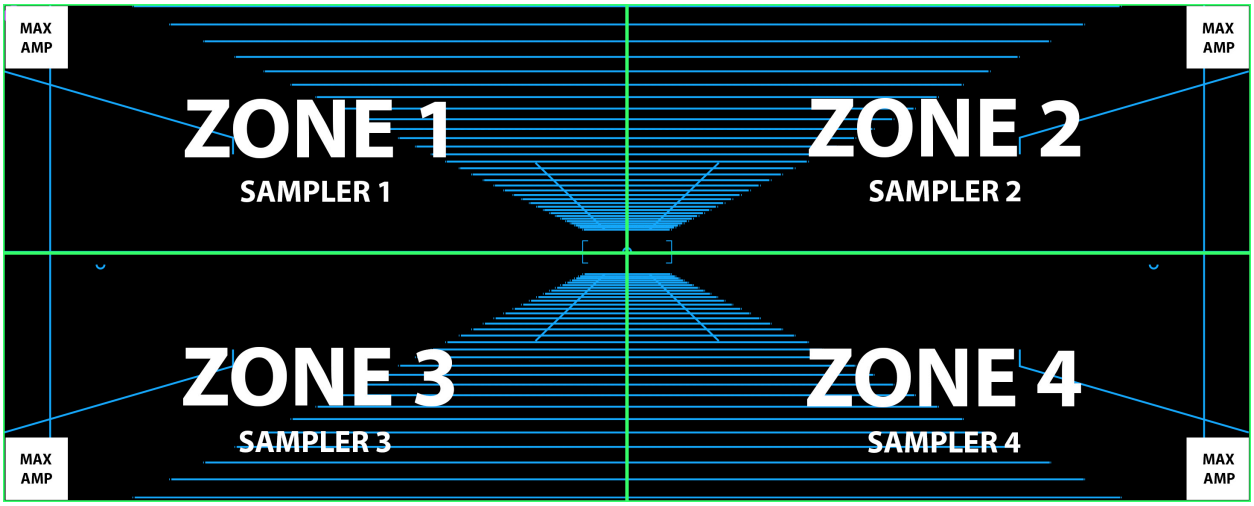
Holding the Control/Command (Win/Mac) key gives you finer control over a parameter.

Double clicking a knob will set it to its default value.

GRID SECTION:



The grid is split into 4 zones that correspond with the 4 sampler modules



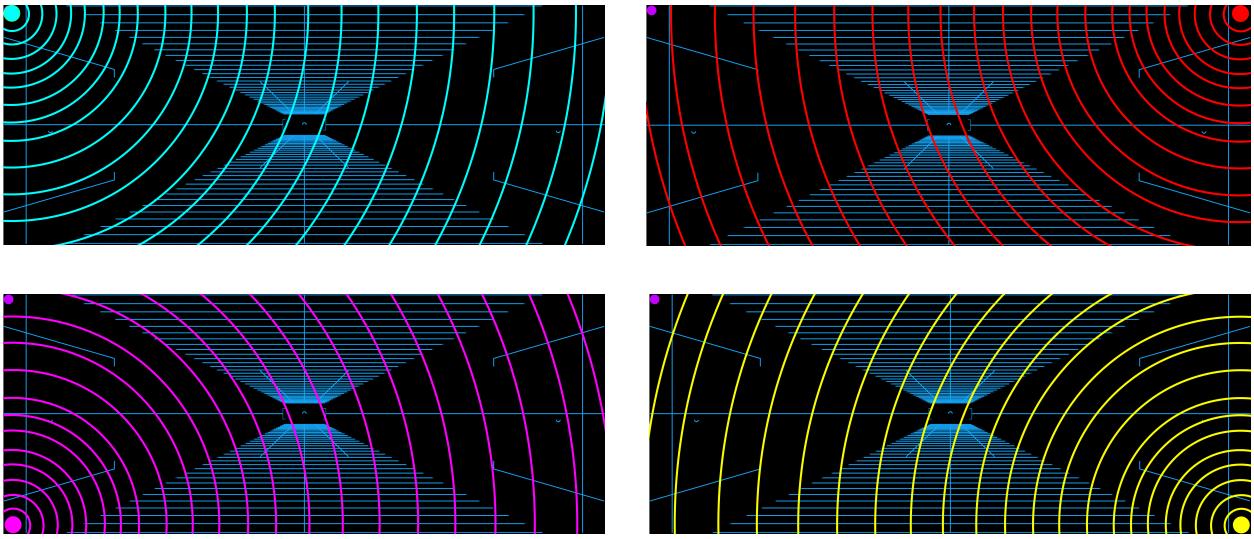
Grid Zone 1 = top left = Sampler 1
Grid Zone 2 = top right = Sampler 2
Grid Zone 3 = bottom left = Sampler 3
Grid Zone 4 = bottom right = Sampler 4

*The zone order is easy to remember if you visualize a **Z** shape.*

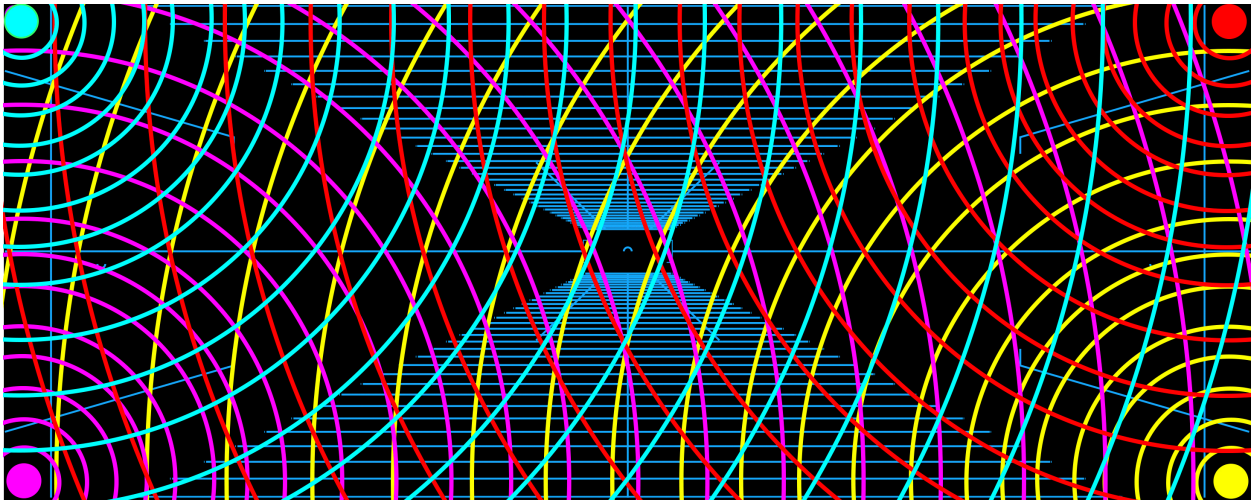
The far corner of each zone corresponds with the maximum amplitude of each Sampler.

A good way to visualize the way the zones work is to think of each corner as a speaker that is broadcasting the signal coming from the respective sampler.

At the point of origin (in the corner), the signal is at its loudest and as it moves farther away, it gets quieter until it finally reaches silence at the edge of the grid.

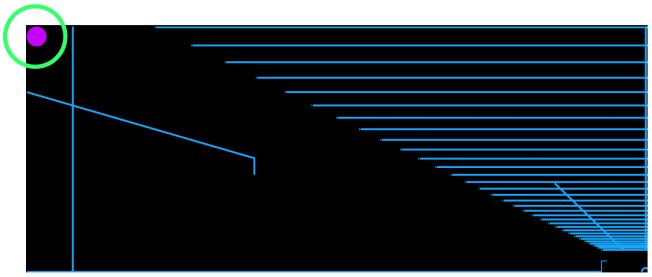


Assuming that all of the samplers are broadcasting a signal, the zones essentially reference the grid quadrants where the signals overlap:



Another important concept to understand is that the path represents a superimposed set of directions for the playhead to travel across, which in turn determines which of these signals will become audible over the course of its trajectory.

PATH:



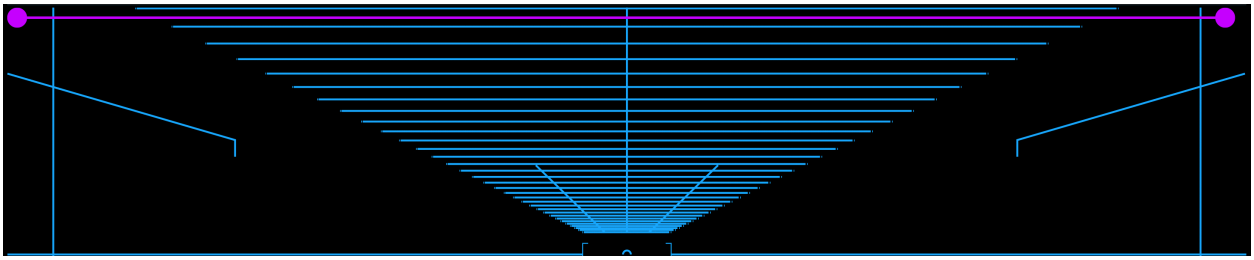
By default, there will only be one point present at the top-left corner of the grid.

For practical purposes we'll refer to this as the path's "point of origin".

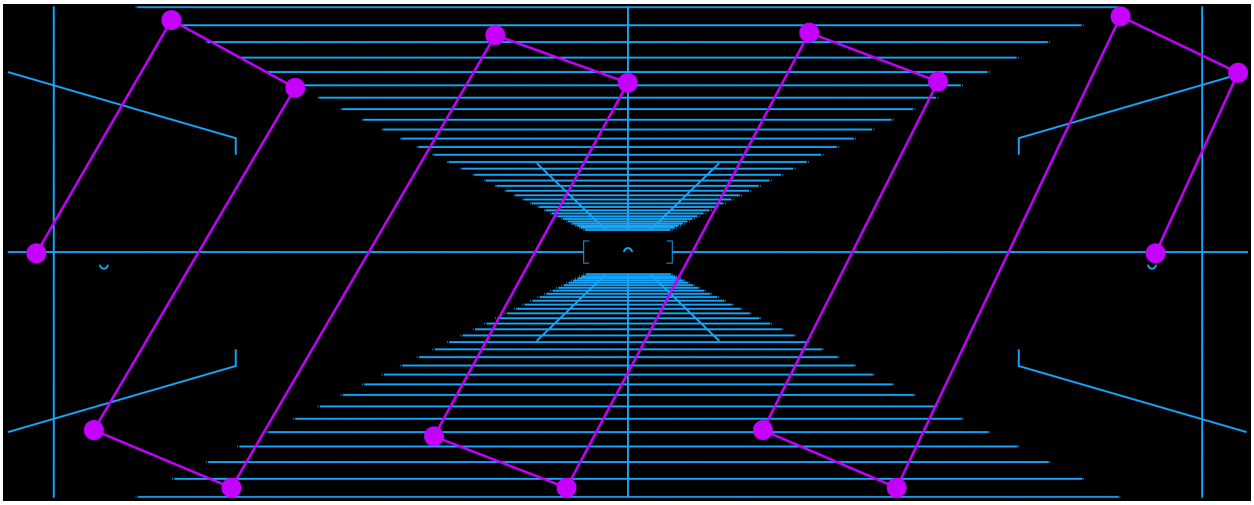
⚠ *You can move the point of origin to any grid location so long as you keep the relationship between the signals and the grid zones closely in mind in order to avoid unwanted silence or dead zones.*

Assuming you want to utilize more than one sampler, you will need to add more points to the grid, thus creating a "path" for the plugin's playhead to travel across.

To draw a new point on the grid, simply shift+click in the desired location. Assuming that the "path view" option is active, you will see a line that connects the origin point and the new point you just created.



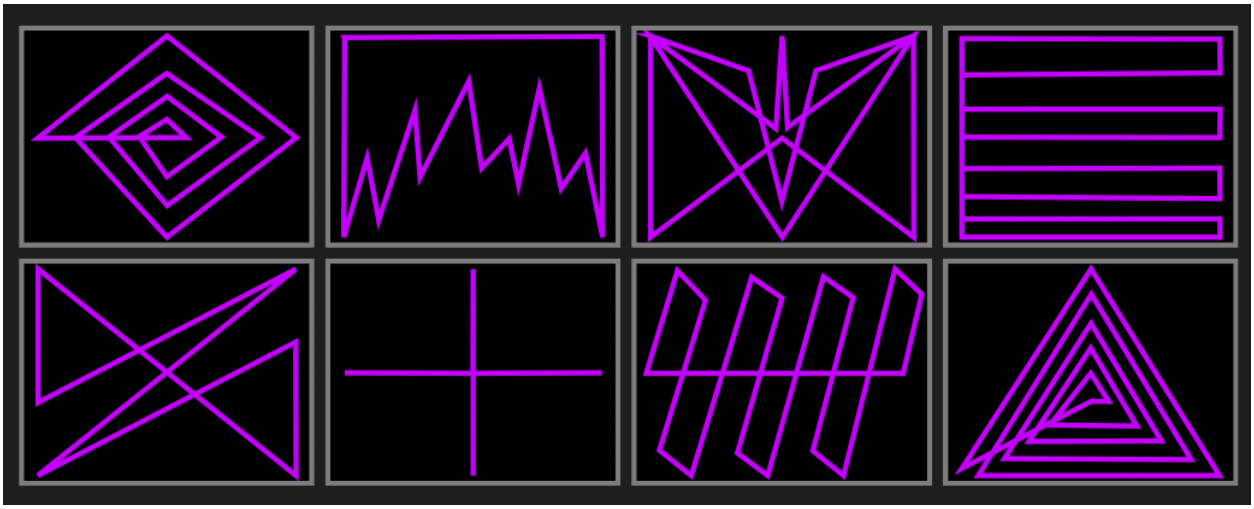
You may draw up to 16 points in this way, effectively creating the aforementioned path for the playhead to traverse.



All of the path points can also be manually repositioned, should you wish to do so. This makes it easy to fine tune your patch while listening to the results in realtime.

In case you happen to draw shapes you're particularly fond of, we have implemented a path preset system which allows you to save your favorite shapes into up to 8 slots.

A diverse selection of shapes are available by default - we decided to include more abstract shapes since it's implied that basic shapes such as squares and triangles are quite easily drawn and ultimately more obvious.



Once you've drawn a shape you would like to keep, simply shift+click in the desired slot and your shape will be stored there, along with a miniature visual representation of it.

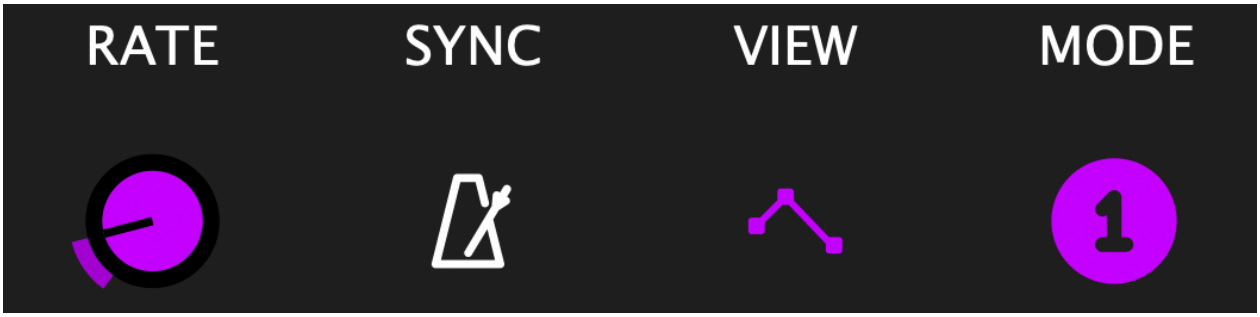
When a shape is saved to a slot, it is saved in the plugin's preference file so that it loads the custom shapes next time it is launched.

In case you should ever want to restore the factory shapes, simply navigate to the Global Menu and : "Reset Factory Path Presets"

To delete a point, simply right+click somewhere on the grid.

Note that point deletion is handled slightly differently between the Grid and Envelope Editors. On the Grid, you must right+click somewhere on an open area (do not click on the actual point itself). The Envelope Editor, on the other hand, requires that you right+click directly on a breakpoint in order to delete it.

There are various other important parameters in the Path Section:



RATE : determines the speed at which the playhead will travel across the path. You may also modulate this parameter to induce more complex forms of rate fluctuation.

SYNC : allows you to synchronize the speed of the path to your DAW's clock. When SYNC is active, the rate parameter will be locked to various available beat divisions.

VIEW : allows you to show and hide the lines interconnecting the active points on the grid. Turn this ON while editing and OFF during normal use to minimize visual clutter.

MODE : 5-way switch that changes the playback behavior of the playhead:

- ONE-SHOT
- FORWARD
- BACKWARD
- PENDULUM
- RANDOM

When drawing shapes, remember to keep the relationship between the grid zones and the sampler in mind so that you don't create any unwanted dead (silent/quiet) spots by passing the playhead over a zone that corresponds with a sampler that doesn't have a sample loaded or occurs at a low amplitude stage of the grid. For example, if you placed the point of origin in the bottom-right zone, yet only have a sample loaded in sampler 1.

PLAYHEAD : the playhead is visualized as a fuchsia ring. The grid location of this playhead determines which sampler signals are audible. Each time you send a MIDI trigger to the plugin, a new playhead will move across the path in realtime according to the active grid coordinates and settings in the path section. Since Palindrome has 4 voice polyphony, you may see up to 4 playheads on the grid simultaneously, depending on how many MIDI "notes" are being pressed and/or how the global envelope is set up.

SAMPLER MODULES:

Because Palindrome was specifically developed for experimental sound design, we implemented granular samplers due to their inherent focus on experimentation. As such, Palindrome behaves differently than our other samplers and it's important to understand the underlying concepts in order to get the most out of the plugin.

Each of the 4 modules are selectable via the labeled tabs at the top of the interface.

Palindrome comes with a diverse collection of samples and we included various presets to showcase how they can be utilized to create interesting sounds. Of course, Palindrome also works with all of your existing sample libraries and loops.

Click in the LOAD FILE dialog box to load a sample, or drag & drop samples directly from your DAW or desktop onto the waveform display. Once you select a file, the < > arrows increment/decrement through the files in the currently active folder.

Right-click inside the waveform display to reveal a menu with the following options:

- *Clear Slot*
- *Copy/Paste Settings*
- *Lock Soundfile On Preset Change - with a submenu for individual/grouped locks*

ALT+Click inside the waveform display to load a random audio file

Rather than playing a file from start to finish, Palindrome will loop a small portion of the sample, effectively allowing you to "scrub" the loop across the length of the file. This loop is indicated by a transparent white overlay which is superimposed over the waveform display of the sampler, as shown below:

The position and size of the loop are determined by the START and SIZE parameters, and the respective visual indicators will move across the waveform in realtime.

Up to 4 overlays may be visible simultaneously, depending on how many MIDI triggers are active at a time.

START : Determines the starting position of playback

(based on a percentage of the sound file's length and size in milliseconds)

SIZE : Determines the size of the grain loop

PITCH : Alters the pitch in +/- 24 semitones

FINE : Alters the pitch more finely for greater precision

PAN : Determines the panoramic position of the sampler's signal

AMP : Determines the amplitude of the samplers output

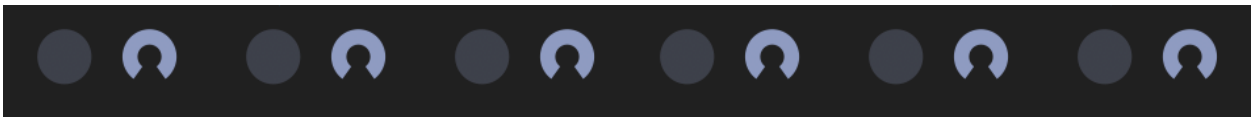
Palindrome features three granular windowing options that are selectable via the dropdown menu. Each of them brings out different timbral characteristics in the grains.

RECTANGULAR : no softening of the edges - more raw and aggressive sounding
TRIANGULAR : a triangular window is applied to the grain to soften the edges
HANNING : a hann window is applied to the grain to soften the edges

⚠ *Note that the granular mode in Palindrome is of the "looping" variety rather than the "grain cloud" variety. We have specifically chosen this granular method due to its sonic characteristics, and how they apply to the concepts employed throughout Palindrome.*

REVERSE : Reverses the playback direction of the loaded file

SPEAKER ON/OFF : Activates or deactivates the output of the sampler



Each modulatable parameter has a small dot next to it. These dots are the modulation assignment slots, which are inactive by default, as shown above.

Once you make a modulation assignment, the corresponding envelope number will be displayed in green inside the slot. The mod depth dial, which is the crescent shape next to each slot, determines the min/max range of modulation on the respective parameter.

For more on modulation and how to make assignments, see the Envelope section.

To the right of each sampler's waveform display lies the corresponding insert effects section. Each of the effects inserts process the incoming signal from left to right and offers two parameters, followed by a MIX knob.

Once you choose an effect from the list, its parameters will populate the knobs.

- **LPF :** Low Pass Filter // Parameters: Cutoff and Res
- **HPF :** High Pass Filter // Parameters: Cutoff and Res
- **BPF :** Band Pass Filter // Parameters: Cutoff and Res
- **DRIVE :** Distortion // Parameters: Drive and Amp
- **FOLD :** Wavefolder // Parameters: Drive and Amp
- **RING :** Ring Mod // Parameters: Wave and Frequency
- **DELAY :** Delay // Parameters: Time and Feedback

ENVELOPES:

Palindrome features 8 user-definable multi-breakpoint modulation envelopes.

Rather than making use of traditional LFOs for modulation, Palindrome gives you the ability to draw complex shapes with up to 16 breakpoints. Each envelope can be used to modulate multiple targets simultaneously, making for a deeply complex mod system.

Each of the numbered dots corresponds with one of the 8 envelopes. To create a modulation assignment, simply drag and drop one of the numbered dots to the desired target parameter's modulation slot. A successful assignment is made when you see the green numbered dot inside the destination slot.

Right+Click on the modulation slot to clear a mod assignment

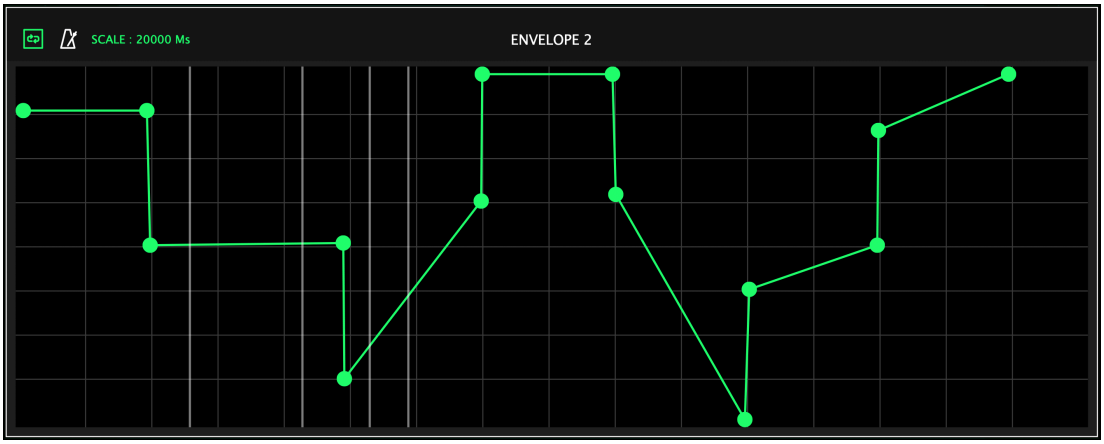
To view the envelope editor window, click the dedicated modulation button. The button will be illuminated in green to signify that it is active. The currently selected envelope editor will also be illuminated in green as illustrated below:

Once you select the desired envelope editor, it will become active. Note that the currently active envelope number is written out in the header, which makes it easy to keep track of which envelope editor you're currently working in.

You may either modify the existing shape by moving the existing nodes with your mouse, or you can create your own shape as follows:

- Shift+Click : Create Breakpoint
- Right+Click on node: Delete Breakpoint
- Right+Click on grid: Copy/Paste/Clear Envelopes via Menu

The white vertical lines that travel across the grid of the envelope editor coincide with the active voices and the SCALE parameter settings.



The number of visible indicators is determined by the number of active voices

Loops the envelope after it reaches its last stage

Synchronization with host clock of your DAW

SCALE: Determines the speed of the envelope 20 Ms - 20,000 Ms

When synced, the scale will be displayed as relevant beat divisions

GLOBAL:

The Global section features controls that will affect the consolidated output of the plugin.

ATTACK : The attack stage of the global amplitude envelope

RELEASE : The release stage of the global amplitude envelope

AMP : The master amplitude of the plugin

PITCH : The master pitch control of the plugin

SIZE : The size of the master reverb

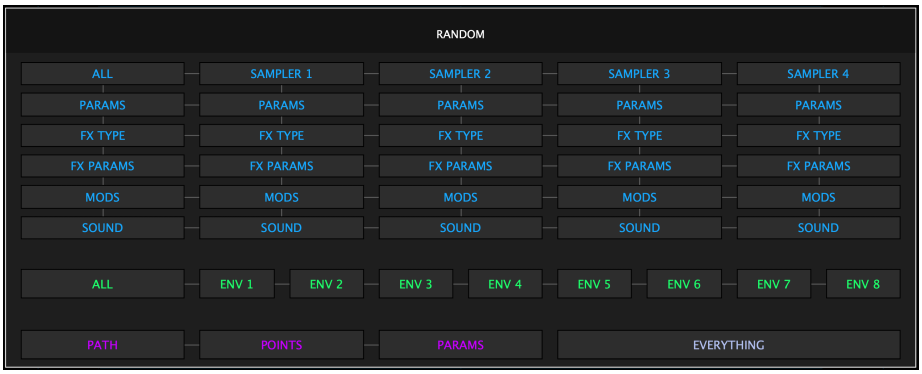
DAMP : The amount of high frequency damping of the reverb

MIX : The wet/dry mix of the reverb vs. the dry master output

FOOTER:

The footer section features the preset browser and its associated parameters, as well as access to the randomizer and configuration menu.

RANDOMIZER :



? Click the small question mark icon in the footer to show the Randomizer panel

The Randomizer panel features a sophisticated randomization system that allows you to isolate sections of the plugin or randomize entire groups of parameters simultaneously.

A comprehensive layout of columns and rows shows a macro overview of all of the plugin's randomizable parameters. The rectangular parameter labels can be clicked to trigger the desired randomization.

Be sure to audit your patches after randomizing, since a lot of parameters will likely wind up at awkward values and either induce silence or other unwanted issues. You should always check critical parameters such as amplitude, pitch, etc - in order to assess whether they need to be manually tweaked to more logical settings.

More often than not, you can tame an otherwise chaotic and possibly unusable patch by scaling back the value of modulation depth applied to the various parameters. Other parameters that may need to be tamed are things like "rate", where spastic settings may be causing unwanted behavior on your patch. Simply dialing back the rate to a slower speed is often all that's needed to bring things back under control.

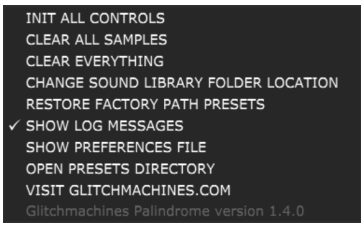
PRESETS :

You can navigate the presets either by clicking the drop-down menu and selecting a preset, or by using the navigational arrows to increment/decrement through the list.

SAVE PRESET : Clicking on this option will open a dialog box that will let you save the current preset on your hard drive using the extension ".plnp".

⚠ *Only the presets saved in the default preset folder will appear in the menu.*

CONFIGURATION MENU:



Click the small gear icon in the footer to access the Configuration Menu, which gives you access to various important functions that affect the plugin.

INIT ALL CONTROLS : Initialize all plugin parameters to their default state

CLEAR ALL SAMPLES: clears the currently loaded audio files

CLEAR EVERYTHING: initializes all parameters and clears all loaded audio files

CHANGE SOUND LIBRARY FOLDER LOCATION :

In case the PALINDROME_SAMPLES folder should ever need to be moved to another location on your system, this option will open a dialog where you can point the plugin to the new location of the PALINDROME_SAMPLES folder.

RESTORE FACTORY PATH PRESETS : restores the factory path shapes inside the 8 path preset slots

SHOW LOG MESSAGES : toggles notifications that appear at bottom left of the footer

SHOW PREFERENCES FILE :

This option opens the finder/explorer to the location of the preferences file. This file stores saved options like custom path shapes, UI dimensions, etc.

OPEN PRESETS DIRECTORY :

A shortcut to the dedicated folder where the plugin's presets are stored

VISIT GLITCHMACHINES.COM :

A convenient link that takes you to our website

Thanks for purchasing Palindrome!

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