



# HYSTEREIS.

# HYSTERESIS // CREDITS

## SOFTWARE DEVELOPMENT:

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## HYSTERESIS PRESETS:

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## PRODUCT GRAPHICS:

Valentin Rodriguez / DMAS3

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Glitchmachines® [www.glitchmachines.com](http://www.glitchmachines.com)

## ABOUT US:

Glitchmachines was established in 2005 by sound designer and electronic musician Ivo Ivanov. For the first 5 years of our brand's existence, we were focused on building handcrafted circuit-bent hardware instruments. We sold a limited number of units through boutique synthesizer retailers Analogue Haven and Robotspeak in California and we custom made instruments for numerous high-profile artists and sound designers. In 2010, we shifted our focus toward creative software plugins and sound effects packs.

## SYSTEM REQUIREMENTS:

- Broadband Internet connection for product download
- VST/AU host such as Ableton Live, Logic Pro, Renoise, etc.
- Mac OS X 10.7 or higher (PPC not supported)
- Windows Vista or higher
- CPU with SSE2 support
- Minimum recommended CPU: Core 2 Duo, 2GHz

## SETUP:

Unpack the GM\_HYSTERESIS .zip file and place the entire folder in any location of your choosing, such as an internal or external hard drive in your system.

Navigate to the appropriate subfolder for your OS (MAC or WINDOWS) inside the HYSTERESIS\_INSTALLERS folder, and run the installer.

Windows users: be sure to select the proper architecture for your system (32bit/64bit)

Launch your VST or Audio Unit DAW of choice, and instantiate the HYSTERESIS plugin on an Audio or Instrument Track (as an audio effect).

Our download links are set to expire within 30 days. Should you need the files again, simply download them again from our website: [www.glitchmachines.com](http://www.glitchmachines.com)

For tech support, please contact us at: [support@glitchmachines.com](mailto:support@glitchmachines.com)

Hysteresis is the reincarnation of Inear Display's "Oxymore" plugin - all presets are cross-compatible.

## HYSTERESIS DESCRIPTION:

Hysteresis is a FREE glitch delay plugin geared toward creating robotic artifacts and abstract musical malfunctions.

Hysteresis features a delay effect with stutter, lowpass filter and modulation effects thrown into the feedback signal path.

Easily infuse your projects with glitchy articulations and abstract textures. Process anything from drums and percussion to synth lines and sound effects. On top of being able to create incredibly wild signal mutations, Hysteresis can also be used to generate classic delay effects.

## HYSTERESIS INTERFACE OVERVIEW:



The input signal first goes through a delay line on each stereo channel, but instead of sending the output directly back into the delay line, the resulting signal is sent to a stutter processor, then to a lowpass filter and finally to another delay line on the opposite channel which is modulated for creating chorus type effects. The output of the second delay line is then routed back to the first one on the original channel.

The stutter effect can be used to generate reverse delays, noisy pitch-shifting or raw granulation. The lowpass filter has an internal LFO to make the cutoff frequency oscillate, and the modulation processor can act as a subtle chorus or at the contrary as a noisy modulator by changing the range of the modulation rate. The delay can be synced to your DAW's tempo.

## STUTTER:



This effect is the first in the feedback signal chain. It loops short slices of the incoming audio which can then be played back at a different speeds and backwards.

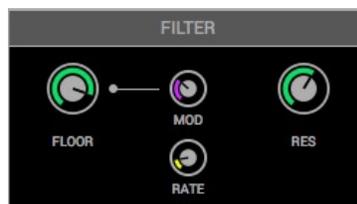
**SIZE** : controls the length of the loop. This value is proportional to the delay time (so it can be different on each stereo channel depending on the stereo separation amount of the delay)

**SPEED** : controls the speed at which the looped audio is played back. A value of 100% means normal speed, 200% means twice faster, 50% means twice lower and a value of 0% stops the playback. Range : 0% to 400%

**MIX** : crossfades between the normal feedback signal and the output of the stutter effect. Range : 0% to 100%

**REV** : when switched on, the looped signal will be played backwards

## FILTER:



The lowpass filter is applied to the output of the stutter effect.

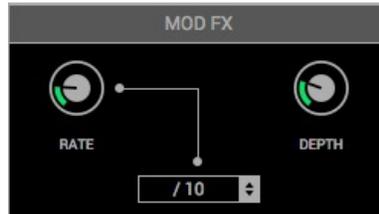
**FLOOR** : controls the minimum cutoff frequency in case the filter is modulated, otherwise it sets the cutoff frequency. Range : 20Hz to 6kHz

**MOD** : controls the amount of LFO modulation applied to the cutoff frequency. Range : 0% to 100 %

**RATE** : controls the rate of the LFO modulating the cutoff. Range : 0Hz to 20Hz

**RESONANCE** : the filter resonance at the cutoff frequency

## MODULATION:



This effect is applied to the output of the filter but happens on the opposite audio channel. It is then routed back to the feedback input of the first delay line on the original channel.

**RATE** : the rate of the delay time modulation. Lower values will result in chorus type effects while higher values will result in noisy ring-modulation/FM type sounds. This parameter depends on the menu located at its right. When set to «Default» mode, the rate will be the one set by the knob, but it can also be divided by 10 or multiplied by 10. *Range : 0Hz to 600Hz (base range, can be multiplied or divided by 10)*

**DEPTH** : controls the overall output of the modulation effect as well as the amount of signal that will be fed back to this effect. Use this parameter with caution as high values combined with high values of the delay section feedback can lead to very loud sounds. If this happens, you can reset the delay lines and the feedback parameters by pressing the «PANIC» button in the output section. *Range : 0% to 100%*

**MODULATION RATE:** The modulation rate can be multiplied or divided by 10 via the drop down menu

## DELAY:



The main delay line. Input first goes through it and the processed feedback is sent back to it.

**TIME** : controls the delay time. The value can either be in milliseconds or in bar divisions if the «Sync» switch at the top is switched on. In sync mode, if the tempo goes below 40 BPM, the value displayed may be inaccurate as values exceeding the maximum delay size will be divided by 2. *Range : 5Ms to 1000Ms in free mode, or 1 to 128 bar divisions in sync mode*

**FEEDBACK** : *Range : 0% to 100%* - Controls the amount of the feedback signal (processed by the other effects). Use this parameter with caution as high values combined with high values of the modulation section *amount* parameter can lead to very loud sounds. If this happens, you can reset the delay lines and the feedback parameters by pressing the «PANIC» button.

**SEPARATION** : controls how late the right channel delay will be compared to the left channel delay. If set to 0%, both channels will be delayed by the same amount. If set to 100% the delay time of the right channel will be twice the delay time of the left channel. This also impacts the stutter effect loop sizes. Range : 0% to 100%

**PING->OUT** : if enabled, the output of the first delay line (pre-feedback) goes to the effect mix, otherwise it is muted. If this parameter is not activated, the modulation Amount parameter should be higher than zero if you want to hear the delay

## PRESETS:



You can change the current preset via the the drop down menu or increment/decrement through the preset list via the arrow buttons.

**SAVE** : will open a dialog box that will let you save the current preset on your hard drive using the extension «.exp». Only the presets saved in the default preset folder (where the dialog box opens by default) will appear in the menu.

**LOAD** : load a preset stored somewhere else by dragging the file onto the «Presets» section.

**RANDOM** : will set all knobs (except the master output, dry/wet parameter and the «sync» button) to random values.

## OUTPUT:

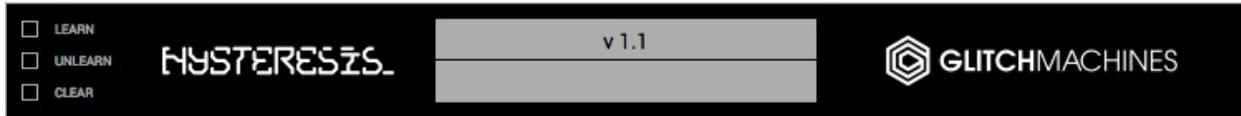


**D/W** : a standard dry/wet mix knob allowing you to blend the amount of the effect with fully counter clockwise being zero effect, and fully clockwise being 100% effect.

**LEVEL** : the final output of the plugin

**PANIC** : allows you to reset the delay lines and feedback parameters in case of unwanted signal spikes

## FOOTER:



The footer contains the MIDI functions and the parameter value display.

As parameters are adjusted, their name and value will be displayed here.

## MIDI:



**LEARN** : to assign a knob to a MIDI controller, click on «Learn». Then once learn mode is active (while the button is on), move the control you wish to assign on the plugin interface, then move a control on your MIDI controller and the parameter will be bound to that control.

**UNLEARN** : to unlearn a parameter, toggle the «Unlearn» switch on, move the parameter you wish to disconnect on the plugin and it will no longer respond to MIDI CCs.

**CLEAR** : you can unlearn all parameters at once using the «Clear» button.

*MIDI mappings are saved in a preferences file when the plugin is closed, so they will still be present when relaunching it, but they can be overridden if you open a project in your host with different mappings as they are also saved in the project state.*

## INTERFACE TIPS:

- Make finer value changes by holding the Control / Command key while moving a knob
- Double-clicking a knob will set it to its default value.

Thanks for downloading HYSTERESIS!

Please check out the rest of our products at our website: [www.glitchmachines.com](http://www.glitchmachines.com)