



# SUBVERT // CREDITS

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*This symbol refers to important technical info*



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

## SETUP:

- ⚠ *This plugin is not backwards compatible with previous versions.*
- ⚠ *Presets are not interchangeable between versions.*
- ⚠ *It is not necessary to uninstall or overwrite previous versions of Subvert (1.x). Subvert 2.x can coexist with previous (now discontinued) versions of the plugin. However, it's advised that you back up and/or render any sessions where Subvert 1.x may have been in use because this version of the plugin is no longer supported or publicly available.*
- ⚠ *Please note that Subvert 2.0 is an Audio Unit or **VST3**-only 64bit plugin.*
- 💡 *Subvert is a **stereo** plugin; be sure that you are instantiating it on a stereo track.*

1. Unpack the SUBVERT2.zip file
2. Via the SUBVERT2\_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:** 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. Launch your AU/VST3 DAW and instantiate SUBVERT2 on a **stereo** track.
4. Load some audio onto the track and check out the factory presets to get a sense for how the plugin sounds and works.

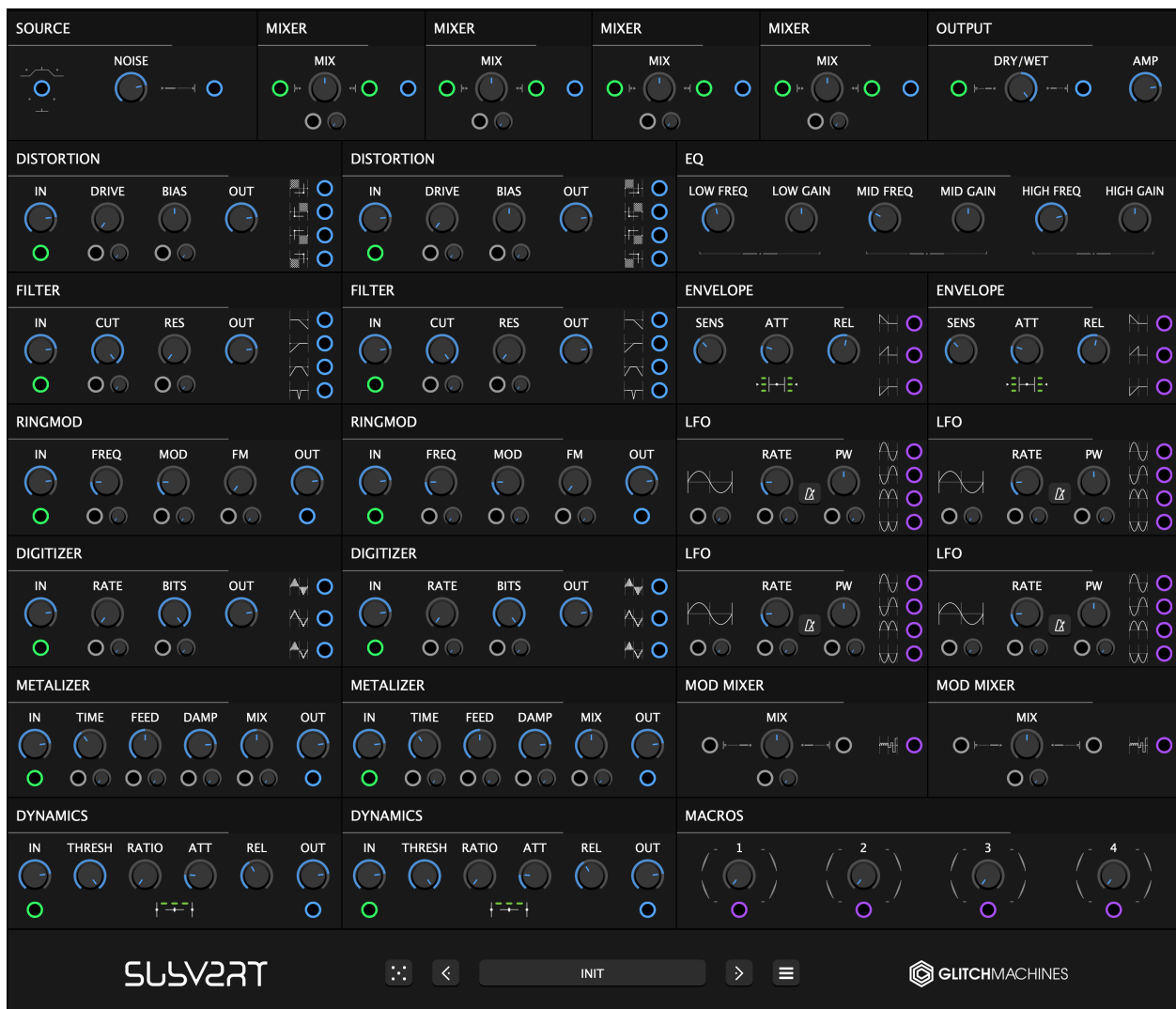
- 💡 If you require tech support, you may reach us at: [glitchmachines.sales@gmail.com](mailto:glitchmachines.sales@gmail.com)

## SUBVERT DESCRIPTION:

Subvert 2 is a modular multi-effects processor designed to decimate the frequency spectrum. Version 2 has been redesigned from the ground up, implementing a broad range of new features such as a modular patching system, new LFOs with 15 wave shapes, new dynamics modules, revised effects algorithms, new noise generator, new feedback path, new macros, an improved preset system with 100 new factory presets and a fully redesigned scalable user Interface.

Based around Multimode Distortion, FM Ring Mod, Digitizer, Metalizer, Multimode Filter and Dynamics effects modules, Subvert 2 allows you to freely explore the open ended routing facilities thanks to its audio and modulation mixers, envelope followers, LFOs, and Macro controllers. We included an assortment of factory presets, showcasing the various facets of this diverse effects processing plugin. Subvert 2 brings an extensive range of decimation effects to your audio arsenal.

## SUBVERT INTERFACE:






Subvert's interface colors are designated to the following sections / functions:

AUDIO OUTPUTS	-		AUDIO CABLE	-	
MOD OUTPUTS	-		MOD CABLE	-	
AUDIO INPUTS	-				
MOD INPUTS	-				
ACTIVE INDICATOR	-				

## PARAMETER VALUE DISPLAY:



Parameters feature a popup parameter value display which appears adjacent to the knob position as you adjust the relevant knob.


-  *Holding the Control/Command (Mac/Win) key gives you finer control over a parameter.*
-  *Double clicking a knob will set it to its default value.*
-  *Several parameter initialization options are available per the Config Menu.*

## SCALABLE INTERFACE:

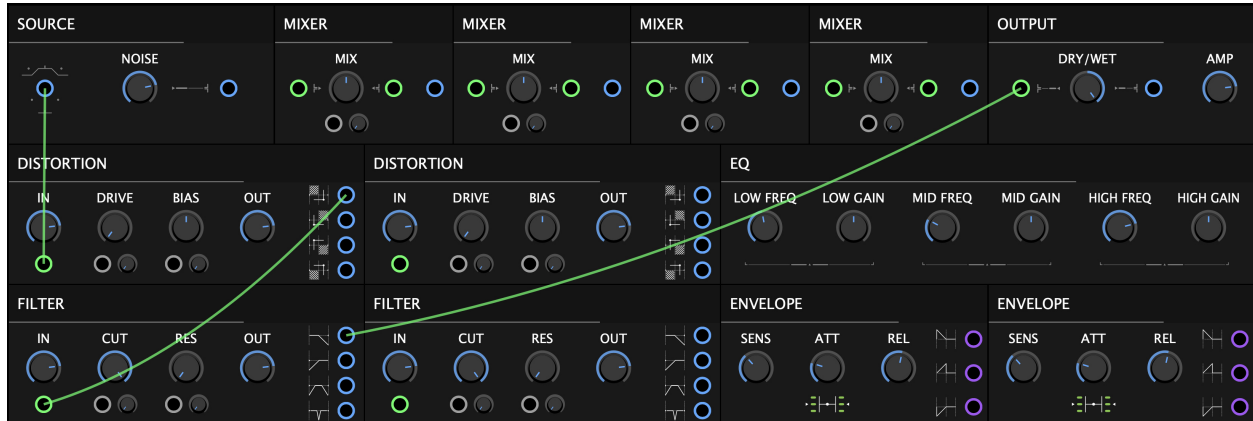


You may scale the Subvert interface by dragging the bottom-right corner of the window until you reach the desired proportions. This setting is automatically saved in the preferences file and the plugin will launch with the set dimensions until they are altered.

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

-  *Ensure that the plugin is not instantiated when you trash the preferences file or the plugin will auto generate a duplicate with the same unwanted settings.*

## PATCHING SYSTEM:



Due to its modular architecture, Subvert will always launch with its default (INIT) patch to ensure it will pass the incoming audio signal as expected:

**DAW** > Distortion In > Distortion A Out > Filter In > Lowpass Filter Out > **Subvert Out**

Click, drag & drop from a source output node to a destination input node.

As you proceed with this, a patch cable will appear to illustrate the connection.

To ease the patching process, as you click and drag a patch cable away from a source node, only viable destination nodes are illuminated, while all others are dimmed:



💡 *Once a modulation connection is made, **turn up** the adjacent **modulation depth dial**.*

- Right-click on a destination node to break the relevant connection
- A single output node can be patched to several destination nodes simultaneously
- You can reduce clutter by decreasing the patch cable opacity via the config menu
- Audio signals are carried over a green cable and modulation signals over a gray cable
- You can initialize the patch via the Configuration Menu

## MODULATION SECTION:



Complex modulation routings give motion to Subvert's core. All key parameters can be modulated using the onboard envelope followers, LFOs, mod mixers and macros.

Two onboard Envelope Followers allow you to base modulations on the transients of incoming signals, with the option of tracking the left, right or consolidated channels.

One of the highlights of Subvert's modulation system are the new LFOs which feature 15 wave shapes, pulse width modulation and four output polarities each.

The modulation mixers are dedicated to convolving incoming modulation signals, making it possible to create extremely complex modulation shapes at their output.

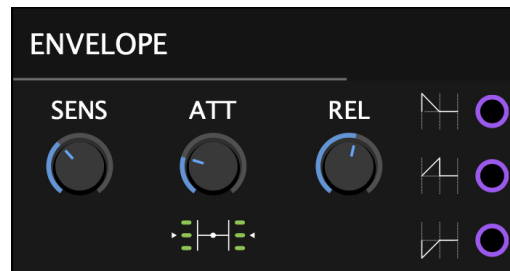
Finally, the new Macro section features four macro controllers that can be used to scale, offset and control complex connections within your patches.



Beneath each modulatable parameter in Subvert, you will find a modulation depth dial, which allows you to set the range of modulation applied to the corresponding parameter.

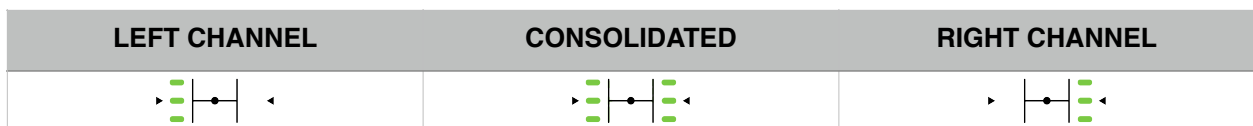
In case of unipolar positive signals like the default Envelope out or the Macros, the base value acts as the floor. With bipolar signals like the LFOs, the base value is the center of the modulation range, and the modulation is clipped to the parameter range bounds.

## ENVELOPE FOLLOWERS:



The envelope follower modules track the changes of amplitude in the input signal and output a smoothed version of these, suitable for modulating other parameters.

**INPUT TRACKING:** The button at the bottom of the module is used to set the envelope to track either the left, right or consolidated (both channels summed to mono) signal. Click the icon to cycle through the three modes where the green LEDs indicate which sides are being tracked:

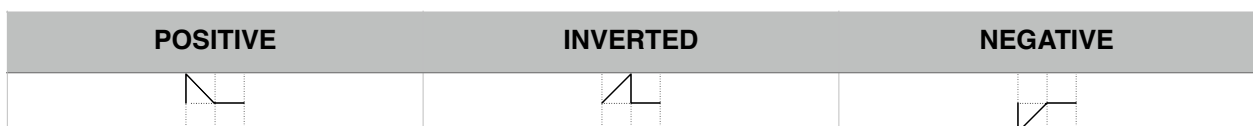


**SENSITIVITY:** This parameter adjusts the gain of the input signal. This will act on the entire range of the envelope.

**ATTACK:** The attack time of the envelope in milliseconds.

**RELEASE:** The release time of the envelope in milliseconds.

The output nodes at the right side of the Envelope module carry the following signal:





## LFO MODULES:



**WAVE SELECTOR:** This menu lets you choose the waveform of the LFO.

Click on the graph icon to cycle through the following 15 wave shape options:

	SINE		SQUARE		STAIR 4		SINE 8 ATTACK		SNAP 3
	RAMP		STEP RND		STAIR 8		SNAP 1		SINE FOLD
	TRIANGLE		SMOOTH RND		SINE 8 DECAY		SNAP 2		TRIANGLE FOLD

**RATE:** This parameter lets you set the frequency of the LFO either in Hertz, or in beat divisions if the **SYNC** button is toggled on.

**SYNC:** The sync button allows you to synchronize the LFO rate to your host's clock. When sync is active (i.e. the button is toggled ON), the metronome icon is illuminated in green and the rate knob is locked to various possible beat divisions.

**PULSE WIDTH:** This parameter allows you to alter the value of elapsed time (i.e. width) between a leading and trailing edge of a single pulse. In this context, it gives the user a greater degree of control over the architecture of certain wave shapes.

**⚠** *This parameter only acts on waveforms that are derived from a square, including Square, Triangle and Triangle Fold.*

The four outputs at the right side of the LFO module can be patched to multiple destination targets and used simultaneously.

They carry the following modulation signal based on the selected waveform:

	POSITIVE		MIRROR POSITIVE
	INVERTED		MIRROR NEGATIVE

## MOD MIXERS:

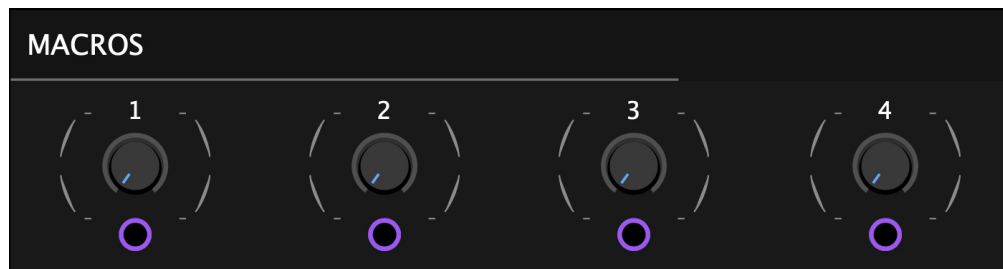


These modules convolve two modulation sources. Patch a modulation signal of choice into each channel and the summed modulation signal is available at the output node.

The outputting modulation balance is calculated according to the position of the **MIX** parameter which can itself be modulated for evolving modulation shape mutations or more advanced techniques such as the one explained below.

The Mod Mixer makes it possible to create elaborate modulation signals, but it can also orchestrate complex tasks. For example, you could periodically interrupt a modulation signal. This can be accomplished by setting up the first channel to carry a modulation signal such as an LFO sine wave. The second channel should be “empty”. You now can modulate the MIX parameter with something like a square wave LFO to dial in how quickly the mixer switches between channels, thereby gaining control over when the modulation signal in channel 1 is *interrupted*, i.e. turned “off” on its way to modulating a destination parameter. This is just one example of a technique that can utilize the Mod Mixers to achieve a significant degree of complexity and control in your patches.

## MACROS:

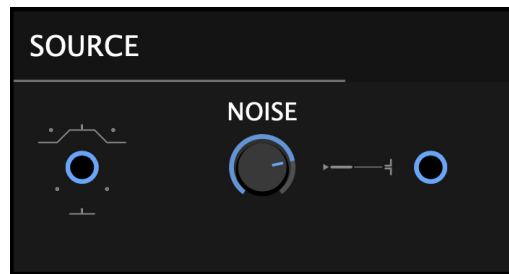


Subvert features a new Macro section with 4 independent Macro controllers that give you additional control over your patches.

For example, you can use these controllers to offset several modulation targets simultaneously with a single macro knob, making it possible to perform and/or sequence complex parameter changes.

These changes can be orchestrated either by moving the knob yourself in realtime, or automating it precisely via your DAW's automation facilities.

## SOURCE MODULE:



The blue **source node** at the left side of the module is the **point of origin** in a patch because it carries the signal from your DAW into Subvert. As explained earlier, the default patch features a basic setup that connects the source signal to a distortion module's input, then to a filter's input and finally to the plugin's output node (which is itself explained later in this guide).

**⚠** *In most cases, if there is no patch cable connected to the source signal output, there is no signal for the plugin to process. However, this is not always true because you can build entire patches with noise as the only source, as illustrated in the factory presets.*

The white **Noise** generator features a dedicated amplitude knob and output node. It can be utilized in a variety of sound design techniques such as blending in noise to emphasize high frequency content or grit in a patch and/or to give the filters more “to chew on” by mixing noise with your signal before it hits the Filter or other inputs.

## DISTORTION MODULE:



The distortion module is the nucleus of Subvert. It features four distinct distortion flavors via four separate outputs as well as drive and bias controls.





**IN:** This is the common signal input found in all processing modules.

**DRIVE:** The amount of signal boost applied before the active distortion mode. (0.0 - 1.0)

**BIAS:** Adds a positive or negative DC offset to the signal, altering how the original signal will react to the distortion.

**OUT:** Controls output amplitude in all processing modules. (-70.00dB - 12.00dB)

The Distortion module has 4 outputs, each featuring a different distortion type:

	NODE A - <b>SHAPE</b> : a traditional wave shaper-style distortion with an overdriven tone.
	NODE B - <b>FOLD</b> : a digital sounding distortion which generates more complex tones.
	NODE C - <b>GORGON</b> : an aggressive overdriven effect which boosts the signal even at low drive settings.
	NODE D - <b>CREEPER</b> : a signal clipper that inverts the phase of the clipped peaks.

💡 *At low drive settings, Creeper yields erratic glitches that get closer as the drive amount increases. At high drive settings it provides a unique flavor of digital distortion.*

💡 *Outputs can be layered via the audio mixers to achieve unique combinations of effects.*

## FILTER MODULE:







**IN:** This is the common signal input found in all processing modules.

**CUT:** This parameter adjust the cutoff frequency in Hz (40Hz - 11,000 Hz)

**RES:** This parameter controls the amount of emphasis at the filter cutoff frequency.

**OUT:** Controls output amplitude in all processing modules (-70.00dB - 12.00dB)

The 4 outputs at the right side of the module can be used simultaneously and carry the following signals:

	LOW PASS		BAND PASS
	HIGH PASS		NOTCH

## RING MODULATOR MODULE:



The Ring Mod's input amplitude is modulated by a high frequency sine oscillator (OSC1) whose frequency is modulated by another sine oscillator (OSC2).

**IN:** This is the common signal input found in all processing modules.

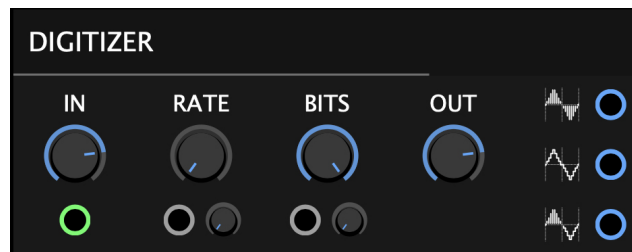
**CAR FREQ:** Determines the frequency of the carrier wave (OSC1).

**MOD FREQ:** Determines the frequency of the modulator wave (OSC2).

**FM:** Controls the amount of modulation applied to the carrier.

**OUT:** Controls output amplitude in all processing modules (-70.00dB - 12.00dB)

## DIGITIZER MODULE:



The digitizer module combines sample rate reduction and bit depth reduction effects.

**IN:** This is the common signal input found in all processing modules.

**RATE:** A sample rate reduction effect (1X - 64X)

**BITS:** A bit depth reduction effect (1bit - 16bits)

**OUT:** Controls output amplitude in all processing modules (-70.00dB - 12.00dB)

The three outputs at the right side of the module carry the following signals:



## METALIZER MODULE:



The Metalizer is a delay with very short delay times designed to achieve metallic effects.

**IN:** This is the common signal input found in all processing modules.

**TIME:** The delay time - CCW for shorter delay, CW for longer delay (1ms - 200ms)

**FEEDBACK:** Controls the amount of signal fed back into delay.

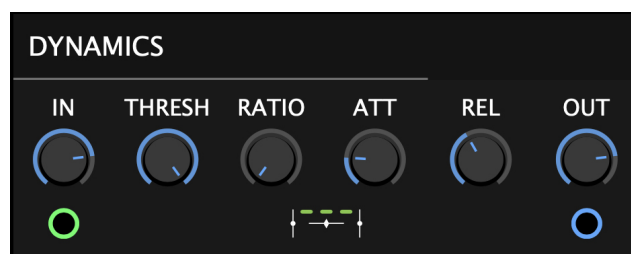
💡 *This effect can be used to create chorus/flanger fx when the delay time is modulated.*

**DAMP:** Sets the cutoff frequency for lowpass filtering of the feedback path

**MIX:** Controls the blend between the incoming signal and processed output signal.

**OUT:** Controls output amplitude in all processing modules (-70.00dB - 12.00dB)

## DYNAMICS MODULE:



The new dynamics module features two modes: **COMPRESSOR** and **GATE**

The state button at the bottom center of the module toggles between these modes:

	<b>COMPRESSOR</b> - TOP LEDs ILLUMINATED
	<b>GATE</b> - BOTTOM LEDs ILLUMINATED

⚠ *The Dynamics module uses common parameters across both modes of operation.*

**IN:** This is the common signal input found in all processing modules.

**THRESH:** The level at which the processor will process the signal (-40.00dB - 0.00dB)

💡 *In Compressor mode, the signal ABOVE this threshold is processed. In Gate mode, the signal BELOW this threshold is processed, hence the LED positioning on the button.*

**RATIO:** How much gain reduction is applied once the signal passes the threshold.

⚠ *This parameter is disabled while the processor is in GATE mode.*

**ATTACK:** The amount of time before the processor will begin to affect the signal.

**RELEASE:** The amount of time before the processor will stop affecting the signal.

**OUT:** Controls output amplitude in all processing modules (-70.00dB - 12.00dB)

## EQUALIZER:



This 3-Band Equalizer is used to sculpt the consolidated signal before it makes its way into the Output module.

The EQ is useful when you want to tame a particularly nasty patch or simply want to emphasize or de-emphasize a specific portion of the frequency spectrum, which is often crucial when dealing with distortion effects.

It features three sweepable frequency bands (**LOW, MID, HIGH**) with amplitude control (**AMP**) over each band.

## OUTPUT:



This module gives you access over the amplitude and mix of the plugin's output.

You can set the ratio of unprocessed vs. processed signal using the **DRY/WET** knob.

The green INPUT node at the left of this button is where the signal needs to be present in order for it to be audible outside of the plugin (i.e. its portal back to your DAW).

**⚠** *With no signal present at this node, you will not hear audio at the output of the plugin.*

The blue **Wet Output** node carries the signal of the whole processing chain minus the dry part of the dry/wet mix. It allows reinflecting the output in the signal chain in order to create feedback loops. A common approach would be to patch this output back to a side of an audio mixer and blend it with a part of the signal chain by carefully adjusting the mix knob. The resulting patch can become highly sensitive to small changes of the mix value of the feedback signal.

**💡** *This technique can yield very interesting sonic results when used appropriately but may also be totally ineffective in various routing scenarios. Experimentation is key!*

The output amplitude of the plugin output can be scaled using the **AMP** control.

## PRESETS:



You can navigate through the 100 factory presets either by clicking in the drop-down menu, or by using the navigational arrows to increment/decrement through the list.

For Subvert 2, we implemented our new folder system, allowing the integration of **Preset Banks**. The factory banks are organized into four groups: BASIC, EFFECT, MELODIC, RHYTHMIC. You can add your own folders so long as they are only 1 level deep from the root folder and follow the same general conventions utilized in the factory preset banks. To retain the factory presets, we recommend adding a USER bank.

**💡** *The preset bank categories are merely suggestive, so be sure to experiment because many of the presets work well on sources other than their categorical designation.*

**SAVE PRESET...** : Opens a dialog box that will allow you to save the current preset on your hard drive using the extension “.sbvp”.



## RANDOMIZE:

- This button (located in the footer section of the interface) allows you to randomize the settings in order to generate unforeseen results which you can use as fresh starting points for new effects or to offer a new perspective on an existing patch.

⚠ *Patch connections are not randomized because this does not yield useable results.*

## CONFIGURATION MENU:

☰ The Configuration Menu gives you access to several important plugin settings:

**INIT ALL CONTROLS:** Reverts all parameters to their default settings without disconnecting patch cables.

**CLEAR MODULATION ROUTING:** Clears all modulation assignments without affecting other parameters.

**INIT AUDIO ROUTING:** Reverts to default patch and also clears patch connections without affecting other parameters.

**INIT PATCH:** Reverts to the default patch and resets all parameters to default values.

**CABLE OPACITY:** Decrease the opacity of patch cables by a percentage via submenu.

**OPEN PRESET FOLDER:** This option will pull up your OS file browser, automatically taking you to the correct preset folder in your system.

**SHOW PREFERENCE FILE:** This option will pull up your OS file browser, from where you can access the preferences file that stores the plugin's configuration options. If you ever need to reset Subvert's User Interface to its default proportions simply close the plugin, trash the corresponding preferences file and relaunch the plugin in your DAW.

Thanks for purchasing SUBVERT 2!

Please check out the rest of our products at our website: <https://glitchmachines.com>