



POLYGON // CREDITS

SOFTWARE DEVELOPMENT:

Thomas Hennebert
Ivo Ivanov

SOUND DESIGN AND SAMPLE CONTENT:

Ivo Ivanov

PRESET DESIGN & BETA TESTING:

Thomas Hennebert
Ivo Ivanov
Matt Baggiani
Drew Madden
Hans Besselink
Ian Lambert

AUDIO DEMOS / USER GUIDE / TUTORIAL VIDEOS:

Ivo Ivanov

PRODUCT GRAPHICS:

Ivo Ivanov

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This symbol refers to important technical info



This symbol refers to a tip, idea or side note

SETUP:

- ⚠ *Please note that POLYGON 2.0 is an Audio Unit or **VST3**-only 64bit plugin*
- ⚠ *It is not necessary to uninstall or overwrite previous versions of POLYGON (1.x). POLYGON 2.0 can coexist with previous (now discontinued) versions of the plugin*
- ⚠ *The POLYGON 2.0 factory sample bank is different from the previous version and both can coexist on your system (presets are **not** cross-compatible between versions)*

1. Unpack the POLYGON2.zip file
2. Via the POLYGON2_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** POLYGON2_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 POLYGON2 on an Instrument Track.
5. Follow the prompt and point to the location of the **POLYGON2_SAMPLES** folder.
 - Upon first launch, you will see a popup that prompts you to point to the POLYGON2_SAMPLES folder on your system. POLYGON 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

POLYGON SYNOPSIS:

Polygon 2.0 is a hybrid sampler plugin designed to facilitate the creation of mind bending composite sound effects and unusual instrument patches.

Polygon 2.0 features a fully re-designed scalable user interface and we have completely revamped nearly every aspect of the plugin. Polygon's new granular mode will catapult your samples into uncharted realms while its clean and logical interface, extensive modulation options and powerful new dual oscillator make it an invaluable tool for music production and creative sound design.

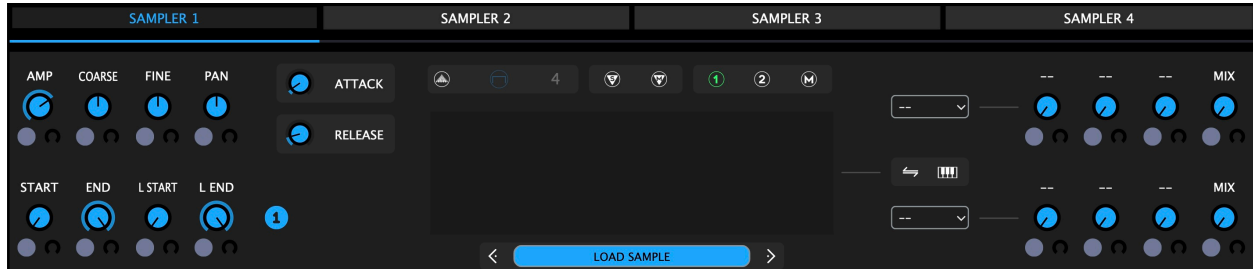
With its 4 Granular Samplers, Dual Oscillator with FM, 4 Modulation Sequencers, 8 LFOs, Modulation Utilities, Dual Insert Effects per sampler, Global Filter, Dual Global Effects, Comprehensive Randomizer, Variable Polyphony, specially curated Factory Sample Bank and 100 Factory Presets, Polygon 2.0 brings sound designers and musicians a powerful new sound sculpting instrument.

POLYGON INTERFACE:

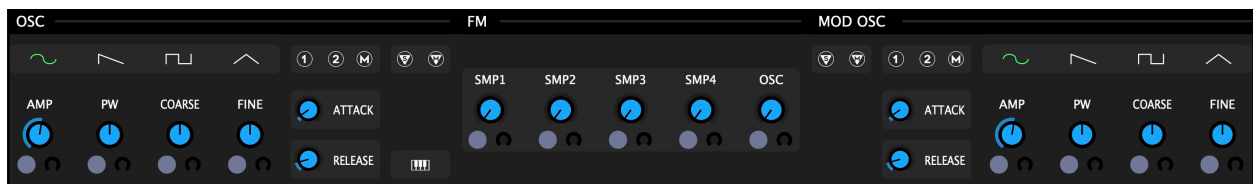


Polygon's user interface is split into five main sections:

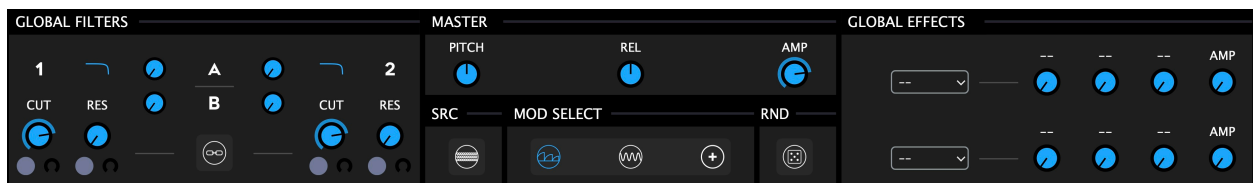
- **SAMPLER MODULES** - 4 main sound generators with two FX inserts each



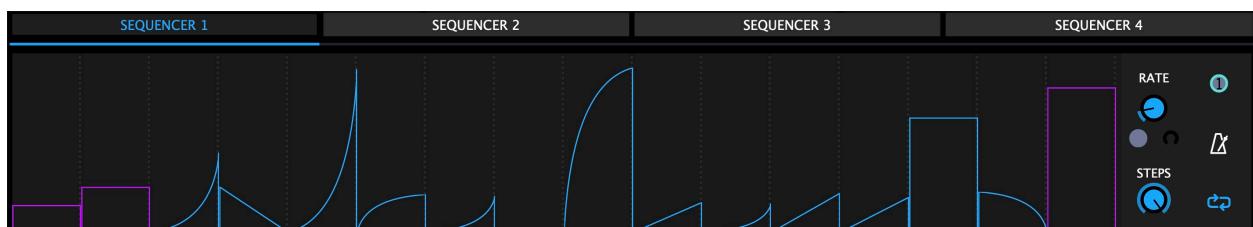
- **OSCILLATOR MODULE** - dual oscillator with variable waveshapes and FM



- **GLOBAL / MASTER** - global filters, FX, modulation, master section & randomizer



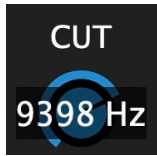
- **MODULATION SECTION** - 4 mod sequencers, 8 LFOs, and various mod utilities



- **FOOTER SECTION** - preset browser and configuration menu



PARAMETER VALUE DISPLAY:



Parameters that may require precise adjustments have been equipped with a parameter value popup 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 a transparent popup.



Note that some parameters don't feature this display - these parameters either have a value range from 0-1 (i.e. ON/OFF) or from 0-100%.

SCALABLE INTERFACE:



You may scale the Polygon user 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 Config Menu option and trash the corresponding file before relaunching the plugin.



In some situations (on older machines or laptops with lower resolution screens), it's possible that the default UI dimensions don't allow the user interface to fully display on screen, thereby usually impeding your ability to access the Configuration Menu. In this event, it's possible to alter the preferences file by manually typing in the desired dimensions. Contact our support team if you need assistance with this.

INITIALIZE

The Initialize option at the top of the Config Menu allows you to quickly reset your patch to the factory default **INIT** state.



Hold the Control/Command (Win/Mac) key to gain finer control over a parameter.



Double click a knob to reset it to its default value.



Drag & drop nodes to destination slots at parameters you wish to target.



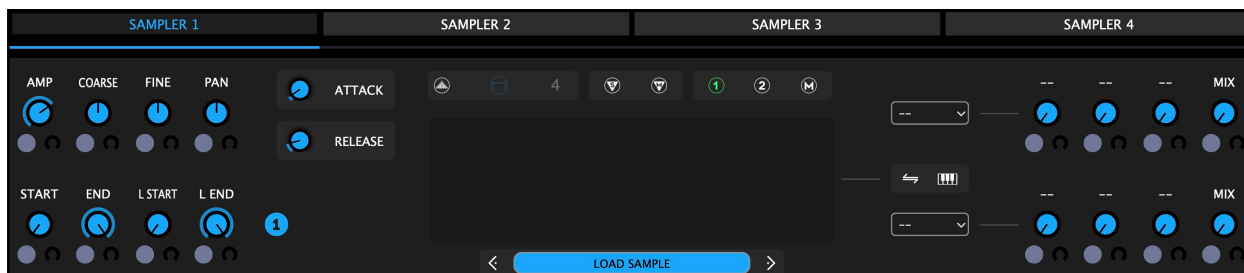
You can right-click on a node to clear it.



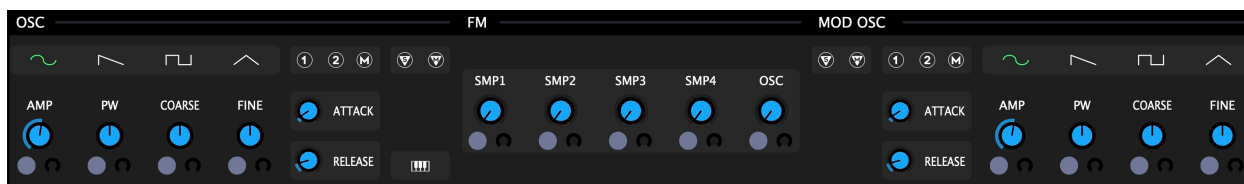
You can "overwrite" the active node by dropping another node onto it.

POLYGON OVERVIEW:

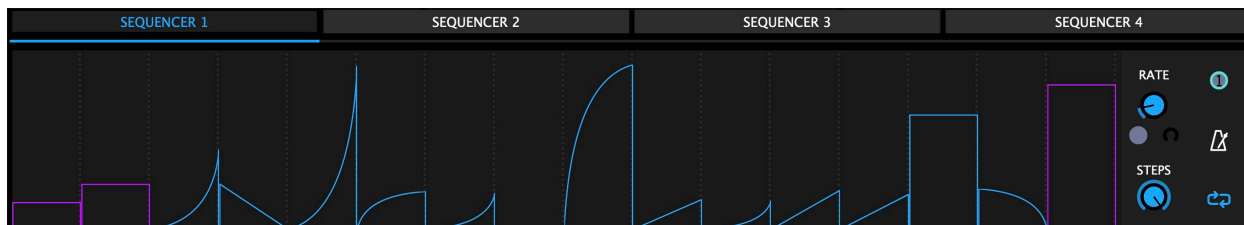
At the heart of Polygon 2.0, you will find 4 Sampler modules featuring a new granular mode and various playback and loop modes. Each of these samplers also feature two user-definable insert effects slots and various routing options.



The fully redesigned dual oscillator features a modulatable FM section, which allows you to dial in FM amounts as well as to use the Oscillators as a source to FM the samples. The Main and Mod Oscillator signals can also be layered to yield even more complex tones. Both Oscillators operate in either sine, saw, triangle or square wave mode with pulse width modulation, and both offer flexible routing options.

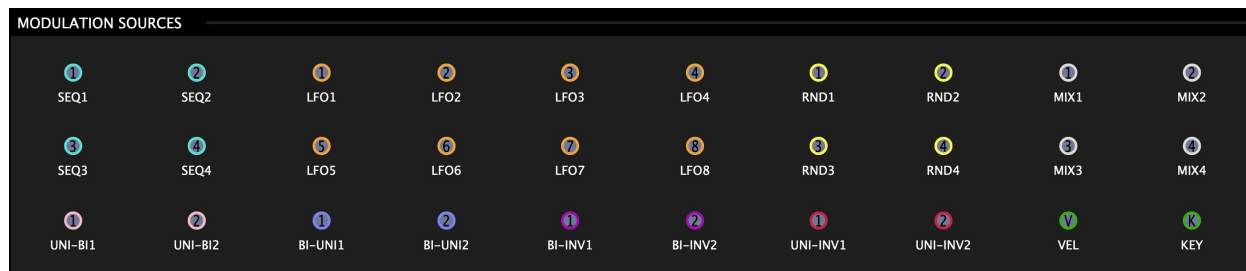


Polygon's modulation system has also been fully overhauled. It now features a node-based, drag & drop modulation system similar to our other sampler, [Palindrome](#). Assignments are made easily by dragging the desired Source Node (numbered dot) and dropping it onto the desired parameter's mod assignment slot. Assignment slots (gray dots) with corresponding modulation depth dials appear next to all parameters that are viable modulation targets.

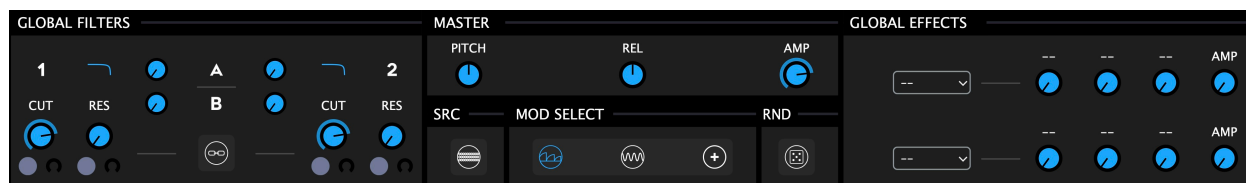


The modulation section is now accessible via a new tabbed interface with 4 Modulation Sequencers which feature adjustable curves on a per-step basis, as well as 8 LFOs and a number of unconventional Modulation Utilities. We've also implemented a completely redesigned Randomizer panel that groups and isolates all of the plugin's parameters for either broad or focused randomization of all of the plugin's pertinent parameters.

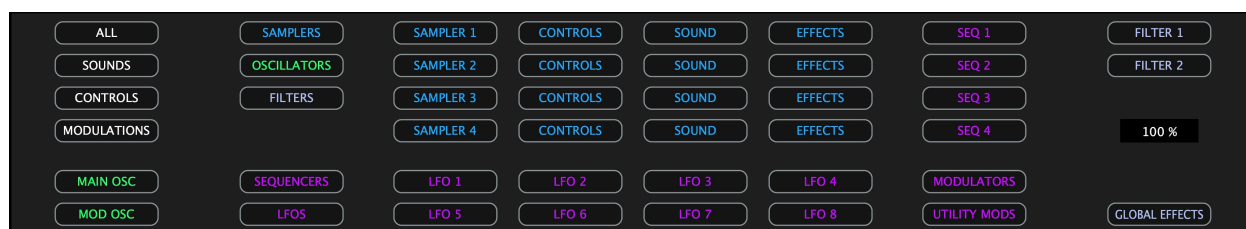
A new Mod Sources panel has been implemented in order to facilitate the convenient connection between parameters that aren't visible on the interface simultaneously. This panel duplicates all of the plugin's local mod Source Nodes and places them into a single console for easy access while interconnecting the various elements of the plugin.



At Polygon's core, you will find two redesigned Filters, both of which offer various filter types, effects sends and the ability to run in Serial or Parallel Mode. At the center of the plugin, we've included new Master and Mod Select facilities and we also added two user definable Global Effects processors at the end of the signal path.



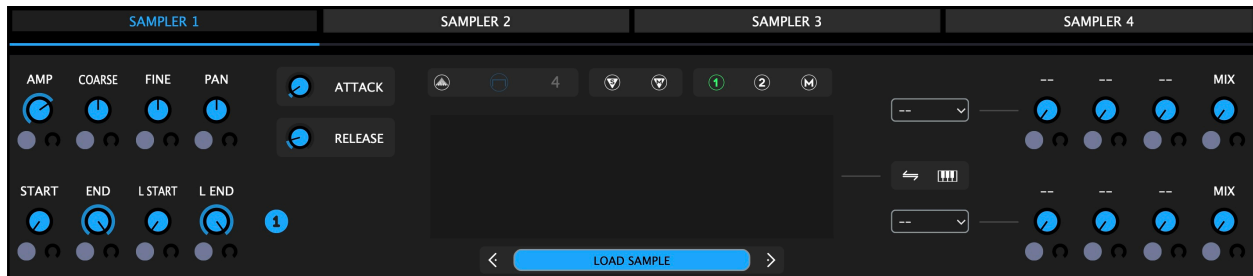
Beneath all of the up-front features, we've included a comprehensive Randomizer section where you can randomize nearly all of the plugin's parameters in isolation and/or randomize various groups of parameters simultaneously. This section quickly yields interesting results and is specifically designed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



For Polygon 2.0, we curated a completely new 1.3 GB sample bank derived from our latest sound effects products. To get you started working with the plugin straight away, we also included a wide variety of factory presets from some of our best designers.

Whether you are a music producer or sound designer, Polygon will yield interesting results each time you work with it, thanks to its creative workflow, streamlined interface and comprehensive modulation options. Use it to create shape-shifting synth patches, heavily modulated basslines, vivid atmospheres, glitchy percussive elements, mind bending sound effects and virtually anything else you can imagine.

SAMPLER MODULES:



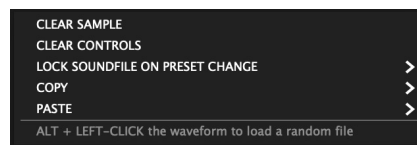
Because Polygon was specifically developed for experimental sound design, we implemented granular samplers due to their inherent focus on sonic exploration.

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

Polygon comes with a diverse collection of samples and we included 100 presets to showcase how they can be utilized to create a broad range of interesting patches. Of course, Polygon also works with all of your existing sample libraries and loops.

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

Right-clicking on any of the waveform displays brings up the following menu:



CLEAR SAMPLE: clears the sample file currently loaded in the respective sampler

CLEAR CONTROLS: resets the parameters of the respective sampler to default values

LOCK SOUNDFILE ON PRESET CHANGE: prevents desired files from changing when switching presets - used as a creative tool to audition files within other presets.

COPY: copy either the loaded file or the respective sampler's settings

PASTE: paste either the copied file or settings from another sampler instance

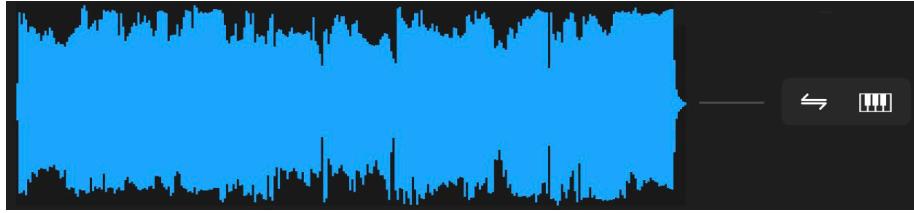


ALT+Click in the waveform display to load a random file. This is a useful creative tool for when you like a patch but want to quickly audition random files within that context.




Polygon's maximum sample file size is governed by your system RAM. To avoid performance issues it is generally advised not to load massive, high resolution files.

By default, the Samplers will load in Fixed Mode, where any/all MIDI notes will trigger the loaded sample at its root pitch. This mode is useful when creating one-shot patches like sound effects or percussive sounds that do not need to be played chromatically.

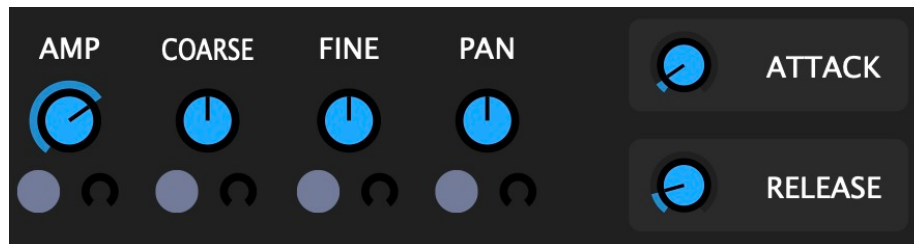


Clicking on the small keyboard icon shown in the above screenshot will activate **CHROMATIC MODE**, thereby allowing you to play the loaded file chromatically.

Clicking the small icon to the left of the keyboard icon activates **REVERSE PLAYBACK**.

 *Note that Polygon 2.0 does not offer a timestretch algorithm so the samples will speed up and slow down as they deviate from their root pitch in either direction.*

Each sampler includes a number of sculpting options, which are as follows:



AMP : determines the amplitude of the Sampler's output


COARSE : alters the pitch in +/- 24 semitones

FINE : deviates by +/- 100 cents from the current pitch

PAN : determines the panoramic position of the Sampler's signal

ATTACK : determines timeframe of the Attack Envelope phase between 1-2000ms

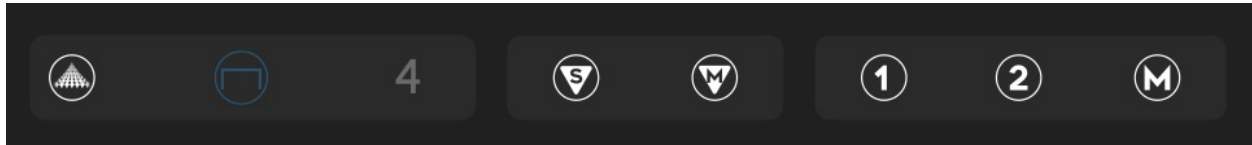
RELEASE : determines timeframe of the Release Envelope phase between 10-5000ms

 *Don't forget to **TUNE** your samples in situations where you'd like for the Samplers and Oscillators to track the same pitch. Since all sample files will theoretically be in a unique pitch, this should be done at the samplers and oscillators on a per-patch basis, according to the requirements of the relevant application of the plugin.*








Modulatable parameters feature a gray Assignment Node (destination slot) and Modulation Depth Dial. Simply drag & drop the Node that corresponds with your desired modulation source and turn up the Depth Dial to the desired value.

Various important functions are situated directly above the waveform displays:



Regardless of the playback mode (Classic / Granular - explained in detail below), all 4 Samplers feature the same 5 controls:

-  **SOLO** : exclusive Solo allows you to isolate the signal of the desired Sampler
-  **MUTE** : allows you to cut the signal of the corresponding Sampler
-  **1 FILTER 1 ASSIGN** : assigns the output of corresponding Sampler to Filter 1
-  **2 FILTER 2 ASSIGN** : assigns the output of corresponding Sampler to Filter 2
-  **MASTER ASSIGN** : bypasses Filter and sends the signal to the Master Output



Routing assignments can be made concurrently, thereby allowing you to route the respective Sampler's signal to multiple destinations simultaneously.

-  **GRANULAR MODE**: this button switches between "Classic" & "Granular" modes






Parameters toward the bottom-left of the module will switch dynamically to reveal parameters relevant to each mode. Functions that do not belong to a mode will be greyed out and inactive until the associated mode is activated.

CLASSIC MODE :



Playback/Loop Status:


- 1 ONE SHOT** : this is the default playback status which plays the sample in its entirety once per each trigger.
-  **FORWARD** : once the loop range is reached, it will loop continually in the forward direction until the Sampler is no longer receiving a trigger.
-  **BACKWARD** : once the loop range is reached, it will loop continually in the backward direction until the Sampler is no longer receiving a trigger.
-  **PENDULUM** : once the loop range is reached, it will loop continually in the forward & backward direction until the Sampler is no longer receiving a trigger.


- **START** : determines at which point of the audio file playback will start
- **END** : determines at which point of the audio file playback will end
- **L START** : determines at which point of the audio file the loop start is set
- **L END** : determines at which point of the audio file the loop end is set



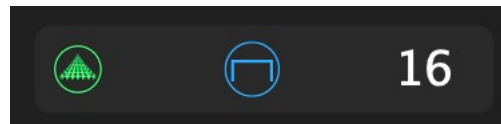
WAVEFORM DISPLAY: waveform zooming adapts to the current focus and playback/loop settings; this way the loop range always corresponds to the zone shown in the display. If the focus is modulated (either start, end or both) the zoom will no longer match the focus as the visual indicators do not reflect the modulation values in realtime.

A visual indicator in the form of a transparent line denotes the trajectory of each triggered voice throughout its duration.

 *Visualizations do not update in realtime when modulated as it is difficult to discern/adjust values when the display is jumping erratically - especially with fast modulations.*




 *The waveform displays are intended to serve the purpose of visual guides, rather than precise graphs. Thus, particularly in the case of very short samples or focus settings, they may not be 100% accurate.*

GRANULAR MODE :



Clicking on the Granular Mode button (shown in green above, which denotes that it is active) puts the respective sampler into a new mode that offers a variety of extended granular synthesis functions.

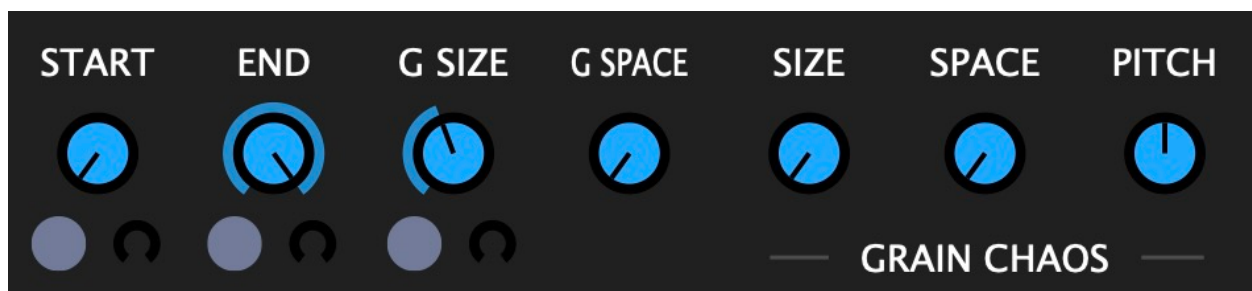
Polygon features 3 granular windowing options that are selectable via the button shown in blue above. Each of these bring out different timbral characteristics in the grains.

-  **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

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Click & drag to select between 1-16 simultaneous grains

As noted earlier, the interface will dynamically switch to bring the pertinent parameters into view once the respective mode is active.



START : determines at which point of the audio file playback will start

END : determines at which point of the audio file playback will end

GRAIN SIZE : determines the size of the grains

GRAIN SPACE : determines the space in between each grain (updates on new trigger)

GRAIN CHAOS :

The grain chaos parameters allow you to fine tune the behavior of each grain cluster by giving you control over their size, space and pitch. They set the amount of random deviation from the base value of each grain.

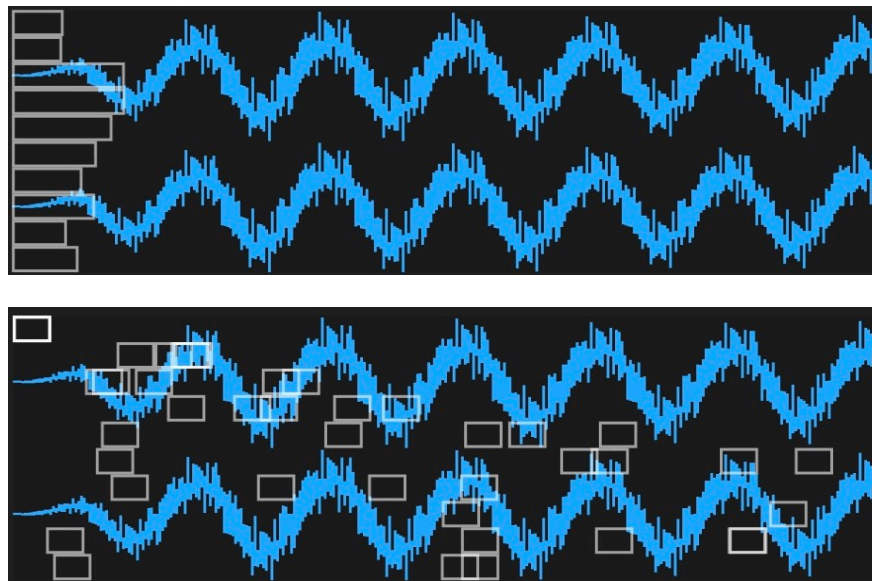
- When the chaos parameters are at their default values, all the grains have the same size, spacing and pitch.
- When these parameters are altered, each grain is generated with a random offset applied to the corresponding base parameter value.

GRAIN CHAOS SIZE: adds positive offset to grain size

GRAIN CHAOS SPACE: adds positive offset to space between grains

GRAIN CHAOS PITCH: adds positive/negative offset to grain pitch

! *Note that the Grain Chaos parameters do not update in realtime - a value setting will always be audible on a new trigger following a parameter adjustment.*

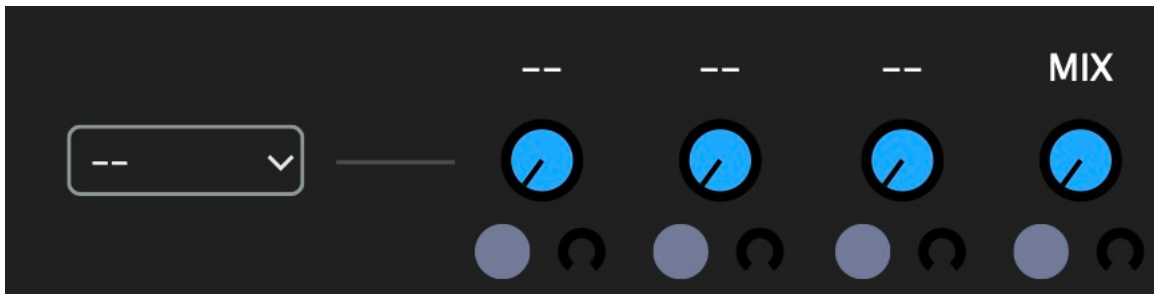


The grain visualization represents the position, size and quantity of active grains.

! *When modulating the sample range, the waveform display does not adapt in realtime so in this context the grain positions do not represent their real positions.*

! *Depending on the sample length, grain size and space settings, some grains may be out of sample limits.*

INSERT EFFECTS:



At the right side of each of the 4 Sampler modules, you'll find two Insert Effect slots. These slots include several effects that can be inserted in the signal path, giving you lots of options when it comes to processing the output signals of the Samplers.

As you select the desired effect from the dropdown menu on the left, the three knobs to the right of the menu will update to reveal parameters relevant to the chosen effect.

Each of these knobs are also modulatable.

The following Insert Effects are available:

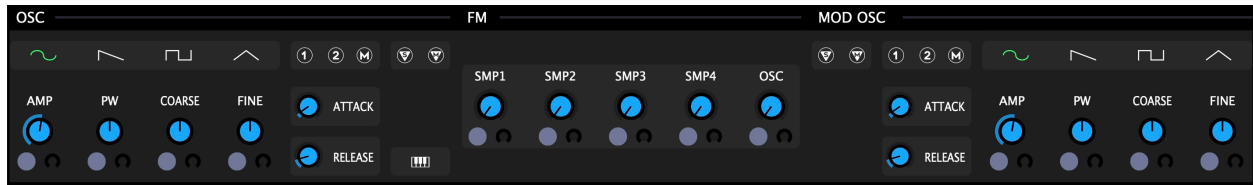
- **LPF** : Low Pass Filter // Parameters: Cutoff and Res
- **HPF** : High Pass Filter // Parameters: Cutoff and Res
- **BPF** : Band Pass Filter // Parameters: Cutoff and Res
- **1-BAND EQ** : Single Band Equalizer // Parameters: Freq, Q, Gain
- **OVERDRIVE** : Distortion // Parameters: Drive and Amp
- **FOLDOVER** : Wavefolder // Parameters: Drive and Amp
- **BITCRUSH** : Sample Rate & Bit Reduction // Parameters: Rate and Bits
- **RINGMOD** : Ring Modulator // Parameters: Frequency and Wave

⚠ The **MIX** knob is always present regardless of the chosen effect. Use this parameter to blend the balance between the dry and wet signal (0-100%).

⚠ If no effect is chosen, the dropdown menu and parameters will display two lines (shown above) to denote that they are inactive.

⚠ Some effects may not necessitate for all of the knobs to be populated with parameters.

OSCILLATOR:



The fully redesigned Oscillator module is an important part of Polygon’s anatomy. We incorporated this oscillator to allow you to add additional sonic content to your patch without having to sacrifice one of your Sampler modules to do so.

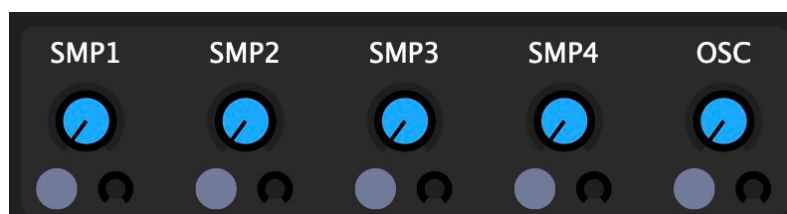
Previous versions of Polygon featured a Sub Oscillator which we intended for situations when designing composite (layered) sound effects, where it is helpful to incorporate a source of low frequency content to help sonically “round out” your patches.

As of version 2.0, we have expanded this module significantly by adding a Mod Oscillator, which can be utilized for modulating the frequency of the Main Oscillator (FM) and/or the loaded sample files. The Mod Oscillator can also be layered with the Main Oscillator, thereby allowing you to create more complex synthesizer tones.

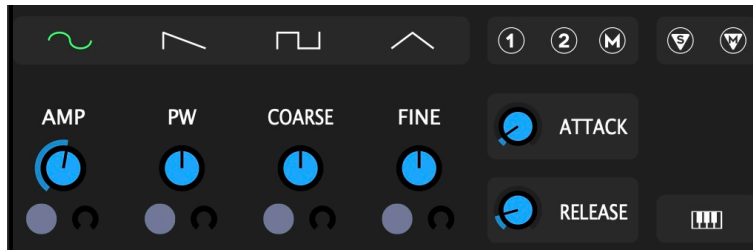
Now that we have extended this module into a Dual Oscillator with FM, several waveshapes, modulation and routing options, it has evolved into more than just a low frequency source. This in particular is why we’re calling Polygon 2.0 a “Hybrid Sampler” as it sits somewhere in between a sampler and a synthesizer.

FM SENDS :






The 5 knobs at the center of the Oscillator module send the Mod Oscillator’s signal to the frequency of the 4 Sampler modules (SMP1-4) and/or Main Oscillator (OSC).




These parameters are ranged from 0-100% and also available as modulation targets.



Waveform Select: click to select Sine, Sawtooth, Square or Triangle waveshapes

-  **SOLO** : exclusive solo allows you to isolate the signal of the desired OSC
-  **MUTE** : allows you to cut the signal of the corresponding OSC
-  **FILTER 1 ASSIGN** : assigns the output of corresponding OSC to Filter 1
-  **FILTER 2 ASSIGN** : assigns the output of corresponding OSC to Filter 2
-  **MASTER ASSIGN** : bypasses Filter and sends the signal to the Master Output

 *Routing assignments can be made concurrently, thereby allowing you to route the respective Oscillator's signal to multiple destinations simultaneously.*

AMP : determines the Amplitude of the Oscillator's output

PULSE WIDTH : alters the square & triangle wave symmetry to produce new harmonics


COARSE : alters the Pitch in +/- 24 semitones


FINE : deviates by +/- 100 cents from the current pitch

ATTACK : determines timeframe of the Attack Envelope phase between 1-2000ms

RELEASE : determines timeframe of the Release Envelope phase between 10-5000ms

CHROMATIC MODE : the small keyboard icon at the right of the Release parameter activates Chromatic Mode, thereby allowing you to play the oscillator chromatically.

 *Note that both oscillators feature identical parameter sets except for **Chromatic Mode**, which is available at the Main Oscillator (keyboard icon at bottom-right - shown in the screenshot above) and affects both Oscillators simultaneously.*

 *Don't forget to **TUNE** your Oscillators in situations where you'd like for the Samplers and Oscillators to track the same pitch. Since all sample files will theoretically be in a unique pitch, this should be done at the Samplers and Oscillators on a per-patch basis, according to the requirements of the relevant application of the plugin.*

MODULATION SYSTEM:

Polygon 2.0 features a completely redesigned, drag & drop node-based modulation system that abandons the previous mod matrix panel in order to simplify the process of assigning and dialing in modulation settings. Encapsulated in a new tabbed design, this system gives the modulators more panel space and makes them easily accessible.

Each mod source incorporates a local color and number designation (Source Node), making it simple to maintain a visual overview of all active mod assignments in a patch.

💡 *Drag & drop Nodes to Destination Slots at parameters you wish to target.*

💡 *You can right-click on a Node to clear it.*

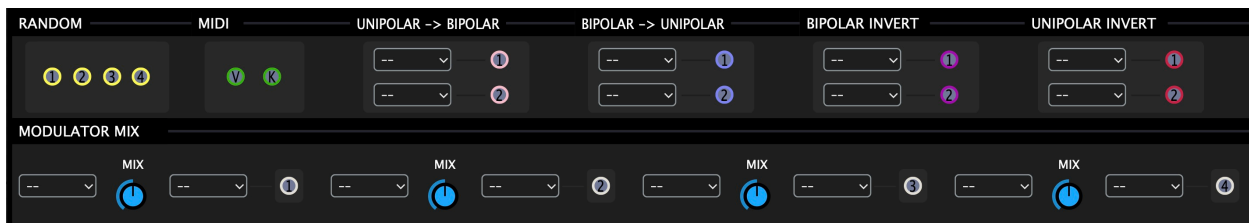
💡 *You can “overwrite” the active Node by dropping another Node onto it.*

💡 *You can assign a single modulation source to multiple destinations at once.*

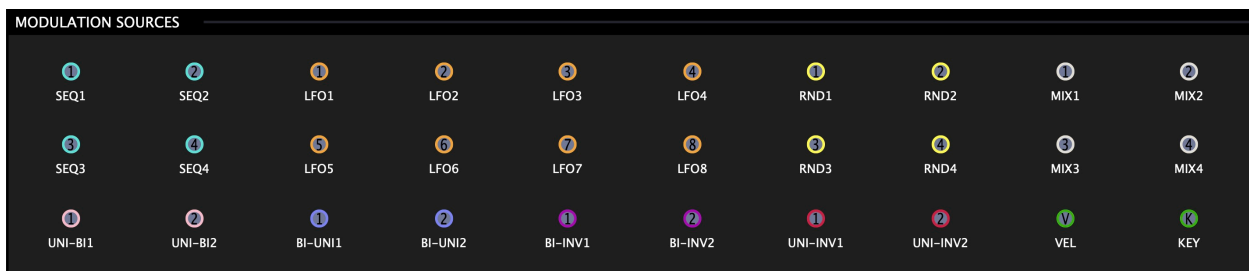
On top of Polygon’s 8 LFOs, we added 4 Modulation Sequencers which feature per-step user-definable curves, rate modulation and a number of other powerful functions.



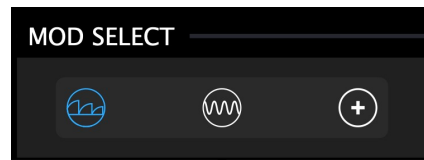
To fully maximize Polygon’s modulation facilities, we’ve also implemented a Mod Utility panel which allows you to transform, mix, randomize and contort modulation signals.



A new Mod Sources panel has been implemented in order to facilitate the convenient connection between parameters that aren’t visible on the interface simultaneously. This panel duplicates all of the plugin’s local mod Source Nodes and places them into a single console for easy access while interconnecting the various elements of the plugin.



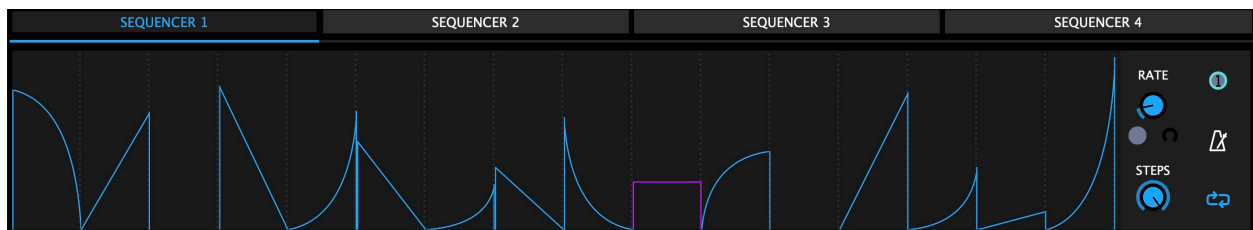
MOD SELECT:



Near the center of Polygon's interface, you'll find the newly implemented Mod Select section which is used to switch between the three modulation source panels.



Clicking this icon brings the modulation **SEQUENCER** panel into view



The Sequencer panel features 4 tabbed step sequencers with up to 16 steps each.

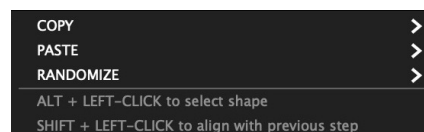
Each step can be set to a variety of curves (explained below). To access the desired Sequencer, click the respective tab/label located above the lanes. The header of the currently visible sequencer will be illuminated and underlined in blue.

A transparent overlay is displayed over the active step on a per-voice basis.



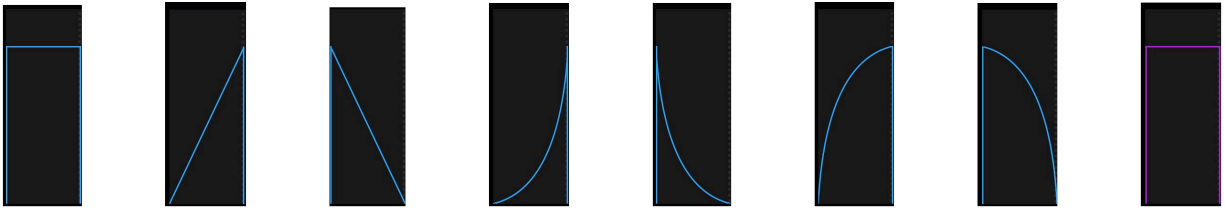
*The Sequencers can be used as powerful modulation tools. Try putting the Sequencer in **One-Shot** mode, narrowing down the steps to a single step and designating the step to the curve with the desired behavior. It's also possible to approximate multi-stage envelopes by activating more than one step and setting the shapes to your preference.*

Right+click anywhere in the sequencer lanes to reveal a menu with options that allow you to manipulate the sequences to your liking:



- **COPY** : allows you copy a single step or the entire sequence of steps
- **PASTE** : allows you paste a single step or the entire sequence of steps
- **RANDOMIZE** : allows you to randomize all shapes, levels, or both

ALT + Left Click to cycle through the following step shapes:



- **STANDARD STEP** : equal weighting at the start/end of step
- **LIN UP** : linear curve increasing value between start/end of step
- **LIN DOWN** : linear curve decreasing value between start/end of step
- **EXPO UP** : exponential curve increasing value between start/end of step
- **EXPO DOWN** : exponential curve decreasing value between start/end of step
- **LOG UP** : logarithmic curve increasing value between start/end of step
- **LOG DOWN** : logarithmic curve decreasing value between start/end of step
- **RANDOM** : like a standard step but generates random values each time it is active

Click + Drag up/down on a step to increase/decrease its value (0-100%).

Shift + Click on a step to align it with the previous step.

Dragging a step all the way down will set it at 0% and de-activate (but not skip) it.

At the right side of each Sequencer lane, you'll find a number of useful parameters:

SOURCE NODE: the numbered teal Node at the top-right of each Sequencer. Used to designate the respective Sequencer as a modulation source for a desired target.

RATE: sets the rate (speed) of the Sequencer. Values range between 10Ms - 5000 Ms.

Note that synced/un-synced rate slots are technically seen as two separate destinations and the plugin will individually retain your modulation assignments in each state.

SYNC: activating the metronome icon synchronizes the Sequencer with your DAW. When active, the RATE knob displays beat divisions relevant to the host's clock

STEPS: this parameter sets the number of steps for each Sequencer between 1-16.

DIRECTION: click to cycle through the various directional modes (explained in the SAMPLER section earlier in this Guide).

Direction refers to the **PLAYHEAD - Shapes are not reversed when played backwards**

Unlike the Samplers, the Sequencers include a **RANDOM mode which sends each step in a random direction.**



Clicking this icon brings the modulation **LFO** panel into view



The Low Frequency Oscillators have useful features that maximize their potential when it comes to complex modulation. We have updated their design and implemented orange modulation Source Nodes at the top-right of each LFO. This makes modulation assignments a simple matter of dragging & dropping Source Nodes to desired targets.

As with all of the modulation sources, each of the orange Nodes are numbered according to their respective LFO, which then makes it easy to visually identify which sources are connected to which targets in any given patch.

RATE: the frequency at which the LFO cycles (0.01Hz - 20.00 Hz). This parameter is also a viable modulation target.



Note that synced/un-synced rate slots are technically seen as two separate destinations and the plugin will individually retain your modulation assignments in each state.

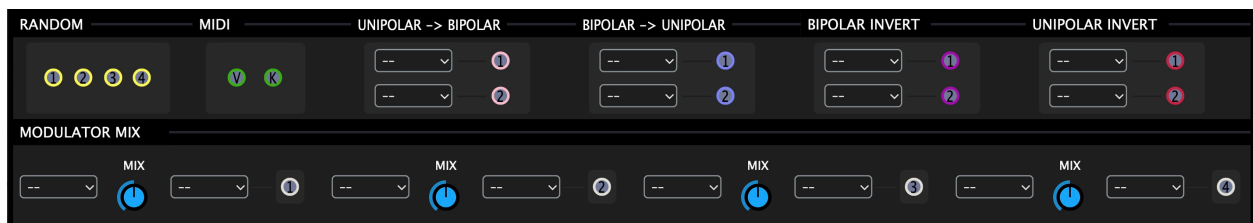
SYNC: activating the metronome icon synchronizes the LFO with your DAW. When active, the RATE knob displays beat divisions relevant to the host's clock

RETRIG: activating the **R** icon restarts the LFO's cycle upon each trigger

WAVE: clicking through these icons selects the LFO wave: Sine, Square, Saw Up, Saw Down, Triangle, Random & Smooth Random



Clicking this icon brings the **MOD UTILITY** panel into view





The Modulation Utility panel features a number of extremely powerful tools that allow you to transform, mix, randomize and contort modulation signals.

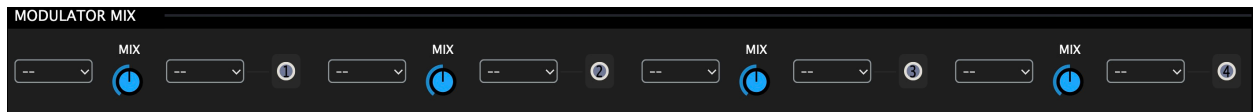
RANDOM: all four of these Nodes generate a different set of random values which are held for the duration of the current note/trigger.

 *Each voice will have a different value even if playing the same note.*

MIDI: allows you to modulate parameters via MIDI Velocity (**V**) or MIDI Keytracking (**K**). This will set the assigned parameter to values based on incoming velocity data or key tracking - where the minimum and maximum modulation values are represented by the lowest and highest velocity and/or MIDI note values.

The converter/inverter modules feature 2 channels - each with a dropdown menu:

- **UNIPOLAR to BIPOLAR:** converts unipolar modulation signals to bipolar
- **BIPOLAR to UNIPOLAR:** converts bipolar modulation signals to unipolar
- **BIPOLAR INVERT:** inverts bipolar modulation signals
- **UNIPOLAR INVERT:** inverts unipolar modulation signals



The **MODULATOR MIX** section features for Mixers that allow you to convolve and blend modulation sources in order to create even more complex shapes than what's possible via the modulation sources alone.

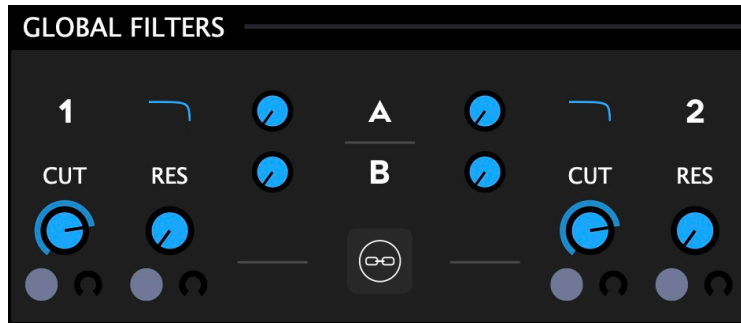
As with the other sources, each Mixer has a designated modulation Source Node that is color coded to denote its origin and numbered to denote the respective source (1-4).

To create a Modulation Mix, select the two modulation sources you would like to mix via the dropdown menus at the left and right side of each MIX knob. These menus include a list all of the available options.

Once you've chosen your desired options from the two menus, you can use the MIX knob to blend/balance their signals accordingly. The resulting modulation signal can then be used as a modulation source in the same way as the other modulators.

To assign a Mixer's output to a target, simply drag and drop the Source Node to the desired destination parameter and turn the modulation depth up to the desired value.

GLOBAL FILTERS:



The Global Filter module features two multi-mode Filters with two Global Effects sends each (A/B), and the ability to run in either serial or parallel mode.

- **FILTER CUTOFF:** alters the cutoff frequency of the Filter (40Hz-18000Hz)
- **FILTER RESONANCE:** adds emphasis to the cutoff frequency of the Filter
- **FILTER MODES:** click to cycle through Filter types: Low Pass, High Pass, Band Pass
- **FX SENDS A/B:** sends the corresponding Filter's signal to the relevant Global Effect



Sends correspond to the Global Effects as they appear on the user interface - where the Top = A and Bottom = B



Clicking this icon switches between Parallel & Serial modes

In **Parallel Mode**, the Filters behave independently and their signals appear at either the Master Section or Global Effects depending on the Send settings.

In **Serial Mode**, the Filters become linked and the signal from Filter 1's output signal is fed through Filter 2 on its way to either the Master Section or Global Effects depending on the Send settings.



In Serial Mode, Filter 1 never reaches the main output directly but its output can still go through the Sends.

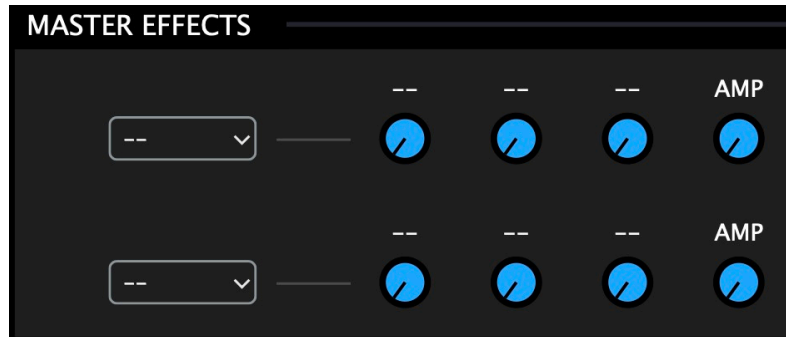


In both modes, the Global Effects are always layered on top of the main output.



The Global Effects can never be heard in isolation.

GLOBAL EFFECTS:



The Global Effects module features two user definable effects slots. These slots include several effects that can be inserted in the signal path prior to the plugin's output, giving you lots of options when it comes to adding additional polish to your patches.

As you select the desired effect from the dropdown menu on the left, the three knobs to the right of the menu will update to reveal parameters relevant to the chosen effect.

The following Global Effects are available:

DELAY // Parameters: Delay Time, Feedback, Damp

SYNCED DELAY // Parameters: Delay Time, Feedback, Damp

REVERB // Parameters: Reverb Size, Damp, Width

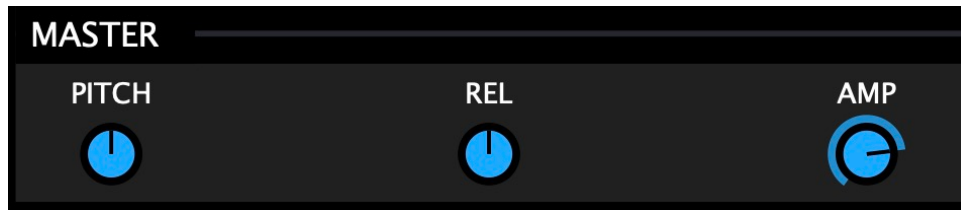
STUTTER // Parameters: Size, Freeze, Speed

⚠ *Due to their implementation, it's best to approach the Global Effects in a similar way to "stomp box effects", as they are situated at the end of the signal path and their parameters are not viable modulation targets. You can, however, use the automation facilities of your DAW to gain command over these parameters on a timeline.*

⚠ *The **AMP** parameter is always present regardless of the chosen effect. Use this parameter to adjust the amplitude of the respective Global Effects (-70dB to 0dB).*

⚠ *Sends correspond to the Global Effects as they appear on the user interface - where the Top = A and Bottom = B*

MASTER SECTION:



The Master Section includes three crucial parameters:

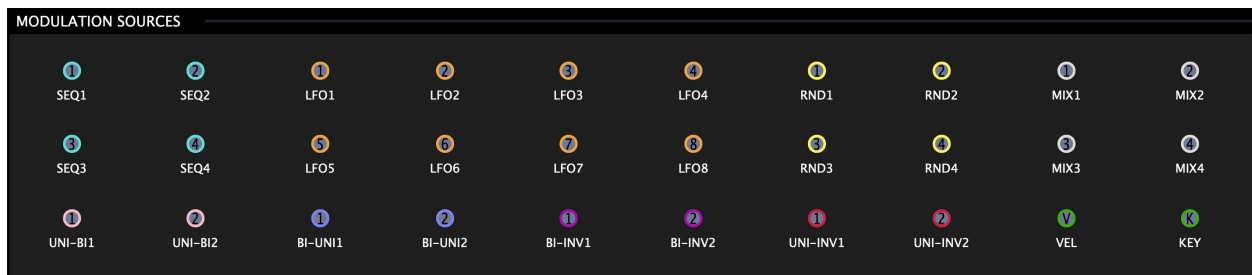
MASTER PITCH: the master pitch of Polygon. Increase/decrease the overall pitch of your patch by +/- 12 semitones without going to each individual module


MASTER RELEASE: the master release envelope of Polygon. Increase/decrease the overall release time by +/- 2000 Ms without going to each individual module

MASTER AMPLITUDE: the master amplitude (volume) of Polygon's audio output. This parameter's values range from -70dB to +12dB.

 *These parameters deviate from the set values of their respective parameter siblings*

MODULATION SOURCES:



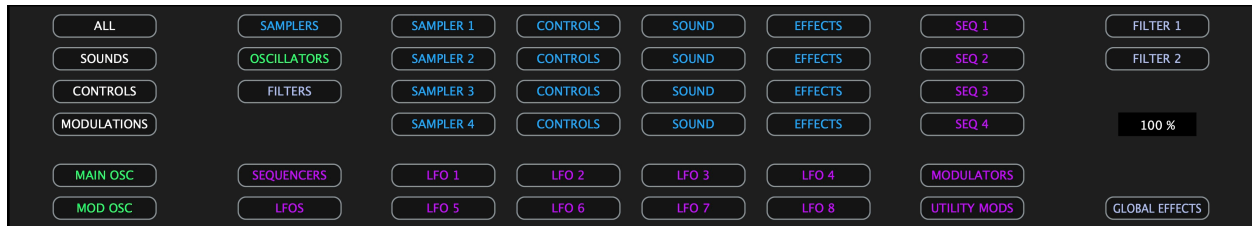
 Clicking this icon near the center of the UI brings the **SRC** panel into view

A new Mod Sources panel has been implemented in order to facilitate the convenient connection between parameters that aren't visible on the interface simultaneously. This panel duplicates all of the plugin's available modulation sources and places them into a single console for easy access while interconnecting the various elements of the plugin.

Example: SEQUENCER 1 to LFO1 Rate, VEL to SEQ3 Rate, etc.

 *The Modulation Sources panel button behavior differs slightly from its neighboring Mod Select buttons in that it is set up as a **TOGGLED** button rather than a **SWITCHED** one.*

RANDOMIZER:



 Clicking this icon near the center of the UI brings the **RND** panel into view

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

A comprehensive layout of buttons shows a macro overview of all of the plugin's randomizable parameters. When clicked, buttons trigger the associated 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 artefacts. You should always check randomized parameters to assess whether they need to be manually updated 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 extreme settings may be causing unwanted behavior in your patch. Simply dialing back the rate to a lower value (slower speed) is often all that’s needed to bring things back under control.


100 %

Click + Drag percentage box to set the desired percentage of randomization

 *The Randomizer panel (RND) button behavior differs slightly from its neighboring Mod Select buttons in that it is set up as a **TOGGLED** button rather than a **SWITCHED** one.*

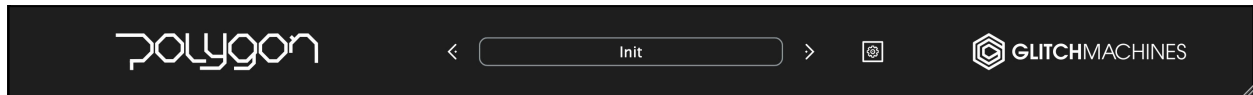
 *In some situations, the parameters you are randomizing could be out of view or hidden by another panel. In these scenarios you will still see visual button feedback on each click, confirming that the parameters have been randomized.*

 *Although nearly every parameter is randomizable, we excluded parameters such as Master Amplitude since these usually do not yield useful results when randomized.*

 *You have to select a target folder for each desired sampler prior to randomizing, otherwise the controls will be randomized but no sample will be loaded in samplers that do not have a predefined target folder.*

FOOTER:

The Footer section gives you access to the Preset Browser and Configuration Menu.



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 “.plgp”.



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

MIDI PROGRAM CHANGE:

Polygon will react to incoming MIDI Program Change messages.

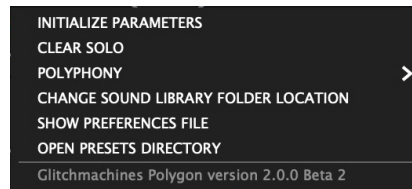


Program changes will trigger presets from the regular presets folder in the order they appear in the menu.

If necessary, you can customize which preset to load in a specific order by manually integrating a numeric prefix in the preset name as follows :

```
001_My_Preset
002_My_Other_Preset
003_Yet_Another_Preset
004_Yet_Another_Preset
005_Yet_Another_Preset
006_Yet_Another_Preset
007_Yet_Another_Preset
etc...
```

CONFIGURATION MENU:



Click the small gear icon in the footer to access the Global Config Menu, which houses various important functions that affect the plugin.

INITIALIZE :

Initializes all of the plugin's parameters to their default state and clears all samples.

CLEAR SOLO:

This is a helpful utility that clears the active solo without having to navigate to it directly.

POLYPHONY :

This option allows you to allocate the plugin's polyphony to either 2, 4, 6 or 8 voices.



Higher polyphony settings can drastically impact your CPU. We have set the default at 4 as balanced compromise but you can adjust this to your personal preference depending on how it impacts the performance of your machine.



Polyphony settings are retained Globally - they can not be changed/recalled per preset.

CHANGE SOUND LIBRARY FOLDER LOCATION :

If you need to move the POLYGON2_SAMPLES folder to another location on your system, this option will open a dialog where you can point the plugin to its new location.

SHOW PREFERENCES FILE :

This option opens the Finder/Explorer to the location of the preferences file. This file stores saved options like the user interface dimensions, etc. You can trash (delete) this file in order to reset Polygon to its factory dimensions.

OPEN PRESETS DIRECTORY :

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



Note that the plugin's current version number is displayed at the bottom of this menu.

SAMPLE CONTENT OVERVIEW:

We have specially curated and included a new 1.3 GB sample bank with Polygon 2.0.

This collection consists of brand new material derived from our latest sound effects collections and also includes some unheard material from our private vault of samples.

The Polygon factory sample bank is comprised of 6 sound categories:

- **DESIGNED:** processed, layered and designed sound effects
- **FOLEY:** unprocessed Foley recordings derived from a huge list of objects
- **LOFI:** unprocessed circuit bent, glitch synth and modular synth recordings
- **NOISE:** unprocessed digital noise derived from electromagnetic fields
- **SYNTH:** unprocessed tones derived from a broad range of oscillators
- **TONAL:** unprocessed tonal material derived from a variety of acoustic instruments

In the context of Polygon, we like to think of samples as a collection of **ingredients** from which you can craft your patches. As such, when you are designing sounds, it is helpful to take things like texture, frequency content, energy and motion into consideration.

Polygon makes it easy to focus on specific portions of samples, so it's important to consider that even a fraction of a sample can become a prominent element in a patch.

Of course this extends well beyond the included bank of factory samples; you can of course load any of your existing samples into Polygon. To take things even further, visit our website to take a look at our diverse range of [sample pack products](#).



You can use the samples from Polygon's library inside your DAW or other devices - please take a look at our [EULA](#) to understand the details of our license agreement.

Thanks for purchasing POLYGON 2.0!

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