

AUDIO POISON STAGGER 1.0 USER MANUAL

WHAT IS STAGGER?

Stagger is a multi-effect that includes different orders and structures for all of the common filter types (LP, HP, BP and BS). As well, some of them have been fused together with various distortions and modulation techniques to truly bring out the monster in your track. With the filter/modulation hybrids, you can even make your sounds talk or you can take it a step further by adding one of several of Stagger's uniquely designed formant filters and/or additional distortions to really bring out the beast.

With the filters set a side, you also get several delay based effects that we have deemed appropriate for modulation which go hand in hand with some of the military style modulation techniques taken from World War II.

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STAGGER FEATURES

1. Filters All Have Multiple Design Types and Orders: Low Pass, High Pass, Band Pass, Notch and Formant Filter Type(s).
2. RF style modulation which includes FM, PM, AM, AM-DSB and AM-SSB, as well as wave shaping algorithms for several different kinds of distortion.

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3. Various Filter/Distortion, Filter/Modulator, Filter/Delay Combination(s).
4. Intelligent Routing (Parallel, Series Pairs That Can Be Grouped).
5. Automatic Mixing w/ Perceptual Weighting (to prevent layer based attenuation standard summation / averaging).
6. Step Sequencer Designed Entirely With Usability in Mind.
7. 16 Patterns, and 4 Layers / Pattern.
8. Variable Pattern Speeds ($1/2$, $1/2^{\wedge}T$, $1/4$, $1/4^{\wedge}T$, $1/8\dots$).
9. Copy / Paste Functionality For Layer \Leftrightarrow Pattern Configurations.
10. Additional Effects: Tremolo, Stereo Pan, Vibrato, Doubler, Flanger, Slapback Echo, Echo, etc.

EFFECT SETTINGS



Stagger contains over 50 filters and effects which can be configured for each kernel

CONTINUOUS LFO

Enabling the continuous LFO check box will prevent the LFO position from resetting upon transitioning to a new effect kernel from within the step sequencer. By default, the LFO resets the phase position to zero causing it to “start over” each time it is triggered.

EFFECT ROUTING

Stagger supports both series and parallel effect routing. In addition, the routing goes beyond your regular super-position for mixing everything together and uses perceptually weighted mixing coefficients to ensure no matter how many combinations, routed in any order: the perceived gain will remain maximumly constant unless you are doing some serious wave shaping purposely in which that would be an exception.

For the series routing, you get 3 assignable groups. For example, you could route *EFFECT1* in parallel with *EFFECT2*, which can be routed in series with *EFFECT4*, while *EFFECT3* could be in series with *EFFECT5* and both *EFFECT3* and *EFFECT5* in parallel with *EFFECT2/EFFECT4* and *EFFECT1* before being automatically, and perceptually weighted, mixed together.

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DYNAMIC PARAMETERS

With 60 filters and effects, the attributed parameters for each of them are not always the same. For this reason, we have created dynamically assignable parameter knobs that can be re-assigned by clicking on the label.

Note: When configuring the envelope, re-assigning any of parameters will determine the routing of the *Param1*, *Param2*, *Param3* and *Param4* options for the envelope destination in respect to ordering of the Parameters as they are shown.

ENVELOPE SETTINGS



The envelope is built up with four partitioned, three point bezier curves, as opposed to your traditional more limited ADSR style of envelope which was originally invented with major design constraints in mind due to the state of technology half a century ago. As a result, you get a whole new dimension of controllability. Bezier curves were chosen in order to ascertain the most natural feeling transitions with controllable comfort.

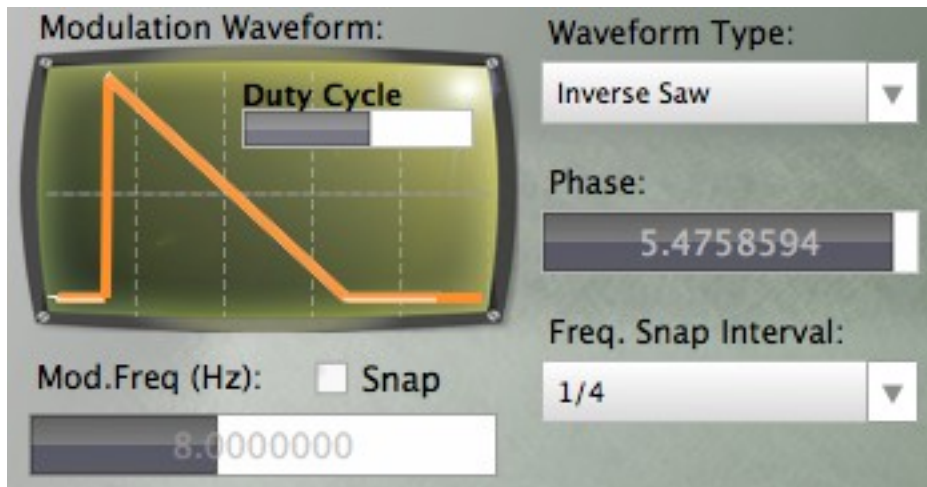
As for routing the VCO product of the envelope, you can attach it to any of the available settings mentioned in the previous section. This includes effect gain, stereo pan, as well as which ever parameter each of the dynamically assignable parameters are configured with.

Enabling and disabling each of the envelopes is achieved simply by checking or unchecking the box located next to the “Enable Envelope” label.

Note: In future versions of Stagger, there will be multiple envelope “types” (For example: several experimental coordinate systems extrapolated from say constellation diagrams, or a swarm sensitive drawing board, as well as more basic polynomial fitting based controlled by dragging your mouse, etc.

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LOW FREQUENCY OSCILLATORS



WAVEFORM SELECTION

The low frequency oscillators are stored and read from wave tables. Stagger includes all of the basic wave types including Sine, Triangle, Saw, Inverse Saw and Square waves. In addition, Stagger is also equipped with 8 “custom waveforms” which can be useful for further shaping of your overall sound (try using them in combination with their respective Envelopes).

FREQUENCY, PHASE AND DUTY CYCLE CONTROLS

Each low frequency oscillator has a bandwidth of 20 Hz starting at nil. You can control the phase for each of these oscillations with a selectivity of +/- 360 degrees. Likewise, increasing the phase will cause the waveform in the preview box to move to the left as the angle increases for time at 0s. Additionally, decreasing the phase will cause the waveform to move in the opposite direction.

Several of the wave-types allow you to control the duty cycle. These include both the saw waves, the square wave and the custom wave. A 50% duty cycle will mean that the square wave is high for half of the entire 360 degrees of the wave cycle. Analogically speaking, if you were to cut the waveform in half (at the 180 degree phase angle), then increasing and decreasing the duty cycle above and below 50% will cause the angle originally at the 180 degree phase position to move forward and back while stretching the two half cycles, in which you made from cutting the waveform in half (analogically).

FREQUENCY SNAPPING

You have the ability to control the interval of the frequency control by enabling the check box next to the “Snap. Freq.” label. As for the intervals, you can control the frequency interval

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derived from 1/2, 1/3, 1/4, 1/6 and 1/8 notes. Basically, if your project tempo is 140, and you wanted the interval to be equivalent to 1/3 (half note triplets), the frequency control would snap to the following frequencies: 0, 0.77767, 1.5553, 2.3330, 3.1107, 3.8883, 4.6660, 5.4437, 6.2214.... which is simply " $n * \text{tempo} * \text{notes} / 60$ " where n is an integer describing the current frequency control position and notes would be half note triplets in the fore-mentioned example. Finally, this is automatically adjusted when you load a preset made in a project with either a different tempo and/or if you were to change the the tempo of the current project.

STEP SEQUENCER



TIP: Right clicking a sequencer button will repeat the last configuration until the next time you use your left mouse button again.

PROGRAMMING THE SEQUENCER

To program the step sequencer, simply clicking on any of the step buttons, while the Draw button is impressed, will allow you to select any of the given effect kernels for that particular step. Similarly, right-clicking will allow you to re-use the last effect kernel configured for any of the 16 steps. On the contrary, deleting a step can be done in the same manner with the Delete button impressed rather than the Draw button (some people do sniff glue).

RESETTING, COPY / PASTING PATTERNS AND LAYERS

The Reset button will clear the current pattern of the current layer if you need to start over for whatever reason. The copy button will present you with a drop down list allowing you to either copy the active layer currently being displayed for the current pattern or all layers in the current pattern. After the layer(s) have been copied, the Copy button will be replaced with a Paste button where you can paste the copied layer(s) onto any of the 16 patterns available to you.

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LIST OF FILTERS AND EFFECTS

TREMELO - Modulatable velocity
STEREO PAN - Modulatable stereo panning
LPF 12dB - 2nd order low-pass filter with a 12dB/octave roll off
LPF 24dB - 4th order low-pass filter with a 24dB/octave roll off
LPF SVF - State variable low-pass filter with a 12dB/octave roll off
LPF FUZZ - 2nd order low-pass filter with a fuzz style distortion
LPF GRUNGE - 2nd order low-pass filter with wave shaping distortion
LPF DOUBLER - 2nd order low-pass filter with modulating delay line
LPF SLAPBACK - 2nd order low-pass filter with a kind of slapback echo
LPF COMB - 2nd order low-pass filter combined with a modulating comb delay
LPF COLOR - 2nd order high-pass with post comb filtering / all pass diffusion for colorization
HPF 12dB - 2nd order high-pass filter with a 12dB/octave roll off
HPF 24dB - 4th order high-pass filter with a 24dB/octave roll off
HPF SVF - State variable high-pass filter with a 12dB/octave roll off
HPF FUZZ - 2nd order high-pass filter with a fuzz style distortion
HPF GRUNGE - 2nd order high-pass filter with wave shaping
HPF AMDSB - 2nd order high-pass filter with double side-band amplitude modulation
HPF AMSSB - 2nd order high-pass filter with single side-band amplitude modulation
HPF COMB - 2nd order high-pass filter combined with a modulating comb delay
HPF COLOR - 2nd order high-pass with post comb filtering / all pass diffusion for colorization
HPF AMSSB - HP filter combined with amplitude single sideband modulation
HPF AMDSB - HP filter combined with amplitude double sideband modulation
FORMANT - Formant filter with three formant resonators and a band pass filter
FORMANT DSB - Formant + double side-band amplitude modulation
FORMANT SSB - Formant + single side-band amplitude modulation
NOTCH - 2nd order notch filter
PEAK - 2nd order peak filter
PEAK SVF - State variable peak filter
BPF1 - State Variable Band-pass Filter with 12dB/octave roll off
BPF AMSSB - BP filter combined with amplitude single sideband modulation
BPF AMDSB - BP filter combined with amplitude double sideband modulation
BPF EXCITED - Band-pass filter combined with distortion
BPF GRUNGE - Band-pass filter combined with distortion
BPF THIN - Two 2nd order HP and LP filters with a 12dB/octave roll off on each side
RESONATOR - Another 2nd order peak filter
DELAY MOD - Modulatable comb filter
FLANGER - Slow modulating delay line in parallel with input
VIBRATO - Simple pitch modulation controlled by a modulating delay line
ECHO - Modulatable
SLAPBACK - Slapback echo
RING MOD - Ring modulation
FM MOD - Frequency Modulation
PM MOD - Phase Modulation
AM DSB - Amplitude Double Side Band Modulation
AM SSB - Amplitude Single Side Band Modulation


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AM MOD - Amplitude Modulation
RESAMPLE – Sample rate reduction
DISTORT1 - Wave Shaping
DISTORT2 - Wave Shaping
DISTORT3 - Wave Shaping

AUTHORIZATION

Step 1

This can be accomplished by entering your serial number for the respective product into the authorization form located in either the "Global Settings" and/or "About" sections of the plugin's graphical user interface. It will appear as follows:



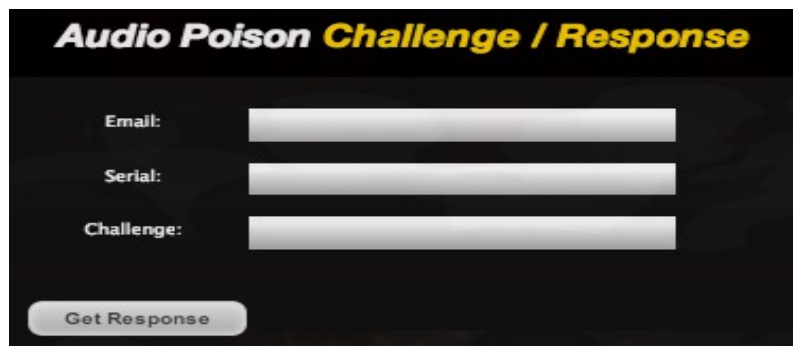
Serial Number

Once you have entered your serial number, clicking "Get Challenge" will produce a code unique to your computer which will be displayed in the box located directly underneath of the text box in which you entered the serial number into.

Step 2

The next step is to navigate to the Audio Poison's challenge / response web form in order to retrieve a response code that matches the unique challenge code generated by your computer. You can either click the link located underneath the text box where your challenge code is displayed to have the link open up automatically into a web browser, or you can enter the URL into your browser manually: <http://www.audiopoison.com/challenge>

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Audio Poison Challenge / Response

Email:

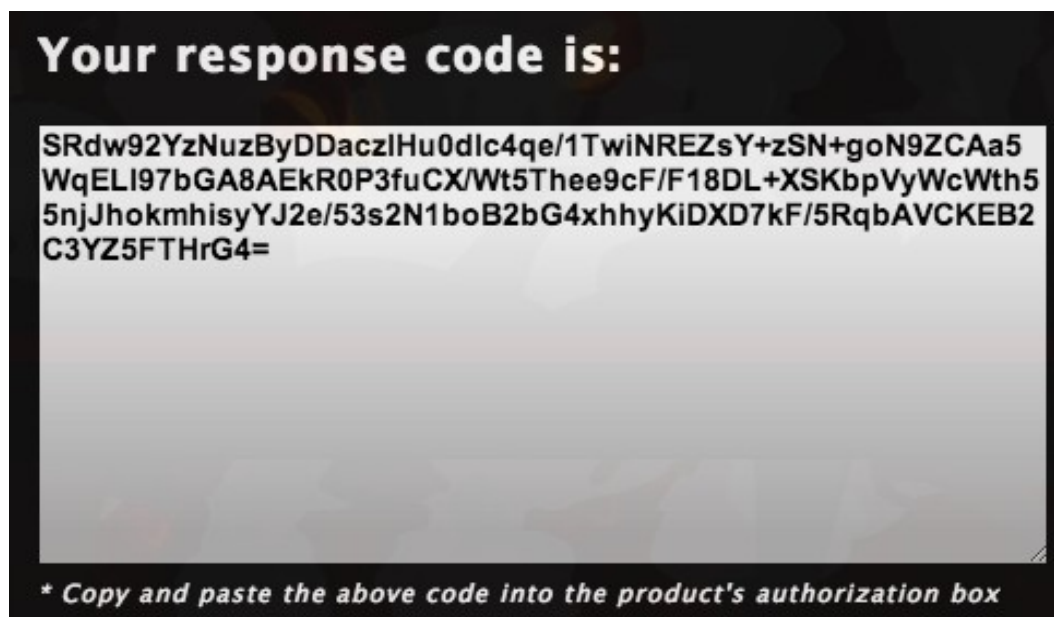
Serial:

Challenge:

Get Response

Step 3

After submitting the form presented at the above URL, you will be provided with a response code in which you can either copy and paste directly from the website, or download as a file and import into plugin. The response code can be pasted into the plugin via the text box located right next to where you retrieved the challenge code from. The response code will appear as follows:



* Additionally, there will be a "Save As File" button, located right underneath the above response code text box, which will allow you to save the response code as a file which you will be able to import via the plugin's graphical user interface from the same area that you created the challenge code from. (This can make it easier if you are authorizing the plugin on an offline computer).

If you are unsure what your serial number is or experience any kind of technical issue, please do not hesitate to create a support ticket!

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Finally, if you are not sure what your serial number is, you can retrieve any information and/or downloads relating to your purchase by either emailing support /at/ audiopoison.com or by logging into your account @ <http://www.audiopoison.com/account>

SYSTEM REQUIREMENTS

WINDOWS / PC: VST

32-bit and soon to be 64-bit support (64-bit should be ready for RTM)

MAC OSX: VST, AU

32-bit and 64-bit support

RTAS, AAX versions will be released soon after the RTM version of Stagger. TDM and HDX versions will be available at a time TBA due several minor set backs to the development of Stagger this past year.

CONTACT INFORMATION

E-mail: support@audiopoison.com, **Web:** <http://www.audiopoison.com/contact>

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Audio Poison Support Portal

<http://support.audiopoison.com/>

KVR Audio Hosted Forum

<http://www.kvraudio.com/forum/viewforum.php?f=220>

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