

USER MANUAL

_EFX MOTIONS

ARTURIA

_The sound explorers

Special Thanks

DIRECTION

Frédéric Brun Kevin Molcard

PROJECT MANAGEMENT

Samuel Limier

PRODUCT MANAGEMENT

Edouard Madeuf (lead) Maxime Audfray Clément Bastiat
Christophe Luong Matthieu Bosshardt

DIGITAL SIGNAL PROCESSING

Andrea Coppola	DSP libraries:	Hugo Caracalla	Geoffrey Gormond
Geoffrey Gormond	Samuel Limier (lead)	Andrea Coppola	Rasmus Kürstein
Samuel Limier	Marc Antigny	Mauro De Bari	Marius Lasfargue
	Kevin Arcas	Alessandro De Cecco	Fanny Roche
	Yann Bourdin	Loris De Marco	

SOFTWARE

Yann Burrer (lead)	SW libraries:	Gonçalo Bernardo	Christophe Luong
Corentin Comte	Pierre-Lin Laneyrie (lead)	Yann Burrer	Pierre Mazurier
Patrick Perea	Alexandre Adam	Corentin Comte	Fabien Meyrat
Raynald Dantigny	Stéphane Albanese	Raynald Dantigny	Mathieu Nocenti
Pierre Mazurier	Pauline Alexandre	Samuel Lemaire	Marie Pauli
	Baptiste Aubry	Cyril Lépinette	Patrick Perea

DESIGN

Maxence Berthiot (lead) Edouard Madeuf Florian Rameau
Christophe Luong Michael Spillane Morgan Perrier

SOUND DESIGN

Maxime Audfray (lead)	Andrea Coppola	Graphyt	Matt Pike
Matthieu Bosshardt	Cubic Spline	Lily Jordy	Avanti Singh
Gustavo Bravetti	Databroth	Florian Marin	Zardonic

QUALITY ASSURANCE

Nicolas Naudin (lead)	Matthieu Bosshardt	Rémi Pelet	Enrique Vela
Germain Marzin	Bastien Hervieux	Roger Schumann	Nicolas Stermann
Arnaud Barbier	Aurélien Mortha	Adrien Soyser	

MANUAL

Mike Metlay Jimmy Michon

IN-APP TUTORIAL

Gustavo Bravetti

BETA TESTING

Bastiaan Barth (Solidtrax)	(NaviRetlav)	Gary Morgan	Jeff Stoneley
David Birdwell	Kirke Godfrey	nvadradio	TJ Trifeletti
Benedict Breslin	Mat Herbert	Paolo Negri	Chuck Zwicky
Raphaël Cuevas	Andrew Macaulay	Davide Puxeddu	
Dwight Davies	Olivier Malhomme	Mateo Relief vs MISTER X5	
Adrian Dybowski	Jam El Mar	Fernando M Rodrigues	

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26 avenue Jean Kuntzmann
38330 Montbonnot-Saint-Martin
FRANCE
www.arturia.com

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Special Messages

This manual covers how to use Efx MOTIONS, provides a comprehensive look at its features, and details how to download and activate it. First, some important messages:

Specifications Subject to Change:

The information contained in this manual is correct at the time of printing. However, Arturia reserves the right to change or modify any of the specifications or features without notice or obligation.

IMPORTANT:

The software, when used in combination with an amplifier, headphones or speakers, may be able to produce sound levels that could cause permanent hearing loss. DO NOT operate for long periods of time at a high volume or at a level that is uncomfortable.

If you encounter any hearing loss or ringing in your ears, please consult an audiologist.

NOTICE:

Service charges incurred due to lack of knowledge relating to how a function or a feature works (when the software is operating as designed) are not covered by the manufacturer's warranty, and are therefore the owner's responsibility. Please study this manual carefully and consult your dealer before requesting additional support.

EPILEPSY WARNING – Please Read Before Using Efx MOTIONS

Some people are susceptible to epileptic seizures or loss of consciousness when exposed to certain flashing lights or light patterns in everyday life. This may happen even if the person has no medical history of epilepsy or has never had any epileptic seizures. If you or anyone in your family has ever had symptoms related to epilepsy (seizures or loss of consciousness) when exposed to flashing lights, consult your doctor prior to using this software.

Discontinue use and consult your doctor *immediately* if you experience any of the following symptoms while using this software: dizziness, blurred vision, eye or muscle twitches, loss of consciousness, disorientation, or any involuntary movement or convulsion.

Precautions to Take During Use

- Do not stand too close to the screen.
- Sit a good distance away from the screen.
- Avoid using if you are tired or have not had much sleep.
- Make sure that the room is well lit.
- Rest for at least 10 to 15 minutes per hour of use.

Congratulations on your purchase of Efx MOTIONS!

Excellence is placed at the heart of every Arturia product, and Efx MOTIONS is no exception. We are thrilled to bring you this mind-blowing toolbox of audio effects, each one designed to move with your music in fascinating ways. Explore the presets, tweak a few controls, get lost in the features - dive as deeply as you like.

Be sure to visit the www.arturia.com website for information on all our other inspiring hardware and software instruments, effects, MIDI controllers, and more. They have become indispensable tools for many visionary artists around the globe.

Musically yours,

The Arturia team

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1. WELCOME TO EFX MOTIONS!



Thank you for purchasing **Efx MOTIONS**, a versatile multi-effects processor that's truly something new. While Arturia is known for its exceptional software models of famous vintage gear and components (some of which appear in Efx MOTIONS!), this plug-in brings together a wide variety of original takes on audio effects processing in a unified and fun-to-use package.

You'll enjoy hard-hitting overdrives, sweet and powerful filters, intriguing noise effects, dynamic control of volume and pan, and so much more. Each of these effects can be modulated in a variety of ways, with everything from multi-segmented envelopes to sequencers, all in tight sync with one another and your DAW.

Efx MOTIONS is all about putting motion into your sounds, in ways ranging from the familiar to the far-out. We can't wait to hear what you do with it!

1.1. Motion: what's the big deal?

Audio effects can change sound in a huge variety of ways. It's useful to think of these in a variety of larger categories:

- **Frequency:** effects that change the frequency content of the input signal. These include filters, EQ, etc.
- **Dynamics:** effects that change the loudness of the input signal. This could mean anything from a simple volume or pan control to a multi-band compressor.
- **Gain:** effects that change the input signal's tonal character by overdriving the signal. These include distortion, fuzz, wavefolding, etc.
- **Time:** effects that use time delay to create timbre changes. There are a huge variety of these: echo, delay, chorus, flanger, vibe, reverb, and more.

In the early days of analog effects, all of these effect types were *static*. You'd set the parameters to certain values, and as audio passed through the effect, it would be processed in exactly the same way at all times. In other words, you'd set your filter parameters or overdrive amount or gain, and as the music played, that's where they'd stay.

There are exceptions to this rule, of course – for example, a compressor doesn't sit still all the time, because its effect varies with the incoming signal level, and a fuzz circuit reacts very differently with changes in playing dynamics. But the vast majority of these effects were "set and forget."



What about time-based effects? Aren't they always about changes over time? Yes, but how those changes *occur* is static. Once you set the depth and rate of a chorus, it stays there.

As effects got more sophisticated, they began to offer ways where the processing could be changed over time while playing. One of the earliest examples is the wah-wah pedal, a filter controlled by the foot.

As synthesizers came into more common use, elements of their control architecture were adapted for use in effects. The possibilities for modulation were endless! Parameters could react to changes in audio levels thanks to various *triggers* and *envelope followers*, and the *low-frequency oscillator (LFO)* was used to smoothly vary many different parameters, not just change delay times in choruses and flangers. Even complex modulators like the *sequencer*, which repeated loops of control voltage values, were incorporated into effects!

The benefits of this kind of control should be pretty obvious. Now, effects could change their sounds to follow the music, providing animation and a natural energy flow to enhance the natural movement from verse to chorus, etc. Static effects didn't have to be so... well... *static*.

1.1.1. Five fun FX, made to move

That history of adding motion to effects processing has inspired Efx MOTIONS. Behind its easy-to-use front panel, you'll find five different effects processors: a multi-mode Filter module, a Noise generator, a Drive module with many different types of distortion, a Volume module for dynamic level control, and a Pan module with adjustable width and bass defeat.

In addition to these five processors, each with its own complement of modulation sources, there are global Beat Repeat and dual FX generators to take your sound even further. You can chop up and modify your audio with digital DJ effects from pitch and time stretch to roll, reverse, and stutter, then process the final signal with a variety of spatial, modulation, distortion, dynamic, and filter effects over and above what's already in the modules.

These are all controlled by a variety of modulators that can work in sync with your DAW software, respond to the audio they "hear", and more. With each effect sporting different modulations, a simple input signal can be transformed into a constantly evolving soundscape - or just subtly changed to follow the mood of a song. It's all up to you!

1.2. Efx MOTIONS Features Summary

- Five unique effects modules:
 - Filter
 - Noise
 - Drive
 - Volume
 - Pan
- Effects can be reordered via drag-and-drop
- Each effect has independent controls for effect parameters, as well as
 - a multi-stage Motion Envelope with various Trigger options for the primary parameter
 - Dynamics control via envelope follower tracking input audio or an external sidechain input
- Two Macro knobs controlling multiple parameters simultaneously, with two Macro tabs letting you assign the different modulations.
- Beat Repeat section with exclusive Roll, Reverse, Pitch, Stretch, and Stop functions for up to 16 steps
- Dual FX processors with a choice of 14 different algorithms from echo and reverb to multi-band compressor and parametric EQ
- Three global modulators that can be operated as function envelopes, step sequencers, random generators, or envelope followers
- All effects modules and Function Generators have independent clock sync settings, including synchronisation modes
- Global bandwidth control for processing of the input signal, with variable slope and optional low cut and high cut filters
- Advanced searchable Preset Browser
- Windows or macOS compatible in AAX, Audio Units, and VST2/VST3 formats.

We hope that you find this collection of motion-enhanced effects a constantly inspiring resource for sound design and enhancement. Dive deep, have fun... and don't forget to stop designing sounds and make some actual *music* once in a while!

2. ACTIVATION AND GETTING STARTED

2.1. Compatibility

Efx MOTIONS works on computers and laptops equipped with Windows 8.1 or later or macOS 10.13 or later. It is compatible with the current generation of Apple M1 and M2, M1 and M2 Pro/Max/Ultra, and other Apple Silicon processors. You can use it as an Audio Unit, AAX, VST2, or VST3 plug-in within your favorite recording software.



2.2. Download and Install

You can download Efx MOTIONS directly from the [Arturia Products Page](#) by clicking either the **Buy Now** or **Get Free Demo** options. The free demo is limited to 20 minutes of operation.

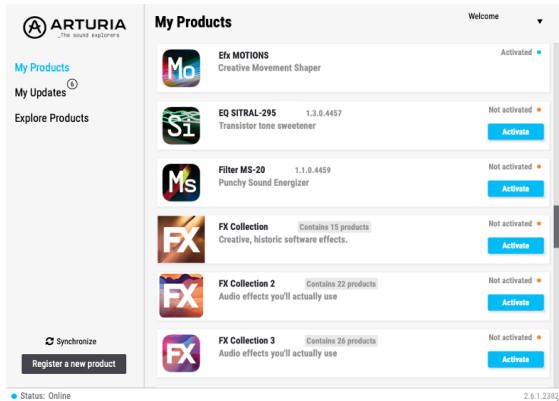
If you have not already done so, now is a good time to create an Arturia account by following the instructions on the [My Arturia webpage](#).

Once you install Efx MOTIONS, the next step is to register the software. This is a simple process that involves a different software program, the **Arturia Software Center**.

2.2.1. Arturia Software Center (ASC)

If you haven't installed ASC yet, please go to this web page: [Arturia Downloads & Manuals](#).

Look for Arturia Software Center near the top of the page, and then download the installer version for the system you're using (Windows or macOS). ASC is a remote client for your Arturia account, letting you conveniently manage all your licenses, downloads, and updates from one place.



After you complete the installation, do the following:

- Launch the Arturia Software Center (ASC).
- Log into your Arturia account from ASC's interface.
- Scroll down to the 'My Products' section of ASC.
- Click on the 'Activate' button next to the software you want to start using (in this case, Efx MOTIONS).

It's as simple as that!

2.3. Working with Efx MOTIONS as a plug-in

Efx MOTIONS is used as a *plug-in* within all major Digital Audio Workstation (DAW) programs including Cubase, Digital Performer, Live, Logic, Pro Tools, Reaper, Studio One, and more.

Plug-ins have numerous advantages over hardware, including:

- You can use as many instances on different tracks as your computer can handle.
- You can automate the plug-in's settings via your DAW's automation feature.
- All settings and changes are saved with your DAW project, letting you pick up right where you left off.

2.3.1. Audio and MIDI settings

Since Efx MOTIONS is a plug-in, settings for audio and MIDI routing are handled in your recording software or DAW. They are generally located in some type of Preferences menu, though each product does things a bit differently. So, consult your recording software's documentation for information on how to select your audio interface, activate outputs, set the sample rate, assign MIDI ports, set project tempo, adjust buffer size, and the like.

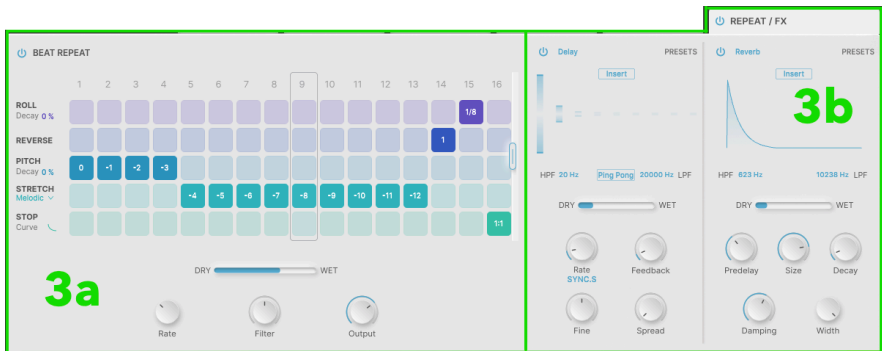
Now that you've set up your software, it's time to set things in motion!

3. INTERFACE OVERVIEW

Before we start working with Efx MOTIONS, we need to learn our way around. There's a lot going on here, so we're going to split up the *graphical user interface* (GUI) into logical sections before we teach you about them.



Parts of the Efx MOTIONS GUI



The REPEAT / FX tab

Key	Name	Function
1	Visualizer/Crossover [p.11]	The FFT Visualizer display and controls for the Crossover
2	Audio Path [p.11]	Controls for parameters in the five effects modules - Filter [p.13], Noise [p.15], Drive [p.16], Volume [p.18], and Pan [p.19] - that make up the Audio Path .
3	REPEAT / FX tab	Controls for Beat Repeat [p.20] (3a) and the two FX [p.24] (3b)
4	Motion Editor [p.42]	The Motion Envelope [p.42] and its associated Trigger [p.50] and Dynamics [p.58] tabs
5	Macro [p.63]	Macro control knobs and function assignment tabs
6	Modulation [p.60]	Three Modulation generators, each of which can be a Sequencer [p.64], Function [p.67] (one-shot or looping envelope), Random [p.68] control signal, or Envelope Follower [p.68].
7	Toolbars [p.69]	Global controls, including the Preset Browser [p.79], located above and below the main window.

The links above will take you to the various parts of the manual that cover these functions. It's perfectly fine to jump around and learn what you need at any given time, but we recommend that you go through the manual in order at least once. Efx MOTIONS is designed so you can get to work and do a lot without ever looking at the manual, but there are a lot of great functions that aren't obvious at first. Reading the manual will help you be sure that all of its power is at your command.

3.1. Standard control behaviors

As you use Efx MOTIONS, keep in mind that its controls will react to most standard mouse gestures. Just as a few examples:

- **Hover** can open floating displays with precise parameter values, highlight a function for explanation in the Lower Toolbar, indicate a point on the Motion Envelope, or reveal modulation amounts.
- **Click** can select parameters for editing, turn functions with buttons on and off, or pop up menus.
- **Drag** is the common way to change parameter values or move envelope points.



You can also scroll with your mouse over a knob to change the value of a parameter.

- **Double Click** is most often used to reset parameters to their default values (if they have one), and to erase a point inside a motion envelope.
- **Right Click** brings up contextual menus in the envelope editors, and is used for fine-tune adjustments of parameters in other sections.
- **CTRL-Click** (Windows) or **COMMAND-Click** (macOS), which we will write as **CTRL/CMD-Click**, lets you select multiple Motion Envelope points for simultaneous editing.
- **Shift-Click** lets you momentarily toggle the [Snap \[p.47\]](#) function as you move points.

You'll find many other examples as you play with Efx MOTIONS, and we'll call out uncommon actions when needed.



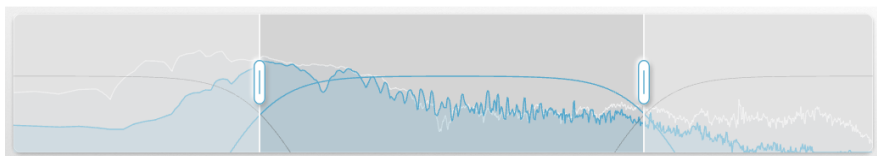
Many control settings are scaled arbitrarily, e.g. from 0.00 to 1.00. When a control has a range in specific units such as seconds or decibels, it will be noted.

4. THE AUDIO PATH

Let's start with a deep dive into the audio-processing functions of Efx MOTIONS. These include:

- The **Visualizer/Crossover**
- The **Audio Path** and its five modules
- **Beat Repeat**
- The two **FX** processors

4.1. Visualizer/Crossover



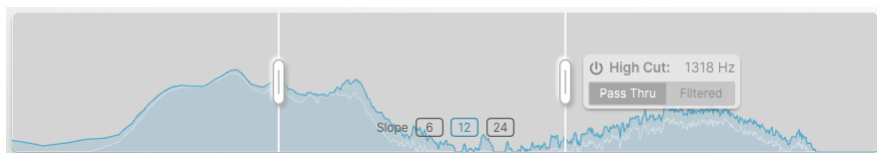
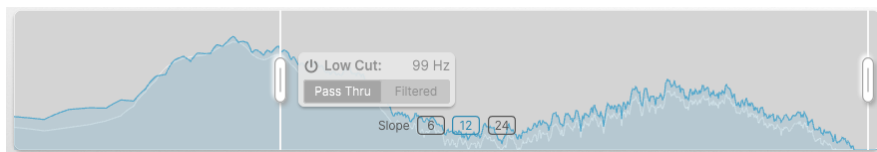
The **Visualizer/Crossover**, as its name implies, has two functions:

- It displays the input audio signal in real time as a *Fast Fourier Transform* of amplitude vs. frequency, so you can see where the energy in the input signal is falling in the frequency spectrum
- It offers controls to isolate the plug-in's effect to a narrower band of frequencies if desired.

4.1.1. Using the Crossover

As you can see on the display, the Crossover offers two "handles" which you can click and drag to the left or right to set the upper and lower crossover points.

Hover the mouse over a handle to pop up a set of controls for the Low Cut and High Cut filters, which control how the Crossover affects audio.



Each menu lets you turn the Low Cut or High Cut filter on/off, and select Pass Thru (audio isn't filtered) or Filtered operation. The pop-up also shows that filter's crossover frequency, which is displayed dynamically as you move the handles.

The filters can have a slope of 6, 12, or 24 dB/octave at the crossover points. This is chosen with a set of buttons at the center of the display.



Choosing a 6 dB/octave slope gives you *phase-linear* behavior, i.e. the Crossover won't alter the phase of the signal.

4.1.2. Output Level and Dry/Wet Mix



These knobs set the overall output level of the plug-in, and let you adjust the overall wet/dry mix to determine how much of your original sound is blended with Efx MOTIONS at the output. The lock icon next to the Dry/Wet knob preserves the current setting as you change presets.



The Top Section of the plug-in window also features two [Macro \[p.63\]](#) knobs, but we'll come back to those later.

4.2. The Audio Path

The five modules in the **Audio Path** represent the core of how Efx MOTIONS processes audio. They're shown as a set of five tabs across the middle of the interface.



The Audio Path tabs (and Beat Repeat/FX tab)

Each tab is color coded, and shows a miniature scrolling display of the current output state of the module. You can click on any module to edit its motion controls and sound parameters, and click the Power button icon to disable that module.



You can reorder the effects modules in the Audio Patch by simply dragging and dropping them into the order you wish.

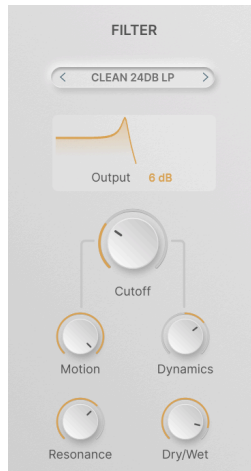
The sixth tab, **REPEAT/FX**, accesses the [Beat Repeat \[p.20\]](#) and [FX \[p.24\]](#) controls. This tab can't be reordered. We'll discuss the FX in this chapter and Beat Repeat in the [Motion Editor \[p.42\]](#) chapter.

The five modules are described below, in the order that they're presented in the Default preset. We're going to be talking about their sound parameters here, which are shown on the right of each tab. The parameters on the left and center belong to the [Motion Editor \[p.42\]](#), which we'll cover in the next chapter.



NOTE: Each module has a primary parameter that's controlled by the Motion & Dynamics parameters.

4.2.1. Filter



The Filter module is a multi-mode filter with five filter modes and a total of 24 different settings for slope, tonality, and more.

Its primary parameter is **Cutoff**, which ranges from 20 Hz to 20 kHz and has a default value of 20 kHz.



This default setting makes sense because it lets all audio through, as long as you're working with a low pass filter. For any other mode, especially high pass, check the Cutoff setting to be sure you haven't muted everything by accident.

Clicking the Advanced button in the [Upper Toolbar \[p.70\]](#) brings up two extra controls: **Resonance** (or Spread), and **Dry/Wet** mix.

Click on the filter name to pop up a window where you can select the Filter Mode:



- **Clean (MultiFilter):** A straightforward multi-mode filter with a clean and classic sound. Options include Low Pass, High Pass, Band Pass, and Notch, at a slope of either 12 or 24 dB/octave.
- **Warm (SEM):** This is a modeled state-variable filter of the sort used in the famous Oberheim Synthesizer Expander Module (SEM), with a warm character. Options include Low Pass, High Pass, Band Pass, and Notch, at a slope of 12 dB/octave.
- **Gritty (MS-20 MK2):** This filter mode models the second-generation filter circuit in the KORG MS-20, with its nasty and aggressive character. Options include Low Pass modes at 6 or 12 dB/octave slope. Crank the Resonance on this one for pure grunge!
- **Sharp (Surgeon):** The Surgeon filter can be thought of as a single band of parametric EQ, very sharp in terms of which frequencies it affects, but without Resonance. It's available as Low Pass, High Pass, Band Pass, and Notch; the latter two have a Spread (bandwidth) knob accessible via the Advanced button.
- **Phaser:** A *phase shifter* or *phaser* is a popular modulation effect that's been a staple of guitarists' pedal boards for well over 50 years. It's made up of a series of all-pass filters called *poles* that create phase shifts; one pair of poles results in one moving frequency notch. The Efx MOTIONS phaser can provide anywhere from 2 to 12 poles, and has a Feedback control accessible via the Advanced button.

A dynamic display under the Mode selector shows the shape of the filter curve and how it moves over time. Click and drag the **Output** parameter to boost the gain.

4.2.2. Noise

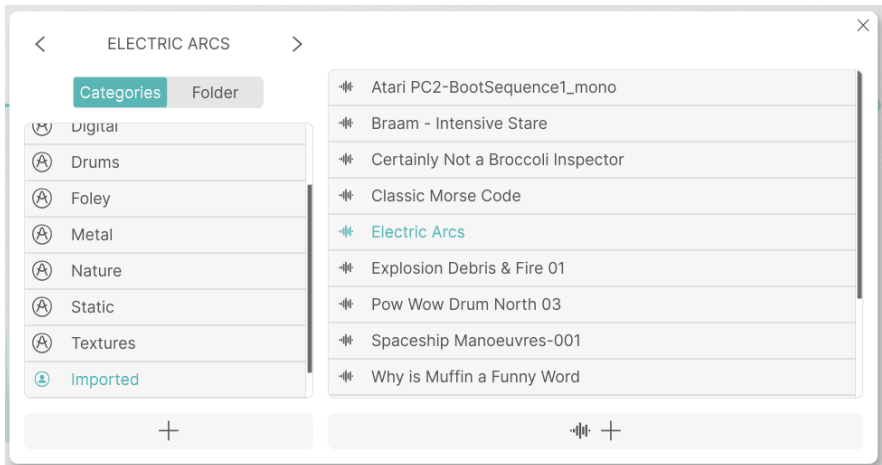


The Noise module does just that – it injects noise into the signal. When modulated in various ways, this can add grit and character, or help create unusual special effects.

Its primary parameter is **Level**, which ranges from -70.0 dB (muted) to +12 dB and defaults to 0 dB (unity gain).

Clicking the Advanced button in the [Upper Toolbar \[p.70\]](#) brings up two extra controls: **Filter** (a simple “tilt” tone control, low pass to the left, high pass to the right) and **Stereo** (width of the noise’s stereo image).

Note that these are not conventional modeled noise sources as you’d get in a synthesizer plug-in. They are all digital samples of up to roughly 8 seconds in length, selectable from a library pop-up:



You can spend hours exploring the dozens of sounds that come included with Efx MOTIONS! They are organized into categories: Atmospheric, Crackles, Digital, Drums, Foley, Metal, Nature, Static, and Textures.

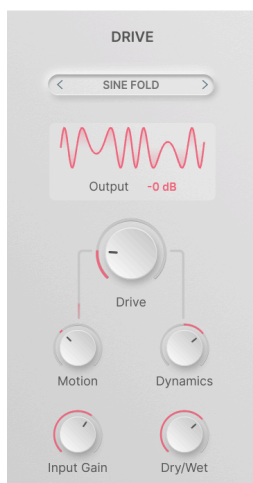
You can also import your own WAV or AIFF files, or entire folders of them, using the + icons at the bottom of the popup. Hovering over a sample name brings up a trash can icon for deleting that sample.



Note that you can import very long samples, but only the first 8 seconds will play back, then the sample will restart at the beginning and loop.

A static display under the Noise selector shows the waveform of the selected sample, and you can click and drag the **Tune** parameter to pitch shift the original sound up or down by up to 36 semitones (3 octaves).

4.2.3. Drive

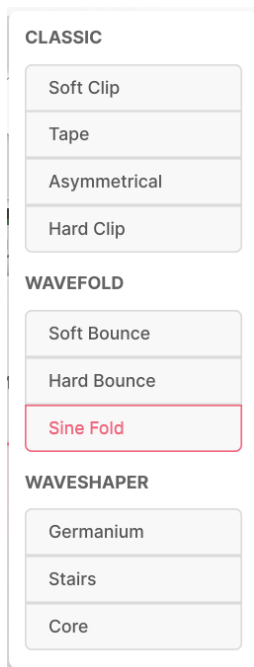


The Drive module produces a wide variety of overdrive and distortion sounds based on classic circuits, wavefolding, and waveshaping.

Its primary parameter is **Drive** amount, which ranges from 0 to 50 dB of gain and defaults to 0 dB when double clicked.

Clicking the Advanced button in the [Upper Toolbar \[p.70\]](#) brings up two extra controls: **Input Gain** (up to 24 dB) and **Dry/Wet** mix.

The ten drive modes are selected from a popup when you click on the current drive mode name:



These modes include:

- **Classic:** Soft Clip, Tape, Asymmetrical, Hard Clip
- **Wavefold:** Soft Bounce, Hard Bounce, Sine Fold
- **Waveshape:** Germanium, Stairs, Core

The graphic display is designed to give you a general idea of how output is distorted as the Drive amount goes up. Some are familiar tones, and others are quite unusual (and sometimes downright scary!). Clicking on **Output** lets you adjust the output level by up to ± 12 dB.

4.2.4. Volume



The Volume module allows you to create complex tremolo and gating effects by modulating the signal level in real time. It's a very simple module, with no pop-ups or extra controls.

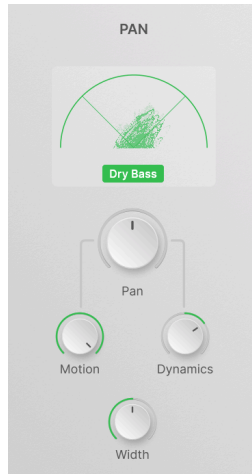
The primary parameter is **Volume**, which ranges from -70.0 dB (muted) to +12 dB and defaults to 0 dB (unity gain).



NOTE: The Motion parameter acts as a sidechain control of the Volume parameter, not as an offset.

The dynamic display shows the volume envelope scrolling in real time, along with the resulting waveform.

4.2.5. Pan

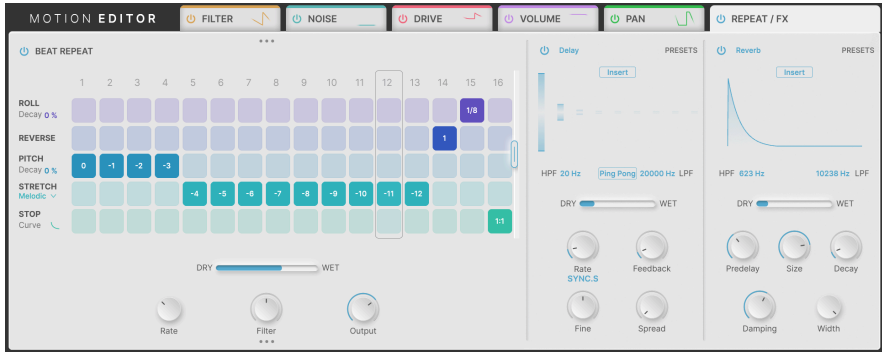


The Pan module animates the motion of audio across the stereo soundstage. The primary parameter is **Pan**, which ranges from 100% Left to 100% Right with the default at Center.

It has no pop-ups, and the only extra control is a **Width** knob. It ranges from 0% (mono) to 200% (exaggerated stereo), with a default setting of 100% (standard stereo).

The dynamic display is a *vectorscope* (a display of stereo distribution of audio in real time). The **Dry Bass** button removes low frequencies from the Pan process to preserve mono compatibility.

4.3. Beat Repeat



Clicking on the sixth tab, **REPEAT / FX**, brings up the controls for **Beat Repeat** and the two **FX** processors.

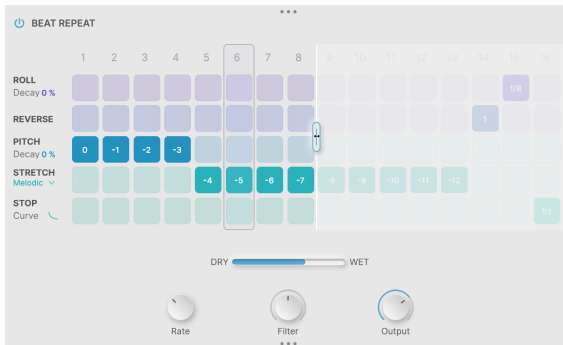
Beat Repeat, on the left, is a grid-based sequencer that allows each step in a loop to have one of five different digital effects applied to it. This can add a lot of extra movement to rhythmic material, over and above what the Motion Editor is already doing with the Audio Path modules.

4.3.1. Global parameters

Beat Repeat is centered around a row of steps that run in a loop as your DAW plays. Each time a step is triggered, the output of the Audio Path chain can be processed in one of five ways, or left as is.

REMEMBER: Only one effect at a time can be active in any step!

Grab and drag the handle at right to set how many steps the loop will have, from 1 to 16:



Setting the Beat Repeat Length to 8 steps

As you can see, shortening the loop does not erase any of the information in unplayed steps; it's just waiting to be used again.

Under the step grid are controls for:

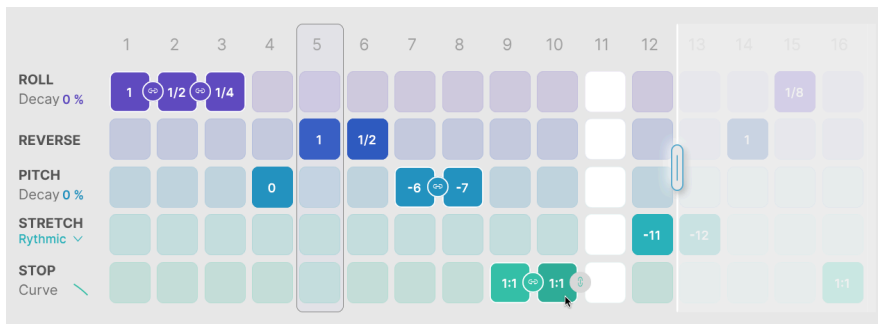
- **Dry/Wet:** Sets the blend between the output of the Audio Path and the output of Beat Repeat
- **Rate:** The beat subdivision of each step, which can be set to 1/2, 1/4, 1/8, or 1/16 bar
- **Filter:** A "tilt" tone control for the processed audio. Defaults to 0% (no filtering) and can be set left (-100% to 0%) for low pass or right (0% to 100%) for high pass.



NOTE: the Filter only affects the processed audio, so turning the knob all the way left or right will only pass dry signal. In a way, the Filter knob acts as a secondary dry/wet mix control.

- **Output:** Sets the level of the processed signal. Ranges from -70.0 dB (effectively muted) to 6.00 dB of boost, defaulting to 0 dB (unity gain).

4.3.2. The Beat Repeat effects



To turn on a particular effect for a step in the Beat Repeat grid, simply click the appropriate box.

If you immediately click and drag after selecting a new box, you will move the activated box into a new position, and activate every box that your mouse passes over. This is a good way to quickly turn on a particular effect for multiple steps: just click and drag left or right.

If you click on a box that's already been selected, you can then scroll or drag up/down to change the value in the box.

Right click anywhere in a step to turn it off (it will turn white).

4.3.2.1. Link

If a parameter supports it, a small grey chain icon will appear next to the box you click, so you can **Link** multiple steps together. In the picture above, the mouse is hovering on Stop for step 10, and the grey Link icon has appeared next to it.

Linking has slightly different behavior depending on the effect using it.



NOTE: If you click the Link icon next to an empty box, it will create the link and also fill in that box, turning off any other effect that was in that step.

4.3.2.2. Roll

Roll creates a stuttering effect, where a buffer of audio is captured and looped for the duration of the step. Scroll to set the Roll time, which indicates how much of a step the loop length is.

Roll time can be set to 1/8, 1/6, 1/4, 1/3, 1/2, 2/3, 3/4, or 1 step.

If steps are not linked, Beat Repeat will sample and roll the input audio that's playing at the start of each step. If steps *are* linked, each step will use the audio that was captured on the first linked step, and won't reload new audio until there's an unlinked step.



Here's an easy example. If you roll a melody and the steps aren't linked, then different parts of the melody will be sampled for different Roll steps. But if the steps are linked, every step will roll the first notes of the melody.

Roll has an associated parameter called **Decay**, which puts a simple decay envelope on each step. At 0%, the step cycles at full volume; at 100%, the step dies away, with a sort of "plucked" sound. Drag the Decay value up/down to change it.

4.3.2.3. Reverse

Reverse takes the audio in a step, slices it up, and plays the slices in order... but each slice is played back in reverse.

With longer slices, the reversal may rearrange the order of notes. Shorter slices, on the other hand, may create reversals *inside* notes, so the timbre will change but the melody may not.

Reverse can't be linked and there's no adjustable parameter for it.

4.3.2.4. Pitch

Pitch will pitch-shift the audio in a step downward by anywhere from 0 to 12 semitones. It does not shift pitch upward. Note that this is a "traditional" pitch shift, which doesn't preserve the timing of notes within a step.

The **Decay** parameter controls how quickly each step drops to the chosen pitch. At 0%, each step plays at the chosen pitch immediately, while at 100%, each step starts without any pitch change and then drops to the set value.

Linking steps allows to sustain the pitch decay envelope, envelope restarts only when a new unlinked step is played back.

4.3.2.5. Stretch

Stretch is a time-stretching algorithm that lets you play with the pitch of each step while preserving rhythm/timing for the audio.

Stretch can be set from 0 to -12 semitones, and there are three different stretch modes:

- **Rhythmic**, which preserves transients and sounds best on sources like drum loops
- **Melodic**, which preserves pitches and works well on melodic and chordal instruments
- **Texture**, which is best for long sustained material

4.3.2.6. Stop

Stop produces the classic "Tape Stop" DJ trick of slowing down an audio source to a stop. The value you can set for each step is **Occurrence**, which is how often the effect happens.

Occurrence can be 1:1 (happens every time the step is played), 1:2 (happens every other time), 1:3 (every third time), 1:4 (every fourth time), or 1:8 (every eighth time).

The **Curve** parameter lets you control the rate of slowdown, from logarithmic (slowdown starts gently but then happens more and more drastically) through linear, to exponential (initial slowdown is dramatic, then eases off).

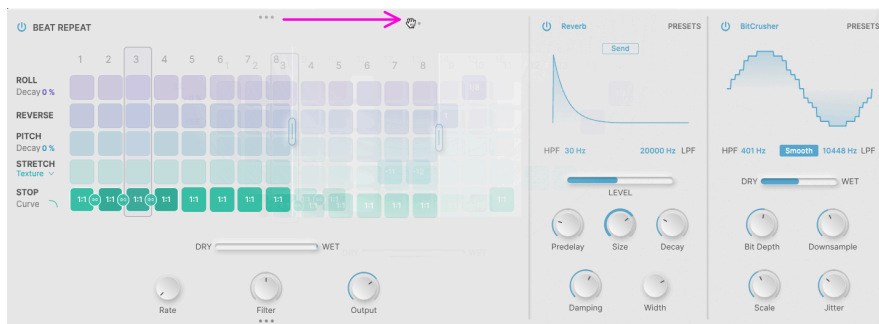
Linking steps lets you set up longer, slower stops.

4.4. FX

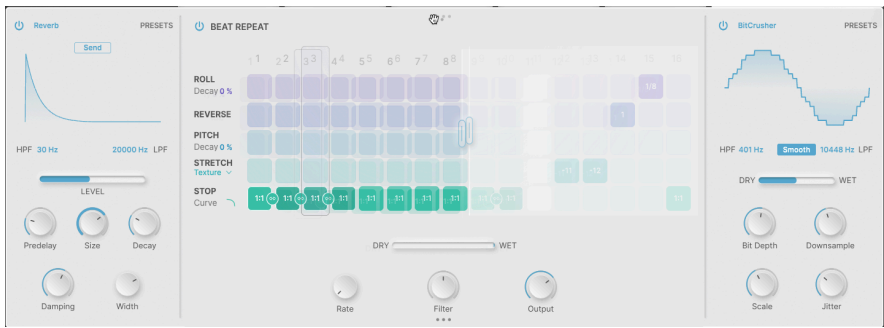


Even after the Audio Path and Beat Repeat, Efx MOTIONS isn't done with your audio yet! The two **FX** offer a variety of ways to sweeten your final sound.

4.4.1. Reordering FX



Click and drag on the three dots (purple arrow)...



...to move the module into a different position.

Each of the three modules in the Repeat / FX tab can be reordered by simple drag and drop. Hover your mouse over the three dots that appear at the top or bottom edge of the module you want to move (the cursor becomes a hand icon), and drag to reorder.

4.4.1.1. Insert vs. Send

Most of the FX operate as **Insert** effects - the input signal passes through and appears at the output in a user-specified Dry/Wet mix. However, some of the temporal effects have the option of being used as **Send** effects.

When the **Send** button is pushed, the Dry/Wet mix slider becomes a Level slider, which controls how much of the audio is sent to the FX.

If you've reordered the FX so one or both come before Beat Repeat, using Send mode allows you to route that FX's output around the subsequent modules, which will process the dry signal from before the Send.

4.4.2. Common parameters

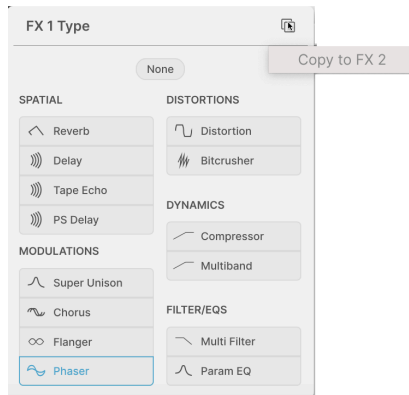
Each of the FX has an individual bypass button (the power button icon at the top left), and a pop-up Presets menu accessed at the top right. Each Presets menu has a **Save As...** option, so you can save your FX settings for use in other presets.

Most offer a High Pass Filter and Low Pass Filter to control the frequency response of the FX itself; this combines with the many other frequency-based controls in Efx MOTIONS (Crossover, Beat Repeat Filter, etc.) to provide very fine control over where the effects work on your sound.

Each effect has two rows of controls: a set for quick access at all times, and more fine-tuned features that become visible when the **Advanced** button is on.

i Many control settings are scaled arbitrarily, e.g. from 0.00 to 1.00. When a control has a range in specific units such as seconds or decibels, it will be noted.

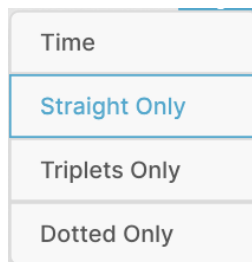
Clicking on the effect name brings up a menu of the available FX types:



The FX Types

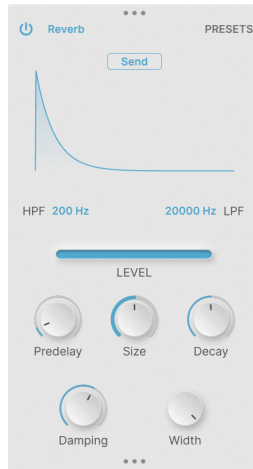
Clicking on the icon at the top right copies the FX program to the other FX module.

4.4.2.1. Rate Sync



This pop-up appears when you click under the **Rate** knob, whenever there's an FX function that can sync to the DAW. Options include Time (no sync, set in Hertz or milliseconds) or sync in straight, triplet, or dotted note values.

4.4.3. Reverb



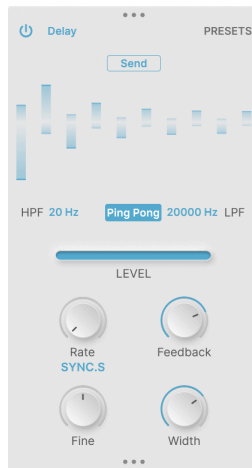
Reverb provides a sense of space and depth, creating an artificial room, hall, chamber, or other ambience to "hold" your sound.

Controls include:

- **Predelay:** Time delay before the first reflected sound. Range 0 to 200 ms, default 3 ms
- **Size:** Size of the virtual room, with larger sizes being more diffuse.
- **Decay:** Reverb decay time.
- **Damping** (Advanced): Softening of high frequencies.
- **Width** (Advanced): Mid-Side width emphasis

Reverb can be set up as a Send FX.

4.4.4. Delay



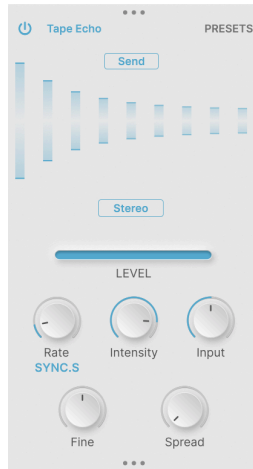
Delay covers a range of digital echo effects, with or without DAW sync.

Controls include:

- **Ping Pong**: causes delay repeats to bounce between left and right in the stereo field.
- **Rate**: Timing of echo repeats. Range 2 ms to 2000 ms (time) or 1/32 to 8 (sync).
- **Feedback**: Relative loudness of subsequent repeats. Tops out at 1.00 (infinite repeat).
- **Fine** (Advanced): Fine adjustment of delay time. Range ± 50 ms, default 0 ms.
- **Width** (Advanced): Gradually broadens ping pong from mono to stereo.

Delay can be set up as a Send FX.

4.4.5. Tape Echo



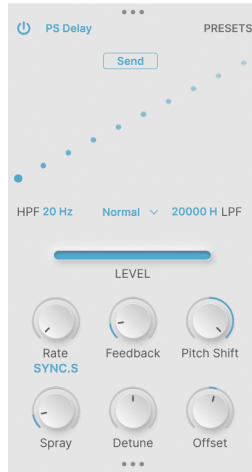
Tape Echo is a rich, warm delay reminiscent of the sound of classic tape-loop echo machines from the 1960s and 1970s.

Controls include:

- **Rate:** Timing of echo repeats. Range 10 ms to 1000 ms (time) or 1/32 to 8 (sync).
- **Intensity:** Relative loudness of subsequent repeats (feedback). Ranges from 0.00 to 1.20, default 0.350, values above 1.00 produce positive feedback a.k.a. "runaway".
- **Input:** Input gain. Range ± 12 dB, default 0 dB (unity gain).
- **Fine (Advanced):** Fine adjustment of delay time. Range ± 50 ms, default 0 ms.
- **Spread (Advanced):** Adds a time offset between the left and right channels.

Tape Echo can be set up as a Send FX.

4.4.6. PS Delay



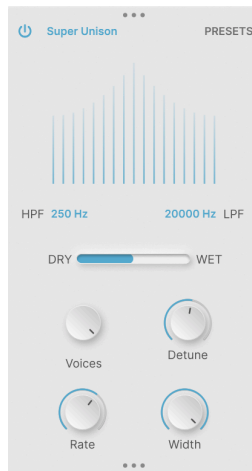
Pitch Shift Delay is a classic effect from early digital signal processors of the 1980s. Each subsequent repeat of the echo receives a pitch shift, producing subtle or wild cascades of changing pitch.

Controls include:

- **Rate:** Timing of echo repeats. Range 16 ms to 2000 ms (time) or 1/32 to 8 (sync).
- **Feedback:** Relative loudness of subsequent repeats. Tops out at 1.00 (infinite repeat).
- **Pitch Shift:** Detuning of each successive echo repeat. Range ± 24 semitones, default 0 semitones.
- **Spray** (Advanced):
- **Detune** (Advanced): Fine tuning of delay pitch shift. Range ± 100 cents (one semitone), default 0 cents.
- **Offset** (Advanced): Delay time offset between left and right channels. Range ± 20 ms, default 0 ms.

PS Delay can be set up as a Send FX.

4.4.7. Super Unison

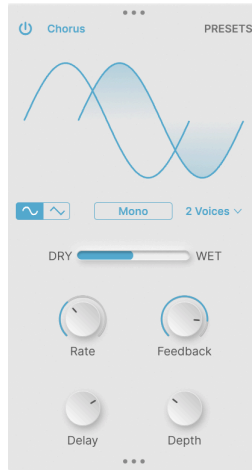


Super Unison was first developed for virtual analog synthesizers in the 1990s, using delayed copies to make a single sound come across as richer and more powerful.

Controls include:

- **Voices:** How many pairs of voices (1 sharp, 1 flat) are added around the original sound. Range: 1 to 8 pairs.
- **Detune:** Sets detuning of the voice spread.
- **Rate** (Advanced): Speed of the LFO modulating the detuned voices. 0 to 1.0 Hz, default 0.350 Hz.
- **Width** (Advanced): Stereo width of the effect.

4.4.8. Chorus

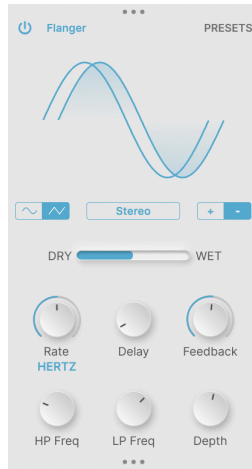


Chorus is a classic modulation effect, using short delays modulated by an LFO to provide movement and thickness, imitating a "chorus" of voices.

Controls include:

- **Waveform:** Sine or triangle waveform for the modulation LFO.
- **Stereo:** Chooses between conventional Mono chorus or Stereo chorus with slightly different Left and Right modulation.
- **Voices:** Pops up a menu to choose the number of chorus voices to be added, from 1 to 3.
- **Rate:** Modulation LFO speed. Range 0.1 Hz to 5 Hz.
- **Feedback:** Amount of delay feedback.
- **Delay (Advanced):** Sets the static value around which the delay time is modulated. Range 0.6 to 20 ms, default 13.1 ms.
- **Depth (Advanced):** Delay modulation range. Range 0 to 10 ms, default 2.2 ms.

4.4.9. Flanger

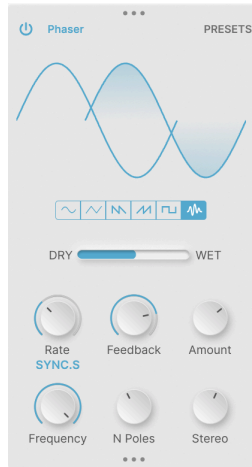


The Flanger is another classic modulation/thickening effect, using very short modulated delay times for a rich “whooshing” effect.

Controls include:

- **Waveform:** Sine or triangle waveform for the modulation LFO.
- **Stereo:** Chooses between Mono or Stereo flanging.
- **Polarity:** Selects either positive or negative flanging, each with its own characteristic tonality.
- **Rate:** Modulation LFO speed. Range 0.005 Hz to 10 Hz or sync 1/32 to 8.
- **Feedback:** Amount of delay feedback.
- **HP Freq** and **LP Freq** (Advanced): Sets filters to remove lows and highs from the effect input. Range 30 to 800 Hz (HP), 1000 to 20000 Hz (LP).
- **Depth** (Advanced): Flanger modulation depth.

4.4.10. Phaser

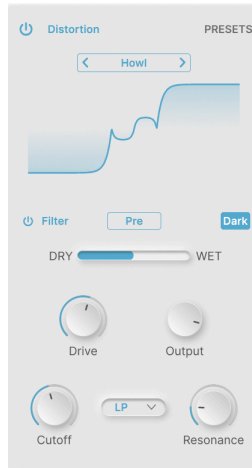


A Phaser (Phase Shifter) uses a series of All Pass Filters to introduce phase changes in an input signal. If the filter settings are modulated via LFO, this produces a rich thickening that is different in character than that of a chorus or flanger.

Controls include:

- **Waveform:** Chooses the LFO waveform between sine, triangle, falling sawtooth, rising sawtooth (ramp), square, and random.
- **Rate:** Modulation LFO speed. Range 0.1 Hz to 10 Hz or sync 1/32 to 8.
- **Feedback:** Amount of delay feedback.
- **Amount:** Modulation depth.
- **Frequency (Advanced):** Center frequency for the modulation effect. Range 30 Hz to 15000 Hz, default 740 Hz.
- **N Poles (Advanced):** Number of poles (filters) providing notches in the frequency response. Range 2 to 12 (1 to 6 frequency notches).
- **Stereo (Advanced):** Changes the phaser output from mono to stereo.

4.4.11. Distortion



There are many kinds of distortion, and this FX provides a wide selection of everything from gentle overdrive and classic circuit behavior to twisted and frightening digital artifacts. The distortion types are chosen from this pop-up menu:

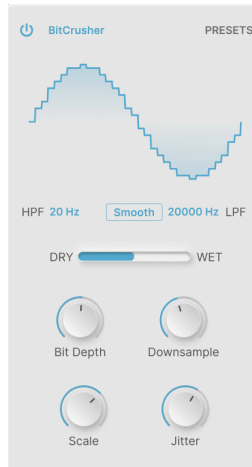


There's also a filter that can be engaged either before (Pre) or after (Post) the distortion, with a **Dark** button to roll off the highs a little.

Controls include:

- **Drive:** Input gain boost. Range 0 to 50 dB.
- **Output:** Output level. Range -24 to +3 dB, default 0 dB (unity gain).
- **Cutoff (Advanced):** Filter cutoff frequency. Range 20 Hz to 20000 Hz.
- **Filter Mode (Advanced):** Low Pass, High Pass, or Band Pass.
- **Resonance (Advanced):** Resonance around the cutoff frequency.

4.4.12. Bitcrusher



A Bitcrusher degrades digital audio signals in two ways: first, it lowers the Bit Depth (Resolution) of the audio, and second, it downsamples the audio to a lower sample rate. These effects produce a wide variety of early-era digital grunge.

Controls include:

- **Smooth:** This switch turns on an interpolation mode that makes downsampling (slightly) less harsh... so you're getting the artifacts you want rather than the ones you don't.
- **Bit Depth:** Sets the resolution of the audio output, from 16 bits down to 1.5 bits.
- **Downsample:** Sets the sample rate of the audio output, from 44.1 kHz down to 200 Hz.
- **Scale (Advanced):** This increases the precision of bit quantization at lower amplitudes, once again giving you the artifacts you want.
- **Jitter (Advanced):** Randomizes the downsampling frequency for even more digital yuckiness.

4.4.13. Compressor



A Compressor controls the dynamics of an incoming signal by "turning down" levels that cross a certain threshold. How quickly the compressor reacts and how it performs its gain reduction will determine its sonic character.

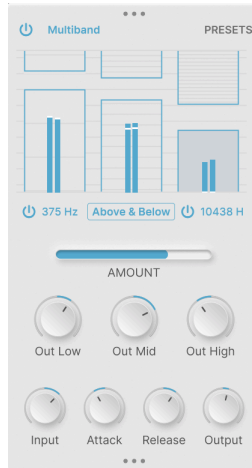
Since some of the effects in Efx MOTIONS can cause sudden and drastic changes in level, a compressor can be very handy to tame your final signal. To give you an idea of how hard the compressor is working, a Gain Reduction meter is provided next to the compression curve display.

A **Makeup** switch enables automatic output level control, a feature of some classic compressor and limiter designs.

Controls include:

- **Threshold:** Sets the level at which the compressor begins to work. Range is -60 to +20 dB, default is 0 dB.
- **Ratio:** Sets how hard the compressor "turns down" the gain for signals that pass the threshold. Range is 1.0 (no compression) to 100 (brick wall limiting).
- **Output:** Compensates for output level changes due to the compressor's action. Range is ± 3 g dB, default is 0 dB (unity gain).
- **Attack (Advanced):** Sets how quickly the compressor acts on signals that pass the threshold, from an extremely "grabby" 0.010 ms to a loose 1000 ms.
- **Release (Advanced):** Sets how quickly the compressor lets go of a signal once it drops below the threshold again, to prevent "pumping" or "breathing" effects. Range is 1 ms to 2000 ms.

4.4.14. Multiband

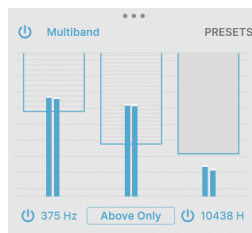


A Multiband compressor provides dynamics control that is split up over several different frequency ranges. This allows, for example, dynamics in the mids and highs to be controlled while leaving the lows alone.

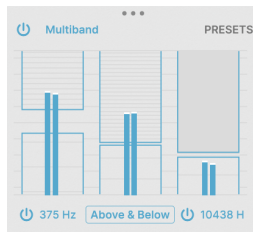
This FX allows you to work with one, two, or three frequency bands. Turning on each of the two crossovers (click and drag to set the frequencies) activates or deactivates the appropriate band(s). You'll only be shown the active bands on the display.

The interactive graphic display of the Multiband FX allows you to easily control the threshold and ratio for up to three frequency bands. Click and drag the top/bottom of a "box" to set the threshold for that band. Click and drag inside the box to set the ratio. Higher ratios will be indicated by denser line patterns, and ratios below 1 (expansion) will be shown by sparse lines.

In the example graphic below, the lows (frequencies under 375 Hz) that go above the indicated threshold on the left are being compressed a little bit, the mids are being compressed a bit more when they cross the slightly lower threshold, and the highs (above 10438 Hz) are being hard-limited if they exceed a very low threshold:



In this second example, the compressor is set to Above & Below rather than Above Only. That means signals below the lower set of thresholds will have their gains turned up (expanded) to focus the dynamic range even more:



This is a lot to absorb! Multiband compression is one of the most complex bits of effects processing you can perform, and while it can be used for surgical control of levels in music mixing and mastering, it's also great for unusual effects. We advise that you just play with the settings while feeding the FX a variety of different signals, to get a feel for what it does.

Global controls include:

- **Out Low, Out Mid, and Out High:** Set the output gain to make up for changes in level that are caused by compression in any of the three bands. Range is ± 24 dB, default is 0 dB (unity gain).
- **Input, Attack, Release, and Output (Advanced):** These controls allow fine "plus or minus" adjustment of these parameters for a selected band.

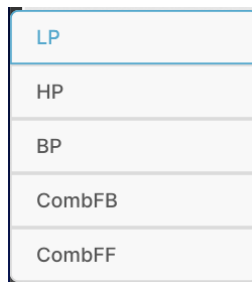
4.4.15. Multi Filter



The Multi Filter is a multi-mode filter with some interesting variations on the usual theme. Its Low Pass, High Pass, and Band Pass modes offer a steeper 36 dB/octave slope that's not found on conventional audio gear, and there are two Comb filters - one Feedforward and one Feedback - with a rich, flanger-like tone.

Controls include:

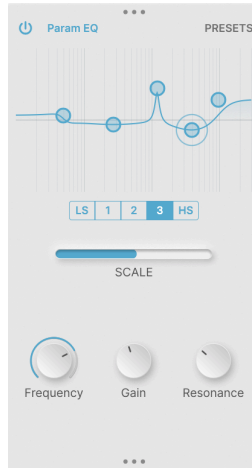
- **Mode:** Opens a pop-up menu to choose the filter mode:



The two Comb filters allow for interesting swept frequency effects.

- **Slope:** Chooses the slope of the LP, HP, or BP filters, between 12, 24, and 36 dB/octave.
- **Cutoff:** Sets the cutoff frequency, between 20 and 20000 Hz.
- **Resonance:** Sets the resonance.

4.4.16. Param EQ



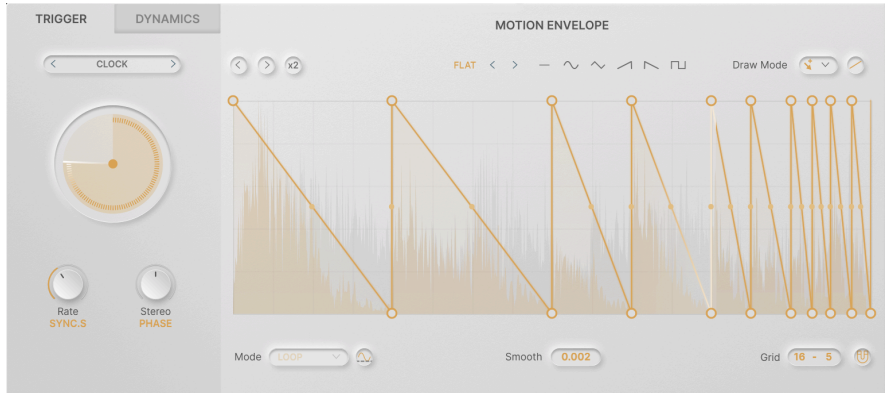
A Parametric Equalizer is a pro audio tool for finely sculpting the frequency response of an audio signal. It will contain two or more sets of controls that let you pick a frequency, decide how much gain boost or cut you want to apply at that frequency, and how wide the boost or cut will be. This lets you do everything from gently warm a signal with a small mid boost to notching out a specific frequency that contains unwanted hum.

The Param EQ appears as an interactive graph of gain vs. frequency. You have five points to work with: three fully parametric EQ bands, and high and low shelving filters. Click and drag to set the frequency and gain of any particular point; the point will be highlighted with a ring.

Once you've highlighted a particular point, the **Frequency**, **Gain**, and **Resonance** knobs let you dial in its precise settings.

5. THE MOTION EDITOR

The Motion Editor is the heart of Efx MOTIONS. It's the place where the various effects modules are set in motion!



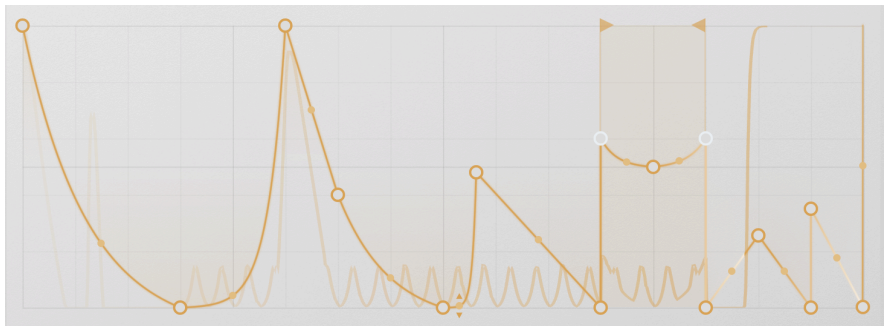
Each of the five [Audio Path \[p.11\]](#) modules has its own set of Motion Editor controls, independent of the others. This allows you to build intricately linked effect modulations that aren't simply duplicates of one another.

Basically, there are two kinds of Motion control for the primary parameter of each module:

- The **Motion Envelope**, whose effect strength is set with the **Motion** knob under the primary parameter and which is controlled via the **Trigger** section;
- The **Dynamics** envelope follower, whose effect strength is set with the **Dynamics** knob under the primary parameter and which is controlled via the **Dynamics** section.

These two kinds of motion control are analogous to the most common modulation sources in a synthesizer: the LFO (for repeating modulations) and the Envelope (for one-shot modulations that happen in response to a trigger event).

5.1. The Motion Envelope



The Motion Envelope is at the heart of Efx MOTIONS' time-based effect control. There are many different options for controlling the plug-in over time, but the Motion Envelope is the most central. You'll almost always start here, and many great presets do their magic with the Motion Envelope alone.

5.1.1. Motion Envelope controls and concepts

There are two rows of controls that apply to the Motion Envelope. One set runs across the top of the Envelope grid and is always visible; the other set runs along the bottom of the grid and becomes visible when the **Advanced** button is on.



The upper row consists of:

- **Left and Right Shift:** Clicking one of these arrow icons will shift the position of Motion Envelope points by one grid division earlier or later.
- **Duplicate:** Clicking the button marked **x2** squeezes the existing Motion Envelope into the first half of the grid, then places a duplicate of it in the second half. The effect is that the Motion Envelope runs twice as fast. This can be done until a maximum of 32 segments/64 points is reached, which means an Envelope with more than 16 segments/32 points can't be Duplicated.



If you want to build a modulation that features a basic shape with small variations over time, the Double function lets you set this up very quickly and then add the variations by hand.

- **Envelope Preset** controls, starting with the name of the last selected preset. Click on it to open the [Envelope Preset \[p.48\]](#) Library.
 - Next are left and right arrows to change to the previous or next Envelope Preset
 - Next are simple starter envelope shapes: flat, sine, triangle, ramp up, ramp down, square.
- The [Draw Mode \[p.48\]](#) pop-up lets you choose how to draw within the grid to create your Motion Envelope
- The **S-Curve** button changes the connections between envelope points from straight lines to curved ones. For example, a ramp becomes one quarter of a sine wave.



There are other ways to alter a line's curvature, which we'll learn about under [Tension \[p.47\]](#). The S-Curve button is a quick way to get musically useful results on all of a Motion Envelope's stages at once.

The lower row consists of:



- **Mode:** Opens a pop-up menu to select the Motion Mode of the envelope based on the [Trigger \[p.50\]](#) parameters, e.g. Loop vs. One-Shot.
- **Polarity:** Sets the Motion Envelope to send *unipolar* (all values above 0) or *bipolar* (positive and negative values) data.



This button is only present for the Filter and Drive modules.

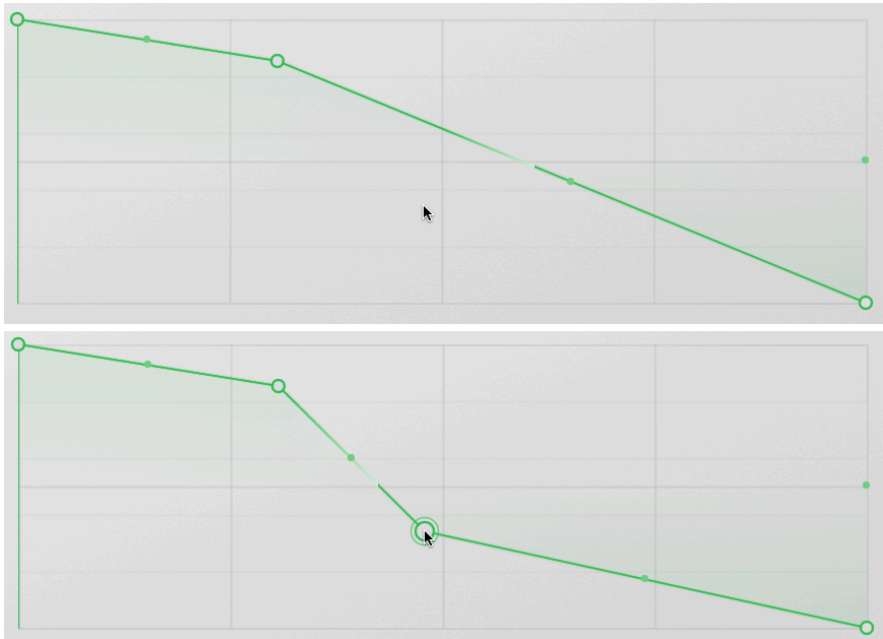
- **Smooth:** Lets you select a smoothing time for changes in slope between envelope points, to avoid clicks. Range is 0 to 4000 ms, with 2 ms as the default.
- **Grid:** Sets horizontal and vertical [Grid \[p.47\]](#) divisions.
- **Snap:** Clicking the magnet toggles [Snap \[p.47\]](#) mode for envelope editing.

5.1.2. Basic Motion Envelope creation with points and lines

A Motion Envelope is made up of one or more envelope *points* connected by straight or curved *lines*. These appear on a display called the **Grid**.

5.1.2.1. Create a point

To create a new point, click anywhere on the Grid. A point will be placed where you click and the points on either side of it will be connected to it with new lines.



Adding points to a Motion Envelope

In the screenshots above, clicking where the cursor is pointing in the top picture creates the new point seen in the bottom picture. Easy!

5.1.2.2. Move a point

Hover the cursor over a point to select it (it will have a ring around it), then click and drag to move it. While it's being moved, the point will be solid color rather than an open circle.



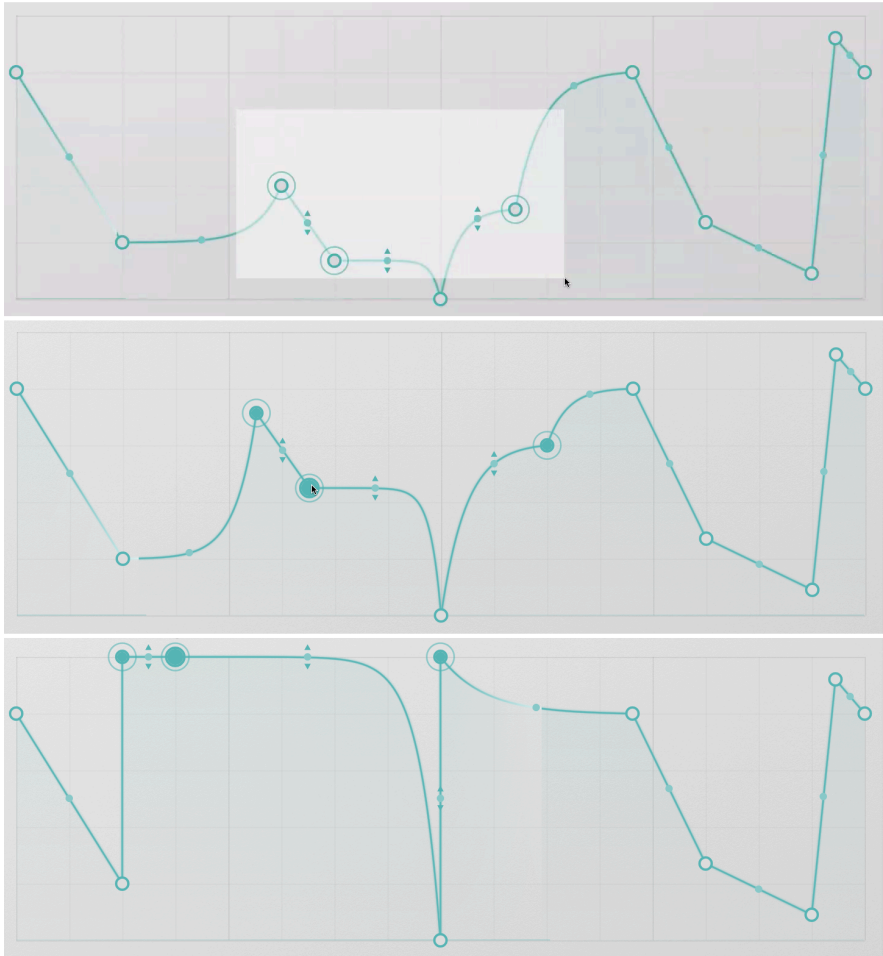
Points have a particular left-to-right order in time. You can't drag one point earlier or later in time than the ones on either side of it.

5.1.2.3. Delete a point

To delete an existing point, hover over it to select it and double-click on it. Alternatively, you can right-click on it and select **Delete Point** from the pop-up that appears.

The two points on either side of the deleted point will automatically be connected with a new line.

5.1.2.4. Select and move multiple points



Selecting and moving multiple points

Sometimes it's worthwhile to move a range of points at the same time. To do this, CTRL/CMD-Click and drag over the range of points you want to work with; all of the selected points will be ringed.

Click and drag any one of the selected points and all of the others will move with it, along with the lines between them. Note that the relative positions of the points will change to accommodate keeping them all within the grid and within the bounds of the two points on either side of them.

In the screenshots above, the point outside of the original selection doesn't move, even as the other points are dragged farther away. When the cursor is dragged off the top of the grid, the points "flatten" against the upper boundary.


The multiple points will remain selected until you click somewhere on the Grid away from them. This will deselect them all but will *not* create a new point.

If you double-click on one of several selected points, you will delete that point but leave the others unaffected. To delete all selected points at once, right-click on one and choose **Delete Selected Points** from the pop-up that appears.

5.1.2.5. Grid and Snap

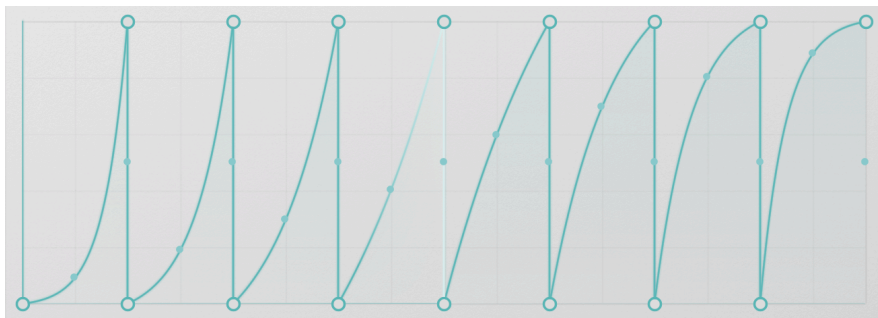
The Grid settings determine how many horizontal and vertical divisions are shown on the Grid display. Changing the settings will not affect how a Motion Envelope plays back.

However, the Grid can help you when setting up precisely timed points. By clicking on the Snap magnet icon, any point you move will be slightly "magnetized" to jump to the nearest Grid lines. This can speed up complex envelope design a lot!

 The Shift key acts as a momentary Snap on/off switch. If you press the Shift key while dragging points, it will turn on Snap (if Snap is disabled) or turn off Snap (if snap is enabled) until you release the Shift key.

Grid settings also come into play when using certain [Draw Modes \[p.48\]](#).


5.1.2.6. Tension



Ramps with different Tension values

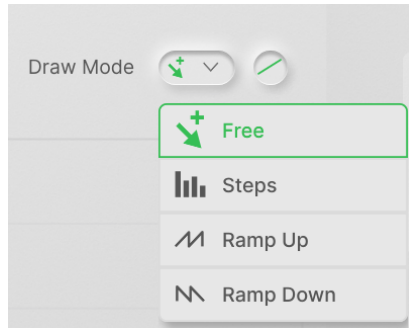
Lines between points don't have to be straight. If you hover your mouse over the dot at the center of each line, two small arrows will appear above and below the dot. Click and drag up or down to change the *tension* (curvature) of that line.

The amount of tension will be restricted by the positions of the two points connected by the line. You can't drag a line higher or lower than either of the end points.

 If you want to create a 'sag' or 'bump' between two points, place a new point in between them and move it above or below them. If you delete a point, the line connecting the two points on either side of it will preserve the tension of the line that came before the deleted point (i.e. the one to its left).

5.1.3. Draw Mode

The techniques we've described so far for drawing Motion Envelopes are used in Free mode, the first of four **Draw Modes** that you can select from a pop-up:

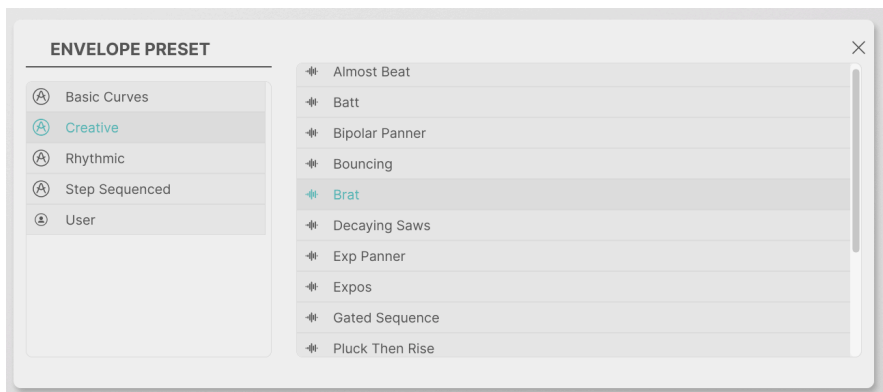


The four Draw Modes are:

- **Free:** Points can be placed and moved at will.
- **Steps:** Clicking and dragging will create a series of flat steps at heights determined by the mouse movement. The width of each step is determined by the Grid setting.
- **Ramp Up:** As above, but with each step a ramp up from zero to the mouse position.
- **Ramp Down:** As above, but with step a ramp down from the mouse position to zero.

These modes are great for quickly setting up series of pulses or risers, or step-sequencer-like chains of values. Naturally each point and line can be fine-tuned afterward once you switch back to Free mode.

5.1.4. Envelope Presets

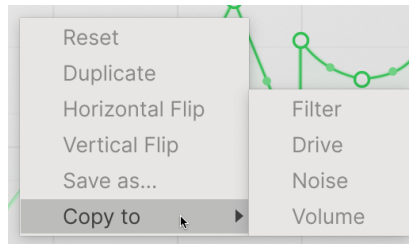


It can be a lot of fun creating your own Motion Envelopes, but sometimes you'll just want to use something ready-made. Or perhaps you've created a really cool Motion Envelope and would like to save it and use it in a different preset. That's where **Envelope Presets** come in.

Click on the colored name above the Grid to pop up the Envelope Preset Library. It contains a variety of useful preset envelope shapes, in four Factory banks: Basic Curves, Creative, Rhythmic, and Step Sequenced. In addition, there is a User bank where you can save your own designs.

5.1.5. Envelope Functions

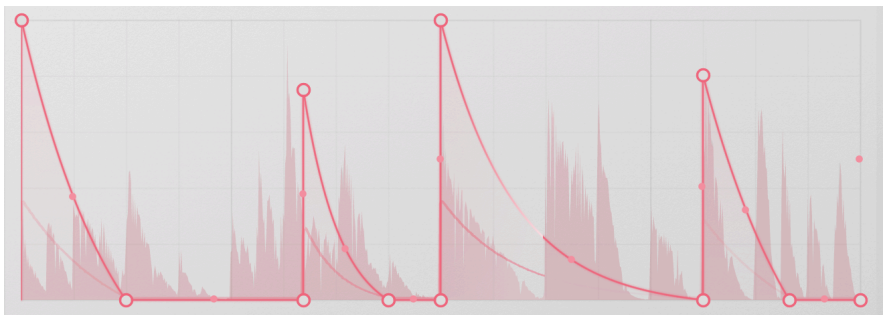
Right-click on the grid anywhere there's not a point or line, and the Envelope Functions pop-up will appear:



It offers the following useful options:

- **Reset:** Resets the Envelope to a flat line with only one point.
- **Duplicate:** Duplicates the Envelope in the same way as the Duplicate (x2) button does.
- **Horizontal Flip:** Reverses the Envelope in time.
- **Vertical Flip:** Inverts the Envelope.
- **Save As...:** Lets you save the Envelope to the User Preset bank with a name of your choice.
- **Copy To:** Lets you place this Envelope in any of the other Audio Path modules in the current Preset.

5.1.6. Visualization



The Motion Envelope has a built-in visualizer to give you guidance as to what's going on. It scrolls along with the Envelope itself, showing the audio waveform loudness vs. time as well as a trace of the output control signal. The current playback position is indicated with a white highlight.

With these, you can get an idea of whether the Envelope is triggering properly, overloading, etc.

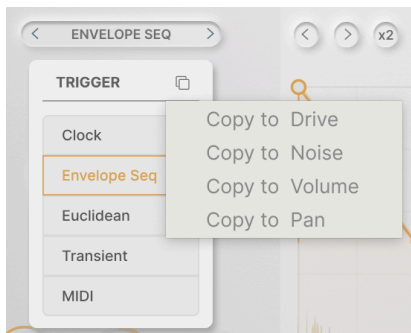
5.2. Trigger

The Motion Envelope's shape is only part of the story - then there's the question of how it's played back. While it would be possible to just set a clock running and have the Motion Envelope follow that, Efx MOTIONS adds a number of other intriguing choices, thanks to the many faces of the **Trigger** section.

Trigger offers five different timing engines for the Motion Envelope, each of which interacts with it in a unique way:

- **Clock**
- **Envelope Sequencer**
- **Euclidean Sequencer**
- **Transient control**
- **MIDI**

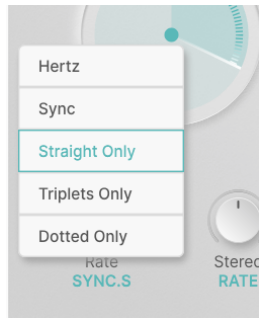
The pop-up menu for choosing the Trigger engine also has a Copy icon that lets you copy the current settings to another module in the Audio Path.



5.2.1. Rate and Stereo

The two controls common to all five of the Trigger engines are **Rate**, which sets the time base for the engine and therefore for the Motion Envelope, and **Stereo Offset**, which widens the sound by changing the behavior of the Motion Envelope on the left vs. right channels.

Clicking under the Rate knob brings up this sync menu:



Hertz refers to unsynced timing, and ranges from 0.025 Hz to 50 Hz. **Sync** ranges from 24 Bars to 1/32 triplet, and the menu lets you scroll through all the different sync options or filter them by straight, triplet, or dotted values.

There are two types of Stereo Offset, each of which involves adding tiny differences between the signal processing on the left and right sides of the signal. When it's set to **Rate**, the effect is produced by introducing changes in the clock rate; when it's set to **Phase**, the effect uses a phase offset between the two clocks instead.

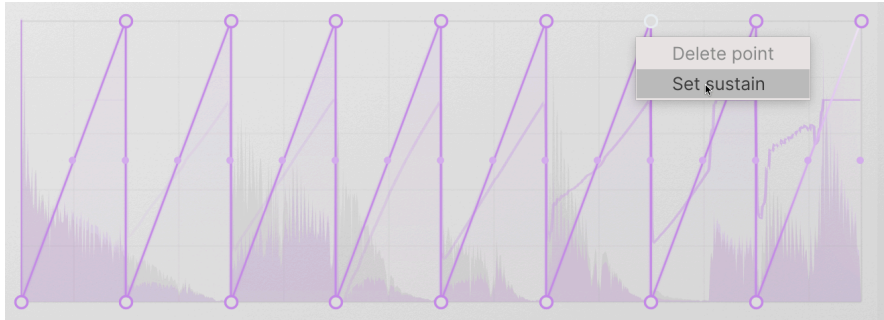


There's no right or wrong choice here; they produce subtly different effects, and which one works best depends on the application and your ears. Never be afraid to experiment!

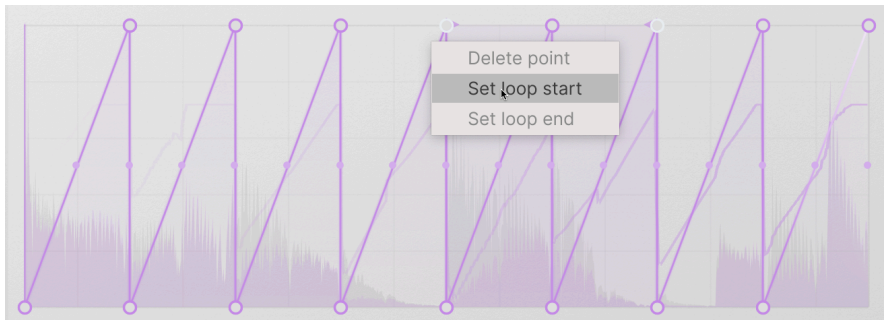
5.2.2. Motion Mode

Each engine will offer a different set of options for the Motion Mode, which specifies how the Envelope is triggered/retriggered.

- **Loop:** Once the DAW is started, the Envelope loops according to the Rate. It stays in sync, and can be retriggered based on trigger conditions.
- **One-Shot:** The Trigger causes the Envelope to play through once and then stop.
- **Envelope:** One point in the Envelope can be designated a Sustain Point, where the Envelope will hold until the gate signal that triggered it has passed. To set the Sustain Point, right-click on the point and select **Set Sustain** from the pop-up menu. The Sustain Point will be shown in white:



- **Envelope Loop:** Similar to Envelope mode, except the Envelope has designated Loop Start and Loop End points. These are chosen by right-clicking and selecting **Set Loop Start** or **Set Loop End** from the pop-up menu. The Loop Start and End Points are shown in white, with small triangular flags to indicate the portion of the Envelope that has the loop:



You can also move the Loop points after they've been set, by dragging the flags themselves.

5.2.3. Clock



The first and simplest of the Trigger engines is the Clock. It has no specific controls beyond the usual Rate and Stereo knobs, and its Motion Mode defaults to Loop.

Clock is what you'll use when you want the Motion Envelope to be a basic multi-segment LFO with no frills.

5.2.4. Envelope Seq

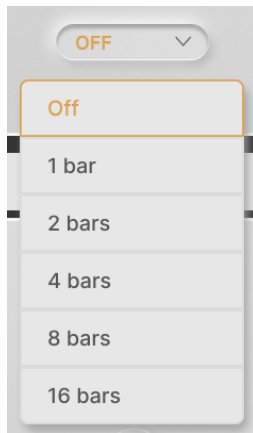


The Envelope Sequencer is a “france gate” sequencer where each step has its own gate length, allowing the Motion Envelope to be retriggered in a variety of interesting rhythms.

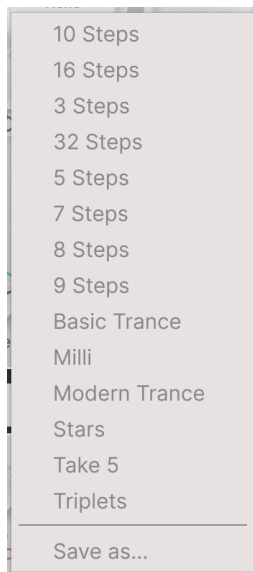
- **Rotate Left:** Rotates the sequence counterclockwise (a given beat falls earlier)
- **x2:** Duplicates the sequence (double speed) up until the maximum number of steps
- **Rotate Right:** Rotates the sequence clockwise (a given beat falls later)
- **Length:** Sets the number of discrete steps in a full sequence, from 2 to 32. Step lengths will be different to create various rhythms.
- **Gate:** Sets the gate length, the percentage of each step that the gate is on. Gate length ranges from 1% to 100% of step length.
 - In Envelope mode, the Envelope will pause at the Sustain Point until the gate ends, then retrigger at the start of the next step.
 - In Envelope Loop mode, the Motion Envelope will loop between the Start and End points until the gate ends.
- **Reset:** Resets the sequence to the start after a certain number of bars (1, 2, 4, 8, 16) if desired.



This works very well in conjunction with unusual Lengths (e.g. 5 or 11), as a means of “getting back to the start” in a predictable way.



5.2.4.1. Envelope Seq Presets



To get you started with the Envelope Sequencer, Efx MOTIONS comes with a library of familiar and unusual gate patterns. These make for a great starting point for your own explorations. The left and right arrows on either side of the Sequencer dial let you scroll through the presets.

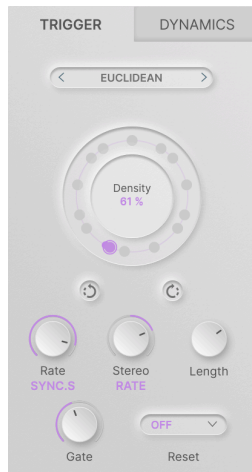
5.2.4.2. Altering an Envelope Sequence



Creating your own rhythms is straightforward. Start with a pattern from the Preset library, then change the Length and turn various steps on and off by clicking on them.

A colored step will trigger, and a grey step will not. The currently playing step is indicated with a darker shade. The step you're mousing over will turn white. Steps with length greater than 1 will stop the envelope at the Sustain Point until the step is over.

5.2.5. Euclidean



The Euclidean Sequencer is an interesting variant on gate sequencing. It has almost the same controls as the Envelope Sequencer, but rather than relying on patterns of longer and shorter gate steps, it sets triggers by the principle of **Density**.

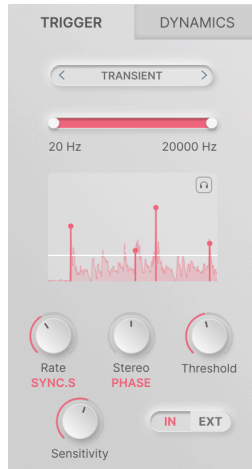
As you turn up the Density of a Euclidean sequence, trigger points are gradually populated until they're all filled. The sequencer will try to place the points as far apart as possible while still keeping them on the timing grid, resulting in patterns with a unique character.

In the following example, the Length of the sequence is 8. As we turn up the Density, the various points on the circle are filled in until we have a trigger in all 8 positions.



As you can imagine, when the Length is turned up higher (up to a maximum of 32), things can get really interesting!

5.2.6. Transient

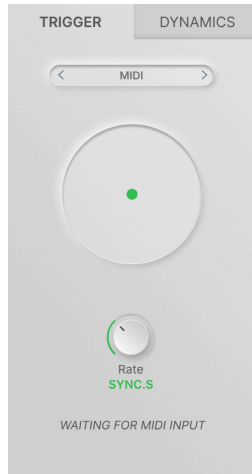


The Transient engine listens to input audio and analyzes it for *transients*, sharp beginnings of notes or sounds. The scrolling display shows transients as dots above the audio, with the detection threshold shown as a white line.

The Transient engine has controls for **Threshold** and **Sensitivity** to help you pick out the right number of triggers, and an **In/Ext** switch that listens either to the audio signal itself or to audio from another DAW channel in order to pick out triggers.

Unique controls include a horizontal bandpass filter to isolate the part of the frequency spectrum where you're looking for transients, and a **Drive Solo** button (the headphone icon in the scrolling display) that isolates the input as filtered by the transient detector so you can listen to it alone.

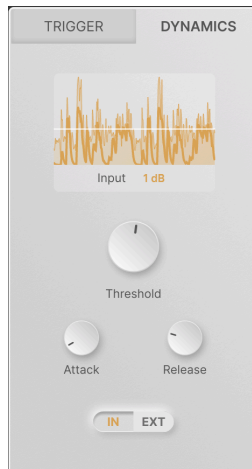
5.2.7. MIDI



The last Trigger engine uses MIDI notes to retrigger the Motion Envelope. Using Note On and Note Off data as well as Start and Stop commands, the MIDI engine is the only one that has all four Motion Modes available: Loop, One-Shot, Envelope, and Envelope Loop.

Consult your DAW's manual for how to route MIDI data to the audio channel containing Efx MOTIONS, as the method will differ by platform.


5.3. Dynamics



Dynamics is an *envelope follower*, a module that creates a control signal based on the amplitude of an incoming audio signal. This lets you create patches that respond dynamically to changes in volume, as with more aggressive guitar playing or accented notes in a drum machine loop.


The scrolling display shows the audio currently being used to trigger the envelope follower. The waveform with a thin line represents the audio itself, and the waveform with the thicker line represents the actual control signal being output.

The **Input** parameter displays how much boost in gain is being applied to the input signal. Up to 24 dB of gain is available here.

 Note that this is gain applied to the input of the detection circuit, so you can get useful results out of weaker signals. It does not add gain to the audio itself!

The other controls are:

- **Threshold:** Sets the signal level at which the envelope follower is triggered. Its range is -50 to 0 dB. The current Threshold setting is shown on the scrolling display as a horizontal white line.
- **Attack:** Sets how much time elapses between the audio signal crossing the threshold and the control signal being generated. Under unusual circumstances, you might want to delay the onset of control by a significant amount, so the Attack ranges from 0 to 1000 ms. However, this will usually be set as fast as possible - the default value is 5 microseconds!
- **Release:** Sets how much time elapses between the audio signal dipping back under the threshold and the control signal being stopped. This can produce smoother behavior when the audio is "chattery" and crosses the threshold rapidly. Range is 5 ms to 10 seconds, with a default setting of 150 ms.
- **In/Ext:** Switches between triggering the envelope generator with the audio input signal itself, or an external audio signal from another channel in your DAW. This technique, known as *sidechaining* or *keying*, can be very useful in tying the sound of one instrument to the dynamics of another.

 Sidechaining is done all the time in recording studios. A classic example is sending the sound of the kick drum into the sidechain input of a compressor that's processing the bass guitar sound, which ties the two sounds together tightly in timing.

6. MODULATION

Modulation means “change.” It’s a term borrowed from synthesizer design, which describes how elements of a sound can be controlled automatically, effectively giving the player an infinite number of “hands” to turn knobs and push buttons in various ways. Because so much of Efx MOTIONS relies on this kind of automation, the plug-in comes with a lot of modulation options beyond those in the Motion Editor.

In this chapter, we’ll look at how to set up modulation routings within Efx MOTIONS, and how to work with them as you’re making music.

After that, we’ll click the Advanced button and look at the five modulation sources there: the two Macros and the three Modulators.

6.1. Basics

Every modulation has a *source* and a *destination*. If we think of modulation as “automatically turning a knob”, then the source is whatever’s doing the turning and the destination is the knob being turned.

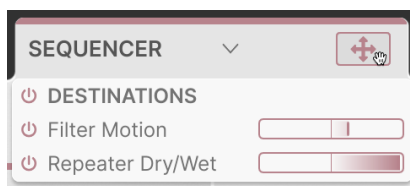
A source and destination make up a modulation *routing*. The amount of control the source exerts over the destination is called the modulation *depth* or *amount*.

6.1.1. Assigning a modulation

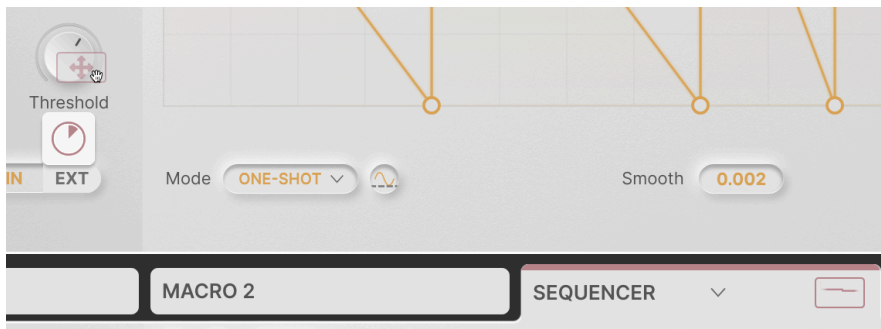
Like the tabs attached to each module in the Audio Path, each of the Macros and Modulators has a tab that displays its name and a dynamic line (called a Modulation **tracer**) showing what signal it’s generating at the moment.

As long as the Advanced button is on, all five tabs and their tracers are always visible, no matter which tab is highlighted. That’s deliberate, because the tracers are where we assign new modulations.

Hover your mouse over the tracer corresponding to the source you wish to use – in this example, the Sequencer Modulator. The cursor becomes a hand and the tracer becomes a square icon with a cross of four arrows:



Click on it and drag it to the control (which could be a knob, a horizontal slider, etc) that you want as a destination, then drop it there.



It's as simple as that!

i If you hover over a destination that is modulatable, a pop-up dial display will appear under it. If you don't see such a dial, then the control you're hovering over can't be modulated. Fortunately there aren't very many of those!

6.1.2. Examining modulations at the destination

Once a routing has been established, you can examine it just by hovering your mouse over the control. The pop-up dial will appear, showing the currently set modulation amount.

If a dial doesn't appear, the control hasn't had a modulation assigned to it yet. If more than one modulation source has been assigned to the same destination, all of them will appear as a collection of dials.

Without clicking, move your mouse from the control to the relevant dial. A tooltip box will tell you which source it's for, and the current amount setting.

Modulation dials are color coded to indicate the kind of source they represent: light blue for Macros, brown for a Sequencer, green for a Function, purple for Random, and dark blue for Envelope Follower. They are bipolar, with 0 at the center, negative modulation amounts to the left, and positive amounts to the right.

In this example (which is modulation overkill!), Macro 1 is set to a small negative amount, Macro 2 is nearly 0, Sequencer 1 is a large positive, Function 2 is fully negative, and the Envelope Follower is fully positive.

When you hover over a particular modulation's pop-up dial, the ring around the knob will show the modulation amount in the appropriate color. Similarly, a horizontal slider will show the amount in the appropriate color with a line from left to right.

6.1.2.1. Which source is which?

Sometimes a preset might have two or even three dials in the same color. There are two Macros, both light blue, and if a preset uses three Function modulators, they'll all be green. So how do you tell which source goes with which dial?

It's easy! As you hover over a particular dial, the appropriate source's tab will show a colored box around its tracer, and the other tracers will vanish. A tool tip will also pop up with specific information on the precise source.

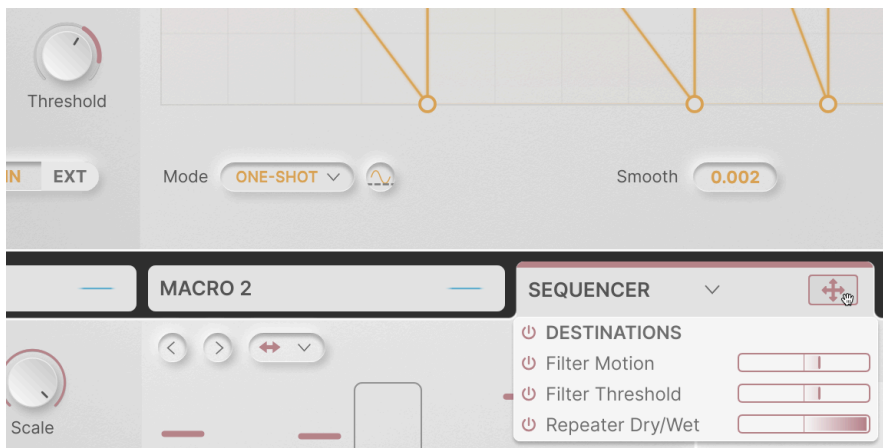
6.1.3. Changing modulation amounts at the destination

While you've highlighted a particular pop-up dial, you can click and drag to change its value. Right-click and drag to change the modulation amount with fine accuracy. Double-click to set the amount to 0. When you're done, move your mouse away and the pop-up will vanish.

i Setting a dial to 0 will remove it entirely once you mouse away from the control.

6.1.4. Examining modulations and changing amounts at the source

To see which destinations a Modulator is currently controlling, hover your mouse over its tracer, as if you were about to assign a new modulation. In addition to the arrow-cross icon and hand cursor, a drop-down menu will appear with a list of all of the current modulation routings for that source:



i Note that in the screenshot above, the Threshold knob where we added the modulation at the start of this chapter is ringed in the appropriate color and shows the modulation amount. In addition, although you can't see it in this screenshot, the other two destinations are hinted at with colored dots replacing their tracers. This makes it easy for you to see at a glance where your destinations can be found.

Each routing in the source list has a power icon to deactivate it. There's also a global icon to turn off the source's modulations for all destinations at once. These allow you to quickly hear the effect of turning a modulation off, without having to actually remove the routing.

Each routing has a horizontal bipolar display bar of the amount, with negative values to the left and positive values to the right. As with setting amounts at the destination, you can click and drag to change the amount, right-click and drag for fine adjustment, or double-click to set it to 0. Unlike bypassing the modulation with the power icon, this will remove the routing when you mouse away.



We have two different ways of displaying modulations for a reason. Because a destination can have no more than five sources, the dial pop-up puts a lot of information into a very small space that doesn't obscure nearby controls. Because a source can have many destinations, the drop-down list of modulation bars can be as big as you need to fit them all.

6.2. Macros



The two **Macro** knobs at the top left of the plug-in can be set up to control multiple parameters at once, each with a different polarity and scaling. They allow you to "turn" multiple knobs at once, each in a different amount and direction, with one turn of one knob.



The knobs default to the names MACRO 1 and MACRO 2, but you can double click a Macro name to change it to whatever you like.

6.2.1. Assigning, examining, and adjusting Macro routings

While the Macros' "tabs" in the advanced panel don't actually bring up control panels, they work exactly the same way as the other Modulators' tabs. Click on a Macro's "tracer" (it's not animated, of course) and drag/drop to assign the Macro knob to any destination.

Macro routings will appear as light blue dials in a destination's modulation pop-up, and hovering over a Macro's "tracer" drops down a menu of current assignments and amounts that can be adjusted, bypassed, or removed.

6.3. Modulators

The three Modulators are flexible sources that can be put to work anywhere you need a particular kind of control. Each one can be assigned as one of the four available types, by clicking the down-arrow on its tab to reveal a selection menu.

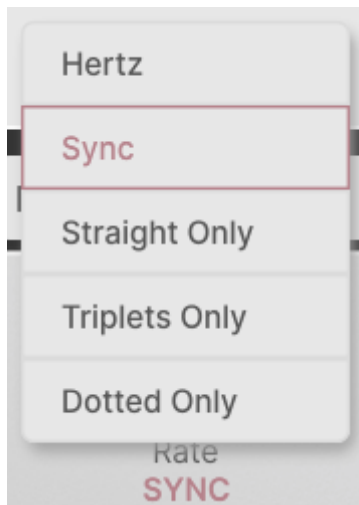
6.3.1. Sequencer



This is an easy-to-use step sequencer that generates stepped value changes in a variety of ways.

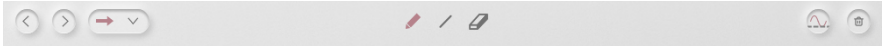
Global parameters include:

- **Rate:** Controls the speed of the stepping. Ranges from 0.1 to 20 Hz (Hertz) or 1/32 triplet to 1 bar dotted (Sync). The pop-up menu allows you to set any Sync division with the Rate knob, or restrict the range to straight, triplet, or dotted values.



- **Scale:** Sets the overall strength of the modulation signal sent out to destinations. It's a sort of "volume control" for the sequence that can be adjusted easily.
- **Smooth:** Smooths out the transitions between steps for more gradual effects.
- **Swing:** Sets the swing amount from 50% (no swing) to 75% (hard swing).

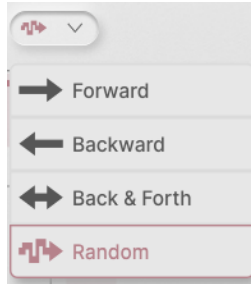
6.3.1.1. Step controls



The Sequencer has a maximum of 16 steps. Like Beat Repeat, the sequence can be shortened by dragging the handle at the far right to cover one or more steps. These steps' settings remain intact even though they are not being triggered as part of a loop.

Step behavior is set by controls along the top edge of the sequence steps:

- **Left and Right Arrows:** Shift the position of sequence steps by one position earlier or later.



- **Playback Mode:** This drop-down menu lets you select the order of step playback. Options include Forward, Backward, Back & Forth, and Random.



- **Draw Mode:** Sets the way the cursor draws step values.
 - **Pen:** Click and drag to draw step values directly.
 - **Line:** Click and drag across the sequence; all steps between where you first clicked and where the cursor is now will be arranged in a line. Move the cursor to change the slope of the line, and release the mouse to set the values.
 - **Eraser:** Click on a step to reset it to 0.



*Polarity button,
Unipolar vs Bipolar*

- **Polarity:** Sets the Sequencer to send *unipolar* (all values above 0) or *bipolar* (positive and negative values) data.
- **Clear:** Click the trash can icon to reset all step values to 0.

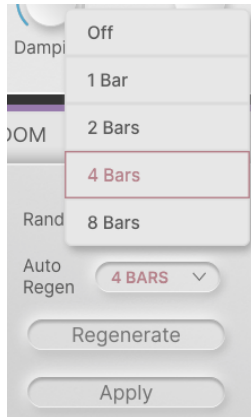
6.3.1.2. Randomization



Sequencer steps before and after adding Randomization

You can add variation to the sequence by inserting some randomness into each step. Click and drag the **Random** parameter to determine how much variation there will be.

As shown above, adding randomness turns a set step value into a possible range of values with the set value at the center. The actual value of the step is seen as a thinner line somewhere in the range.



Of course, if a random set of variations never changes, then it's not really random, is it? That's what the **Regenerate** button is for: it forces all steps to generate a new set of randomized values. **Auto Regen** can "press the Regenerate button for you" every 1, 2, 4, or 8 bars via a pop-up.

Let's say you've played with randomization until you hear a set of values that's a keeper. Just click the **Apply** button to permanently move the step settings to those values, so they will be preserved if you turn Random down to 0.

6.3.2. Function



The Function Modulator is a [Motion Envelope \[p.42\]](#) that you can route to any destination you wish. With all the cool stuff the Motion Envelope can do, it's great to have up to three of them assignable in every Preset!

The Function's feature set is almost identical to the Motion Envelope's, but there are a few small differences.

- **Rate** has a wider range: from 0.025 Hz to 50 Hz, or from 1/32 triplet to a maximum of 24 bars.
- There's a **Scale** knob to adjust the global amount of Function modulation rather than a **Stereo** knob.
- The only Draw Mode is Free.
- There's an **S-Curve** button, but no adjustable **Smooth** time.
- Placement of some controls is different, even though they work the same way.

Most significantly, the Function's only built-in [Trigger \[p.50\]](#) mode is Clock. However, with the **Retrig Source** pop-up, you do have the option of borrowing the Trigger setup from one of the Audio Path modules' Motion Envelopes. In the screenshot above, the Volume module is providing the Function's triggering information.

This way, you can use a Euclidean or Envelope Seq, etc., to drive the Function. The **Mode** button lets you retrigger the Function in Loop or One-Shot mode.

6.3.3. Random

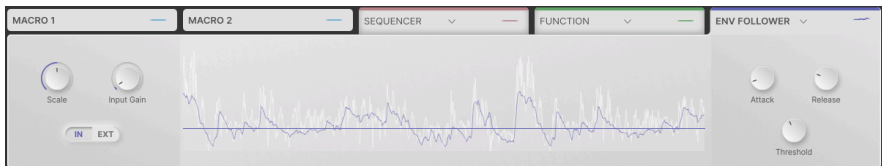


There are many applications where adding a bit of random variation can spice up a sound. The Random Modulator is designed to help you do that easily. It has a much wider rate range than other modulators, making it capable of generating "noise" control signals in the audio range.

Global parameters include:

- **Rate:** Controls the speed of the stepped level changes. Ranges from 0.05 Hz to 200 Hz (Hertz) or 1/32 triplet to 24 bars (Sync). The pop-up menu allows you to set any Sync division with the Rate knob, or restrict the range to straight, triplet, or dotted values.
- **Scale:** Sets the overall strength of the modulation signal sent out to destinations. It's a sort of "volume control" for the sequence that can be adjusted easily.
- **Smooth:** Smooths out the transitions between steps for more gradual effects. This is reflected in the waveform on the dynamic display.
- **Polarity:** Sets the Random to send *unipolar* (all values above 0) or *bipolar* (positive and negative values) data.
- **Retrig Source:** As with the Function, the Random Modulator can use its own internal clock or retrigger from any of the five Triggers in the Audio Path.

6.3.4. Envelope Follower



In the same way that the Function imitates the Motion Envelope/Trigger combination, the Envelope Follower lets you modulate with [Dynamics \[p.58\]](#).

Its controls and functions are identical to those in the Dynamics section of the Motion Editor: Input Gain, Threshold, Attack, Release, and Internal/External triggering. The only addition is a **Scale** knob for quick adjustment of overall control level, as found in the other Modulators.

7. TOOLBARS



The toolbars above and below the main control area of Efx MOTIONS contain a number of important functions for Preset selection, housekeeping, and other utility settings.

The Upper Toolbar includes:

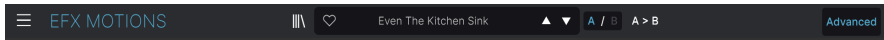
- The [Main Menu \[p.70\]](#)
- The Preset Name Pane and [Preset Browser \[p.79\]](#)
- Switching and copy options for [A and B settings \[p.75\]](#)
- The button to open the [Advanced \[p.75\]](#) features

The Lower Toolbar includes:

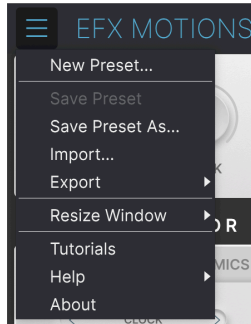
- The [parameter description area \[p.76\]](#)
- The [Bypass button \[p.76\]](#)
- [Undo, Redo, and History \[p.77\]](#)
- The [CPU Meter \[p.78\]](#) and [Panic \[p.78\]](#) functions
- A [corner grab handle \[p.78\]](#) for resizing the plug-in window

7.1. Upper Toolbar

Let's start with the Upper Toolbar, covering its functions from left to right.



7.1.1. Main Menu



Clicking the “hamburger” icon (three horizontal lines) in the top left corner of the upper toolbar opens the Main Menu, a drop-down menu that lets you access a number of useful functions related to Preset management and more.

7.1.1.1. New Preset

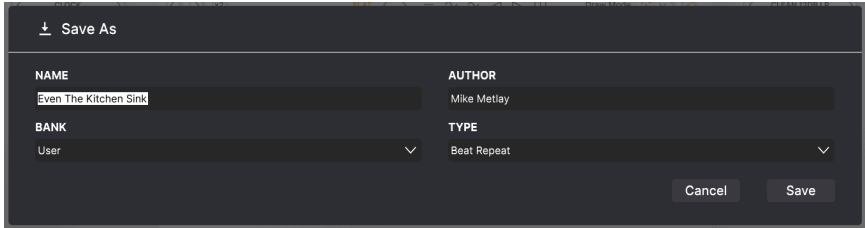
Creates a new Default Preset with initialized settings for all parameters.


7.1.1.2. Save Preset

Overwrites the current Preset with any changes you have made. This applies only to user presets, so this option is greyed out for factory presets.

7.1.1.3. Save Preset As...

This option saves the current settings of Efx MOTIONS under a new Preset name. Clicking this option reveals a window where you can name your Preset and enter more detailed information about it:



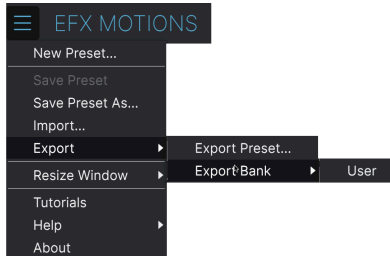
 The Bank, Author, and Type fields are all useful when searching for Presets in the [Preset Browser](#) [p.82].

7.1.1.4. Import...

This command lets you import a Preset file or entire Bank stored on your computer. It opens a navigation window in your computer's OS to find the proper files.

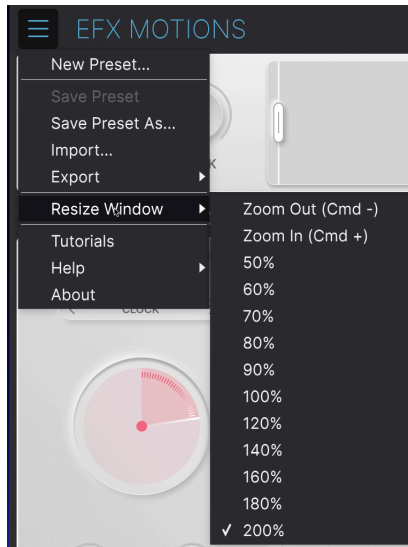
7.1.1.5. Export...

You can export Presets to your computer in two ways: as a single Preset, or as a Bank. In either case, an OS-level navigation window lets you specify where to save the file(s). Both individual Presets and Banks have the filename extension .CLSX.



- **Export Preset...:** Exporting a single Preset is handy for sharing a preset with someone else. The saved preset can be reloaded using the **Import** menu option.
- **Export Bank:** This option exports an entire Bank of Presets, which is useful for backing up or sharing many Presets at once. Saved Banks can be reloaded using the **Import** menu option.

7.1.1.6. Resize Window

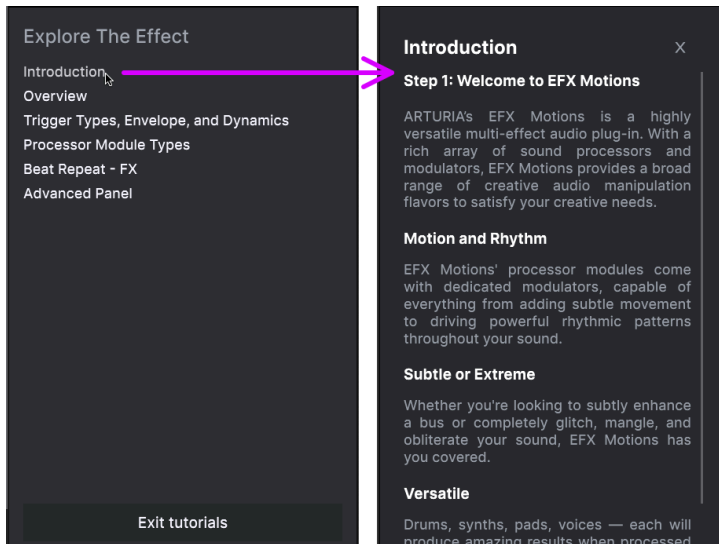


Efx MOTIONS can be resized from 50% to 200% of its default size (100%) without any visual artifacts. On a smaller screen, such as a laptop, you may want to reduce the interface size so it doesn't dominate the display. On a larger screen or a second monitor, you can increase the size to get a better view of the controls and graphics.

You can also perform this operation using keyboard shortcuts: every time you press CTRL- (Windows) or CMD- (macOS), the window will shrink by one size increment, and every time you press CTRL+ (Windows) or CMD+ (macOS), the window will grow by one size increment.

In addition, you can click-drag the [resize handle \[p.78\]](#) at the right of the lower toolbar to make the Efx MOTIONS window any size.

7.1.1.7. Tutorials



Click on a tutorial's name (shown at left) to open the relevant chapter (at right)

Efx MOTIONS comes with interactive tutorials that walk you through different features of the plug-in. Clicking this option opens a pane on the right side of the window where the tutorials appear. Select one to access step-by-step descriptions that highlight relevant controls and guide you through various operations.

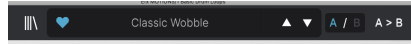
7.1.1.8. Help

Get more help by visiting links to this user manual and Frequently Asked Questions pages on Arturia's website. You will need an internet connection to access these pages.

7.1.1.9. About

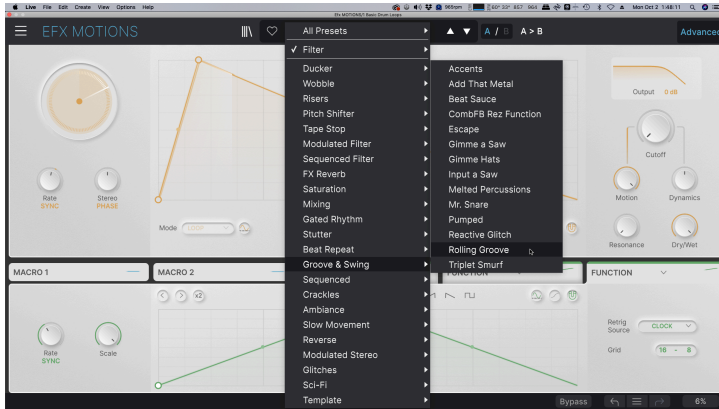
Here you can view the software version and developer credits. Click again anywhere on the screen (outside the About window but inside the plug-in) to make this pop-up window disappear.

7.1.2. Preset Browser access and Name Pane



The Preset Name Pane

Clicking the “books on a shelf” button opens the [Preset Browser \[p.79\]](#), which offers a myriad of ways to browse, sort, and organize Presets in Efx MOTIONS.



Clicking on the Preset name also opens up quick drop-down menus for selecting Presets outside of the Browser, as shown above. You can select to look at lists of Presets organized by Type, as shown above, or look at All Presets at once.

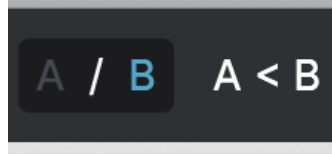
Everything you need to know about managing Presets is covered in detail in the [Preset Browser \[p.79\]](#) chapter. This includes working with Favorites, which are tagged by clicking the heart icon.

i Note: An asterisk just after the name in the Preset Name Pane (*) indicates that you've edited that Preset.

7.1.3. Dual settings and copy



Preset state A active with the option to copy settings to B



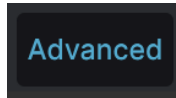
Preset state B active with the option to copy settings to A

Each Preset is actually two Presets in one! Using the A and B buttons, you can switch between two completely different sets of knob settings for the Main Panel, and the Advanced Panel. These are saved within each Preset.

When A is active, clicking **A > B** will copy the A settings to B. When B is active, clicking **A < B** will copy the B settings to A.

i ! When you edit settings in a Preset and close your DAW project without saving the Preset, the changes will be remembered when you reopen it – but they will be recalled in Slot A. That means that editing settings in Slot B and closing your DAW without saving them will move those settings over to Slot A when you reopen the project – and Slot B will be blank. Save often!

7.1.4. Advanced Button



Near the upper right corner of the top toolbar is the **Advanced Button**. This opens up a drop-down panel of extra [Macro \[p.63\]](#) and [Modulation \[p.60\]](#) controls, and gives you access to various extra features in the [Audio Path \[p.11\]](#) modules and the [Motion Editor \[p.42\]](#).

7.2. Lower Toolbar



Lower toolbar, left side

The Lower Toolbar of the Efx MOTIONS interface can be thought of in terms of left and right halves. On the left is the Control Description display, and on the right are buttons for several useful utility functions.

7.2.1. Control Descriptions

Filter Cutoff: Controls the filter cutoff frequency

This Control Description pops up when you mouse over the Filter Cutoff knob

Operate or hover on any knob, button, icon, or other control, and a brief description of what it does appears in the lower left-hand corner.

7.2.2. Utility Functions

Bypass



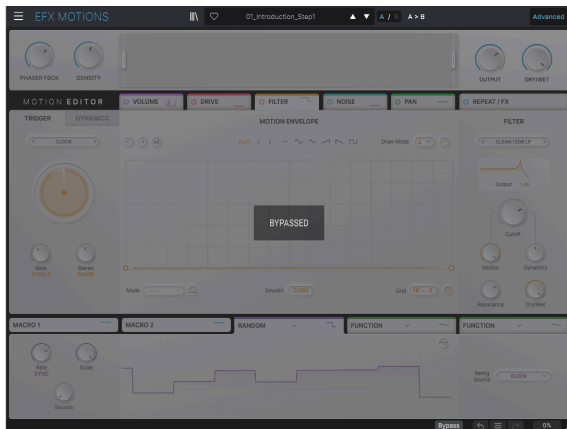
10%

Utility functions on the right side of the Lower Toolbar

The lower right corner of the plug-in window gives access to useful global functions.

7.2.2.1. Bypass

The **Bypass** button bypasses the Efx MOTIONS plug-in entirely. It's useful for quick comparisons of dry versus processed signal without having to bypass the plug-in at the DAW level. When bypassed, the plug-in window looks like this:



7.2.3. Undo, Redo, and History

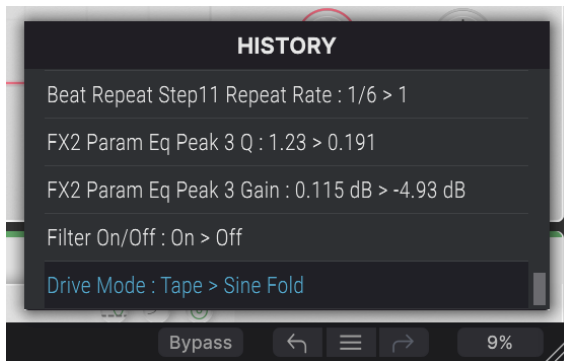
When editing a plug-in, it's all too easy to overshoot the sweet spot for one or more controls, and then wonder how to get back to where you were. Like all Arturia plug-ins, Efx MOTIONS offers comprehensive Undo, Redo, and History functions so that you always have a safe way back.

Use the left (**Undo**) and right (**Redo**) arrows to go back and forward one control movement at a time.

Click the left arrow to revert to the state before the most recent edit you made. You may click repeatedly to undo several edits in reverse time order.

Click the right arrow to redo the most recent edit you undid. If you have undone several, you may click repeatedly to redo them in forward time order.

7.2.3.1. History



Click the center "hamburger" (three lines) button to open the History window, as shown above. This provides a step-by-step account of every move you have made in Efx MOTIONS. Clicking on an item in the list not only re-executes that move – it returns the plug-in to the overall state it was in when you first made that move.



Note that the A and B controls settings within a Preset have separate Undo Histories.

7.2.4. CPU Meter

At far right is the **CPU Meter**, which displays the overall load Efx MOTIONS is placing in your computer CPU. Since it deals only with this plug-in, it is not a substitute for the resource metering tools in your DAW.

7.2.4.1. Panic

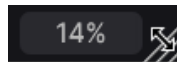


Mousing over the CPU Meter accesses the PANIC function

Mouse over the CPU Meter, and it will display the word **PANIC**. Click to send an all-sounds-off command that silences any sound processed through Efx MOTIONS. This is a momentary command, so sound will resume if your DAW is still playing.

In the event of serious runaway audio (say, from an unrelated delay effect that has gone into a feedback loop), stop your DAW playback and disable the plug-in causing the problem.

7.2.5. Resize handle and Max View



The Resize handle appears next to the CPU Meter

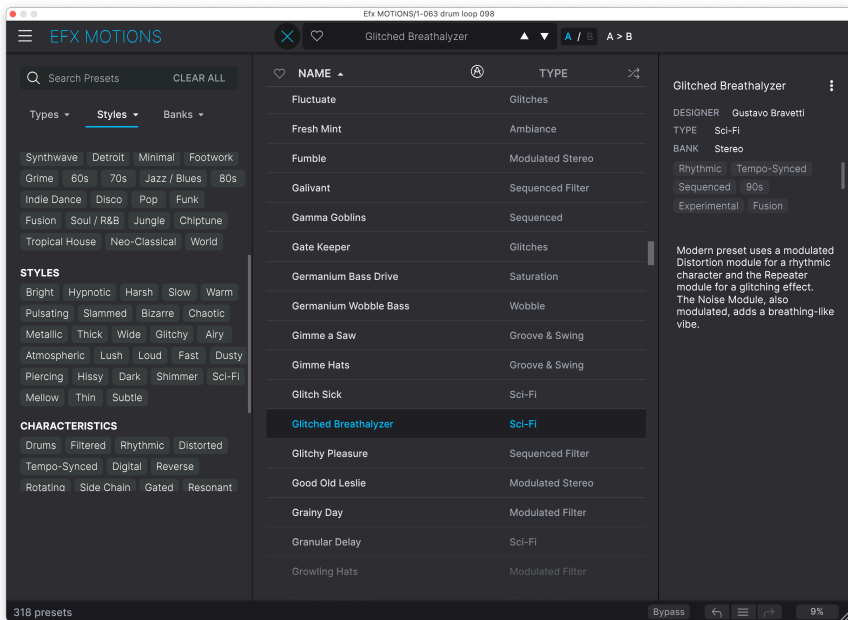


Click the Max View icon (the blue arrows) to reset the window size

Grab and drag the diagonal lines to the right of the CPU meter to resize the Efx MOTIONS plug-in window. This is a shortcut for quickly switching between increments in the [Resize Window \[p.72\]](#) menu. When you let go, the plug-in window will snap to the nearest size increment.

Sometimes, you may see a button with two diagonal blue arrows (the Max View button) over the Resize handle. This happens when, for some reason, the window size is not displaying all of the controls of Efx MOTIONS. Click it to restore a full view of the open controls.

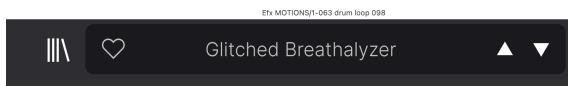
8. WORKING WITH PRESETS



Efx MOTIONS lets you browse, search, and select Presets from a browser-like interface inside the plug-in. You can also create and save your own Presets in the User Bank. Of course, the state of any instance of the plug-in – including the current Preset – is automatically saved when you save your DAW project, so you can always pick up where you left off.

First, we will cover Preset functions from the Upper Toolbar in more depth.

8.1. Preset Name Pane



The name pane at top center is always displayed whether you're in the main controls view or the Preset Browser. It displays the name of the current Preset, obviously, but also offers further ways to browse and load Presets. Again, a filled-in heart icon indicates a liked Preset.

8.1.1. The Arrows

The up and down arrows to the right of the Preset name step serially through Presets. This is limited by the results of any currently active search, i.e. the arrows will only step through those Presets. So, make sure any searches are cleared if you simply want to step through all available Presets until you find something you like.

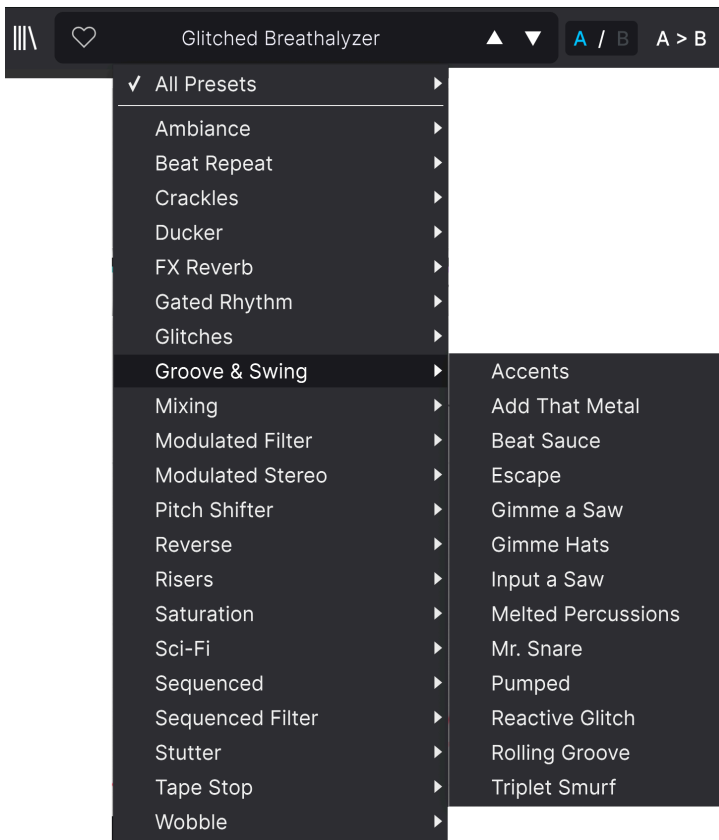
8.1.2. Quick Browser

As mentioned briefly in the previous chapter, you can click on the Preset name in the center of the upper tool bar to bring up a drop-down Quick Browser for Presets. The first option in this menu is called All Presets, and it brings up a submenu of literally every Preset in the current Bank:



All presets

Below this are options that correspond to the [Types \[p.83\]](#). Each of these brings up a submenu of all Presets of its Type:



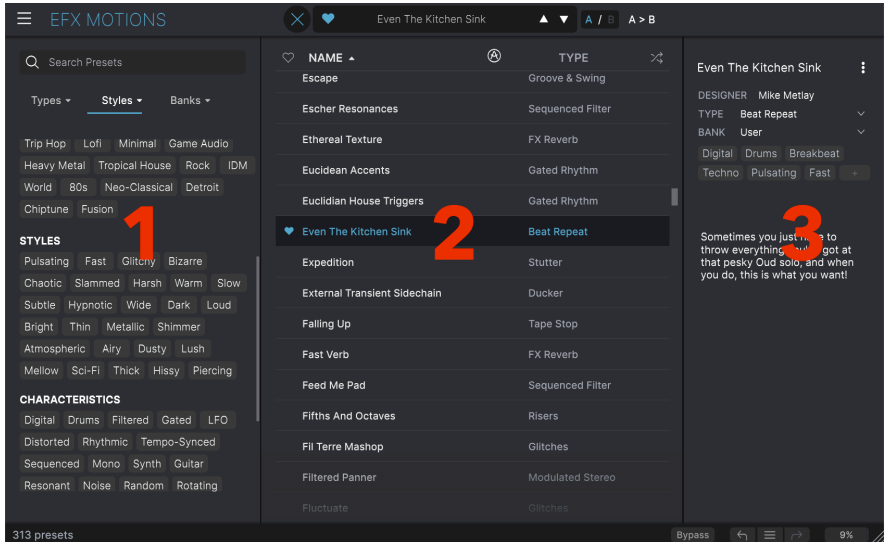
Selecting Modulation from the drop-down menu shows all the Presets of this type.

Unlike the up and down arrows, the “All Presets” submenu is independent of search criteria – it simply shows you every Preset available. Likewise for the Type choices below the line, which always include all Presets within that Type.

8.2. The Preset Browser

Click the “books on a shelf” icon (four vertical and tilted lines) in the Upper Toolbar to access the Preset Browser. When the Preset Browser is open, the icon becomes a large X, and is used to close the Browser when you’re done.

The three main areas of the Preset Browser are as follows:

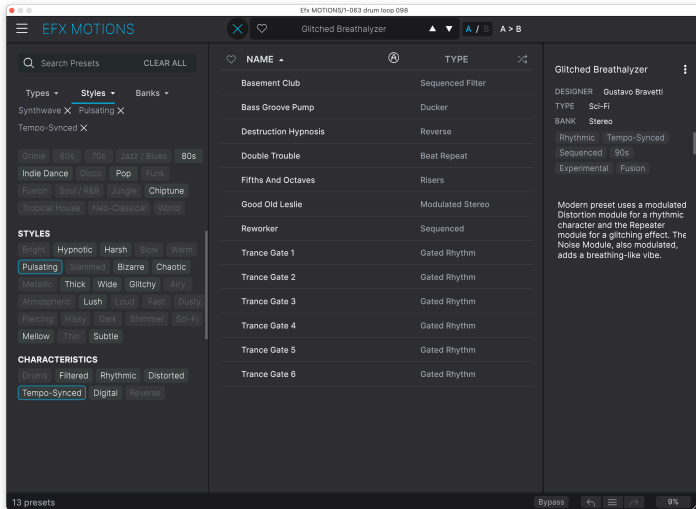


Number	Area	Description
1.	Search [p.82]	Searches for Presets by text entry with filters for Type, Style, and Bank.
2.	Results Pane [p.86]	Displays search results, or all Presets if no search criteria are active.
3.	Preset Info [p.88]	Displays Preset Details; can edit details for Presets in User Bank.

8.3. Searching Presets

Click on the Search field at the top left and enter any search term. The browser will filter your search in two ways: First, simply by matching letters in the Preset name. Second, If your search term is close to that of a [Type or Style \[p.83\]](#) it will include results fitting those tags as well.

The Results Pane will show all Presets that fit your search. Click the **CLEAR ALL** text to clear your search terms.

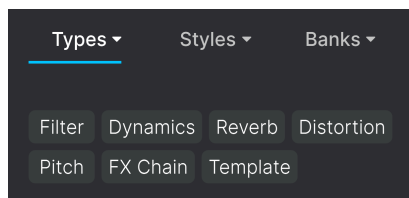


Filtering by typing the text ("Leslie") in the Search field

8.3.1. Using Tags as a Filter

You can narrow (and sometimes expand) your search using different *tags*. There are two kinds of tags: **Types** and **Styles**. You can filter by one, the other, or both.

8.3.1.1. Types



Types are categories of audio effects: filter, distortion, modulation, and so on. With a clear search bar, click the **Types** drop-down to bring up the list of types. Types sometimes include sub-types (especially in more complex Arturia effect plug-ins) but Efx MOTIONS is relatively simple, so Rotator is the primary type you will see.

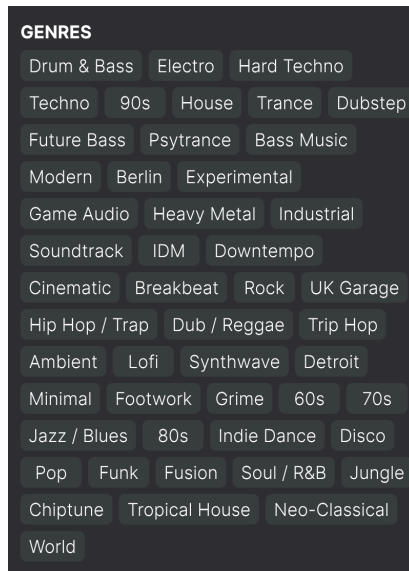
The display order of the Name and Type columns can be inverted by clicking the arrow buttons to the right of their titles.

i You can specify the type when [saving a Preset \[p.71\]](#). That Preset will then show up in searches where you've selected that Type.

8.3.1.2. Styles

Styles are, well ... exactly that. Accessed by the **Styles** button, this area has three further subdivisions:

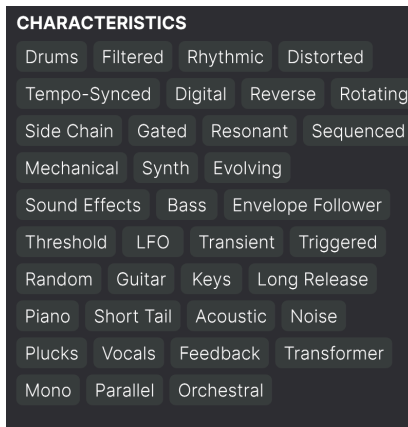
- *Genres*: Identifiable musical genres such as Ambient, Bass Music, Industrial, etc.:



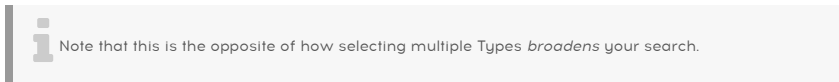
- *Styles*: General “vibe” such as Bizarre, Metallic, Slammed, etc.:



- *Characteristics*: Even more detailed audio qualities such as Filtered, Resonant, Mechanical, Noise, and more:



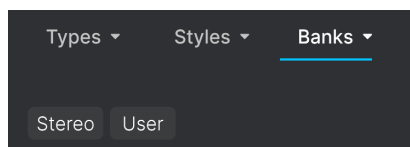
Click any one, and the results will show only Presets that match that tag. Notice that when you select any tag, several other tags usually grey out and become unavailable. This is because the browser is *narrowing* your search by a process of elimination.



Deselect any tag to remove it and widen the search without having to start all over again. You can also clear the tag by clicking the X to the right of its text, which appears at the top.

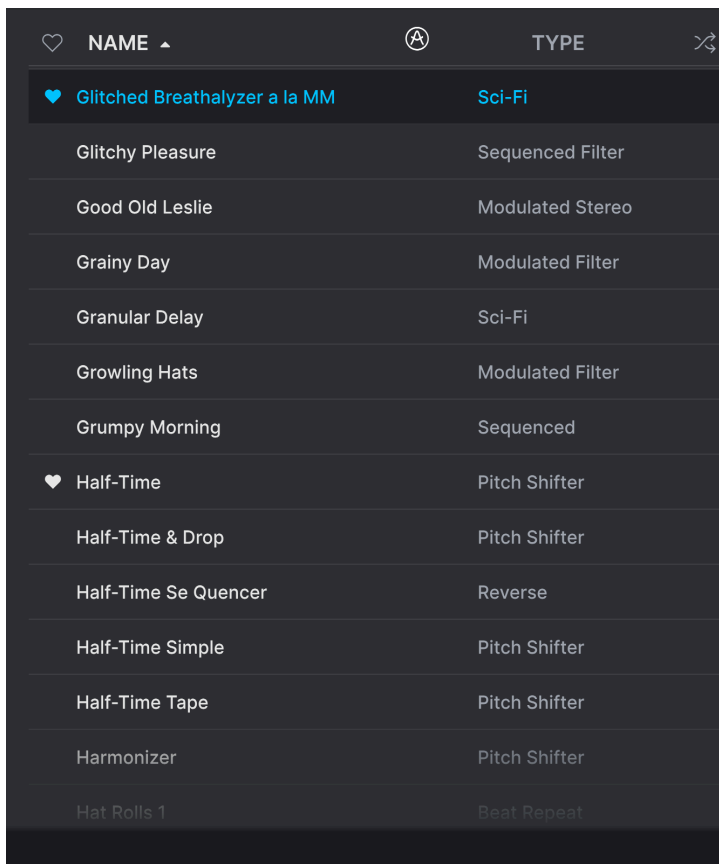
Note that you can search by a string of text, Types and Styles, or both, with the search becoming narrower as you enter more criteria. Clicking **CLEAR ALL** in the search bar will remove all Type and Style filters as well as any text entry.

8.3.2. Banks



To the right of the **Types** and **Styles** drop-downs is the **Banks** drop-down, which lets you do your search (using all the methods above) within the Factory or User Banks.

8.4. The Results Pane



NAME ▲	TYPE
♥ Glitched Breathalyzer a la MM	Sci-Fi
Glitchy Pleasure	Sequenced Filter
Good Old Leslie	Modulated Stereo
Grainy Day	Modulated Filter
Granular Delay	Sci-Fi
Growling Hats	Modulated Filter
Grumpy Morning	Sequenced
♥ Half-Time	Pitch Shifter
Half-Time & Drop	Pitch Shifter
Half-Time Se Quencer	Reverse
Half-Time Simple	Pitch Shifter
Half-Time Tape	Pitch Shifter
Harmonizer	Pitch Shifter
Hat Rolls 1	Beat Repeat

The central area of the browser shows search results, or simply a list of all Presets in the Bank if no search criteria are active. Simply click on a Preset name to load it.

8.4.1. Sorting Presets

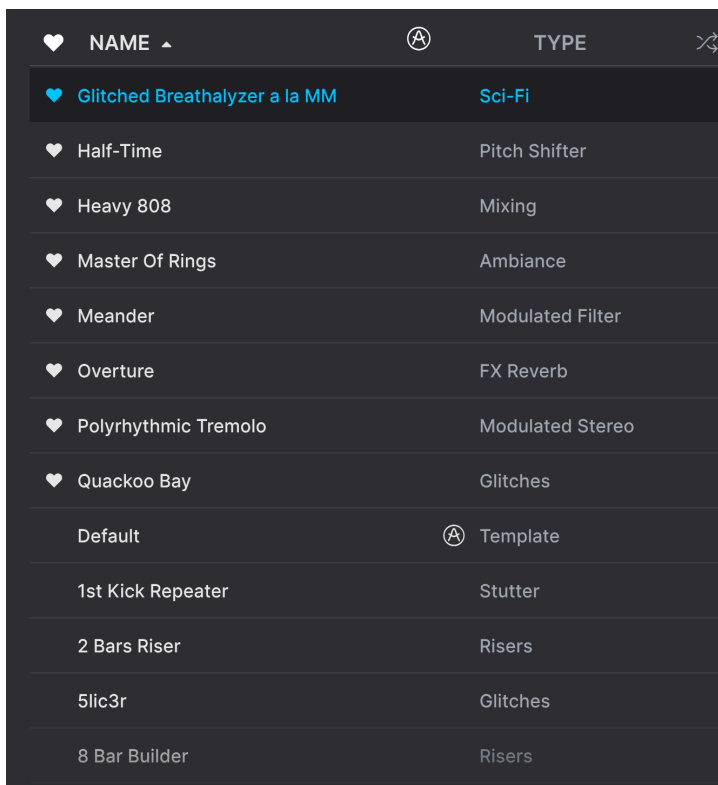
Click the **NAME** header in first column of the Results list to sort the results list of Presets in ascending or descending alphabetical order.














Click the **TYPE** header in the second column to do the same thing by Type.

8.4.2. Liking Presets

As you explore and create Presets you can mark them as Liked by clicking the heart icon next to their names. (This icon also appears in the Upper Toolbar's [Preset Name Pane \[p.79\]](#).

Clicking on the heart icon makes all of your liked Presets show up at the top of the results list, as shown here:

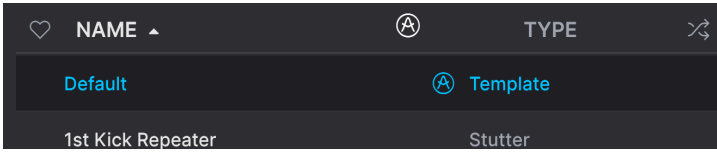


 NAME 		TYPE 
 Glitched Breathalyzer a la MM		Sci-Fi
 Half-Time		Pitch Shifter
 Heavy 808		Mixing
 Master Of Rings		Ambiance
 Meander		Modulated Filter
 Overture		FX Reverb
 Polyrhythmic Tremolo		Modulated Stereo
 Quackoo Bay		Glitches
Default		Template
1st Kick Repeater		Stutter
2 Bars Riser		Risers
5lc3r		Glitches
8 Bar Builder		Risers

A filled-in heart icon indicates a Liked Preset. An outline indicates a Preset that has not been Liked (yet). Click the heart at the top of the list again to return the list to its previous state.

8.4.3. Featured factory Presets

Presets accompanied by the Arturia logo are factory creations we think really showcase the capabilities of Efx MOTIONS.



Clicking the Arturia icon at the top of the Results pane sorts all featured Presets to appear at the top of the list.

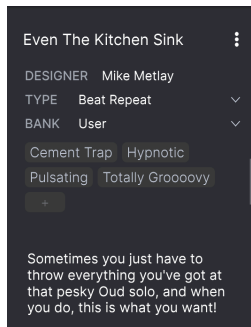
8.4.4. Shuffle Button



This button randomly reorders the Preset list. Sometimes it can help you find the sound you're looking for more quickly than scrolling through the entire list.

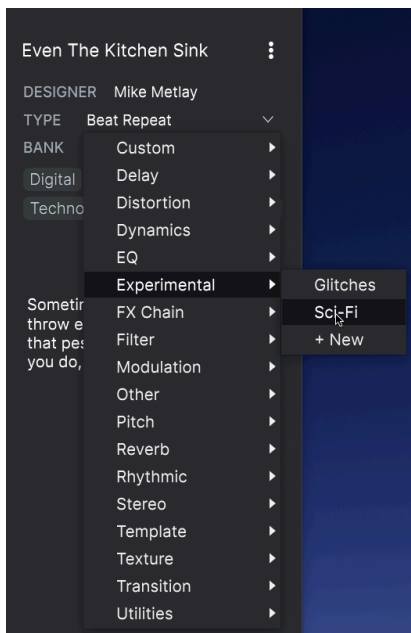
8.5. Preset Info Section

The right side of the browser window shows specific information about each Preset.



For Presets in the User bank (as the result of a Save As operation), you can enter and edit the information in the Preset Info Section and it will update in real time. This includes the designer (author), Type, all Style tags, and even a custom text description at the bottom.

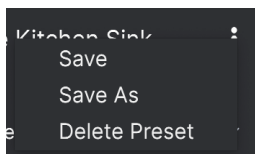
To make the desired changes, you can type directly in the text fields or use one of the pull-down menus to change the Bank or Type. As shown here, you can also use a hierarchical menu to select the Type or even create a new Type or Subtype.



i Types and Styles changes you make here are reflected in searches. For example, if you remove the "Bright" Style tag from a Preset and then save that Preset, it will not show up in future searches for Bright Presets.

8.5.1. Preset Info Quick Menu

Clicking the icon with three vertical dots brings up a quick menu for Save, Save As, and Delete Preset operations:



For sounds in Factory banks, only **Save As** is available.

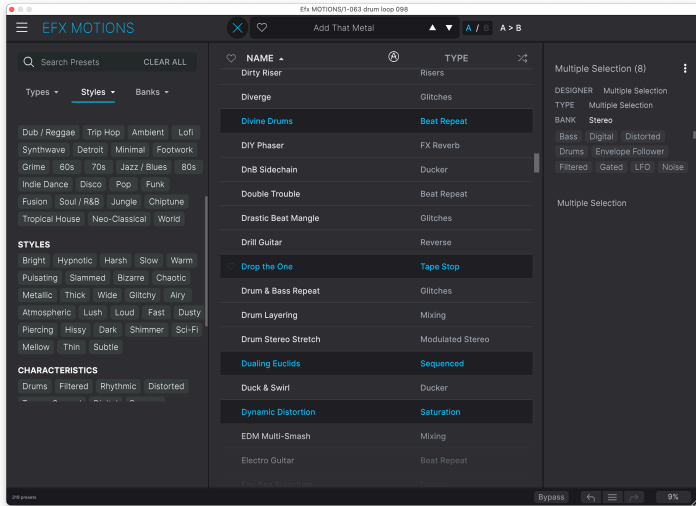
8.5.2. Edit Style

You can also create your own Style tags to help refine searches according to criteria that matter most to you. Clicking on the + icon in the list in the Preset Info pane opens the Edit Style pane, where you can create as many new tags as you'll ever need:



8.5.3. Editing Info for Multiple Presets

It's easy to edit information such as Types, Styles, designer name, and text description for several presets at the same time. Simply hold CMD (macOS) or CTRL (Windows) and click the names of the Presets you want to change in the Results list. Then enter the comments, change the Bank or Type, etc., and save.



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