USER MANUAL

_EFX AMBIENT

ARTURIA

_The sound explorers

Special Thanks

DIRECTION

Frédéric Brun
Kevin Molcard

DEVELOPMENT

Samuel Limier (lead)
Loris De Marco
Geoffrey Gormond
Pierre-Lin Laneyrie
Patrick Perea
Yann Burrer
Alexandre Adam
Stéphane Albanese
Marc Antigny
Baptiste Aubry
Kevin Arcas
Hugo Caracalla
Corentin Comte
Raynald Dantigny
Mauro De Bari
Alessandro De Cecco
Pascal Douillard
Rasmus Kürstein
Marius Lasfargue
Cyril Lépinette
Christophe Luong
Pierre Mazurier
Mathieu Nocenti
Marie Pauli
Fanny Roche

DESIGN

François Barrillon (lead)
Jonas Sellami
Morgan Perrier

SOUND DESIGN

Lily Jordy (lead)
Anthony Baldino
François Barrillon
Simon Gallifet
Florian Marin
Victor Morello
Matt Pike
Slynk

TESTING

Aurélien Mortha (lead)
Arnaud Barbier
Thomas Barbier
Matthieu Bosshardt
Bastien Hervieux
Germain Marzin
Roger Schumann
Adrien Soyer
Julien Viannenc

TUTORIALS

Stephen Fortner

MANUAL

Stephen Fortner (author)
Gala Khalife
Minoru Koike
Jimmy Michon
Holger Steinbrink
Justin Trombley

BETA TESTING

Gert Braakman
Chuck Capsis
Marco Correia 'Koshdukai'
Richard Courtel
Adrian Dybowski 'Navi
Retlav'
Mat Herbert
Terry Marsden
Apollo Negri
Davide Puxeddu
Mateo Relief vs MISTER X5
Axel Rigaud
Fernando Manuel Rodrigues
TJ Trifeletti
Stephen Wey
Chuck Zwicky

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Special Messages

This manual covers how to use Pitch Shifter-910, 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.

Introduction

Congratulations on your purchase of Pitch Shifter-910

Thank you for purchasing Pitch Shifter-910, an audio effect plug-in crafted to give you an inspiring and perhaps unstable musical journey through digital pitch shifting. Drawn from ground-breaking boxes of the mid-1970s you'll quickly discover why they were used so extensively on records ever since for a wide variety of reasons.

Excellence is placed at the heart of every Arturia product, and Pitch Shifter-910 is no exception. 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 AMBIENT

Efx AMBIENT is a sonic playground inspired by the crazed and creative world of boutique guitar pedals. It's designed to turn the most ordinary melodies, basslines, and rhythms into astounding sonic artifacts – ever-evolving soundworlds, stuttery and unpredictable glitchfests, rich layers of tape-era warmth, and so much more.

Six unique Modes let you run your audio through everything from pitch-shifted reverbs and harmonic stretching to reverse delays, spectral enhancement, and maybe just a little bit of bit crushing on the side. A uniquely interactive interface lets you get as detailed as you wish with parameter control, then focus on a simple set of tools to create constantly changing textures in real time. This is not a conventional effects processor by any means – it's a set of tools to throw you head first into the deep waters of creative sound shaping!

1.1. The joy of boutique guitar pedals

Guitar pedals started out as supplements to the basic tools of the guitarist's world: the instrument and the amp. Unique electronic circuits were developed to create living, breathing, dynamic sounds, taking the guitar into another place. Fuzzboxes and distortion pedals, compressors, modulation effects, delays and reverbs... as time went on, more and more of what we would normally consider "pro audio effects" found their way onto pedalboards everywhere.

All along the way, however, there was an overarching sense of fun that was somehow missing from the big rackmount effects in studios. Pedals were painted in goofy colors, knob functions were given crazy names, and designers were encouraged to dip their toes into the waters of truly out-there sound design.

If you were to go to a well-equipped guitar store that featured guitar pedals from a variety of small boutique manufacturers, you would find everything from deliberately overdriven feedback loops and computer buffer shufflers to ring modulators, granular delays, and pedals whose functions are so strange that even their builders have trouble explaining what they do. In every genre from bluegrass to metal, from country to shoegaze, guitarists are putting together amazing combinations of pedals and exploring to their hearts' content.

So here's a question: *Why let the guitarists have all the fun?*

Efx AMBIENT is meant to bring a big chunk of that barely-controlled, chaotic, exciting stompbox magic into your DAW.

1.2. How do I use it?

Efx AMBIENT has several elements that you can turn on or off as needed. At its center are six Modes: carefully designed effects chains that produce uniquely dynamic and ever-changing textures, where reverbs, delays, distortion, digital signal mangling, and modulation all coexist, each parameter available for fine control from a set of onboard modulators or by turning the knobs yourself.

The Modes are supplemented by a delay-line-based Space effect, filtering and ducking, up to four modulation sources that can be sequencers, function or random signal generators, or envelope followers to track the dynamics of your music. Dual Macros let you pile up multiple modulations onto a pair of knobs that can be controlled with a graphical XY interface. And when you've created your sonic masterpiece, you can save it along with the dozens of inspiring Presets that come included with Efx AMBIENT.

The rest of this manual will go into detail about how each of these elements works.

1.3. When would I use it?

Efx AMBIENT was intended from the beginning to be a creative effect. Modern producers and composers are always looking for new ways to make their sounds stand out, whether writing for albums, creating soundtracks for streaming or other media, producing and beatmaking, or performing live.

Efx AMBIENT lets you:

- easily turn simple sounds into complex evolving ambient textures that spur interest and emotional impact
- create comparatively complex sounds without being buried in parameters and menus
- quickly audition, edit, perfect, and save your sounds in a straightforward way
- find inspiration in pushing boundaries
- build confidence in your sound design by making mistakes... and saving the ones that sound amazing.

Efx AMBIENT can be used on specific instruments, sequences, and drum loops to great effect, reshaping their entire character to suit your song. If you're feeling brave, you could even put Efx AMBIENT across your Master bus and put a strange spin on an entire mix!

1.4. Efx AMBIENT feature summary

- Six Modes for rapid and powerful sound manipulation: Reflect, Woven, Siren, Organist, Codec, and Sunken
- Unique combinations of reverb, delay, pitch shifting, modulation, filtering, distortion, bit crushing, and more
- Simple Tone and Space controls for each Mode expose powerful but easy-to-use parameters
- Sequencer, Function, Random, and Envelope Follower modulation sources automate your sonic changes
- Two Macros assign multiple parameters to two knobs and an intuitive XY graphic controller
- Input Filter, Pre Delay, and Ducking for fine control over signal frequency and level over time
- Curated factory Presets to get you started
- Full edit history with undo, redo, and direct access to each editing step

Are you ready to get crazy?

2. ACTIVATION AND FIRST START

2.1. Compatibility

Efx AMBIENT works with Windows 10 or later, or macOS 10.13 or later. It is compatible with the latest Apple Silicon M-series 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 AMBIENT 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.

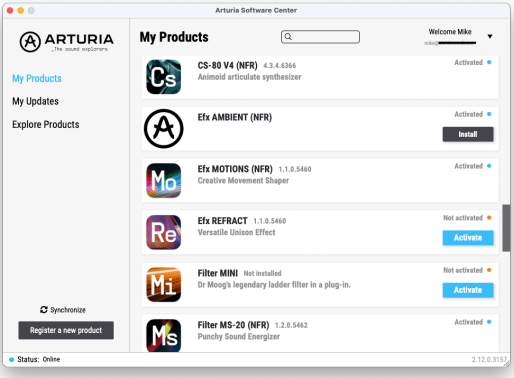
If you have not already done so, now is a good time to create an Arturia account by following the instructions on the My Arturia webpage.

Once you install Efx AMBIENT, 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.



The Arturia Software Center (ASC)

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 AMBIENT).

It's as simple as that!

2.3. Working with Efx AMBIENT as a plug-in

Efx AMBIENT 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:

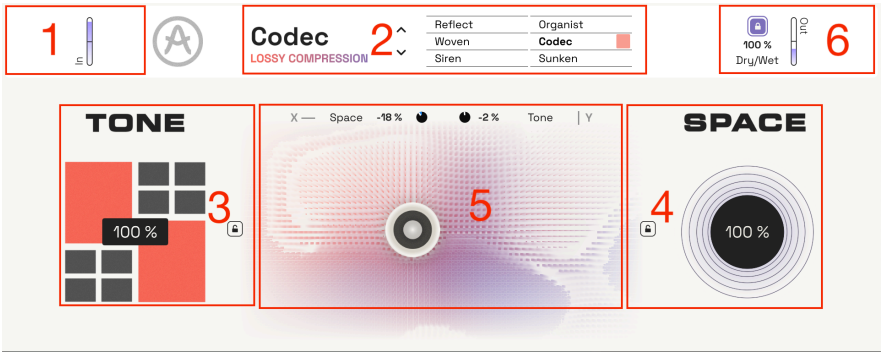
- You can use as many instances on different tracks as your computer can handle. This is quite helpful for a product like Efx AMBIENT that can be used on tracks, subgroups, buses, and even the main mix.
- You can automate the plug-in's settings via your DAW's automation feature.
- All settings and changes are saved with your DAW project, letting you pick up right where you left off.

2.3.1. Audio and MIDI settings

Since Efx AMBIENT 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 or Settings menu, either at the global or project level, and each product does things a bit differently. 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 so on.

3. THE MAIN PANEL

The **Main Panel** of Efx AMBIENT is an all-in-one destination for controlling the plug-in. There are no hidden tabs or pop-up menus; all the features you'll need are right in front of you at all times.

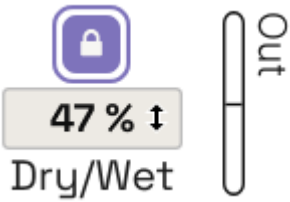


Number	Area	Description
1.	Input Section [p.10]	Input Gain and metering
2.	Mode Selector [p.10]	Chooses the Mode used by the given Preset
3.	Tone Control [p.11]	Tone Mix and Mix Lock controls
4.	Space Control [p.12]	Space Mix and Mix Lock controls
5.	XY/Macro Control [p.13]	Rapid Tone/Shape control, plus Macro [p.41] amount settings
6.	Output Section [p.13]	Output level setting, global dry/wet mix control, and output metering

3.1. Common control behaviors

Efx AMBIENT uses only a few basic mouse movements to control all of its functions.

3.1.1. Displaying and changing parameter values



Hovering the mouse over the Dry/Wet control displays its current value and an up/down cursor

Many parameters in Efx AMBIENT have a numerical readout of the value that *also* serves as its control. In addition to moving the control, you can drag on this value to change it.

If you set values with your mouse's scroll wheel, they will change in consistent ways. Every scroll step will change 2% for parameters given in percentages, 0.5 dB for levels or gains, and 5 ms for times.

Any parameter that doesn't have a permanently displayed value will pop up a value when you hover over it, and may also give you a double arrow cursor depending on the parameter:

Hovering the mouse over the Pitch control displays its current value and a left/right cursor

3.1.2. Parameter descriptions

Hovering the mouse over the Distortion control pops up a parameter description below.

Operating or hovering on a control displays its name and a brief description of its function in the left corner of the lower toolbar [p.50].

> Note that some controls have global names across all Modes, which will be reflected in the parameter description. In the example above, **Character** is the global name of the knob that is used for **Distortion** in this Mode.

3.1.3. Fine tuning and resetting to default values

Hold the right mouse button or Control key while dragging on any knob to adjust it more slowly. This helps when you want to dial in precise values. Double-click on any knob to return it to its factory default setting.

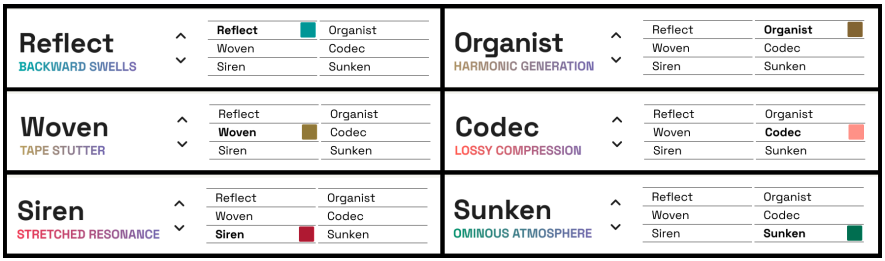
3.2. Input Section

Input Gain control and meter

This meter on the left side of the Main Panel gives you quick visual feedback of the input signal level. If the plug-in is set for stereo input, the meter shows the higher of Left or Right at any given moment.

Click and drag on the meter top set the **Input Gain** from -24.00 to +24.00 dB. In the picture, the mouse is hovering over it, displaying its value.

3.3. Modes



The six Modes available in Efx AMBIENT

Modes are at the center of Efx AMBIENT's ability to rapidly morph and shape sound in dramatic ways. If we return to our analogy of boutique guitar pedals, Modes are like six different pedals to choose from, each with its own particular set of creative possibilities.

The Modes are:

- **Reflect**: Input sounds are buffered and played in reverse with down-pitched reverb, with optional octave harmonics and reverse feedback loops, creating interesting forward/backward shifting textures.
- **Woven**: A delay with feedback combined with upward-pitched reverb for rhythmic ambiences.
- **Siren**: Stretched harmonic resonances for ringing, dense textures, with optional transient retriggering for pulsing spaces.
- **Organist**: Adds ringing harmonics and spectral enhancement, lacing the input audio with constantly shifting overtones in various harmonic series.
- **Codec**: Assorted forms of digital signal destruction, including MP3 lossy compression, bit crushing, and spectral freeze for bizarre stuttering effects.
- **Sunken**: Heavily filtered and tape-saturated effects blend with simulated tape dropouts to evoke a variety of "underwater" ambiences.

While on the Main panel these Modes only differ in their Tone and XY graphics, once we open the Advanced Panel we will see how their parameters differ. In the Advanced Panel [p.15] chapter, we will delve into the various Modes in detail.

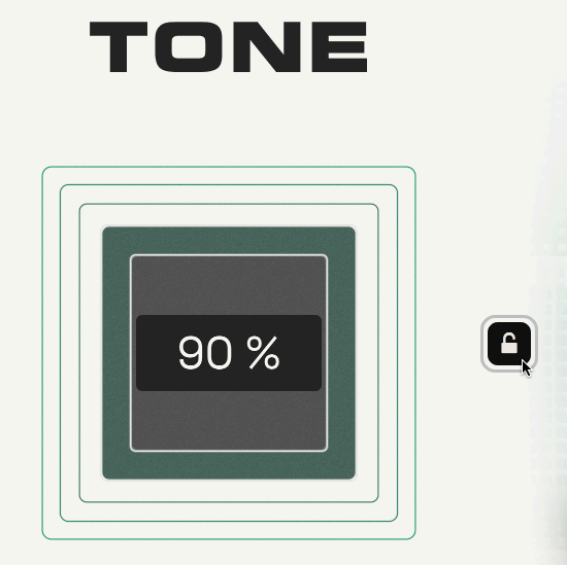
To load a particular Mode, simply click on its name in the list. The colored icon beside your choice will change, along with the title in the selection area and the animated graphic under the Tone control.

> The beauty of having Efx AMBIENT as a plug-in rather than a hardware pedal is that you can open as many of them as your computer can handle. Want to run all six Modes at once in your choice of pedal order? Go ahead!

3.4. Primary controls on the Main Panel

The lower part of the Main Panel features easy-to-use global controls for the primary parameters in a Preset, enabling fast adjustment over a wide range of sonic possibilities.

3.4.1. Tone



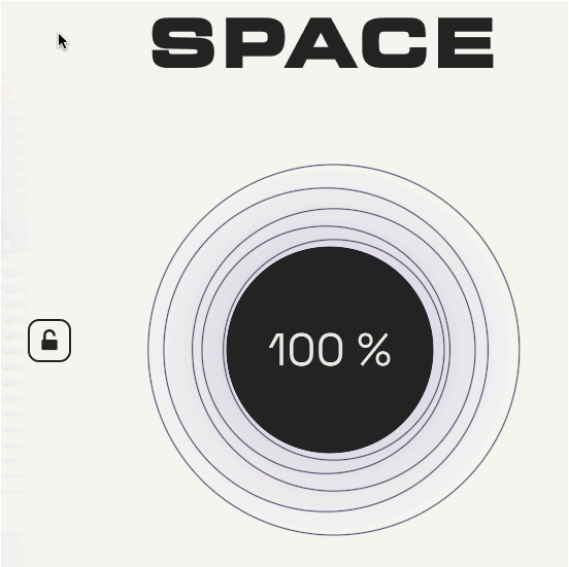
Tone control with the Tone Mix Lock button at right

The **Tone** control sets the mix of how much Tone processing is being done to the input signal.

The **Tone Mix Lock** button preserves the Tone Mix setting as you audition various Presets.

The specific Tone parameters vary by Mode, and will be explained in detail in their respective Tone Parameter [p.15] sections of the Advanced Panel chapter.

3.4.2. Space



Space control with the Space Mix Lock button at left

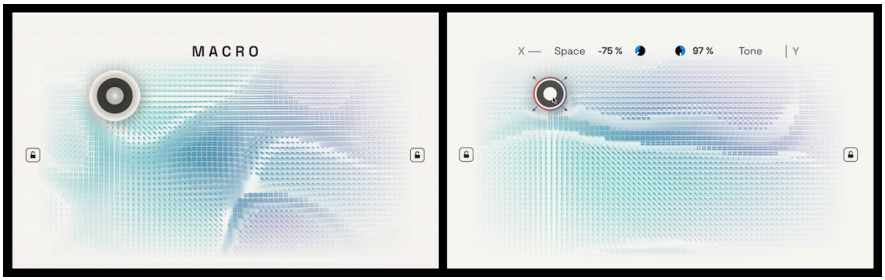
The **Space** control sets the mix of how much Space processing is being done to the input signal.

The specific Space parameters are the same for all Modes, and will be explained in the Space Parameters [p.22] section of the Advanced Panel chapter.

The **Space Mix Lock** button preserves the Space Mix setting as you audition various Presets.

3.4.3. Macro XY Control

The animated graphic at the center of the Main Panel is the **Macro XY Control** area. When the mouse is hovered inside this area, controls appear for the two Macros [p.41] in use for that Preset.



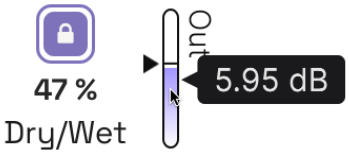
The XY Macro Control area without (left) and with (right) mouse hover

Click and drag the round icon to change the two Macro values in real time. Which parameters are changed, and in what direction, and by how much, are all set by the Modulation [p.24] parameters of the Macros.

- Horizontal (**X**) movement controls the left knob corresponding to Macro 1
- Vertical (**Y**) movement controls the right knob corresponding to Macro 2

> The Factory Presets have **X** assigned to Tone and **Y** assigned to Space.

3.5. Output Section



Dry/Wet Mix, Mix Lock, and Output Gain control/meter

The Output Section has a meter that also controls **Output Gain** by ±24 dB. In the picture, the mouse is hovering over it, displaying its value.

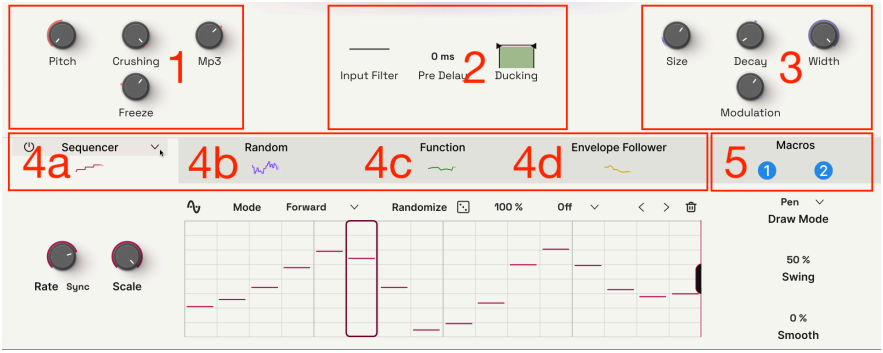
To the left of the Output Gain/Meter is the **Dry/Wet Mix**, a global setting for the blend of unprocessed to processed signal at the output, from 0% (dry) to 100% (fully wet). The **Mix Lock** icon above the Mix control prevents the Mix from changing as you audition various Presets.

3.6. Time to go deeper!

These settings will let you quickly play with a Preset to get a feel of what it can do. To go deeper into these parameters, and automate them to follow external control, we click the **Advanced** button and drop down the Advanced Panel [p.15]...

4. THE ADVANCED PANEL

When you click on the Advanced [p.49] button, the **Advanced Panel** opens. It appears as a new drop-down area under the Main Panel, and adds a number of extra controls to Efx AMBIENT for deeper and finer control:



Number	Function Set
1	**Tone Parameter Controls** [p.15] that are specific to every Mode
2	**Input Filter** [p.23], **Pre Delay** [p.23], and **Ducking** [p.24] control for fine adjustment of frequency, time, and level
3	**Space Parameter Controls** [p.22] common to all Modes
4	Four slots for four different **Modulators** [p.28] to automate parameter control. Any Modulator can be assigned to any slot, but for this illustration, the slots hold one each of the four Modulator types:
4a	A powerful step Sequencer [p.28]
4b	A multi-step Function [p.32] generator
4c	A Random [p.39] control source
4d	An Envelope Follower [p.40] for tracking signal dynamics
5	Two user-programmable **Macros** [p.41] to adjust multiple parameters at once by varying amounts

Underneath the row of Modulator tabs is the area where each tab's controls will appear when selected.

In this chapter, we'll explain all of the various controls to be found in the Advanced Panel, and explain modulation functions for controlling them all.

4.1. Tone Parameters

The Tone is the primary set of signal processes that defines each Mode.

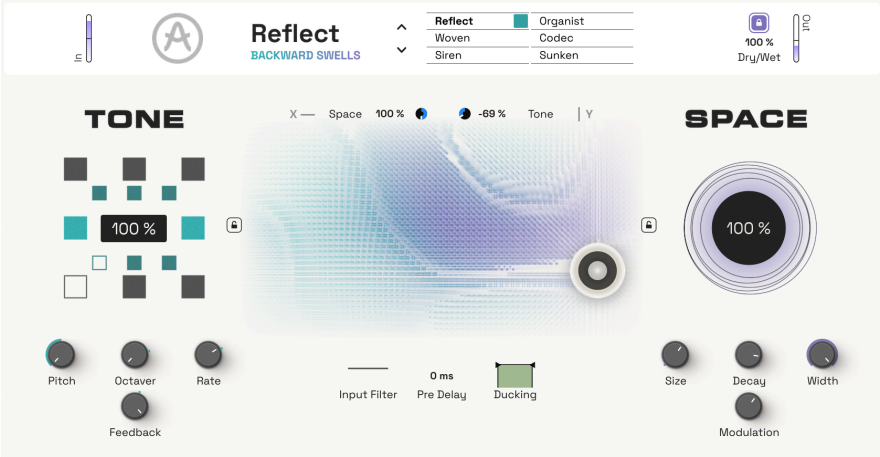
Each Mode has a **Pitch** control to tune the signal up or down by up to 12 semitones (1 octave).

To give a broader range of timbres appropriate to each Mode, the nature of the pitch shift is different depending on the Mode – some are *granular* (pitch shift in the *time domain*, by dividing up the sound into overlapping packets called *grains* and manipulating them) and some are *spectral* (pitch shift in the *frequency domain*, by altering harmonic spectra).

> The pitch shifting algorithm is adjusted for best results in each particular Mode, so as you play with the Modes, you should let your ears "learn" what the **Pitch** knob does in each case.

We'll now revisit the Modes introduced in the Chapter on the Main Panel [p.8] and discuss how the specific controls for each one will affect the sound.

4.1.1. Reflect

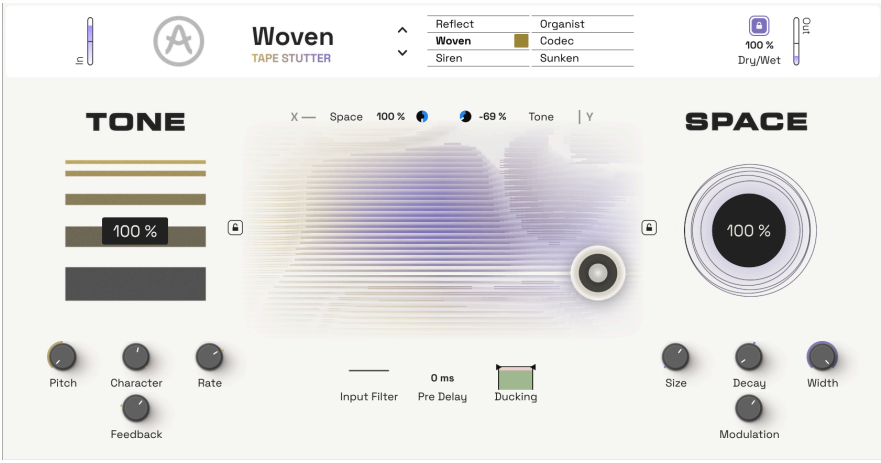


In **Reflect** Mode, input sounds are buffered and played in reverse with down-pitched reverb, with optional octave harmonics and reverse feedback loops, creating interesting forward/backward shifting textures.

- **Pitch**: Up to 12 semitones of pitch shift up or down. In this Mode, the process is granular.
- **Octaver**: Controls the amount of the reversed signal that's pitch-shifted one octave upward, adding harmonic interest.
- **Rate**: Controls the size of the sample buffer (how long the reversed samples will be), with the effect becoming more obvious as the buffer gets bigger.
- **Feedback**: Controls the amount of reversed and pitch-shifted audio fed back to the input for cascading reverse effects.

Automating the **Rate** can produce fascinating ever-changing sweeps, which can be boosted in clarity with the **Octaver**. To get a classic reverse stutter effect, combine a long **Rate** with high **Feedback**.

4.1.2. Woven

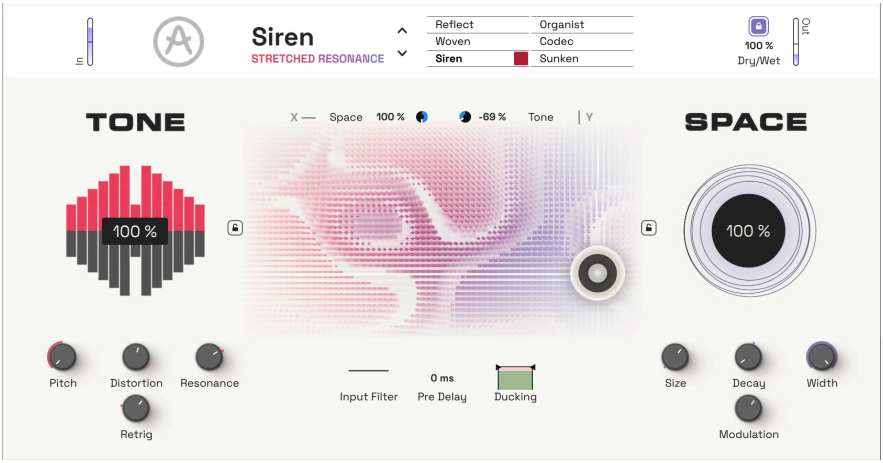


Woven is a stuttering delay with feedback, combined with upward-pitch-shifted reverb for rhythmic ambiences.

- **Pitch**: Up to 12 semitones of pitch shift up or down. In this Mode, the process is granular.
- **Character**: Adds filtering and tape saturation to control the overall tone and warmth.
- **Rate**: Controls the delay rate by changing the sample buffer size.
- **Feedback**: Runs the effected audio back to the input for further processing. This creates repeating layers that vary in interesting ways when you add pitch modulation.

At very slow **Rate** settings, the cascading delays become more obvious, especially with increased **Feedback**. Here, **Character** basically controls how "dirty" the resulting sound will be, evoking the sound of ancient tape echoes with tapes that haven't been changed in many years.

4.1.3. Siren

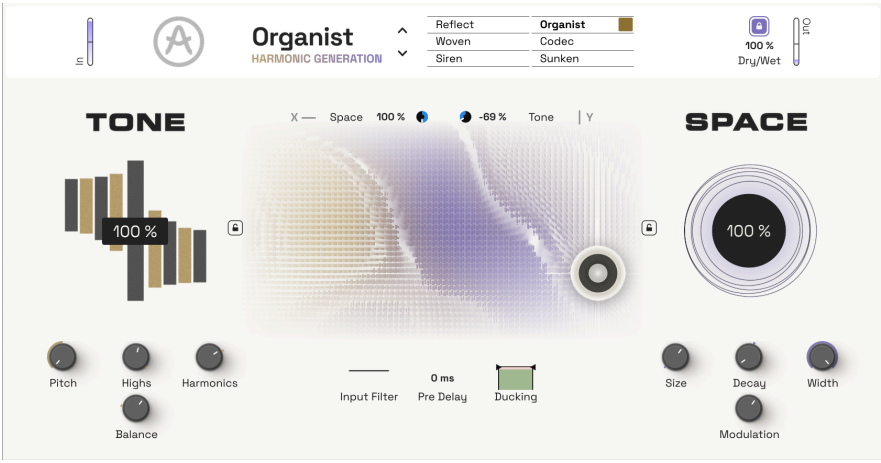


Siren offers stretched harmonic resonances for ringing, dense textures, with optional transient retriggering for pulsing spaces.

- **Pitch**: Up to 12 semitones of pitch shift up or down. In this Mode, the process is spectral.
- **Distortion**: A tape model for distortion and saturation, providing weight and character.
- **Resonance**: Stretches the harmonics of the signal, providing the basic texture.
- **Retrig**: Retriggers the resonant effect by shutting it down and restarting it when transients are detected for gating/pumping sounds.

This Mode works best with shorter **Space** reverbs, especially when you turn up **Retrig** to emphasize the rhythmic pulse of your input sound.

4.1.4. Organist

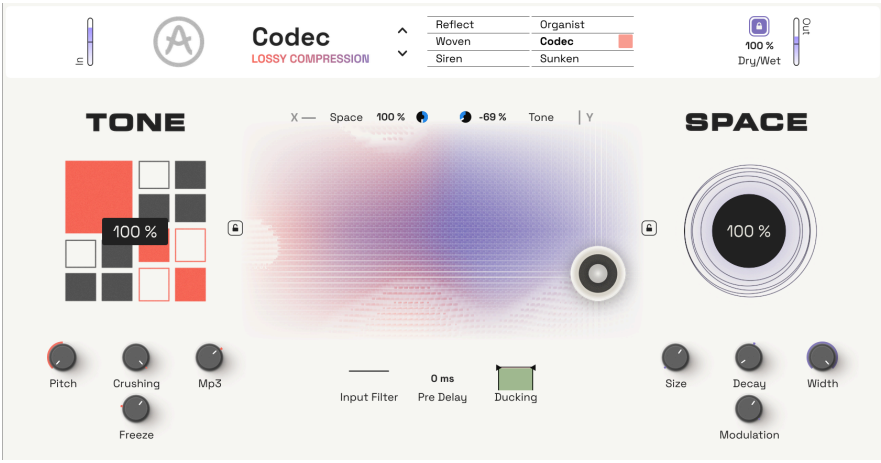


Organist adds ringing harmonics and spectral enhancement, lacing the input audio with constantly shifting overtones in various harmonic series.

- **Pitch**: Up to 12 semitones of pitch shift up or down. In this Mode, the process is spectral.
- **Highs**: Controls the filtering at high frequencies.
- **Harmonics**: Controls the overall amount of harmonics generated.
- **Balance**: This control crossfades between various harmonic spectra – modulate this for evolving sound textures.

When you add **Harmonics**, the results can be very subtle or turn sounds into long drones, which can then be made to shift and evolve by modulating the **Balance**. These harmonics can be massively enhanced by **Space** to create the ringing harmonics you'd hear inside a large space with stone walls like a cathedral.

4.1.5. Codec

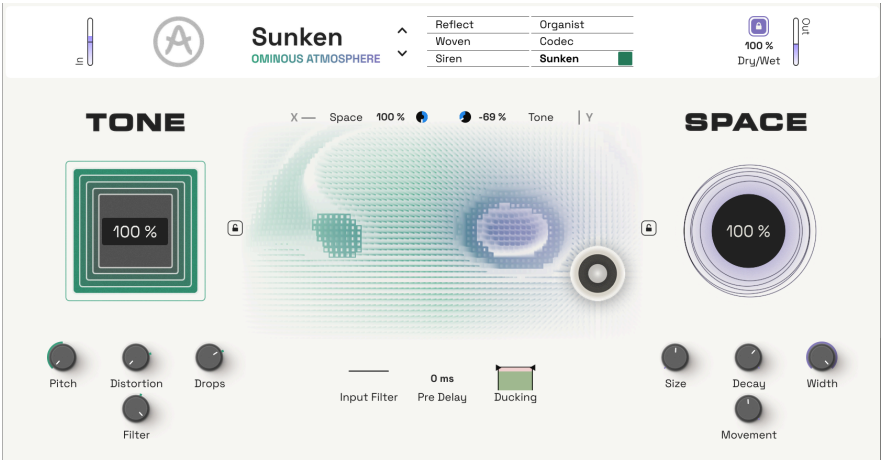


Codec provides assorted forms of digital signal destruction, including MP3 lossy compression, bit crushing, and *spectral freeze*, where the current signal spectrum is "held" and repeated for bizarre stuttering effects.

- **Pitch**: Up to 12 semitones of pitch shift up or down. In this Mode, the process is spectral.
- **Crushing**: Filters and downsamples the input signal.
- **MP3**: Adds lossy compression artifacts like frequency drops and distinct digital distortion.
- **Freeze**: Controls how often the spectral freezes happen, *and* how long they last.

The **MP3** control can give you everything from an old-digital vibe to heavy artifacts. **Freeze** can be automated for evolving spectral effects. These sounds can be greatly enhanced with the **Space** processing.

4.1.6. Sunken



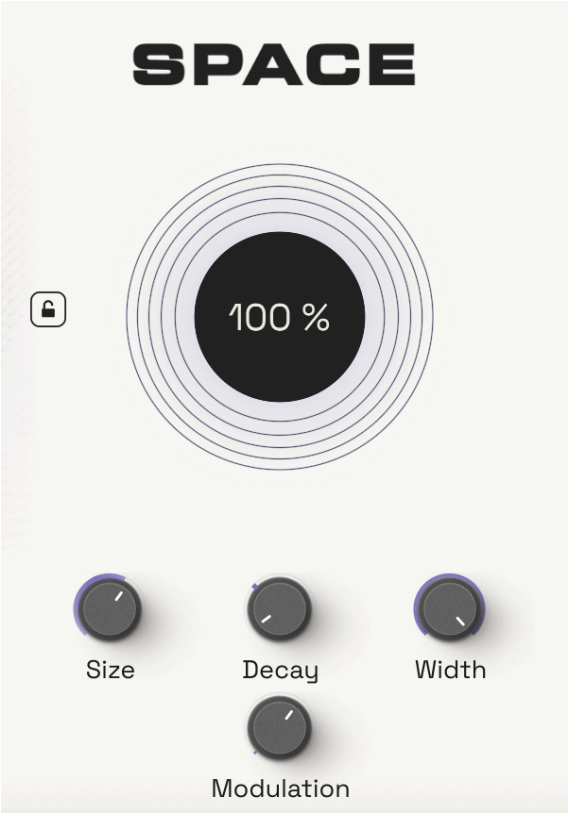
In **Sunken** Mode, heavily filtered and tape-saturated effects blend with simulated tape dropouts to evoke a variety of dark, heavy "underwater" ambiences.

- **Pitch**: Up to 12 semitones of pitch shift up or down. In this Mode, the process is granular.
- **Distortion**: This is a saturation based on germanium transistor circuits, adding warmth and harmonic distortion.
- **Drops**: Controls tape-like dropouts and wow/flutter for more interesting variable character.
- **Filter**: This one knob controls the cutoff and resonance of the distortion filter.

The **Filter** control is a great overall setting for the tonal "mood" of the texture, with lower settings producing darker and more ominous sounds. Similarly, pushing **Drops** and/or **Distortion** will degrade the sound and make it "older", with long **Space** reverbs as the final touch for a massive sound.

> If you're having trouble "hearing" what any given Mode does, try playing with it while playing back a looped line of spoken or sung vocals, a simple phrase of several words that are easy to understand. The human ear is excellent at picking out voices (it's a survival trait from our Stone Age days), so manipulating the controls on a voice will generate results that you can follow more easily. While you can always simply try each Mode on everything to see what sounds good, being able to predict what the Modes do may help you make a guess as to where to start your experiments.

4.2. Space Parameters



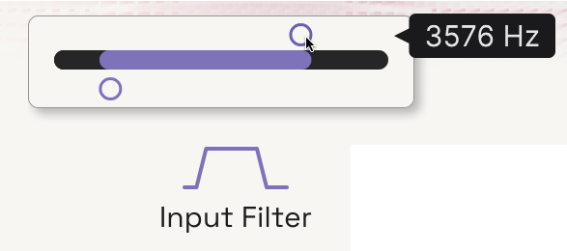
Every one of the Modes runs through a **Space** processor, which is a pitch-shifted reverb to extend and deepen the Modes and help create huge sonic textures. All of the controls are the same regardless of Mode:

- **Size**: Up to 12 semitones of pitch shift up or down.
- **Decay**: Sets the reverb time, from short and ringing to long and cavernous.
- **Width**: Sets the stereo width of the output, allowing for wide and dramatic soundstaging.
- **Modulation**: Adds a chorus effect in the reverb by subtly modulating the pitch.

4.3. Input signal controls

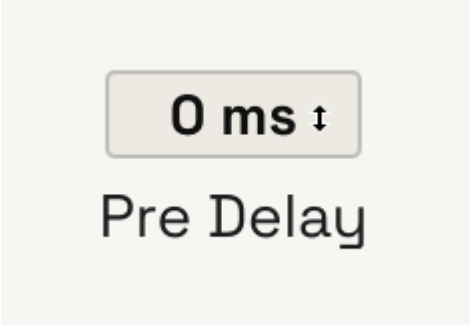
These controls allow for quick tweaks to the input before it is processed.

4.3.1. Input Filter



This pops up a bandpass filter with separate highpass and lowpass settings. Both have a range of 20 Hz to 20 kHz, and allow everything from subtle "tilt" EQ to drastic frequency limitations. The graphic changes shape and lets you see the rough settings at a glance.

4.3.2. Pre Delay



This control delays the processed signal by anywhere from 0 to 500 milliseconds. Sometimes a bit of time delay between the dry signal and the process adds a sense of larger environments.

4.3.3. Ducking

Ducking can be set from 0.00 to -70.0 dB. Drag the horizontal bar to set the threshold above which audio is lowered in volume (*ducked*), allowing loud transients' influence on the sound to be kept under control. This is best suited for material that has a lot of dynamic range.

4.4. Modulation

Before we discuss the Modulators and Macros, let's talk about what they do in general, and how to get them to work for you.

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 AMBIENT relies on this kind of automation, the plug-in comes with a lot of modulation options built in.

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

After that, we'll examine each of the modulation sources: the four Modulators and the Macros.

4.4.1. Assigning a modulation

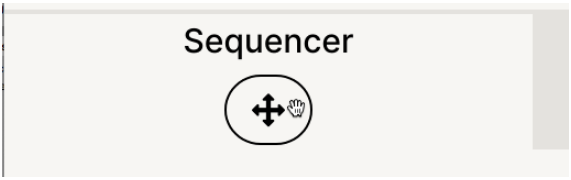
Every modulation has a *source* and a *destination*. If we think of modulation as "automatically turning a knob", then the source is whatever's doing the turning and the destination is the knob being turned.

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*.

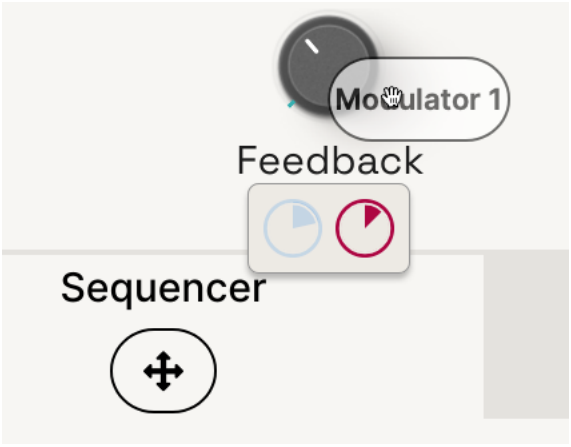
Each of the Modulators and Macro has a tab that displays its name and a dynamic line (called a Modulation **Tracer**) showing what signal it's generating at the moment.

As long as the Advanced button is on, all five tabs and their Tracers (or the circled **1** and **2** for the Macros) 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: 23



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!

> 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!

4.4.2. Examining and adjusting modulations at the destination

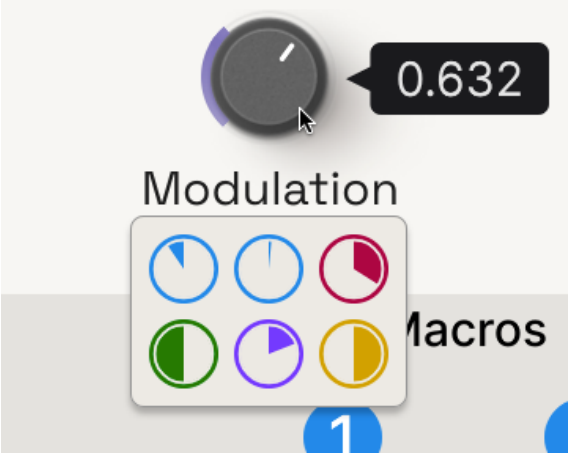
Once a routing has been established, you can examine it just by hovering your mouse over the control. The pop-up dial will appear, showing the currently set modulation amount.

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.

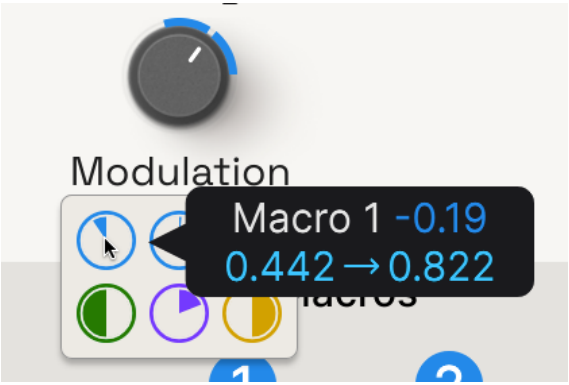
Without clicking, move your mouse from the control to the relevant dial. A tooltip box will tell you which source it's for, and the current amount setting.

Modulation dials are color coded to indicate the kind of source they represent: blue for Macros, red for a Sequencer, green for a Function, purple for Random, and yellow for an Envelope Follower. They are bipolar, with O 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 O, a Sequencer is set to a large positive amount, a Function is fully negative, a Random source has a medium positive amound, and an 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. You will also see a pop-up display that shows the precise modulator in use, its default setting, and its range of control.

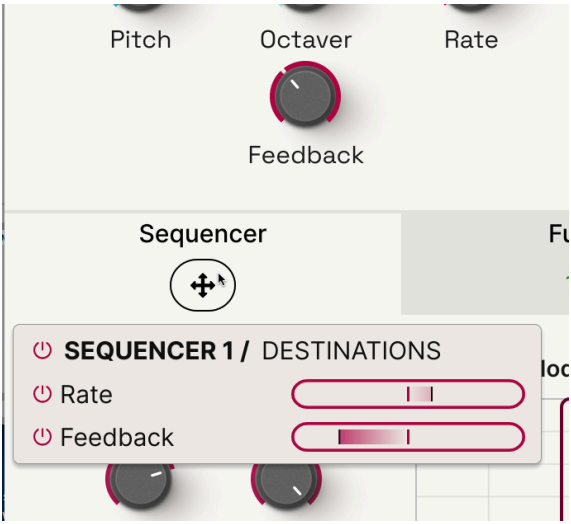


While you've highlighted a particular pop-up dial, you can click and drag to change its value. Right-click and drag to change the modulation amount with fine accuracy. Double-click to set the amount to O. When you're done, move your mouse away and the pop-up will vanish.

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

4.4.3. Examining and adjusting modulations 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:



Note that in the screenshot above, the Feedback knob 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(s).

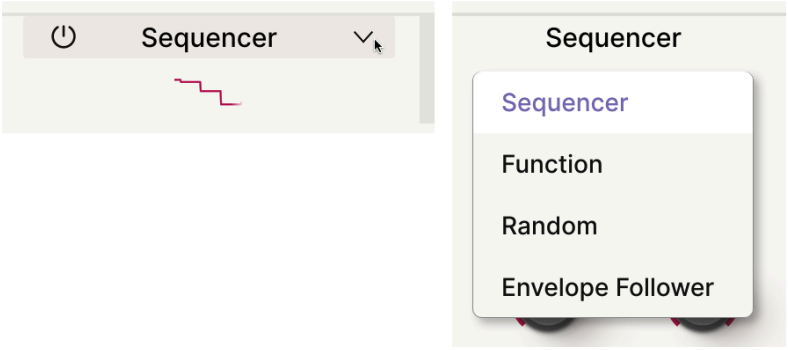
Each routing has a horizontal bipolar display bar of the amount, with negative values to the left and positive values to the right. As with setting amounts at the destination, you can click and drag to change the amount, right-click and drag for fine adjustment, or double-click to set it to 0. Unlike 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 six 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.

4.5. Modulators

Tabs for the four Modulators and the Macros

The four Modulators are flexible sources that can be put to work anywhere you need a particular kind of control. As shown here, all four of the Modulator tabs show animated Tracers of their current activity at all times.

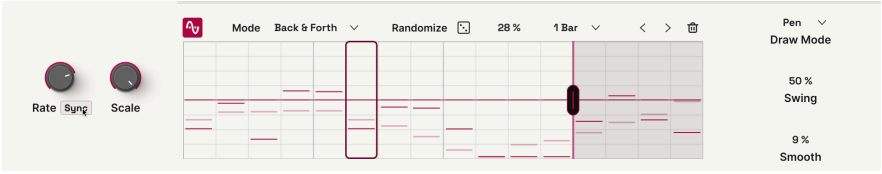


Left: hovering over a tab. Right: clicking on the drop-down arrow to open Modulator selector menu.

Each one of the Modulator tabs can be assigned as one of the four available types, by clicking the down-arrow on its tab to reveal a selection menu. Similarly, each Modulator can be turned off by clicking the Bypass (power icon) button that appears when you hover your mouse over the tab.

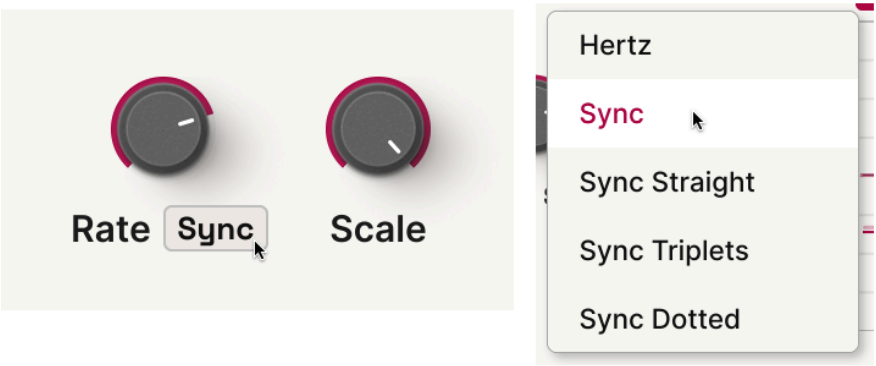
> Remember that any Modulator can be freely assigned to any of the slots. This includes using more than one of a particular Modulator. If your sound design needs four different Functions or Sequencers, you've got them. Go wild!

4.5.1. Sequencer



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

Global parameters include:



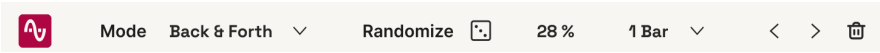
Clicking on the Sync button (left) pops up a menu of sync types (right).

- **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.

4.5.1.1. Step controls

The Sequencer has a maximum of 16 steps. The sequence can be shortened by dragging the vertical 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.

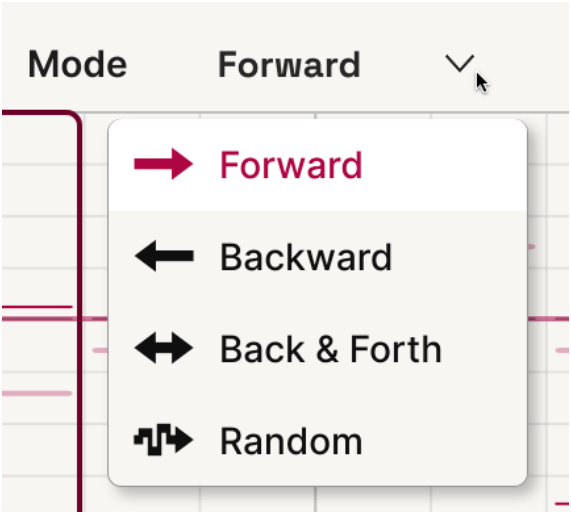
> In the screenshot at the start of this section, the sequence has been shortened to 12 steps.



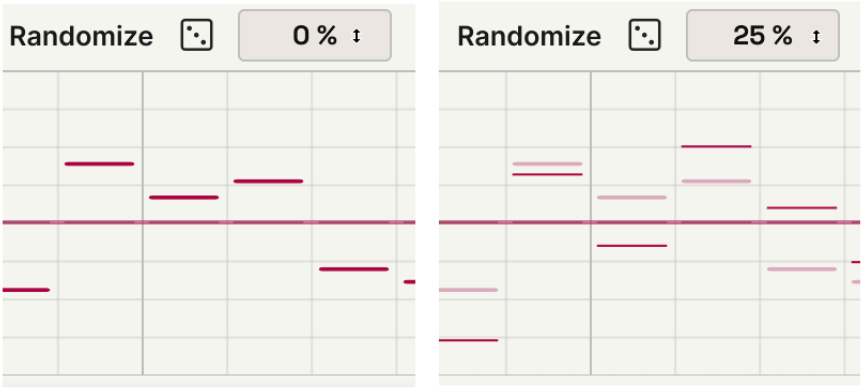
Step behavior is set by controls along the top edge of the sequence steps. From left to right, they are:

Polarity button, Unipolar vs Bipolar

- **Polarity**: Sets the Sequencer to send *unipolar* (all values above 0) or *bipolar* (positive and negative values) data. When the icon is lit red, bipolar is selected.

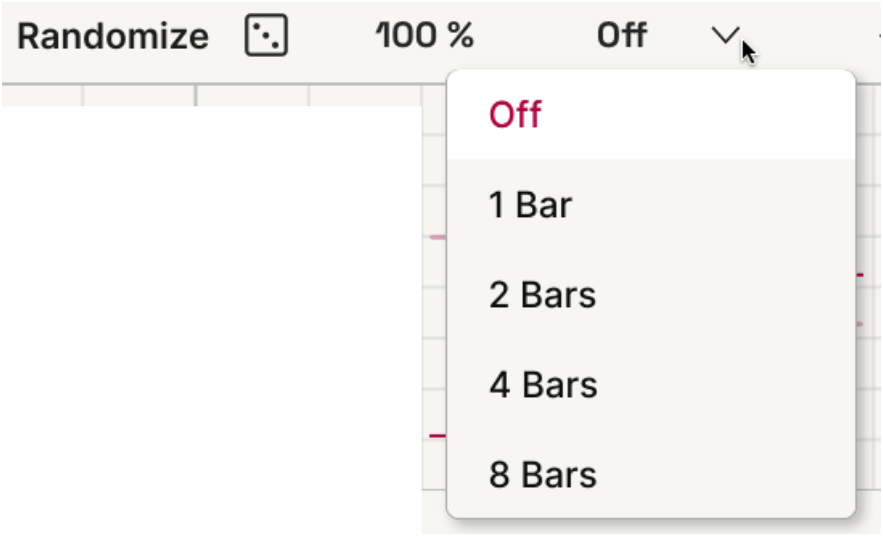


- **Playback Mode**: This drop-down menu lets you select the order of step playback. Options include Forward, Backward, Back & Forth, and Random.
- **Randomize**: You can add variation to the sequence by inserting some randomness into each step, which is set with the **Random Amount** parameter.



Random Amount O% vs. 25%. Note fixed values vs. randomly generated values.

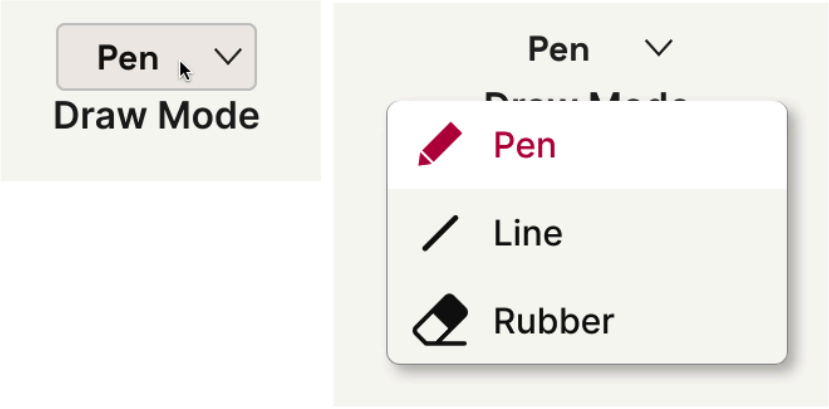
As shown above, adding randomness turns a set step value into a possible range of values with the set value at the center. The set fixed value of the step is seen as a pale red line, and the current random value is shown as a dark red line.



Randomize controls: Regenerate (dice icon), Random Amount, Auto Regen drop-down

- **Regenerate**: Of course, if a random set of variations never changes, then it's not really random, is it? That's what the **Regenerate** button (the dice icon) 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 drop-down menu.
- **Left and Right Arrows**: Shift the position of sequence steps by one position earlier or later.
- **Clear**: Click the trash can icon to reset all step values to O.

Finally, on the far right, just above the **Swing** and **Smooth** settings, is the **Draw Mode** drop-down, which sets the way the cursor draws step values.



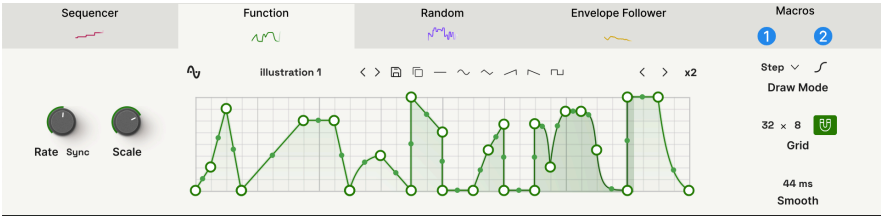
The choices are: - **Pen**: Click and drag to draw step values directly. - **Line**: Click and drag across the sequence; all steps between where you first clicked and where the cursor is now will be arranged in a line. Move the cursor to change the slope of the line, and release the mouse to set the values. - **Rubber**: Click on a step to reset it to O.

> For our American friends, "rubber" is a common European English term for "eraser".

Finally, there are two more global parameters, set by clicking and dragging up or down.

- **Swing**: Sets the swing amount from 50% (no swing) to 75% (hard swing).
- **Smooth**: Smooths out the transitions between steps for more gradual effects. It's a percentage of the step length, from O% to 100%.

4.5.2. Function



The Function Modulator is a user-created "envelope" that you can route to any destination you wish. It allows control of parameters with extreme accuracy. The center of the panel is the **Grid**, a detailed representation of the Function in use, surrounded by a variety of controls.

The two primary controls to the left of the Grid are similar to those on the Sequencer:

- **Rate**: How quickly the Function cycles through, from O.O25 Hz to 5O Hz, or from 1/48 (1/32 triplet) to a maximum of 24 bars.
- **Scale**: Adjusts the global amount of Function modulation.

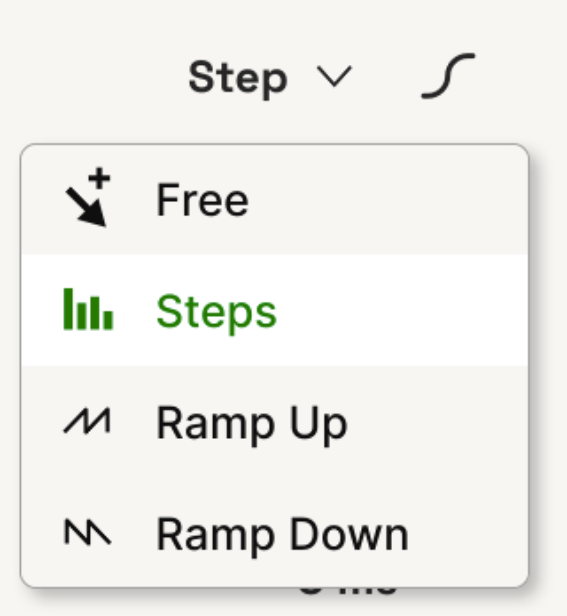
Above the Grid is a row of global controls. From left to right, they are:

- **Function Polarity** (sine wave icon): Chooses unipolar (off) or bipolar (on) function values.
- **Function Preset** controls: let you work with premade Function Presets [p.38] or create your own.
- **Left and Right Shift** arrows: Clicking one of these arrow icons will shift the position of Function 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 Duplicate function lets you set this up very quickly and then add the variations by hand.

To the right of the Grid are several more controls:

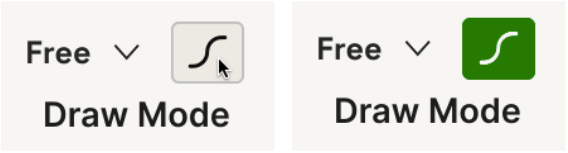
- **Draw Mode** pop-up lets you choose how to draw within the grid to create your Function:



The four Draw Modes are:

- **Free**: Points can be placed and moved at will, as we'll talk about in detail in the section on Drawing Functions [p.35].
- **Step**: 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 alternative Draw Modes are great for quickly setting up series of pulses or risers, or step-sequencer-like chains of values. Each point and line can be fine-tuned afterward, once you switch back to Free.



The S-Curve button

- 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.

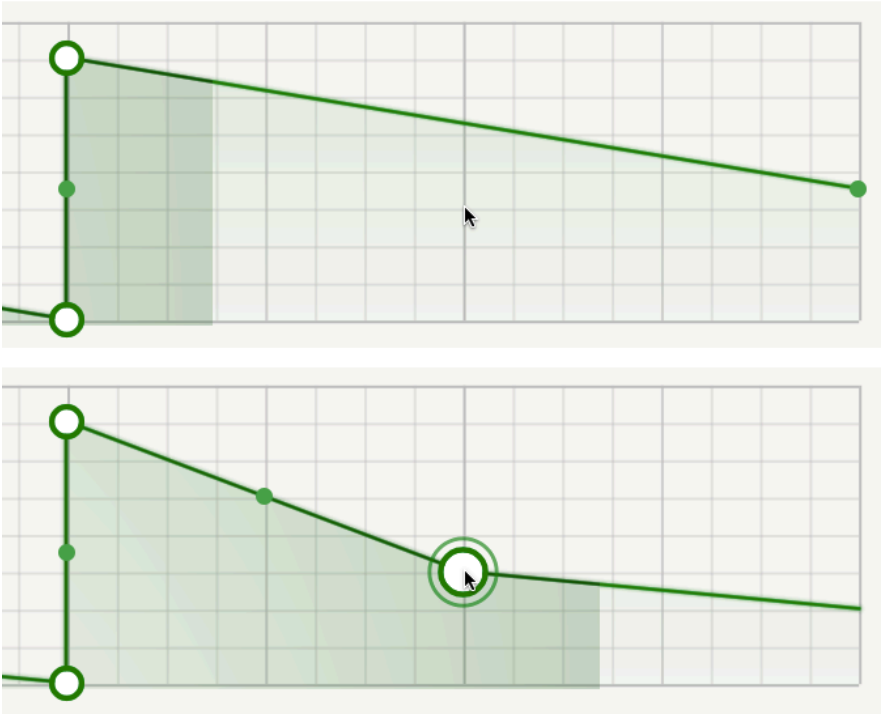
> There are other ways to alter a line's curvature, which we'll learn about under Tension [p.37]. The **S-Curve** button is a quick way to get musically useful results on all of a Function's steps at once.

- **Grid**: Sets horizontal and vertical Grid [p.36] divisions.
- **Snap**: Clicking the magnet icon toggles Snap [p.36] mode for Function step editing.
- **Smooth**: Controls smoothness of transitions from step to step, from 0 ms to 4.0 seconds.

4.5.2.1. Drawing Functions

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

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.



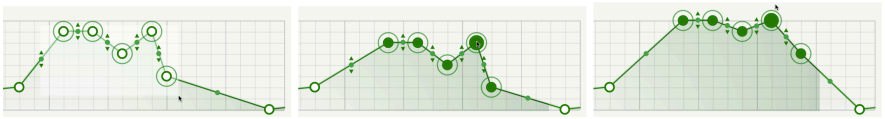
Adding points to a Function

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

Hover the cursor over a point to select it (it will have a ring around it, as shown above), 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.

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.



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.

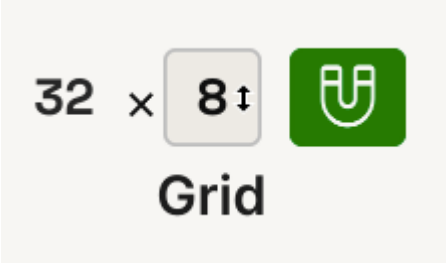
Click and drag any one of the selected points and all of the others will move with it, along with the lines between them. Note that the relative positions of the points will change to accommodate keeping them all within the grid and within the bounds of the two points on either side of them.

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.

4.5.2.2. Grid and Snap



Grid settings and Snap (magnet) button

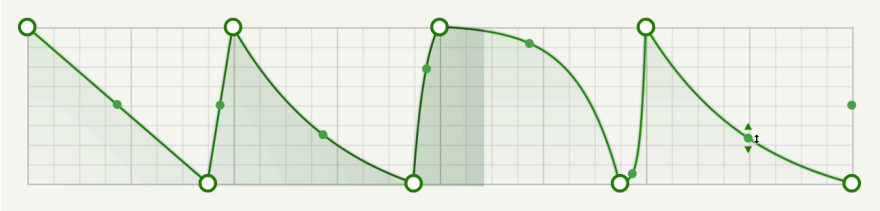
The Grid settings determine how many horizontal and vertical divisions are shown on the Grid display. Changing the settings will not affect how a Motion Envelope plays back.

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.

4.5.2.3. Tension



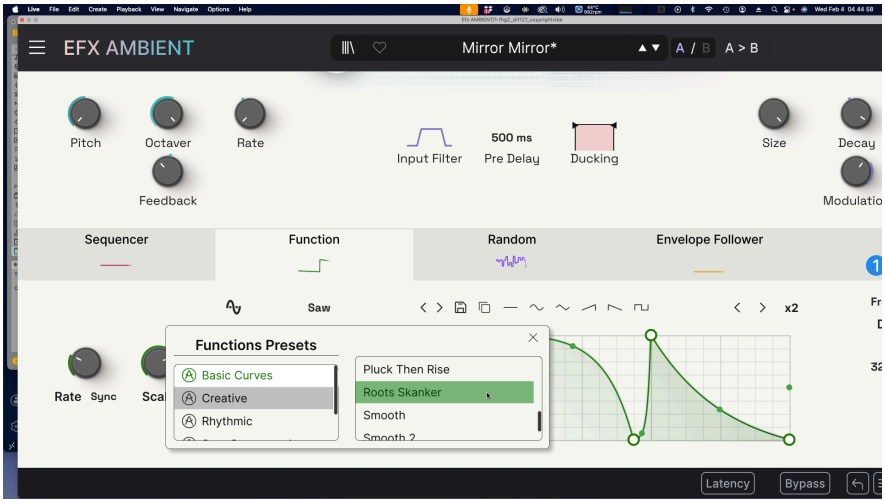
Ramps with different Tension values

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).

4.5.2.4. Function Presets



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

Click on the Function Preset name (it will be the last one selected, not necessarily what is on the Grid at the moment) above the Grid to pop up the Function 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.

- The **left and right arrows** move to the previous or next Function Preset.
- The **Save** and **Copy** icons let you save the current Function as a User Function Preset, and copy the Function to paste into another Modulator tab.
- The six **waveform icons** let you choose a simple Function with one click: Flat, Sine, Triangle, Ramp (up), Saw (down), and Square.

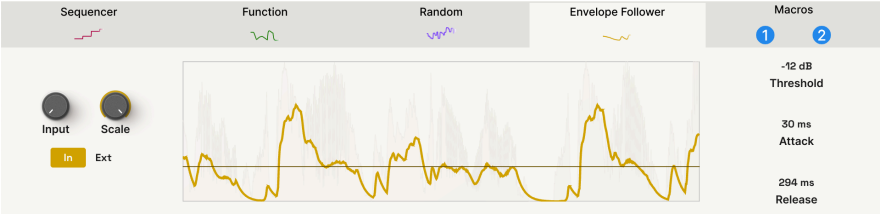
4.5.3. Random

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.
- **Polarity**: Sets the Random to send *unipolar* (all values above 0) or *bipolar* (positive and negative values) data.
- **Distance**: Controls how far away the next step can be from the previous step's value. This lets you create anything from very tiny variations to huge jumps. The default value is 100% (complete range of randomness), but it can go as low as 0% (no variation, a flat line) to 200% (wild swings that often hit the highest and lowest values).
- **Jitter**: Adds random variation in timing to the steps, with some lasting longer than others.
- **Smooth**: Smooths out the transitions between steps for more gradual effects. This is reflected in the waveform on the dynamic display.

4.5.4. Envelope Follower



The **Envelope Follower** 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 background faded line represents the audio itself, and the waveform with the thicker line represents the actual control signal being output.

- **Input**: Sets a gain boost applied to the input signal, up to 24 dB.

> 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!

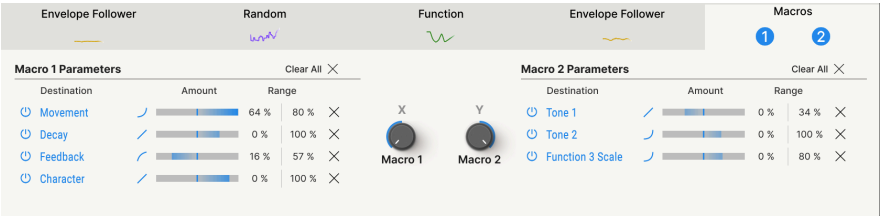
- **Scale**: Sets the overall strength of the modulation signal sent out to destinations. It's a sort of "volume control" for the sequence that can be adjusted easily.

- **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, for example controlling a drone modulation with the beat of a kick drum track.

The controls to the right of the visualizer are:

- **Threshold**: Sets the signal level at which the envelope follower is triggered. Its range is -50 dB (the default) to 0 dB. The current Threshold setting is shown on the scrolling display as a horizontal black 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 0!
- **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.

4.6. Macros



The two **Macro** knobs at the top center of the Main Panel [p.8] 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 XY controller lets you move both at once, for intuitive control of all aspects of your sound.

The Advanced Panel is where you will find all the controls for creating and adjusting the Macros.

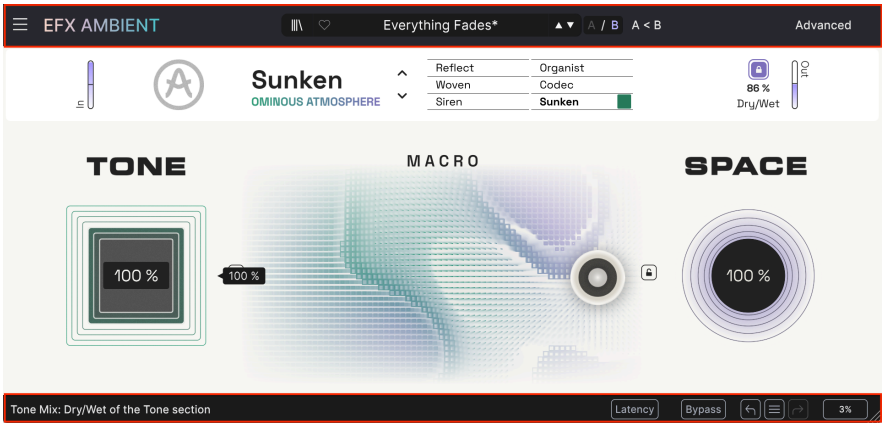
The Macros tab in the Advanced Panel works exactly the same way as the other Modulators' tabs. Click on the circled **1** or **2** and drag/drop to assign one or the other Macro to any destination.

As with other Modulations [p.24], Macro routings will appear as light blue dials in a destination's modulation pop-up, and hovering over a Macro's circle icon drops down a menu of current assignments and amounts that can be adjusted, bypassed, or removed.

The Macros tab itself shows all of the currently assigned modulations for each Macro, but allows more detailed control of each one. Each Parameter in a Macro has controls for:

- **Parameter Bypass**: turns that modulation in the Macro on or off.
- **Curve**: Drag this icon up or down to change the shape of the control response from exponential to linear (the default) to logarithmic.
- **Amount**: Sets the direction and amount of the modulation.
- **Range**: limits the lower and upper values of the parameter that the Macro can't surpass. This lets you set one parameter in a Macro to only move a little bit while other parameters have larger ranges.
- **Clear**: Click the X to remove a modulation from a Macro, or click **Clear All** to start from a blank canvas.

5. THE TOOLBARS



The Upper and Lower Toolbars are indicated in red boxes

The **Toolbars** above and below the Main Panel [p.8] of Efx AMBIENT contain a number of important functions for Preset selection, housekeeping, and other utility settings.

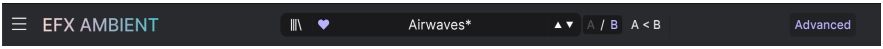
The Upper Toolbar includes:

- The Main Menu [p.43]
- The Preset Name Pane and Preset Browser [p.54]
- Switching and copy options for A and B settings [p.49]
- The Advanced button [p.49]

The Lower Toolbar includes:

- The parameter description area [p.50]
- The Latency [p.50] button
- The Bypass button [p.51]
- Undo, Redo, and History [p.51]
- The CPU Meter [p.52] and Panic [p.52] functions
- A corner grab handle [p.53] for resizing the Efx AMBIENT window

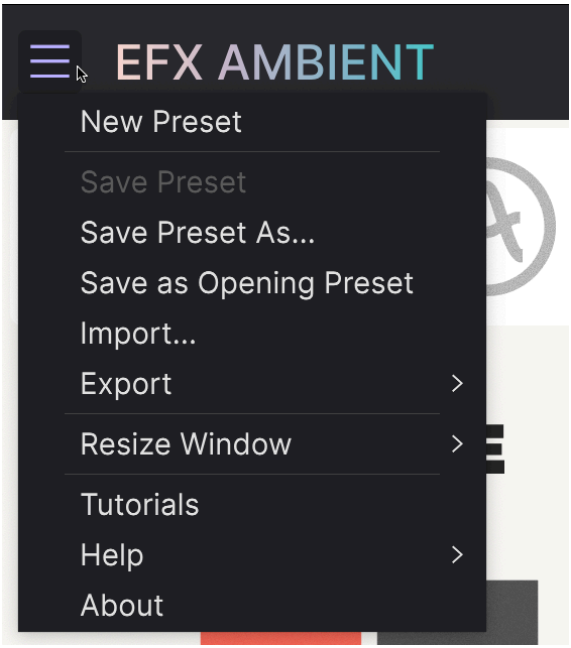
5.1. Upper Toolbar



The Upper Toolbar

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

5.1.1. 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.

5.1.1.1. New Preset

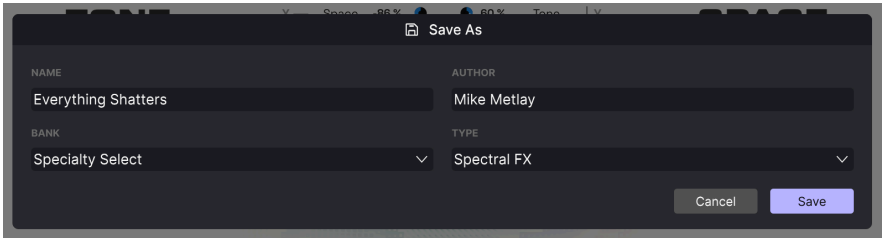
Creates a new Default Preset with initialized settings for all parameters.

5.1.1.2. 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.

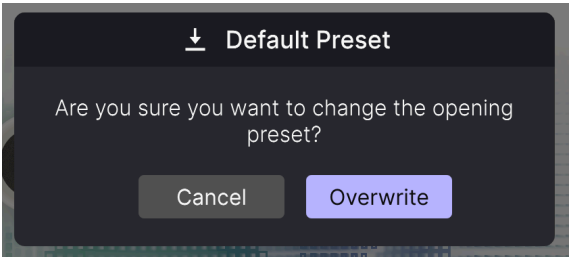
5.1.1.3. Save Preset As...

This option saves the current settings of Efx AMBIENT under a new Preset name in the User bank. (Factory Presets cannot be overwritten or deleted.) Clicking this option reveals a window where you can name your Preset and enter more detailed information about it:



> Information entered for the Bank, Author, and Type fields are all useful when searching for Presets in the Preset Browser [p.54]. You can also type a name into the Bank field, which will create a new user bank that will then be available in subsequent *Save As* operations. You can't write into the Factory bank, but you can create multiple user banks!

5.1.1.4. Save as Opening Preset



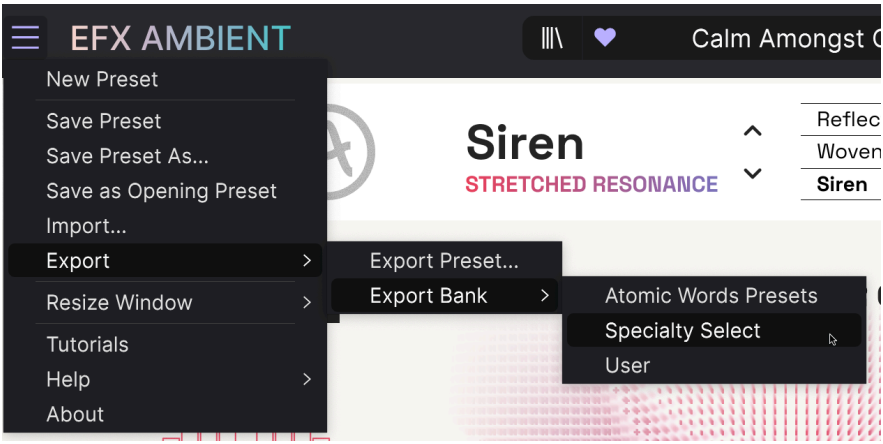
This option pops up a window to select the current Preset (Factory or User) as the one that will open when Efx AMBIENT is first placed on a track or bus in your DAW project. If you choose a Factory Preset, it will open with its initial factory settings.

5.1.1.5. 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.

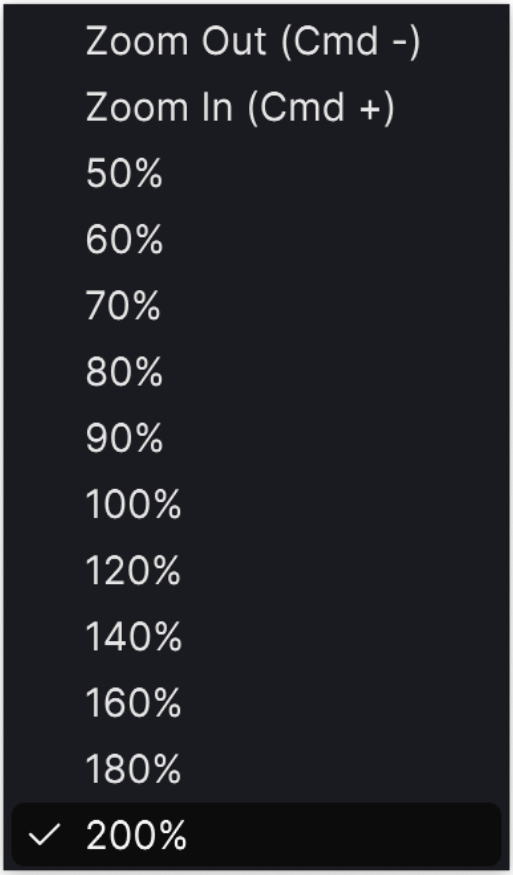
5.1.1.6. Export...

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 .BSPKX. By default, filenames include a time and date stamp.



- **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. If you have created more than one User bank, all of them will appear here.

5.1.1.7. Resize Window

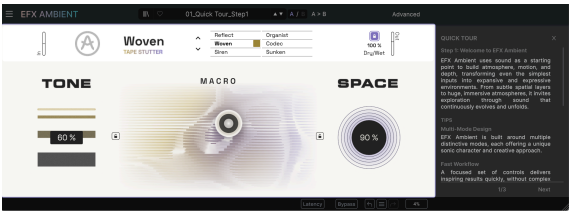


Efx AMBIENT can be resized from 50% to 200% of its default size (100%) without any visual artifacts. On a smaller screen, such as a laptop, you may want to reduce the interface size so it doesn't dominate the display. On a larger screen or a second monitor, you can increase the size to get a better view 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.53] at the right of the lower toolbar to change the Efx AMBIENT window size.

5.1.1.8. Tutorials



Here's a page from the Main Panel Tutorial

Efx AMBIENT 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 the relevant controls and walk you through the process. Click **Exit Tutorials** at the bottom of this pane to end the tutorial and collapse the plug-in window to its previous size.

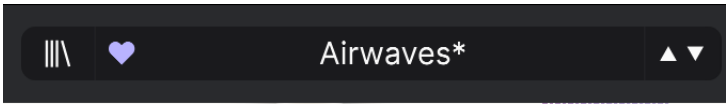
5.1.1.9. Help

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.

5.1.1.10. About

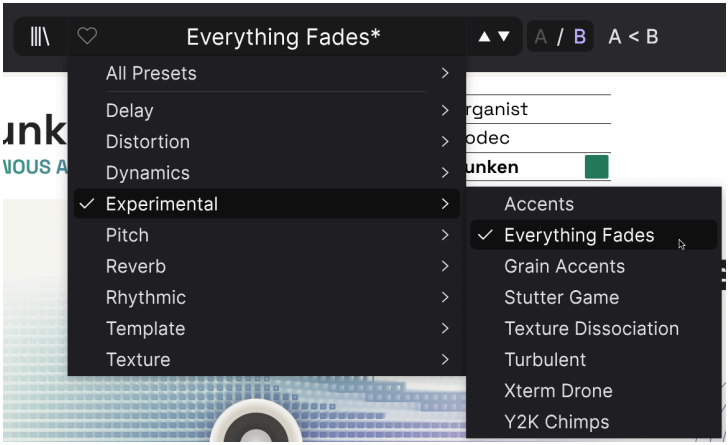
Here you can view the software version and developer credits. Click again anywhere on the screen (outside the **About** window but inside the plug-in) to make this pop-up window disappear.

5.1.2. Preset Browser access and Name Pane



The Preset Name Pane

Clicking the "books on a shelf" button opens the Preset Browser [p.54], which offers a myriad of ways to browse, sort, and organize Presets in Efx AMBIENT.



The Preset Types drop-down, showing options for Experimental

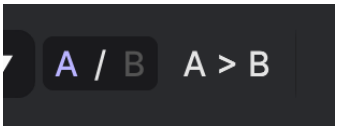
Clicking on the Preset name also opens up a quick drop-down menu for selecting Presets without having to go into the Browser, as shown above. You can select to look at lists of Presets organized by purpose, as shown above, or look at All Presets at once.

> The categories/purposes on the left of the drop-down correspond to Subtypes [p.58], a specific level of Tag found in the Preset Browser.

Everything you need to know about managing Presets is covered in detail in the chapter on the Preset Browser [p.54]. This includes working with Liked Presets, which are tagged by clicking the heart icon you can see to the left of the Preset name.

> Note: An asterisk just after the name in the Preset Name Pane (*) indicates that you've made changes to that Preset, even if you haven't saved them. If you want to keep them, be sure to do a **Save Preset As...** operation and name your Preset.

5.1.3. Dual settings and copy



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

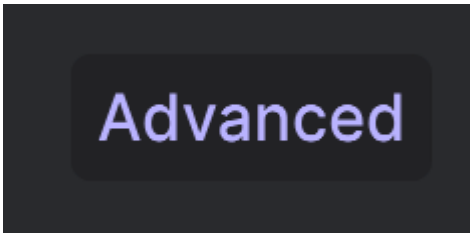
Preset state B active with the option to copy settings to A

Each Preset is actually two Presets in one! Using the A and B buttons, you can switch between two completely different sets of control settings. 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.

> ! 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!

5.1.4. Advanced button



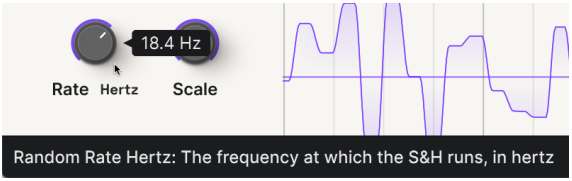
The Advanced button

Finally, at the upper right corner of the Upper Toolbar is a button to access the Advanced Panel [p.15] described in its own chapter.

5.2. Lower Toolbar

The Lower Toolbar

5.2.1. Parameter Description area



This Parameter Description pops up when you hover over the Rate control for the Random Modulator

Operate or hover on any knob, button, icon, or other control, and a brief description of the parameter will appear in the lower left-hand corner.

5.2.2. Latency

The Latency button

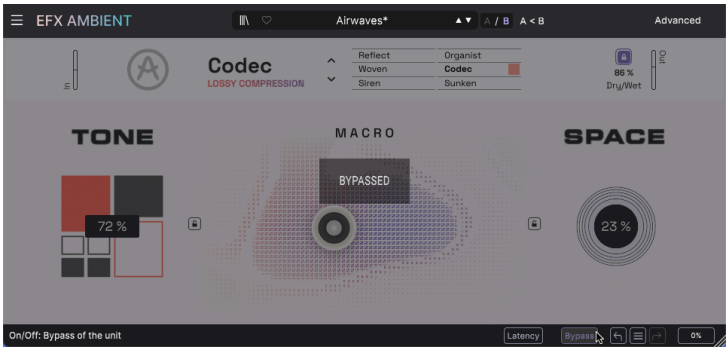
Efx AMBIENT offers an option for *latency compensation*, selected by pressing the **Latency** button.

Digital signal processing (DSP) doesn't happen instantaneously. Processing each sample of audio adds a bit of delay called *latency*. Most DAW software has a way to compensate for latencies in different audio channels and submixes, depending on how much latency they're experiencing.

If you're hearing too much delay in the signal you're processing when compared to other tracks in your mix, the **Latency** button will compensate by attempting to match the latency value for your DAW session.

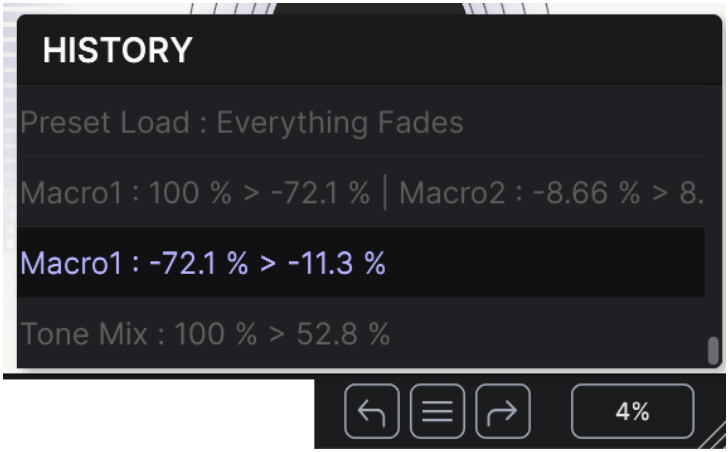
5.2.3. Bypass

The **Bypass** button bypasses the Efx AMBIENT plug-in entirely. You can use it to quickly compare dry vs. processed output without having to bypass the plug-in at the DAW level.



When "Bypass" is engaged, it's pretty obvious...

5.2.4. Undo, Redo, and History



The Undo and Redo buttons, History pop-up, and CPU Meter

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 AMBIENT offers comprehensive Undo, Redo, and History functions so that you always have a safe way back.

Use the arrows to go back and forward one control movement at a time.

5.2.4.1. Undo

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.

5.2.4.2. Redo

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.

5.2.4.3. 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 AMBIENT. 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.

5.2.5. CPU Meter

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

5.2.5.1. Panic

Mousing over the CPU Meter accesses the Panic button

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 AMBIENT. This is a momentary command, so sound will resume if your DAW is still playing.

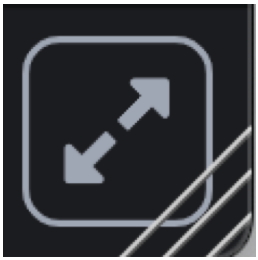
In the event of serious runaway audio (say, from an unrelated delay effect that has gone into a feedback loop), stop your DAW playback and disable the plug-in causing the problem.

5.2.6. Resize handle

Drag the corner icon next to the CPU Meter to change window size

Grab and drag the diagonal lines to the right of the CPU meter to resize the plug-in window. When you release the mouse button, the window will snap to the nearest increment available in the Resize Window [p.46].

5.2.6.1. Max View button

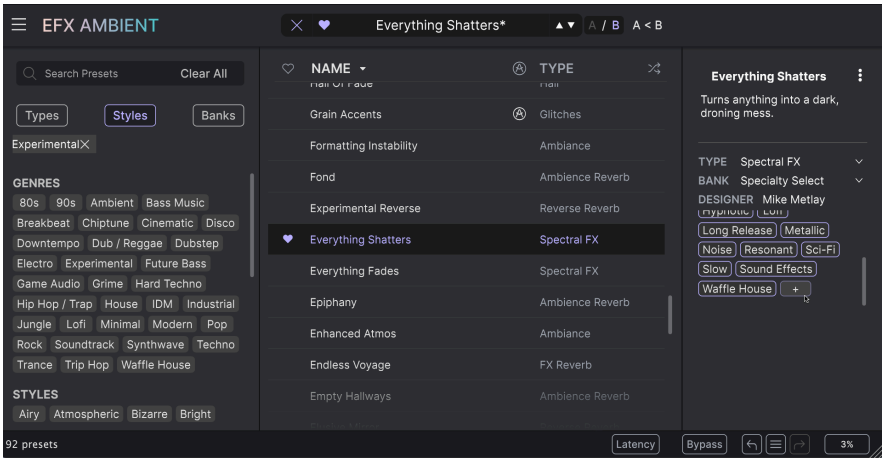


If this icon appears, click it to restore an accurate window size.

Sometimes, you may see the above button with two diagonal arrows appear over the resize handle. This happens when, for some reason, the window size is not displaying all of the controls of Efx AMBIENT. Click it to restore a full view of the open controls.

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

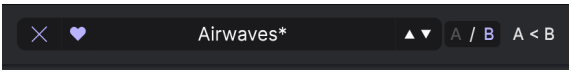
6. THE PRESET BROWSER



Efx AMBIENT lets you browse, search, and select Presets from the **Preset Browser**, a flexible yet easy-to-use graphic user 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'll cover the Preset functions from the Upper Toolbar [p.43], as introduced in the previous chapter.

6.1. Preset Name Pane



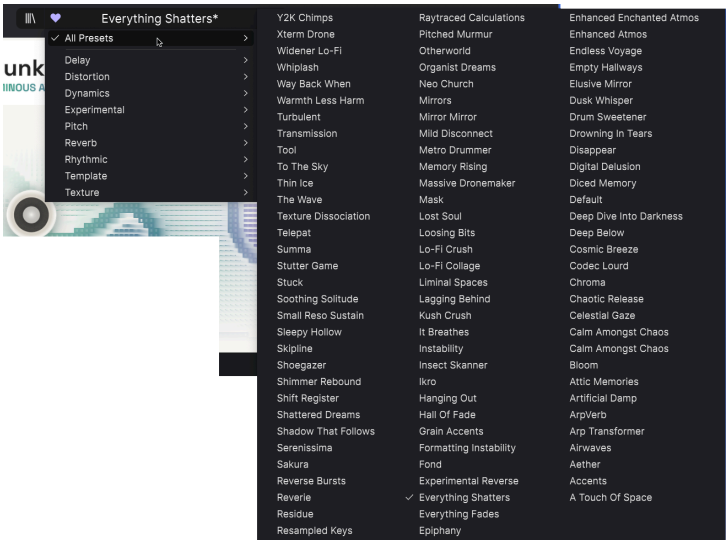
The **Preset Name Pane** at top center is always displayed whether you're in the main controls view or the Preset Browser. It reads out the name of the current Preset, obviously, but also offers further ways to browse and load Presets. A filled-in heart icon indicates a liked Preset.

6.1.1. 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 the search results. So, make sure any searches are cleared if you simply want to step through all available Presets until you find something you like.

6.1.2. Preset quick access

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

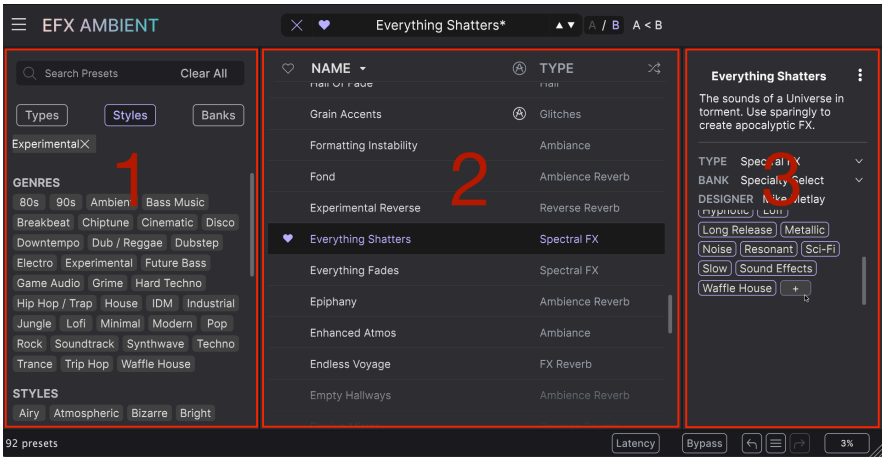
Below **All Presets** are category options for different applications: Delay, Distortion, etc. These correspond to the Subtypes [p.58] in the plug-in's library of Tags. Each of these brings up a submenu of Presets that are appropriate for the specified purpose. One useful aspect is that in the Tags area [p.58], which Subtypes are visible depends upon the parent Type selected. But in the above menu, all Subtypes are always displayed.

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 choices below the line, which always include all Presets within that Type.

6.2. 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:

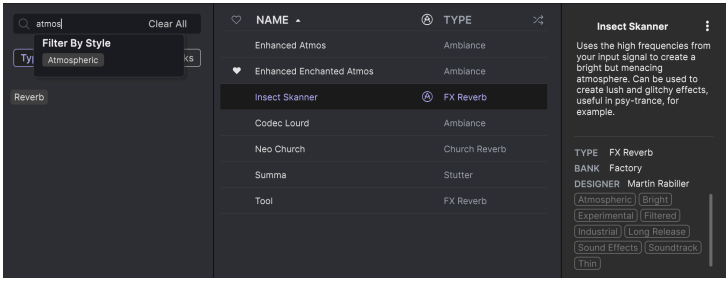


Number	Area	Description
1.	Search [p.57]	Searches for Presets by text entry with filters for Type, Style, and Bank.
2.	Results Pane [p.61]	Displays search results, or all Presets if no search criteria are active.
3.	Preset Info [p.65]	Displays Preset Details; can edit details for Presets in the User Bank.

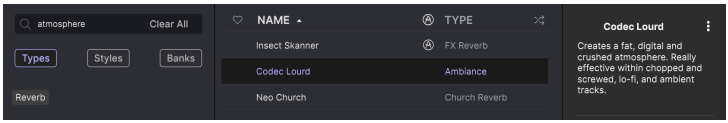
6.3. Searching Presets

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 and Preset Info. Second, If your search term is close to that of a Type or Style [p.58] 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.



Searching for the letters 'atmos' brings up two Presets with 'atmos' in the name, and five more where 'atmos' appears in the Preset Info (as shown here). There is also a suggested Filter By Style for the word 'atmospheric'.

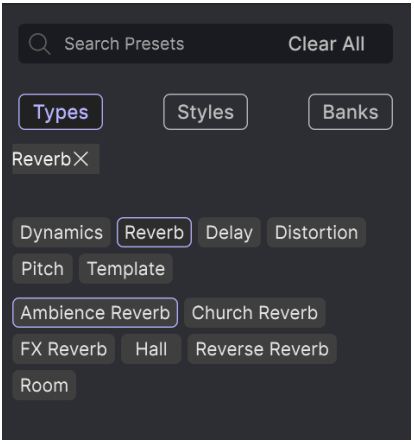


However, typing the full word 'atmosphere' restricts the search results to the three Presets that actually have the full word 'atmosphere' in their Preset Info.

6.3.1. 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.

6.3.1.1. Types and Subtypes



The main type, Reverb, is in the upper group of tags; its subtypes are in the lower group

The Types in Efx AMBIENT are: Dynamics, Reverb, Delay, Distortion, Pitch, and Template. With a clear search bar, click the **Types** button to bring up the list of types. If you filter by Multiple Types, say by typing in a second Type name when a first Type has already been selected, then all Presets in *either* Type will be shown.

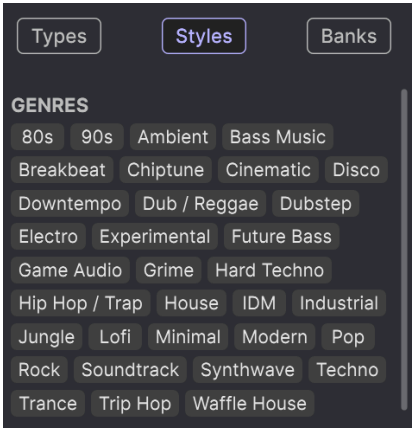
Types sometimes include Subtypes. In the above example, Reverb is the main Type, and the bottom row of Subtypes includes Ambience Reverb, Hall, etc. The selected Type determines which Subtypes are displayed.

> You can specify the Type and Subtype when saving a Preset [p.44], using the contextual Type menu. That Preset will then show up in searches where you've selected that Type. The categories of Presets in the quick drop-down menu [p.55] correspond to Subtypes, i.e. specific purposes or musical goals for the plug-in's processing.

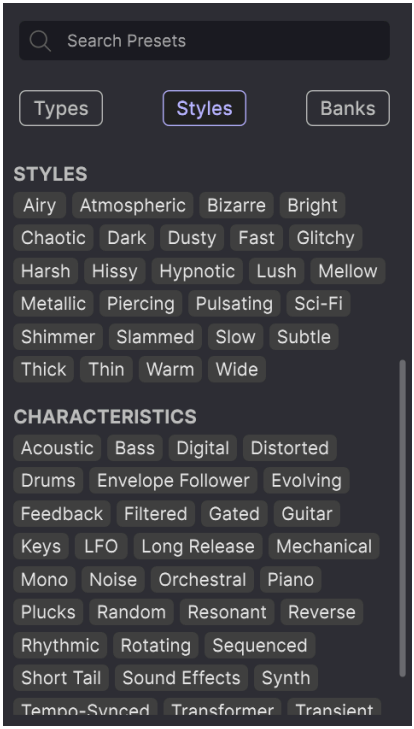
6.3.1.2. Styles

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 Fast, Mellow, Slammed, etc.
- **Characteristics**: Even more detailed audio qualities and target sonic characters such as Acoustic, Envelope Follower, Short Tail, etc.:



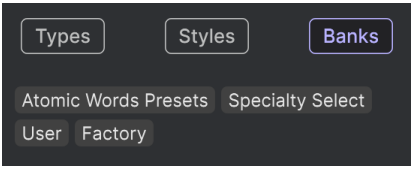
Click any tag in any of these categories, and the results will show only Presets that match that tag. Notice that when you select any tag, several other tags usually grey out and become unavailable. This is because the browser is *narrowing* your search by a process of elimination.

> Note that this is the opposite of how selecting multiple Types *broadens* your search.

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/Subtypes 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.

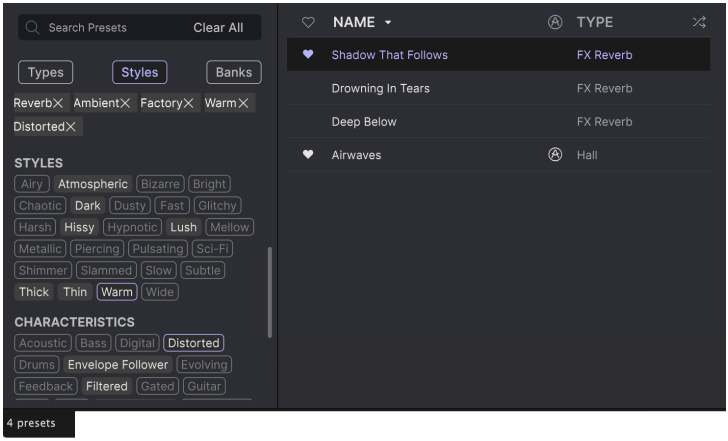
6.3.2. Banks



In this example, Specialty Select is a custom-named User Bank

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. When you perform a **Save Preset As...** [p.44] operation, you can type in a custom name in the Bank field. This will create a new User bank that will then be available in the menu the next time you **Save Preset As**. So you're not confined to a single, boringly named "User" bank.

6.4. The Results Pane



The results of searching using a combination of Type, Style, Characteristics, and Bank

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.

6.4.1. Sorting Presets

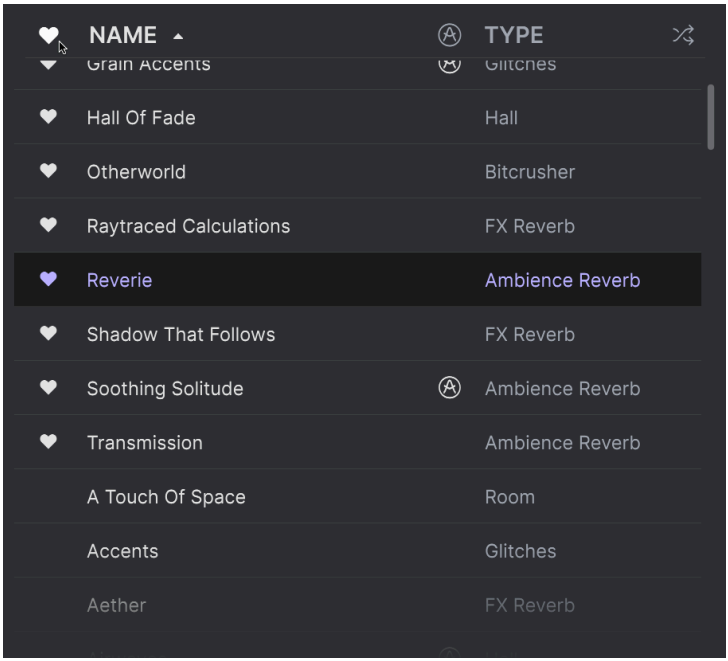
Click the **NAME** header in first column of the Results list to sort the results list of Presets in ascending or descending alphabetical order.

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

6.4.2. 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.54].

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



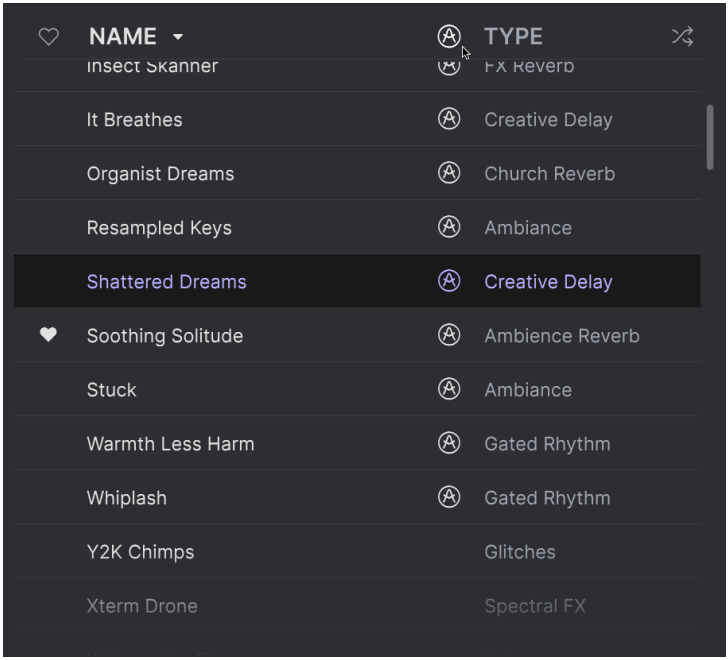
A filled-in heart icon indicates a Liked Preset. An outline indicates a Preset that has not yet been Liked. Click the heart at the top of the list again to return the list to its previous state.

6.4.3. 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... and sometimes it can simply spark inspiration.

6.4.4. Featured Presets

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

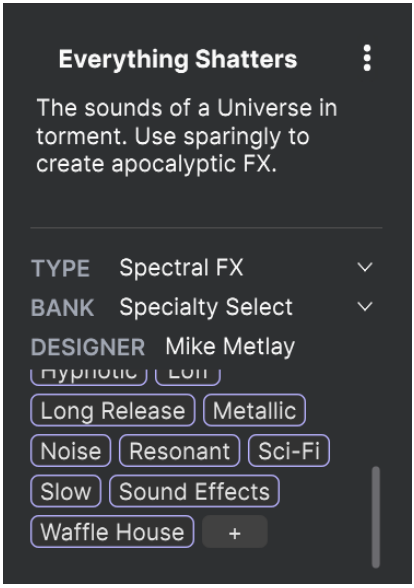


Clicking the Arturia logo icon at the top of the Results pane sorts all featured Presets to appear at the top of the list.

> Sorting by Liked presets takes priority over sorting by factory-featured ones. So, if the top heart icon is engaged, the results will show all liked Presets first, but the first among these will be featured Presets. Non-liked featured Presets will appear lower on the list.

6.5. Preset Info Section

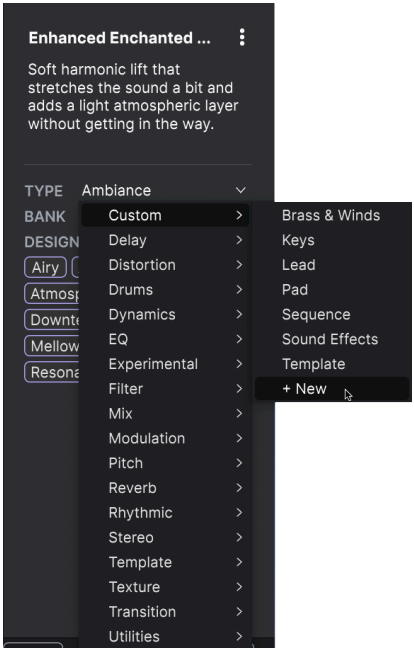
The right side of the browser window shows specific information about each Preset.



The Preset Info pane, with custom notes and Bank selection

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

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.

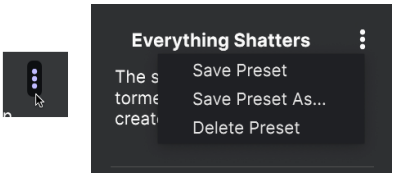


You can select a Type, Subtype, or create your own with New +

> Types and Styles changes you make here are reflected in searches. If you remove a given Style tag from a Preset and then save that Preset, it will not show up in future searches for Presets bearing that tag. Note that we provide a huge range of Types and Subtypes meant to work across the entire FX Collection. Not all of these apply straightforwardly to Efx AMBIENT.

6.5.1. Preset Info quick menu

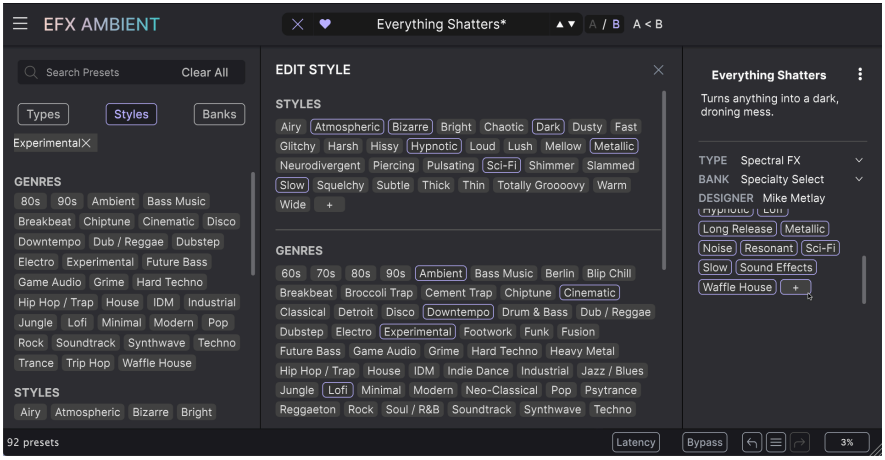
Clicking the icon with three vertical dots brings up a quick menu for **Save Preset**, **Save Preset As...**, and **Delete Preset** operations:



For sounds in Factory banks, only **Save Preset** and **Save Preset As...** [p.44] are available. If you're working with a user Preset and **Save Preset** is greyed out, it means you haven't yet changed anything in the Preset.

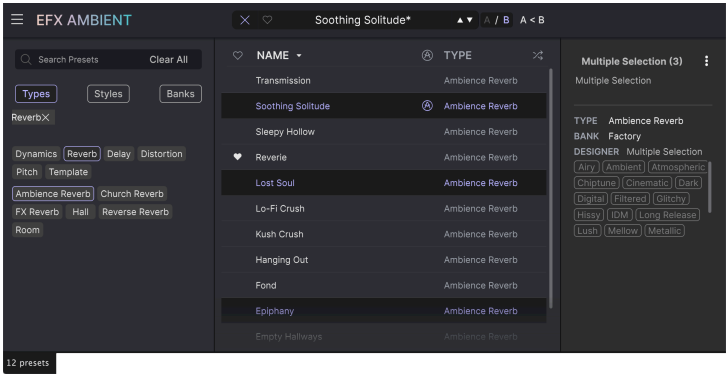
6.5.2. Edit Style

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:



6.5.3. 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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