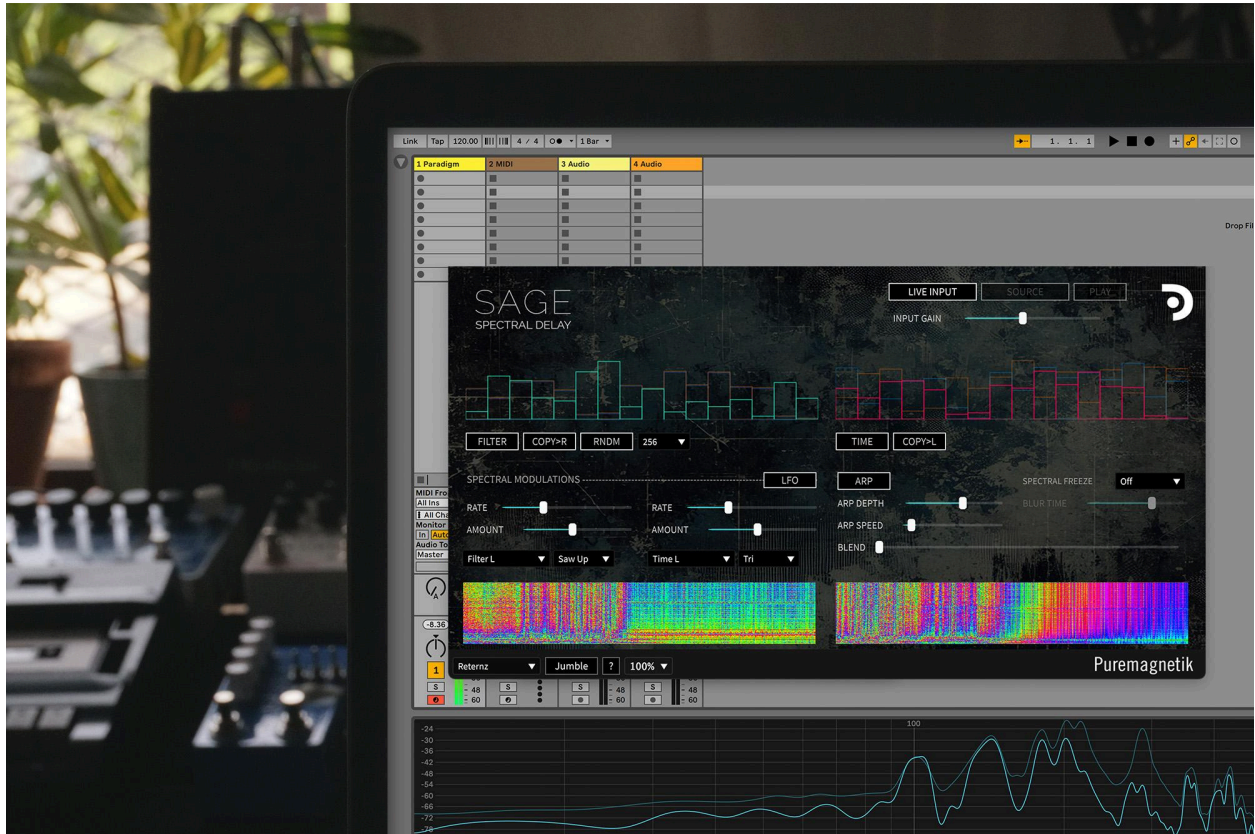


Sage | Spectral Delay

User Guide 1.0.1

By Puremagnetik

<http://puremagnetik.com/sage>



Sage is a cutting-edge spectral processor, drawing inspiration from the iconic but discontinued Native Instruments Spektral Delay plugin. It offers unparalleled capabilities in crafting shimmering rhythmic patterns and manipulating subtle harmonic overtones. By dissecting and modulating audio across the frequency spectrum, Sage can reveal hidden layers of sound, introducing rich textures and evolving sonic landscapes that were previously unnoticed.

Sage stands out from traditional delay effects due to its ability to apply delays separately to different frequency bands. Here's an overview of its key features:

- **Spectral Processing:** Sage divides incoming audio into up to 1024 frequency bands using a Fast Fourier Transform (FFT) algorithm. Each of these bands can then be delayed, modulated, and processed individually.

- **Frequency-Dependent Delays:** You can control the delay time, feedback, and amplitude for each frequency band independently. This allows for highly intricate and evolving delay effects, such as creating complex rhythmic patterns or spatial effects based on different frequencies in the input signal.
- **Advanced Modulation:** Sage also includes modulation options for each frequency band, allowing for dynamic changes to the delay and filtering, making it possible to achieve shifting and morphing sound textures.
- **Creative Sound Design:** Sage excels in experimental sound design, as it allows for a wide range of creative effects that go beyond typical delays, such as spectral smearing, rhythmic filtering, and complex echoing textures.
- **Graphical Interface:** The user interface provides a graphical display of the frequency spectrum, making it easier to adjust the delay and feedback for specific frequency bands visually.
- **Sage can function as an effect plugin,** allowing real-time processing of incoming audio or the processing of audio files directly from disk.

INPUT SECTION



FILE INPUT / LIVE INPUT

This button toggles between a loaded audio file and an input on the channel that Sage is instanced on. This enables you to use Sage as an effect or audio file player.

SOURCE

When in File Mode (F/I button set to F) use the Source button to browse your disk for files. You can also drag + drop files into Sage from your file browser.

PLAY / STOP

This begins file playback when Sage is in File Mode.

INPUT GAIN

A primary gain stage for attenuating the incoming signal or file being processed.

SPECTRAL DELAY PROCESSING



FILTER / TIME / FBACK

This button toggles between three editing modes to adjust

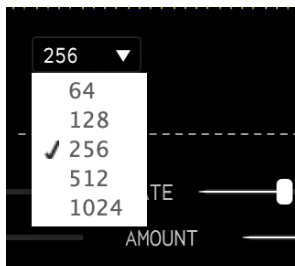
1. The Spectral Filter — Attenuate specific bands
2. Delay Time — Change the delay time on each specific band
3. Feedback — Change the delay feedback on specific bands

RNDM

Randomly change Filter, Time and Feedback tables for both Left and Right channels.

ANALYSIS BANDS

Dynamically change the number of bands used for spectral analysis and resynthesis. There is no definite rule for how many bands to use, and when to use them. However, this setting changes the sound dramatically and we encourage you to experiment with different bands on different content. When using the Spectral Arpeggiator for instance, you will find different bands work well on percussive content while others work well on harmonic content.

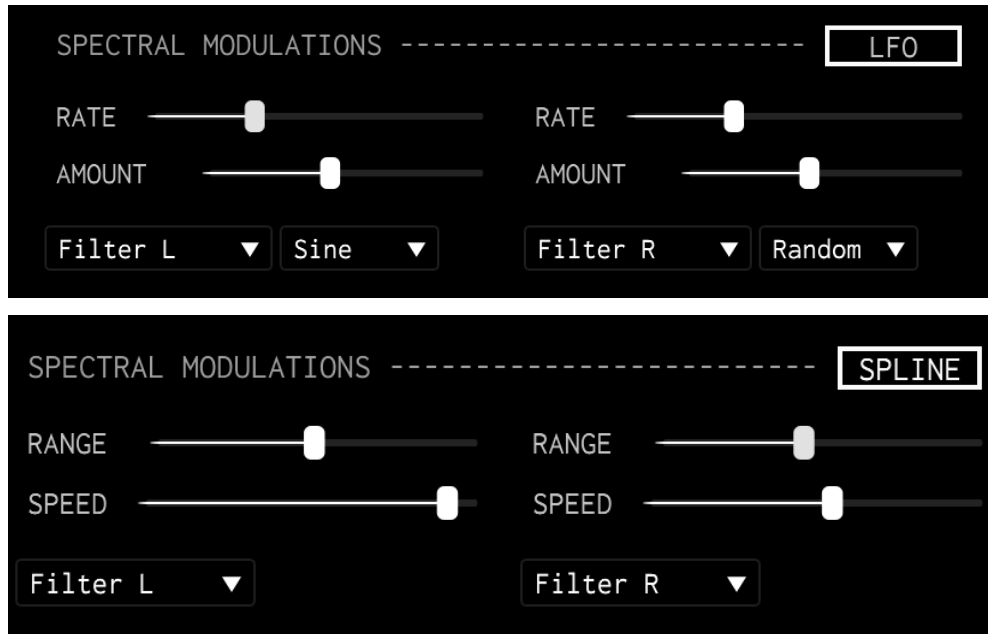


COPY

Copy the *currently* selected editing mode's table to the corresponding table in the *opposite* channel. For instance, when editing the right channel's FBACK table, you can easily copy this

table to the Left channel's FBACK table by simply clicking this button. This allows you to keep both channels in parity.

SPECTRAL MODULATIONS



LFO / SPLINE

There are 2 modulation sources that can affect two individual destination parameters. You can choose to make these two sources either a cyclical LFO or a randomly generated spline curve. The cyclical LFO repeats the LFO waveform pattern (unless it is a Random shape). The spline is a more natural generation of random points through time, with a curved line connecting each one.

LFO MODE — RATE

Speed of the cyclical LFO in hertz.

LFO MODE — AMOUNT

Amplitude of the LFO. This controls how much the LFO modulates the Destination parameter (see below).

LFO MODE — SHAPE

Choose between various waveform shapes for the LFO.



SPLINE MODE — RANGE

Similar to Amount in LFO mode, Range controls how far the randomly generated points in the spline travel to affect the destination parameter.

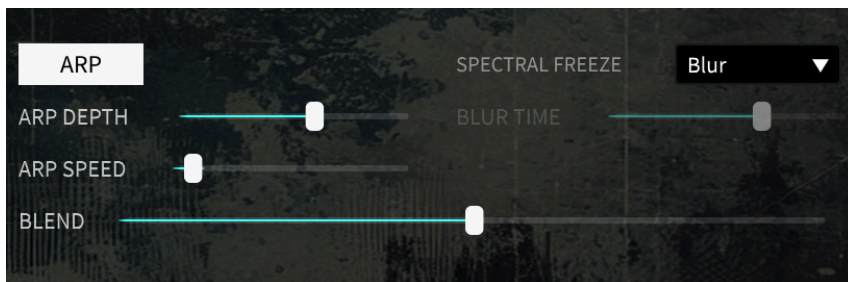
SPLINE MODE — SPEED

Frequency of points generated across the spline. The higher the Speed, the more often the spline will modulate the destination parameter.

DESTINATION

Two destination parameters can be selected for the LFO or Spline to control. If both slots are mapped to the same parameter, the results will be combined.

SPECTRAL FREEZE, BLUR and ARP

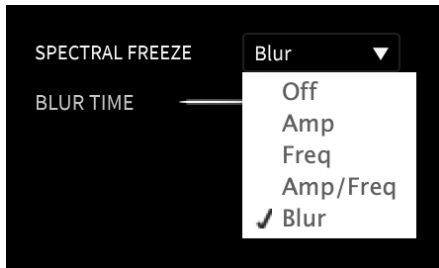


Sage allows you to spectrally freeze either amplitude bins, frequency bins or both. For instance, if you spectrally freeze the *frequency* bins of a loop that has dynamic changes in volume (e.g. a drum loop), the frequency will stay frozen in time while the rhythmic and *amplitude* fluctuations continue. The reverse is true if you freeze only the amplitude bins — the volume will stay the same while the frequency changes.

The spectral FREEZE and BLUR dropdown menu allows you to either

- a) No Freeze — The signal remains unaffected
- b) Freeze Amp — Only freeze the amplitude components of the spectrum
- c) Freeze Freq — Only freeze the frequency components of the spectrum

- d) Freeze A/F — Freeze both the amplitude and frequency components of the spectrum
- e) Blur — spectral blur smears the resynthesized signal across the time domain. Once “Blur” is selected, a slider appears allowing you to adjust the Blur Time of the signal from 0 - 2 seconds. Use it to create spectral clouds of sounds, or set the blur for a short period to generate a "smear" effect.



ARP

The Spectral Arpeggiator cycles continuously between bins at a selected speed and depth. The DEPTH and SPEED controls become visible when ARP is activated. Use this to create spectrally animated effects. Use various spectral band settings and band numbers to get dramatically different results.

Sage Spectral Delay Manual

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For questions or comments please write hello@puremagnetik.com