



# Albedo

Granular cloud reverb

**AAX + AU + VST** effect plugin for Mac/Windows/Linux

Designed and developed by **Sinevibes** ©2019-2024



# INTRODUCTION

**Albedo** is a granular cloud reverb plugin. It constantly records incoming audio into a buffer, and at the same time runs up to 64 individual looping playheads – called grains – scattered within this buffer. All grains have their own random size and position, and as they are overlaid together, a lush “cloud of sound” effect is produced. Thanks to dual envelope generators per grain, playback speed has continuous adjustment with perfectly smooth transitions between forward and reverse directions – enabling live audio manipulation much like on a tape machine or a turntable, including a fully stopped state.

With a flexible multi-mode filter before the buffer recording stage, as well synchronous grain speed and size modulation, **Albedo** is capable of a truly vast variety of effects: from melting pitch shifts and chaotic reversed delays, to chorus atmospheres and dark grimy dissonance. **Albedo** can also “freeze” its buffer and keep playing the granular cloud eternally, allowing you to layer the original input signal on top – and making this plugin a great performance tool.

# SPECIFICATIONS

## SOUND ENGINE

- Real-time circular recording buffer with freeze and stereo link functions, plus optional multi-mode state-variable filter
- Granular playback engine with up to 64 grains, randomized position and size, bi-directional speed, variable detune
- Selectable grain playback interpolation: low quality linear and high quality spline
- Sine-wave LFO for synchronous grain speed and size modulation
- Lag filters on all continuous parameters for smooth, click-free adjustment
- Supports mono > mono, mono > stereo, and stereo > stereo channel configurations

## GRAPHIC INTERFACE

- Color-coded graphic elements
- Consistent name, mapping, value, and unit implemented for all parameters in both graphic user interface and host control/automation
- Built-in preset management functions
- Supports window size scaling up to 200%

## SUPPORTED FORMATS

- **Mac:** 64-bit **AAX, AU, VST3** plugins for Intel and Apple Silicon processors, requires Metal graphics support and macOS 10.9 or later
- **PC:** 64-bit **AAX, VST3** plugins for x86 processors, requires Windows 8.1 or later
- **Linux:** 64-bit **VST3** plugin for x86 processors, requires a fairly recent Linux distribution

# INTERFACE

**Albedo** features a fully vector-based interface, with color-coded elements for effective visual grouping. The plugin allows you to change its window size from 0.8x to 2x in 20% increments. The last size you set is stored in a preference file and is recalled the next time **Albedo** is loaded.



- Hold *shift* and drag a knob to adjust the parameter with increased resolution.
- Use *option-click* (Mac) or *alt-click* (Windows, Linux), or *double-click* any knob to recall its default setting.
- To fully initialize all plugin's parameters, load the preset named *Default* from the *Factory* or the *User* bank.

# PRESETS

**Albedo** features simple built-in functions for saving and loading presets, as well as for quickly switching between presets within the same bank. All these functions are accessed via the top toolbar.

Preset Name

Click the preset name at the top to show the list of presets in the current bank. Use *command-click* (Mac) or *control-click* (Windows, Linux) to reveal the actual preset file in the system file browser.



Switch to the previous preset in the current bank. The current bank is automatically set to wherever the last preset was loaded from.



Switch to the next preset in the current bank.

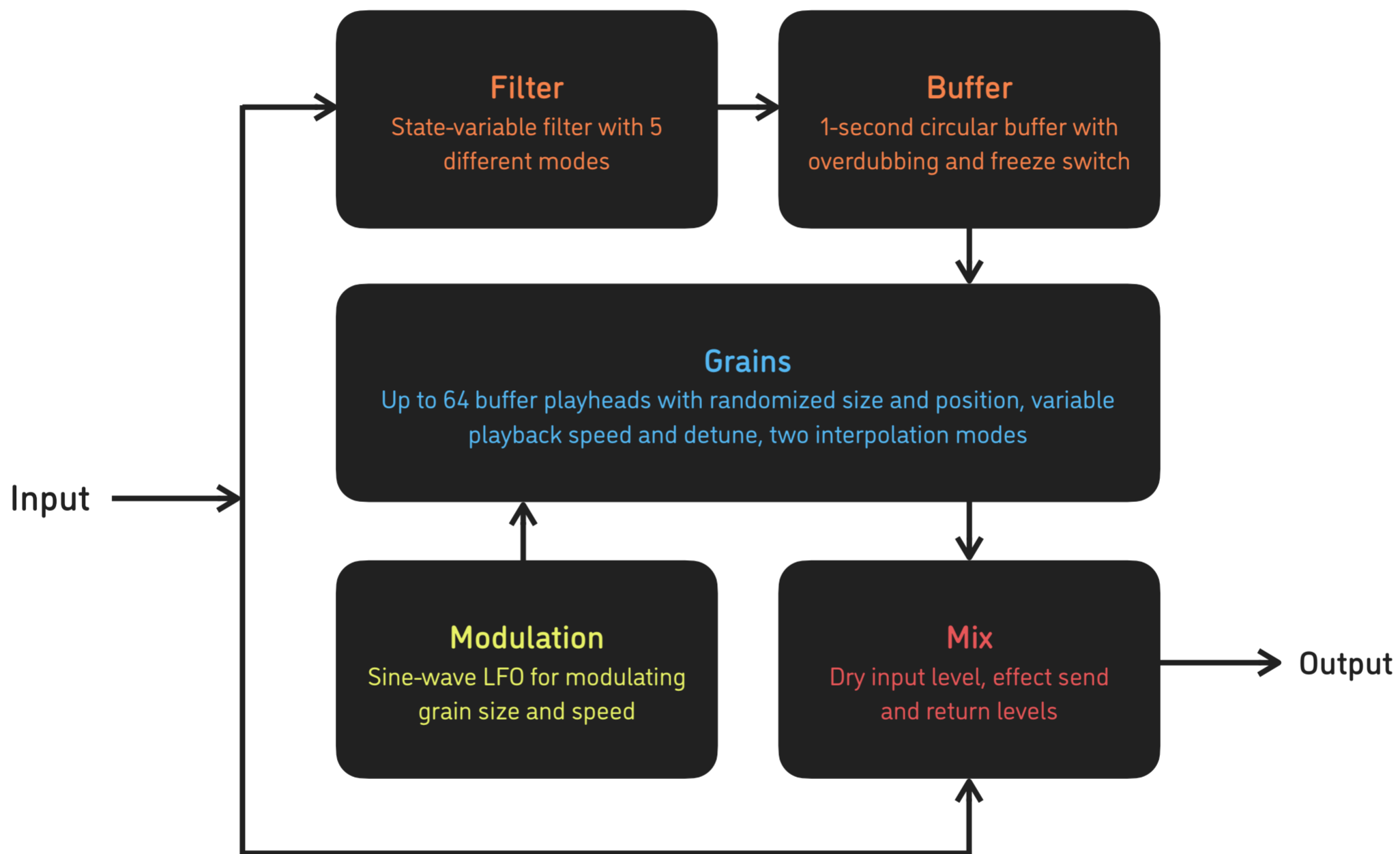


Show open file dialog with the list of preset banks. By default, the plugin includes two banks: *Factory* and *User*. However, you can freely create additional banks – simply by creating new subfolders.



Save current preset. Please note: due to the limitations of the typeface, you can only use latin letters when naming your presets

# DSP DIAGRAM



# PARAMETERS

## Buffer

<b>Filter</b>	<b>20 Hz .. 20 kHz</b>	Pre-buffer filter cutoff frequency
<b>Filter Type</b>	...	Select the filter type: bypass (off), low-pass -24 dB/octave, high-pass -24 dB/octave, band-pass -12 dB/octave, band-pass -24 dB/octave, band-reject -12 dB/octave
<b>Feedback</b>	<b>0 .. 100 %</b>	Amount of previously recorded signal fed back into the buffer
<b>Freeze</b>	<b>On</b>	Buffer recording is suspended and the granular engine indefinitely plays back the previously recorded buffer contents, allowing to overlay the input signal on top of the granular cloud reverb signal without affecting the latter
	<b>Off</b>	Buffer recording operates normally
<b>Stereo Lock</b>	<b>On</b>	Grain size and position within the buffer are locked between left and right channels, preserving the original stereo image of the input signal
	<b>Off</b>	Grain size and position are independent between left and right channels

## Mix

<b>Input</b>	<b>0 .. 100 %</b>	Dry input signal level
<b>Send</b>	<b>0 .. 100 %</b>	Amount of filtered input signal being sent into the granular engine
<b>Return</b>	<b>0 .. 100 %</b>	Wet output level of the granular engine



# PARAMETERS

## Grains

<b>Number</b>	<b>1.. 64</b>	Number of grains being played back by the engine
<b>Size</b>	<b>50 .. 500 ms</b>	Average grain size; effective randomized grain size is from 20 to 100 ms at the minimum setting, and from 200 to 1000 ms at the maximum setting
<b>Speed</b>	<b>- 2.0 .. + 2.0 x</b>	Grain playback speed ratio (negative values play the grains in reverse)
<b>Detune</b>	<b>0 .. 10 %</b>	Speed deviation between individual grains
<b>High Density</b>	<b>On</b> <b>Off</b>	All grains play back at full level Individual grain levels are randomized between 25 and 100 %
<b>High Quality</b>	<b>On</b> <b>Off</b>	Uses spline interpolation for grain playback, producing a neutral sound Uses linear interpolation for grain playback, producing a darker sound which becomes notably more distorted at low playback speeds

## Modulation

<b>Rate</b>	<b>0.05 .. 20 Hz</b>	Sine-wave modulation generator rate
<b>Depth</b>	<b>0 .. 100 %</b>	Amount of modulation signal synchronously applied onto grain speed (within the range of $\pm 1$ semitone) and grain size (within the range of $\pm 20\%$ , using a phase-inverted modulation signal)



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