



Cache

real-time audio manipulator

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

Designed and developed by **Sinevibes** ©2024-2025

INTRODUCTION

Cache is a MIDI-controlled effect plugin for real-time audio manipulation. Its unique sound engine constantly records all incoming audio and processes it live through multiple included buffer-based algorithms – such as repeat, robotize, time stretch, stop, reverse, rewind, scratch – and much more. The plugin allows you to set up any custom combination of 12 such effects at the same time, and then trigger them with extreme precision via MIDI note events – creating transitions of any complexity, all on the fly. Thanks to its lightning-fast workflow and meticulously tuned algorithms, **Cache** is a highly practical, dependable and super-fun tool for live performance, studio production, remixing, and sound design.

SOUND ENGINE

- 12 simultaneous buffer-based effects triggered via MIDI key zones with sample-level precision
- Multiple algorithms selectable individually per each key zone: **Loop, Repeat, Ping-Pong, Robotize, Stretch, Stop, Reverse, Rewind, Scratch, Bend, Roll Up, Roll Down**
- High-quality spline interpolation, fade envelopes and two-pole gate switches for completely smooth operation
- Supports mono > mono, mono > stereo, and stereo > stereo channel configurations

USER INTERFACE

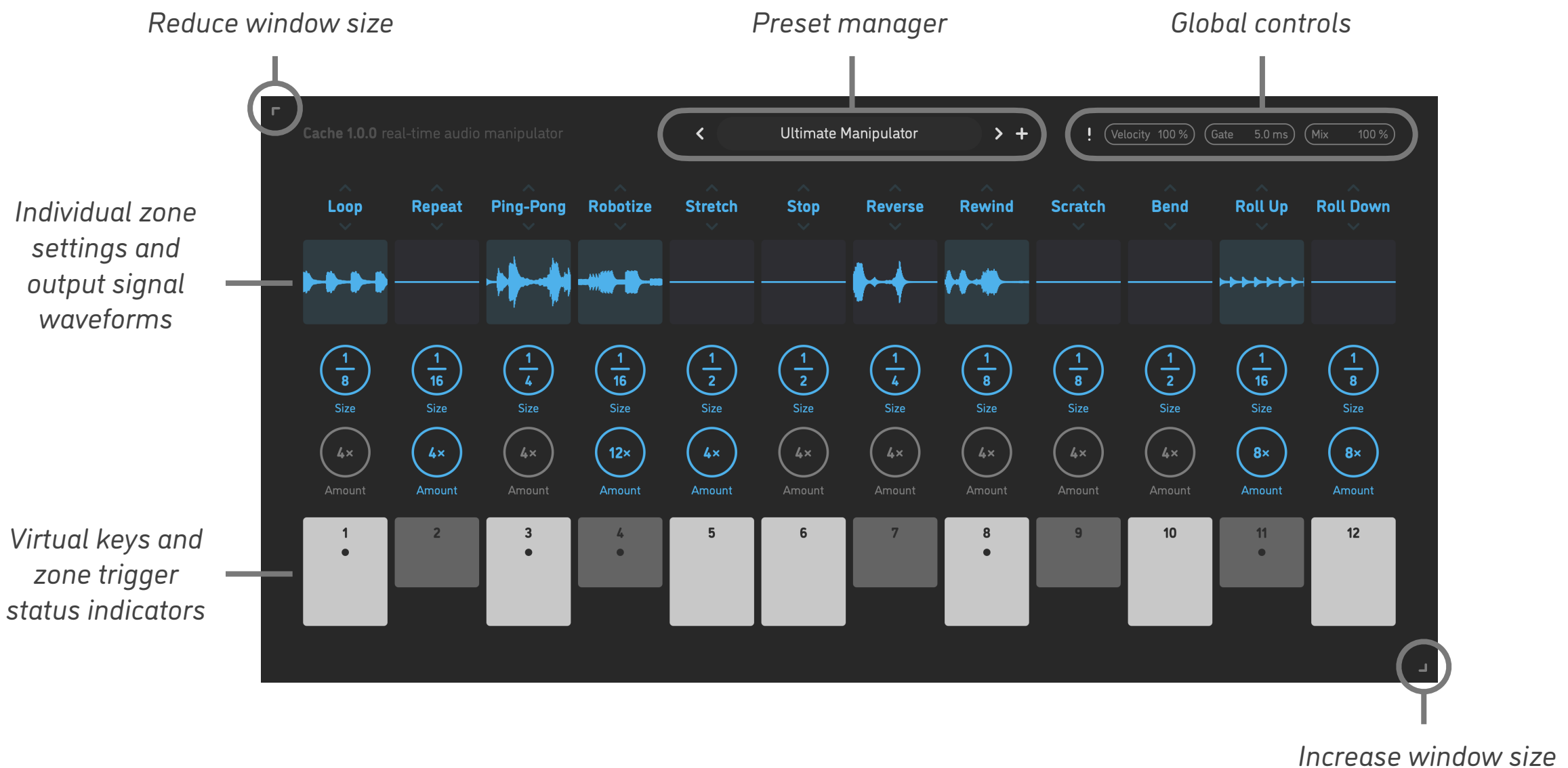
- Color-coded control elements
- Consistent name, mapping, value, and unit implemented for all parameters in both graphic user interface and host control/automation
- Built-in preset management functions
- Supports window size scaling up to 200%

SUPPORTED FORMATS

Mac	AU/VST3/AAX for macOS 10.13 or newer (64-bit Apple Silicon and Intel)
Windows	VST3/AAX for Windows 8.1 or newer (64-bit Intel and AMD)
Linux	VST3 for Linux 2020 or newer (64-bit Intel and AMD)

OVERVIEW

Cache features a fully vector-based interface, with color-coded elements for effective visual grouping. The plugin allows you to change its window size from 80% to 200% in 20% increments. The last size you set is stored in a preference file and is recalled the next time **Cache** is loaded.



Cache supports a number of shortcuts and alternative ways to adjust parameters:

- Hold **shift** and drag any control element to adjust it with increased resolution.
- Use **option-click** (Mac), **alt-click** (Windows, Linux), or **double-click** any control to reset any control.
- The mouse wheel (and vertical swipe on the trackpad) can also be used on most control elements.

SETUP

Cache operates as a MIDI-controlled effect plugin. Thus, to use it, you need to set it up accordingly depending on how MIDI-controlled effects are handled in your particular DAW application. In most hosts, you need to place **Cache** on an audio track or a bus which you'd like to process, and then you need create a MIDI track that will be routed into that **Cache** instance. In some hosts, however, it works differently: **Cache** works as an instrument plugin, directly controlled via note events on its own track – and you need specify which audio or instrument track (or bus) is routed into its instance for processing.

Please refer to the support documents for the particular DAW you're using. Below are a few examples.

Logic Pro	Ableton Live	Bitwig
<ul style="list-style-type: none">• Create an audio or an instrument track #1 that Cache will process• Create a new instrument track #2 for Cache itself: in the instrument plugin selector on this track, choose <i>AU MIDI-controlled effects</i> > <i>Sinevibes</i> > <i>Cache</i>• In the top right corner of the plugin window, in the <i>Side Chain</i> selector, choose the track whose audio will be routed into Cache• MIDI events on track #2 will control the key zones in Cache; processed audio will also come out this track – thus track #1 should be muted	<ul style="list-style-type: none">• Create an audio or an instrument track #1 that Cache will process• From the plugin browser, add Cache to this track's effects rack• Create a new MIDI track #2, set the monitor mode to In, then set the destination track to the track that has Cache on it• MIDI events from track #2 will control the key zones in Cache; processed audio will come out of track #1	<ul style="list-style-type: none">• Create an audio or an instrument track #1 that Cache will process• From the plugin browser, add Cache to this track's effects rack• Create a new MIDI track #2• On track #1, add Note Receiver MIDI device before Cache and select track #2 as the note source• MIDI events from track #2 will control the key zones in Cache; processed audio will come out of track #1

ZONE CONTROLS

Cache features 12 identical zones, each with its own buffer-based audio processing algorithm (please refer to the [ALGORITHMS](#) page for full reference). These zones can be activated and deactivated using MIDI note on/off events: each zone is assigned to one of the 12 keys in an octave (**Cache** responds to the notes on all octaves). As soon as a zone receives a MIDI note on event, it triggers the algorithm assigned to it and also closes the gate on the dry input signal; on a MIDI note off event, the zone switches back from its output to the dry signal.

Zone algorithm **type** selector

Loop



Zone's output signal waveform scope

Size parameter: defines the duration of the audio slice the algorithm will capture and process; the fraction's numerator and denominator can be set separately

$\frac{1}{8}$

Size

4x

Amount

Amount parameter: defines the duration of the audio snippet the selected algorithm will capture and process (available on select algorithm types)

Zone trigger key: shows a dot when the zone is active; also allows you to trigger the zone via the UI (note that these events can't be recorded into the MIDI track)

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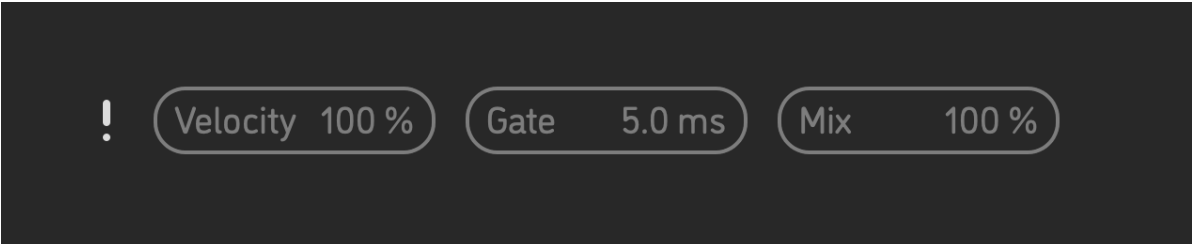


ALGORITHMS

1	Loop	Record a slice of audio and play it on repeat
2	Repeat	Record a slice of audio and play it on repeat a set amount of times, then restart the recording/playback cycle automatically
3	Ping-Pong	Record a slice of audio, play it back once normally and once in reverse, then restart the cycle automatically
4	Robotize	Once per each slice size, generate a random number (from 1 to the amount parameter setting) and use it to calculate a fraction of the slice size; record that fraction, play it on repeat this number of times, then restart the cycle automatically
5	Stretch	Record one bar of audio and play it back on repeat, slowing the playback down by a set amount of times using granular time stretching
6	Stop	Record a slice of audio and simultaneously play it back while decreasing the playback speed until it reaches zero by the end of the slice
7	Reverse	Play a previously recorded slice of audio in reverse, on repeat
8	Rewind	Play a previously recorded slice of audio in a reverse loop, while controlling the playback speed from 8× to zero within 1 bar, to simulate a vinyl record rewind.
9	Scratch	Record a slice of audio and play it on repeat while controlling the playback speed and direction to simulate a vinyl scratch effect
10	Bend	Play a previously recorded slice of audio in reverse, on repeat, while applying a non-linear speed curve from zero to 2×
11	Roll Up	Record a slice of audio and play it on repeat a set number of times while gradually increasing the playback speed, then restart the cycle automatically
12	Roll Down	Record a slice of audio and play it on repeat a set number of times while gradually reducing the playback speed, then restart the cycle automatically

GLOBAL CONTROLS

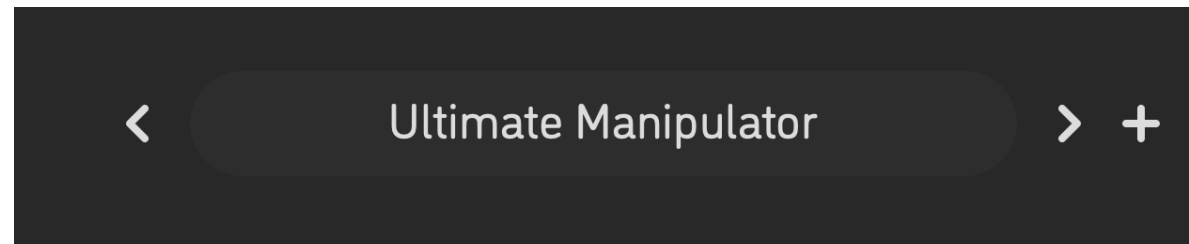
Cache features four global controls located at the top right of the interface. These controls affect all 12 key zones at the same time.



!	Panic button: “all notes off” MIDI event which is useful if your host or your controller keyboard suddenly misses note off events and one or more zones get stuck playing.
Velocity	Velocity sensitivity of the zone output levels (0 .. 100%)
Gate	Lag time of the two-pole low-pass filters which are applied onto the dry signal and the gate output gates (0.1 .. 50 ms); effectively adjusts the dry-wet signal crossfade time
Mix	Balance between the dry input signal and the wet processed signal (0 .. 100%)

PRESET MANAGER

Cache features simple built-in functions for saving (+) and loading presets, as well as for quickly switching between presets within the same bank (< and >). All these functions are accessed via the top toolbar:



You can click the preset name while holding ***command*** (Mac) or ***control*** (Windows, Linux) to reveal the actual preset file. You can also click the preset name while holding ***shift*** to open the preset browser showing the available preset banks. The default plugin installation includes *Factory* and *User* banks, but you can freely create additional subfolders if you wish to have more preset banks.



SINEVIBES

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SUPERPOWERS***