

OneTrick SIMIAN

User Guide



Version 2.0.2
Created by Punk Labs



Functional
Audio
Stream



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Introduction

What is OneTrick SIMIAN

An open source, cross-platform drum synthesizer inspired by hexagonal 80s classics.

Features

- 10 configurable voices
- Preset browser with tags and editing
- 33 factory preset kits
- Multi-out or stereo
- Velocity sensitive pitch, filter, and amp dynamics
- Lofi EPROM for classic cymbal sounds
- Gated Reverb bus
- Saturation (per-voice and global)
- 1176-style limiter with drive control
- Chromatic MIDI channels
- Nondestructive modulation (CLAP only)
- All parameters are automatable
- No telemetry or analytics
- No DRM
- Open source to inspect, learn from, adapt, and improve

Available Plugin Formats

CLAP, VST3 and Audio Unit

Supported Platforms

Linux with glibc 2.31 or later (x86_64), Windows 10 or later (x64), and macOS 10.13 or later (Universal). OpenGL 2.0 or above is required for all platforms.

About Open Source

OneTrick SIMIAN's source code is available under a GPLv3 (or later) license for anyone to inspect, adapt, learn from, and improve. We've all had an app we rely on become outdated, incompatible, or move in a direction we don't like; by releasing the source code, we hope to protect users from these types of situations, and provide a guaranteed availability long after regular development has ceased. We believe that everyone benefits when users have control over their software.

Who is Punk Labs

Punk Labs is run entirely by just two people, Oren Kurtz and Tara Bellafiore. We've been designing software, web projects, video games, and writing music professionally since 2005. Our journey has been long, and we've managed to remain independent. We sincerely hope you enjoy our creation and find it useful.

Getting Started

Installing

There is an assisted installer available for each platform. After downloading, run and follow the on-screen instructions. By default installation will be in the current user’s data folder for the corresponding plugin format. As an alternative, an archive is available for manual installation. Your DAW/Host might need to scan for new/updated plugins once installation is completed. Please consult your DAW/Host’s documentation for details. The following directories are used:

| | | User | System |
|----------------|---------------|---|---|
| Linux | CLAP | ~/ .clap/ | /usr/lib/clap/ |
| | VST3 | ~/ .vst3/ | /usr/lib/vst3/ |
| | Documentation | ~/ .local/share/doc/onetricksimian2/ | /usr/share/doc/onetricksimian2/ |
| | Presets | ~/ .local/share/onetricksimian2/Presets/ | |
| | Uninstaller | ~/ .local/share/onetricksimian2/Install Data/ | /opt/onetricksimian2/Install Data/ |
| Windows | CLAP | %LOCALAPPDATA%\Programs\Common\CLAP\ | %COMMONPROGRAMFILES%\CLAP\ |
| | VST3 | %LOCALAPPDATA%\Programs\Common\VST3\ | %COMMONPROGRAMFILES%\VST3\ |
| | Documentation | %USERPROFILE%\Documents\ | %PROGRAMFILES%\PunkLabs\OneTrick SIMIAN2\ |
| | Presets | %LOCALAPPDATA%\PunkLabs\OneTrick SIMIAN2\data\Presets\ | |
| | Uninstaller | %LOCALAPPDATA%\Programs\PunkLabs\OneTrick SIMIAN2\Install Data\ | %PROGRAMFILES%\PunkLabs\OneTrick SIMIAN2\Install Data\ |
| macOS | Audio Unit | ~/Library/Audio/Plug-Ins/Components/ | /Library/Audio/Plug-Ins/Components/ |
| | CLAP | ~/Library/Audio/Plug-Ins/CLAP/ | /Library/Audio/Plug-Ins/CLAP/ |
| | VST3 | ~/Library/Audio/Plug-Ins/VST3/ | /Library/Audio/Plug-Ins/VST3/ |
| | Documentation | ~/Documents/ | /Library/Application Support/com.PunkLabs.OneTrick-SIMIAN2/ |
| | Presets | ~/Library/Audio/Presets/Punk Labs/OneTrick SIMIAN2/ | |

Tip: On Windows, you can paste a directory listed with the environment variable (ex. %LOCALAPPDATA%) into the File Explorer address bar to be taken to that location. On macOS you can paste the directory listed into “Go to Folder...” located in the Finder, “Go” menu.

Basic Navigation

There are three types of controls: knobs, faders, and switches. Each control can be clicked and dragged to modify its parameter. Holding the Shift key on your keyboard while dragging allows for finer control. Single clicking on a switch will increment its value by one. Parameter values are displayed while hovering your mouse cursor over a control. To reset any control hold the Control key on your keyboard and either single click or hit Enter/Return, alternatively you can double click without holding any modifier keys.

The interface is also fully keyboard navigable. Tab will focus on the next control, while holding Shift and hitting Tab will focus on the previous control. You can also navigate using Arrows. Enter/Return or Space will activate a preset or buttons. Holding Control while using the Arrows will adjust a parameter's value. Holding Control and Shift while using Arrows will allow for finer adjustments.

Audio Bus Layouts

There are two supported layouts, Stereo and Multi-Out Stereo. Consult your DAW/Host's documentation for selecting the layout.

Stereo:

Provides a main stereo output bus with all processing applied.

Multi-Out Stereo:

Provides a main stereo output bus with all processing applied, as well as stereo auxiliary buses for processing each kit piece separately.

Chromatic MIDI Channels

Normally the entire drum kit is played on a single MIDI channel (1 or 10) with the voices spread out across the keyboard. For additional control, each voice has also been assigned a unique MIDI channel, allowing you to play that voice chromatically. Please see the ***Chromatic MIDI Map*** for details.

Overview



Tip: You can click on the logo to view the version number and credits.

The plugin is split up into key areas: the **Kit**, the **Global Controls**, and **Presets**. Each area will be broken down and explained.

Kit

Click on one of the drum icons to select that voice for editing. When a voice is triggered, its icon will animate.

Tone

Controls for the *triangle wave oscillator* and *cymbal sample*.



Pitch: Adjusts the frequency (in Hz) of the *triangle wave oscillator* as well as the playback speed of the *cymbal sample*.

Bend: The maximum amount to bend **Pitch** (in semitones) when triggering the voice.

Waveform: Blends between the *triangle wave oscillator*, and the *cymbal sample*.

Velocity: The amount of velocity sensitivity to apply to **Bend(Tone)**.

Filter

Controls the *lowpass* filter applied to *noise* and the *cymbal sample*.

Cutoff: The frequency of a 1-pole *lowpass* filter applied to the *noise* and/or *cymbal sample*.

Bend: The maximum amount to bend **Cutoff** (in semitones) when triggering the voice.

Resonance: the amount of resonance of the *lowpass* filter.

Velocity: The amount of velocity sensitivity to apply to **Bend(Filter)**.

Envelope

Controls a simple 1-shot decay envelope.

Decay: The maximum time it takes (in milliseconds) for the voice to fade out. Each note will vary based on velocity.

Punch: How punchy (nonlinear) the envelope is.

Mix

Controls how oscillators are mixed, as well as the **Room Reverb** send.

Pan: Pans the voice left / right.

Room: Sends the voice to the **Room Reverb** bus.

Tone/Noise: Fades between the *tone oscillators* and *noise*.

Transient: Adds a short click when the voice is triggered.

Amp

Controls the voice's individual preamp

Gain: The relative volume of the voice.

Saturation: Introduces harmonic distortion to the voice using a waveshaper.

Velocity: The amount of velocity sensitivity to apply to **Gain**.

Global Controls

This area allows you to configure the global settings. Each control in this area affects all voices.

Input

Controls incoming midi triggers

Velocity: Adjusts the global amount of velocity sensitivity allowed before any processing.

Room Reverb

Controls a “Zita-Rev1”-style reverb.

Size: The size of the room in percent.

Gate: The cutoff (in dB) for gated reverb.



Output

Final processing controls

Drive: Controls how much to drive **Saturation** by applying a preamp gain.

Saturation: Introduces harmonic distortion to the final output using a waveshaper.

Volume: Adjusts final output volume without introducing any additional signal color.

VU Meter

Visualizes the final output volume.

Preset Browser

Displays a list of the Factory and User presets. Click on a preset to load it, or browse through them with the Arrow keys and press Enter. Selecting a preset will bring up an info pane with details. The controls are listed from left to right.

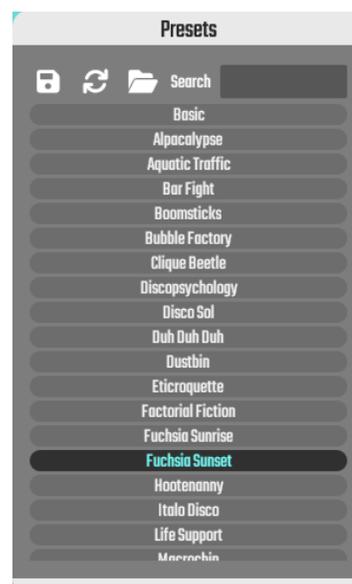
Save: Displays the **save dialog** to save the current settings as a user preset.

Refresh: Refreshes the list of installed presets. Press this if you've added any presets while the plugin was open.

Open: Opens the preset folder with your system file browser.

Search: Filters the list of presets to match your query. You can search for title, description, author, or tags. If you search for tags you must type the full tag, but other fields use a substring search.

Presets are stored as simple plain-text JSON files with a .preset extension. This makes it easy to edit them in a text editor, or manipulate with a language like python. Install new presets by copying them into the presets folder, or delete existing ones. You can find the presets folder by hitting **open** in the **preset browser**, or by referencing the directories table in the **Getting Started, Installing** section.



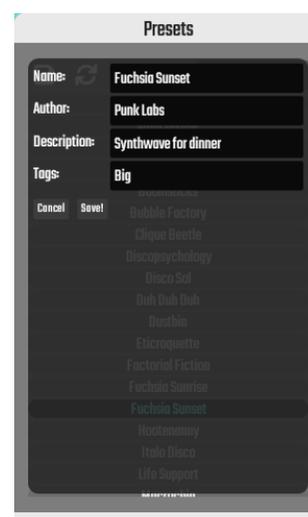
Save Dialog

Name: A title for your preset, this will show up in the list of presets.

Author: Your name, useful if you decide to distribute your presets. This will show up in the info popup when selecting a preset.

Description: A brief description of your preset. This will show up in the info popup when selecting a preset.

Tags: A space-separated list of tags. These are used when searching. This will show up in the info popup when selecting a preset.



MIDI Map

| Voice Number | MIDI Note | Common Use |
|-------------------|-----------|-----------------------|
| Voice 1 | C2 / B1 | Kick |
| Voice 2 | D2 / E2 | Snare |
| Voice 3 | C#2 | Rimshot / Cowbell |
| Voice 4 | D#2 | Clap |
| Voice 5 | F2 / G2 | Tom Low |
| Voice 6 | A2 / B2 | Tom Mid |
| Voice 7 | C3 / D3 | Tom High |
| Voice 8 | F#2 | Hi-hat Closed / Pedal |
| Choke Voice 8 & 9 | G#2 | Hi-hat Choke |
| Voice 9 | A#2 | Hi-hat Open |
| Voice 10 | C#3 | Cymbal / Crash / Ride |
| Choke Voice 10 | D#3 | Cymbal Choke |
| Effect | | Control |
| Decay | | Pitch Wheel |
| Filter Cutoff | | Mod Wheel (CC 1) |

Special Considerations

Voice 8 will choke **Voice 9** to act in a Hi-hat Closed/Open configuration. This is hard-coded functionality, and is not configurable. Keep this in mind if you use these voices for non-cymbal sounds.

Chromatic MIDI Map

| Voice Number | Common Use | MIDI Channel |
|--------------|-------------------|--------------|
| Voice 1-10 | Full Kit | 1 or 10 |
| Voice 1 | Kick | 2 |
| Voice 2 | Snare | 3 |
| Voice 3 | Rimshot / Cowbell | 4 |
| Voice 4 | Clap | 5 |
| Voice 5 | Tom Low | 6 |
| Voice 6 | Tom Mid | 7 |
| Voice 7 | Tom High | 8 |
| Voice 8 | Hi-hat Closed | 9 |
| Voice 9 | Hi-hat Open | 11 |
| Voice 10 | Cymbal | 12 |

Note: Each voice is played relative to its trigger note, e.g. Kick starts at C2.

Multi-Out Channel Map

| Bus | Channels |
|---------------|----------|
| Main Out | 0, 1 |
| Kick | 2, 3 |
| Snare | 4, 5 |
| Rimshot | 6, 7 |
| Clap | 8, 9 |
| Tom Low | 10, 11 |
| Tom Mid | 12, 13 |
| Tom High | 14, 15 |
| Hi-hat Closed | 16, 17 |
| Hi-hat Opened | 18, 19 |
| Cymbal | 20, 21 |

Note: Main bus has reverb and global saturation applied whereas auxiliary buses do not.

Changelog

2.0.2 (July 5, 2024)

- Fixed: Crashing on Linux caused by OpenGL/window multithreading.

2.0.1 (June 20, 2024)

- Change: Saving presets now displays an error on failure.
- Fixed: Multi-out buses crackling
- Fixed: Crash when user preset folder doesn't exist.

2.0.0 (May 28, 2024)

This is a complete rewrite that brings new functionality and minimum system requirements. Previous sessions will not be compatible, but it can be installed along side version 1.x.

- Added: CLAP plugin format
- Added: Multi-out Buses
- Added: Preset saving, editing, and tagging
- Added: Chromatic MIDI Channels
- Added: Pitch wheel controls decay
- Added: Mod wheel controls filter cutoff
- Added: Plugin now saves last state
- Added: VU meter
- Added: Fully keyboard navigable
- Change: Reverb using Zita-Rev1
- Change: Reverb Decay renamed to Size
- Change: Using NIH-plugin framework
- Change: Using Steinberg Audio Unit Wrapper (vst3sdk 3.7.11)
- Fixed: Tom drums are now mapped correctly according to General MIDI
- Removed: Voice icon and color controls
- Updated Minimum System Requirements:
 - Windows 10
 - macOS 10.13
 - OpenGL 2.0
- Updated Installer: Using Qt Installer Framework for Windows and Linux (QtIFW 4.6.1)
- Updated Documentation:
 - Added: New sections “Basic Navigation”, “Audio Bus Layouts”, “Chromatic MIDI Channels”, “Chromatic MIDI Map”, “Multi-Out Channel Map” and “Support”.
 - Change: Updated “Supported Platforms”
 - Change: Updated screenshots
 - Change: Updated framework and plugin format logos
 - Change: “Installing” section now reflects new install locations.
 - Change: “Voice Section” renamed to “Kit”
 - Change: “Preset Selector” section renamed to “Preset Browser” and now expanded to cover the new features.
 - Change: “MIDI Map” now includes pitch and mod wheel controls.

- Change: “Notices” section now only relevant to documentation.
- Fixed: Header and paragraph formatting issues.
- Removed: “Visual Controls” section

1.1.0 (November 17, 2022)

- Change: UI refinements to reduce clutter.
- Change: Alt-clicking Color and Icon buttons now resets to default.
- Fixed: Panning hard-right causes voice to sleep.
- Fixed: Knob label inconsistency for Tone/Noise across voices.
- Fixed: Multithread buffer issue causing garbled audio.
- Fixed: Increasing memory consumption from flooding the glyph cache.
- Source: Refactored to use our new OneTrick shared core.
- License: Changed OneTrickIcons font license to SIL Open Font License, Version 1.1
- Updated Dplug to version 13.0.5
- Updated Documentation:
 - Added a paragraph in “Overview” on how to modify and reset controls.
 - Fixed Windows install paths using “/” instead of “\” under “Using the Archive”.

1.0.2 (October 18, 2022)

- Optimized: DSP is now multithreaded with each voice running in parallel.
- Changed: DSP now uses FastMath without hand-editing. This should help with custom builds.
- Updated Dplug to version 12.8.3

1.0.1 (October 3, 2022)

- Changed: Reduced glibc requirement for broader compatibility
- Fixed: Bitwig faded notes after momentary silence
- Fixed: Faded first note after plugin load
- Fixed: Dull sound above 48kHz samplerate
- Fixed: Potential crash when clicking elements (Dplug 12.7.21)
- Updated Dplug to version 12.7.21
- Updated Documentation:
 - Added Windows Uninstaller details
 - Added Changelog section

1.0.0 (September 20, 2022)

- Initial Release

Support

Product Home Page: <https://punklabs.com/ot-simian>

E-mail: contact@punklabs.com

News and Updates: <https://punklabs.com/blog>

Notices

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