apisonic labs

SPEEDRUM

User Guide

version 1.5.3

Table of Contents

Quick Start

   To quickly start, load Speedrum into your preferred plugin host / DAW, and then just drag and drop the audio sample(s) from a plugin host sample browser or a system file manager to a Pad or Layer editor. Layer editor will show the waveform of a loaded sample and layer controls will be available for adjusting. Left-click on a Pad to play it, or use your midi controller.
   Or drag and drop an audio loop in to the Slicer tab, so it can be sliced to individual drum hits, which you then drag to every pad you want as a single sample.

Supported audio file formats are WAV, AIFF, FLAC, MP3 and OGG.

TIP - if you plugin host support it Pad name will be visible in a plugin host Piano Roll (only for VST/VST3 version of a Speedrum)

Header

Resize - set plugin window size for this instance of a plugin

Speedrum logo - open About page on mouse left-click

Save drumkit - button to save drumkit (enabled if kit was changed)

Central label - displays all relevant information

Main menu:
- New DrumKit
- Load DrumKit
- Import
  - *Lite kit* - will import kit saved with Lite version (only Sample AHD Hold parameter will not be imported, because in a Speedrum it is automatic on a sample level)
  - *Poise kit* - partial import of the Poise (by One Small Clue) drumkit, not all but most of the parameters will be converted and imported
  - *Geist kit* - basic, partial import of the Geist2 (by FXpansion) drumkit - samples + compatible parameters(volume, pan, pitch, padmode... also for layers)
  - *SFZ kit* - basic, partial import of the of sfz format file. With the option in Preferences it is possible to recognize <group> as one Pad and import first 8 samples <region> as Layers. Otherwise, first 32 <region> will be converted to Pads with one layer each. Volume, Pan and Lo/Hi velocity parameters for each layer will be converted/imported.
- Save Drumkit As - opens a save customization dialog box, where you specify what you want to save
  - samples will be saved in a sub-folder named like a drumkit file
  - loading a drumkit with a Pads Midi Map saved will show that map in a Pads Midi Map menu of the Setup tab
  - kit info consists of text and an image that can be easily loaded
- Set Outputs - shortcuts to set output channels for all pads on A/B set at once
- Download User Guide - open Speedrum web page
- Check for Updates - check latest stable version
- About - some info about the plugin and the system

MIDI - MIDI-IN LED indicator

Global Volume - knob for global volume of the instrument

Browser - toggle sample/kit browser

Preferences - toggle Preferences page

Preferences

CONTROL
- **Drag&Drop on Pad Default** - default behavior for sample drop on a Pad - *Alt/Option* key will override this and do the opposite
- **Select Pad with MIDI Notes** - when plugin host not playing
- **Reset Output on Pad Reset** - option to reset also Output channel when a Pad is reset
- **Play Pad on Click** - whether a mouse left-click on the pad will play that pad or just select it
- **Preview Layer on Click** - whether a mouse left-click on the layer will preview that layer or just select it

GUI
- **Default Size** - plugin window size for new instances
- **Default Layout** - set 16 or 32 pads layout for new instances
- **Alternate AB Layout** - put B set of pads on top of A set of pads in a 32 pads layout (default is B right of an A)
- **Show on Pad** - change what is displayed on a Pad
- **Show channel on Pad** - pad output channel
- **Middle C Octave** - according to what middle C octave to display the notes numbers
- **Apply Pad Color to Controls** - apply active Pad color to all active Pad controls, otherwise controls will have default plugin color
- **Default Pad Color** - default color for pads on new drumkit
- **Hide Cursor on Knobs** - hide mouse pointer when dragging knobs
- **Playhead** - playhead gui position

AUDIO
- **Layer S/E Tiny Auto Fade** - automatic fade for Start (0.1ms) and End (3ms) layer sliders, this comes in very handy when Humanization is on to eliminate clicks and pops due to sudden transitions

MISC
- **Save Kit Button Action** - action of the Save Kit Button (silent or dialog)
- **SFZ Import <group> as Layers** - recognize <group> as one Pad and import first 8 samples <region> as Layers
- **Drag&Drop Render Folder** - will be used to save drag&drop rendering to Pad or DAW, unless overriden with folder selection in the Setup tab
- **External Audio Editor** - browse to binary of an audio editor on your system
- **Autocheck for new Versions** - automatically checking for a new version of a plugin
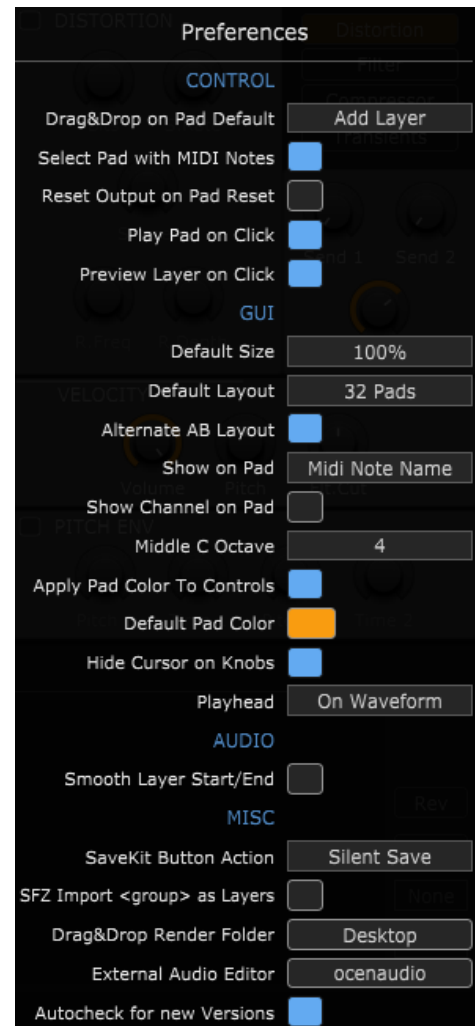
Browser

Browser will show drumkits and samples for supported formats.

The arrow keys can be used to navigate the browser, while RightArrow will preview selected sample.
Return key will load selected drumkit, or it will load sample in the visible tab (LAYERS or SLICER).
If it doesn't work, check that your plugin host send keystrokes to the plugin (some hosts may not support sending key press info to a plugin).

Audio preview can be toggled with a small speaker icon, and preview volume can be set with a knob. Also the preview output channel can be set to any available output.

The section on the right will show basic info (sample rate, channels, etc.) for the selected sample, or name and cover art for the selected drumkit.

There are 10 slots for a folder fast access.
Left-click on a slot will set the browser to that location, right-click on a slot will set a slot shortcut for the currently opened location, and *Alt/Option* + right-click will empty the slot.
The first slot is a default location for new instances.
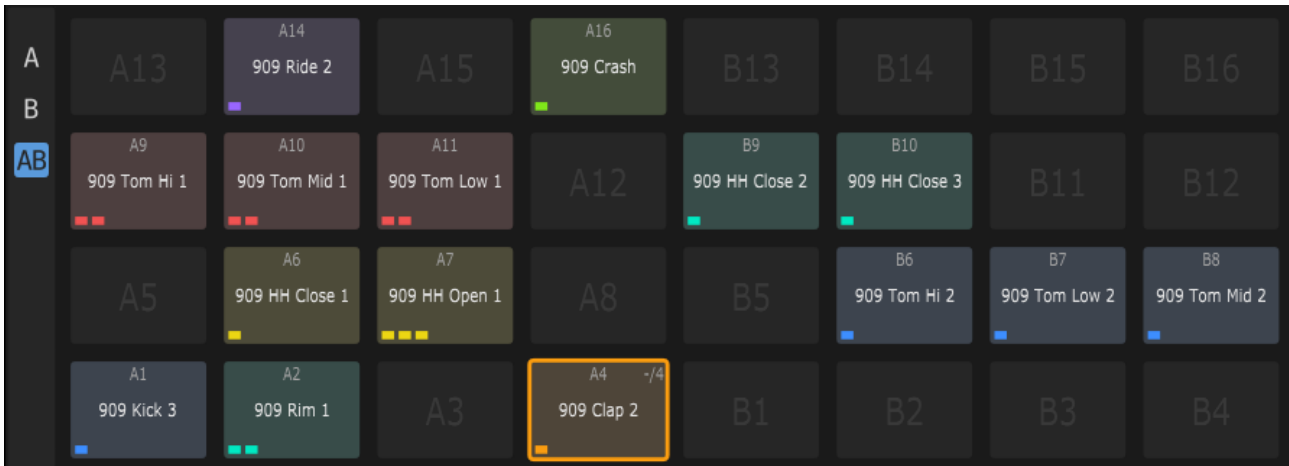
Double-clicking on a drumkit will load it.
Select one or multiple samples and drag & drop to Pad, Layer buttons or Layer waveform.

The Auto, Favorite folders or the Info can be selected with the buttons on the bottom left.

If autoload toggle is on, the selected sample will be automatically loaded into active editor (layer/slicer).
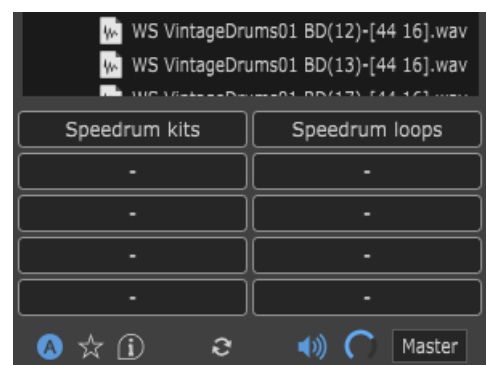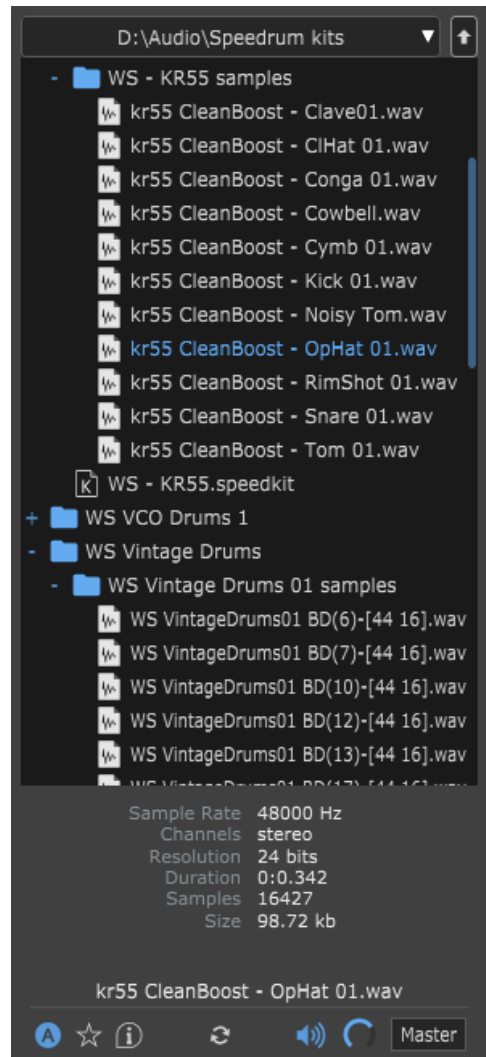
The Drum Pads

Speedrum has **32 Drum Pads**. Each Pad can have up to **8 layers**, and each layer can load one sample. Each Pad is triggered by one MIDI note.

Drum pads can be swapped by drag & drop, and copied by *Alt/Option* + drag & drop.
Delete key or middle-click will reset the pad.
Arrow Keys can be used to change the selected drum pad.
(If browser is open, Arrow Keys are used to navigate the browser)

Multiple Pads can be selected at once for a multi-edit functionality.
Ctrl/Command + left-click on a Pad will add/remove it from multi-selection.
Multi-selection can also be achieved by mouse right-button drag, or adding to selection while holding *Ctrl/Command*.

Ctrl/Command + left-click on a layout button (A / B / AB) selects all pads from that layout.

When in multi-edit mode, any change to an active Pad will be applied to all other Pads in a multi-selection (volume, out channel, color...).
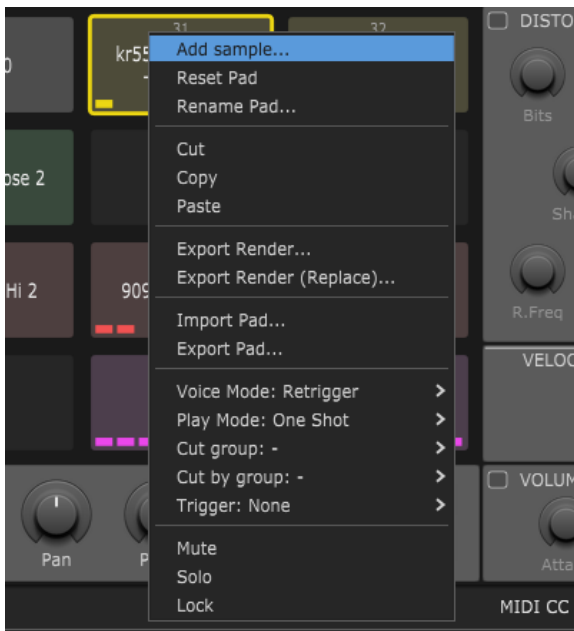
Pads layout can be set with A / B / AB buttons.
A = shows pads 1 to 16
B = shows pads 17 to 32
AB = shows all 32 pads

In the AB layout, pads can be in a default A set and B set left to right or in an alternative form where B set is on top of A set (settable in a Preferences).

Pad context menu:

- **Add sample...** - open system file manager to load sample
- **Reset Pad**(s) - Clear Pad (Pads if multi-edit) data
- **Rename Pad**
- Standard **Cut**, **Copy**, **Paste**
- **Export Render...** - to file (with maximum velocity, ignore Humanization)
- **Export Render (Replace)...** - same as above but replaces Layers with rendered sample after exporting the render
- **Import Pad...** - import saved Pad from a file
- **Export Pad...** - save single Pad settings to a file
- **Voice Mode** - see Main Controls
- **Play Mode** - see Main Controls
- **Cut group** - see Main Controls

- **Cut by group** - see Main Controls
- **Trigger** - on note on trigger selected Pad 1-32
- **Mute** - mute the Pad
- **Solo** - solo the Pad
- **Lock** - locked drum pads will be skipped when loading drum kits, loading new drum kits, delete/reset pads

TIP - *Shift* + left (right) click on a Pad will mute (solo) selected pads

Main Controls

Main Controls of a Pad:

- **Color** - there are 12 colors that can be assigned to each Pad for better recognition, default pad color can be set in the Preferences
- **Waveform-button** - drag&drop to export rendering of the Pad (Rendering Folder or Project Folder if specified will be used for saving files)
  - On Windows and MacOS - can be droped to other Pad or outside Speedrum (DAW or folder)
  - On Linux - can be droped to other Pad
- **Voice Mode** - Retrigger - active sample layers will be silenced, sound will not overlap
  - Poly - active sample layers will continue to play, sounds will overlap
- **Play Mode** - The play mode option controls how a drum pad responds to MIDI note-off events.
  - One Shot - pad will play all the way through, ignoring any MIDI note-off events, release knob will be disabled in this mode
  - Note On - pad will play until it receives a MIDI note- off event. If the amplitude envelope is off, the pad will be silenced immediately, if the amplitude envelope is on it will begin the release stage.
- **Mute** / **Solo**
- **Volume** - Pad volume - after the sum of all layers, and before FX processing
- **Pan** - Pad pan/balance
- **Pitch** - Pad pitch +/-12 semitones
- **Cut** / **Cut By** - There are 8 Cut groups. When a pad assigned to a 'Cut' group is triggered, any pads assigned to the corresponding 'Cut By' group will be silenced
- **Trigger** - on note on trigger selected Pad 1-32
- **Output** - Each Pad can be set to one of 16 individual stereo outputs, first stereo output is Master output

Some tips for knobs:

- double-clicking the knob will reset its value to default
- for fine control, hold down a *Shift* key on your computer keyboard before adjusting the knob
- some knobs snap to specific values (like Pitch), with an *Alt/Option* key moving knob will ignore snapping
- knob contextual menu (right-click on a knob):
  - click on the blue value to enter the value manually
  - MIDI Learn - based on selected Pad/Layer (follows the active Pad/Layer) (also for buttons)
- there are option in the Preferences to apply Pad color to all controls
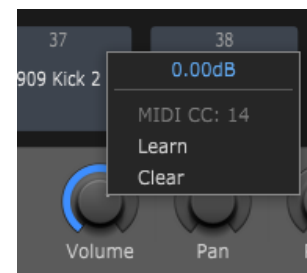
Modulation Controls

Volume Envelope:
AHD(R) (Attack, Hold, Decay, Release) type Pad envelope with 0 - 15 seconds for every segment
Release will be enabled only in a "Note On" Play Mode

Pitch Envelope:
Pitch envelope is Pad based, but the amount it will affect the Pad Layer is controlled on a Layer
with a "Pitch Env" knob
Pitch 1 - the initial sample pitch shift amount
Time 1 - time taken to travel to the second envelope point
Pitch 2 - the second sample pitch shift amount
Time 2 - time taken for the pitch envelope to finish

Velocity:
- to Pad Volume
- to Pad Pitch (-12 to +12 semitones)
- to Filter Cutoff in a FX Section (-100% to +100 %)

Humanize:
- Velocity (+/- 40 %) maximum amount to randomize the trigger velocity
- Pitch (+/- 2 semitones) maximum amount to randomize sample pitch
- Time (0 - 50 ms)   maximum time to delay the sample start
- Pan (+/- 40 %) maximum amount to randomize sample pan

Sends/Output:
- Send 1 - the amount of pads output to be sent to Delay or direct output for external processing
- Send 2 - the amount of pads output to be sent to Reverb or direct output for external processing
- Output Volume - the final output volume of the Pad, after FX processing

TIP - when Humanizize is on check the "Layer S/E Tiny Auto Fade" in the Preferences to
eliminate clicks and pops due to sudden transitions

FX Section

Each drum Pad has a dedicated FX Section with four essential effect.
The effect's section changes its layout depending on the layout of the Pads.
All effects have a Power button, so can be activated/deactivated.

Distortion includes controls for:
Bits - bitcrusher
S. Rate - sample rate reduction
Shaper - waveshaping
R. Freq - ring modulation frequency
R. Depth - ring modulation depth

Filter has 2 type, Analog and Ladder
with 3 mode lowpass, bandpass and highpass all with
12 / 24 dB slopes
Cutoff and Resonance controls can be controlled simultaneously, dragging on the filter response curve.
Ladder type has additional Drive parameter.

Compressor is classic VCA type with all essential controls.
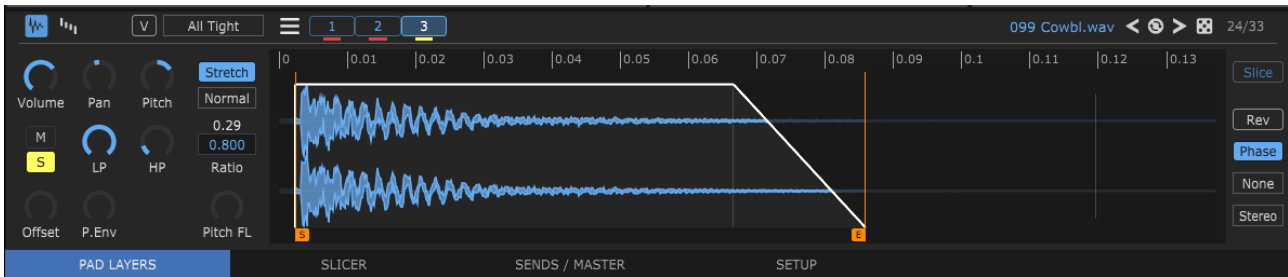It is used for adding punch and to control dynamics.
Ratio knob snaps to specific values but can be fine-tuned with *Alt/Option* key modifier.
Simple reduction meter show gain reduction.

Transients is a simple transient shaper with two parameters, Attack and Sustain.
It also includes an overall Gain parameter and a Hard Clipper.

Layers

The lower pane of a plugin window contains PAD LAYERS, SLICER, SENDS / MASTER and SETUP and tabs.

LAYERS tab shows all the Layers (with a loaded sample) of an active Pad. Every Pad can have up to 8 Layers, and every Layer can load one sample.
Left-click on a Layer number or the waveform will make that layer active, and preview the audio of the layer if host not playing.
Multiple sample layers can be selected at once for quick editing with *Ctrl/Command* + left-click, or *Ctrl/Command* + right-click on any layer button will select all layers.
Layers can be swapped, or can be moved to a different Pad (copied with *Alt/Option*) by drag and drop.
Delete layer(s) with middle-click on a layer number.

TIP - *Shift* + left (right) click on a Layer will mute (solo) selected layers (same behavior as on Pads)

Layer menu (hamburger icon):
• **Delete** - unload sample and reset the layer
• **Duplicate** - add a duplicate of an active layer at the end of layers if not all 8 layers used already
• **Export** - Render - to file (ignore Pad params)
• **Export (Replace)** - Render - to file (ignore Pad params), and reload rendered afterwards
• **Load in Slicer** - load the sample file in the Slicer tab
• **Show file...** - shows the sample using system default file manager
• **Edit with (editor)** - open sample file in a selected (in Preferences) audio editor (WARNING if sample file is edited (premanent change) but was loaded in mutiple layers/pads it will not load on that other layers/pads next time when loading state/kit, because it is now a diferent sample file)

Each Pad has a **Layers Mode** parameter. It determines which layers are played when a drum pad is triggered.

Pad Layers Modes:
- **Single** - when a Pad is triggered, only the active (selected) layer will play
- **Round Robin** - the next layer will be played each time the Pad is triggered
- **Random** - a random layer will be played each time the Pad is triggered
- **Random Exc** - (random exclusive) same as Random, but does not repeat the last played
- **All Tight** - default mode - all layers will be played, the humanization is calculated once and used for all layers

    All mods can additionally respect velocity ranges (**"V" button**) - triggering according to the MIDI note velocity, and layers velocity ranges can be edited (see Velocity ranges view)
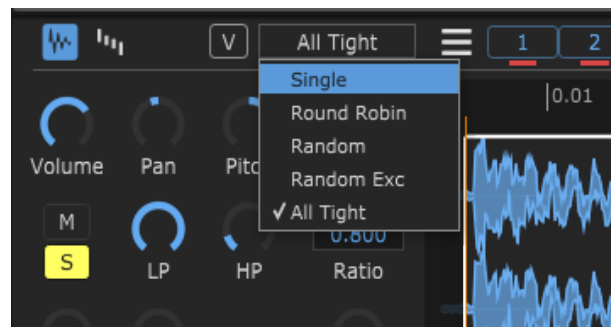

Every layer has a set of dedicated controls:
- **Volume** - layer volume
- **Pan** - layer pan
- **Pitch** - adjusts the pitch of the sample layer. (+/- 12 semitones)
- **Mute/Solo**
- **LP**, **HP** - Low-pass and High-pass filter
- **Pitch Env** - amount of Pad Pitch envelope applied to a Layer
- **Phase** - invert the phase of a sample
- **Offset** - the offset control delays the start of a sample when the pad is triggered
- **Stretch** - stretching on/off
- **Stretch Mode** - Normal, Smooth, Crisp
- **Sample Length Beats** - left/right arrow will stretch to next whole beat if possible, it is also possible to manually enter a value with a mouse click
- **Stretch Ratio** - ratio knob, it is also possible to manually enter a value with a mouse click
- **Pitch FL** - pitch that use stretching - sample will not change the length
- **Slice** - trim (indefinitely, non-destructive) to use only part of the sample. It will be disabled when Stretch or Reverse is active. The colored button emphasizes that it is a slice. Layer created from Slicer will automatically be Slice.
- **Reverse** - reverse the sample, non-destructive
- **Normalize** - normalize a sample to 0dB, -3dB, -6dB, it is non-destructive and can be undone
- **Channels Mode** - for stereo samples selectable Stereo, Mono (L + R), Left and Right, also non-

destructive and can be undone

There are two views in a Layer editor (can be switched with first two buttons on the editor header):
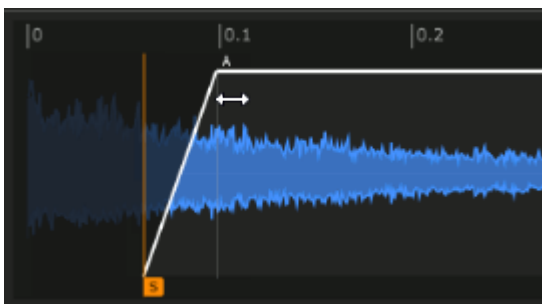
Waveform view - default view - sample waveform view of the selected Layer

With a simple mouse drag you can set a Start / End of a sample and also an Attack / Decay of a sample AHD envelope.
Selection can be moved left right with *Alt/Option* + drag.

You can also **zoom** waveform view horizontally to get a closer look:
- ruler drag up/down and left/right to zoom and move
- double-click on a ruler resets view to full
- *Alt/Option* + double-click on a ruler zoom to selected area (Start-End sliders)
- mouse wheel up/down to zoom in/out on a mouse pointer
- mouse middle-click + drag to move zoomed area left/right
- *Ctrl/Command* + left/right-click sets start/end marker to mouse pointer
- MIDI Learn for start/end slider - (right-click) based on selected Pad/Layer and actual zoom

Top right corner contains the name of the loaded sample with the number of samples in a current folder, and the Slice mode toggle button. Double-click on a sample/loop name will open a Browser and select that sample file.
There are also some buttons for fast loading sample from current folder, with the autoplay:
- previous sample
- reload current sample
- next sample
- random sample

Holding *Alt/Option* while changing the file will try to preserve Sart/Eend/Attack/Decay state.

The far right is the ordinal number of the sample file in the total number of files in the current folder.

Velocity ranges view - velocity ranges of all Layers
The velocity ranges work in conjunction with all Play Modes and can be used to program velocity splits.

The velocity menu contains commands for spliting, inverting, reseting and moving overlaps.
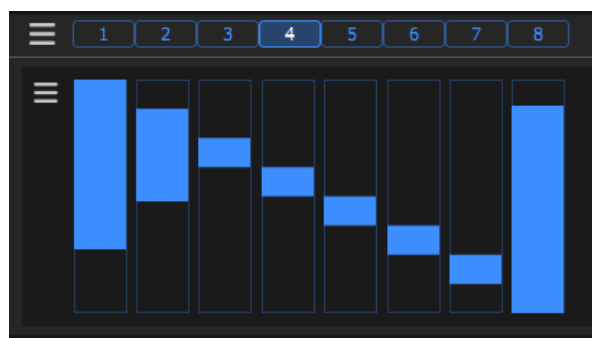
Slicer

With Slicer, the drum loop can be cut into individual drum hits which can then be loaded into the Pads as normal samples.

There are two slicing modes:

In Transients mode, slicing will look at transients/onsets.

- **Threshold** - the Threshold knob will set the sensitivity when looking for transients/onsets
- **Length** - the Length knob will set the minimum length of a slice

In BPM mode, slicing will be processed with the beats per minute base.

- **Sync** - sync slicing bpm to free/host/stretch bpm
- **BPM** - set the desired beats per minute
- **Division** - additional divisions of a beat

Stretching controls:
- **Stretch** - stretching on/off
- **Stretch Mode** - Normal, Smooth, Crisp
- **BPM** - right mouse click will set stretching bpm to host bpm, with left mouse click you can manually enter a bpm value
- **Stretch Ratio** - ratio knob, it is also possible to manually enter a value with a mouse click
- **Pitch FL** - pitch that use stretching - sample will not change the length

A slice can be selected with the left mouse button. When selected, start and end of a slice can be changed with the Start/End slider. Moving a transient/onset marker over the other will delete that marker. Additional transient/onset markers can be created with the *Shift* + left-click on the loop.

The slices can be dragged and dropped onto the pads to populate pads or layers on a specific pad. *Ctrl/Command* + drag will take selected slice plus all the slices to the right of the selected, so for example, to drag all slices at once hold *Ctrl/Command* while start dragging first slice.

When dropping on pads, "Drag&drop on Pad Defaul" from preferences is respected, which can be temporarily switched with holding *Alt/Option key.*

TIP - mouse wheel on knobs is very handy here, also the *Shift* key modifier

Sends / Master
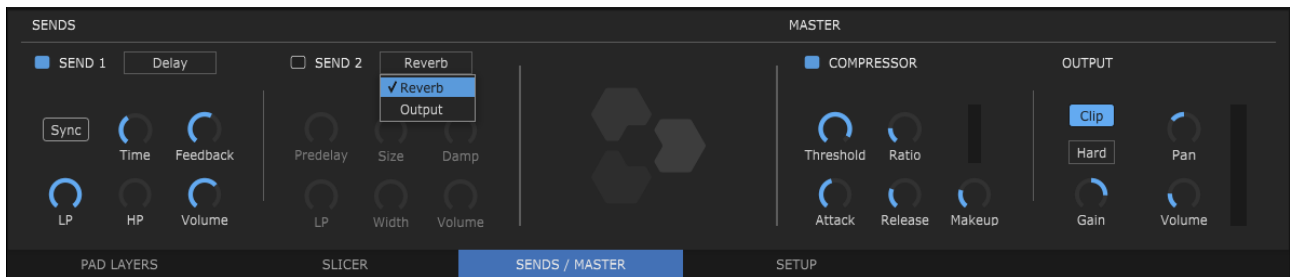
Sends / Master tab provides two Send fx/out slots and master output channel FXs.

Send can be FX, first slot has a Delay while second has a Reverb effect, or it can be a direct output to send signal to external effect. If it is Delay or Reverb, then the signal is forwarded to the main output channel. In the case of the direct output the signal is not returning to the master channel.

Delay includes controls for:
Sync - sync the delay to your host's tempo with the selected note value
Time - when Sync is on, it will give a note values - right-click will bring the menu to choose from
     - when Sync is off, it will control the delay in seconds(milliseconds)
Feedback - amount of repeating echoes, a value of 0 produces only one echo
LP / HP - lowpass and highpass filter
Volume - output volume of the delay

Reverb includes controls for:
Predelay - a short amount of delay (0-500ms) before the reverb takes effect
Size - sets the room size, affecting how long the reverberation lasts
Damp - amount of absorption in the room from the environment
LP - lowpass filter
Width - higher values increase the stereo effect
Volume - output volume of the reverb

Output - send can be set to any of the available direct output channels, so it can be used to easily send the amount of the output of an individual pad to an external effect

Compressor is classic VCA type with all essential controls.
It is used for adding punch and to control dynamics.
Ratio knob snaps to specific values but can be fine-tuned with *Alt/Option* key modifier.
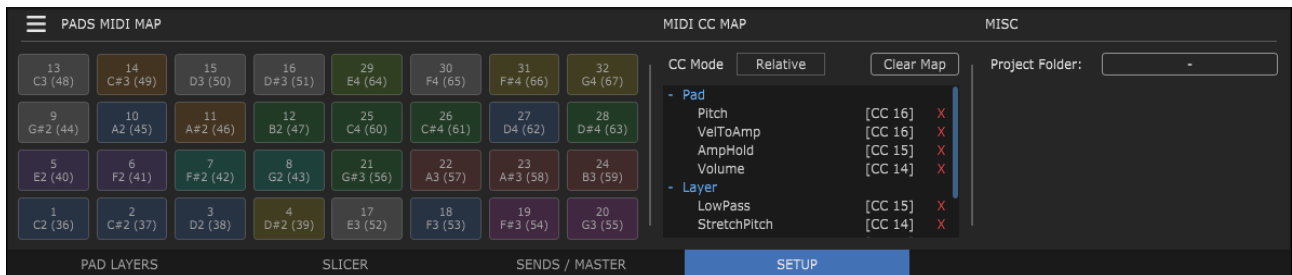Simple reduction meter show gain reduction.

The **Clipper** can be Soft or Hard, and its input can be adjusted new using Gain.

TIP - the peaks on the meter can be reset by clicking on the meter itself

Setup

The Setup tab contains the settings related to MIDI, but also some settings exclusive to the current instance of plugin.

Pads MIDI Map (trigger map)

A trigger map contains 'region' information for each drum pad. In other words it controls what MIDI notes trigger which drum pad. Every pad respond to a single MIDI note.

For pad to learn a trigger note just left-click on a pad note/number you want to learn in the Setup tab and then press a key or pad on your MIDI controller or a DAW Piano Roll. It will change the pad text according to the newly learned note.

To manually set pad to a specific midi note number, right-click on a trigger button to get a dialog for entering number.

Save, delete and load of trigger maps is supported from a Pads MIDI Map menu.
Also, it is possible to set the current trigger map to be the default map for all new instances.

MIDI CC Map

Midi CC map contains GUI control links to midi cc parameters.
There are two operating modes for receiving cc messages, so it can be set to correctly recognize the mode from the sender:
Absolute - received messages are interpreted as 0 to 127
Relative - received messages are interpreted +1/-1 (most often come from the endless encoder)

The currently mapped controls are visible in the list. A control can be "unlearned" by clicking on the red "X" in its row.

Misc

Project Folder - if selected, will be used to save drag&drop rendering to Pad or DAW, but only for this instance of the plugin, and it overrides Render Folder slected at Preferences. It is useful for storing rendered samples directly in the DAW project folder.

FAQ

What are the system requirements?
- Host software / DAW - 64 bit
- CPU Intel / AMD / Apple M1
- Windows 7 or newer
- MacOS 10.11 or newer
- Linux Ubuntu 20 or newer (experimental = tested on Mint and Manjaro, and will probably work on other linux distributions as well)

What are the restrictions of the Demo version?
Demo version is fully functional with no time restrictions but loading the drumkit and reloading the plugin state is disabled.

Do I need internet to Activate plugin?
No! It is a simple unobtrusive offline activation. When you purchase a license in our online store your purchase will be processed by Paddle and you'll be sent an activation code by email. Then open the demo plug-in, enter your email and activation code when asked, and enjoy your fully-functional, licensed plug-in.

Can I use a license on multiple PCs?
You can use the personal license on all of your computers, and this includes mixed use on Windows/macOS/Linux computers, as long as only you use it.

Apple Silicon compatibility?
The installer will install universal binary that contain separately optimized code for Intel and Apple Silicon processors which will run natively on each platform.

Can I request a refund?
Unfortunately, not. The license issued is non-revocable so there is no way to return the purchase. All Speedrum sales are final.