

TAL-Sampler

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Introduction

The TAL-Sampler is a special sample-player plugin that can create different vintage sounds even with high quality samples and is available as VST, Audio Unit and AAX plug-in format. You can load and play your own samples in every common sample format (*.wav, *.aiff, *.aif, *.mp3, *.ogg, *.flac).

TAL-Sampler can play up to four totally independent layers; this means four samples with their own settings, at the same time. There is also a simple sfz import for samples that imports the mapping and sample paths.

Unlike other samplers, TAL-Sampler has the same setting like analogue synthesizers including a powerful modulation matrix, a high quality self-oscillating 24/12/6 dB low pass filter and almost every parameter is automatable. You can choose between different digital analog converters to get the real vintage sound of different sampler inside your DAW.

Some nice additions like a real-time time stretcher and the possibility to modulate or automate the sample loop positions gives this sampler a lot of possibilities to create new sounds.

It's tested and works within the most common audio hosts as *Ableton Live*, *Cubase*, *Logic Pro*, *Garage Band*, *Reaper* and *DSP-Quattro*. No standalone version available. Try the unregistered demo version to be sure that the plugin works in your environment. The demo will play a noisy sound every minute.

Please use at your own risk. We take no responsibility for any damage caused by our VST, AU (Audio Unit) and AAX plug-ins.

Installation

Windows

Requirements:

- SSE 2 compatible processor (Pentium II or higher is required or an AMD equivalent)
- Windows XP or higher.
- A VST 2.4 compatible host or Pro-Tools 3.6 or higher.

Installation:

- Download the file *install_TAL-Sampler.zip* and unzip it.

Install manually:

- You can copy the plug-ins manually to your hosts VST directory. The zip file contains all plug-ins. Our plug-ins do not require any installation.

Use installer:

- It's also possible to use the installer also it isn't required. Execute *install_vst_32.exe* if you want to install the 32 bit version of the plugin or *install_vst_64.exe* if you have a 64bit host (sequencer). Please read the manual of your sequencer to find out whether it needs 32 or 64 bit plugins. It's also possible to install both versions of the plugin.
- Step through the wizard and choose the path where you want to install the plug-in. Please read the manual of your host to get more information where this directory is.

In hosts like Cubase, the plugin will show up after a restart. Some hosts need a plugin rescan.

If you use Ableton Live and the plugin does not show up after a VST plugin rescan, try to disable and re-enable VST plugin support.

Uninstall:

Just delete the plugin *.dll file to uninstall it.

OS X

Requirements:

- OSX 10.7 or higher.
- Intel Processor.
- AU (Audio Unit) or VST 2.4 compatible host or Pro-Tools 10.3.6 or higher..

Installation:

- Download the *TAL-Sampler-installer.pkg*, unpack it and run the installer. The installer copies the plugin to the right directory. It installs all available versions by default (VST 32/64bit, AU 32/64bit, AAX 32/64bit).

Uninstall:

Delete the plugin. It's located in following directories:

*/Library/Audio/Plug-Ins/VST/
/Library/Audio/Plug-Ins/Components/*

In hosts like Cubase, the plugin will show up after a restart. Some hosts need a plugin rescan.

You maybe need a OSX restart for the Audio Unit.

If you use Ableton Live and the plugin does not show up after a VST plugin rescan, try to disable and re-enable VST plugin support.

Registration

You need to buy and register the plugin to disable the demo mode that fades in a noisy sound every minute.

The registration process is simple. You need to start the demo plug-in and copy paste the serial you got with an email after you bought the plugin.

Click on the preset name and *Register Plugin...* to register the plugin.



This opens the *Register Plugin* dialog. You have to paste the 32 digit serial number into the text field and press *OK*. A click into the text field should be enough to paste the serial. The plugin is now registered if you entered the serial you received by our registration email. You can see this on the top left corner of the plugin. The text *Registered* should show up.



You maybe restart the host after the registration to make sure that also other TAL-SAMPLER plug-in instances are registered.

Set Default Preset Path

The first thing you have to do is to set the default preset path. This is the folder where TAL-SAMPLER is looking for presets if you click on the “Next Preset Arrow” near the preset name and it’s the location that opens up if you choose load preset from the menu. You can do this with the menu entry “Set Presets Location”.



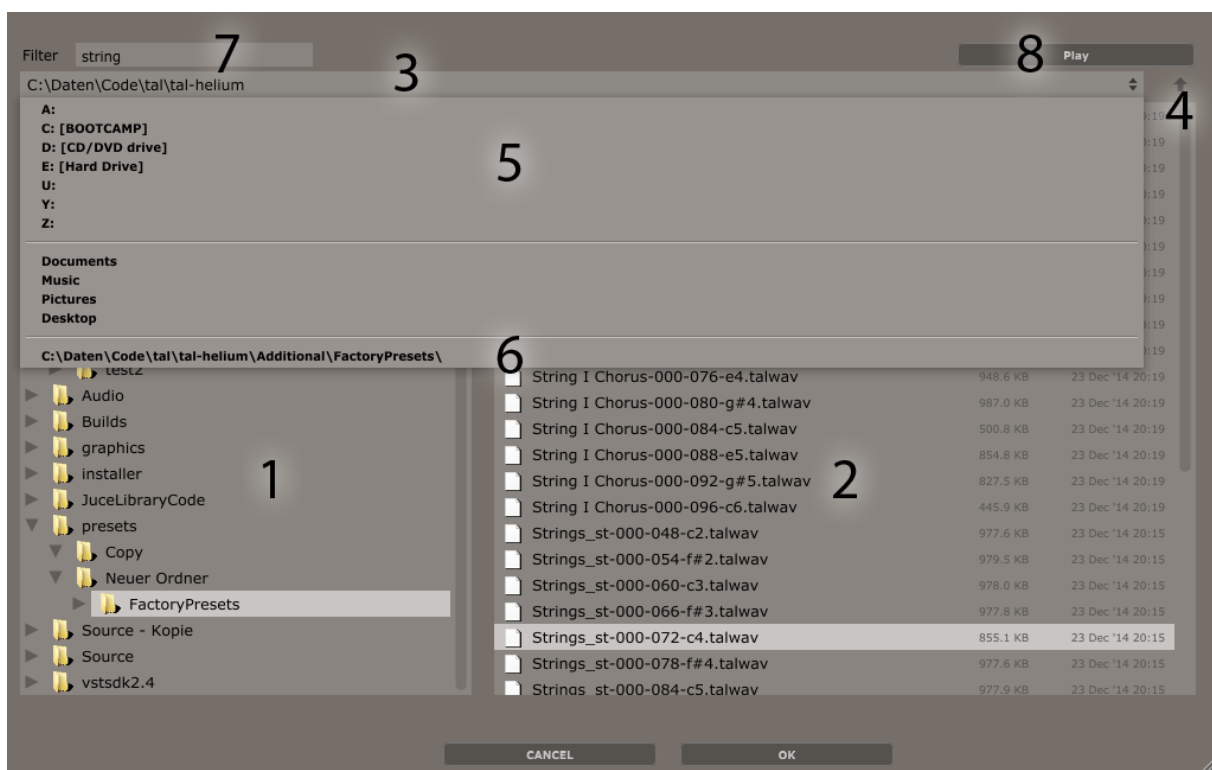
Copy all TAL-SAMPLER presets you have into sub folders of the presets location folder you have chosen. You can now step through the presets with the left and right arrows near the preset name.

Verify your presets location with “Show Presets Folder...”. This opens the system file browser at the currently active preset location.

File Load and Save Dialog

TAL-Sampler has a powerful file dialog that should help to find samples, presets as fast as possible. It contains following parts:

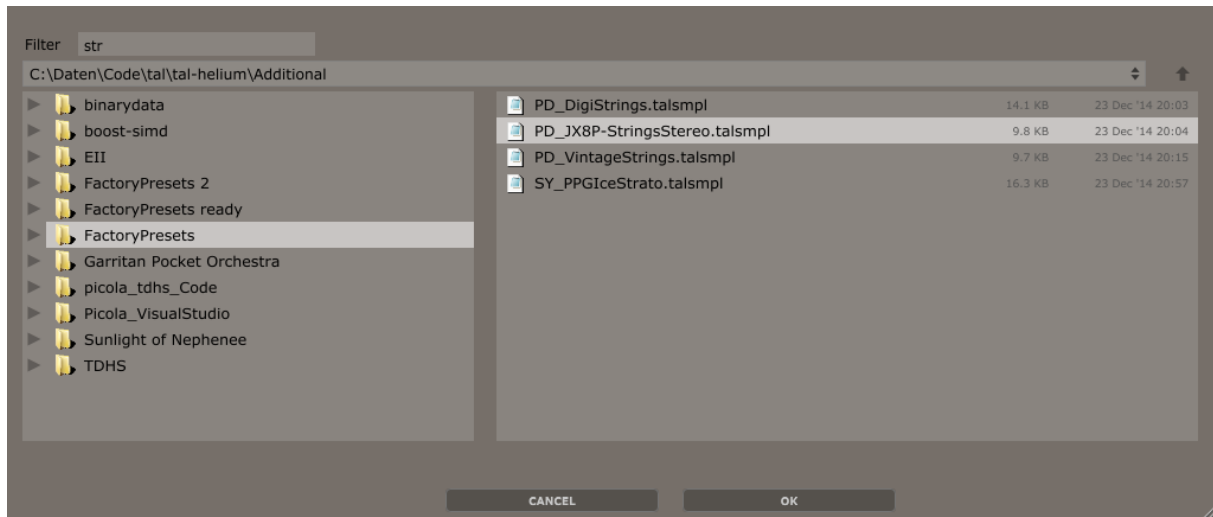
1. Navigate through system directories. Use the filled arrow on the left of the folder name to open and close a folder and jump into a folder with a double click.
2. This is the file list view that shows the files in the selected folder.
3. Shows the current path to the folder.
4. Navigate upwards to the parent folder.
5. Change the drive.
6. Shows the last used folders where you have loaded a sample and the “Default Preset Folder” for fast navigation.
7. Filter the files with the name or a part of it.
8. Listen to the selected audio sample.



Use the “OK” button or double click the sample / preset to load it immediately.

Load a Preset

Choose “Load...” from the menu to open the “Preset Load” dialog. It opens the location you have defined as “Default Preset Location”. Choose a folder to see the included presets. The OK button enables as soon as you have chosen a preset.



Save a Preset

Choose “Save...” from the menu to save and overwrite the current loaded preset. This is only possible if you loaded the preset from disk. Choose “Save as...” works always and saves the preset to the chosen location with relative paths to the samples.

Make sure you save the file-preset on the same drive as the samples, because the paths inside the preset file are saved relatively! A good practice is to have the samples in a sub folder of the preset.

You can choose “Copy Samples to Preset Directory” or “Save Preset and Samples to...” to move the samples to the preset. This is maybe helpful if you use samples from different drives and locations. You can copy the preset and the samples to another location or share them with other people after that.

User Interface

TAL-Sampler has four layers and can play up to four samples simultaneously. Every layer is independent and has its own sampler engine including mapping.

Layer Overview



The layer overview shows the activated layers with the red LED on the left. It's possible to activate and deactivate the layer with a click on the LED.

It also shows the memory used by the sample. This is not equal to the sample size. It's the memory used including pre-calculated tables.

The view also contains the most used controls to have fast access to it. A special parameter is "Coarse". It can transpose the whole layer sample mapping ± 24 half-tones up and down. The other parameters are described in the layer description in more detail.

Do not increase the volume of a layer if the sample is already normalized. This value is directly related to the filter input volume and maybe impacts the filter drive.

Use the main volume knob to adjust the overall volume.

Layer View



The Layer View shows the individual layer parameters. You will find common settings like Volume, Tune (+- 24 halftones), Fine Tune (+- 1 halftone) and Delay where you can delay the sample start up to one second.

COPY / PASTE LAYER allows to copy the layer mappings and paste it into another layer.

Stretch Section



Stretch allows it to change the tempo of the sample without changing the pitch. It is done in real-time without any pre-calculations.

After stretch is enabled, the sample will be played with the same length for all pitches. There are two vintage stretch modes available:

CYCLIC:

Akai style cyclic stretcher. The DENSITY knob controls the grain size.

INTELL:

Time stretch with correlation algorithm. Density changes the correlation windows.

Stretch:

Stretch allows it to change the tempo without affecting the pitch. It's possible to make it infinitely slow (staying at the same position) up to twice the speed.

Layer Filter



It's possible to enable a filter only for the specific layer. There is a one pole 6dB and a 12dB state variable filter with resonance.

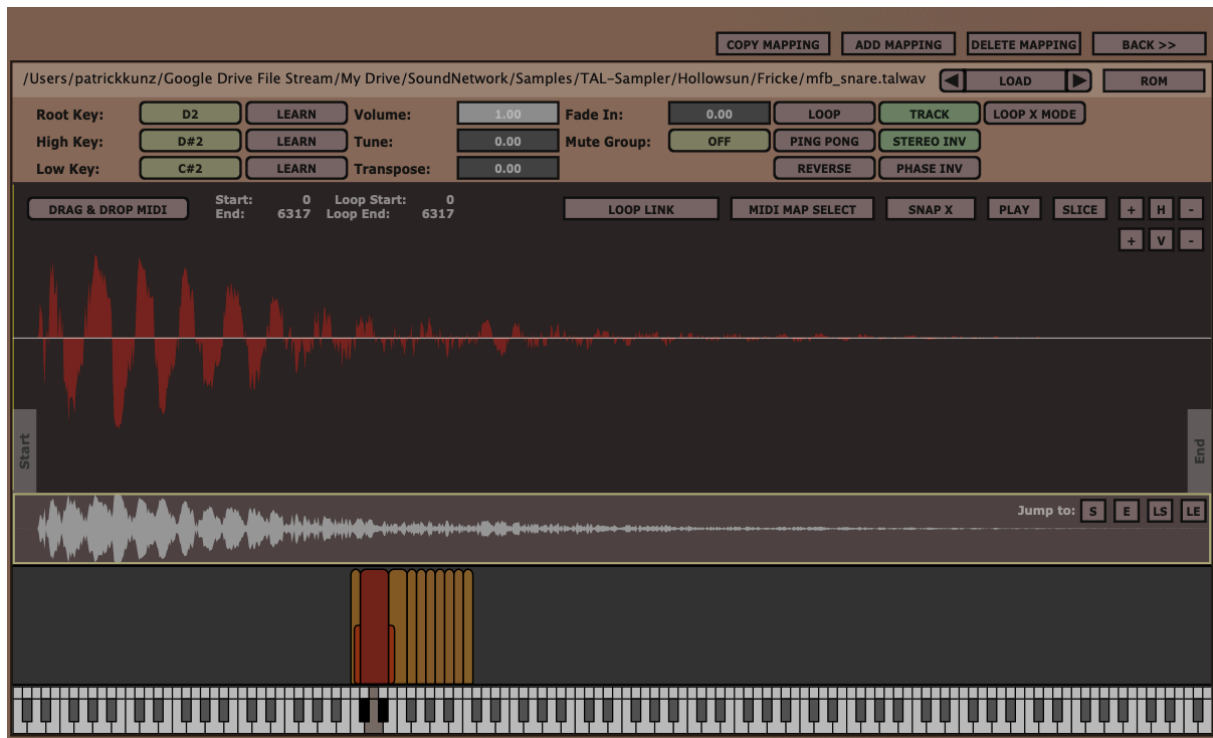
Sample and Loop Section



The sample and loop section offers the most usable parameters for fast sample loading and tuning if you only use one sample or if you want to edit a parameter of an existing mapping.

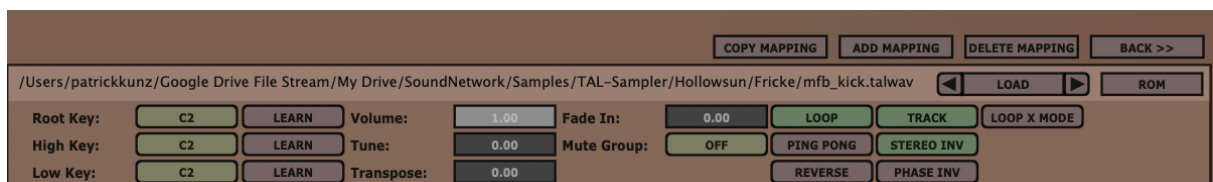
- The sample view shows the sample wave-form and the loop. The yellow sample area shows the loop. A click on the wave form automatically opens the mapping editor.
- On the bottom the view shows the sample name. Use the load button to load a different sample. It's possible to step through other samples in the same folder with the arrow buttons. Same for the SFZ button. It imports the first layer in a SFZ file.
- PLAY plays the current selected sample. The arrows let you step through the layer mappings.
- REV allows to play the sample reverse.
- The parameters give quick access to the most important loop parameters and the start and end positions of a sample.
- Fade automatically cross-fades the loop to avoid clicks. Choose ALL and change the value to fade all samples in the layer with the same value.
- It's possible to make reverse loops when you set the start position behind the end position.
- The loop button enables and disables the loop. Click on the LED's near the loop or sample start and end parameters to make sample accurate adjustments.
- The reverse button plays the current sample reverse.

Mapping Editor



The mapping editor allows it to map samples to different keys. Every layer has its own mapping and every layer can only play one sample at once. Overlapping mappings in one layer are not supported.

Detail View



Access to all mapping specific settings:

ROOT KEY: The root key of the original sample.

LOW KEY: The lowest key that plays the sample.

HIGH KEY: The highest key that plays the sample.

VOLUME: Mapping volume.

TUNE: Mapping fine tuning up to +/- 1 halftone.

REVERSE: Sample reverse mode. Plays the sample in reverse.

LOOP: Enables and disables loop.

LOOP FADE: Defines the cross fade size.

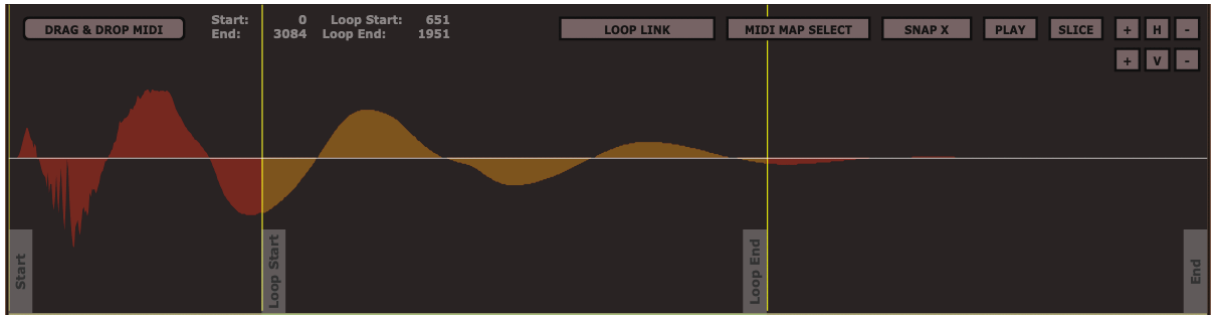
LOOP X-MODE: Always searches for zero crossings even if the loop positions are modulated.

LOAD: Loads or replaces an audio sample. Use the arrow keys to step through the samples inside a folder.

ROM: Contains some basic rom samples, most sampled from a hardware SH-101

DELETE: Deletes the current active mapping.

Waveform View



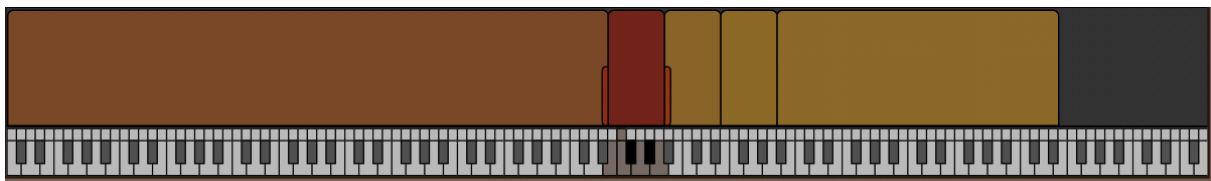
The sample view shows the waveform, start, end, loop start, loop end and the fade in size. You can drag the positions with your mouse and it's possible to zoom in and out with the mouse wheel.

SNAP X: Automatically snaps to zero crossings if you move the start, end, loop start or loop end position.

PLAY: Plays the current active mapping sample.

SLICE: Splits the sample at the mouse click position and creates a new mapping.

Mapping View



The mapping view shows the mappings and the assigned keys per map. The detail and waveform view shows the data of the in the mapping view selected mapping (highlighted red).

You can move mappings with the mouse or change the key range when you drag with the mouse on the left or right hand side of the mapping. You can also see and change the mapping root key when clicking on the rectangles on top of the keys. It's also possible to select more than one mapping and move it with the mouse.

It's possible to drag and drop samples direct into the waveform or mapping view from file explorers, host audio file pools or cubase media bay.

Re-sampler Section

The re-sampler section allows it to change the way samples are re-sampled. There are five different modes (DAC types) with a different sound, CPU usage and quality. Every sample that plays will be processed separately.

You do not need old 8 bit samples with a low sample rate to get the vintage sound. TAL-Sampler has the possibility to down-sample high quality samples to a desired sample rate and bit depth with a high quality re-sampler in real-time.

Signal path of one playing sample:



The re-sampler part depends on the DAC Type.

Linear



This is the most simple and CPU efficient mode. It uses linear interpolation without any filtering. Most sample players use something like this to pitch samples.

You maybe use this if you want to save CPU for a sample that does not need any vintage character.

Variable



Variable is the most common mode with linear bit scaling. It has a variable sample rate and uses a high quality filter to re-sample the signal to the desired sample rate. After that it does poor sample hold to get desired pitch. It's possible to choose a sample rate between 8000 Hz up to 44100 Hz.

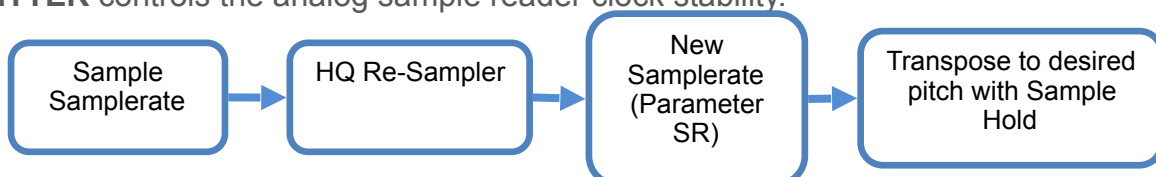
ADC Quality sets the analog digital converter quality. A small value introduces low frequency aliasing.

DAC Quality sets the digital to analog converter quality. A low value introduces high frequency aliasing.

HISS boosts frequencies > 10kHz and makes the DAC artefacts more notable.

SAT adds some saturation to the voice.

JITTER controls the analog sample reader clock stability.



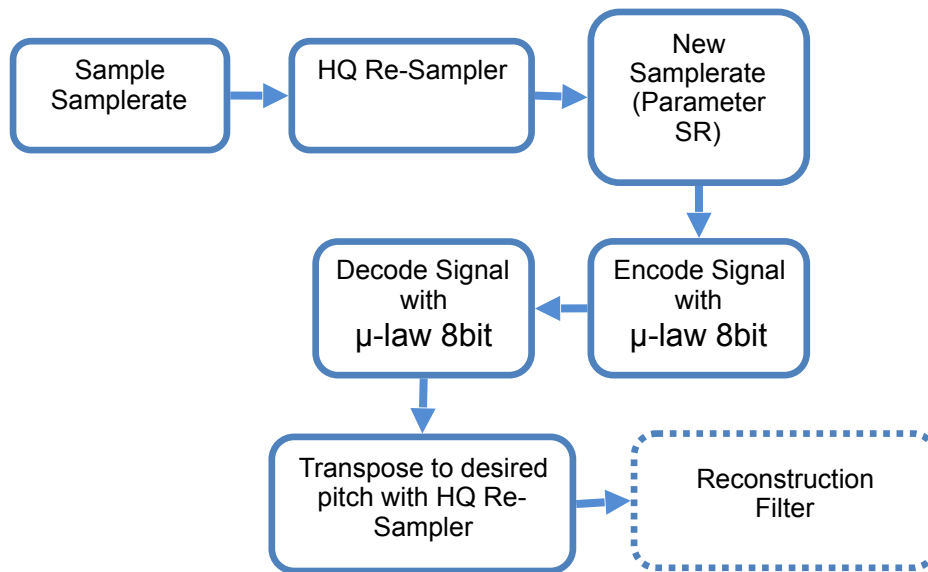
AM 6070



AM6070 is a classic 8bit mode. It makes use of the μ -law algorithm, used in PCM digital telecommunication systems to improve the quality and was also used in early samplers. It adds a nice noise floor to the sample, where low level signals have a better resolution than loud signals. You will find more information on Wikipedia.

TAL-SAMPLER offers a level knob that allows reducing the recording volume. All other parameters work the same

like in the variable mode.



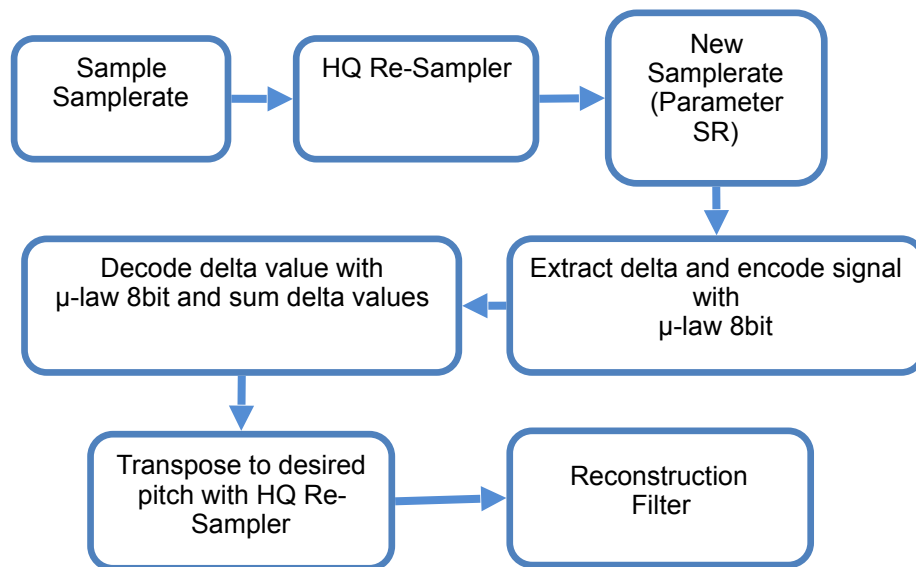
Emu II



Emu II emulates the DAC of a popular hardware sampler from the 80's. It's not possible to adjust the saturation, because it's already included and calibrated with the hardware device.

This emulation also uses 8bit μ -law companding but uses also Differential Pulse Code Modulation with 8bit sample delta values. This way the sampler can have up to 14 bit dynamic range with 8bit data. It sounds especially good

low notes but can sound bad if you pitch up the sample too much. There is also a nice background noise with a special character. You maybe set the sample rate to 27kHz :)



You can decrease the DAC volume to emulate a low volume recording with some more background noise. The Offset knob changes the μ -law table scaling of the encoded data to the decoder. You maybe have to tune this too if you want to emulate the hardware.

Clean



This mode has a subset of the variable mode. It always uses the original sample rate of the sample without downsampling the sample rate.

S1000



This mode uses 8 point sinc interpolation, tuned after the popular S1000 vintage sampler.

Filter Section



The filter section contains a great sounding self-oscillating zero delay feedback stereo resonant low pass filter with 24, 12 and 6dB. The filter needs to be enabled for the specific layer. This can be done with the buttons A, B, C and D. The filter drive depends on the input volume of the different layers. You do not have much resonance if you drive it too hard. Reduce the layer volume in this case. There is also a 6 pole butterworth

filter available.

Envelope Section



The envelope section provides one AMP envelope, a VCF filter envelope and a MOD envelope. All three envelopes can also be used as modulation source in the modulation matrix.

The envelopes are analog modelled but can be switched to a digital one if you choose DIGITAL / RC.

This way the envelope values is digital but will be converted to the analog domain using a RC component to get a smooth transition between the digital

values.

ONE SHOT enables the one shot mode. In this mode the whole sample will be played also if you hit the key only for a short time. It's not usable for looped samples.

LFO Section



The LFO section offers three independent LFO's per voice with five different waveforms (Triangle, Saw, Rectangle, Random and Noise).

TRIG, triggers the LFO with the note start. SYNC, synchronises the tempo to the host tempo. UP enables the unipolar mode where the LFO value is

only positive. This is sometime useful for some modulation effects if you only want a modulation that adds or removes (this depends how if you set the intensity knob in the mod matrix to a positive or negative value) some intensity from the original value. The LFO's can be used as modulation source in the modulation matrix.

Master Section



The master section offers the main parameters for the sampler. It's possible to set the number of voices and enable global volume velocity. Portamento is available in two

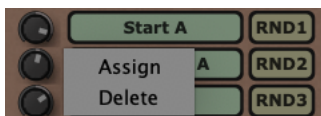
different modes (always or only when notes are overlapping). There is a TIME switch for the portamento mode. It makes sure that the portamento time is always the same for small or big portamento steps.

A master tune and volume knob is also available.

Modulation Matrix Section



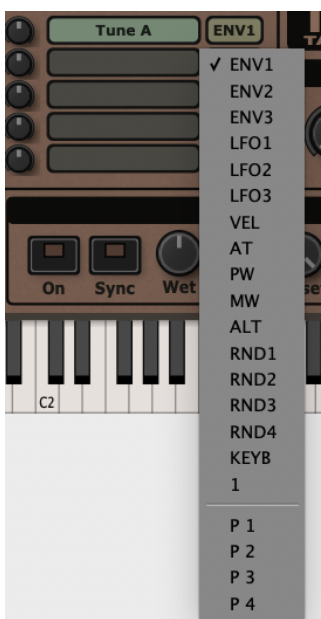
The MOD-MATRIX, allows it to modulate almost every parameter of TAL-SAMPLER. It's even possible to modulate the intensity of another MOD-MATRIX entry. It's possible to add 10 different modulations from the same or different sources.



Click at the first rectangle and choose *Assign* to select a modulation destination. It shows a popup when already a source is assigned. Choose ASSIGN to assign another source or DELETE if you want to delete the source. You can also delete the source with a right mouse click.



The destination field change the color to blue.



Now you can click at a knob on the sampler UI to assign it to the matrix. Use the knob on the left to adjust the modulation intensity. It can be positive or negative.

The value ENV 1 shows the modulation source. You can click on it and choose a different source:

ENV = Envelope, VEL = Velocity, AT = After-touch, PW = Pitch Wheel, MW = Mod-Wheel, ALT = Alternate when you press a new key, RND = A new random value if you press a new key, KEYB = Key Follow, 1 = Value 1, P 1 to P 4 = Use the knobs in the control section to modulate the matrix with host automation or with a MIDI controller.

Equalizer Section



The equaliser section includes a peak EQ. It allows reducing or boosting a specific frequency for a given bandwidth (Q).

Reverb Section



The reverb section adds some nice high quality vintage reverb to the output. It works great for long reverb times.

Delay Section



The delay section is a bit more complex but also offers a lot of possibilities. It has the ability to create chorus or flanger effects with very short delay times, but it can also create common delay sounds.

SYNC synchronises the delay to the host tempo and directly affects the time knob.

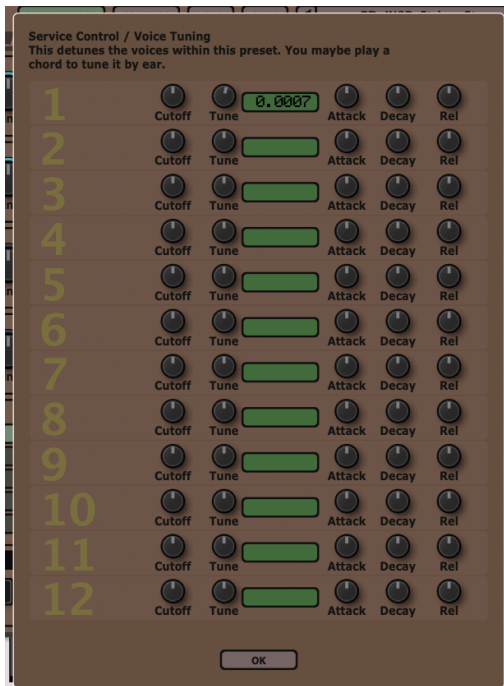
OFFSET controls the delay offset between the left and right audio channel up to 50%.

SPREAD controls the modulation offset of the stereo left and right channel up to 180 degree.

DEPTH and **RATE** control the intensity and the speed of the modulation.

FDB controls the signal feedback or the delay duration.

Service Control



Click on the SERVICE CONTROL button at the top to open the service control dialog. It allows it to calibrate or detune parameters like cutoff, fine tune and envelope speed for each synth voice. Polyphonic analog synth voices are not exactly in tune with each other and you have to make a service from time to time to calibrate the synth. This sounds like a big issue, but it's also something that makes the sound of analog synths more interesting.

MIDI Learn



Assign a midi controller to every control of the synth. Do following steps to make a successful assignment:

1. Enable MIDI LEARN (top right corner)
2. Move a plug-in slider or push the button you want to control.
3. Move your hardware controller
4. Disable MIDI LEARN or do some more assignments.

DELETE ML

Deletes all midi learn assignments.

L

Locks actual loaded MIDI MAPPING and keeps it also if you change to other presets that have another mapping saved.

EMBED AUDIO



Saves the audio data inside the preset and finally in your hosts session file if you use it in a production. This can make your session file huge. It's not recommend to use that feature if you are using bigger samples that are a few megabytes big. You maybe notice that saving and loading sessions can be slow if you embed samples.

It's always better to keep the samples outside as audio data. On OSX you can use the `/Users/Shared/` folder if you want to work on different OSX systems.

On windows you can use the same location outside the user directory to switch between different systems or map the same drive.



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