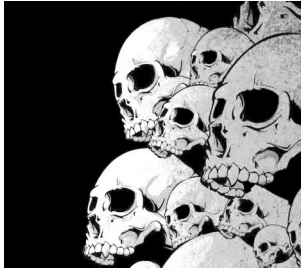


LADSPA



Y. Collette ([ycollette.nospam@free.fr](mailto:ycollette.nospam@free.fr))  
<https://audinux.github.io>





# Les plugins LADSPA

Extrait de <http://linuxmao.org>

C'est la première norme de greffons développée sous GNU/Linux. La première spécification de cette norme a été finalisée le 2 avril 2000.

Le SDK de développement (pour créer de nouveaux greffons) peut être trouvé ici :

<http://www.ladspa.org>

Les greffons LADSPA (Linux Audio Developer's Simple Plugin) permettent d'appliquer un certain nombre d'effets sonores sur un fichier son ou sur une portion de fichier son.



# Les plugins LADSPA

<b>AMB</b>	<a href="http://kokkinizita.net/linuxaudio/index.html">http://kokkinizita.net/linuxaudio/index.html</a>
<b>Blepvco</b>	<a href="http://www.smbolton.com/linux.html">http://www.smbolton.com/linux.html</a>
<b>Blop</b>	<a href="http://blop.sf.net">http://blop.sf.net</a>
<b>CAPS</b>	<a href="http://quitte.de/dsp/caps.html">http://quitte.de/dsp/caps.html</a>
<b>CMT</b>	<a href="http://www.ladspa.org/cmt/">http://www.ladspa.org/cmt/</a>
<b>FIL</b>	<a href="http://kokkinizita.net/linuxaudio/index.html">http://kokkinizita.net/linuxaudio/index.html</a>
<b>FOO</b>	<a href="http://code.google.com/p/foo-plugins/">http://code.google.com/p/foo-plugins/</a>
<b>MCP</b>	<a href="http://kokkinizita.net/linuxaudio/index.html">http://kokkinizita.net/linuxaudio/index.html</a>
<b>NJL</b>	<a href="http://www.ecs.soton.ac.uk/~njl98r/code/ladspa/njl-plugins/">http://www.ecs.soton.ac.uk/~njl98r/code/ladspa/njl-plugins/</a>
<b>Omins</b>	<a href="http://www.nongnu.org/om-synth/omins.html">http://www.nongnu.org/om-synth/omins.html</a>
<b>REV</b>	<a href="http://kokkinizita.net/linuxaudio/index.html">http://kokkinizita.net/linuxaudio/index.html</a>
<b>SWH</b>	<a href="http://plugin.org.uk/">http://plugin.org.uk/</a>
<b>TAP</b>	<a href="http://tap-plugins.sourceforge.net/">http://tap-plugins.sourceforge.net/</a>
<b>VCF</b>	<a href="http://www.suse.de/~mana/ladspa.html">http://www.suse.de/~mana/ladspa.html</a>
<b>VCO</b>	<a href="http://kokkinizita.net/linuxaudio/index.html">http://kokkinizita.net/linuxaudio/index.html</a>

Pour plus d'informations : <http://linuxmao.org>



# Les plugins LADSPA

**VLevel** <http://vlevel.sourceforge.net/>  
**Vocoder** [http://www.sirlab.de/linux/download\\_vocoder.html](http://www.sirlab.de/linux/download_vocoder.html)  
**WASP** <http://linux01.gwdg.de/~nlissne/wasp/index.html>  
**Nova** [https://tim.klingt.org/nova/download/nova\\_filters-0.2.tar.bz2](https://tim.klingt.org/nova/download/nova_filters-0.2.tar.bz2)  
**Calf** <http://calf.sourceforge.net/>

**Socal's LEET Plugins** <http://code.google.com/p/leetplugins/>  
**Invada plugins** <http://www.invadarecords.com/Downloads.php?ID=00000263>  
**DSSI-VST 0.7 now with LADSPA Extensions** <http://www.breakfastquay.com/>  
**Holap synthesizer and DSP effects** <http://holap.berlios.de/>

Pour plus d'informations : <http://linuxmao.org>



# Les plugins LV2

Extrait de <http://linuxmao.org>

Aux origines de LV2, il y a LADSPA.

LADSPA est une norme de greffons vieillissante, elle a fait son temps. Il ne s'agit pas de mettre en cause la qualité DSP des greffons LADSPA, d'ailleurs la majorité des greffons LV2 ré-utilise cette partie du code des greffons LADSPA, mais simplement, la norme LADSPA est une norme limitée au niveau graphique par exemple.

Le format LV2 est issu du consortium Linux Audio Developer = LAD.

<http://lv2plug.in/>

Pour le moment (octobre 2009), il y a moins de greffons LV2 que de greffons LADSPA, espérons que la tendance s'inverse, car le format LV2 convient beaucoup mieux aux exigences et aux attentes des utilisateurs, notamment, pour l'habillage graphique bien plus avancé que les LADSPA. De plus, il facilite la vie aux développeurs de greffons. On peut dire que LV2 est à LADSPA ce que XML+CSS est à HTML.



# Les plugins LV2

**SWH**  
**Il-plugins**  
**zynadd**  
**Calf**  
**LinuxDSP**

<http://plugin.org.uk/lv2/>  
<http://il-plugins.nongnu.org/>  
<http://home.gna.org/zyn/>  
<http://calf.sourceforge.net/>  
<http://www.linuxdsp.co.uk>

Pour plus d'informations : <http://linuxmao.org>

Pour utiliser un plugin sans utiliser d'application, on peut utiliser jalv :

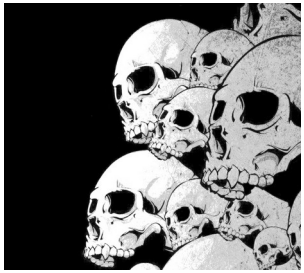
- **jalv** : pour utiliser un plugin avec son interface rdf
- **jalv-qt** : pour utiliser un plugin avec son interface qt (si elle en a une)
- **jalv-gtk** : pour utiliser un plugin avec son interface gtk (si elle en a une)
- **jalv-gtkmm** : pour utiliser un plugin avec son interface gtkmm (si elle en a une)

Exemple :

```
$ jalv.gtk http://nickbailey.co.nr/triceratops
```



On peut utiliser jalv\_select pour simplifier.



# Les plugins DSSI

Extrait de <http://linuxmao.org>

**DSSI** = Disposable Soft Synth Interface?, ce qui veut dire : Interface de Synthétiseurs Logiciels Disponibles. Il convient de le prononcer dizzy.

C'est un standard d'interface logicielle (API) pour les instruments logiciels et les effets. Il apporte à GNU/Linux un équivalent au standard VSTI.

**DSSI** est basé sur l'API Ladspa qui est une autre norme de greffons, les types d'évènement de séquenceur ALSA, et la communication OSC (Open Sound Control) avec des interfaces graphiques adaptées.

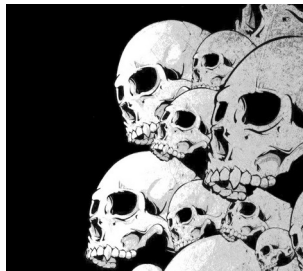
La première publication des spécifications **DSSI**, version 0.1, date du 27 avril 2004. La publication actuelle, version 1.0, date du 9 janvier 2009.

Plusieurs greffons **DSSI** existent, aussi bien des synthétiseurs que des effets sonores ou encore des outils.

<http://dssi.sourceforge.net/>

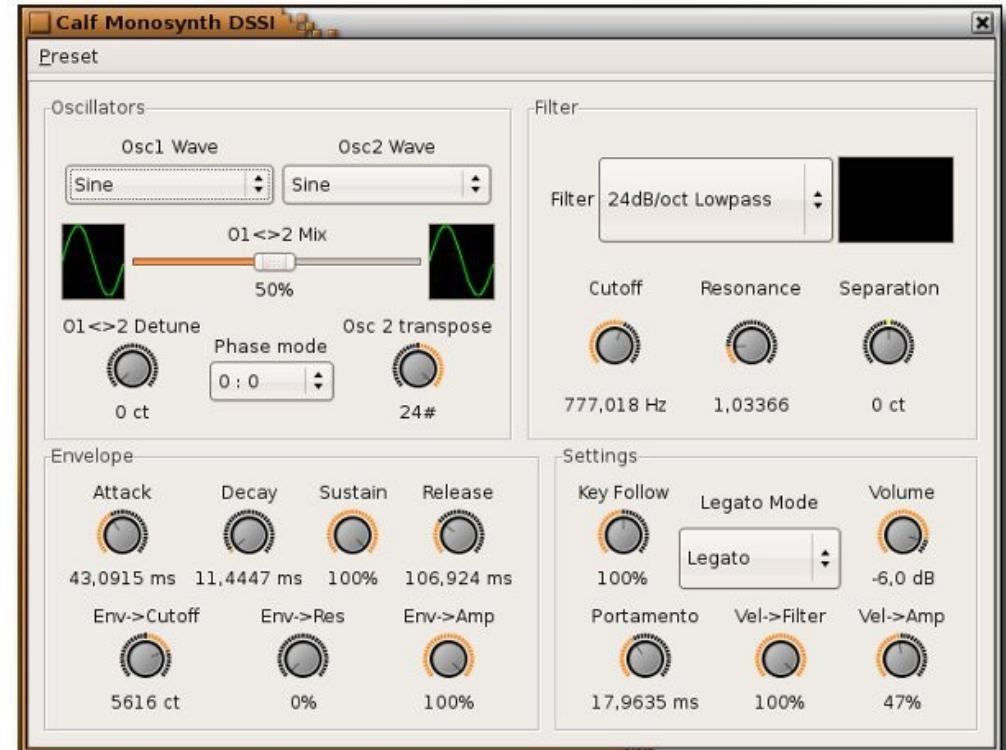
Aujourd'hui, la spec LADSPA V2 (ou LV2) remplace avantageusement DSSI





# DSSI

- \* Calf Monosynth
- \* Calf Organ
- \* Hexter
- \* Xsynth-dssi
- \* **Fluidsynth-dssi**
- \* Sineshaper
- \* Oscilloscope
- \* WhySynth
- \* Nekobee
- \* Wsynth
- \* Holap
- \* Dssi\_convolve
- \* Xy-controller
- \* **amSynth**







# Carla – un éditeur multi plugins 1/2

<https://github.com/falkTX/Carla>

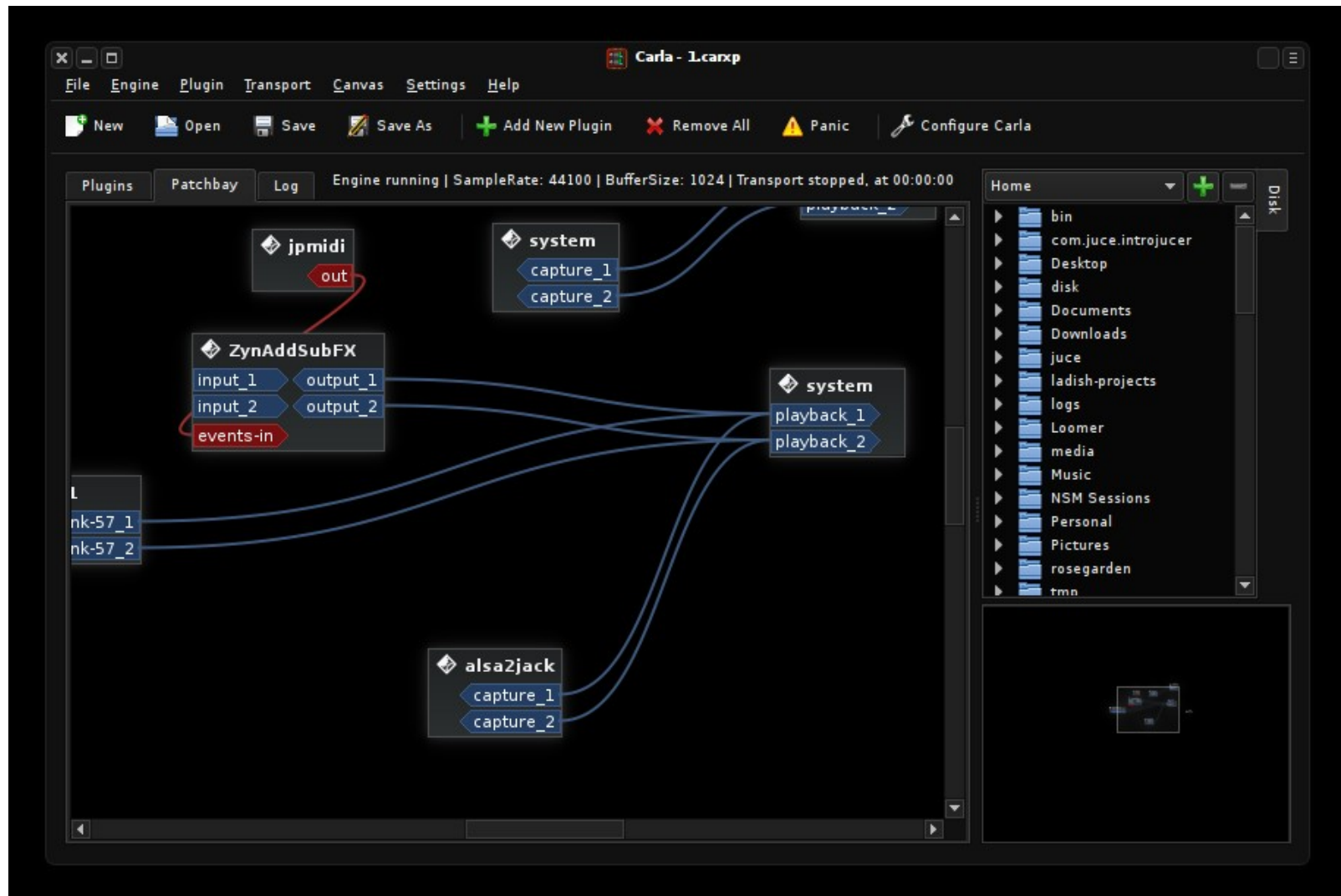
La version Audinux fournit le Windows bridge qui permet de lire des VST Windows

```
$ dnf install carla # Fedora  
$ dnf install Carla-mao # Audinux
```





# Carla – un éditeur multi plugins 2/2





# Surge



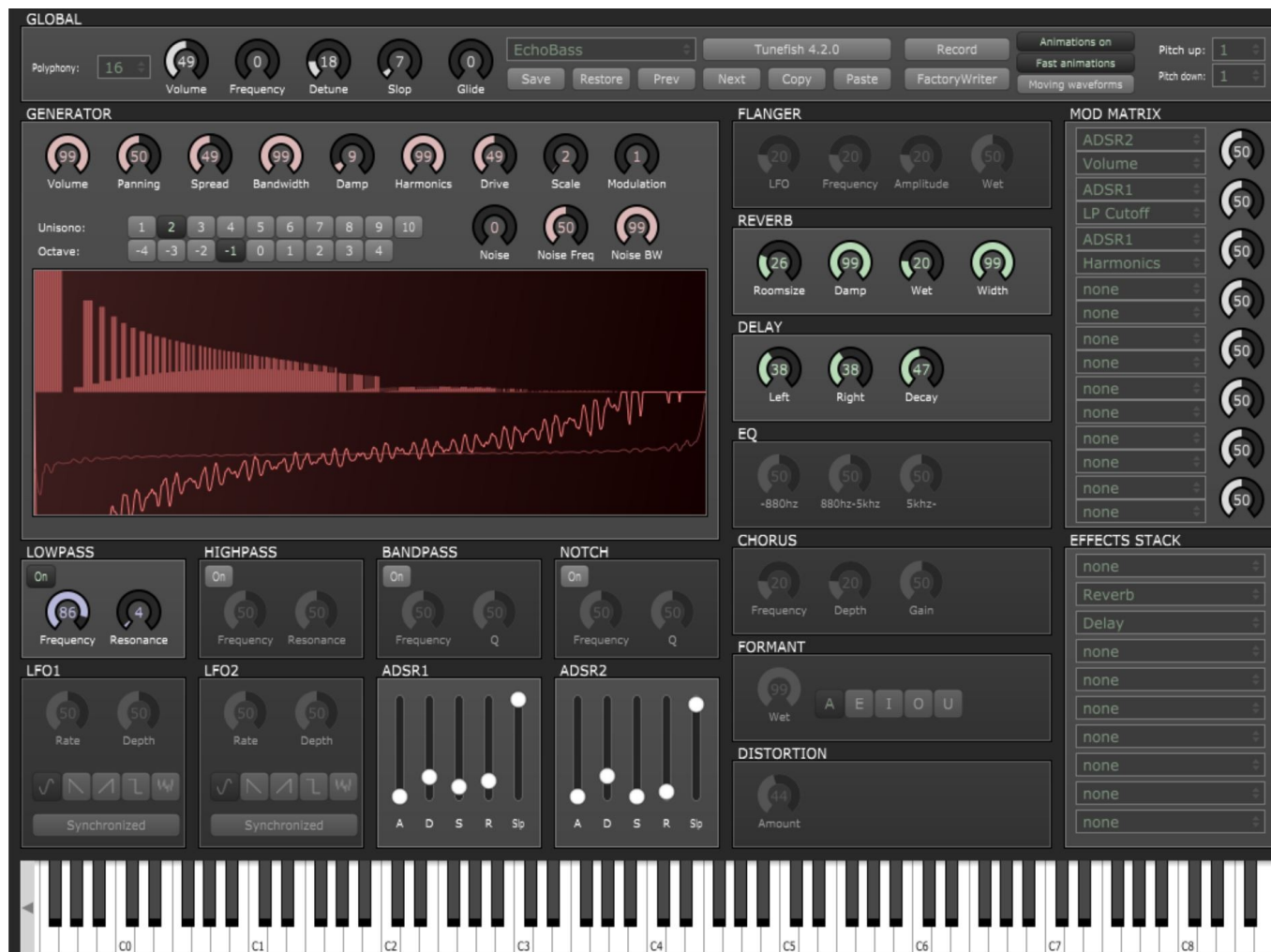




# Odin2

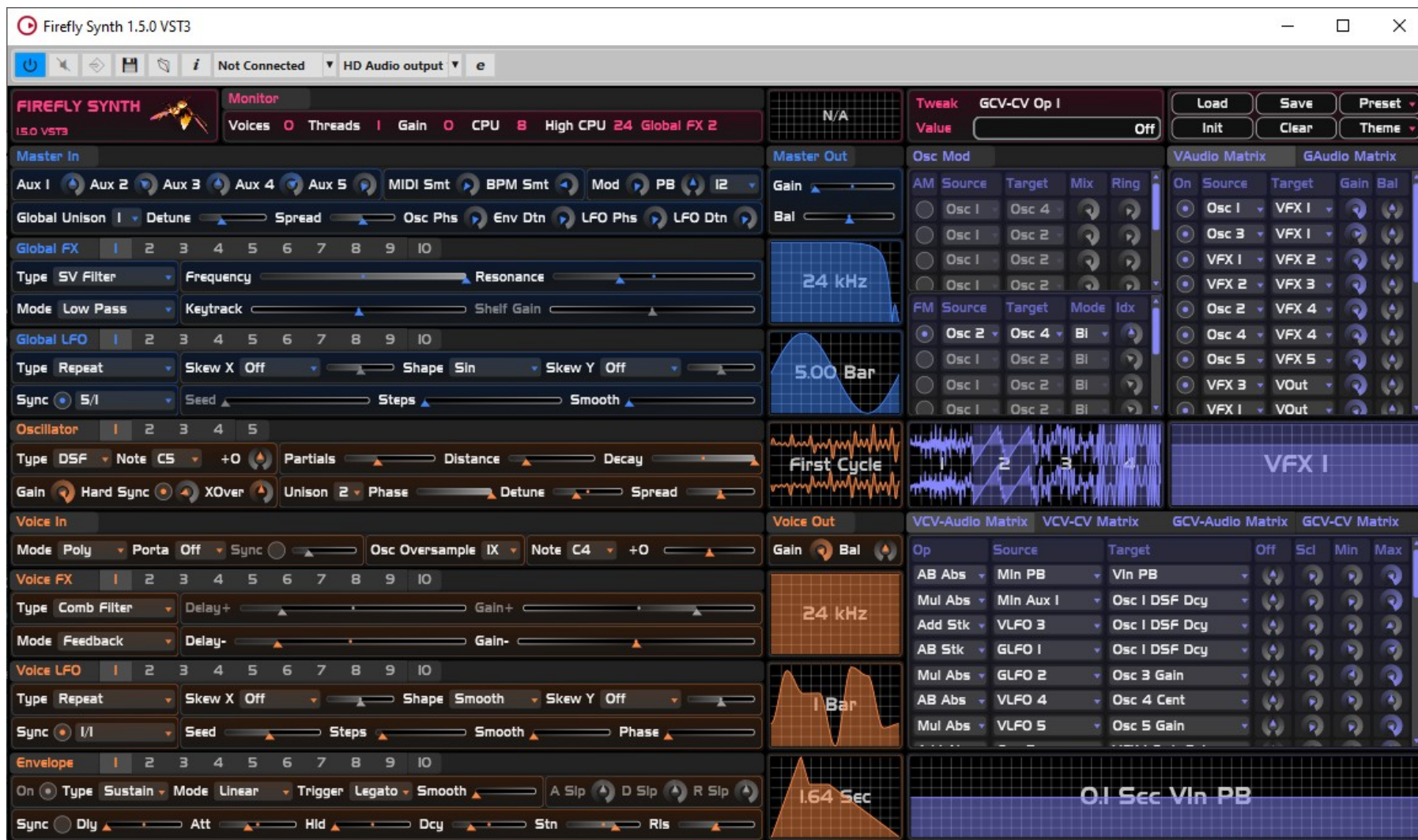


# TuneFish 4





# Firefly





# Wavetable







# Dexed

## DX7 Emulation

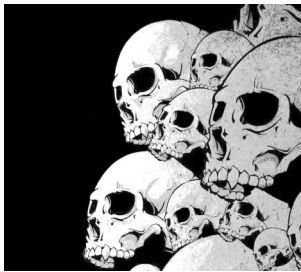




# Les plugins CALF

- Une suite de plugins LV2
- Une applications permettant de connecter ces plugins à Jack : caljackhost





# Calf Jack Host

Calfjackhost est une application rack qui permet de charger et d'associer plusieurs effets Calf via Jack.





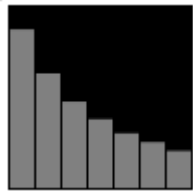
# CALF : les plugins 1/2



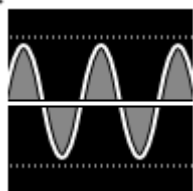
Instruments and tone generators (Organ, Monosynth)



Modulation effects (Multi Chorus, Phaser, Flanger, Rotary, Pulsator)



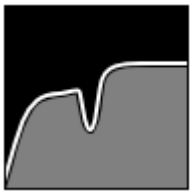
Delay effects (Reverb, Vintage Delay, Compensation Delay Line)



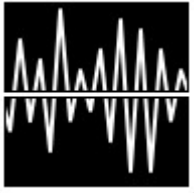
Dynamic processors (Compressor, Sidechain Compressor, Multiband Compressor, Deesser, Gate, Sidechain Gate, Multiband Gate, Limiter, Multiband Limiter, Transient Designer)



# CALF : les plugins 2/2



Filters and equalizers (Filter, Filterclavier, Equalizer 5 Band, Equalizer 8 Band, Equalizer 12 Band)



Distortion and enhancement (Saturator, Exciter, Bass Enhancer, Tape Simulator)



Tools (Mono Input, Stereo Tools, Analyzer)





# Instruments : Calf Organ

A versatile organ/pad synthesizer, capable of producing many types of sounds:

- tonewheel organs (up to 9 drawbars)
- solid state organs (9 independent oscillators with many waveforms to choose from, individual panning, phase shift and detune for each oscillator)
- strings-like or choir-like pads (thanks to a set of long looped samples generated using padsynth algorithm invented by Nasca Octavian Paul)
- fat basses and searing leads

The sound from some or all oscillators can be processed using 2 independent (but connectable) filter sections, controlled by up to 3 ADSR envelopes. A vibrato/chorus/phaser section makes the sound more vivid.



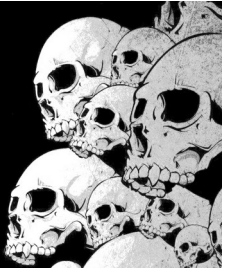
# Instruments : Calf Organ

## Tone generator - 1/3

Presets  
selection



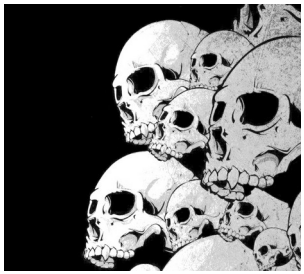




# Instruments : Calf Organ

## Sound processor - 2/3



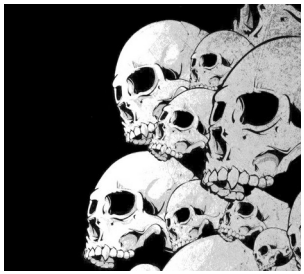


# Instruments : Calf Organ

## Advanced - 3/3







# Modulation effects : Multi Chorus

Multi-tap stereo chorus with adjustable number of voices. Adds warmth and richness, especially if you give it a lot of CPU power. A lot of options make this effect highly flexible in expression.

Presets  
selection





# Modulation effects

## **Chorus:**

The Chorus adds a "copy" of the original signal with a vibrato with variable depth, remembering the sound of two guitars playing a "chorus" section.

## **Flanger:**

The Flanger mixes the original signal with a "delayed copy" of this. This will sound like the "jet plane" effect that you should know of a lot of famous records.

## **Phaser:**

The Phaser generates an exponential phase-cancellation, creating a "comes in and out" sound similar to the Flanger.

## **Cry Baby (Wah):**

Famous for being used by rock and funky musicians like Jimi Hendrix, Frank Zappa, Geezer Butler, Cliff Burton, Kirk Hammet... The Wah-Wah effect modifies the cut-frequency with the use of a MIDI controller (or expression pedal) in Manual Mode. If we select the Auto Mode, a LFO (Low Frequency Oscillator) will modify the cut-freq by our playing.



# Delay effects : Reverb

Simple reverb with basic controls and relatively neutral sound. No dreaded metal barrel sound, but at the expense of higher CPU use and less time density. Like most artificial reverberators, it is not suitable for every instrument, but try it on vocals, guitars or Calf synths, and you will like it.

Preset  
selection





# Delay effects : Vintage Delay

A very simple simulation of tape echo, with a filter in a feedback loop and BPM-based time setting. The number of controls is limited, but all the essential stuff is there. Suitable for synths, guitars and almost anything else.

Presets  
selection







# Dynamics : Compressor

Smooth sounding dynamic compressor with a variety of settings, written by Thor Harald Johansen. RMS/peak modes, A-weighting, metering - feels like real studio gear!

Presets  
selection







# Distortion effects : Saturator

Universal distortion tool. Saturator can act as a guitar distortion as well as a harmonics generator. Some useful filters before and after the distortion stage and gapless adjustment between 2nd and 3rd harmonics give you a great flexibility in sound. The saturation stage is taken from Tom Szilakyi's TAP-plugin pack.

Presets  
selection



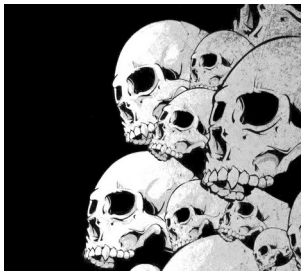


# Tools : Mono Input

Since Calf doesn't provide mono versions of the plugins yet, it is essential to split your signal into stereo signals when used in an audio production environment like Ardour. The Mono Input has some useful functions to deal with the split process like phase inversion and balance.



Presets  
selection



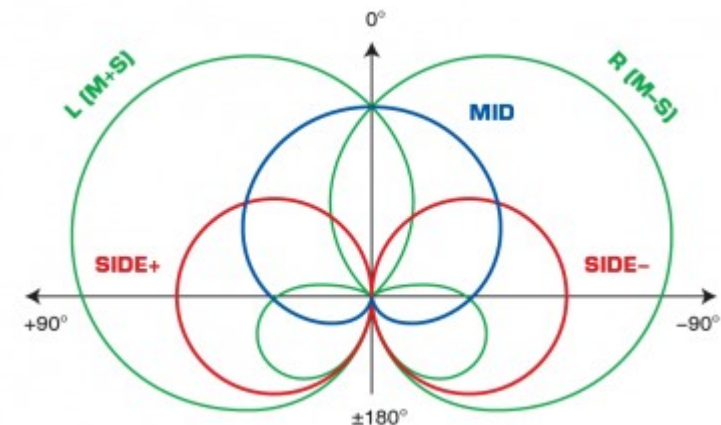
# Tools : Stereo Tools

This device is a toolbox for handling stereo signals. It is able to change M/S microphone signals to L/R and vice versa. Switching the phase, muting a channel, widening the stereo base or delaying one of the channels up to 20ms are some of the features of this input or mastering tool.



Presets  
selection

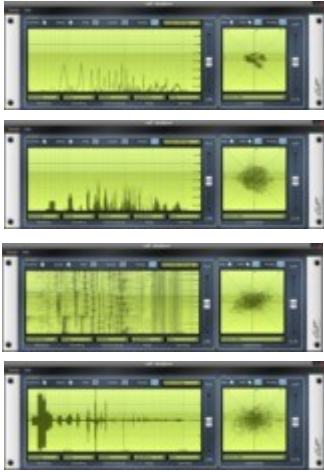
Mid / Side mic setting







# Tools : Analyzer Tools



The FFT-Analyzer of this package has a frequency domain display and a goniometer. The frequency chart displays its information from various input modes like L/R, Average or Stereo; it can draw lines or bars, logarithmic or linear graphing. Various output modes like Stereo Image, Stereo Difference and even a Spectralizer with temporal domain are available. Lots of options provide full control of the way the signal is processed and rendered.

<https://www.youtube.com/watch?v=TWfqcf-EyUE>