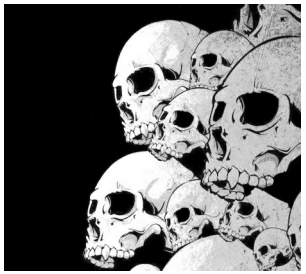
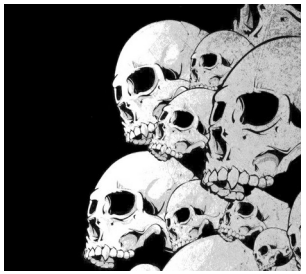


Introduction to Linux

Y. Collette (ycollette.nospam@free.fr)
https://audinux.github.io



Le Live Coding 1/5

SuperCollider : https://supercollider.github.io/

```
play{SinOsc.ar(OnePole.ar(Mix( LFSaw.ar([1,0.99],
[0,0.6],2000,2000).trunc([400,600])*[1,-1] ),0.98)).dup*0.1}
```

https://www.youtube.com/watch?v=wNWFSIadAH8

CSound : http://www.csounds.com/

```
sr = 44100
ksmps = 32
nchnls = 2
0dbfs  = 1

instr 1

iflg = p4
asig oscils .7, 220, 0, iflg
     outs asig, asig
```

QuteCsound

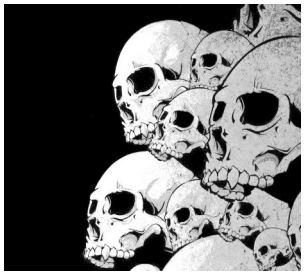
Chuck : http://chuck.cs.princeton.edu/

```
// set the global gain
.1 => dac.gain;

// connect
SinOsc a => dac;
110.0 => a.freq;
1::second => now;
SinOsc b => dac;
220.0 => b.freq;
```

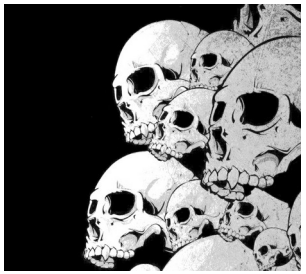
miniAudicle

https://www.youtube.com/watch?v=BHooZu5xzAs
https://www.youtube.com/watch?v=vNrRdyDIniQ



Le Live Coding 2/5

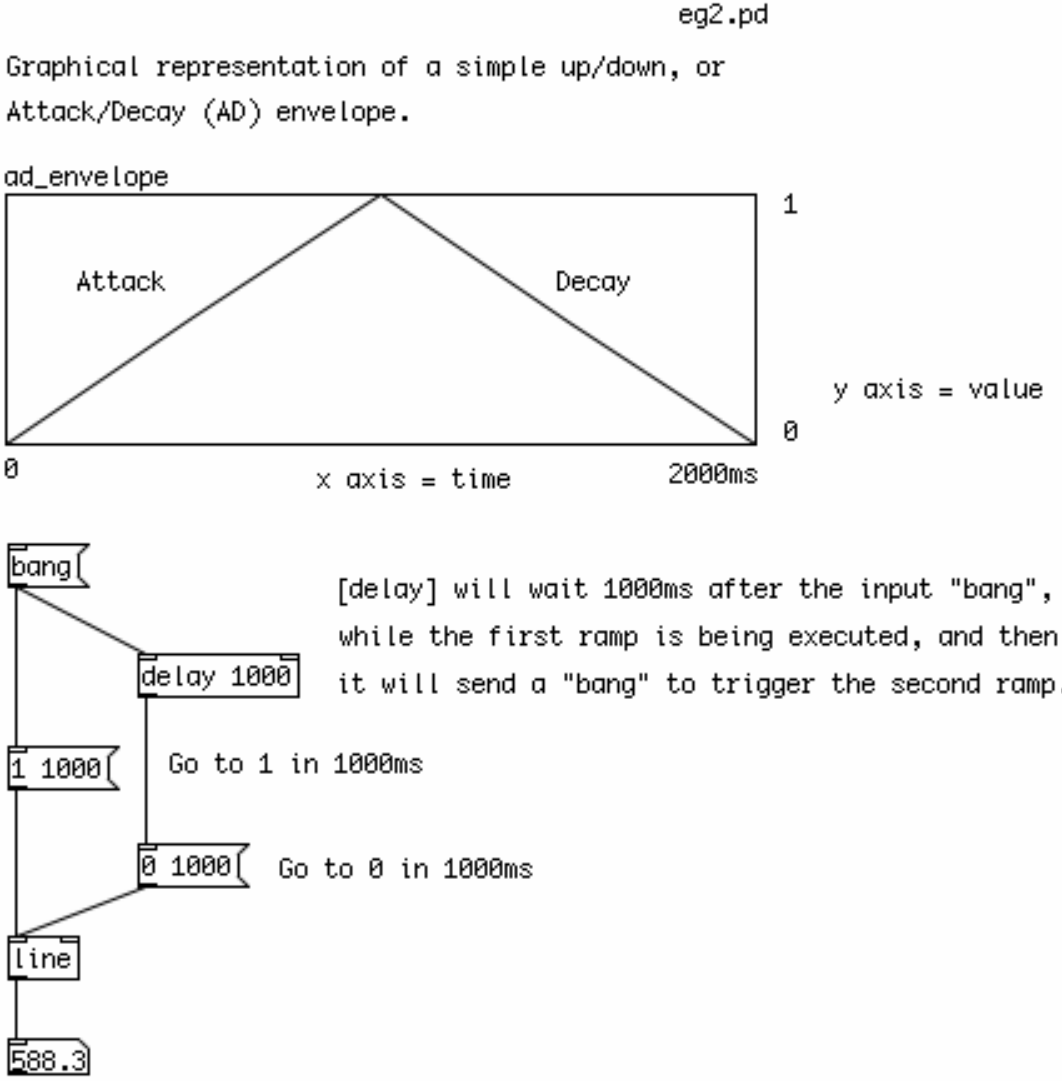
http://sonic-pi.net/

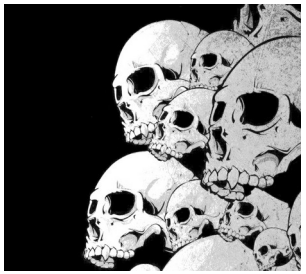


Le Live Coding – 3/5

Pure Data : http://puredata.info/

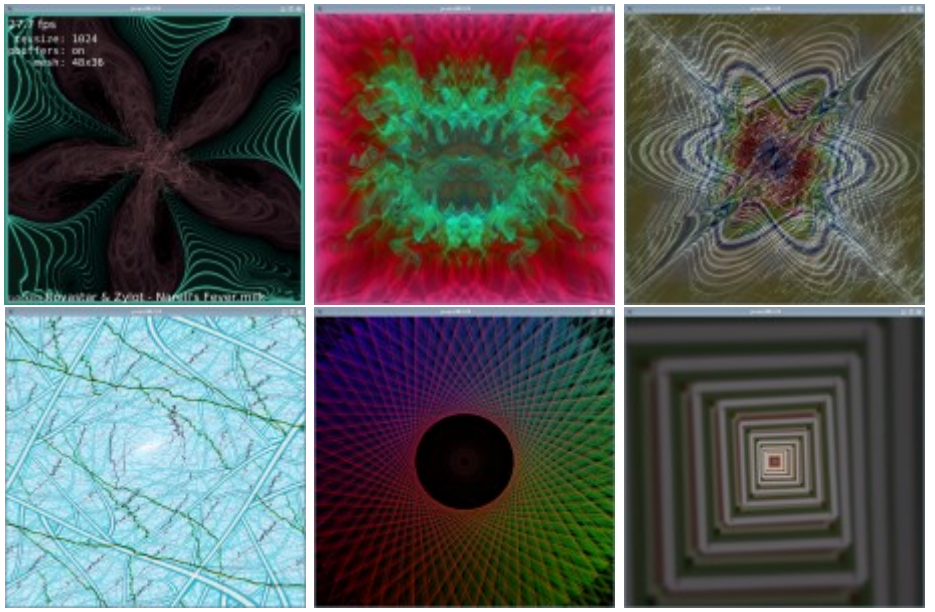
Un outil de programmation visuel dédié à l'audio et à la vidéo.





Le Live Coding – 4/5

ProjectM : un diffuseur de vidéo synchronisé à l'audio
http://projectm.sourceforge.net/



Code issu de WinAmp.

Pour lancer la version Jack de ProjectM

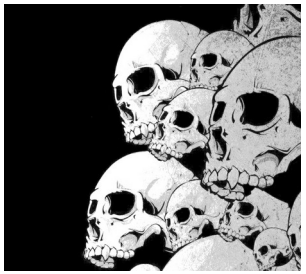
```
$ projectM-jack
```

Pour lancer la version PulseAudio de ProjectM

```
$ projectM-pulseaudio
```

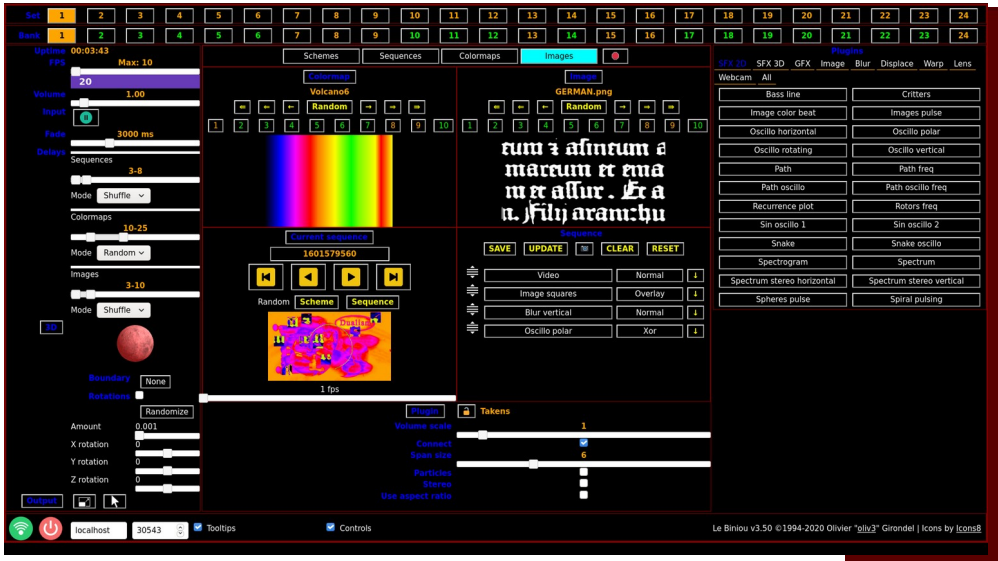
F1 : Aide
F2 : Titre de la chanson
F3 : Nom du preset
F4 : Paramétrage du rendu
F5 : FPS
F : Plein écran

L : Vérouiller / Dévérouiller le preset
M : Affiche le menu
R : Preset aléatoire
N : Preset suivant
P : Preset précédent



Le Live Coding – 5/5

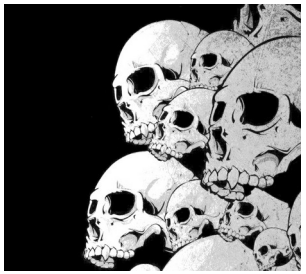
https://biniou.net/



Pour démarrer lebiniou :
$ lebiniou --input jackaudio

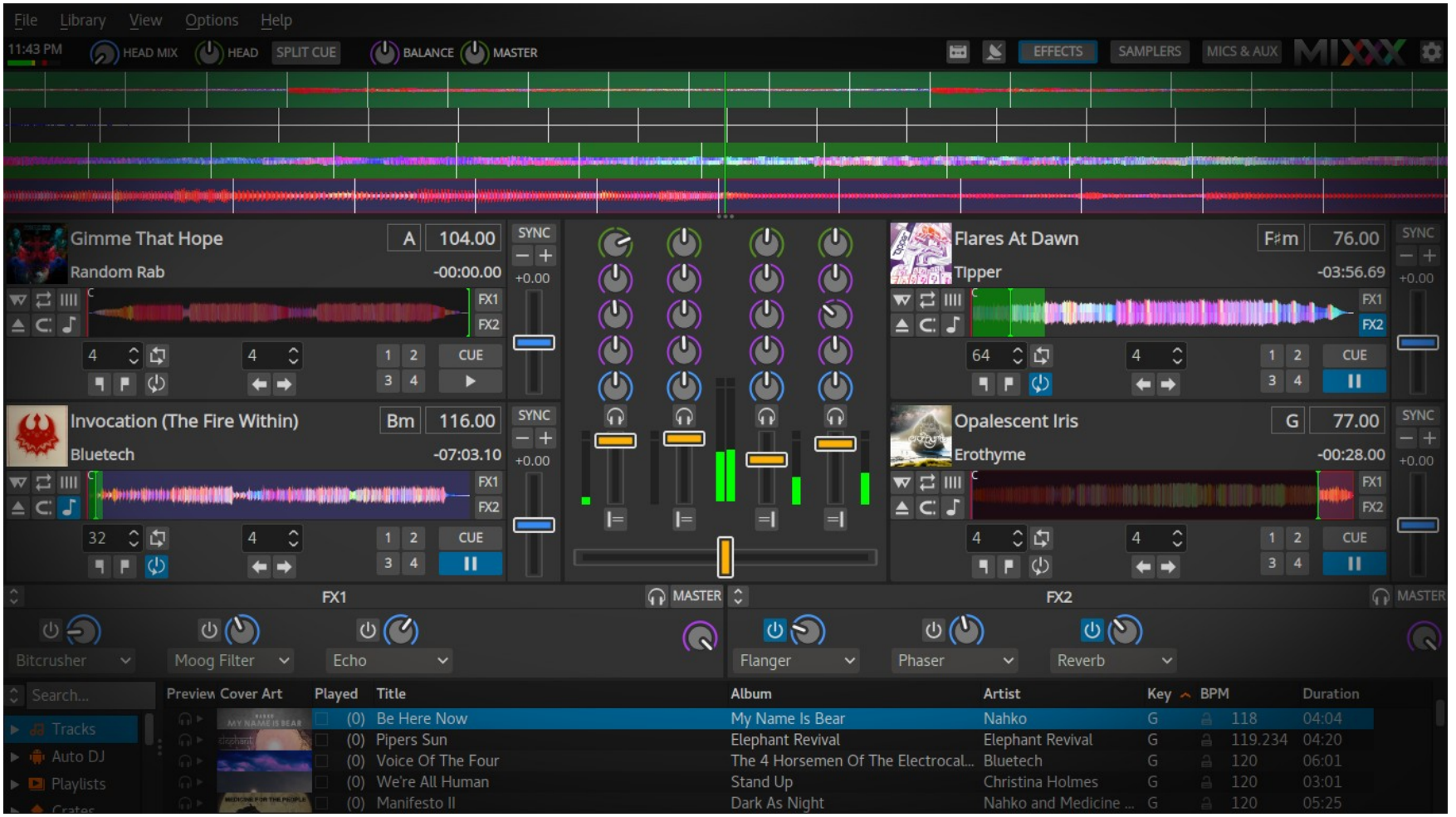
Et en cas de conflit sur l'accès à la webcam :
$ lebiniou --input jackaudio --webcams 0

Lebiniou démarre une fenêtre de contrôle (à gauche) et une fenêtre d'animation (à droite).
Il faut ensuite connecter l 'entrée de lebiniou à une sortie audio.

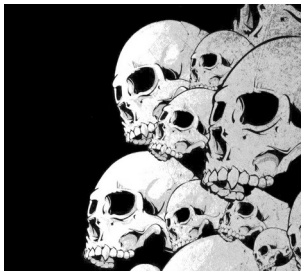


Mixxx

Pour le DJing



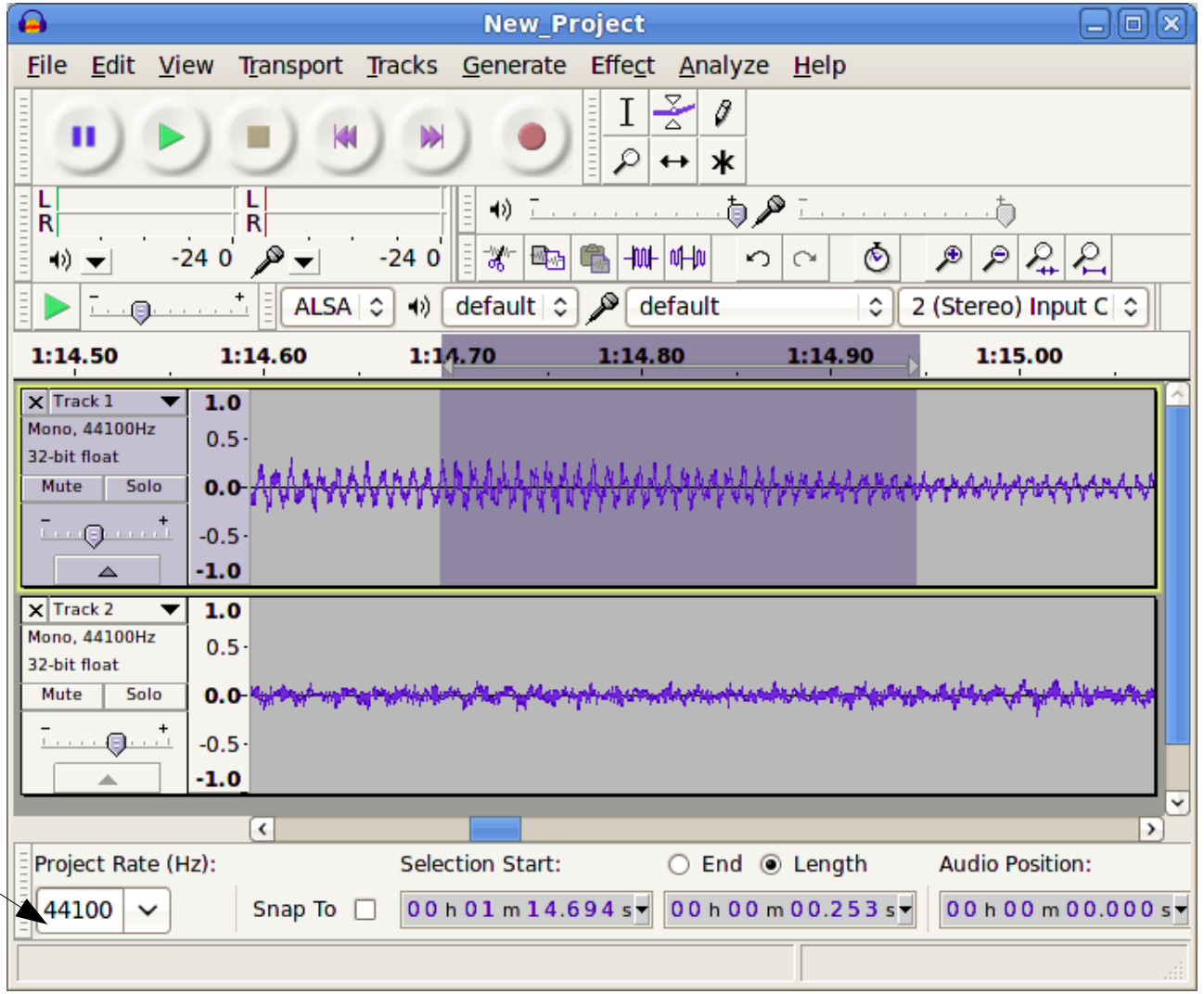
http://www.mixxx.org



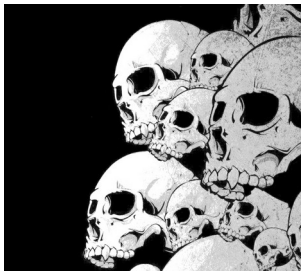
Audacity
L'éditeur audio

Lorsqu'on utilise Audacity avec Jack, il faut bien prendre garde de régler la fréquence d'échantillonnage : Edition → Préférences → Qualité

Il faudra faire correspondre cette fréquence d'échantillonnage avec celle de Jack.

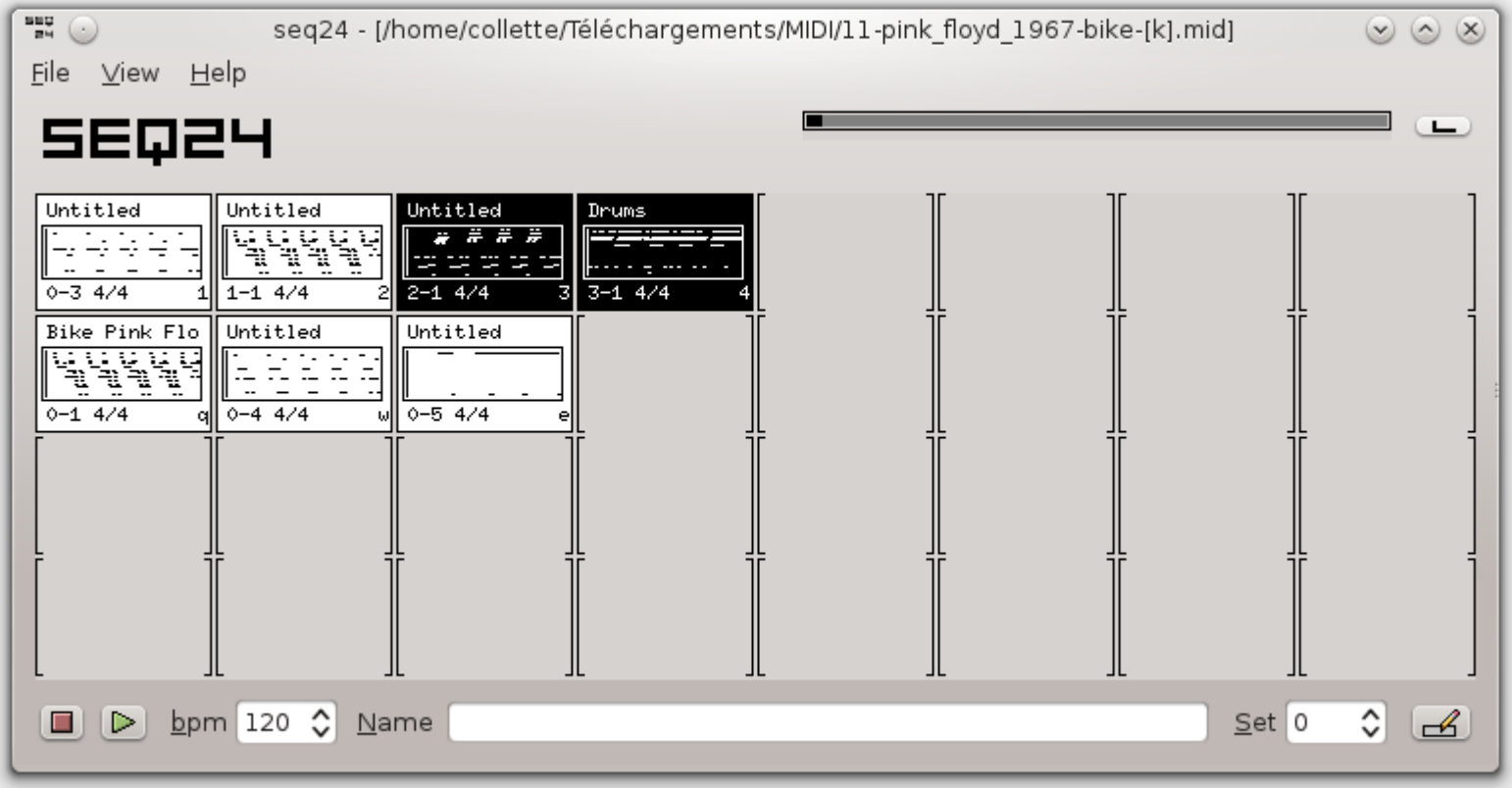


http://audacity.sourceforge.net

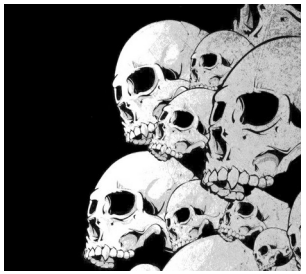


Seq24

Un séquenceur matriciel



https://launchpad.net/seq24
https://github.com/ahlstromcj/sequencer64

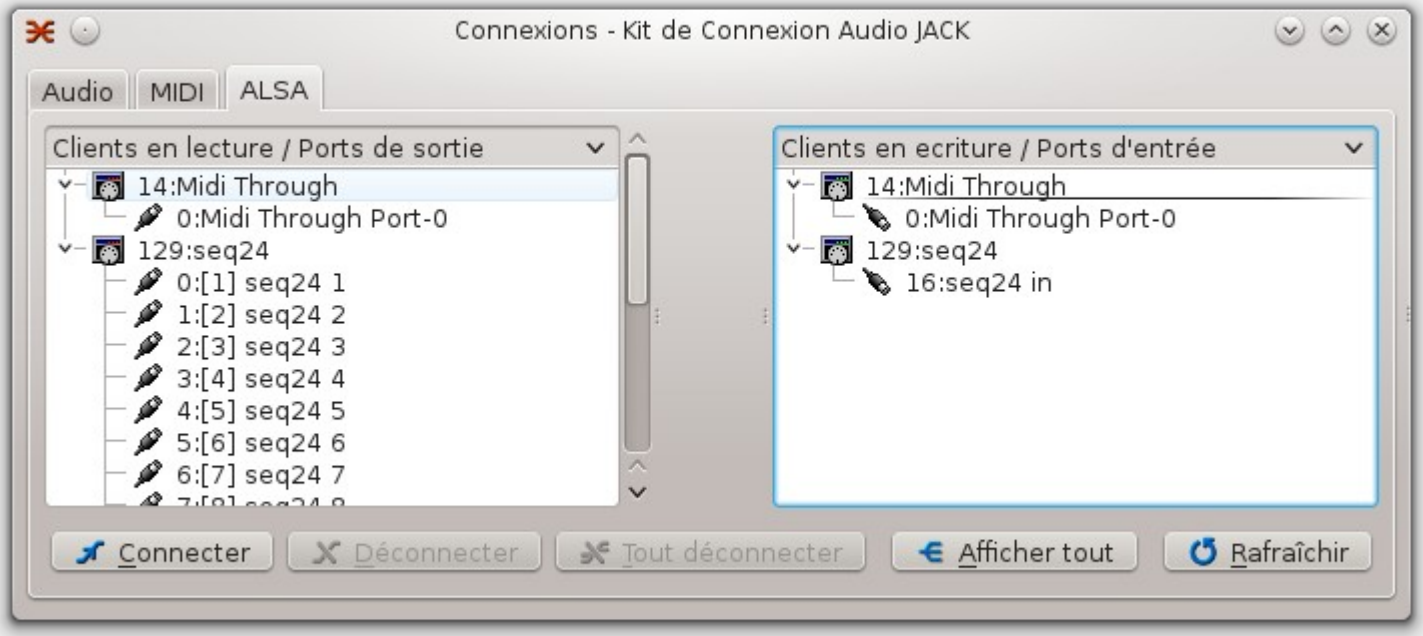


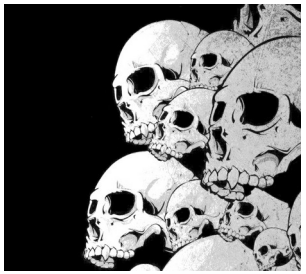
Seq24
Coté Jack

Démarrage en ligne de commande recommandé :

```
$ seq24 -m
```

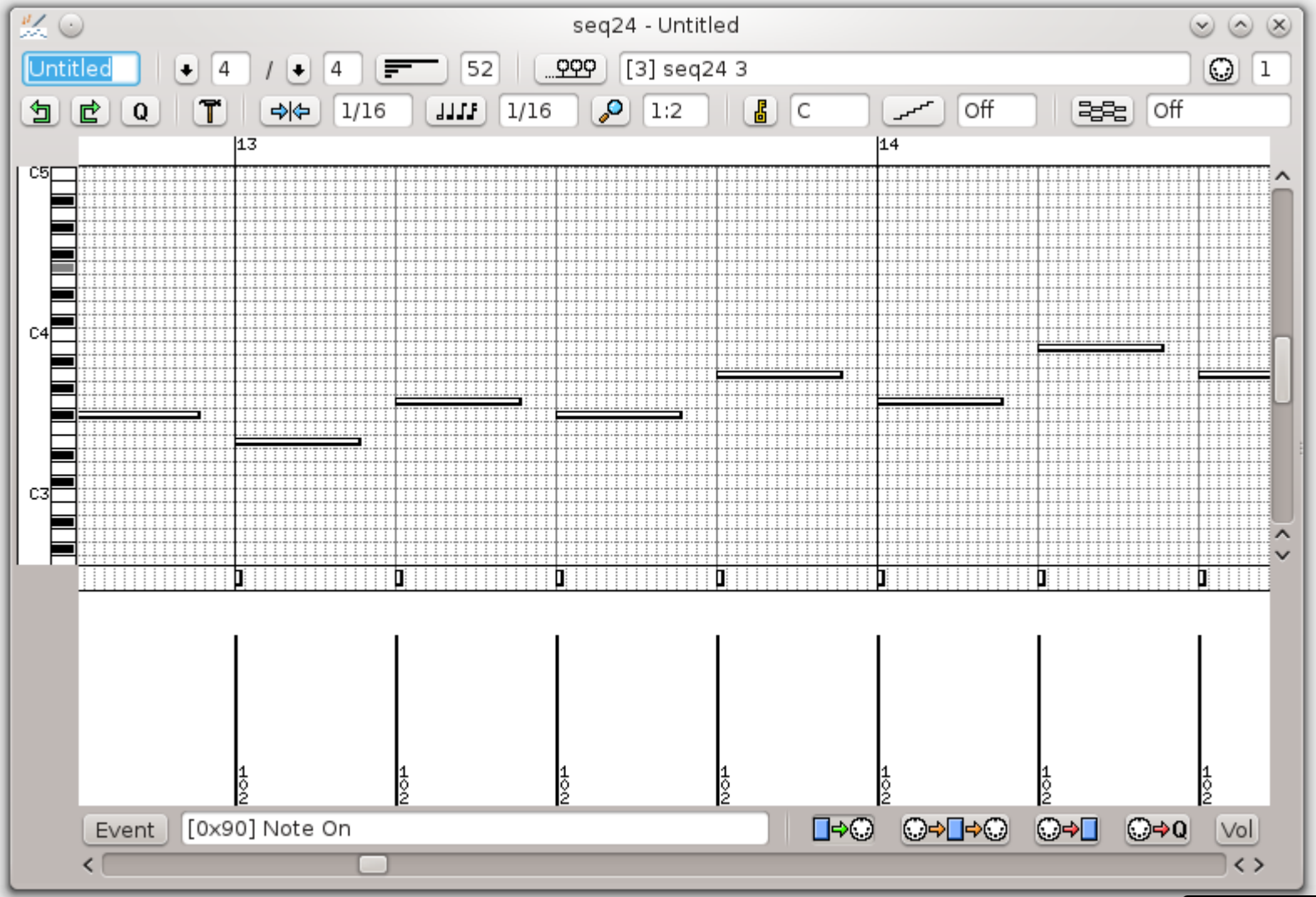
-m, --manual_alsa_ports: seq24 ne réquisitionnera pas de ports ALSA

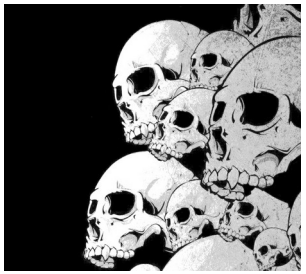




Seq24

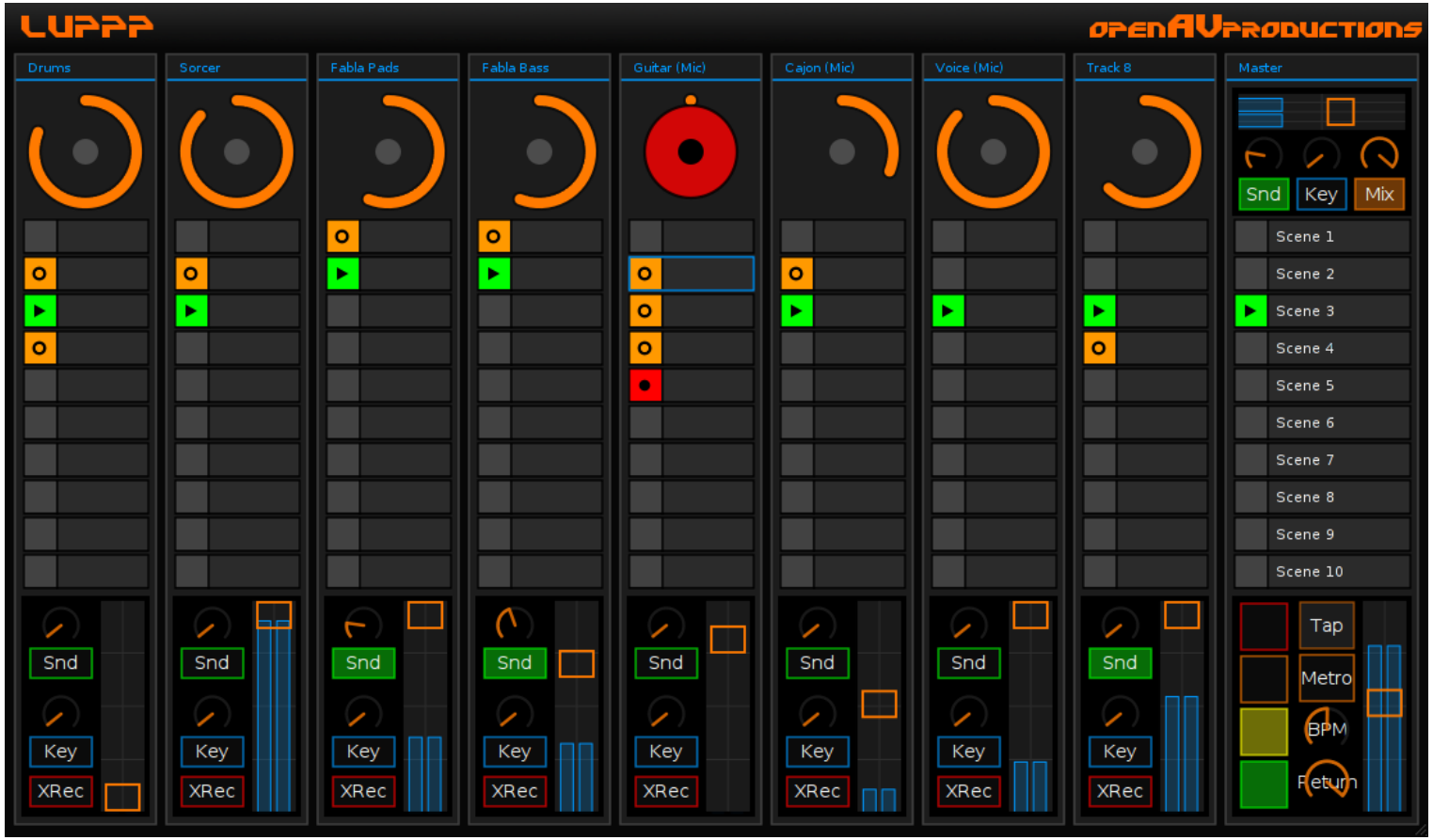
L'éditeur MIDI



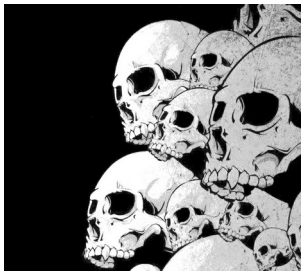


OpenAV / Luppp

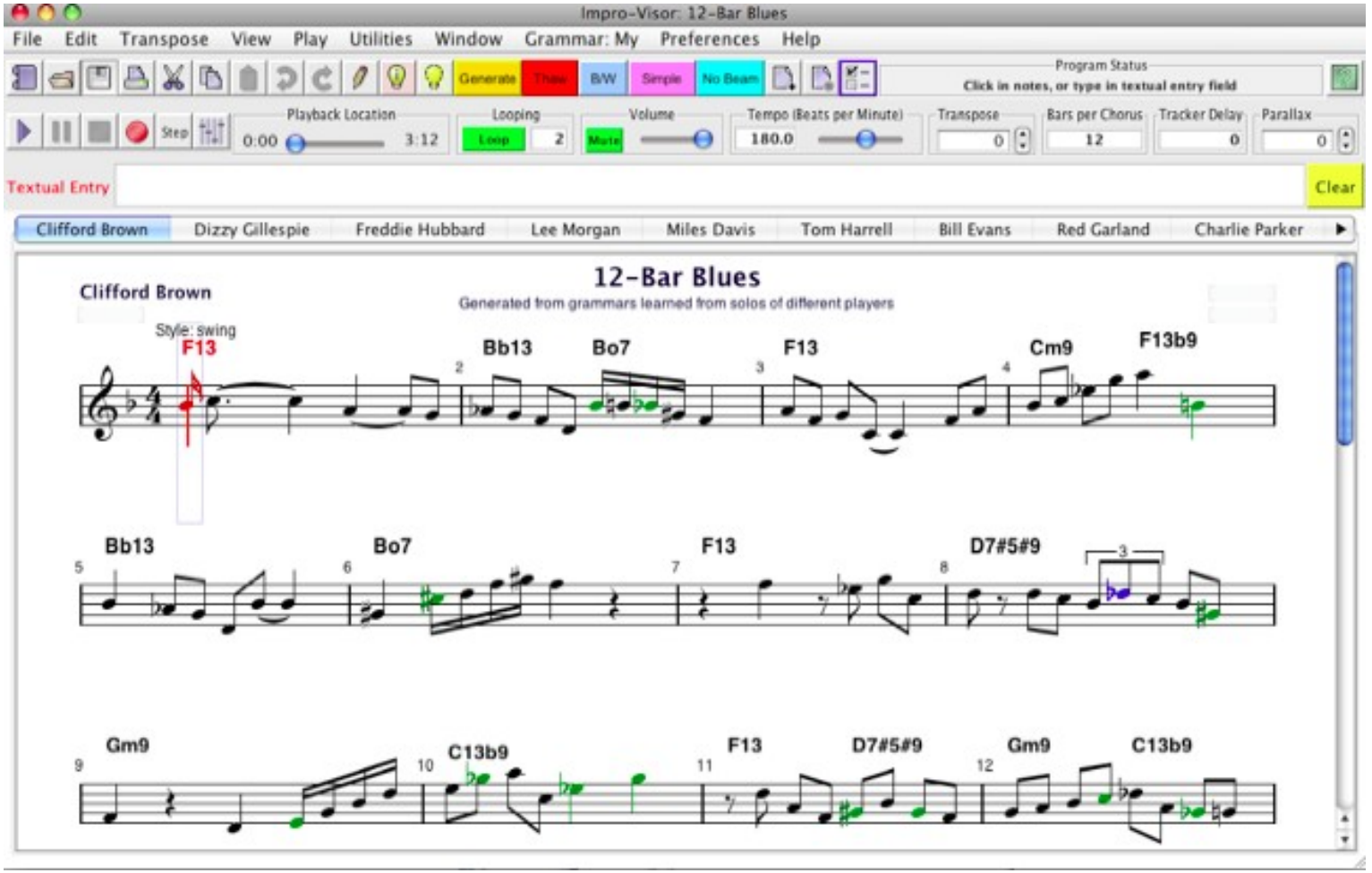
Un séquenceur matriciel



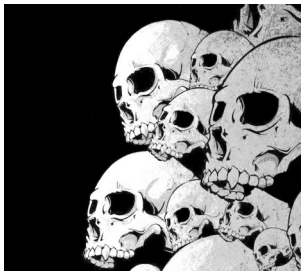
http://openavproductions.com/luppp/



Impro-visor
Pour le Jazz



http://www.cs.hmc.edu/~keller/jazz/improvisor/



Impro-visor
Pour le Jazz

Pour connecter Impro-visor à QSynth, il faut lancer l'interface virtuelle MIDI de ALSA :

```
$ sudo modprobe snd-virmidi
```

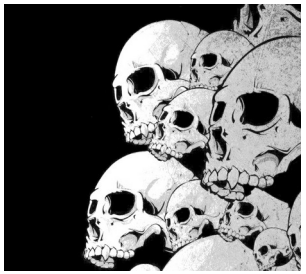
On obtient 4 Virtual Raw MIDI comme le montre l'image suivante:
En Alsa Out, on a :

14: MIDI Through
20: Virtual Raw MIDI 1-0
21: Virtual Raw MIDI 1-1
22: Virtual Raw MIDI 1-2
23: Virtual Raw MIDI 1-3

Après cela, il suffit de connecter Impro-Visor à une entrée Virtual RawMIDI et Qsynth à une sortie Virtual RawMIDI.

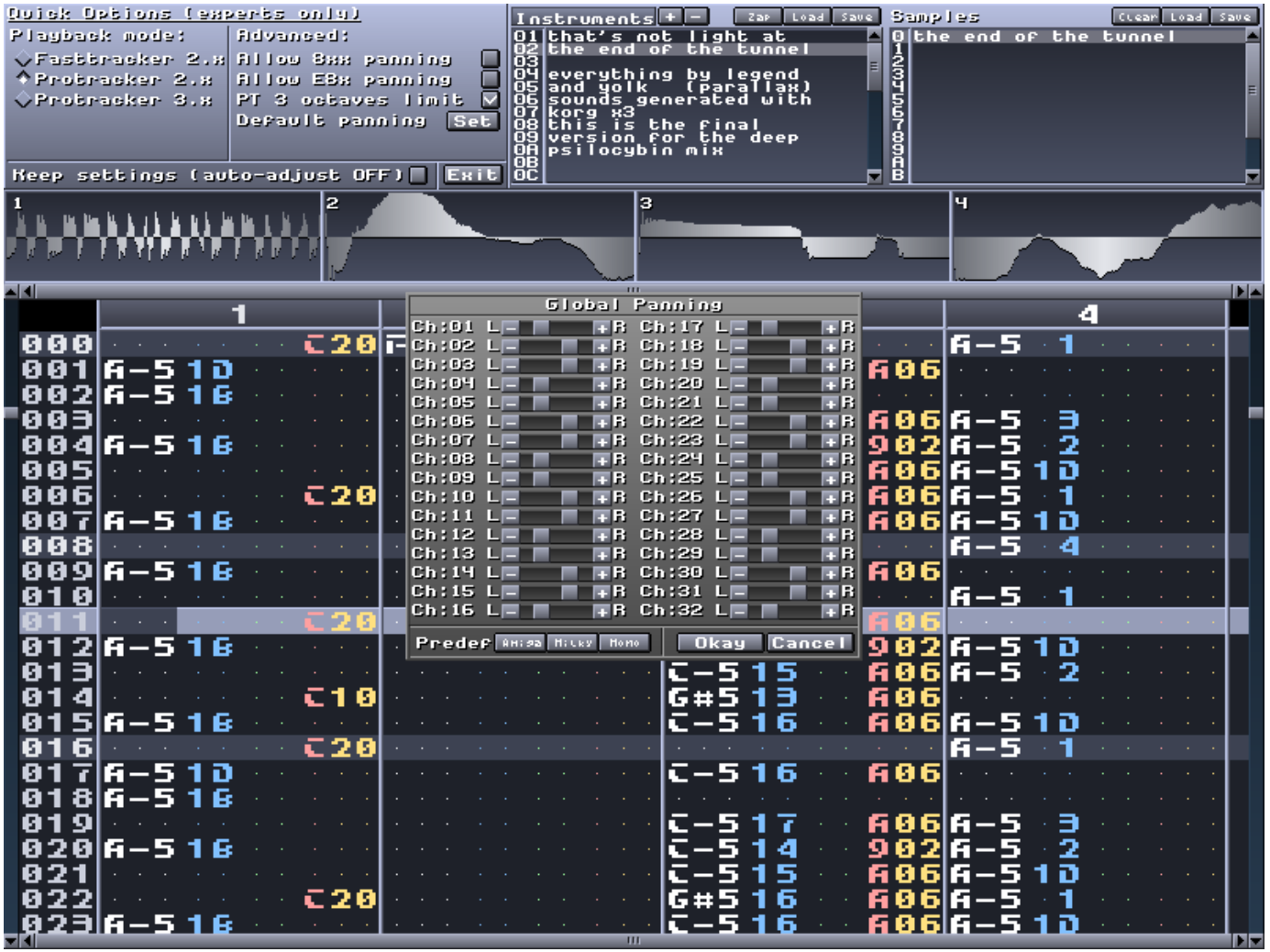
En Alsa In, on a :

14: MIDI Through
20: Virtual Raw MIDI 1-0
21: Virtual Raw MIDI 1-1
22: Virtual Raw MIDI 1-2
23: Virtual Raw MIDI 1-3
128:Timidity



Milkytracker

http://www.milkytracker.org/



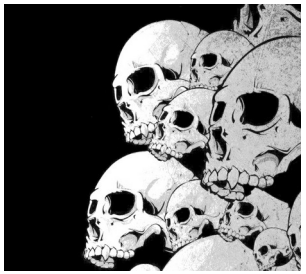
Historique

Soundtracker – 1987 (Amiga)
Protracker – 1990 (Amiga)
Octamed – 1991 (Amiga)
Scream Tracker 3 – 1993 (PC)
Fast Tracker 2 – 1995 (PC)
Impulse Tracker 2 – 1996 (PC)
Renoise – 2000 (PC & Mac)
Skaletracker – 2003 (PC)

Type de fichiers

XM – MOD – IT – S3M
Voir l'article de wikipedia

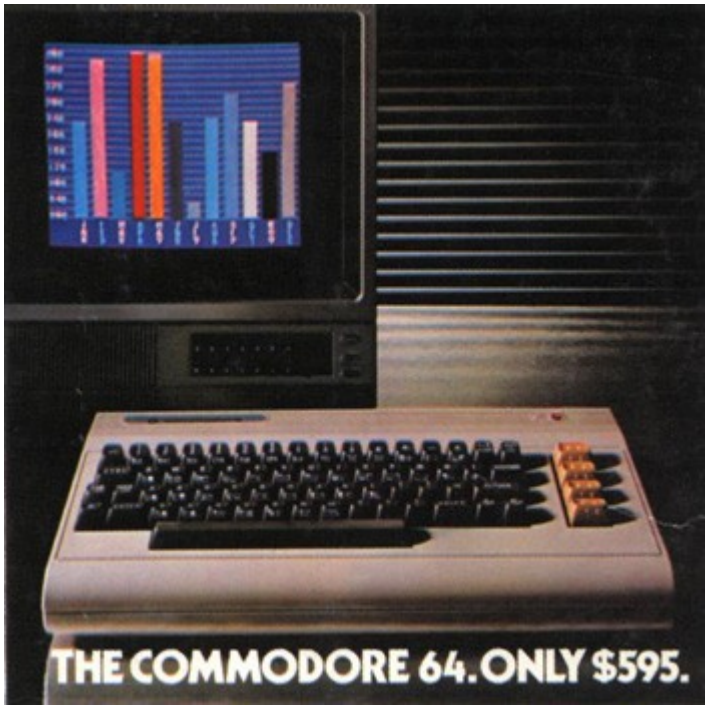
Exemple YouTube

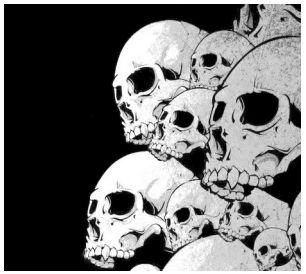


Milkytracker

Amiga - 1987

Commodore - 1982

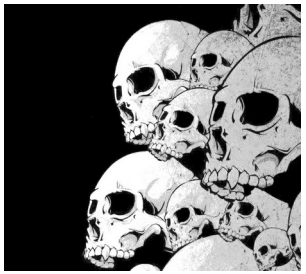




Klystrack

https://kometbomb.github.io/klystrack/

Exemple YouTube



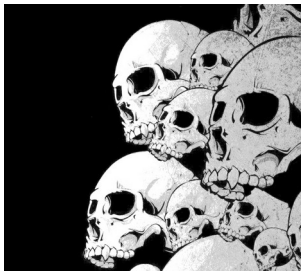
Protrekkr

https://github.com/falkTX/protrekkr

Deux versions de ProTrekkr existent :
- une version OSS
- une version Jack

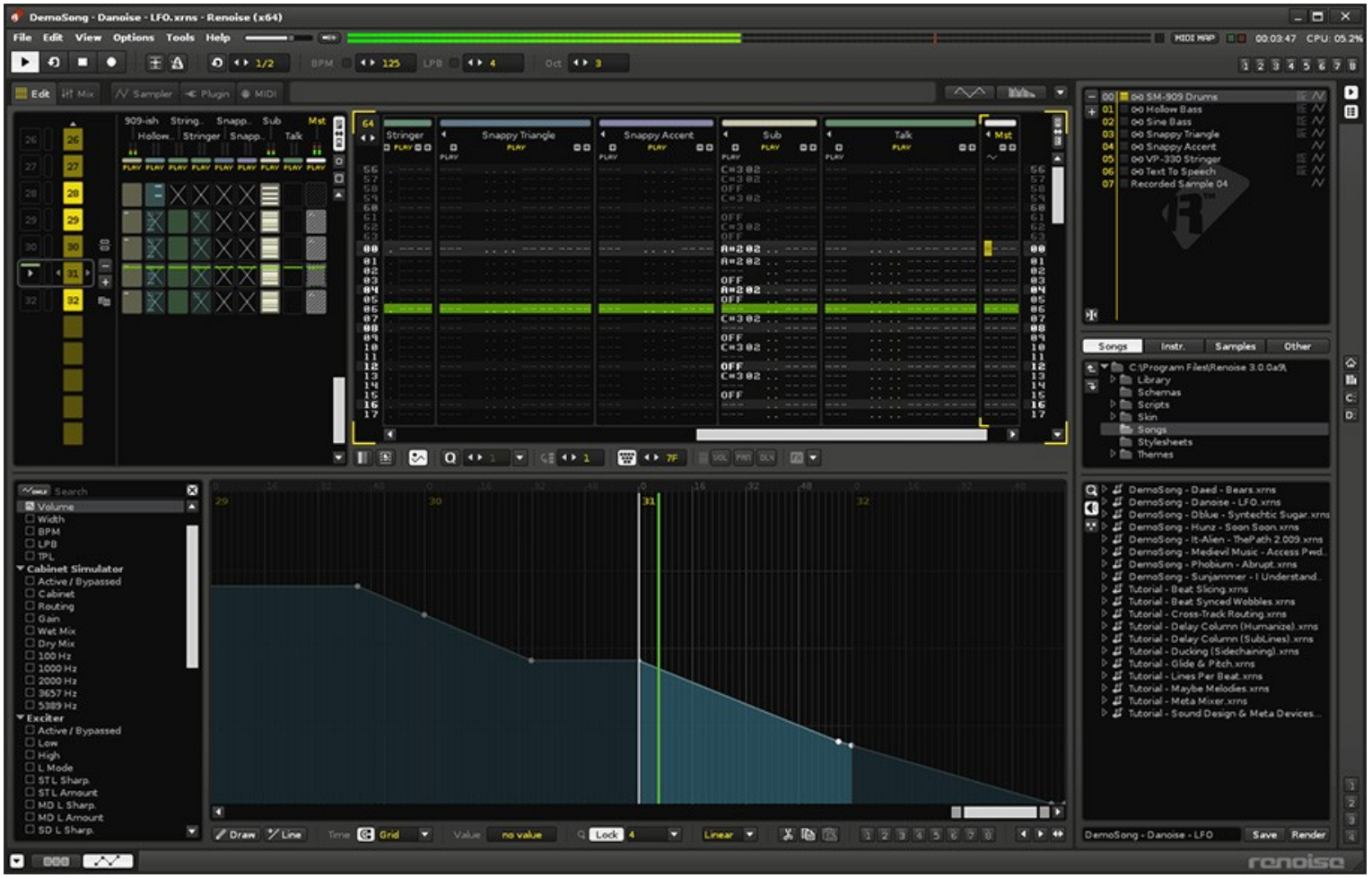
La version hébergée sur GitHub est compatible Jack.

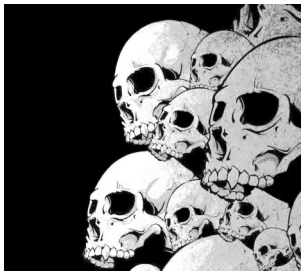
Exemple YouTube



Renoise

https://www.renoise.com





Divers

Des fichiers pour Protrekkr et MilkyTracker :

http://modarchive.org/

Rivendell – La radio Open Source

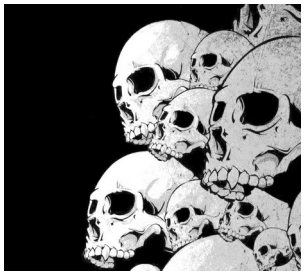
http://www.rivendellaudio.org/

Jack Net / Jamulus / Ninjam

La musique via internet

http://llcon.sourceforge.net/

http://www.cockos.com/ninjam/



Webographie

Presets en tout genre pour les outils Linux :
https://musical-artifacts.com/

Sources de samples :
http://freesound.org/
https://archive.org/
http://wiki.laptop.org/go/Sound_samples

Documentations de divers outils :
https://en.flossmanuals.net/

Site communautaire :
http://linuxmao.org/Accueil
http://libremusicproduction.com/
http://www.linuxaudio.org/
http://linuxmusicians.com/

Fichiers pour le mixage :

Chansons de Nine Inch Nails :
http://www.ninremixes.com/multitracks.php

Différentes chansons :
http://www.cambridge-mt.com/ms-mtk.htm

Des ressources en live coding :
http://sccode.org
http://users.sussex.ac.uk/~nc81/modules/cm1/workshop.html