



ARGOPd est constitué de modules de synthèse et de traitement sonore et visuel fonctionnant en temps réel sous Pure Data.

ARGOPd est conçu pour des utilisateurs qui n'ont jamais programmé Pure Data.

Pour MacOSX, Linux, Windows.

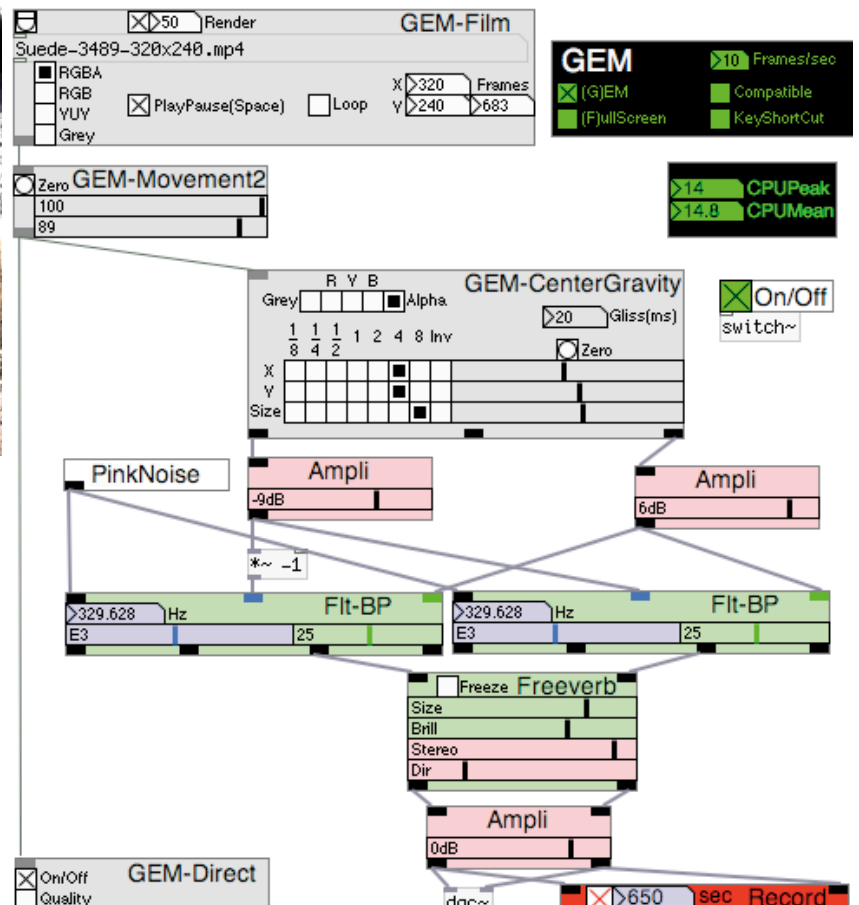
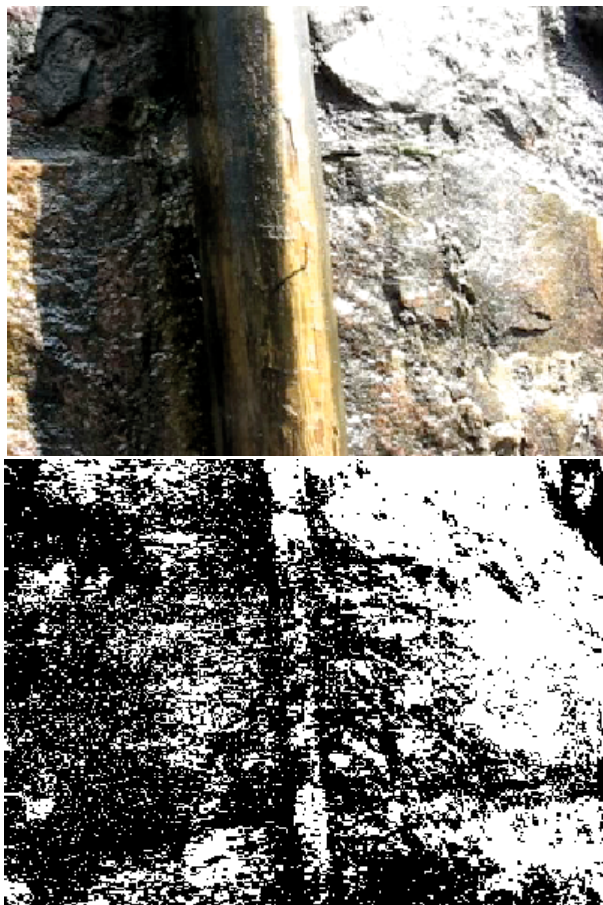
ARGOPd est un logiciel libre et ouvert.

ARGOPd is made of real-time sound and visual synthesis modules. A module is a Pure Data patch.

ARGOPd is conceived for users who have never programmed Pure Data.

For MacOSX, Linux, Windows.

ARGOPd is an OpenSource freeware.



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<http://pagesperso-orange.fr/Paresys/ARGOPd/>

ou <http://gerard.paresys.free.fr/ARGOPd/> or

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Installation

ARGOPd exige l'installation de Pd-0.41.4-extended minimum. Pd-0.41.4-extended est une version étendue de Pure Data (Pd). http://fr.wikipedia.org/wiki/Pure_Data Pd est un logiciel libre. Pd existe pour MacOSX, Linux, Windows.

ARGOPd requires the installation of Pd-0.41.4-extended mini. Pd-0.41.4-extended is an extended version of Pure Data (Pd). http://en.wikipedia.org/wiki/Pure_Data Pd is free software. Pd exists for MacOSX, Linux, Windows.

- 1 Télécharger Pd-0.41.4-extended depuis l'adresse:
<http://puredata.info/downloads>
- 2 Installer Pd-0.41.4-extended.
- 3 Télécharger ARGOPdv05.zip depuis l'adresse:
<http://pagesperso-orange.fr/Paresys/ARGOPd/>
ou / or
<http://gerard.paresys.free.fr/ARGOPd/>
- 4 "Dézipper" le fichier ARGOPdv05.zip
- 5 Le dossier "ARGOPdv05" contient
 - un dossier "MM": tous les MiniModules
 - un dossier "ExMM": exemples
 - un dossier "Ancien-Ancient":
ArgoPdv04...

- 1 Download Pd-0.41.4-extended from:
- 2 Install Pd-0.41.4-extended.
- 3 Download ARGOPdv05.zip from:
- 4 "Unzip" the ARGOPdv05.zip file
- 5 The folder "ARGOPdv05" contains
 - a folder "MM": all the MiniModules
 - a folder "ExMM": examples
 - a folder "Ancien-Ancient":
ARGOPdv04...

Pour les connaisseurs:
Un MiniModule (MM) est un "Graph-on-parent subpatch".
Un "ExMM" est un "patch" constitué de plusieurs MM connectés.
Dans "Ancien---Ancient"
les modules de ARGOPdv04
sont des patches.

For the experts:
A MiniModule (MM) is a "Graph-on-parent subpatch".
An "ExMM" is a "patch" which consists of several connected MM.
In "Old---Ancient"
the modules of ARGOPdv04
are patches.

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Aperçu / Overview

Aperçu / Overview

ARGOPdv05 est constitué de Minimodules (MM) et d'exemples (ExMM).

Un fichier Pure Data (Pd) se nomme un "patch". Son nom a l'extension .pd

Un ExMM est un "patch" Pure Data constitué de Minimodules (MM) connectés.

Le mieux, pour se familiariser avec ARGOPd est d'ouvrir les "ExMM".

Lancer l'application Pure Data (Pd-extended).
Ouvrir le dossier ARGOPdv05.
Ouvrir le dossier ExMM.

ARGOPdv05 consists of MiniModules (MM) and examples (ExMM).

A PureData (Pd) file is called a "patch". Its name has the extension .pd

A ExMM is a Pure Data "patch" consists of connected MiniModules (MM).

The best thing to do, if you want to get used to ARGOPd is to open the "ExMM".

Launch Pure Data (Pd-extended).
Open ARGOPdv05 folder.
Open ExMM folder.

Nom	Taille	Type
ExMM1-Sinus	200 Ko	Dossier
ExMM2-SatTanh	64 Ko	Dossier
ExMM3-TicAlea	116 Ko	Dossier
ExMM4-RingModulation	1,2 Mo	Dossier
ExMM5-DetectEnvelope	1,2 Mo	Dossier
ExMM6-Zhzhxh	628 Ko	Dossier
ExMM7-DetectFreq	312 Ko	Dossier
ExMM8-Oscill-Pulse	156 Ko	Dossier
ExMM9-Envelope.pd	12 Ko	Pure Data Patch
ExMM10-Delay	728 Ko	Dossier
ExMM11-SampleHold	284 Ko	Dossier
ExMM12-Gliss.pd	24 Ko	Pure Data Patch
ExMM13-FM	92 Ko	Dossier
ExMM14-ADC	36 Ko	Dossier
ExMM15-Noise	140 Ko	Dossier
ExMM16-Overdrive	284 Ko	Dossier
ExMM17-Freeverb	972 Ko	Dossier
ExMM18-12Sinus	48 Ko	Dossier
ExMM19-Arduino	104 Ko	Dossier
ExMM20-FFTCompExp	124 Ko	Dossier
ExMM21-FFTVocoder	348 Ko	Dossier
ExMM23-FFTConvolution	1,2 Mo	Dossier
ExMM24-FFTBrickWallFilter	224 Ko	Dossier
ExMM26-FFTNoiseGate	432 Ko	Dossier
ExMM27-FFTSimple	184 Ko	Dossier
ExMM28-FFTReverb	324 Ko	Dossier
ExMM30-GEMImage	288 Ko	Dossier
ExMM31-GEMFilm	1,9 Mo	Dossier
ExMM32-GEMVideo	252 Ko	Dossier
ExMM33-GEMHead	44 Ko	Dossier
ExMM34-GEMRotation	280 Ko	Dossier
ExMM35-GEM2Images	772 Ko	Dossier
ExMM36-GEMDetectMovement	5,2 Mo	Dossier
ExMM37-GEMSimple	60 Ko	Dossier
ExMM38-GEMResize	1,7 Mo	Dossier
ExMM39-GEMPosition	1,6 Mo	Dossier

Nom	Taille	Type
ExMM40-Player	14,2 Mo	Dossier
ExMM41-PlayerVarySpeed	3,9 Mo	Dossier
ExMM43-ControlledHighPass	404 Ko	Dossier
ExMM44-RecordPlayer	2,8 Mo	Dossier
ExMM45-FilterLowPass	660 Ko	Dossier
ExMM46-FilterHighPass	664 Ko	Dossier
ExMM47-FilterBandPass	692 Ko	Dossier
ExMM48-FilterComb	736 Ko	Dossier
ExMM50-PDP-Film	120 Ko	Dossier
ExMM51-PDP-Video-Linux	40 Ko	Dossier
ExMM51-PDP-Video-MacOSX	156 Ko	Dossier
ExMM52-PDP-Video-DetectMovement	52 Ko	Dossier
ExMM53a-PDP-Noise.pd	12 Ko	Pure Data Patch
ExMM55-PDP-Rotate	28 Ko	Dossier
ExMM56-PDP-Image	20 Ko	Dossier
ExMM57-PDP-Mix	28 Ko	Dossier
ExMM58-PDP-Mul	56 Ko	Dossier
ExMM59-PDP-Zoom	24 Ko	Dossier
ExMM61-WaveShaping	192 Ko	Dossier
ExMM62.pd	28 Ko	Pure Data Patch
ExMM63-ReverbConvolution	6,6 Mo	Dossier
ExMM64-OSC	92 Ko	Dossier
ExMM65-PlayerGraph	124 Ko	Dossier
ExMM66-Spatial	3 Mo	Dossier
ExMM67-Reverb	316 Ko	Dossier
ExMM68-ReverbFdn	352 Ko	Dossier
ExMM80-MIDI.pd	28 Ko	Pure Data Patch
ExMM81-MIDI	2,1 Mo	Dossier
ExMM82-MIDI.pd	40 Ko	Pure Data Patch
ExMM83-MIDI	52 Ko	Dossier
ExMM84-MIDI.pd	24 Ko	Pure Data Patch
ExMM91-VBAB	316 Ko	Dossier
ExMM92-93-Beta	72 Ko	Dossier
ExMM94-PhaseVoc	1,9 Mo	Dossier
PasFini-Unfinished	24,1 Mo	Dossier

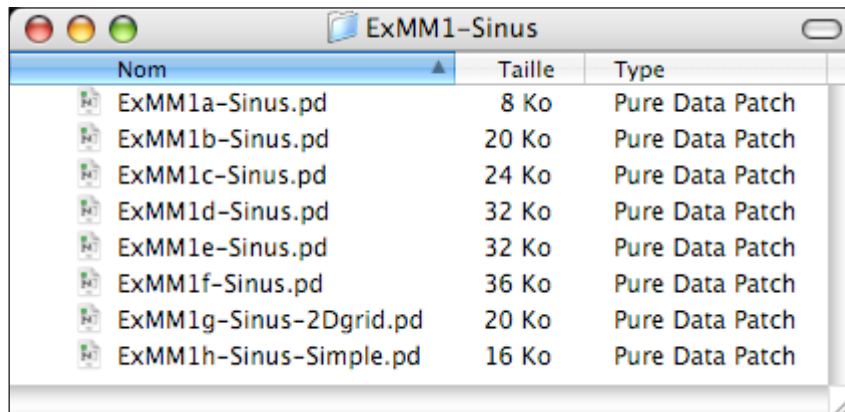
Le même fichier (patch) Pure Data s'ouvre sous MacOSX, Linux, Windows.
A de rares exceptions près...

The same Pure Data file (patch) opens under MacOSX, Linux, Windows.
With rare exceptions ...

Aperçu / Overview

Ouvrir le dossier ExMM1-Sinus

Open ExMM1-Sinus folder

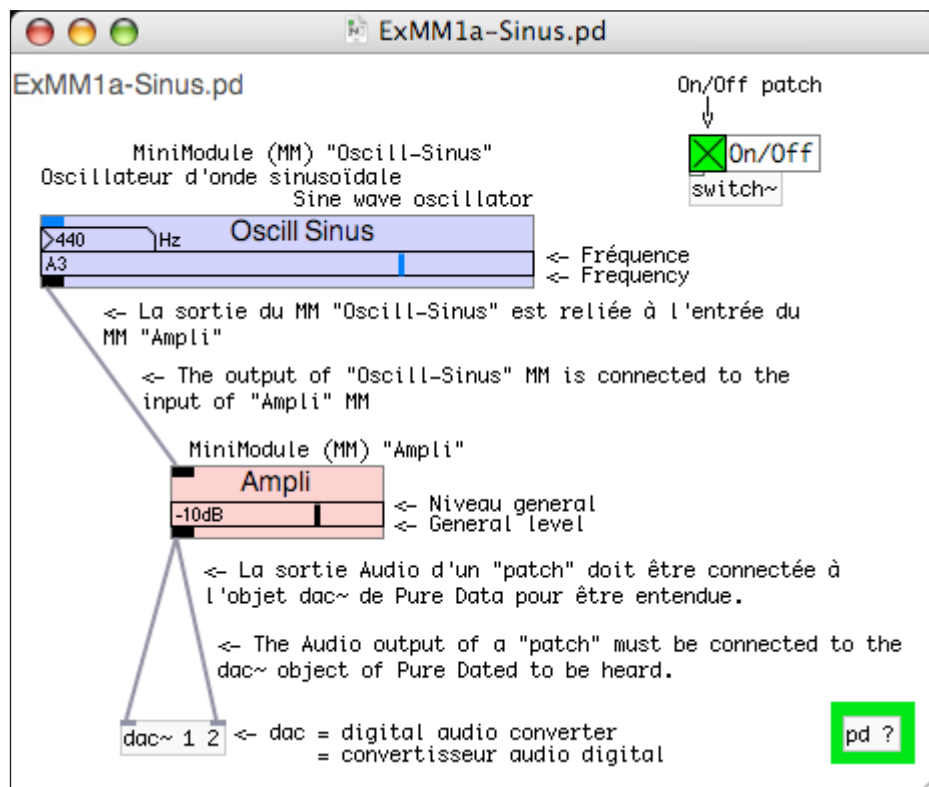


Ouvrir le patch ExMM1a-Sinus.pd

Open ExMM1a-Sinus.pd patch

Attention: sous Linux ou Windows: ne pas ouvrir par 2 x clic sur un fichier .pd mais en faisant Menu File, puis Open. Sinon une nouvelle instance de Pure data est lancée à chaque ouverture.

Caution: under Linux or Windows: do not open by 2 x click a .pd file but by Menu File, then Open. Otherwise a new instance of Pure data opens each time.



Aperçu / Overview

La plupart des exemples est sous la forme d'un dossier contenant plusieurs patches.

Most of the examples are in the form of a folder containing several patches.

La complexité augmente depuis:

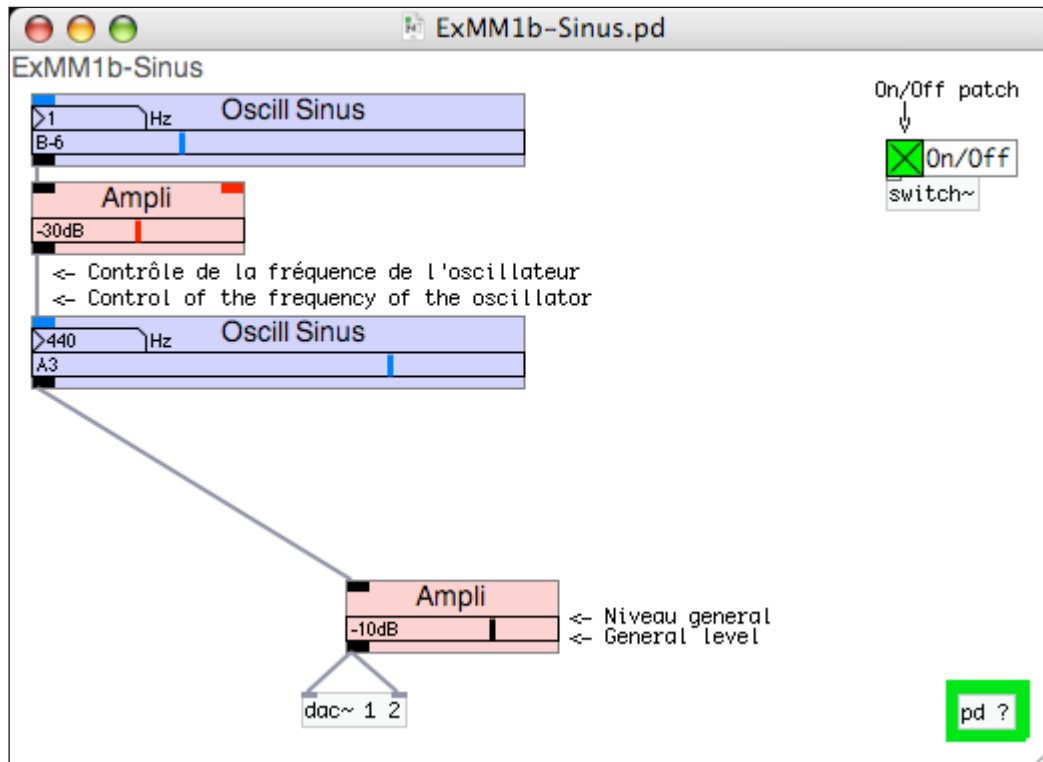
Complexity increases from:

ExMM1a-Sinus.pd

ExMM1a-Sinus.pd

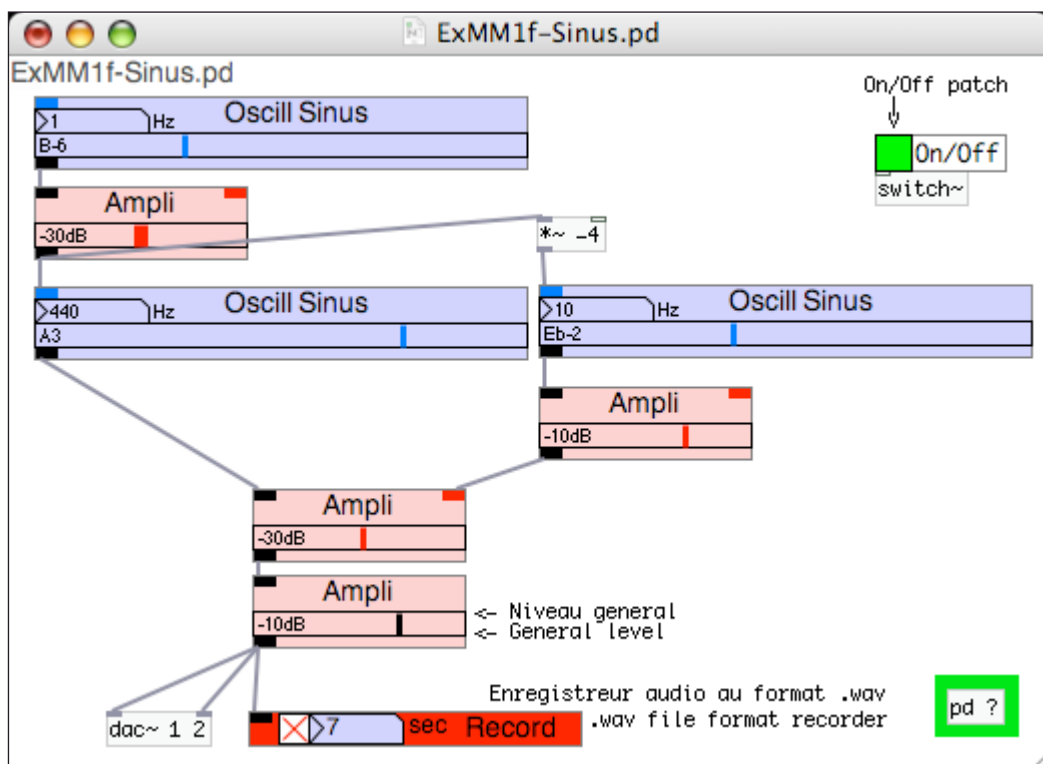
ExMM1b-Sinus.pd

ExMM1b-Sinus.pd



jusqu'à:
ExMM1f-Sinus.pd

until:
ExMM1f-Sinus.pd



Aperçu / [Overview](#)

2 ExMM Audio (FFT)

4 ExMM Audio & Image

9 ExMM Audio

Aperçu / Overview

ExMM20

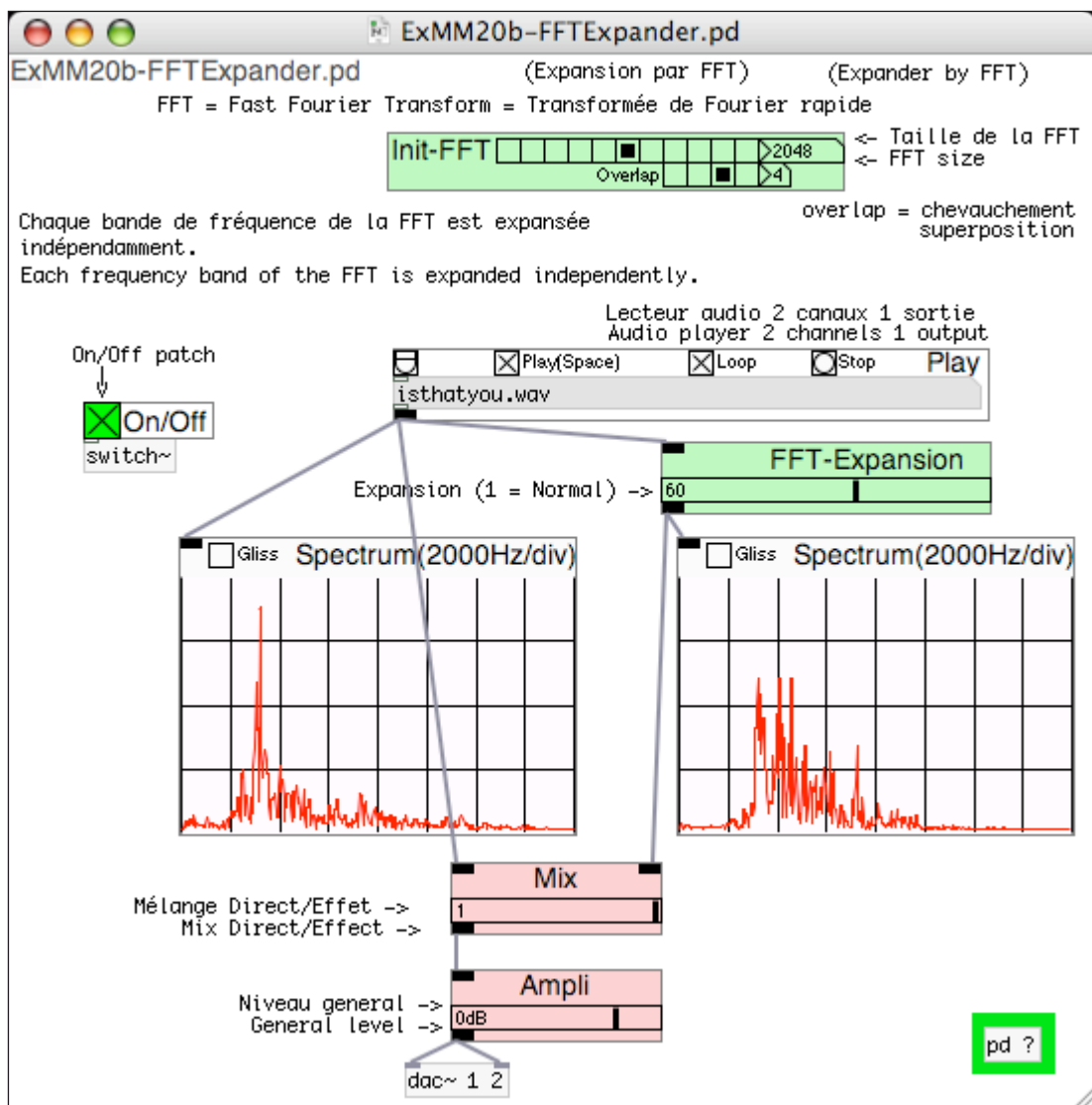
Dans cet exemple, le spectre
d'un signal Audio
est "expansé" dynamiquement.

In this example, the spectrum
of an audio signal
is dynamically "expanded".

Le spectre est calculé par FFT.

The spectrum is calculated by FFT.

FFT = Fast Fourier Transform = Transformée de Fourier rapide



ExMM23

In this example, an Audio signal is obtained by performing a “convolution” between an Audio recording (speech) and a mix of white noise and a ramp signal.

Convolution of 2 Audio signals
= multiplication of the spectrum
of the 2 signals

The spectrum is calculated by FFT.

FFT = Fast Fourier Transform = Transformée de Fourier rapide

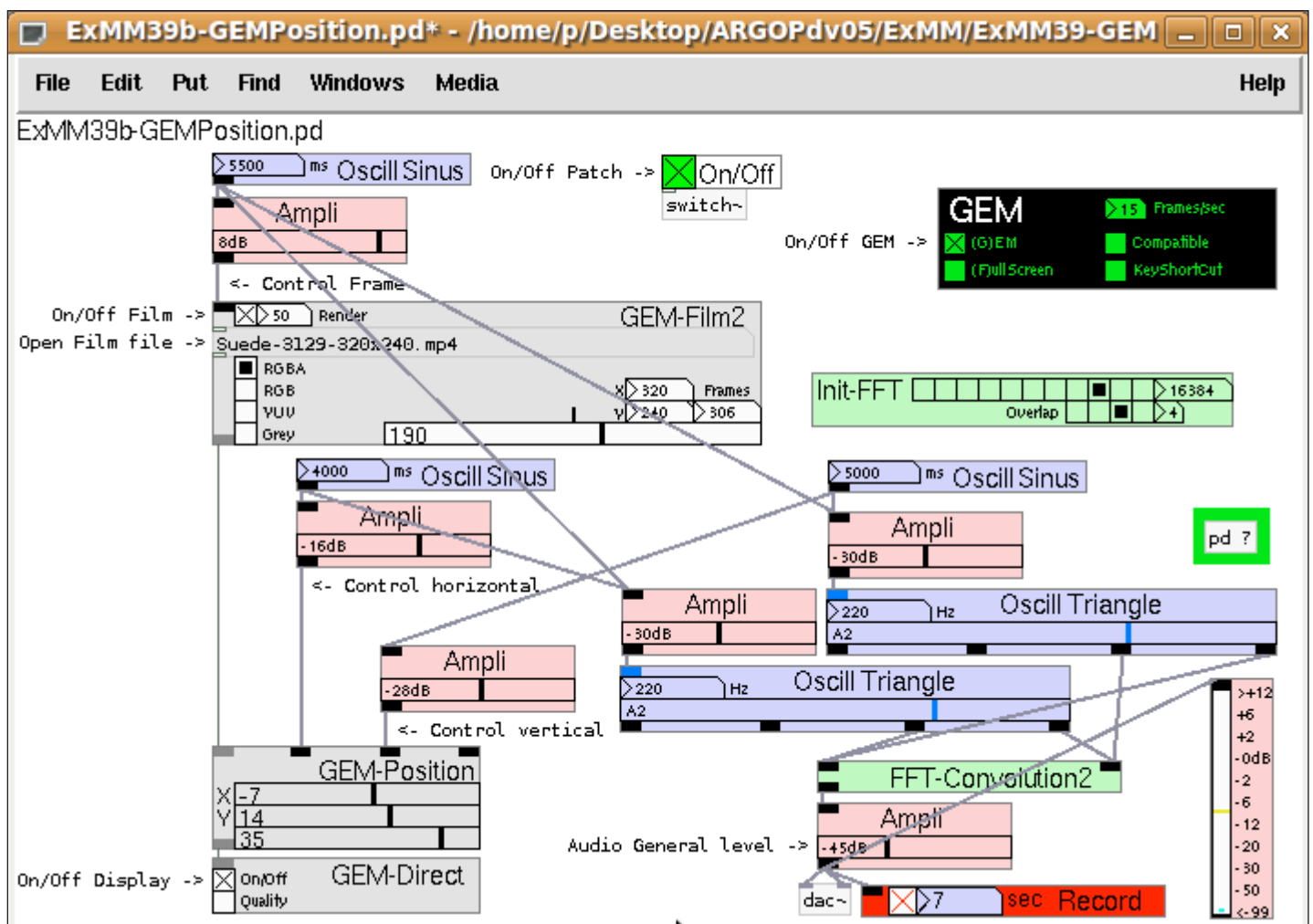


Aperçu / Overview

ExMM39

Dans cet exemple, les mêmes MiniModules contrôlent le mouvement du son et le mouvement de l'image.

In this example, the same MiniModules control the movement of sound and the movement of image.



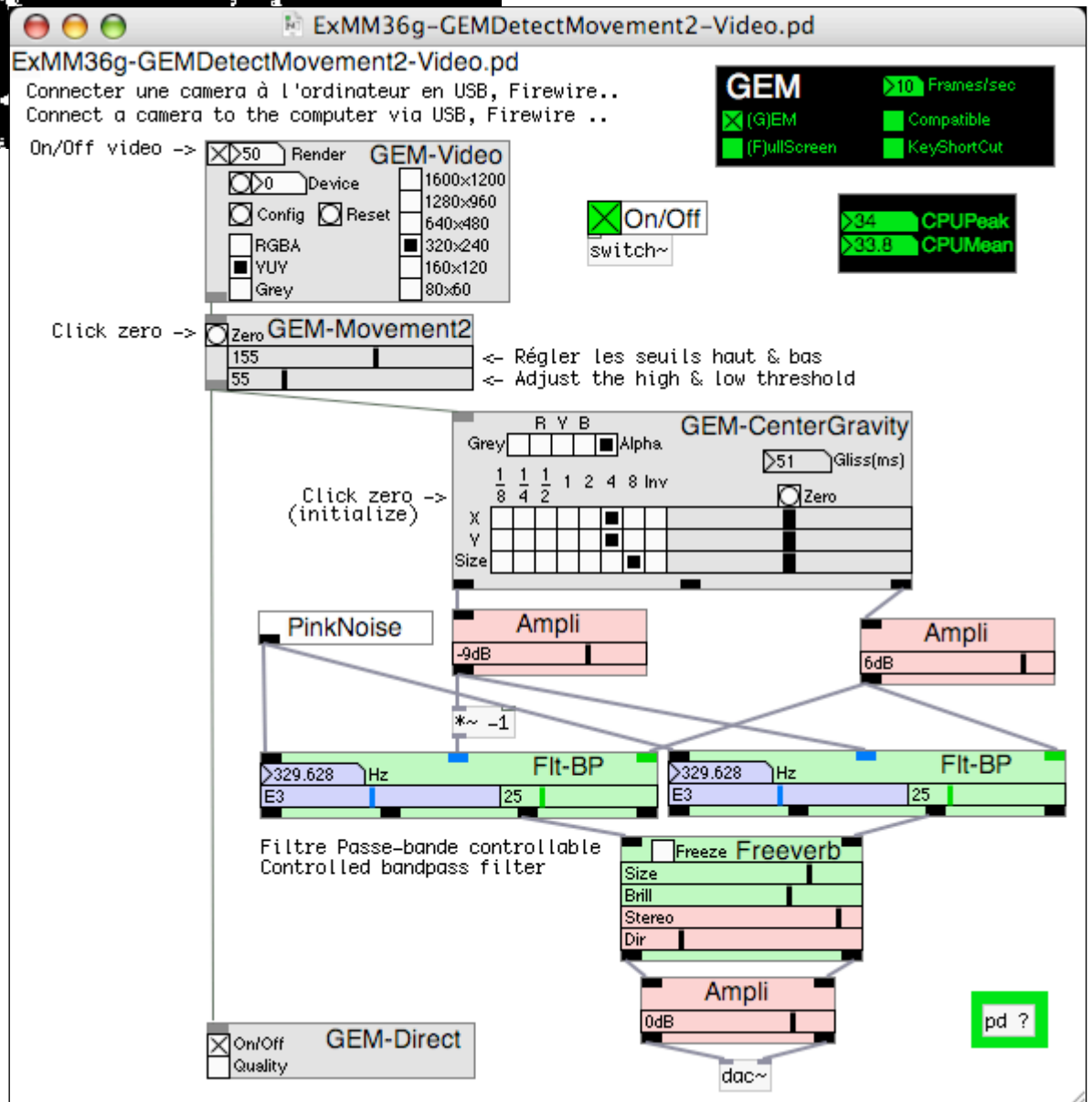
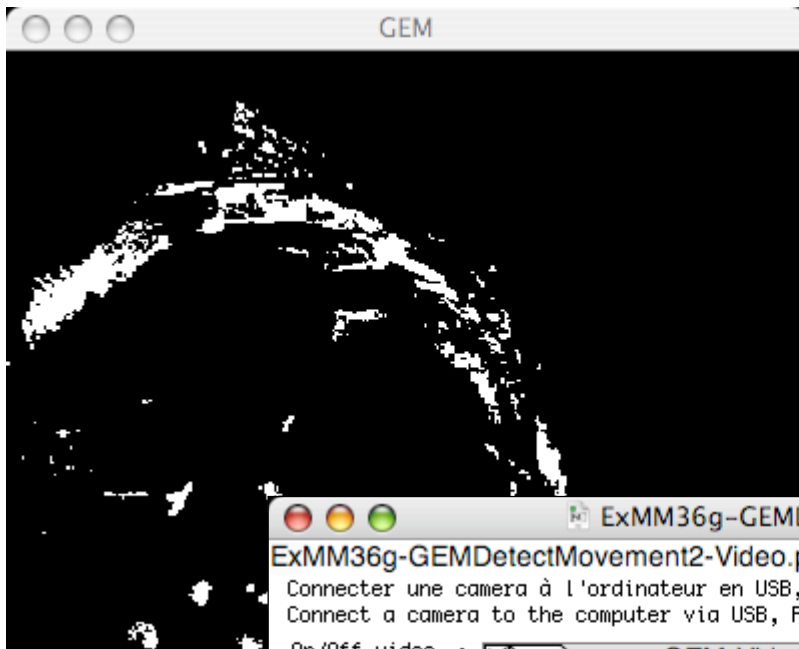
La "library" GEM de Pd-extended est utilisée. The GEM library of Pd-extended is used.

Aperçu / Overview

ExMM36

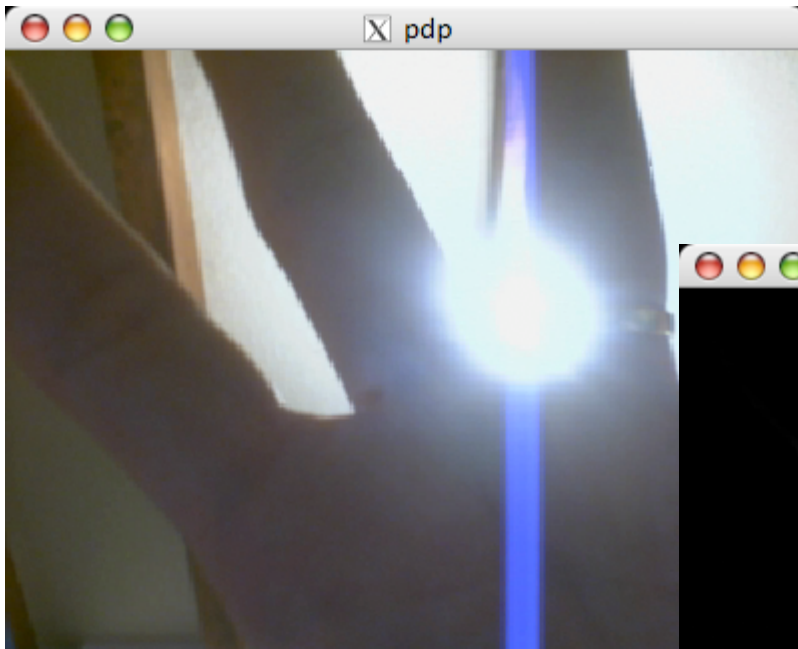
Dans cet exemple, le mouvement dans l'image d'une camera est détecté et contrôle la synthèse sonore.

In this example, the movement in the image of a camera is detected and controls sound synthesis.



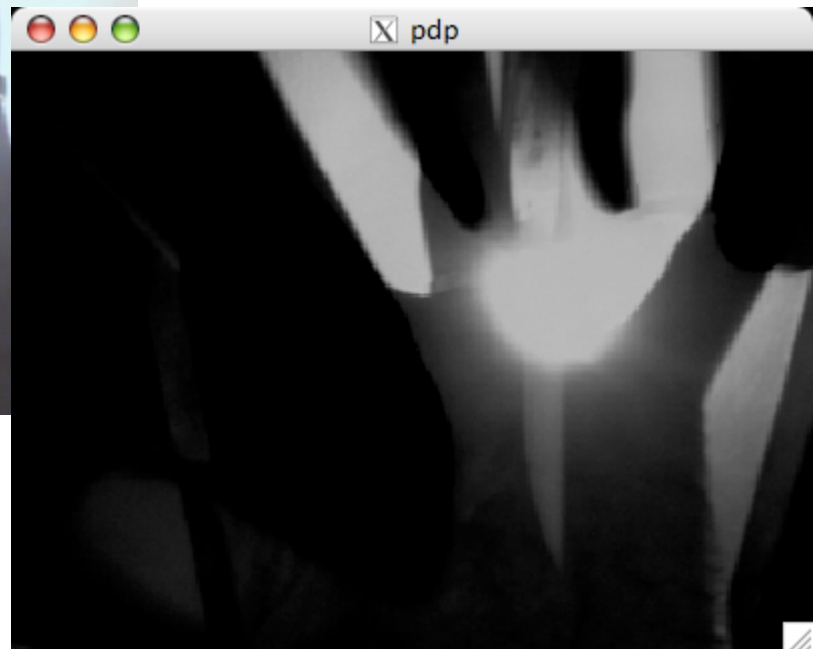
La "library" GEM de Pd-extended est utilisée.

The GEM library of Pd-extended is used.



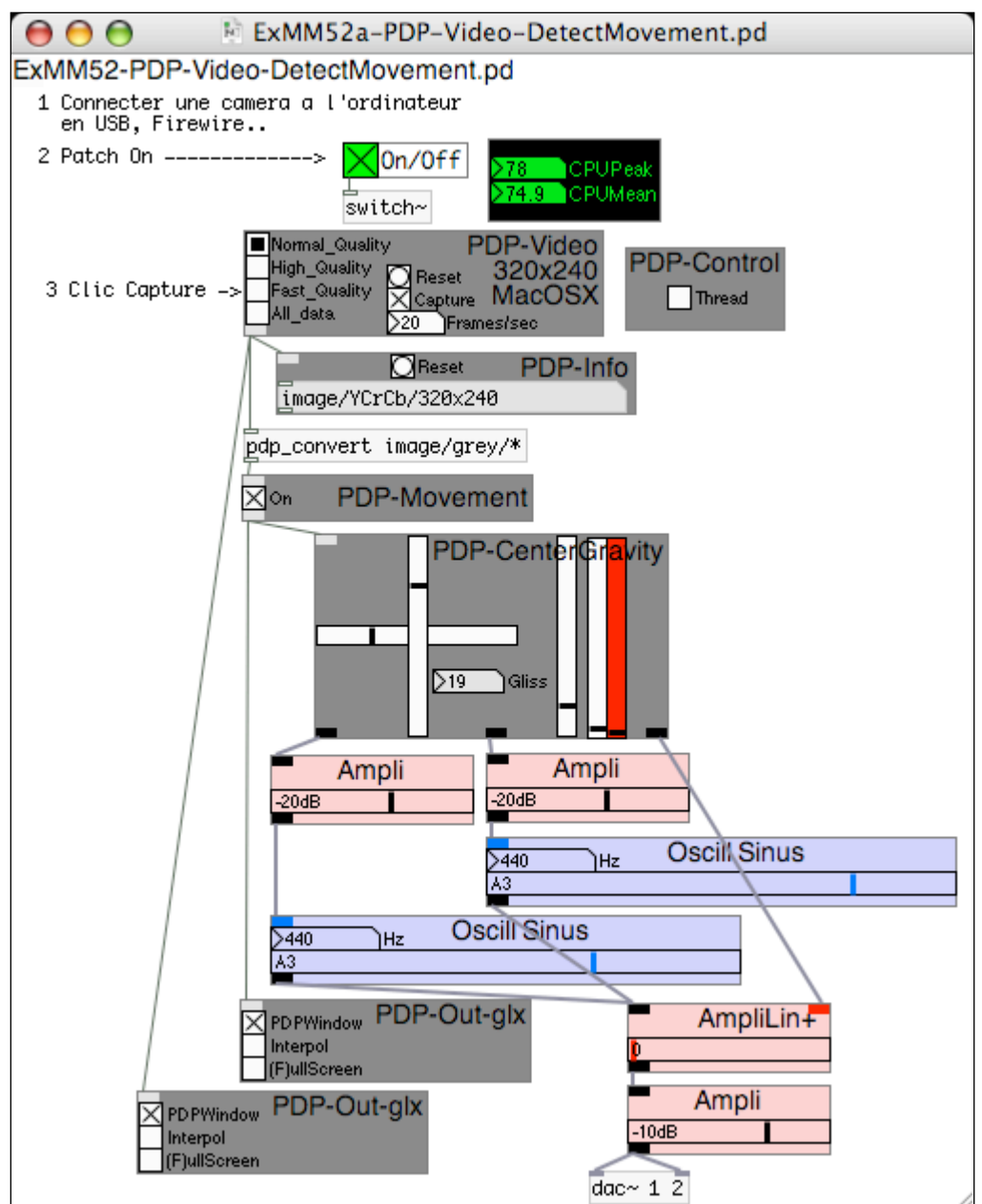
Aperçu / Overview

ExMM52



Dans cet exemple, le mouvement dans l'image d'une camera est détecté et contrôle la synthèse sonore.

In this example, the movement in the image of a camera is detected and controls sound synthesis.



La "library" PDP de Pd-extended est utilisée.
(Non compatible Windows)

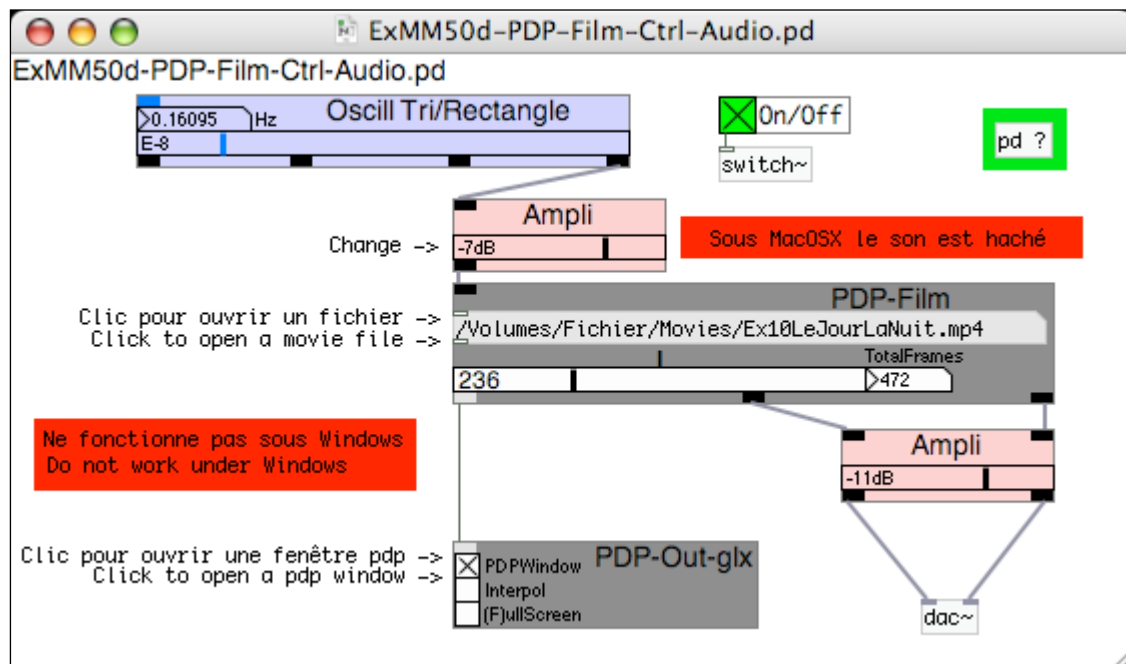
The PDP library of Pd-extended is used.
(Not Windows compatible)

Aperçu / Overview

ExMM50

Dans cet exemple,
le déroulement d'un film est contrôlé.

In this example,
the sequence of a film is controlled.

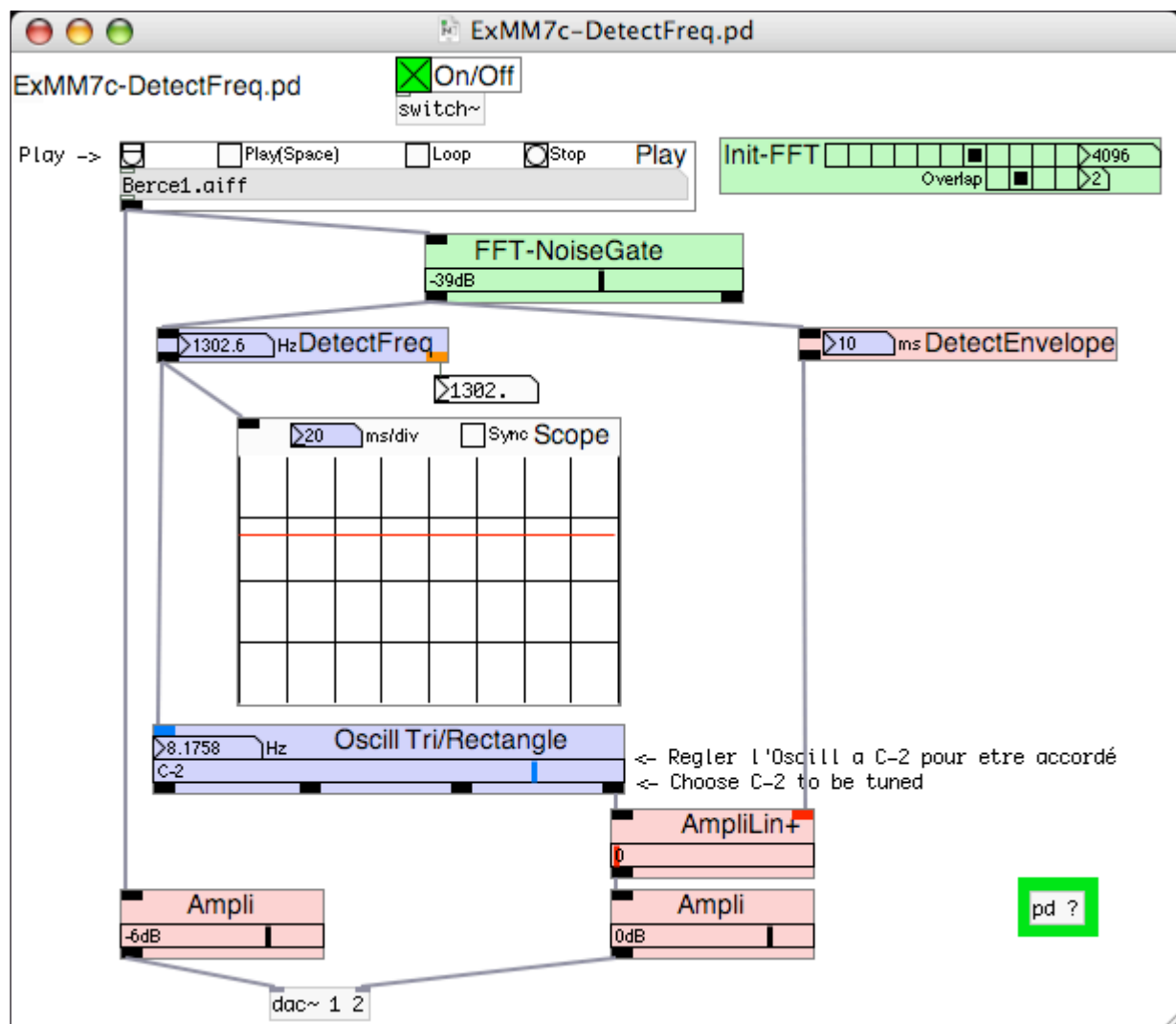
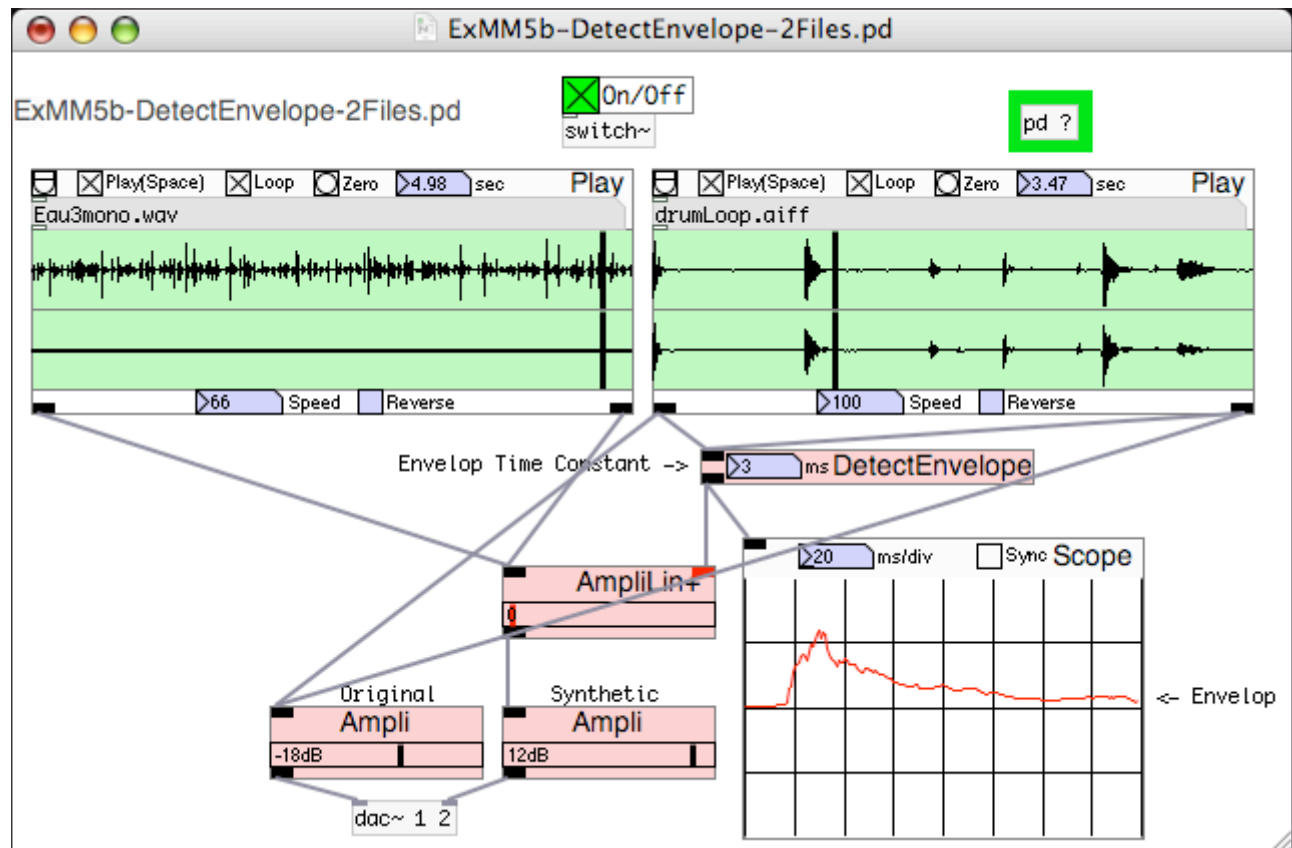


La "library" PDP de Pd-extended est utilisée.
(Non compatible Windows)

The PDP library of Pd-extended is used.
(Not Windows compatible)

Aperçu / Overview

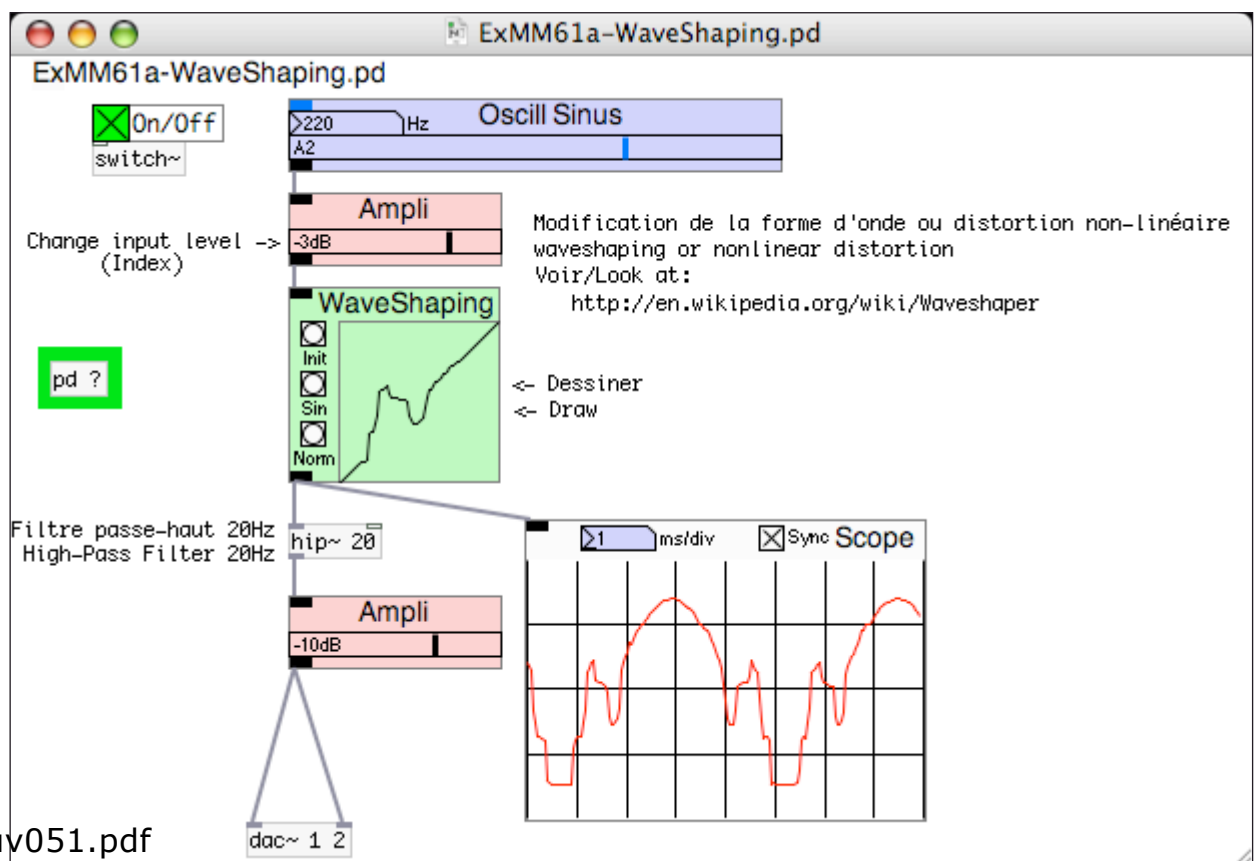
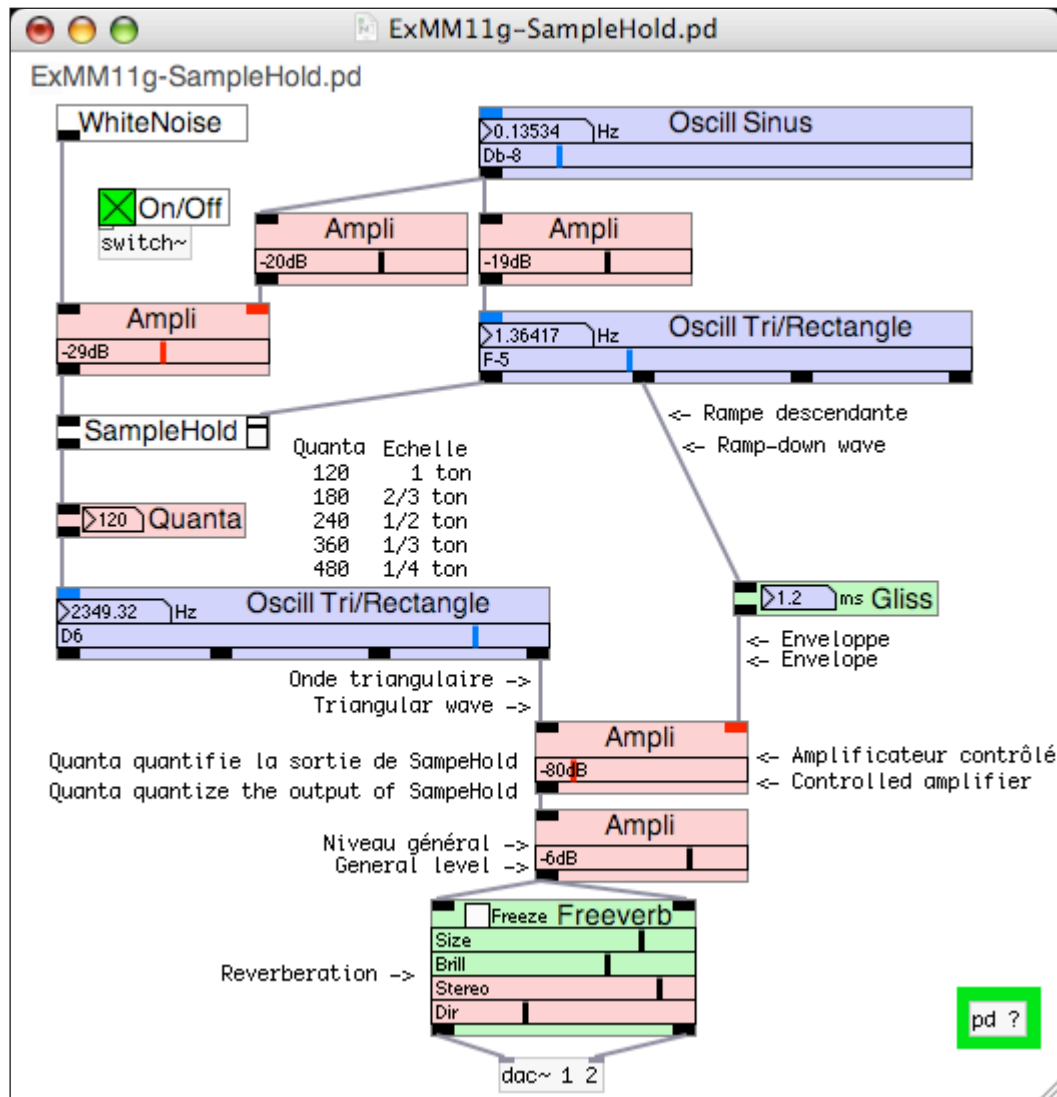
Détection Audio d'enveloppe, de fréquence / Envelop, frequency Audio detector
ExMM5 - ExMM7



Aperçu / Overview

Synthèse Audio / Audio synthesis

ExMM11 - ExMM61

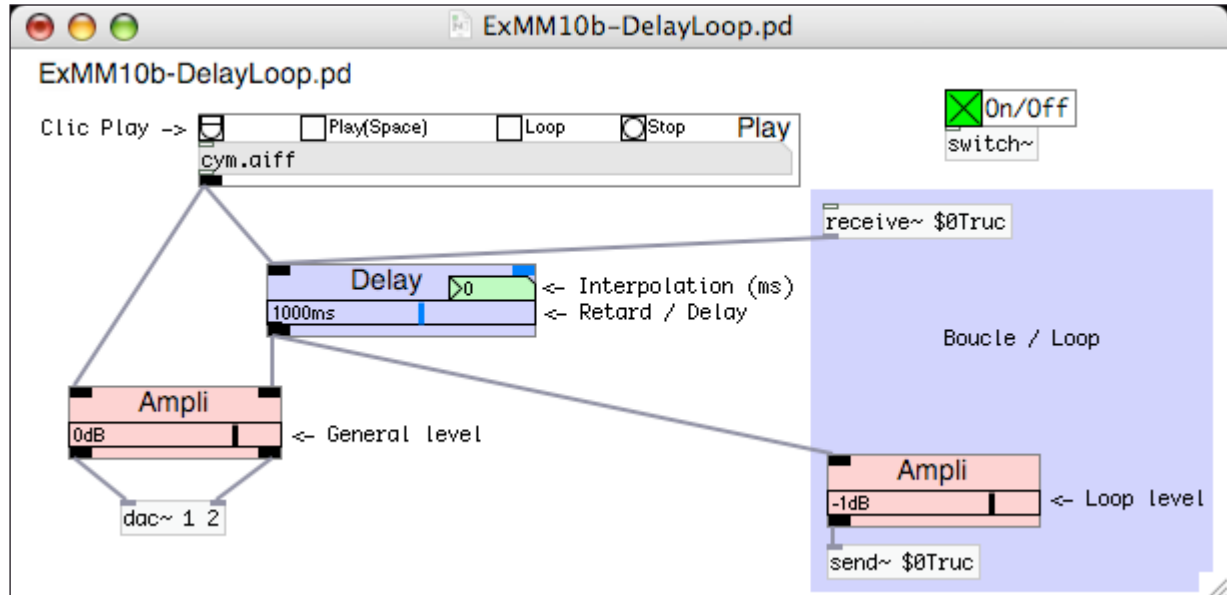


Aperçu / Overview

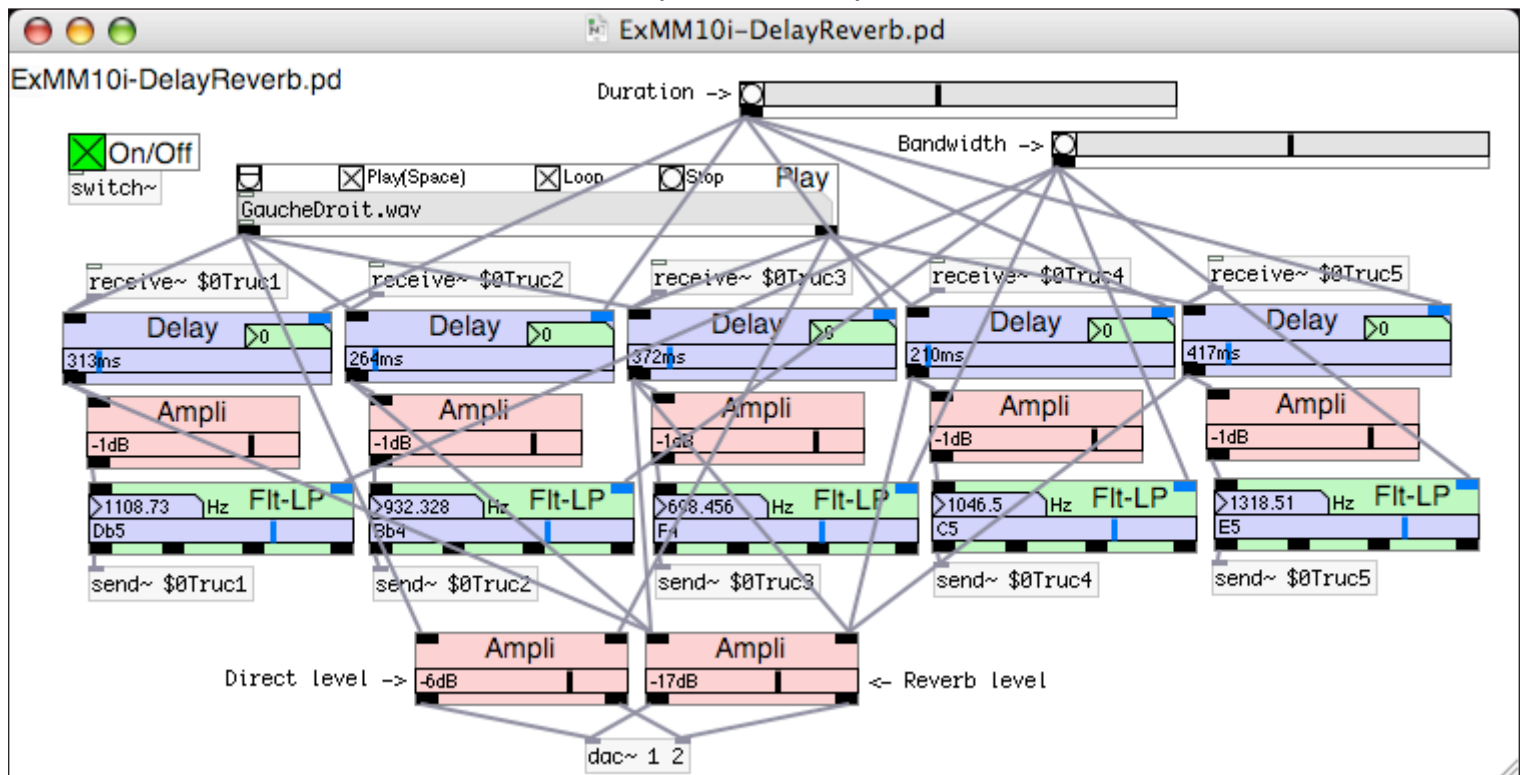
Retard Audio / Audio delay

ExMM10

Simple



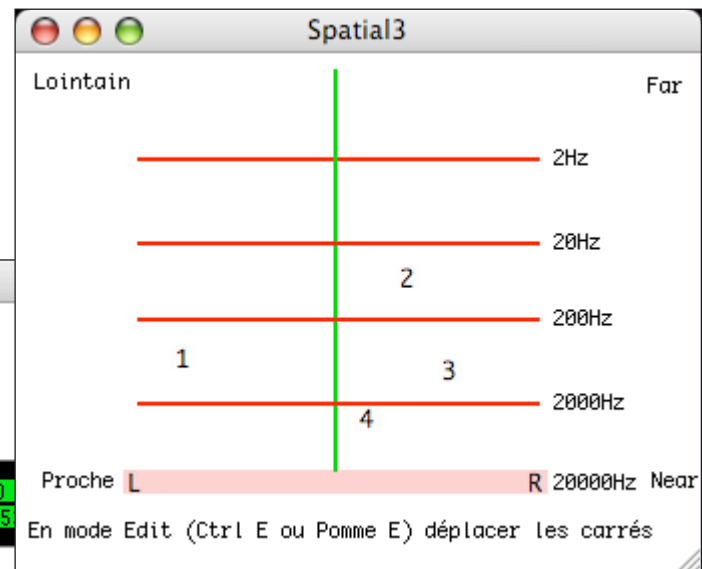
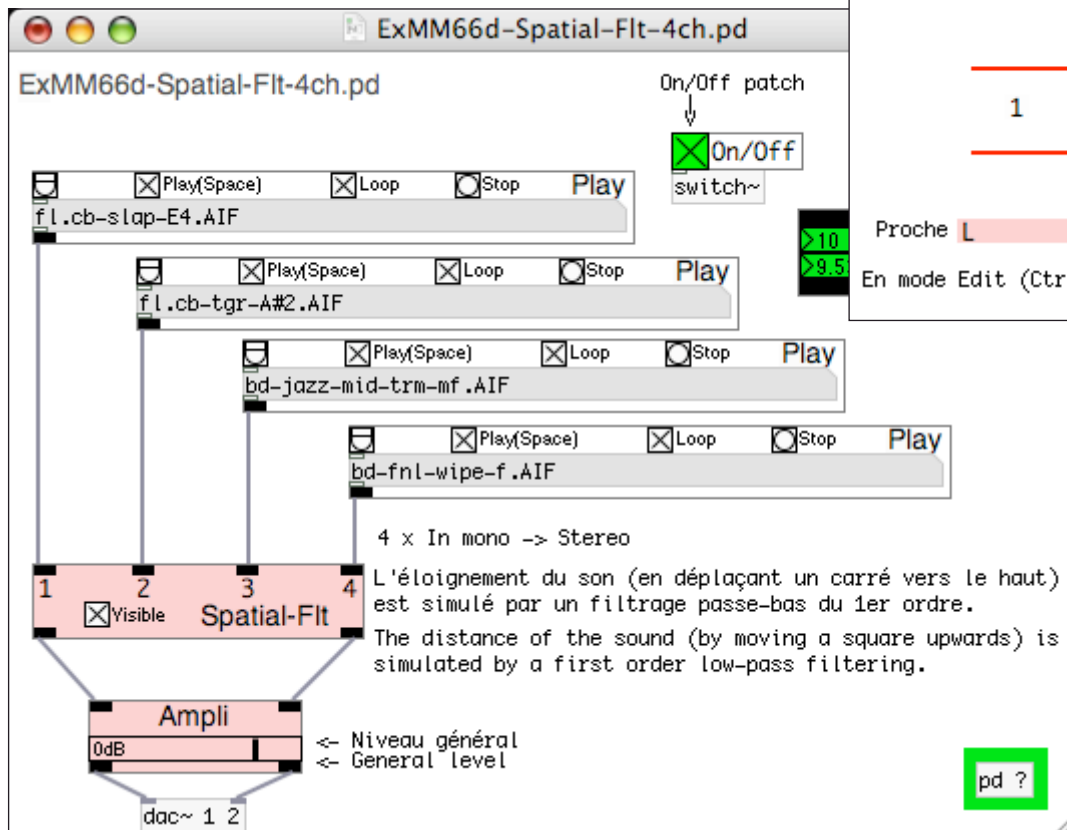
Complexe / Complex



Aperçu / Overview

Spatialisation Audio / Audio spatialization

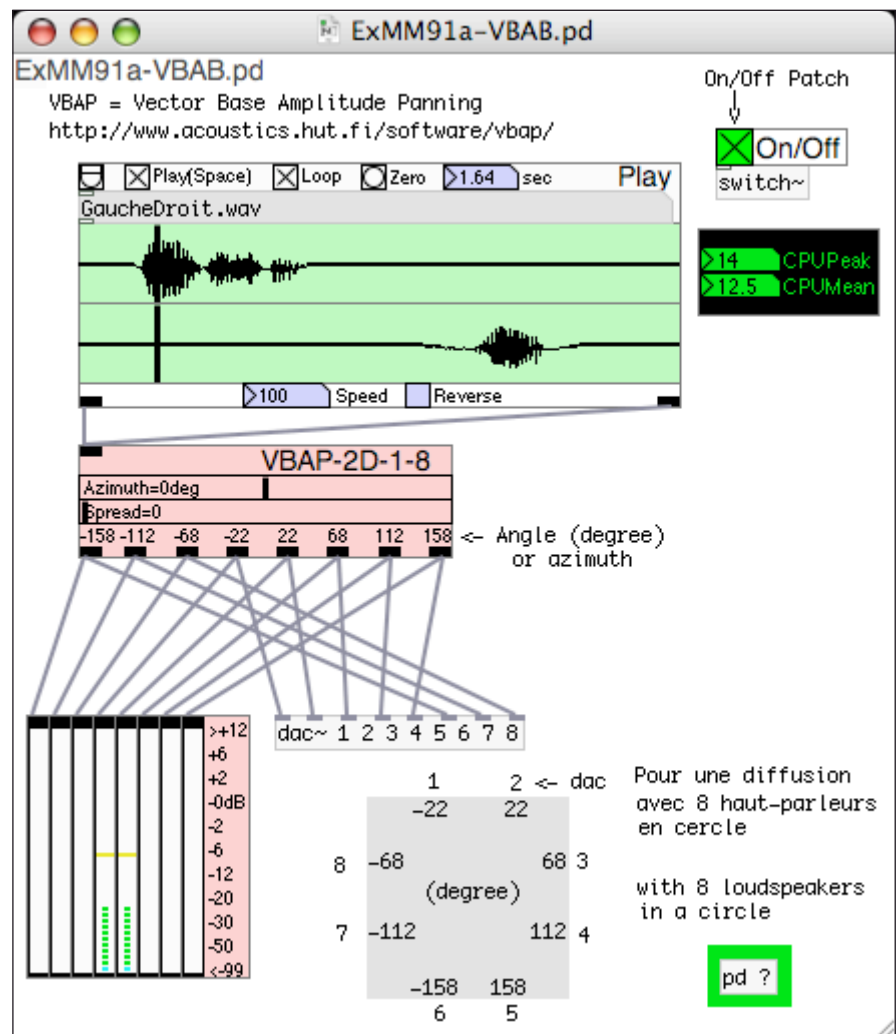
ExMM 66 Stereo



ExMM 91
8 canaux / 8 chanel

VBAP = Vector Base
Amplitude Panning

<http://www.acoustics.hut.fi/software/vbap/>



Aperçu / Overview

ExMM19

Arduino est une plate-forme de prototypage électronique "Open source" basée sur du matériel et logiciel flexibles et faciles à utiliser. Elle est destinée aux artistes, créateurs, amateurs, et quiconque intéressés à la création d'objets ou d'environnements interactifs.

"Arduino is an open-source electronics prototyping platform based on flexible, easy-to-use hardware and software. It's intended for artists, designers, hobbyists, and anyone interested in creating interactive objects or environments."

<http://www.arduino.cc/>

Dans cet exemple,
"Digital In 2" d'une carte Arduino
déclenche la lecture d'un fichier Audio.

In this example,
"Digital In 2" of an Arduino card
trigs the playback of an Audio file.

Voir (en français):

Read (in french):

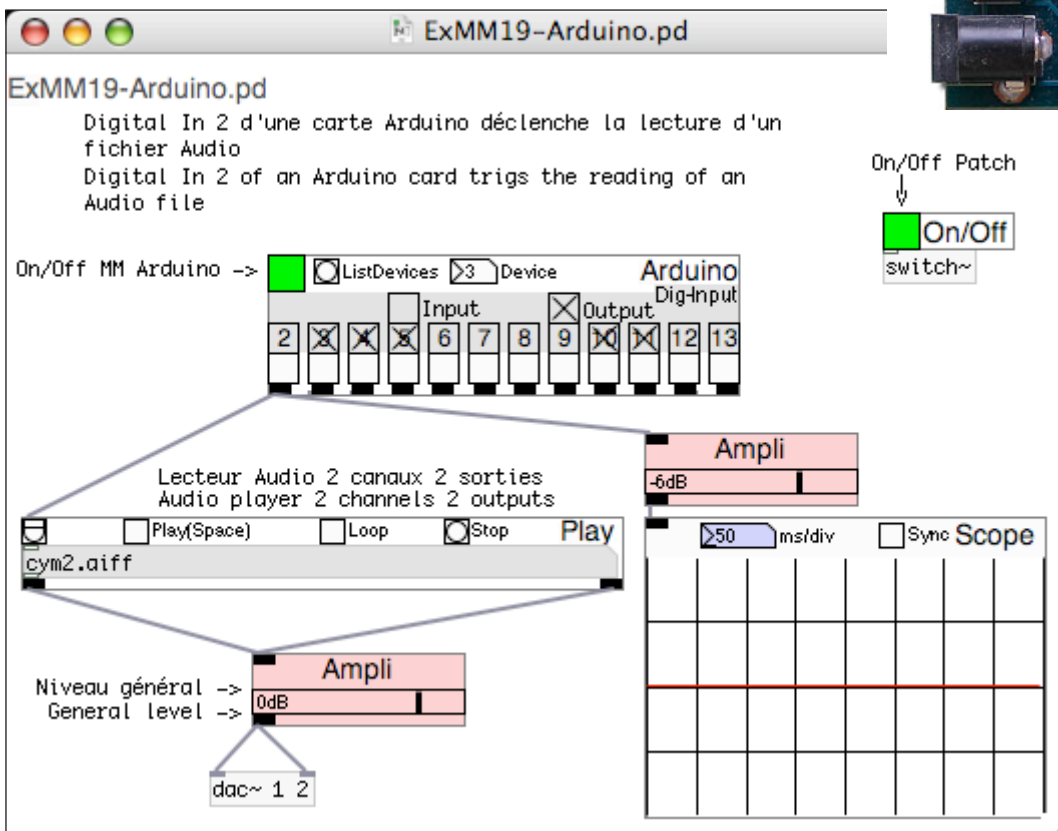
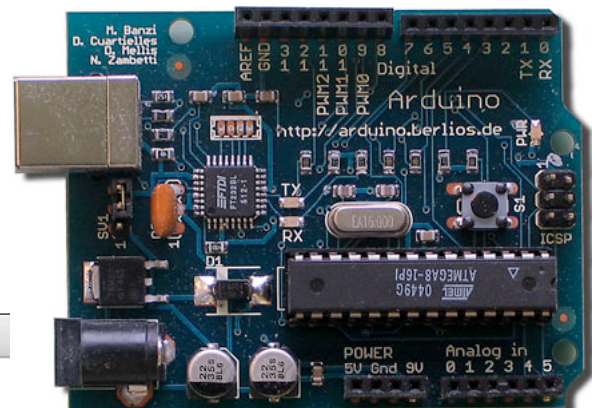
<http://pagesperso-orange.fr/paresys/Methodes/Methode183Arduino.pdf>

ou ouvrir le MM Arduino

or open the MM Arduino

pour avoir plus d'informations...

for more information...



Tous les MM/ All the MM MM = MiniModule

Lancer l'application Pure Data.
Ouvrir le dossier ARGOPdvO5.
Ouvrir le dossier MM.
Ouvrir All-ARGOPdMM.pd

Launch Pure Data application.
Open ARGOPdvO5 folder.
Open MM folder.
Open All-ARGOPdMM.pd

Attention: sous Linux ou Windows: ne pas ouvrir par 2 x clic un fichier .pd mais en faisant Menu File puis Open. Sinon une nouvelle instance de Pure data est lancée à chaque ouverture.

Caution: under Linux or Windows: do not open by 2 x click a .pd file but by Menu File then Open. Otherwise a new instance of Pure data opens each time.

ARGOPdMiniModules

ARGOPd est constitué de modules de synthèse et de traitement sonore et visuel fonctionnant en temps réel sous Pure Data (Pd).

Ce patch "All-ARGOPdMM.pd" permet d'ouvrir les autres patches (placés dans le même dossier) regroupant tous les MiniModules ARGOPd.

Le dossier ExMM contient plus de 100 exemples de patches Pd utilisant des MiniModules.
Le mieux, pour se familiariser avec ARGOPd est d'ouvrir ces ExMM.
Par exemple: Ouvrir ExMM1a-Sinus.pd puis ExMM1b-Sinus.pd...

Un MiniModule (MM) est un "Graph-on-parent subpatch".

ARGOPd is made of real-time sound and visual synthesis modules functioning in real time under Pure Data (Pd).

This "All-ARGOPdMM.pd" patch opens the other patches (located in the same folder), grouping all ARGOPd MiniModules.

ExMM folder contains more than 100 examples of Pd patches using MiniModules.
The best way to become familiar with ARGOPd, is to open these ExMM.
For example: Open ExMM1a-Sinus.pd then ExMM1b-Sinus.pd...

A MiniModule (MM) is a "Graph-on-parent subpatch".

Audio-Player
Audio-PlayerVarySpeed
Audio-Generator
Audio-Effect
Audio-Filter
Audio-FFT
Audio-Ampli
Audio-Control
Audio-Control2D
Audio-Display
Audio-In
Audio-Detect
Audio-Switch
Audio-Simple
Audio-Out
Audio-Record
Patch-Model-Audio-Mono
Patch-Model-Audio-Stereo

Help

MIDI

GEM-Control
GEM-In (Patience...)
GEM-Transform
GEM-Out

PDP-Control
PD-In
PDP-Transform
PDP-Out

OSC

Arduino

Beta

GEM-Example

Audio-Example

fait par / made by Gerard Paresys

<http://pagesperso-orange.fr/Paresys/ARGOPd/>
<http://gerard.paresys.free.fr/ARGOPd/>
gerard.paresys@ens.fr

Compatible MacOSX, Linux, Windows (except PDP...)

Construit sous / Build under Pd 0.41.4-extended
Voir/Look at: <http://puredata.info/downloads>

pd AFaire-ToDo
11 4 2010

Cette fenêtre (un "patch" Pure Data) est une palette qui rassemble tous les "MiniModules".

This window (a Pure Data "patch") is a palette that gathers all the "MiniModules".

Clic par exemple ->

Audio-Generator

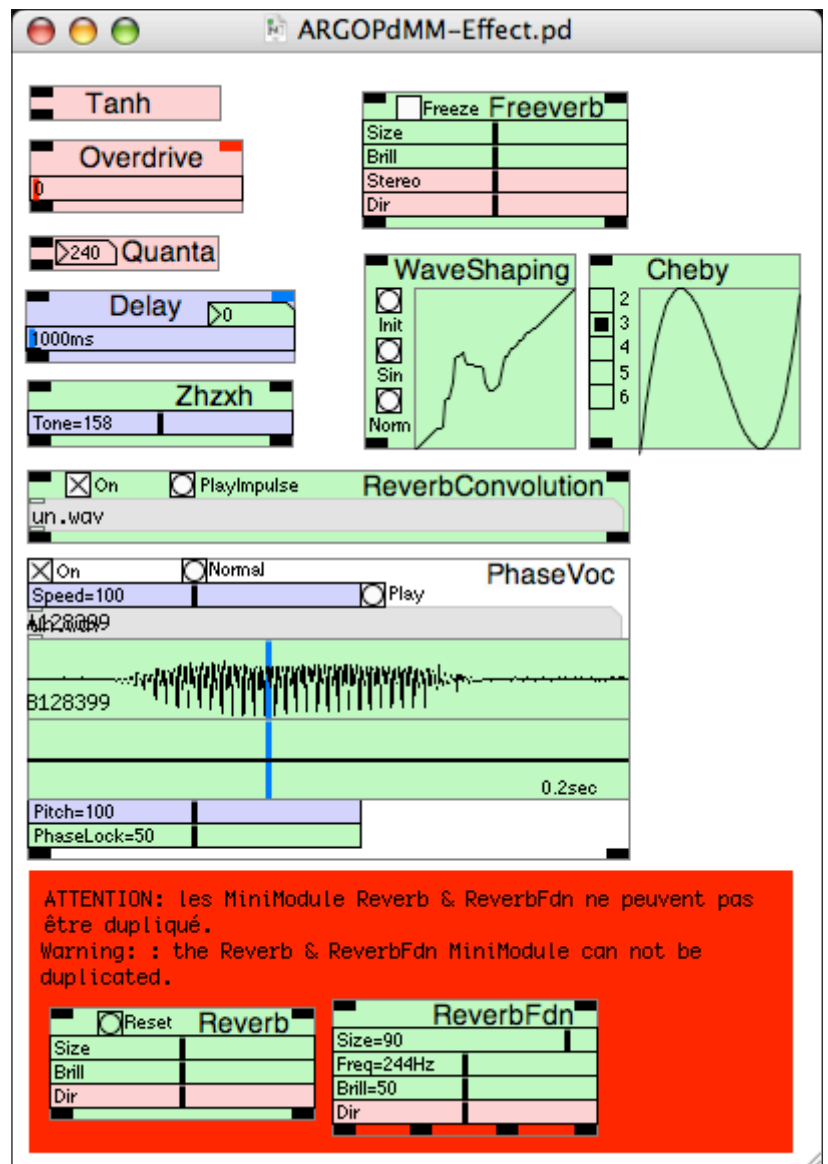
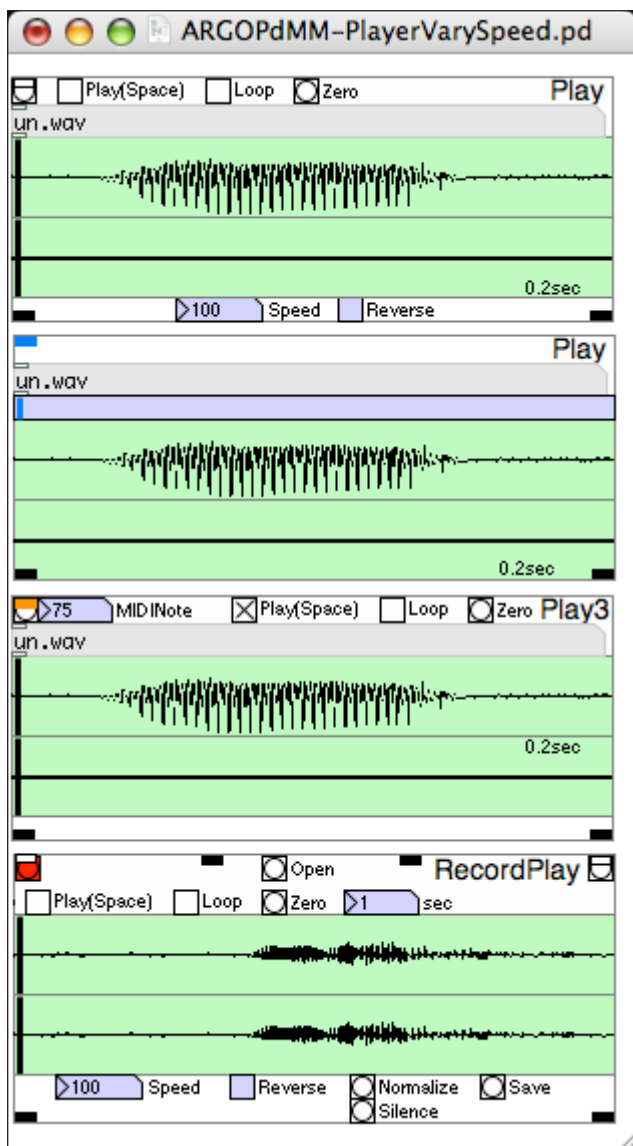
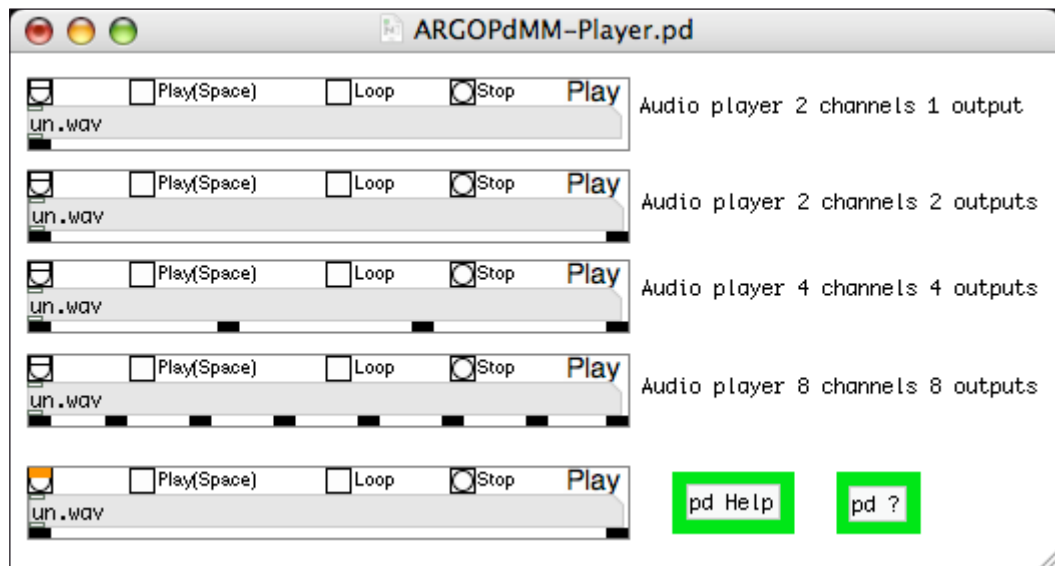
<- Click by example

pour voir un patch contenant les générateurs Audio.

to view a patch containing the Audio generators.

Tous les MM/ All the MM

MM-Audio



Tous les MM/ All the MM

MM-Audio

ARGOPdMM-Generator.pd

pd ?

Envelope

WhiteNoise

PinkNoise

122 Hz Alea1

10 Hz Alea2

ATTENTION: ce MiniModule ne peut pas être présent 2 fois dans le même patch.
WARNING: This MiniModule can not be present 2 times in the same patch.

Oscill Sinus

Oscill Sinus

Oscill Tri/Rectangle

Oscill Triangle

Oscill-Pulse

Oscill 12Sinus

ARGOPdMM-Filter.pd

Flt-LP

Flt-HP

Flt-BP

Flt-BP

Flt-Comb

Gliss

ARGOPdMM-Switch.pd

Switch

SampleHold

ARGOPdMM-Control.pd

On/Off Patch

On/Off

switch~

ATTENTION: il faut placer un seul MiniModule "On/Off" dans un patch.
CAUTION: Place only one "On/Off" MiniModule in a patch.

Audio

Sig

Bang

pd ?

>0.83	>0.05	>1.38
>1	>1	>1
>1	>5	>0.92
>1	>10	>0.9
>1	>20	>0.88
>1	>40	>0.84
>1	>99	>0.8
>0	>0	>0

ARGOPdMM-Detect.pd

DetectEnvelope

HighLimit

LowLimit

Trig

DetectFreq

ARGOPdMM-FFT.pd

ATTENTION: il faut placer un et un seul MiniModule "Init-FFT" dans un patch contenant 1 ou plusieurs MiniModules FFT.
CAUTION: it is necessary to place one and only one MiniModule "Init-FFT" in a patch containing 1 or several MiniModules FFT.

Init-FFT

Overlap

Taille de la FFT

FFT size

FFT-Compression

FFT-Expansion

FFT-NoiseGate

FFT-BrickWallFilter

FFT-Simple1

FFT-Simple2

FFT-Simple3

FFT-Vocoder

FFT-Convolution1

FFT-Convolution2

FFT-Convolution3

FFT-CrossSynthesis1

FFT-CrossSynthesis2

Reset

FFT-Reverb

Size=44

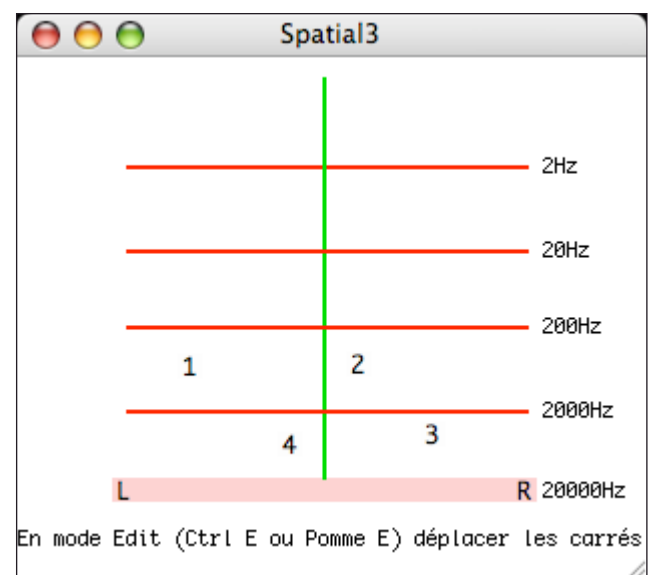
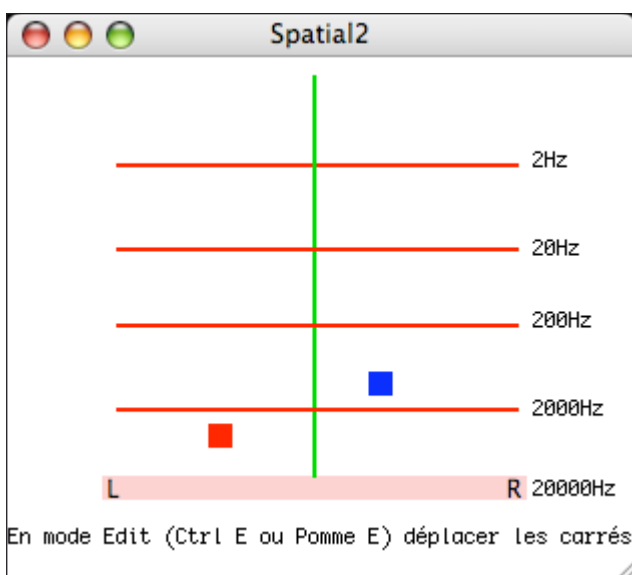
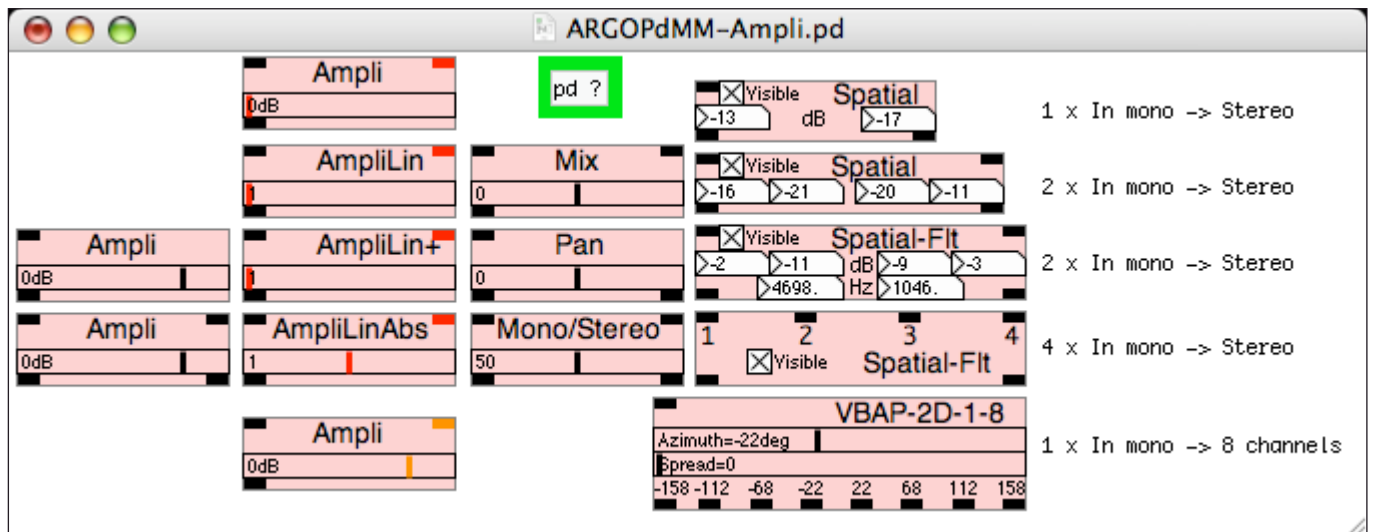
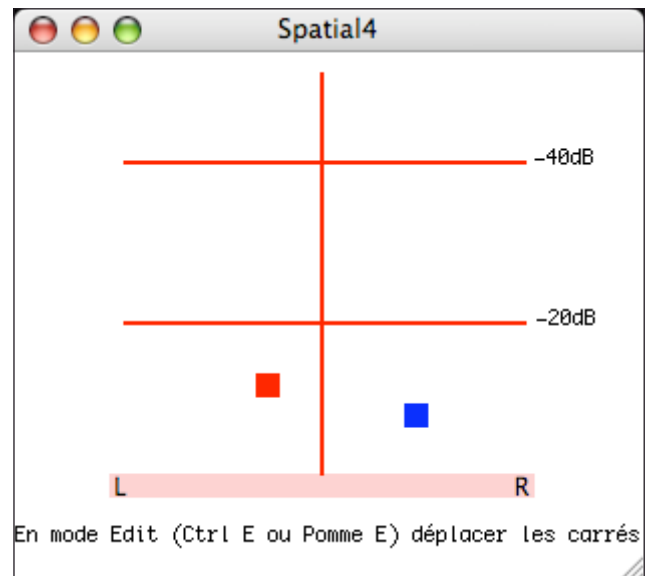
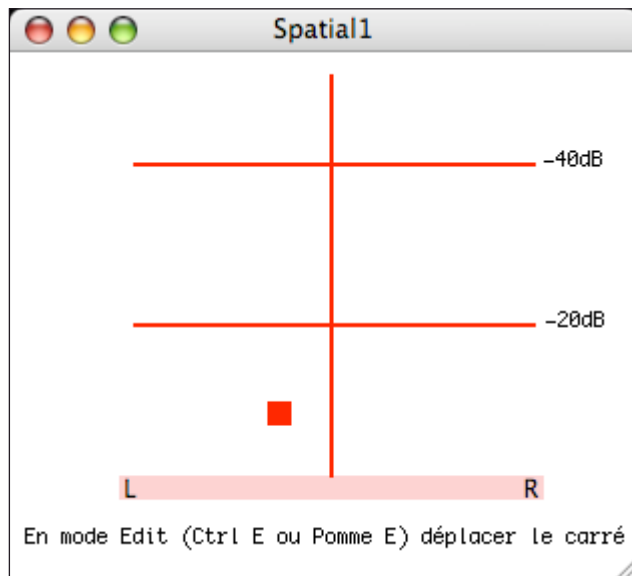
Brill

Dir

ATTENTION: Ce MiniModule ne peut pas être présent à 2 exemplaires dans un même patch.
WARNING: This MiniModule can not be present at 2 copies in a single patch.

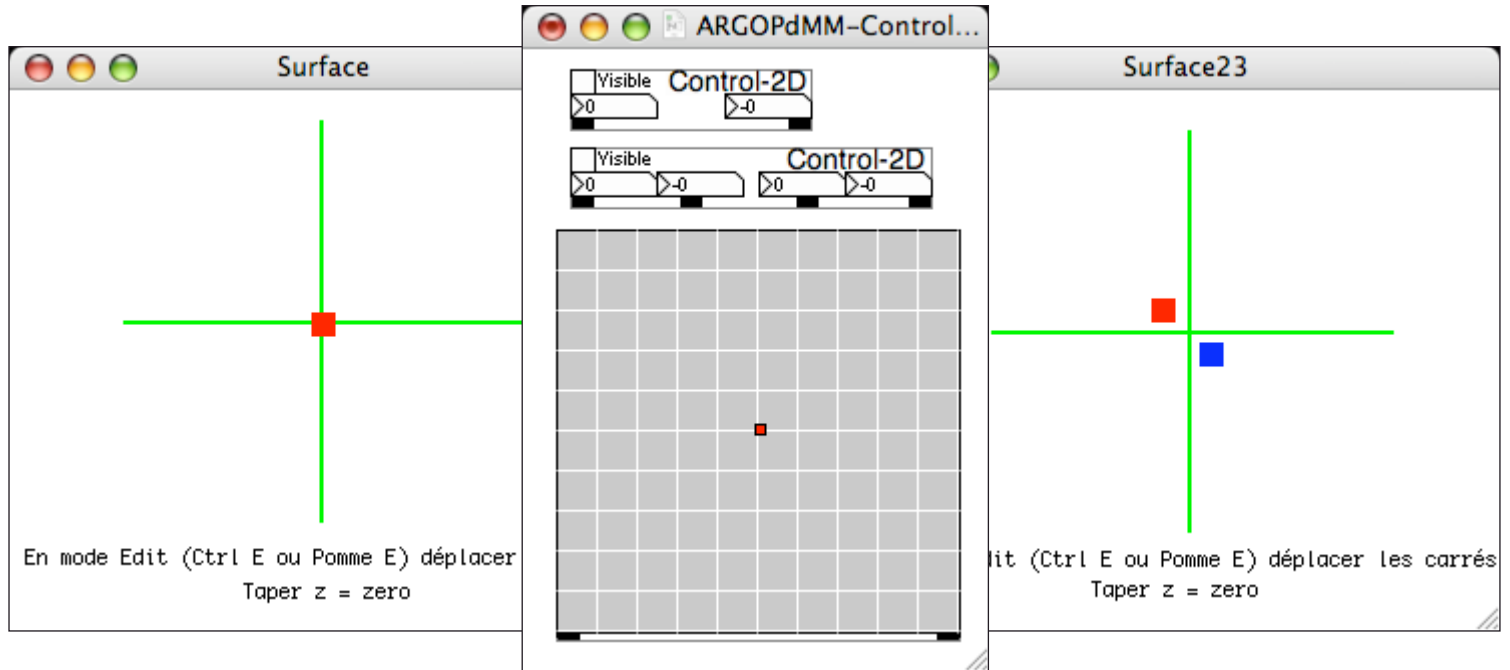
Tous les MM/ All the MM

MM-Audio

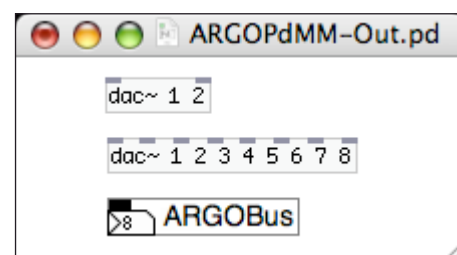
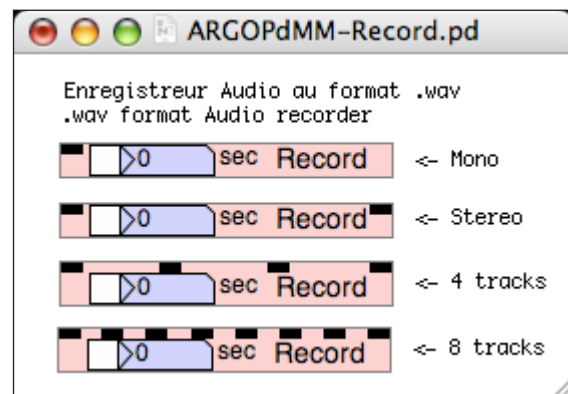
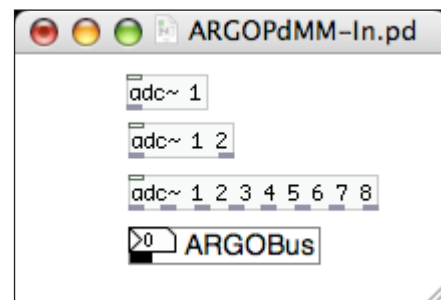
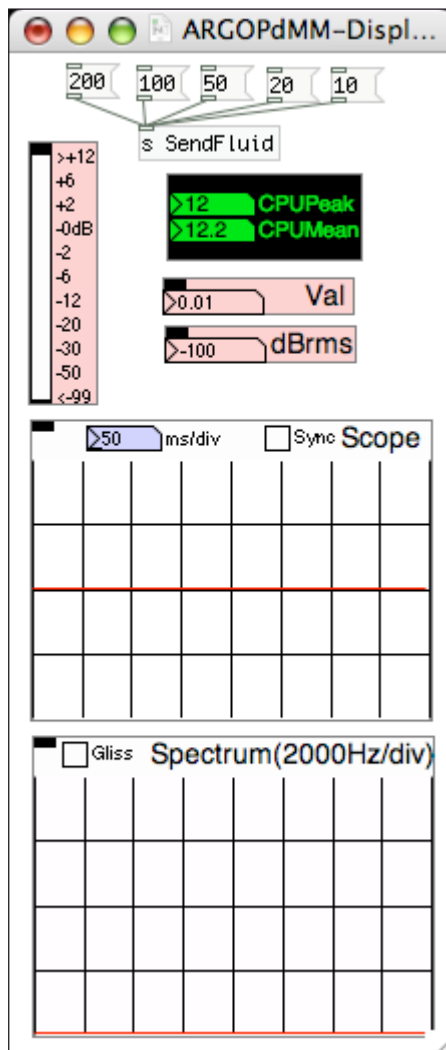


In "edit" mode (Ctrl E or Apple E) move the squares.

Tous les MM/ All the MM MM-Audio



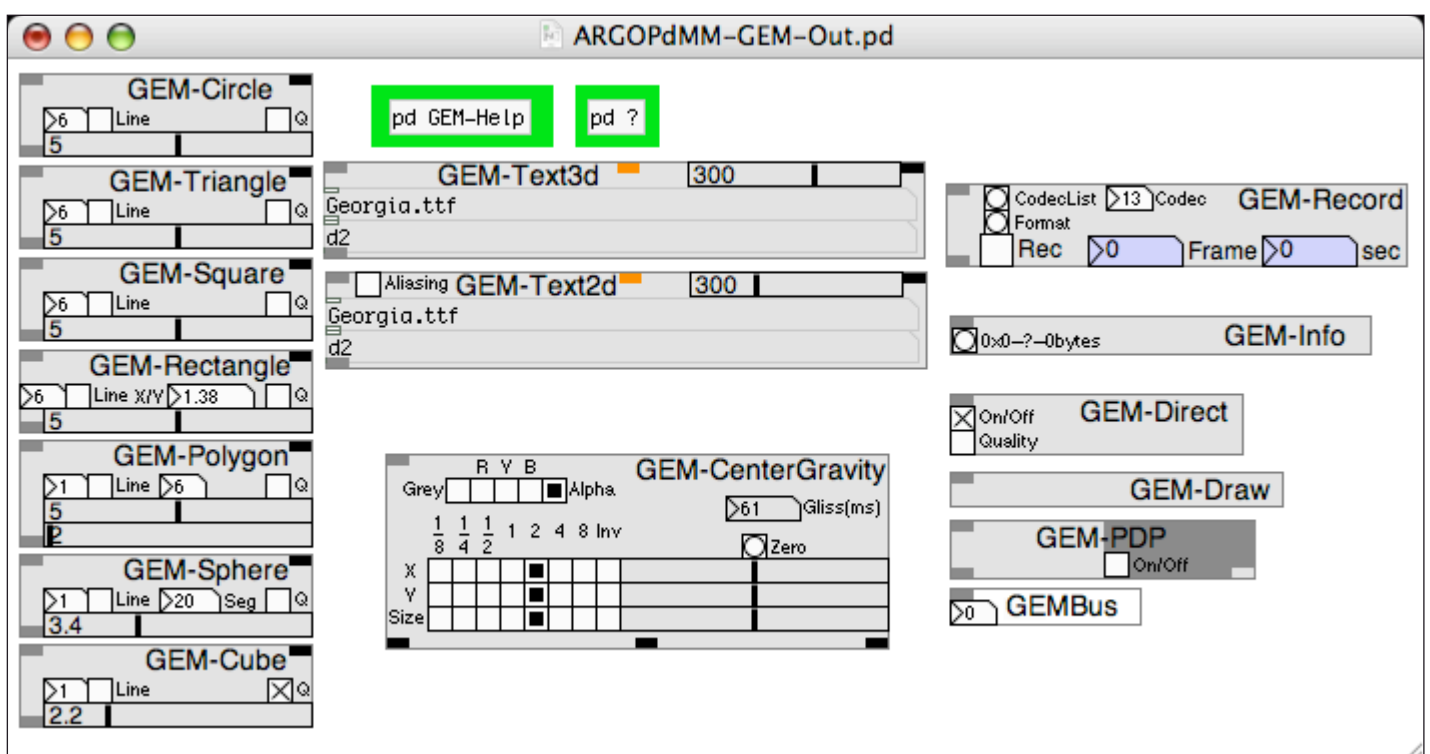
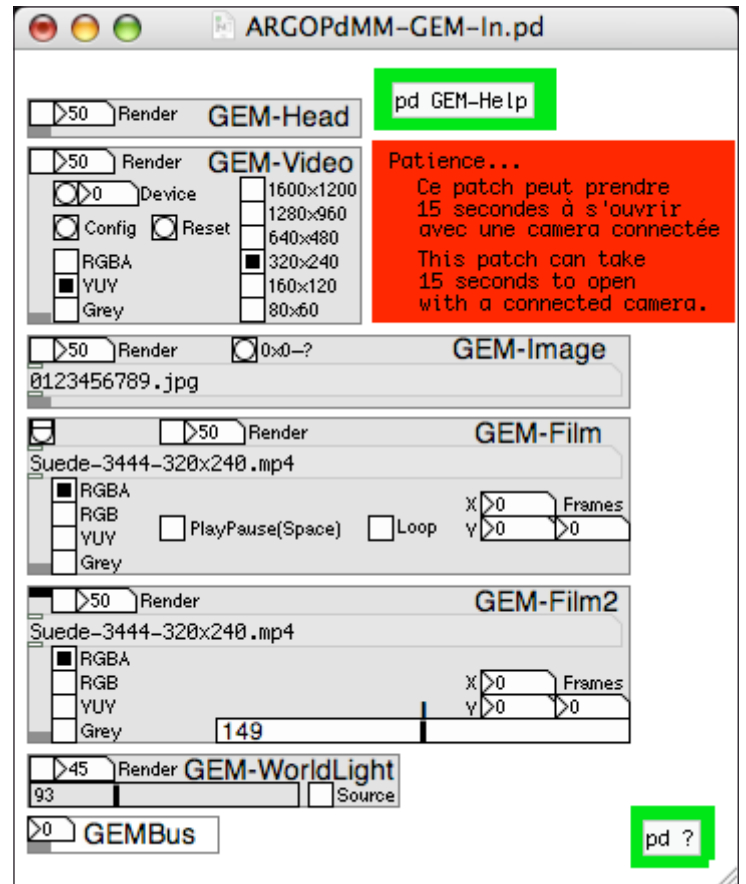
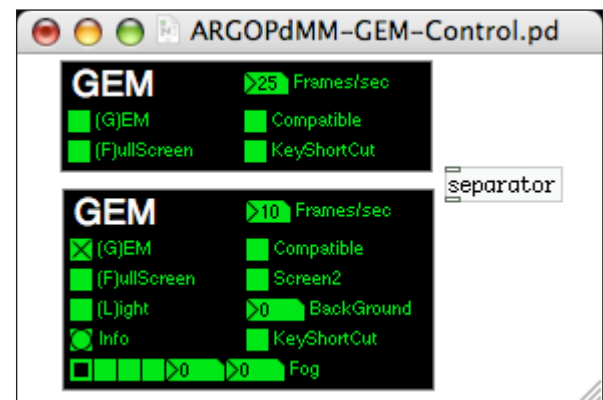
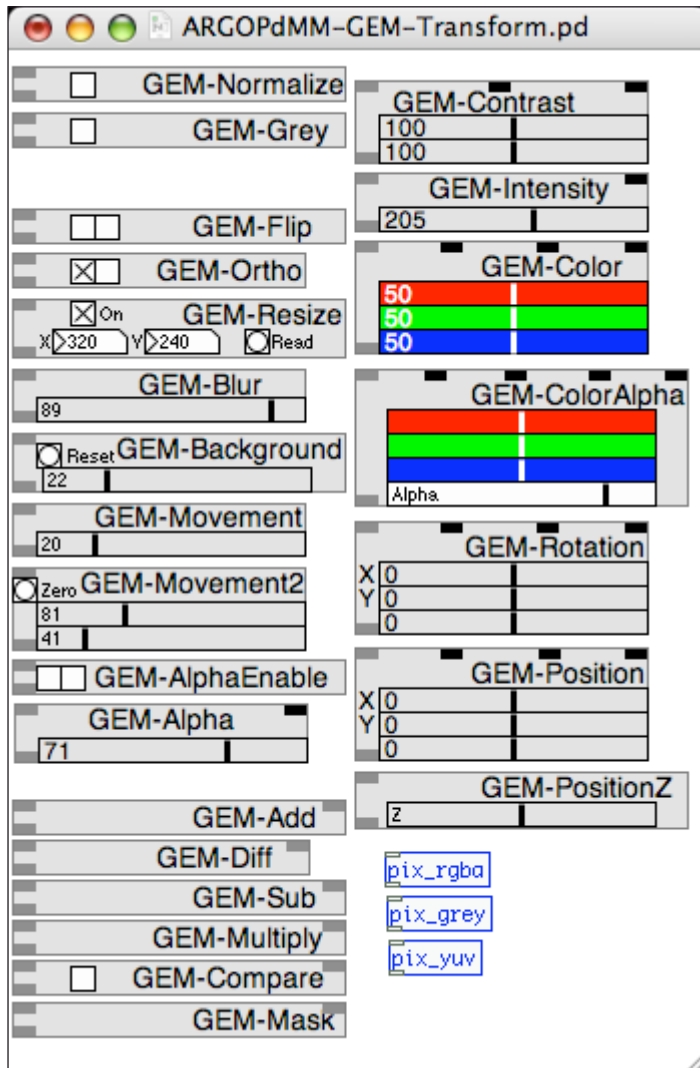
In "edit" mode (Ctrl E or Apple E) move the squares. Hit Z = zero.



Tous les MM/ All the MM

MM-GEM

GEM = Graphics Environment for Multimedia
<http://gem.iem.at/>



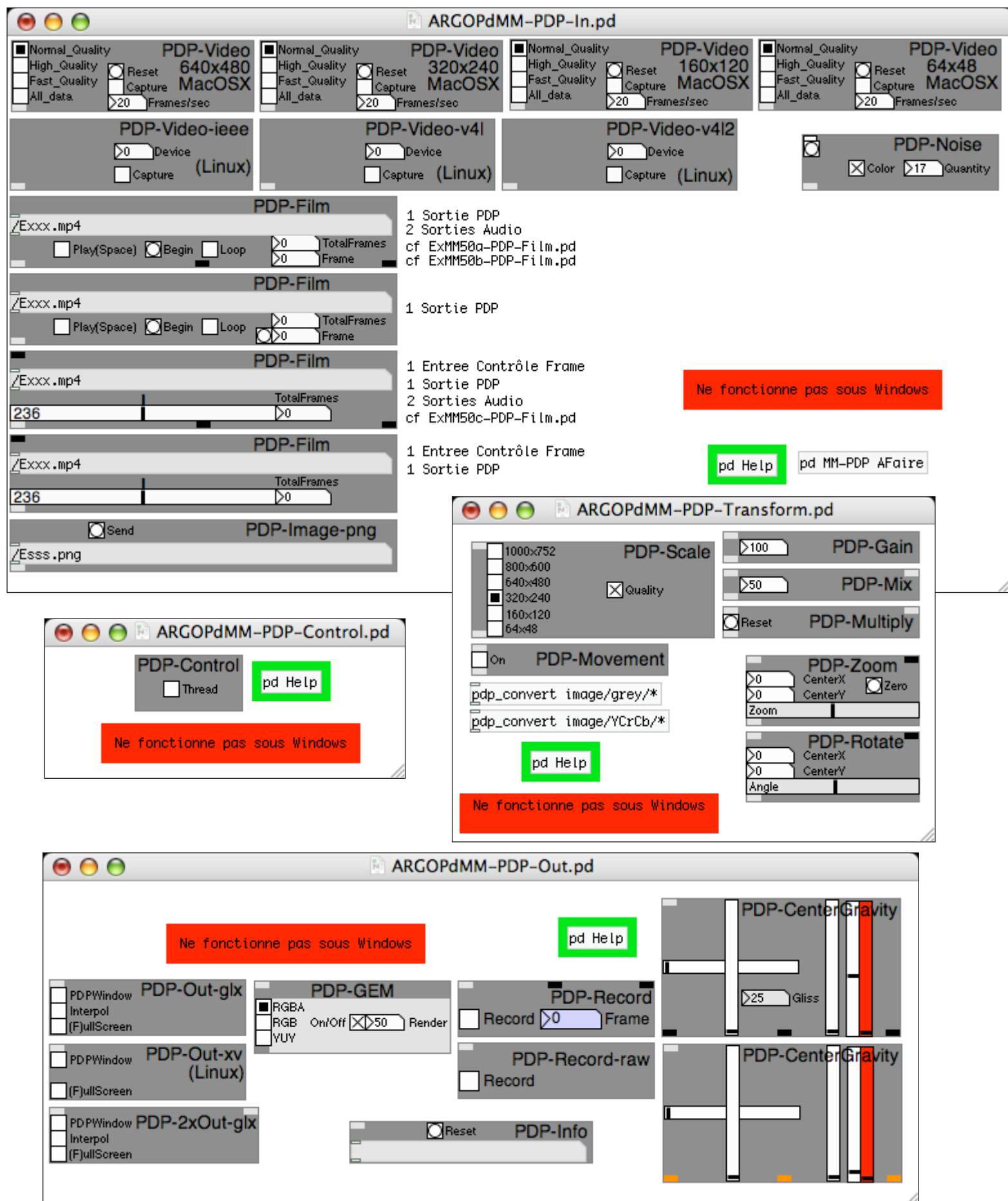
Tous les MM/ All the MM

MM-PDP

PDP = Pure Data Packet

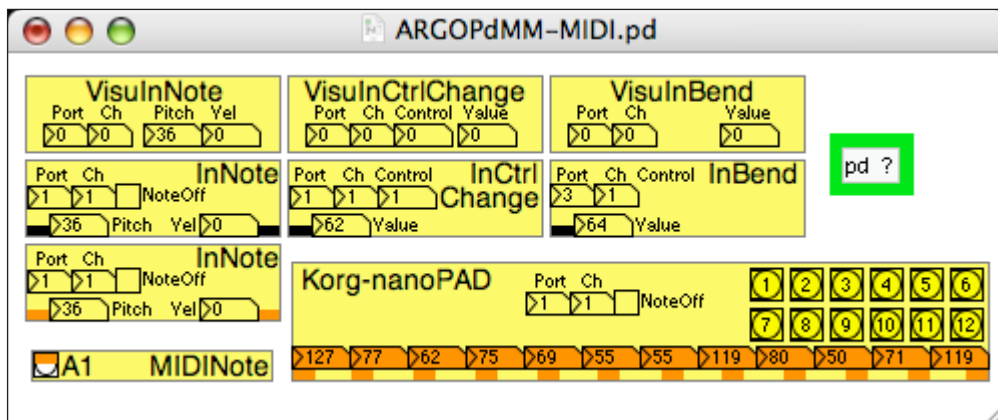
<http://zwizwa.be/pdp/>

"PDP is an extension library for Pure Data, providing video and other media processing functionality."

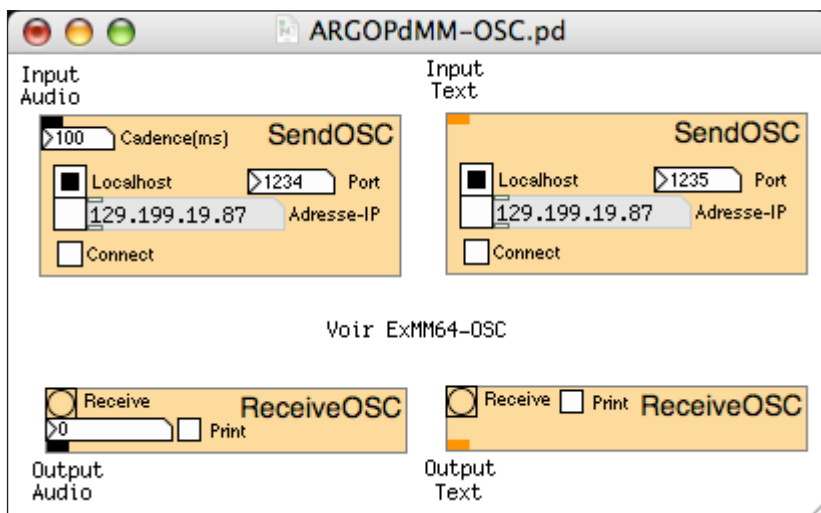


Tous les MM/ All the MM

MM-MIDI

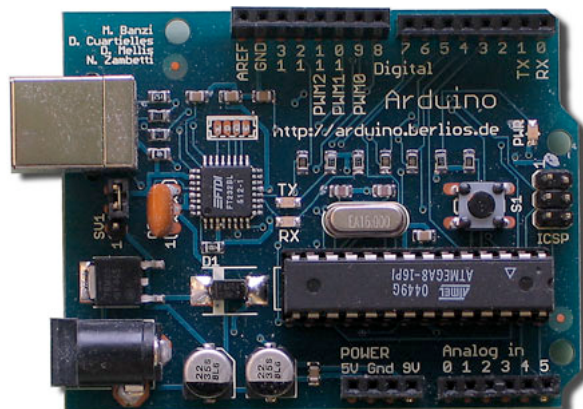


MM-OSC

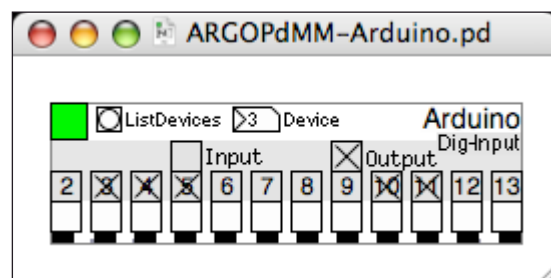


“OpenSound Control (OSC) is a content format for messaging among computers, sound synthesizers, and other multimedia devices that are optimized for modern networking technology.”

http://en.wikipedia.org/wiki/Open_Sound_Control

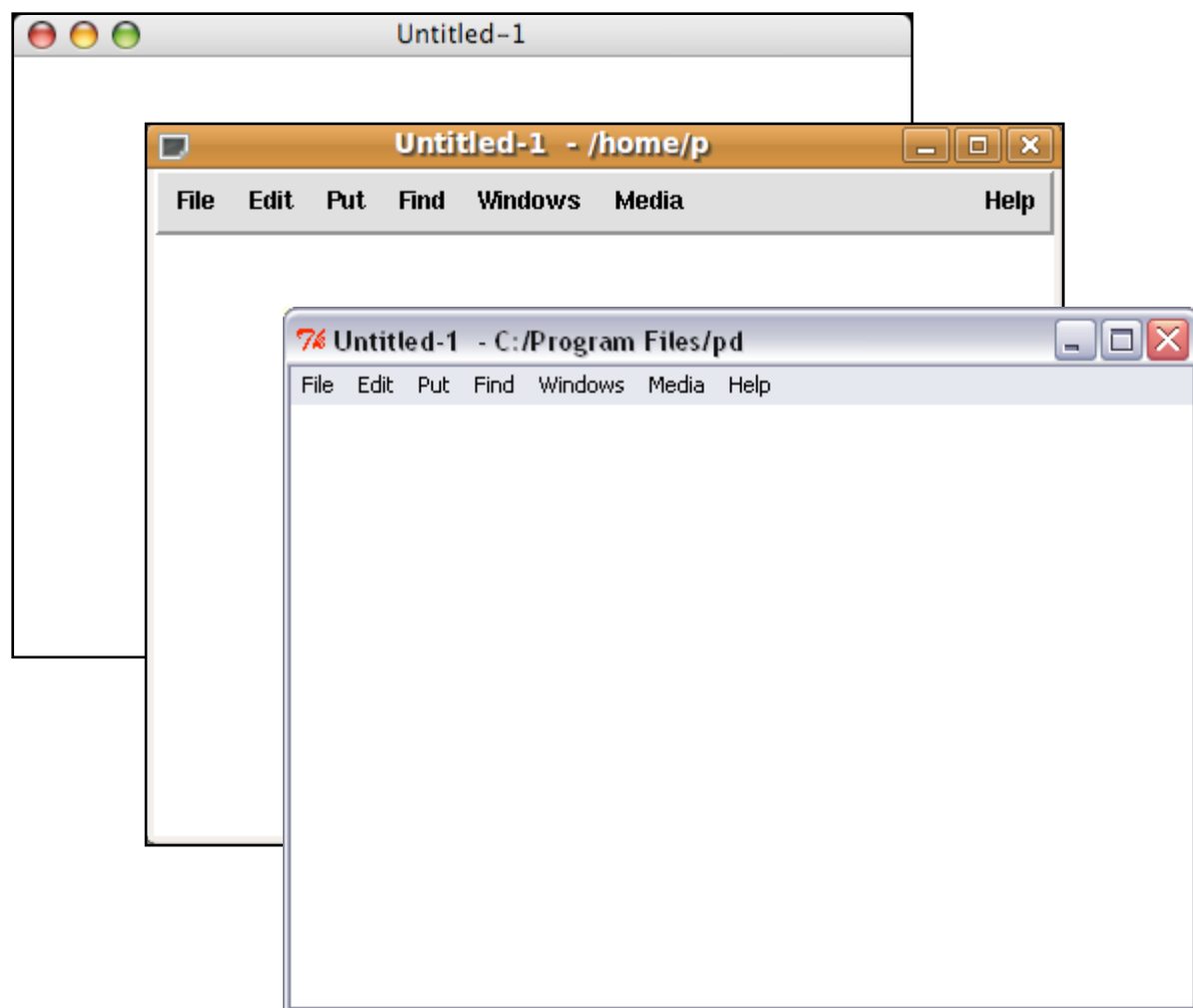


MM-Arduino



<http://www.arduino.cc/>

Construire un “patch” Audio / Build an Audio patch

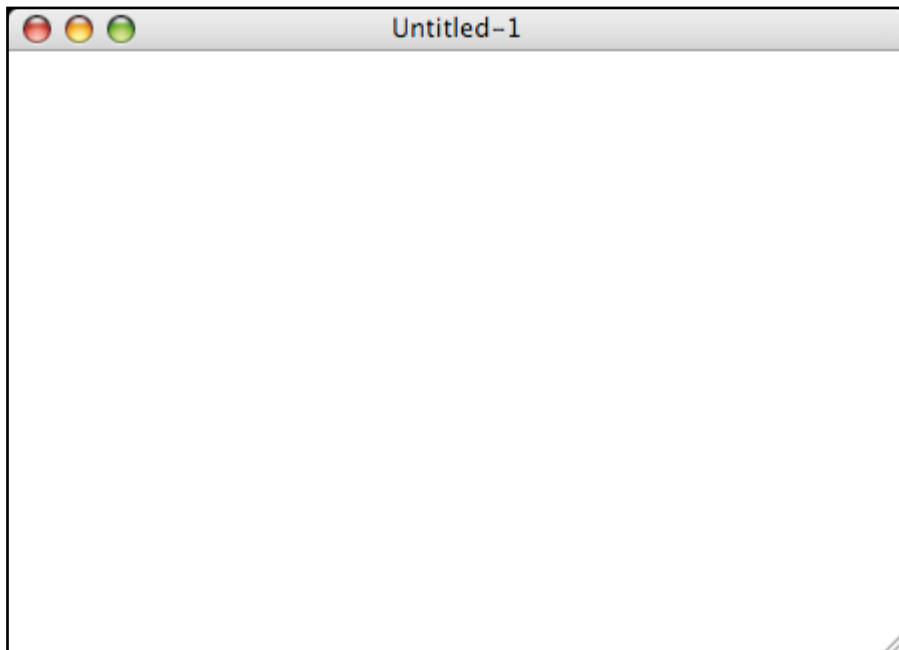


Construire un "patch" Audio / Build an Audio patch

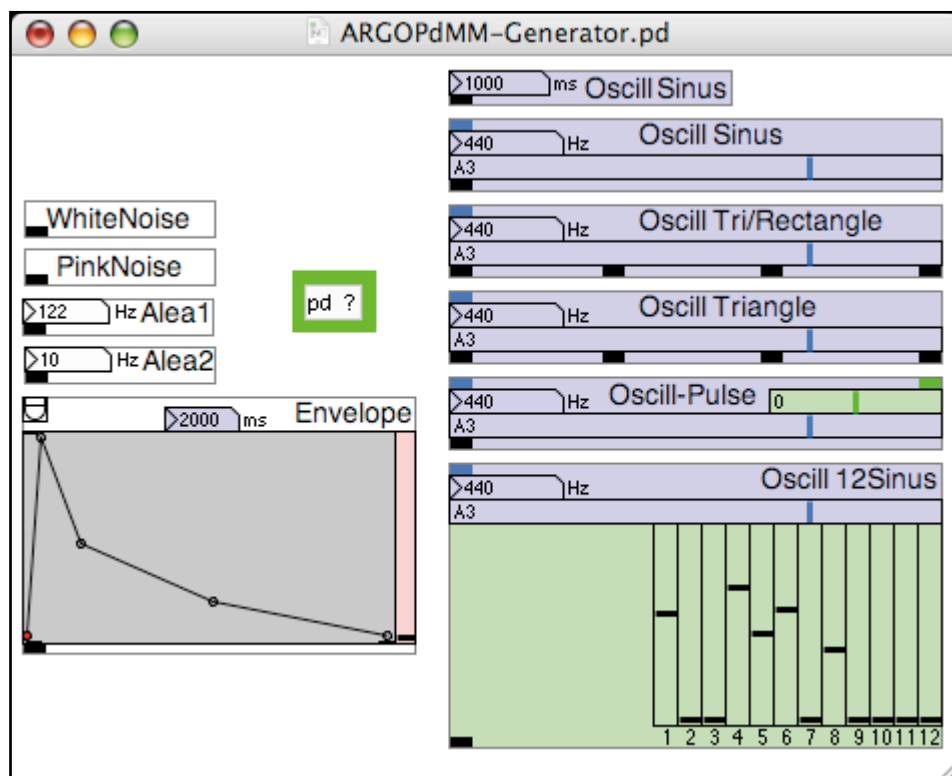
Lancer l'application PureData (Pd-extended)

Launch PureData application (Pd-extended)

Menu File -> New



All-ARGOPdMM.pd -> Click -> Audio-Generator



Passer en mode "Edit":

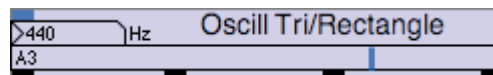
Menu Edit -> Edit mode

Go to the "Edit" mode:

(ou Ctrl E ou Pomme E sous MacOS)

(or Ctrl E or Apple E under MacOS)

Copier ->



<- Copy

Fermer la fenêtre.

Close the Window.

Coller dans la fenêtre Untitled-1.

Paste in the window Untitled-1.

Construire un "patch" Audio / Build an Audio patch

L'autre mode est le mode "Run".
On y revient de la même manière.

The other mode is the "Run" mode.
Same way to go back.

Curseur de la souris ->

Mode "Run" -> 

<- Mouse cursor

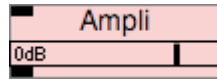
Mode "Edit" -> 

All-ARGOPdMM.pd -> Clic ->



<- Click <- All-ARGOPdMM.pd

Passer en mode Edit -> Copier ->



<- Copy <- Mode Edit

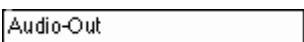
Fermer la fenêtre.

Close the window.

Coller dans la fenêtre Untitled-1.

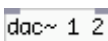
Paste in Untitled-1 window.

All-ARGOPdMM.pd -> Clic ->



<- Click <- All-ARGOPdMM.pd

Passer en mode Edit -> Copier ->



<- Copy <- Mode Edit

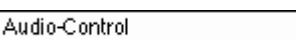
Fermer la fenêtre.

Close the window.

Coller dans la fenêtre Untitled-1.

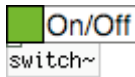
Paste in Untitled-1 window.

All-ARGOPdMM.pd -> Clic ->



<- Click <- All-ARGOPdMM.pd

Passer en mode Edit -> Copier ->
(Attention, prendre les 2 éléments)



<- Copy <- Mode Edit
(Warning: take the 2 elements)

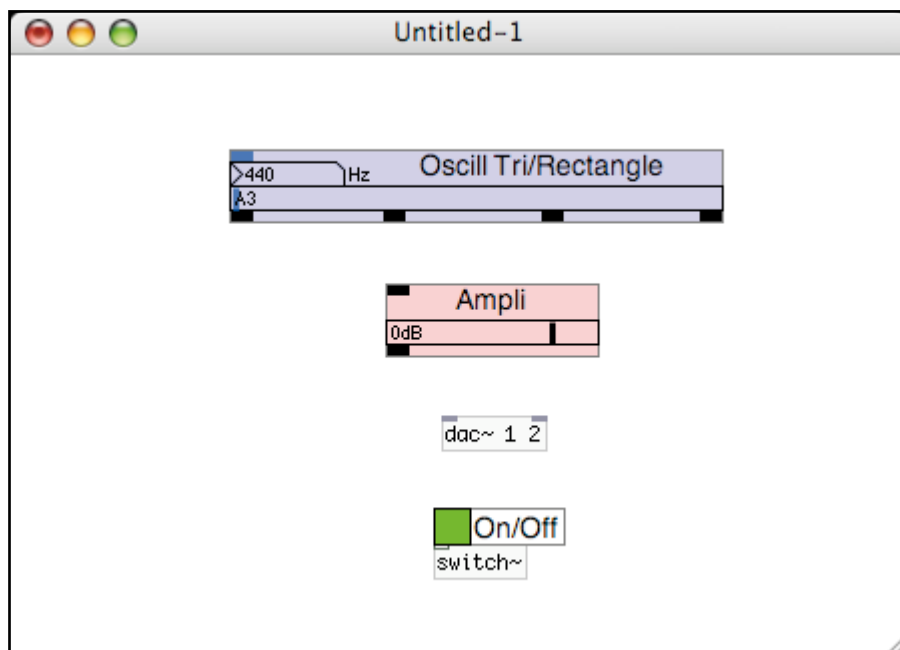
Fermer la fenêtre.

Close the window.

Coller dans la fenêtre Untitled-1.

Paste in Untitled-1 window.

On obtient ->



<- You obtain

On peut changer la position
des 4 éléments...

You can change the position
of the 4 elements...

Construire un "patch" Audio / Build an Audio patch

Les entrées et sorties Audio ->



<- The Audio inputs and outputs

Les entrées sont en haut ->

<- The inputs are on top

Les sorties sont en bas ->

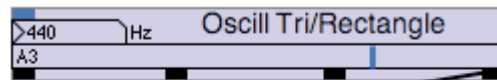
<- The outputs are on bottom

En mode Edit

In Edit mode

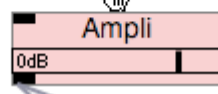
Déplacer les MiniModules

Move the MiniModules



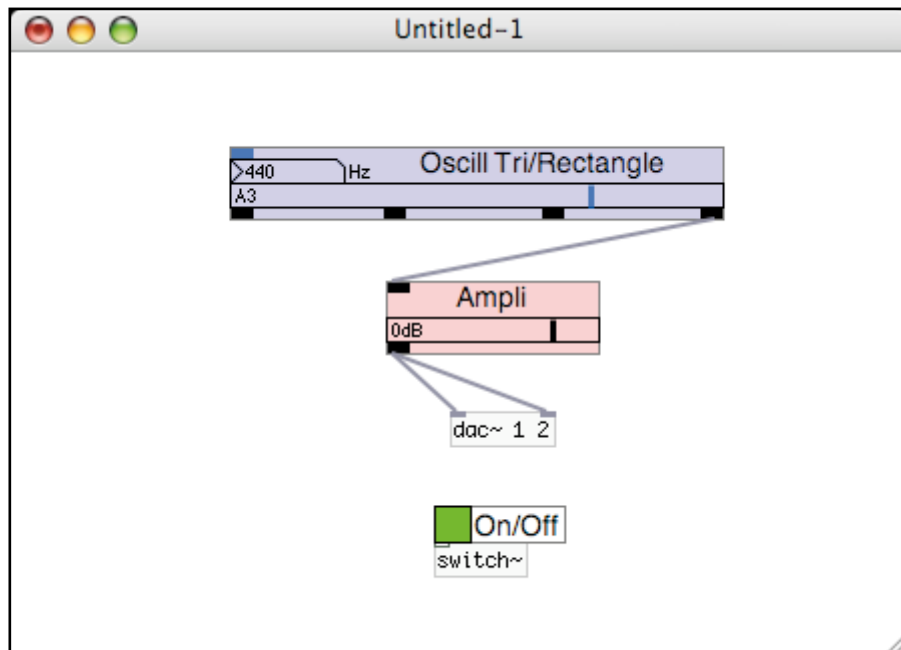
Relier les sorties aux entrées ->

<- Connect the outputs to the inputs



on obtient ->

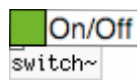
<- you obtain



Quitter le mode Edit.

Quit the Edit mode.

Clic ->



<- Click

On entend un signal triangulaire
de fréquence 440 Hz
de niveau 0 dB

You hear a triangular signal
of frequency 440 Hz
of level 0 dB

Sauver le patch:

Ctrl S (ou pomme S sous MacOS)

Par exemple "Patch1.pd"

ATTENTION:

L'extension du nom du fichier
doit être .pd

Save the patch:

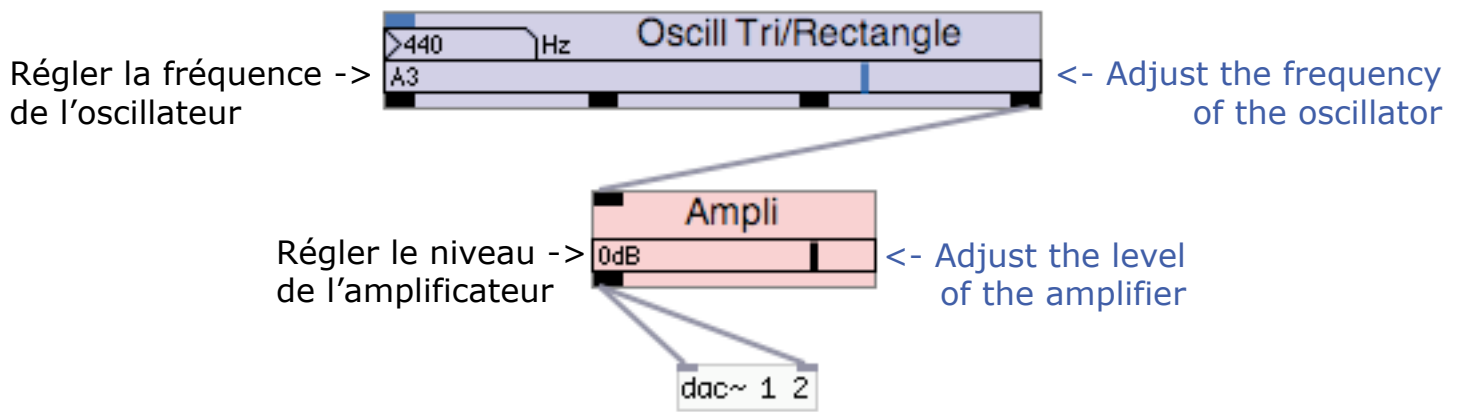
Ctrl S (or Apple S under MacOS)

For example "Patch1.pd"

WARNING:

The extension of the filename
should be .pd

Construire un "patch" Audio / Build an Audio patch



ATTENTION: certains curseurs ne bougent pas quand le patch est Off.

WARNING: some sliders do not move when the patch is Off.

6 méthodes pour régler la fréquence de l'oscillateur:

6 methods to adjust the frequency of the oscillator:

- Glisser le curseur
- Glisser le curseur en maintenant la touche Majuscule du clavier pour régler finement
- Glisser la souris sur le nombre
- Glisser la souris sur le nombre en maintenant la touche Majuscule du clavier pour régler finement
- Clic le nombre
 - + Taper un nouveau nombre au clavier
 - + Taper la touche Entrée
- Entrer un signal dans



- Drag the slider
- Drag the slider while holding the Shift key on the keyboard to fine tune
- Drag the mouse over the number
- Drag the mouse over the number while holding down the Shift key to fine tune
- Click the number
 - + Enter a new number on the keyboard
 - + Type the Enter key
- Enter a signal in

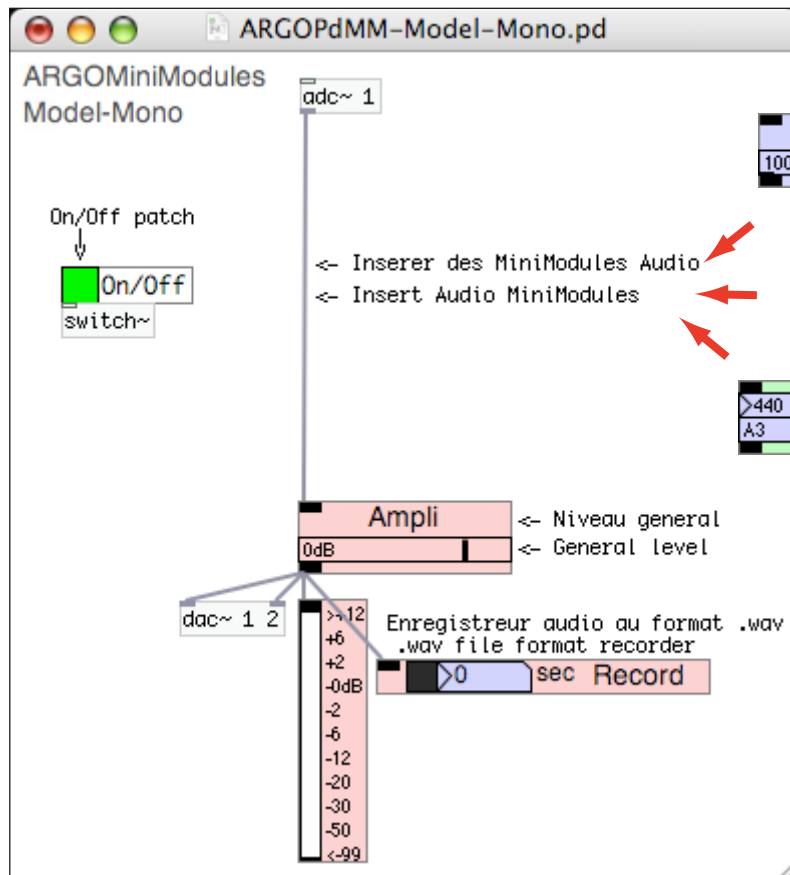
La note (par exemple A3) la plus proche de la fréquence (par exemple 440 Hz) s'affiche.

The note (eg A3) closest to the frequency (eg 440 Hz) is displayed.

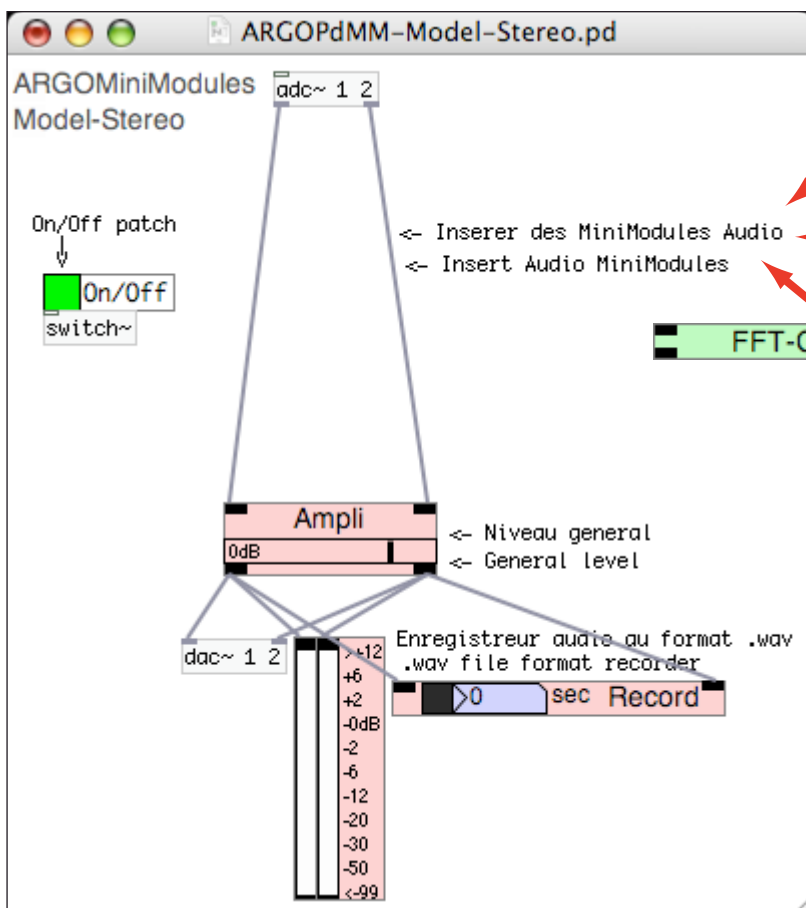
Modèles Audio / Audio models

Une autre méthode pour construire un patch Audio est de démarrer avec un modèle:

Another method to build an Audio patch is to start with a model:



par exemple / by example



par exemple / by example

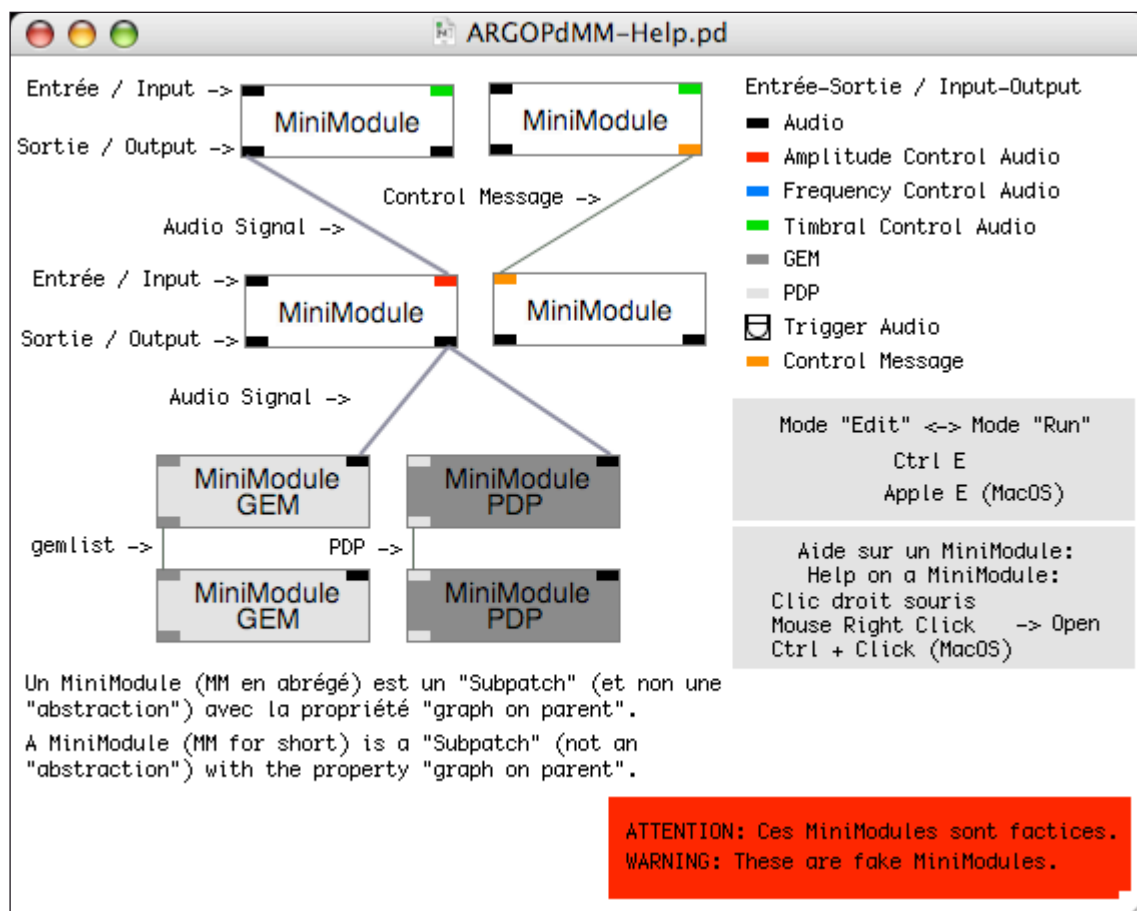
Convention Couleur / Color

Entrée - Sortie / Input - Output



Hauteur - Fréquence - Temps	■	Pitch - Frequency - Time
Timbre - Forme	■	Timbre - Shape
Energie	■	Amplitude
Entrée - Sortie	■	Input - Output
MIDI		
OSC Message		
GEM		
PDP		

All-ARGOPdMM.pd -> ->

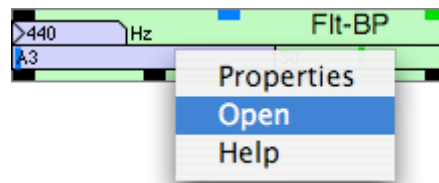


Ouvrir un MiniModule (MM) / Open a MiniModule (MM)

Pour ouvrir un Minimodule:

- Clic droit sur le MiniModule
(ou Ctrl + clic sous MacOSX avec une souris à 1 bouton)

- Un menu s'affiche ->

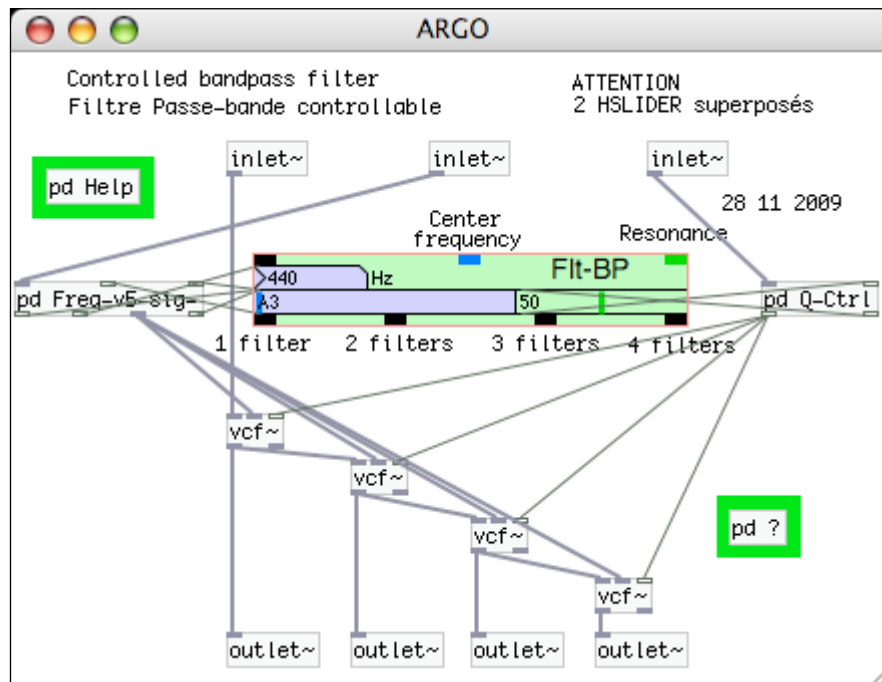


To open a MiniModule:

- Right click on the MiniModule
(or Ctrl + click with a one button mouse on MacOSX)

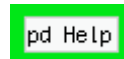
<- A menu appears

- Clic Open ->

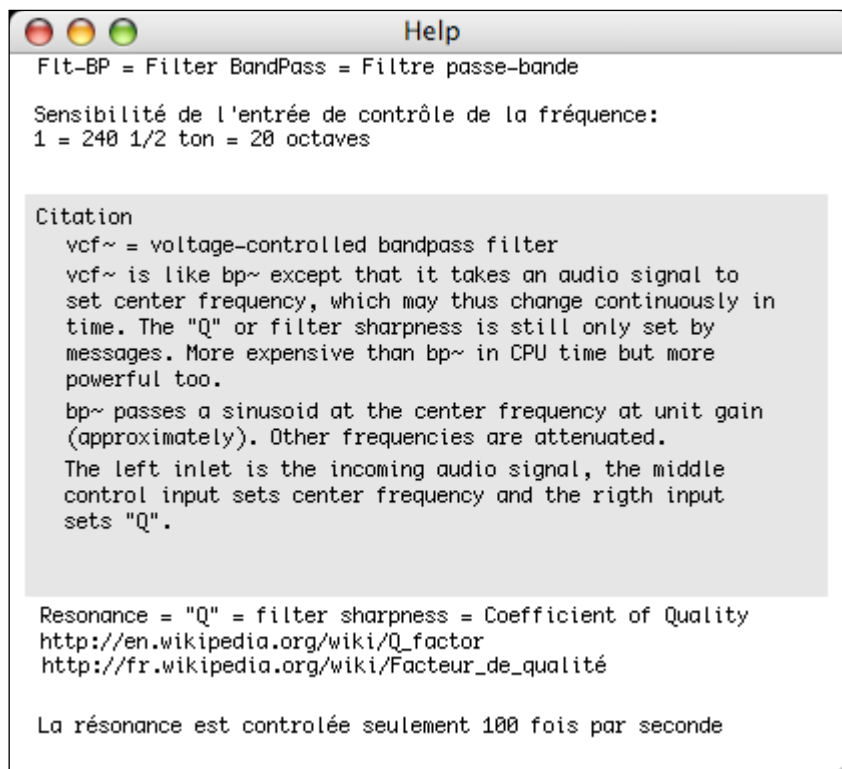


<- Click Open

- Clic Pd Help ->



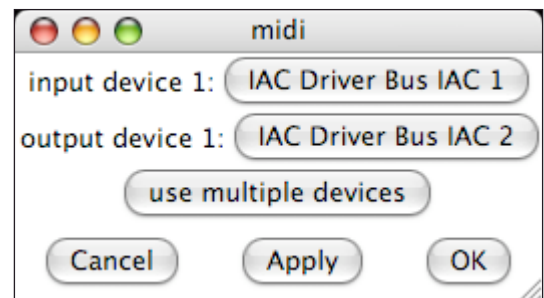
<- Click Pd Help



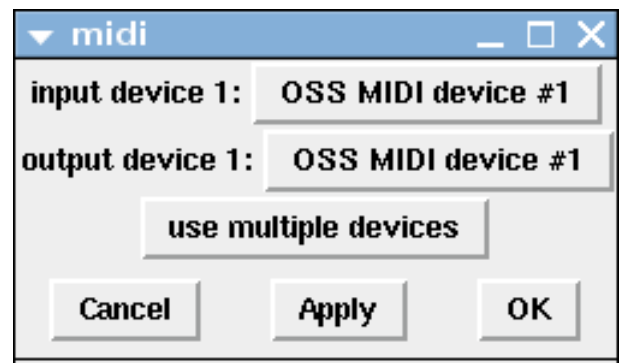
Configuration MIDI

MacOSX -> Pd -> Menu Pd-extended ->
-> Preferences -> MIDI settings... ->

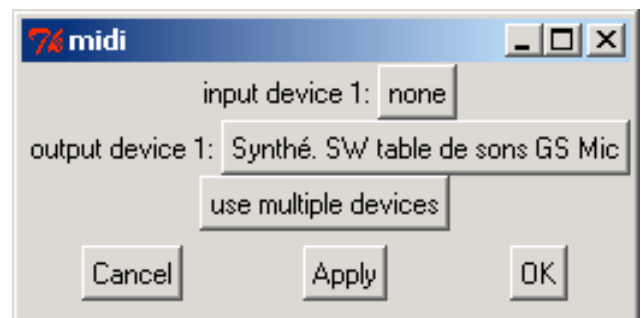
MacOSX -> Dossier Applications -> Dossier Utilitaires ->
-> Configuration audio et MIDI.app -> Périphériques MIDI ->
-> IAC Driver -> 2 x clic -> Cocher "le périphérique est connecté"
-> Ports -> Ajouter un port -> Bus IAC 2



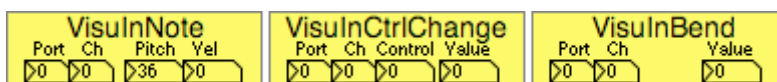
Linux -> Pd -> Menu Media ->
-> MIDI settings... ->



Windows -> Pd -> Menu Media ->
-> MIDI settings... ->



3 MiniModules affichent
les messages MIDI qui entrent:

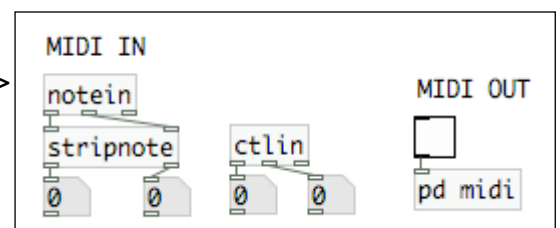


3 MiniModules display
the MIDI messages which enter:

En cas de problème:

In case of a problem:

Pd-extended -> Menu Media -> Test Audio and MIDI ->



Compatibilité / Compatibility

ARGOPdv05 & ARGOPdv04

Dans ARGOPdv05, un "patch" est constitué de plusieurs MiniModules (MM) connectés.

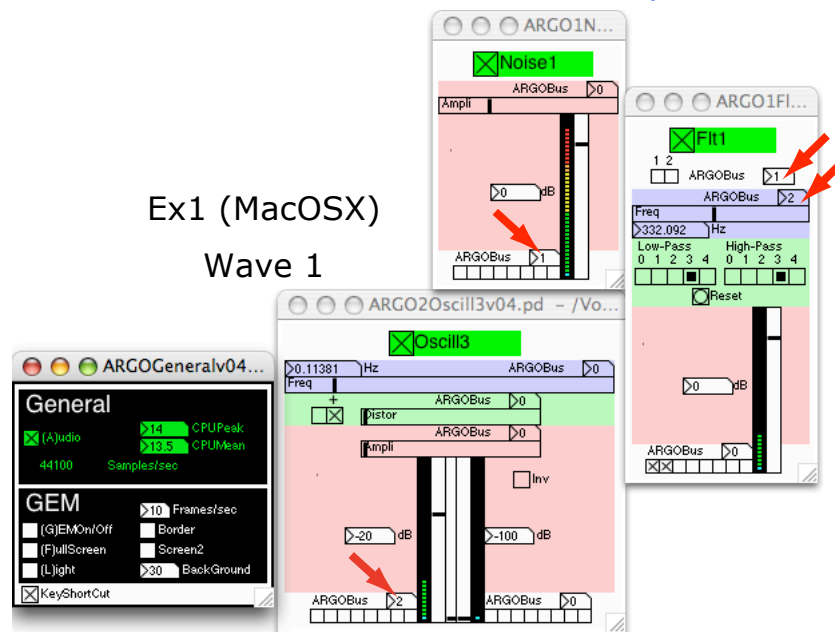
In ARGOPdv05 a "patch" consists of several connected MiniModules (MM).

Dans ARGOPdv04 chaque module est un patch Pure data. Ces modules sont reliés par des sortes de câbles virtuels: les ARGOBUS et les GEMBUS.

In ARGOPdv04 each module is a Pure data patch. These modules are connected by a type of virtual cables: the ARGOBUS and the GEMBUS.

Par exemple:

For example:

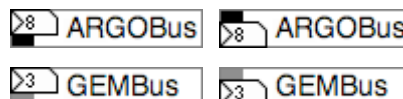


Dans cet exemple, 4 modules, donc 4 patches sont ouverts. ARGOBUS 1 & ARGOBUS 2 sont utilisés. Un module "ARGONGeneral" et un seul doit être ouvert (il gère les ARGOBUS).

In this example, 4 modules therefore 4 patches are open. ARGOBUS 1 & ARGOBUS 2 are used. A "ARGONGeneral" module and only one must be open (it manages ARGOBUS).

Un patch ARGOPdv05 (constitué de MM reliés entre eux) peut être relié aux modules ARGOPdv04 grâce à ces MiniModules:

A patch ARGOPdv05 (consisting of connected MM) can be connected to ARGOPdv04 modules thanks to these MiniModules:



2 patches ARGOPdv05 peuvent être reliées entre eux de la même manière.

2 ARGOPdv05 patches can be connected to each other in the same way.

Liens /Links

- [Wikipedia/PureData \(français\)](#) [Wikipedia/PureData \(english\)](#)
- Miller Puckette site (Pd Vanilla installer...) <http://www-crcs.ucsd.edu/~msp/software.html>
- Pd-extended installer [Pure Data Downloads](#) & (if you like the risk) [auto-build/latest/](#)
- puredata.info = puredata.org <http://puredata.info/>
- 3 tutorials in english
 - [The Theory and Technique of Electronic Music](#) by [Miller Puckette](#)
 - [FLOSS Manual](#) by [Derek Holzer](#), [Adam Hyde](#) etc..
 - [loadbang \(Programming Electronic Music in Pd\)](#) by [Johannes Kreidler](#)
- 2 apprentissages en français
 - [Tutoriel Pure Data](#) de [Raphael Isdant](#)
 - [PureData Initiation fr.pdf](#) de [Jérôme Abel](#)
- 1 tutorial en español
 - [Manual Oficial](#)
- 1 tutorial em Português
 - [TutorialPd.zip](#) por [Alexandre Porres](#)
- 2 tutorials on GEM in english
 - [Gem Manual](#) by [IOhannes m zmölnig](#)
 - [GEM Tutorial](#) by Chris Clepper?
- Mailing list Pd <http://lists.puredata.info/listinfo/pd-list> or <http://www.mail-archive.com/pd-list@iem.at/> (in english)
- Mailing list GEM <http://lists.puredata.info/listinfo/gem-dev> or <http://markmail.org/browse/at.iem.gem-dev> (in english)
- Forum codelab <http://codelab.fr/> (en français)
- Forum~ Pure Data <http://puredata.hurlleur.com/> (in english)
- Pdmedia <http://wiki.puredata.info/>
- PureDataVideopedia http://www.youtube.com/profile_play_list?user=PureDataVideopedia
- A book + DVD [bang bangbook.pdf free download](#) (7.4M) (in english)
- Tom Erbe UCSD class blog <http://music.ucsd.edu/~tre/classblog.php>
- Centre de Ressources Art Sensitif (CRAS) <http://www.craslab.org/> (formation Pd...)
- Compagnie Prométhée <http://www.ciepromethee.org/> et Naxos Bobine <http://www.naxosbobine.org/> (Formation Pd...)
- Obiwannabe <http://obiwannabe.co.uk/>
- idicibel <http://artengine.ca/~idicibel/> (en français...n'existe plus)

Opinion

- 2000 Roland Cahen (français) [Le billet d'humeur du maxeur...](#)
- 2002 Miller Puckette (english) [Max at Seventeen...](#)
- 2004 Miller Puckette Max, Pd... (english) [Who owns our software? ...](#)
- 2006 Hans-Christoph Steiner (english) [Pd as a programming platform](#)
- 2006 Max Mathews (english) "Max and Pd allow almost anyone to synthesize uninteresting timbres..." [Foreword](#)
- 2009 Johannes Kreidler (english) [Programming Electronic Music in Pd \(Abstract\)](#)
- 2009 IOhannes m zmölnig [Reflection in Pure Data.pdf](#) and [Slides](#)