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Detailed users' guide for Winoscillo

1. General presentation

Name: WinOscillo
Categories: granular synthesis, analysis and representation of sound
Versions: 0.88 (Windows)
Platforms (systems): Windows (Windows 95/98/Me/NT/2000)
URL (last login date):
http://perso.wanadoo.fr/haasjn/WinOscillo/WinOscillo-Fr.exe
(15/09/2003)
Size of file to download: 291 Ko
Language: French
Skill level: basic

2. Technical description

Formats
Sound reading present on one of the inputs of the sound card.
Possibility to record in .wav, to put the graphic representation in the clipboard or to print it.

Functionalities
WinOscillo enables you to visualise the sound amplitude and spectrum (amplitude envelope ("Enveloppe d'amplitude") according to time and spectrum analysis with FFT).

In the Windows mixing table, select the entry through which the sound will arrive.
See "Comments, tips" below.

Visualising the sound spectrum at the sound input
By default, this is the image that appears (otherwise: F3).
Horizontal axis: frequency
Vertical axis: intensity
To stall the representation: click on "Pause".
To adjust th escales and reframe the representation: use the different faders.

The frequency and intensity can be measured with two cursors (Ctrl-V and Ctrl-H).

Visualising the amplitude envelope of the sound present at the sound input
To measure the amplitude envelope: press the F2 function key (to return to the spectrum: F3). Access to other settings.

Access to other settings
Click on the right button of the mouse in the faders window (or Ctrl-shift) to let a context menu appear.

3. Detail of different windows

Choose the entry through which the sound will arrive
See "Comments, advice/tips" below.

Visualising the sound spectrum present at the sound input
This is the default image that appears.
Horizontal axis: frequency
Vertical axis: intensity

Scales
Echelle X" ("X scale") sets the vertical scale (intensity).
"Echelle f" ("f scale") sets the horizontal scale (frequency).
"Déplace f" ("move f") allows you to shift to the left or the right. If this fader is completely on the left, the left edge of the window is the start: 0 Hz.
Tick the box "Plein écran" ("full screen") to enlarge the window to fill the whole computer screen.

Freezing the representation
The curve moves a lot: the spectrum of the sound coming in is measured every moment. Freeze the representation by clicking on "Pause". This becomes "Go" – click again to restart the measuring.

Measuring frequency
(for instance to tune an instrument)
Activate the vertical cursor (red and dotted): Ctrl-V on the computer keyboard.

Move it with the mouse and read at the top left (in green). Here: the cursor is at 158Hz. This first stronger frequenc is the basic frequency.
The subsequent peaks to the right are the partials.
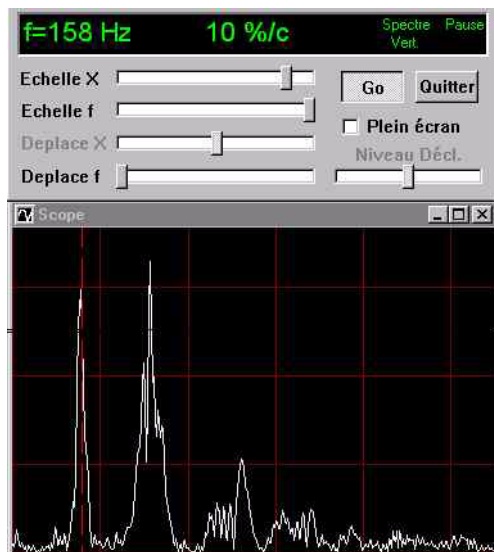
Measuring intensity
The same can be done to measure intensity with a horizontal cursor (Ctrl-H).

Other functionalities
To record a sound fragment: Ctrl-S (in a Wave file).
To save the image in the clipboard: Ctrl-C.
To change the window size: drag the edges.
Visualising the amplitude envelope of the sound ("Signal") present at the sound input.
To measure the amplitude envelope: F2 key on the computer (to return to the spectrum: F3).
Similar settings are available with the les faders.
The example shows a significant background noise before the signal appears:

Advanced settings

Left click on the mouse in the faders window (or Ctrl-shift) to let a context menu appear:

"File" menu ("Fichier"): a fragment of the sound signal can be saved in .wav, etc.
"Editing" menu ("Edition"): copy the image in the computer's clipboard (for instance to paste it in a word-processing document later).
"Affichage" (display) menu: full screen, go from spectrum to signal.
"Signal" menu: settings of the representation of the amplitude envelope
"Spectrum" menu ("Spectre"): settings for the spectrum representation.
"Tool" menu ("Outils"): generator, cursors and options.
"A propos de" ("about") menu: information on the software (its version...)

Sound generator

To send a measured sound out of the computer in order to measure the response curve of a device (amplifier...).
Press Ctrl-shift then click on "Outils" ("Tools") and "Générateur".
By seting on "Sinusoïdal" and "440Hz", you can obtain a sound identical to that of a tuning fork.
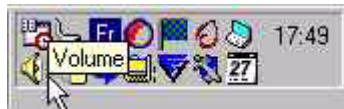Very useful for demonstrating a sinusoidal, a square or a jagged sound, etc.
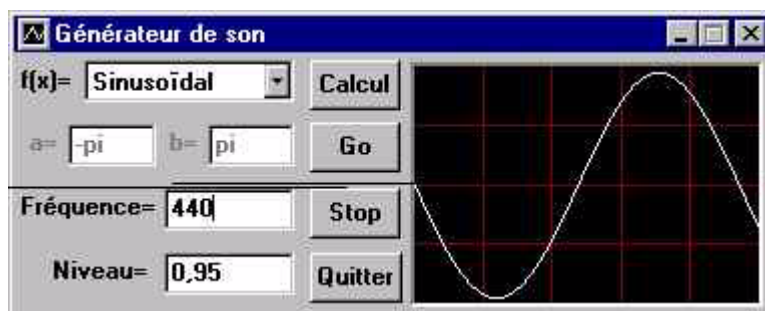
4. Comments, tips

Choosing the entry through which the sound will arrive
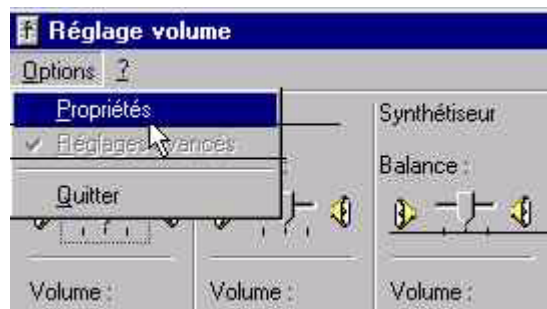Use the Windows mixing table.
Right click on the little speaker at the bottom right of the computer screen.

Then, choose "Contrôle de volume" ("volume control") (left click).

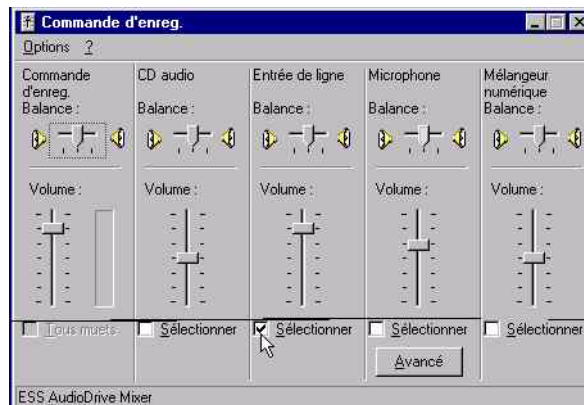Click on "Options" then "Propriétés".

Choose "enregistrement" ("recording") then tick all the volume controls available in the bottom list.

Click on "OK". The mixing table of the "sound inputs" appears.
Check that the fader of the selected entry and the one on the far left are not at the very bottom.

Capturing or printing the obtained image

You can make a copy ("capture") the image on the screen with another software (Hypersnap...).
You can also print the image.

Sound generator

If the sound card is full duplex (input and output functioning totally independantly, which is the case with newer cards), you can use the signal generator's sound to send it to an external device then plug the ouput of this device into the input of the sound card and visualise the result.

Help

Help is available in French on the site:
http://perso.wanadoo.fr/haasjn/WinOscillo/