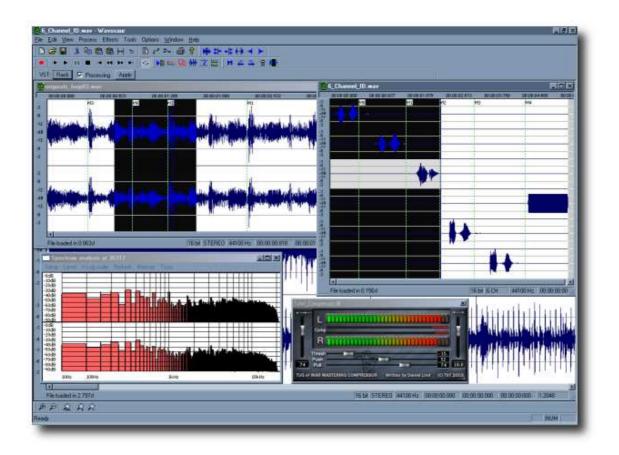
Wavosaur quick start guide



Wavosaur free audio editor with VST and ASIO support. Copyright 2006-2007 the Wavosaur team. http://www.wavosaur.com

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1.Installation

If you have downloaded Wavosaur from http://www.wavosaur.com you have a zip archive called *Wavosaur1.0.0.7000.zip*.

Just unzip the archive, there's only one file in the archive : the Wavosaur executable. Wavosaur doesn't need an installer, it doesn't write into the registry, it doesn't need any external dll.

Configuration files:

t's recommended to create a "Wavosaur" folder to place the application in. Wavosaur creates configuration files to store settings and user preferences: wavosaur.ini & wavosaur.cfg.

Wavosaur can work without these two files (but if you delete them you'll lose your configuration settings).

During a session Wavosaur also create temporary files that are deleted when exiting.

Editor skin prefs:

You can also download optional *.skin* files used for storing the "skin preferences" of the editor. See the **2.4. Editor Configuration** chapter for more informations. These files can be placed anywhere, it's a good idea to store them in the Wavosaur folder.

2. Configuration

2.1. Audio configuration

Go in menu Options \rightarrow Audio configuration

Audio configuration		×
Audio out 1-Waveterminal 192 2-ch Lecture sur modem n° 0 Lecture sur combiné tél. n° 0 2-Waveterminal 192 2-ch 3-Waveterminal 192 2-ch 4-Waveterminal 192 SPDIF-AC3 5-Waveterminal 192 8-ch	Buffer size (sample) 512 Sample rate 44100 ASIO Driver Real time resampling	Cancel
Audio in 1-Waveterminal 192 2-ch Enreg. sur modem n* 0 Enreg. sur combiné tél. n* 0 2-Waveterminal 192 2-ch 3-Waveterminal 192 2-ch 4-Waveterminal 192 SPDIF-AC3 5-Waveterminal 192 8-ch	Buffer size (sample) 2048 Sample rate 44100	

Audio out:

This tab displays all the MME drivers avalaible on your system. Select the driver you want for audio playing.

Buffer size:

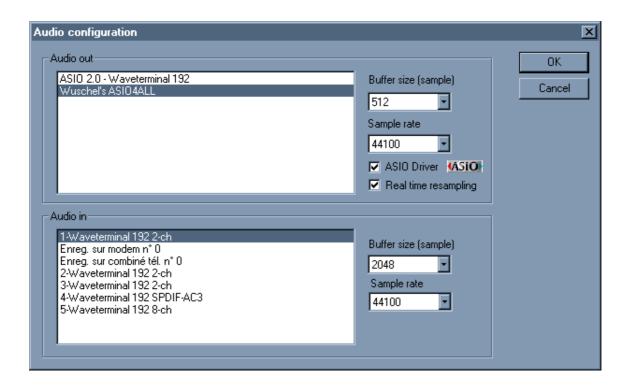
This dropdown menu lets you change the buffer size for audio playing, If you experience glitches or crackle when playing, try to increase the buffer size value. The more the buffer size, the more the latency, decrease the buffer size if you want a better latency.

Sample rate:

This dropdown menu lets you choose the sample rate for audio out. Don't forget to adjust the buffer size if you change this parameter and want the same latency.

ASIO Driver:

This checkbox switches between MME & ASIO drivers. (for the audio output only atm). If your soundcard doesn't support ASIO, you can install ASIO4ALL. Choose your ASIO driver in the audio out tab (see next figure).



Realtime resampling:

When checked, Wavosaur perform realtime resampling : audio output is resampled to the samplerate frequency choosen for output.

If you uncheck this box, file with samplerate that differs from the output samplerate will play faster/slower.

Audio in:

This tab lets you choose the audio driver for audio input. Choose here your line input or mic input for recording.

Buffer size:

Change the buffer size if you experience glitches/missing buffer when recording.

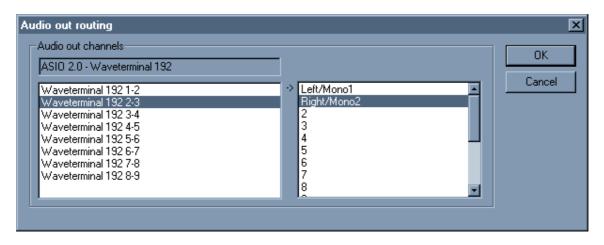
Sample rate:

Choose the sample rate for your recording.

These settings are saved in the .cfg file. If you delete the .cfg file, Wavosaur resets to the default configuration.

2.2. Audio routing

Go in menu Options \rightarrow Audio routing



Depending on your soundcard/drivers you can have more than two outputs. This configuration window lets you choose the routing for audio output.

The left tab displays your soundcard outputs. The right tab displays the Wavosaur channels (= the .wav channels)

Select in the left tab the soundcard audio output, and make it match to the wav channel you want.

- You can send the main stereo channels (0 & 1) to all your outputs.

- You can send all the 16 wav channels to different outputs (if you have enough audio out!) for multichannel wav.

- You can invert left & right outputs.

- Etc.

2.3. MIDI configuration

Go in menu Options \rightarrow MIDI configuration

Midi configuration	×
Midi in MiDi Yoke NT: 4 MIDI Yoke NT: 5 MIDI Yoke NT: 6 MIDI Yoke NT: 7 MIDI Yoke NT: 7 MIDI Yoke NT: 8 UC-33 USB MIDI In1 UC-33 USB MIDI In2 MPU-401 1-Waveterminal 192 Midi	Cancel

This tab let you choose one or more MIDI input port.

At the moment, Wavosaur is receptive to MIDI Control Change messages, you can use a MIDI external controller to trigger the main fonctions in Wavosaur. Here's the list of MIDI CC that can trigger Wavosaur :

MIDI CC 35 : play MIDI CC 34 : stop MIDI CC 27 : pause MIDI CC 28 : record MIDI CC 36 : rewind MIDI CC 37 : forward MIDI CC 33 : volume MIDI CC 31 : go to next marker MIDI CC 30 : go to previous marker MIDI CC 29 : back to start MIDI CC 38 : toggle windows

You can edit the wavosaur.cfg file to assign your own CC numbers.

2.4. Editor configuration

Go in menu Options \rightarrow Editor configuration

E	ditor configu	iration					×
	– Path configu	ration			 		ок
	Vst path	C:\vstplugins					Cancel
	Sor file path	c:\					Cancer
	Sound path	D:\Samples				[]	
	- General						
	🔲 Reminde	er on close (popu	p window	s at close)			
	🔲 Always o	pen new file for i	ecord				
	🔲 Popup m	nenu on right clicl	<				
	Selection grid	d line number	4				
	Forward / rev	wind speed	4				
	Out of screer	n speed	1000				

Pat configuration

You can set a path for :

- VST Plugins
- .sor chain files
- Samples

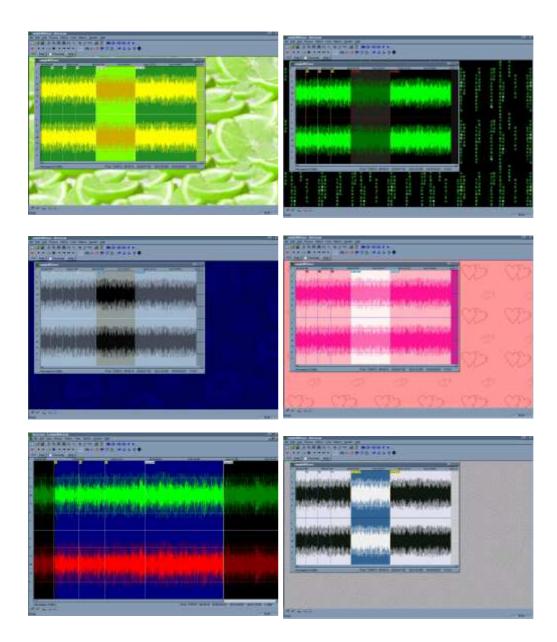
General

Here you can set options for the editor, the changes are effective immediatly.

2.5. Editor configuration

Go in menu Options \rightarrow Editor configuration

You can load a *.skin file to give a different look to the Wavosaur editor. Skin files can be found at http://www.wavosaur.com/skins.php



2.5. Editing wavosaur.cfg

Some configuration options are not yet available from the Wavosaur interface, but you can edit the wavosaur.cfg file to enter your settings.

Open the file:

First be sure that Wavosaur is NOT running Open the wavosaur.cfg file with the Window notepad program:

The configuration informations are presented as:

NAME VALUE

You can change the VALUE fields.

Edit the file:

VSTPathOpen enter your preferred VST path folder

VSTBPM enter the default BPM for Wavosaur

SamplePathOpen enter your preferred sample path folder

ReminderOnClose 0 = no reminder on close 1 = reminder on close

PasteReplace 0 = paste insert the clipboard data at cursor 1 = paste replace the selection with the clipboard data

AlwaysNewForRecord 0 = record appends datas to the current file 1 = record creates a new file

PopupMenuRightClick 0 = drag waveform with rightclick (no context menu on right click) 1 = context menu on right click

3. Files

3.1. New/open/save

To open a file :

Go in menu Files \rightarrow Open

Ouvrir				? ×
<u>R</u> egarder dans :	🚞 Samples			
📄 audio	🚞 hats	🐠 sample020.wav		
📄 datadisk	🚞 instr1	🐠 sample022.wav		
📄 drumkit	🚞 samples01	🐠 sample40.wav		
📄 drums	🚞 samples02	🐠 sample050. wav		
📄 fx1	🚞 test	🐠 sample060.wav		
📄 fx2	🚯 RD_Record000.wav			
📄 fx sounds	🐠 sample02.wav			
Nom <u>d</u> u fichier :				<u>O</u> uvrir
Fichiers de <u>type</u> :	All known media files		•	Annuler
	Duvrir en le <u>c</u> ture seule			1.

Select in the filetype dropdown menu the "file display filter" you want: .wav, .aif, .iff, .au, .snd, .voc, .mp3, .vox, all files, all known media files. If a file can't be opened you can try to use the "**import**" feature. Wavosaur can open a lot of audio formats we won't list here.(new file formats supports are added to each new Wavosaur releases)

To save a file:

At the moment Wavosaur save in .wav format only, you have different options for saving files:

menu Files \rightarrow save or save as: Save the current file on the disk.

menu Files \rightarrow save selection as: Save the current selection in a new file on the disk.

See also the "export" feature.

3.2. Import/export

To import a file :

Go in menu Files \rightarrow Import \rightarrow Import binary file

Import binary file		×
File name D:\Samples\datadis	isk\raw Bro	owse
Frequency 44100 Sign O Signed O Unsigned	Hz Bit per sample 8 bits 16 bits 24 bits 32 bits PCM	
Byte order © Little endian © Big endian	32 bits float 64 bits PCM 64 bits float	
Channel number 2 Start offset in file 🗓	Bytes	
	OK Cancel	

You can import any file, choose the settings for samplerate, bitdepth, sign, channel number and byte order. You can also select an offset to skip the first n bytes of the file.

To export a file :

Go in menu Files \rightarrow Export \rightarrow Export as MP3 You need the lame_enc.dll to be present in the Wavosaur folder (or system folder). You can choose you bitrate for MP3 encoding:

Custom MP3 preset	×
Bit rate Select bit rate: 128 💌 kbit/s	Cancel

Go in menu Files \rightarrow Export \rightarrow Export all regions

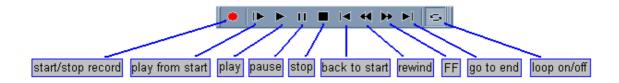
This feature exports all the data regions delimited by markers in separated files.

Go in menu Files \rightarrow Export \rightarrow Export as text

This feature exports the current files in text format, for using in application such as *Excel, Matlab, PSpice* etc. It's not recommended to export long files!

4. Playing/recording

4.1. The transport bar



You can also play/stop by pressing the spacebar.

When loop is on, the selection is played in loop, if there's no selection, the entire file is played in loop.

Play from start plays the entire file without loop (even if loop is on).

Wavosaur plays the **current file** : the one that has the focus. You can quickly switch beetwen opened files with CTRL+TAB.

4.2. Recording

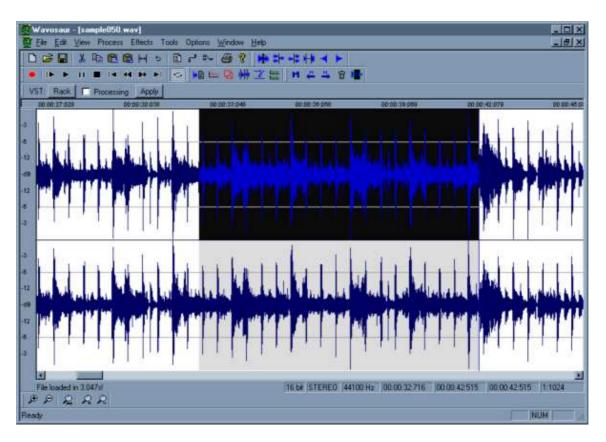
Click on the record button to start : Wavosaur records the audio in. Click on the record button again to stop the recording.

If there's no opened file, Wavosaur create a new file for the recording If a file is opened, the recorded datas are appended at the end of the current file. A marker is inserted to show the beginning of the record.

Check your audio configuration to select the audio input and samplerate. Bit depth is 16 bits, you can change to 24 bits recording if your soundcard supports this bit-depth by editing the wavosaur.cfg (AudioInBitDepth).

5. Editing

5.1. Select/zoom/scroll



Selecting:

Use the mouse to select an audio range. You can also use your keyboard : Shift + Arrow CTRL+A select all the file. Double mouse click select all the file (if there's no loop points or markers) Double mouse click select data inside a loop if loop point are presents. Double mouse click select data between two markers if markers are presents.

Scrolling:

Use mouse right click + drag to move the view. You can also use the scrollbar.

Zoom:

Use the mousewheel to zoom in/out in time, you can also use the up an down arrow keys on your keyboard.

Use CTRL+mousewheel to zoom in/out in amplitude

Channel selecting:

Use your keyboard (the 1...8 keys) to select/deselect the wav channels : the deselected channel have their output muted.

5.2. Basic editing

Basic features can be accessed from menu/toolbar/shortcuts:

🗅 🖻 📟	🖁 🛱 🛱 🛏 ר
delete	DEL
cut	CTRL+X
copy	CRTL+C
paste	CTRL+V
trim/crop	CTRL+T
undo	CTRL+Z

Note about paste:

Paste is inserting the clipboard data at cursor

If there's a selection you have two options :

- paste replace (default behaviour) : the selection is replaced by the clipboard.

- paste insert : the clipboard is inserted at cursor without replacing selection.

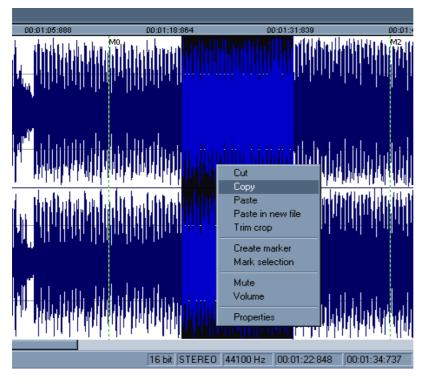
You can copy/paste from one file to another,

note that if the samplerate between source and destination files are different, the clipboard is not resampled.

Note about channel:

At the moment, copy/paste between two files with different channels number is not allowed.

A context menu can be displayed on right click, you have to edit the wavosaur.cfg file to activate this option (see **2.5 Editing wavosaur.cfg**).



5.3. Processing audio

Many of the process features can be found in the process menu, or accessed with the toolbars (not all the features are in the toolbar)

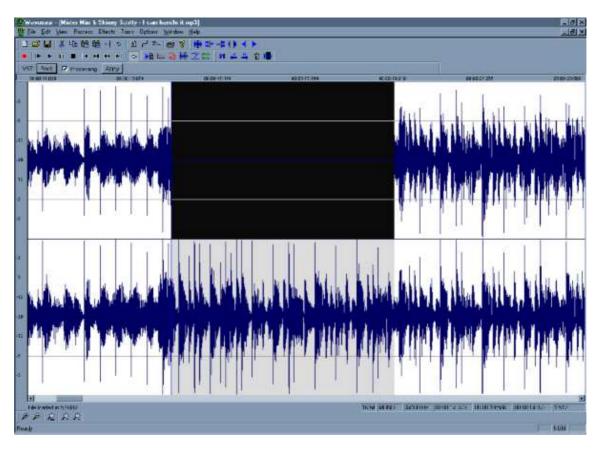


Some process are effective on the selected channel only: Volume, normalize, mute, fade, reverse, invert.

Some process are effective on all channel (selected or not): Insert silence, vocal remover, convert to mono, resample, bit depth converter.

You can find more detailled informations about the process features in the complete help for Wavosaur.

Here's a screenshot of a "mute on the left channel":



6. VST rack

6.1. Using VST effects



Click on the VST rack button under the transport bar brings up the VST rack window. Check the processing box to hear in real time the audio processed by the VST effects.

Click on the apply button to apply the effect to your file.

ST Rack			
VST rack:	VST preset:	VST parameter:	OK
000: TLs-Pocket_Limiter.dll 001: 002: 003: 004: 005: 006: 007: 008: 009: 009: 011: 012: 013: 014: 015: 016: 017: 018: 018: 018: 018: 019:	 000: Default 001: empty 1 002: empty 2 003: empty 4 004: empty 4 005: empty 5 006: empty 6 007: empty 7 008: empty 8 009: empty 9 	000: IN Gain 001: Knee 002: Iq 003: Stereo Link 004: Auto Select Channels 005: Force Channels	Load VST View Kill Load FXB Save FXB Load FXP Save FXP
020: 021: 022:			Save chain
023: 024: 025:			Reset chain
026:	_		VSr

"Load VST" lets you choose the VST effect you want to use "View" shows up the GUI of the VST effect "Kill" unload the VST effect.

Note : after applying an effect don't forget to uncheck the "processing" box unless you want to hear your file (re) processed again.

6.2. Set up a VST effects chain

/ST rack:	VST preset:	VST parameter:	OK
000: ToW_Compressor.dll	 045: Mairo-Zildjans 	000: Dry Gain	
001: Electri-Q (posihfopit edition).dll	046: Mairo-Timpano	001:WetGain	Load VS1
002: Ambience.dll	047: Stevie-Room vocals	002: Time	
003:	📕 048: Sascha K-LongVerb 1	003: Low X-Over Freq	View
004:	049: Sascha K-LongVerb 2	004: Low Time Mult	VIEW
005:	050: Sascha K-Room	005: High X-Over Freq	
006:	051: Topaz-Slap1	006: High Time Mult	Kill
007:	052: Topaz-Slap2	007: Room Size	
008:	053: Topaz-Dreaming1	008: Quality/Cpu	
009:	054: Topaz-Dreaming2	009: Width	Load FX
010:	055: Topaz-Funking1	010: Pre-delay	
011:	056: Topaz-Funking2	011: Lowshelf Frea	
012:	057: Topaz-Ahead1	012: Lowshelf Cut	Save FXI
013:	058: Topaz-Fused	013: Highshelf Freq	
014:	059: Golden-Echo	014: Highshelf Cut	Load FXI
015:	060: rp-[125] Speedy J kick	015: Seed/Variation	
016	061: rp-[125] Triplet delay	016: Hold	Save FX
017:	062: rp-[130] 1/8 Hi rev. 2	017: Gating Amount	
018	063: rp-[130] 303 Accentizer	018: Gating Attack Time	
019:	064: rp-[130] 4/4 Hi reverse	019: Gating Release Time	
020:	065: rp-[130] Speedy J kick	020: Diffusion	Load cha
021:	066: rp-[130] Swing'ya hats		
022:	067: rp-[135] Speedy J kick		Save cha
023:	068: rp-[135] Tom Twister		
024:	069: rp-[140] Speedy J kick		Reset cha
025:	070: rp-Breath of bass-HOLD		
026:	071: rp-From rim to dust		VSr

You can use the VST rack to set up a chain of effects.

To chain the VST effects, select a slot and load a VST effect into it, the signal flow is as you expect : from the slot 000 to the last ocupied slot.

You can save the chain preset in a file and reload it later, use the load and save chain button. The chain file also store the actuals VST parameters state.

"reset chain" removes all the VST from the slots.

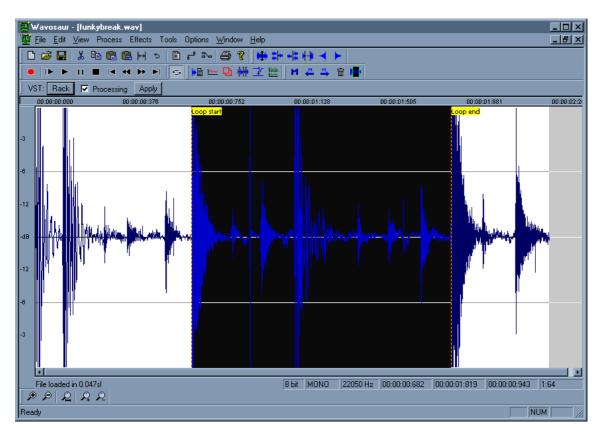
Note that the *.sor chain files format could change with newer version of Wavosaur.

7. Advanced features

7.1. Loop points & markers

Loop points:

Wavosaur can recognize loop points and markers information embedded in .wav files. You can also create loop points and insert markers in Wavosaur. These informations are saved in the .wav file.



To insert loop points in your file, press the "L" key or go in menu Tools \rightarrow Loop \rightarrow Create loop points.

Loop points are inserted at selection start & stop, if there's no selection, loop points are inserted at file start and file end.

You can drag the loop points with the mouse. Double click inside the loop points make out a selection.

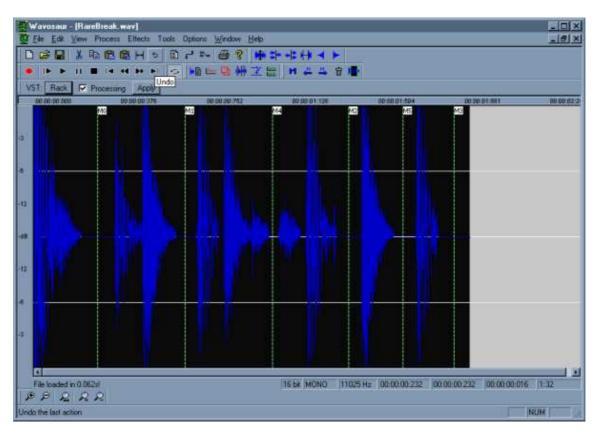
7.1.1 Crossfade loop

Go in menu Tools \rightarrow Loop \rightarrow Crossfade loop

For the moment, the crossfade looping is set to equal volume and 50 or 100% fading.

Markers:

Markers are useful to set "regions" in your audio file.



You can handle the markers with keyboard shortcuts, menu or the marker toolbar:



To kill one marker at once, select it with the mouse, click the left mouse button and press the DELETE key without releasing the left mouse button.

you can drag the markers with the mouse (left click and drag).

Some features in Wavosaur automatically insert markers :

- record
- auto detect region
- set markers at BPM

7.2. Tools

Interpolate:

Interpolates linearly the samples values between samples in a selection, it can be useful to remove very short clicks.

aι	ito detec	t region:		
A	uto detect	region		×
	-		l'and>= 'dura	ition'
	- Custom val			OK
	Level:	-10.00	dB	Cancel
	Duration:	0.20	seconds	
	– Position –			
	💿 Set ma	rker at middle		
	🔘 Set ma	rker at start		
	🔘 Set ma	rker at end		
	🔿 Set ma	irker at start a	nd end	

Insert markers automatically, based on time and amplitude threshold set by user. Can be useful to delimit regions separated by silence.

silence re	mover:		
Silence ren	nover		×
Level:	-50.00	dB	OK
Duration:	0.20	seconds	Cancel

Automatically removes the silence in a file. "silence" can be defined by user, by setting threshold for minimum time and minimum amplitude.

auto trim:							
Value		×					
Value: -40.00	dB	OK Cancel					

Removes silence at start and end of file, user can set a min volume level for "silence".

Synthesis:

Dirac at cursor : insert a 0dB sample at cursor. Step at cursor : insert a step at cursor (replace the current file) Frequency impulse train : insert frequency impulse train (replace all datas)

Simple synthesis:

Sj	nthesis			×
	Properties Frequency:	195.00	Hz	Cancel
	Type: Volume:	Square -3.00	dB (negative value)	
		11.00	second	
	Advanced No mix Mix with Multiply v			

Properties

You can generate simple waveform :sinus, ramp up, ramp down, square, absolute sinus, white noise.

You can choose the frequency, waveform, volume and duration.

Apply

You can overwrite the entire file, only the selection or append the waveform.

Advanced

Mix with audio file will sum the generated waveform with the current file Multiply let you do some kind of ring modulation

7.3. Analysis

Analysis tools can be found under menu→Tools

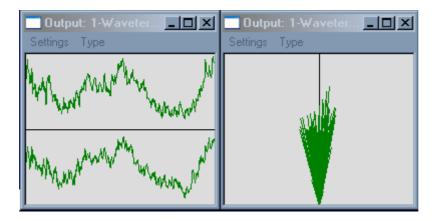
statistics:

Displays statistics about the selection (or the entire file if there's no selection). RMS power, min & max sample values, average value.

OK	Export as txt
Statistics:	
RMS power ch0:	4.17% (-27.60 dB)
RMS power ch1:	5.48% (-25.22 dB)
RMS power ch2:	12.23% (-18.25 dB)
Average value ch0:	-0.78% (-42.12 dB)
Average value ch1:	-0.89% (-41.03 dB)
Average value ch2:	-3.50% (-29.11 dB)
Min value ch0:	-33.07% (-9.61 dB)
Min value ch1:	-100.00% (0.00 dB)
Min value ch2:	-73.04% (-2.73 dB)
Max value ch0:	44.21% (-7.09 dB)
Max value ch1:	78.23% (-2.13 dB)
Max value ch2:	96.61% (-0.30 dB)
General information: Sample name: Channel number: Sample number: Total duration: Frequency: Bits per sample:	D:\3tl.wav 3 300746 00:00:35:961 8363Hz 8

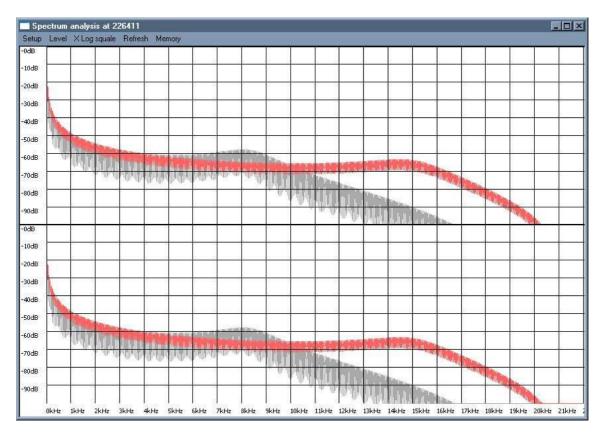
input/output oscilloscopes:

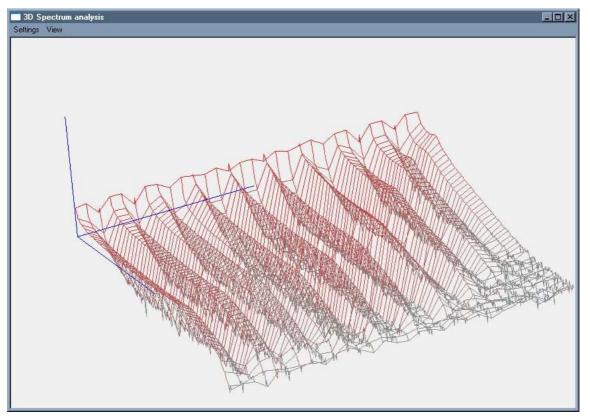
Displays real time oscilloscopes, showing audio input or output. You can visualize the amplitude/pan distribution/FFT/sonogram in real time



2D and 3D spectrum analysis:

Show the frequency spectrum of the selected range. You can change the visualisation settings in the 2D & 3D spectrum windows.





8.Batch processing

To launch the batch processor, go in menu Tools \rightarrow Batch processor. You can also press the "B" key.

Batch proce	essing	×
Source	D:\Samples\hats	
Destination	D:\Processed	
Function	Re sample 44100Hz (no filter or interpolation) Re sample 96000Hz (no filter or interpolation) Auto trim at -50dB Auto trim at -InfdB	Run
Output-	Futuration of	
hat serr	Extracting ok Done! nicl2.wav Extracting ok Done!	4
	Close	

Select a source and a destination folder. Choose a feature in the "Function" tab. Press "Run" to start the processing.

If you set destination folder = source folder, the source files will be overwritten. At the moment, Wavosaur only write .wav files. Other format in source folder are converted to .wav

At the moment you can select only one feature at a time for batch processing.

9.Troubleshooting

no sounds can be heard

 \rightarrow check your selected audio drivers (menu \rightarrow Options \rightarrow Audio configuration).

 \rightarrow depending on your soundcard & drivers be sure there's no other program that use the drivers.

 \rightarrow check also the audio routing (menu \rightarrow Options \rightarrow Audio routing).

there are some glitches/crackles when playing/recording

 \rightarrow try to increase the buffer size in the audio configuration

the latency is too high

 \rightarrow go for ASIO, if your soundcard doesn't support it, try ASIO4ALL

i lost my skin!

 \rightarrow if you change/move/rename the .skin file, Wavosaur can't open the skin informations and reset to the default editor look.

MIDI control doesn't work

 \rightarrow check the MIDI configuration if the right MIDI in port is set,

 \rightarrow set the MIDI CC (editable in the wavosaur.cfg) to match with your hardware.