

WaveLab 4.01

Changes in version 4.01a

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- **New features**

- **WaveLab is now an automation server providing scripting support** for audio file processing and file format conversion, batch processing, playback, and recording. Scripting allows you to remotely control these WaveLab functions, to automate repetitive tasks and optimize your workflow. In more technical terms, WaveLab provides a "COM" interface with a high-level API (Application Programming Interface). This API allows you to write scripts (VBScripts, JScripts) or C++ applications, to call some WaveLab functions. Our approach is to offer control over few but simple and powerful functions. This API will first of all be of interest for studios and structures dealing with large sets of files and needing automation. The API will be extended in the future according to user requests. For details, see the document "WaveLab Scripting.pdf" in the WaveLab\Scripting\ folder. Don't misunderstand this feature with a "macro system".
- **AES-31 support:** 1) import (an Audio Montage gets created), e.g. use this to import a Nuendo project. AES-31. 2) Export (menu File / Save special), with several output options. Use Nuendo 2.0 rather than Nuendo 1.6, because of the improved AES31 implementation. **With Nuendo 2.0, you can create markers that will be interpreted as WaveLab specific markers** when exporting a AES31 project, this by adding some special keywords to the marker name (*note: you have to create a marker track in Nuendo*). Like this: CD track start marker -> "[t-start]"; CD track end marker -> "[t-end]"; CD track splice marker -> "[t-splice]"; CD track index marker -> "[t-index]"; examples of valid marker names: "Hello [t-start]"; "This is [t-end] the end"; "[t-splice] Bye". When importing the names, WaveLab remove the codes when displaying the markers ("[t-start]", etc.). WaveLab will export the markers with the same convention (imported back to Nuendo). In other words, it is possible to design a project almost ready to burn by creating the proper markers in Nuendo.
- **Audio Error Detection and Correction tool** (menu Analysis). This function allows scanning a file for errors, to mark them, and to optionally repair them.
- **Support for ShuttlePro™.** Load the supplied WaveLab ShuttlePro preference file (Tools folder) and then enjoy the jog and shuttle capabilities (we recall that F10 must be pressed to activate the jog and shuttle mode in WaveLab). When the jog and shuttle mode is activated, pressing the Space bar has now for effect to immediately stop playback at the hot point. Finally, an ASIO driver with a rather small latency will give better results. Other pre-programmed ShuttlePro buttons: zoom in/out, undo/redo, start/stop playback, play selection, toggle loop mode, toggle Jog & Shuttle Mode, Open file, save as.

- **Extended File format support:** now WaveLab can save in all available file format from all places (recording, CD grabbing, render, batch, etc.). You will find a new file format dialog in all these places. It is important to note that Resampling and Mixing (proposed in this dialog) happen as the very last step of the rendering chain, after the Master Section processing. For this reason, for high-quality mastering, it is not advised to use these options which are primarily intended to facilitate certain works. For Mastering, use the Resampler plugin and mix options from the Master Section, followed by a dithering process.
- **MPEG Layer 2 support:** WaveLab can now read and write this type of file (also called musicam files). It is possible to create raw mpeg files, or RIFF wrapped files (files with a .wav extension, compliant with the Broadcast Wave Format).
- **Windows Media 9:** WaveLab now supports the full set of Windows Media Encoders 9 (import/export). Of course, Windows Media Player 9 must be installed for this.
- **Vorbis Ogg** file support (import/export).
- ADPCM file format support (Dialogic and Microsoft)
- ASCII/Excel file format support. There are two purposes for this: to import specially generated waveforms, created e.g. in Excel (educational and experimental purposes). To visualize (and possibly edit) any sample value, in text form (e.g. in Excel). These files are not compact: avoid creating huge ones. Note: when using 32 bit float files, the format is not 100% lossless because it is not possible to express a *binary* floating point value in textual *decimal* form without a very small precision loss.
- Updated version of MP3's Lame encoder (v3.93.1).
- MP3 files can now be created with a RIFF header (that is, a file with a .wav extension).
- MP3 and WMA Tags: there is now an option to automatically set the "title tag" as the file name.
- Header-less PCM files can now be created.
- **Audio-CD grabbing: CD-Text can now be imported.** CD-Text is also carried over MP3/WMA tags if saving in these formats.

- **Audio-CD grabbing: it is now possible to grab the entire CD, including audio in pauses and all sub-indexes.** Use the “Convert to Audio Montage” or “Create Cue-sheet” functions for this. This function currently only works with Plextor drives, as far as we could test. Only Plextor supports correctly the official command set for this function. Since Plextor drives are from far the most widely used drives among professionals, we decided not to spend the time to support various specific methods of other manufacturers, at least for the time being.
- Audio-CD grabbing: new function to save the CD as a WAV image with a cue sheet file (.cue file).
- Audio-CD grabbing: the automatic renaming of tracks has changed behaviour: track numbers are added as before but the original track names are preserved.
- Audio-CD grabbing: options to automatically read the ISRC codes and CD-Text, each time a CD is inserted (or the Refresh function called).
- Audio-CD grabbing: it is now possible to define some pre-roll / post-roll values. When grabbing individual whole tracks from a CD, WaveLab will be able to read a bit before the track, and a bit after. Since positioning on a CD is only accurate to 1 or 2 CD frames, this allows grabbing for sure a whole track.
- Audio-CD grabbing: CDDDB track recognition has been replaced with the FREEDB system. About same functionality.
- **New function: “Compare Audio CD images”** (Tools menu). Since WaveLab can now extract a full disk image from an audio CD, it can be useful to compare what has been burnt against what *should* have been burnt. Basically, if you need to validate an audio CD burning session, you would proceed as follows: 1) create a cue-sheet with CD-Image from the Audio Montage (Render dialog). 2) Then open and burn this CD image. 3) Then extract a CD image from the CD import dialog. 4) And finally use the CD image comparison function. Why comparing CD Images and not Audio Montages? Because a CD Image is the lowest level representation of an audio CD, while the Audio Montage can contains multiple elements, such as plugins, envelopes, etc... which would make the comparison less accurate. The comparison is “smart” as it takes into account the possible sample offset of the audio data on a CD (an audio position can only be read with an accuracy of +- 588 samples, according to the Audio CD specifications).
- **Audio selection editor:** For Wave: menu “Edit / Select / Edit...” For Montage: “Tab Edit / menu Select / Edit audio selection range...”
- New function: “Create Audio Montage from Wave” (Edit menu, when a Wave window is active).

- New Master Section plugin called "Silence" to add silence at the start and end of a file. Useful e.g. to generate a specific size to be filled by a reverb tail (reverb must be placed further in the plugin chain). Of course, it can also be used in the batch processor.
- Sample Attribute dialog: the "name" field now default to the file name. Moreover, a new button allows to extract the key from the name, if any, to set the key/detune value. It is also now possible to enter the key by number. It is now also possible to edit key and velocity range information. Information is preserved when converting between AIFF and WAV formats.
- AutoSplit: it is now possible to choose either WAV or AIFF format as file format output.
- AutoSplit: it is now possible to generate BWF (Broadcast Wave Format) time stamps for each split file.
- AutoSplit: it is now possible to generate file names including the MIDI note number.
- Recording: there is now an option to confirm recording's discarding, and another one to confirm the dropped marker names. For this last case, there is now the possibility to specify a marker delay (e.g. if you have pressed the marker hot-key with a delay of 2 seconds, you can yet create the marker at the right position, as far you can roughly estimate this delay).
- Recording: it is now possible to save/restore all settings as presets.
- Recording: a new option allows you to choose if you want the recorded file to open in WaveLab or not (ON by default)
- Audio Montage: Render dialog: new option "Open as new Montage". The source montage is rendered as usual into an audio file, but then an Audio Montage is created, and the possible markers are translated from the audio file to the montage. E.g. this allows you to take a 96 kHz montage with CD markers, and render it as a 44.1 kHz montage ready to be burnt.
- Audio Montage: when rendering one or more clips as individual audio files, it is now possible to specify some options like "bypass Master Section", "Bypass clip plugins", "Bypass volume/pan envelopes".
- Audio file open dialog: there is now an option (check box) to open the audio file(s) directly into an Audio Montage created for the occasion.
- Audio Montage, CD tab: while checking if a CD is valid, if you get the message: "some clips are not included inside CD tracks." the concerned clips now get selected, to ease the search of the mistake.

- Audio Montage: the option "Rename selected clips as their audio files" has now the option to add a time stamp to the file name.
- Audio Montage: Time format dialog: it is now possible to show time code as an absolute number of frames (e.g. "294788" rather than "01:05:30.38")
- Audio Montage: CD Tab: new option "Show times relatively to CD's absolute zero". By default, this is off and times are displayed from the logical zero (the absolute zero plus 2 seconds).
- Audio Montage: Clip tab, new function "Update BWF time stamps (selected clips)". This function only makes sense if each clip refers to a different audio file, and if each clip refers to the very start of the audio file. Each audio file which sees its time stamp updated gets open in a window, as reminder to save it.
- Audio Montage: in the file browser tab, it is now possible to use the keyboard (a-z) to jump directly to the first file name starting with a given letter.
- Transport bar: all settings are now global to all windows, if the option is activated in the preferences (default)
- Preferences: it is now possible to specify an extra VST plugin path. It is also possible to specify if you want the shared VST plugin folder to be ignored or not. It is also possible to specify sub-folder names: any plugin located in these specific sub-folders will be ignored by WaveLab. This is an easy way to remove unwanted plugins (unused in Wavelab, or conflicting plugins). Note: if WaveLab can't start because a plugin crashes during the start-up, you can press and maintain pressed [Control] and [Shift] while running WaveLab: no plugin will be loaded and so you'll be able to adjust the VST path preferences as described above.
- CD Project: it is now possible to set the ruler size for CD or DVD, and to define the media size (red indicator on the ruler)
- ASIO: in the preferences, there is now an option to start ASIO streaming as soon as WaveLab is started. The default option is OFF, that is, ASIO streaming only starts at the first playback or record request.
- **Main bug fixes**
 - VST Dynamics: this plugin would not work on all systems.
 - Audio Montage Full Cloning: a bug that would happen in certain rare cases.
 - Several other bugs