Operation Manual

steinberg

Cristina Bachmann, Heiko Bischoff, Christina Kaboth, Insa Mingers, Matthias Obrecht, Sabine Pfeifer, Benjamin Schütte, Marita Sladek

This PDF provides improved access for vision-impaired users. Please note that due to the complexity and number of images in this document, it is not possible to include text descriptions of images.

WaveLab LE_9.5.20_en-US_2018-02-21

Table of Contents

WaveLab LE Introduction

Platform-Independent Documentation

The documentation applies to the operating systems Windows and **macOS**.

Features and settings that are specific to one of these platforms are clearly indicated. In all other cases, the descriptions and procedures in the documentation are valid for Windows and **macOS**.

Some points to consider:

- The screenshots are taken from Windows.
- Some functions that are available on the **File** menu on Windows can be found in the program name menu on **macOS**.

Help System

There are several ways of accessing the help system. The documentation is available online and most of it can be downloaded in PDF format from steinberg.help.

- To visit steinberg.help, enter `steinberg.help` in the address bar of your web browser or open WaveLab LE and select **Help** > **steinberg.help**.
- To show tooltips, move the mouse over an interface icon.
- To open the help for an active dialog on steinberg.help, click the question mark icon on the title bar (Windows) or in the dialog (**macOS**) to show the **Help** button, and then click the **Help** button, or press **F1** (Windows) or **Cmd-?** (**macOS**).
- To use the menu help, move the mouse over a menu item.
- To see information on what kind of editing can be performed when using the mouse and modifier keys in the **Audio Montage** window, move the mouse over the montage window. The help text is displayed on the info line at the bottom of the window.

To open the "What's This" help, you have the following possibilities:

- In any window, press **Shift-F1** and move the mouse over an interface item, or select **Help** > **What's This?**.
- In a dialog, select the question mark icon on any title bar (Windows) or in the dialog (**macOS**), and move the mouse over an interface item or a menu option.
- Some "What's this" tooltips include a link to a dedicated help topic.

RELATED LINKS
Info Line on page 111

Conventions

In our documentation, we use typographical and markup elements to structure information.

Typographical Elements

The following typographical elements mark the following purposes.

PREREQUISITE

Requires you to complete an action or to fulfill a condition before starting a procedure.

PROCEDURE

Lists the steps that you must take to achieve a specific result.

IMPORTANT

Informs you about issues that might affect the system, the connected hardware, or that might bring a risk of data loss.

NOTE

Informs you about issues that you should consider.

EXAMPLE

Provides you with an example.

RESULT

Shows the result of the procedure.

AFTER COMPLETING THIS TASK

Informs you about actions or tasks that you can perform after completing the procedure.

RELATED LINKS

Lists related topics that you can find in this documentation.

Markup

Bold text indicates the name of a menu, option, function, dialog, window, etc.

EXAMPLE

To open the **Metadata** dialog, open the **Metadata** window and click **Edit**.

If bold text is separated by a greater-than symbol, this indicates a sequence of different menus to open.

EXAMPLE

Select **File** > **Open**.

Key Commands

Many of the default key commands, also known as keyboard shortcuts, use modifier keys, some of which are different depending on the operating system.

When key commands with modifier keys are described in this manual, they are shown with the Windows modifier key first followed by the **macOS** and the key:

- Windows modifier key/**macOS** modifier key-**Z**

EXAMPLE

Ctrl/Cmd-Z means: press **Ctrl** on Windows or **Cmd** on **macOS**, then press **Z**.

How You Can Reach Us

On the **Help** menu in WaveLab LE, you find items linking to additional information.

The menu contains links to various Steinberg web pages. Selecting a menu item automatically launches your browser and opens the page. On these pages, you can find support and compatibility information, answers to frequently asked questions, information about updates and other Steinberg products, etc. This requires that you have a web browser installed on your computer, and a working Internet connection.

Setting Up Your System

Before you start working, you need to make some settings.

IMPORTANT

Make sure that all equipment is turned off before making any connections.

Connecting the Equipment

Your system setup depends on many different factors, for example, the kind of project that you want to create, the external equipment that you want to use, or the computer hardware available to you.

Audio Cards and Background Playback

When you activate playback or recording in WaveLab LE, other applications cannot access the audio card. Likewise, if another application uses the audio card, WaveLab LE is unable to play back. The Windows MME driver is an exception from this.

You can run WaveLab LE together with other applications and always give the active application access to the audio card.

PROCEDURE

1. Select **File** > **Preferences** > **Audio Connections**.
2. Select the **Options** tab.
3. Activate **Release Driver when WaveLab LE is in Background**.

Latency

Latency is the delay between when audio is sent from the program and when you actually hear it. While a very low latency can be crucial in a real-time DAW application such as Steinberg Nuendo or Cubase, this is not strictly the case with WaveLab LE.

When working with WaveLab LE, the important issues are optimum and stable playback and editing precision.

The latency in an audio system depends on the audio hardware, its drivers, and settings. In case of dropouts, crackles, or glitches during playback, raise the **Buffer Number** setting on the **Options** tab in the **Audio Connections**, or increase the buffer size in the ASIO control panel, specific to the audio card.

RELATED LINKS

Audio Connections Tab on page 9

Defining Audio Connections

To be able to play back and record audio in WaveLab LE, you must specify how the internal input and output channels in WaveLab LE are connected to your sound card and which device you intend to use for audio playback and recording.

You can define the buffer settings for your device as well as set up connections to external gear, such as external effects units. You should select at least two channels for stereo playback and recording.

If you have no third-party audio card, you can select the **Windows MME** driver or **Built-in Audio** (Mac) options. You can also use MME with most third party audio cards, with the advantage that you can record and play at different sample rates. However, Windows MME drivers do not allow audio monitoring in the **Recording** dialog or multichannel operation, and other drivers generally offer better sound quality and performance.

RELATED LINKS
Audio Connections Tab on page 9

Selecting an ASIO Driver

Audio Stream Input/Output (ASIO) is a computer device driver protocol for digital audio specified by Steinberg. It provides a low-latency and high fidelity interface between a software application and the soundcard of a computer.

PROCEDURE

1. Select **File** > **Preferences** > **Audio Connections**.
2. Open the **Audio Device** pop-up menu and select your ASIO driver.
   The **ASIO Plug-ins** tab and the **Control Panel** button are activated.
3. Optional: Click **Control Panel** and make your settings.

Selecting a Windows MME Driver

PROCEDURE

1. Select **File** > **Options** > **Audio Connections**.
2. Open the **Audio Device** pop-up menu and select **Windows MME**.
3. On the **Playback** tab, select the audio ports that are used for playback.
4. On the **Recording** tab, select the audio ports that used for recording and monitor input.

Audio Connections Tab

This tab allows you to specify how the internal input and output channels in WaveLab LE are connected to your sound card and which device you want to use for audio playback and recording.

- To open the **Audio Connections** tab, select **File** > **Preferences** > **Audio Connections**.

Global Settings

Audio Device

Allows you to select the audio device that you want to use for playback and recording audio. If you do not have a third-party audio card, you can select the **Windows MME** driver or **Built-in Audio** (Mac) options.

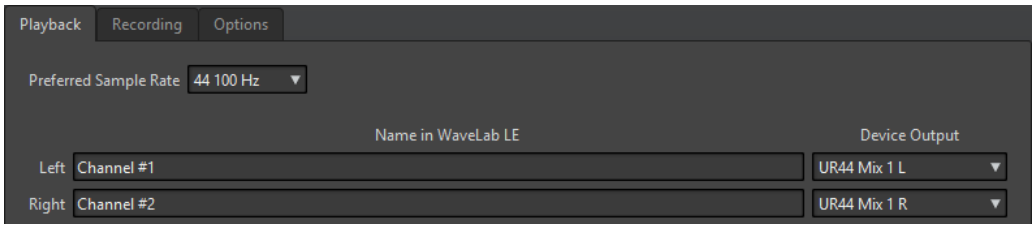
Control Panel

When you select an ASIO driver, the **Control Panel** button is activated. Click the button to open the settings application of your sound card, which is usually installed with the sound card. Depending on your sound card and driver, this provides settings for buffer size, digital formats, additional I/O connections, etc.

Refresh

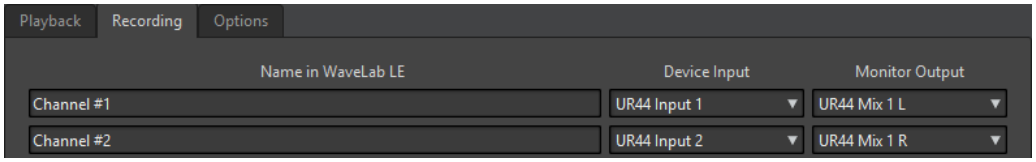
This button causes audio devices to be evaluated again to reflect device changes.

Playback Tab



This tab allows you to select and name audio ports that are used for playback.

Recording Tab



This tab allows you to select and name your audio ports that are used for recording and input monitoring. The inputs that you define here are then available in the **Recording** dialog.

Options Tab

This tab allows you to specify the number of buffers and the control driver functionality.

Buffer Number

Increasing this value improves the elasticity of audio streaming to avoid dropouts.

MME Specific – Buffer Size

Increasing this value improves the elasticity of audio streaming to avoid dropouts. This is only available when an MME driver is selected.

Reset Driver When Changing Sample Rate

Resets the driver when sample rate is changed. When playback or recording must be set to a new sample rate, some audio device drivers must be fully reset to work properly. This operation takes some time.

Perform Short Fade In/Out When Starting/Stopping Playback

Performs a short fade in when starting playback and a short fade out when stopping playback. This avoids clicks that are caused by waveforms that are not starting on a zero-crossing point.

Release Driver

Allows you to run WaveLab LE together with other applications and always give the active application access to the audio card.

- If **When WaveLab LE is in Background** is activated, the driver is released when WaveLab LE is in the background.

- If **When Cubase/Nuendo is in Foreground** is activated, the driver is released when Cubase/Nuendo is in the foreground.

Remote Devices

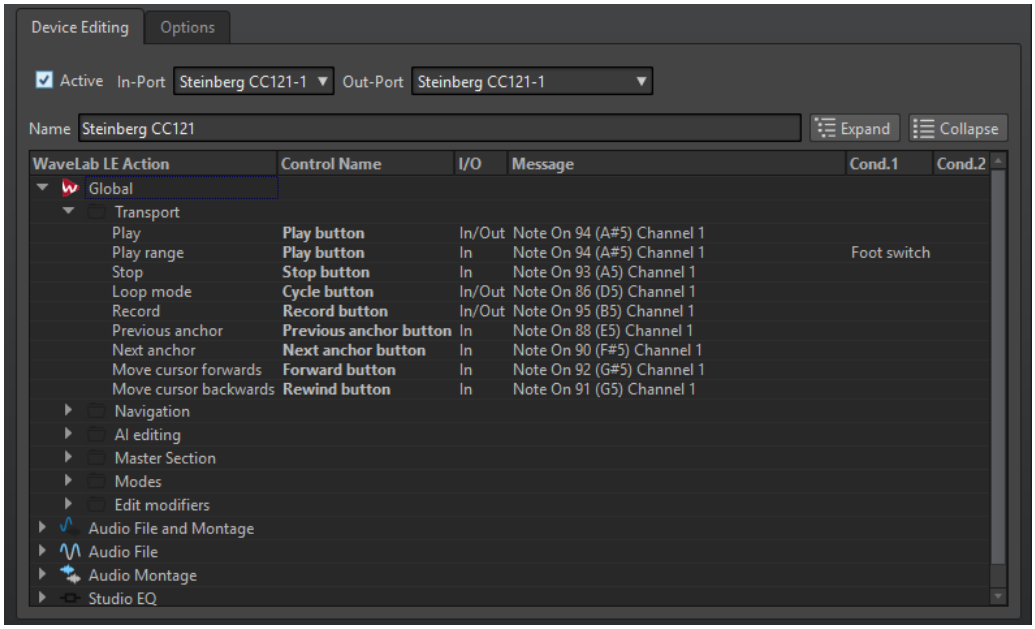
You can use remote devices to remote-control WaveLab LE.

Several commands can be controlled with knobs and sliders of your remote control device.

Remote Devices Tab

This tab allows you to select a device to remote-control WaveLab LE, and see the control map of MIDI control devices.

- To open the **Remote Devices** tab, select **File** > **Preferences** > **Remote Devices**.



Device Editing Tab

This tab lets you select a MIDI control device and see the control map.

Active

Activates the selected device and scans the MIDI ports.

In-Port/Out-Port

Select the MIDI input/output ports of the device that you want to use.

Name

Lets you enter a map name.

Expand/Collapse

Expands/collapses the folder tree of the control map.

WaveLab LE Action List

This folder tree lists the parameters that you can remote-control. The top folder represent contexts. The related parameters can only be controlled if the context is active. For example, if an audio file is active.

A remote control can be used in several contexts if these are exclusive. For example, parameters that can be used for an active audio file or an active audio montage.

The **Global** folder contain the parameters that can always be controlled.

Options Tab

Emulate Mouse Wheel

If this option is activated, the AI knob of Steinberg controllers acts as a mouse wheel in the WaveLab LE user interface, except for plug-ins.

Edit Focused Numeric Field

If this option is activated, the AI knob Steinberg controllers can be used to edit the focused numeric field that you find in many WaveLab LE windows and dialogs.

CC121 Advanced Integration Controller

You can use Steinberg's CC121 Advanced Integration Controller to control WaveLab LE.

This section describes the WaveLab LE factory preset for the CC121. For detailed information on how to use the controller, refer to the manual that came with the CC121. Note that the CC121 was originally designed for Cubase. The following mapping combines the WaveLab LE functionality with the CC121 controls. The controls that are not listed in the following paragraph are not assigned to a parameter.

Channel Section

You can use all controls of the CC121 channel section, except the fader, to control the elements of the selected track in a WaveLab LE audio montage. You can use the fader for the **Master Section**.

Fader

Controls the **Master Section** fader.

PAN knob

Controls the gain of the selected track.

Mute

Mutes/Unmutes the selected track.

Solo

Activates/Deactivates solo for the selected track.

CHANNEL SELECT

Selects the previous/next track in the audio montage.

To move the cursor to the previous/next clip edge in the audio montage, hold **Alt**. To move the cursor to the previous/next region edge, hold **Shift**. To move the cursor to the previous/next marker in the **Audio Editor**, hold **Ctrl/Cmd**.

EQ Section

With the EQ section you can easily control the Steinberg Studio EQ plug-in.

If the EQ TYPE button is activated on the CC121, you can adjust the parameters of the focused Studio-EQ. All necessary EQ parameters, such as Q/F/G of each band, EQ TYPE selection, and ALL BYPASS on/off can be set. You can switch to WaveLab LE navigation mode by turning off the EQ TYPE button. In WaveLab LE navigation mode, you get access to alternative functions, such as scrolling, zooming, and switching between windows.

EQ TYPE activated:

Bandwidth knobs (Q)

Adjusts the Q (bandwidth) of each EQ band.

Frequency knobs (F)

Adjusts the center frequency of each EQ band.

Gain knobs (G)

Adjusts the gain of each EQ band.

ON

Activates/Deactivates the EQ bands.

ALL BYPASS

Activates/Deactivates bypass for all plug-ins in the **Master Section**.

EQ TYPE deactivated:

LOW ON

Opens the **Audio Editor**.

LOW-MID ON

Opens the **Audio Montage** window.

HIGH ON

Opens the preferences tab.

EQ-1 knob for the EQ Gain (G)

Scrolls left/right on the timeline.

EQ-2 knob for the EQ Gain (G)

Adjusts the horizontal zoom on the timeline.

EQ-3 knob for the EQ Gain (G)

Adjusts the vertical zoom on the timeline.

EQ-4 knob for the EQ Gain (G)

Scrolls tracks on the **Audio Montage** window or scrolls vertically on the **Audio Editor**.

EQ-1 knob for the EQ Frequency (F)

Scrolls left/right on the overview timeline of the **Audio Editor**.

EQ-2 knob for the EQ Frequency (F)

Horizontally zooms in/out on the overview timeline of the **Audio Editor**.

EQ-3 knob for the EQ Frequency (F)

Vertically zooms in/out on the overview timeline of the **Audio Editor**.

EQ-4 knob for the EQ Frequency (F)

Vertically scrolls on the overview timeline of the **Audio Editor**.

Transport Section

In this section you can control the transport functions of WaveLab LE.

Previous button

Moves the cursor position to the left.

Rewind button

Moves the edit cursor position to the left.

Forward button

Moves the edit cursor position to the right.

Next button

Moves the cursor position to the right.

Cycle button

Activates/Deactivates Cycle mode.

Stop button

Stops playback. Press again to move the cursor to the previous start position. Press a third time to move the cursor to the beginning of the project.

Play button

Starts playback.

Record button

Press once to open the **Recording** dialog. Press again to start the recording. Press a third time to stop recording. The recorded file opens in the **Audio Editor**.

Function Section

In this section, you can adjust functions, such as fades and envelope level, by using the VALUE knob.

VALUE knob

Rotate this knob to adjust the assigned function. Press the knob to reset the parameter to its default value.

FUNCTION button 1

Adjusts the fade in settings of the active clip.

FUNCTION button 2

Adjusts the fade out settings of the active clip.

FUNCTION button 3

Adjusts the envelope level of the active clip.

FUNCTION button 4

The element clicked last in the **Nudge** section of the **Edit** tab in the **Audio Montage** window is assigned to this button.

AI Knob Section

WaveLab LE can be controlled with the AI knob of Steinberg's CC121, CI2+, and CMC-AI controllers. With the AI knob, you can control the parameter that the mouse points to.

NOTE

The AI knob only works on parameters that are automatable.

In this section you can control parameters via the AI knob.

AI KNOB

Controls the VST 3 plug-in parameters, emulates the mouse wheel, for example, for scrolling, and lets you edit a focused numeric field. To control a parameter with the AI knob, move the mouse cursor over the parameter that you want to control, and move the AI knob. You can activate/deactivate the emulation of the mouse wheel and the editing of the focused numeric field in the **Options** tab.

LOCK

When the mouse cursor points to a parameter, press LOCK to control this parameter regardless of the position of the mouse cursor.

CUBASE READY Indicator

The CUBASE READY indicator has no function in WaveLab LE.

Foot Switch Section

The foot switch has the same function as **Shift**. Press and hold the foot switch while turning the AI knob to fine tune parameters.

WaveLab LE Concepts

This chapter describes general concepts that you will use when working with WaveLab LE. Getting accustomed with these procedures allows you to work more effectively with the program.

General Editing Rules

The common editing operations apply to any Steinberg product.

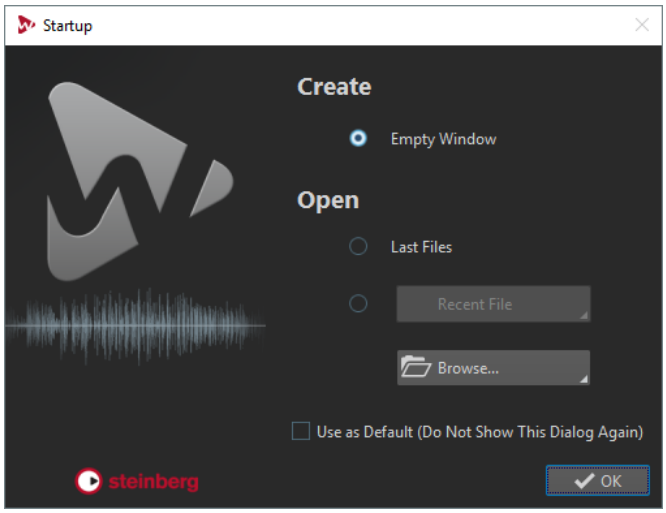
- To select and move interface items, and to select ranges, click and drag with the mouse.
- Use the keys of your computer keyboard to enter numeric values and text, to navigate lists and other selectable interface items, and to control the transport functions.
- Common operations like cut, copy, paste, or the selection of multiple items can be performed using standard keyboard shortcuts.

NOTE

The behavior of your product is also governed by your preference settings.

Startup Dialog

When WaveLab LE starts, the **Startup** dialog opens where you can select which file you want to open.



Create

Empty Window

Creates an empty WaveLab LE window.

Open

Last Files

Opens the files that you last used in WaveLab LE.

Recent File

Allows you to open a recently used file.

Browse

Allows you to select the files that you want to open.

Use as Default (Do Not Show This Dialog Again)

If this option is activated, the option that you select is used from now on and the startup screen does not open anymore. To display the **Startup** dialog, even if this option has been activated, press **Ctrl/Cmd** when starting WaveLab LE.

Basic Window Handling

WaveLab LE follows the basic guidelines for the Windows/**macOS** interface, which means that Windows/**macOS** standard procedures apply.

Closing Windows

- To close a file tab, click the **X** button of the corresponding tab or press **Ctrl/Cmd**-**W**.
- To close a file tab without saving your changes, hold **Ctrl/Cmd**-**Shift**, and click the **X** button of the tab. This avoids having to confirm a warning message whenever you want to close an unsaved tab.
- To close all file tabs but the selected file tab, right-click a file tab and select **Close All But This**.

Switching Between Files

You can have multiple files open and switch between them.

- To bring a file to the front, click the corresponding tab.
- To switch between the files, hold **Ctrl/Cmd**, and press **Tab** continuously.
- To switch back and forth between the last two active files, press **Ctrl/Cmd**-**Tab**. Between each step you have to release all keys.
- To switch backwards, press **Ctrl/Cmd**-**Shift**-**Tab**.
- To toggle between the active file and the last edited file, press **F5**.

Selecting Audio

Almost all types of editing and processing that you perform in WaveLab LE operate on the audio selection. There are numerous ways to make an audio selection.

- To select the whole audio file, double-click it. If the audio file contains markers, triple-click it.

Selecting a Range by Dragging

The standard way to select a range in the wave window is to click and drag.

If you drag all the way to the left or right side of the wave window, it scrolls automatically, allowing you to select larger sections than what can be shown in the wave window. The speed of the scrolling depends on how far from the wave window edge you are.

Audio Range Selection in an Audio File

You can edit, process, or play back selections of an audio file.

- To access the audio range selection options, in the **Audio Editor**, select the **Edit** tab.

The following selection options are available in the **Time Selection** section:

All

Selects the entire waveform.

Toggle

Toggles the selection range on/off.

Extend

Opens a menu where you can select the following options:

- **Extend to Start of File** extends the selection to the start of the audio file. If there is no selection, a selection is created from the edit cursor position.
- **Extend to End of File** extends the selection to the end of the audio file. If there is no selection, a selection is created from the edit cursor position.
- **Extend to Previous Marker** extends the left edge of the selection to the nearest marker to the left or the start of the audio file. If there is no selection, a selection is extended until the edit cursor position.
- **Extend to Next Marker** extends the right edge of the selection to the nearest marker to the right or the end of the audio file. If there is no selection, a selection is extended until the next marker position.
- **Extend to Cursor** extends the selection to the edit cursor position.
- **From Start of File Until Cursor** selects the range between the start of the audio file and the edit cursor position.
- **From Cursor to End of File** selects the range between the edit cursor position and the end of the audio file.
- **From Cursor to Previous Marker** selects the range between the edit cursor position and the previous marker or the start of the audio file.
- **From Cursor to Next Marker** selects the range between the edit cursor position and the next marker or the end of the audio file.
- **From Playback Position to End of File** creates a selection range from the playback position to the end of the audio file. If no playback is taking place, the position of the edit cursor is used.
- **From Playback Position to Start of File** creates a selection range from the playback position to start of the audio file. If no playback is taking place, the position of the edit cursor is used.
- **Double Selection Length** doubles the length of the current selection range.
- **Halve Selection Length** halves the length of the current selection range.

Channels

Opens a menu where you can select the following options:

- **Extend to All Channels** extends the current selection range to all channels.

- **Left Channel Only** reduces the current selection range to the left channel only.
- **Right Channel Only** reduces the current selection range to the right channel only.

Regions

Opens a menu where you can select the following option:

- **Generic Region** selects the range between the two generic markers that encompass the edit cursor.

Selecting in Stereo Files

If you are working on stereo material in the **Audio Editor**, you can apply an operation to one channel only or to the entire stereo material.

Which channel is selected when you click and drag in the wave window depends on where you position the mouse cursor. The pointer shape indicates which channel will be affected.

The following pointer shapes are available:

Select left channel

Clicking in the upper half of the left channel selects the left channel.

Select both channels

Clicking in the middle area between the left and the right channel selects both channels.

Select right channel

Clicking in the lower half of the right channel selects the right channel.

Switching the Selection Between Channels

You can switch the channel selection that you have made for a channel to all channels or switch the selection to the other channel.

PROCEDURE

1. In the wave window of the **Audio Editor**, select a range.
2. Select the **Edit** tab.
3. In the **Time Selection** section, click **Channels** and select one of the following options:
   - **Extend to All Channels**
   - **Left Channel Only**
   - **Right Channel Only**

   You can press **Tab** to switch between the different channel selections.

Selecting in the Overview of the Audio Editor

The ranges that you select in the overview of the **Audio Editor** also apply to the main view.

PROCEDURE

- In the wave window of the **Audio Editor**, hold down **Ctrl/Cmd** and click and drag in the overview.

Moving a Selection Range

If a selection range has the correct length, but the wrong position, you can move it.

PROCEDURE

1. In the wave window, hold down **Ctrl/Cmd**-**Shift**.
2. Click in the middle of the selection and drag to the left/right.

Extending and Reducing the Selection

You can resize a selection range in the wave window.

There are several ways to extend/reduce the selection:

- Select a range, **Shift**-click outside the selection range, and drag to the left/right, or click and drag the edges of the selection range to the left/right.
- To extend the selection to the previous/next boundary (marker or start/end of file), press **Shift** and double-click the non-selected area between the boundaries.

Extending and Reducing the Selection Using the Cursor Keys

- To move the start/end of a selection in the wave window to the left/right, hold down **Shift** and press the left/right cursor keys. To move it in bigger steps, press the **Page Up**/**Page Down** keys.
- To extend a selection to the previous/next boundary in the wave window (marker or start/end of the audio file), hold down **Ctrl/Cmd**+**Shift** and press the left/right cursor keys.

Deleting Selections

There are several options for deleting a selected range.

Audio Editor

The following options can be found on the **Edit** tab in the **Cutting** section.

Crop

Removes the data outside the selection.

Delete

Removes the selection. The audio to the right of the selection is moved to the left to fill the gap.

Audio Montage Window

The following option can be found on the **Edit** tab in the **Removal** section.

Delete Selected Clip

Deletes the selected clip.

Sliders

At various places in WaveLab LE, slider controls are available to change parameters. There are a number of ways to change the value of a slider.

- Position the mouse over the slider and use the mouse wheel without clicking. Hold **Ctrl/Cmd** while using the mouse wheel to scroll faster. This modifier also applies to the zoom wheels. To move a slider, click and drag it.
- To move the slider handle to a position, click the slider at any position.
- To move the slider handle in smaller steps, right-click or click below the handle. Keep the mouse button pressed to automatically step to the next value.
- To reset the slider to the default value, if available, **Ctrl/Cmd**-click the slider, or click using the third mouse button, or double-click the handle.

Renaming Items in Tables

You can rename items in tables in the **Markers** window, and in the **Clips** window.

- To rename an item, double-click it or select it, and press **Return**, and enter the new name.
- To rename the previous/next item, press **Up Arrow** or **Down Arrow**. This way you move the focus on the previous/next item, while staying in the edit mode.

File Browser

The **File Browser** window allows you to browse files from within WaveLab LE. The **Auto Play Mode** is useful for speeding up the process of auditioning sound files.

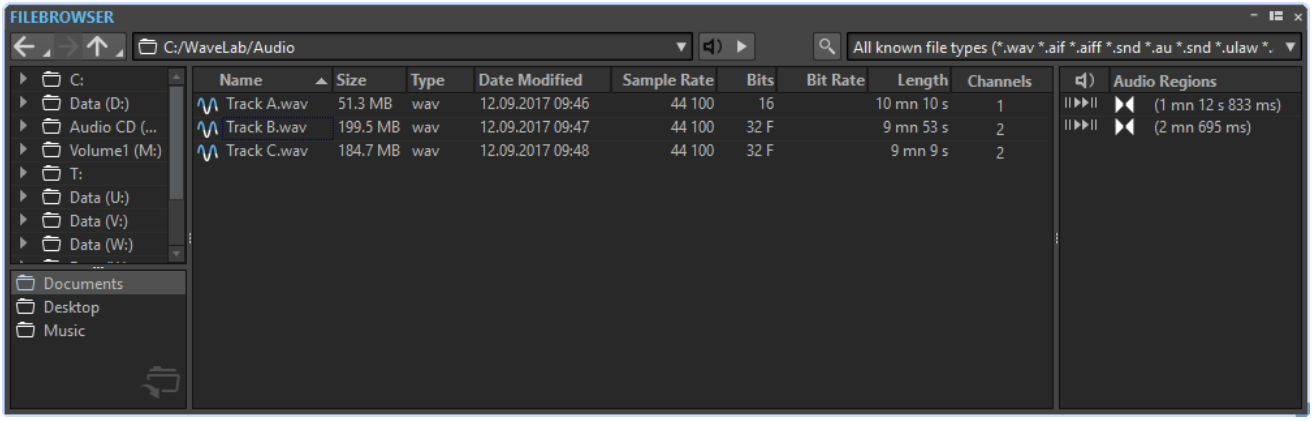
The **File Browser** window provides you with all the standard browsing functions. It features additional controls to audition audio files and any marker defined regions. You can use it to open or insert files by dragging them to another location.

You can also choose to only view specific file types.

File Browser Window

In this window, you can browse files and open them in WaveLab LE.

- To open the **File Browser** window, select **Tool Windows** > **File Browser**.



Back/Forward/Parent Directory

Allows you to navigate through the list and file hierarchy.

Location

This menu allows you to select a file location to browse and lists the recently used locations.

Auto-Play Mode

Automatically starts playback of the selected file.

Play Selected Audio File

Plays the selected audio file.

Search

If this button is activated, you can enter text in the search field.

File type list

Allows you to select which file type and file format to display.

Folder tree

Shows the folders that are available on your computer.

Favorite folders

You can add your favorite folders by dragging them from the folder tree. Each file type has its own favorite folder.

File list

Shows the following information about each file:

- **Name** shows the name of the audio file.
- **Size** shows the size of the audio file.
- **Type** shows the file type of the audio file.
- **Date Modified** shows the date on which the audio file was last saved.
- **Sample Rate** shows the sample rate in Hz.
- **Bits** shows the bit depth in bits. “32F” means 32-bit float and “64F” means 64-bit float.
- **Bit Rate** shows the bit rate in kbps.
- **Length** shows the length of the audio file.
- **Channels** shows the number of channels.

Create Folder

Allows you to create a new folder. Right-click in the file list and select **Create Folder**.

Audio Regions

If the selected file contains region markers, the regions are displayed in the **Audio Regions** section. You can drag regions onto a track.

RELATED LINKS
Folders Tab on page 50

Peak Files

A peak file (extension `.gpk`) is automatically created by WaveLab LE each time an audio file is modified or opened in WaveLab LE for the first time. The peak file contains information about the waveform and determines how it is drawn in the wave window or the montage window.

Peak files speed up the time it takes to draw the corresponding waveform. By default, the peak file is saved in the same location as the audio file.

Rebuilding Peak Displays

Normally, peak files are automatically updated when the date of the peak file is older than the date of the audio file. However, it can happen that the date of the audio file is not automatically updated. In this case you can force a rebuild of the peak file.

PROCEDURE

1. In the **Audio Editor**, select the **View** tab.
2. In the **Peaks** section, click **Rebuild Display**.

Processing Precision

WaveLab LE can load audio samples in many formats but processes them internally as 64-bit float samples.

Mixing inside WaveLab LE is also done in 64-bit float. 32-bit PCM samples can be transferred to 64-bit float and back.

Plug-ins are processed in 64-bit float by default. You can also set the plug-in processing to 32-bit float.

You can set up the processing precision for plug-ins and for temporary files in the **Audio** tab of the **Global Preferences**.

NOTE

Processing in 64-bit float means double precision but slightly longer process time than 32-bit float.

Temporary files in 64-bit float have double precision but take longer to read and write than 32-bit float and their file size is twice as big.

RELATED LINKS

Temporary Files on page 50
Audio Tab on page 163

Workspace Window

The **Workspace** window provides an editing and playback environment for each particular file type. Each environment contains functions that are tailored to the specific purpose of each file type.

- **Audio Editor** for viewing and editing audio files.
- **Audio Montage** window for assembling and editing audio montages.
- **Podcast Editor** for preparing and uploading podcasts.

The **Workspace** window is highly customizable to match your workflow.

Elements of the Workspace Window

The **Workspace** window contains the following elements:

- A menu bar
- Tab groups to host the files to edit. You can move the content of a tab to another tab, create a new empty tab, display the file path, and access other functions by right-clicking.
- A set of tool windows. Which tools are available depends on the file type you are working on. The tool windows can be activated/deactivated individually.

Audio Editor

The **Audio Editor** provides tools and functions for sample-accurate audio editing.

The **Audio Editor** includes various metering tools.

The wave window gives you a graphical representation of the audio file and allows you to view, play back, and edit the file.

RELATED LINKS
Audio File Editing on page 58

Audio Montage

In the **Audio Montage**, you assemble audio clips into a montage. You can arrange, edit, and play back clips on both stereo or mono tracks.

You can place any number of clips on an audio track. A clip contains a reference to a source audio file on your hard disk, as well as start and end positions in the file.

The montage window gives you a graphical representation of clips on tracks. In it you can view, play back, and edit the tracks and clips.

RELATED LINKS
Audio Montage on page 95

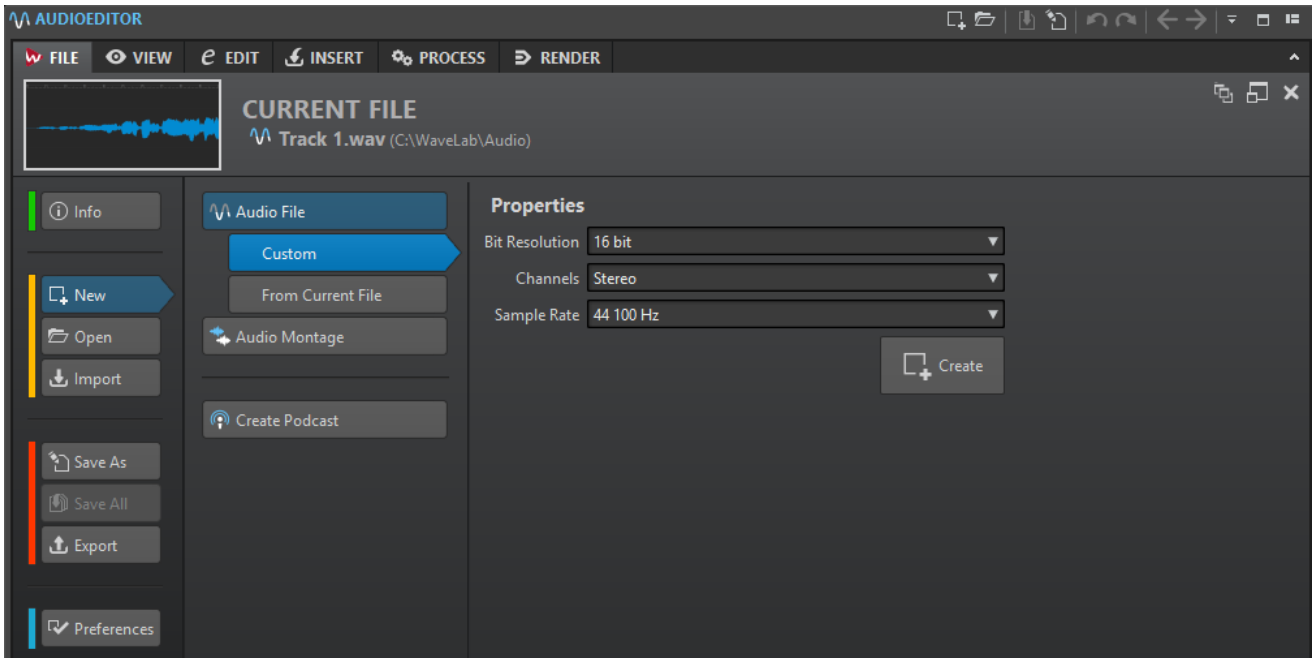
Podcast Editor

In the **Podcast Editor**, you assemble, define, and publish your podcast to the Internet.

RELATED LINKS
Podcasts on page 148

File Tab

The **File** tab is the control center of WaveLab LE. Here, you can save, open, render, import, and export files. It also gives you detailed information about your files and allows you to set up the WaveLab LE preferences.



Info

Provides information about the active file and allows you to edit the audio properties of audio files and audio montages.

New

Allows you to create an audio file, audio montage, or podcast.

Open

Allows you to open audio files, audio montages, or podcasts.

You can also open files that you have previously copied to the clipboard in the File Explorer/macOS Finder.

Import

Allows you to import audio files to an audio montage and audio CD tracks from an audio CD.

Save As

Allows you to save the active file or the project. You can specify the name, file format, and location. You can also save a copy of the active file.

Save All

Allows you to save all changed files of your project at once. The file list gives you an overview of all files that have been changed.

You can use the filter to show all changed files, only audio files, or only audio montages.

Export

Allows you to render the active file and upload the audio file to SoundCloud.

Preferences

Allows you to view and change the preferences of WaveLab LE. You can set up the preferences for the following parts of WaveLab LE:

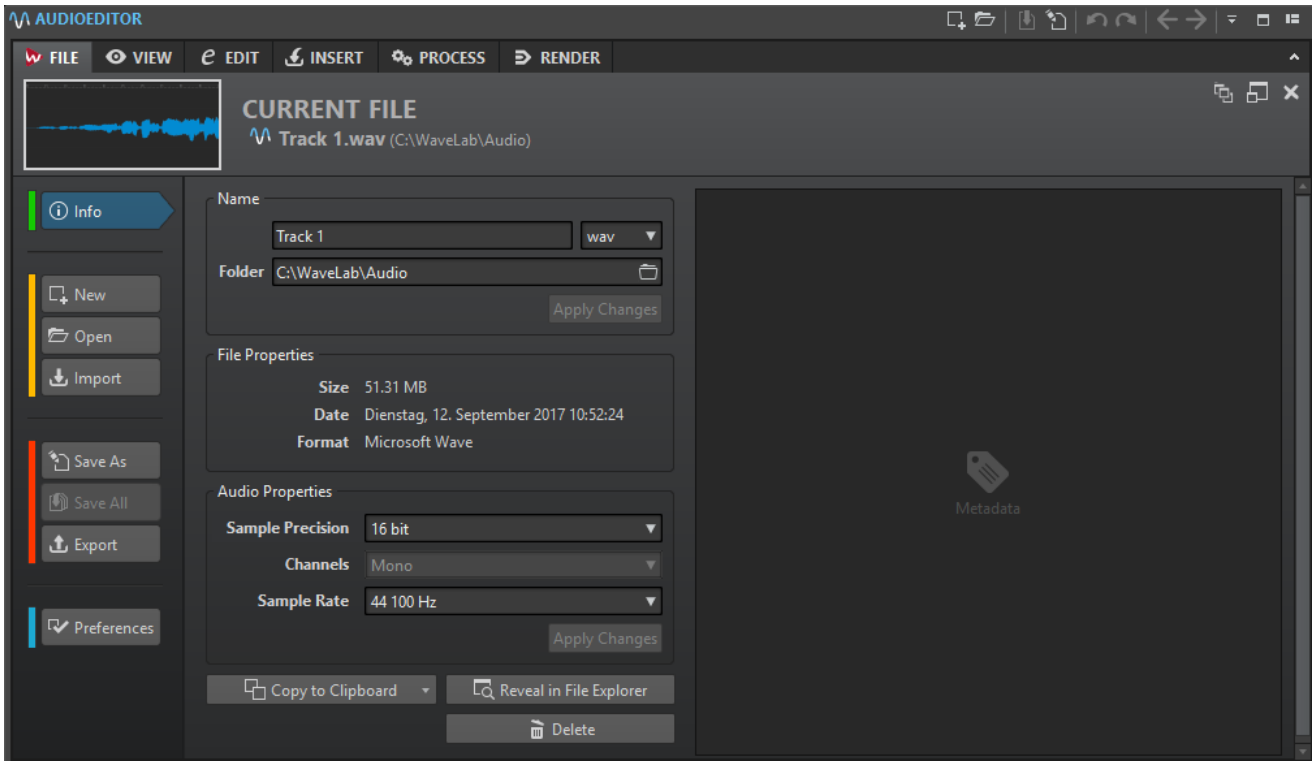
- **Global**
- **Audio Connections**
- **Shortcuts**
- **Plug-ins**
- **Remote Devices**
- **Folders**
- **Audio Files**
- **Audio Montages**

RELATED LINKS
Info Tab on page 26
Configuring WaveLab LE on page 162

Info Tab

The **Info** tab provides information about the active file and allows you to edit the audio properties of audio files and audio montages.

- To open the **Info** tab, select the **File** tab, and click **Info**.



Depending on the selected file, different information and options are available.

Name

Displays the name, file extension, and file location of the active file. You can edit these attributes.

File Properties

Displays the size, date, and file format of the active file.

Audio Properties

For audio files, this displays the sample precision, channels, and sample rate of the active file.

For audio montages, this displays the mode, channels, and sample rate of the active file.

You can edit these attributes.

Metadata

Displays the metadata of the active file.

Copy to Clipboard

Opens a menu from which you can select which information about the active file you want to copy to the clipboard.

Reveal in File Explorer/macOS Finder

Opens the File Explorer/macOS Finder to show the location of the active file.

Delete

Deletes the active file.

Tool Windows

Throughout WaveLab LE there are various tool windows available that allow you to view, analyze, and edit the active file.

Generally, the content of a tool window is synchronized with the active file, with the exception of the audio meters which displays the audio file being played back. Tool windows can be docked and undocked, and saved in your custom layouts. Some tool windows are only available for specific file types.

The tool windows can be accessed via the **Tool Windows** menu.

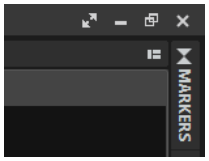
Opening and Closing Tool Windows

You can close all tool windows that you do not need for your project.

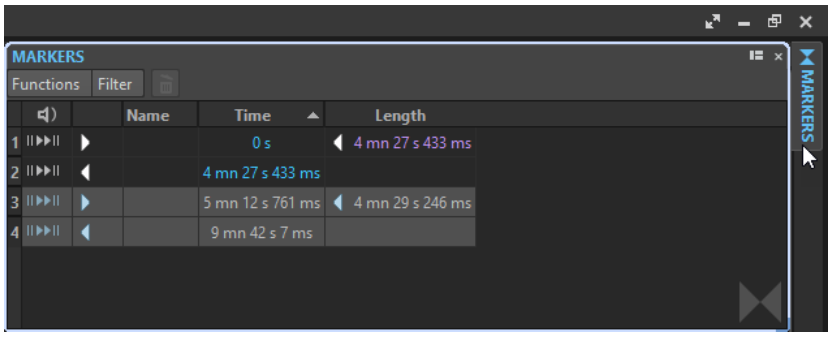
- To open a tool window, select **Tool Windows** and select a tool window.
- To close a docked tool window, right-click the tool window tab and select **Hide**.
- To close an undocked tool window, click its **X** button.

Slide-Out Windows

Slide-out windows are hidden in the frame of the **Workspace** window. When you hover the mouse pointer over the window name, the window slides out. It is hidden again, when you click anywhere else.



Slide-out window tab



An open slide-out window

Docking and Undocking Tool Windows and Meter Windows

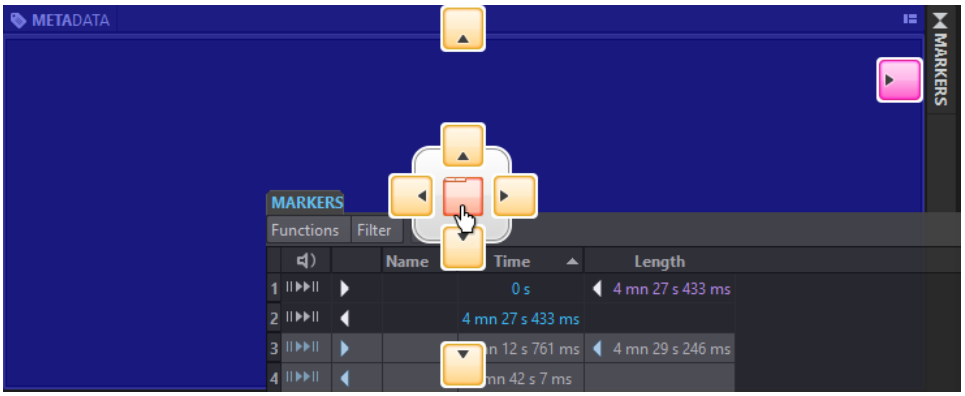
Tool windows and meter windows can be used as docked windows, as floating windows, or as a slide-out window. You can freely drag around the windows and dock them at various locations.

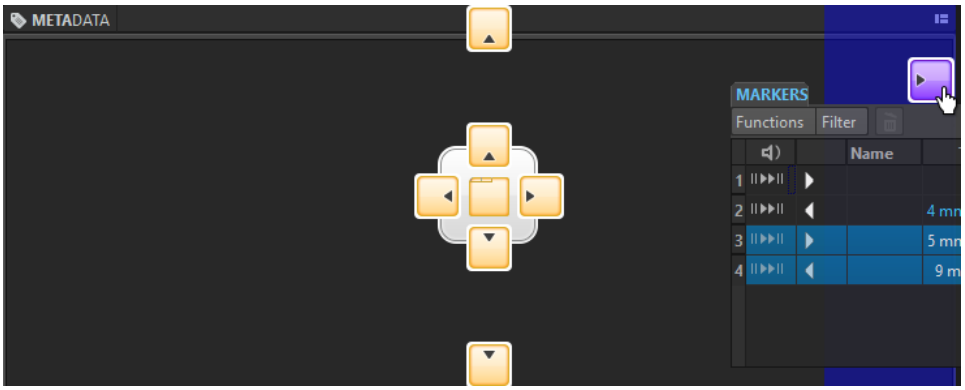
- To undock a tool window or meter window, drag the corresponding tab to another position.

  Now the tool window or meter window is a floating window which can be freely moved.

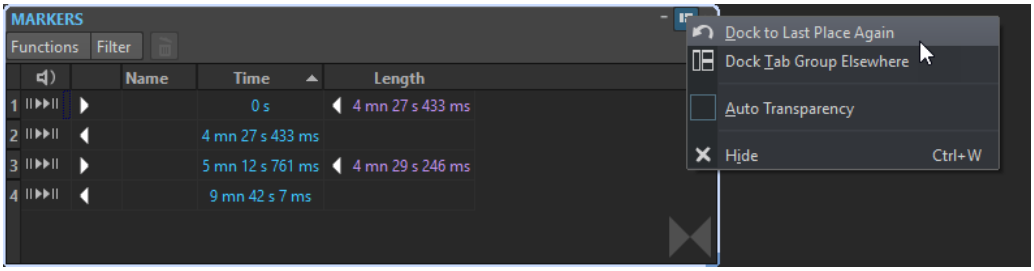
- To dock a tool window or meter window, click and hold the caption bar or click the **Options** button on the right of the caption bar and select **Dock Tab Group Elsewhere**.

  Yellow symbols indicate locations for docked windows, pink symbols indicate locations for slide-out windows. Drag the window to one of the locations.





- To dock a floating tool window or meter window at its last docked position, click the **Options** button on the right of the caption bar and select **Dock to Last Place Again**.



RELATED LINKS
Slide-Out Windows on page 28

Command Bar

The command bar of file windows allows you to create, open, and save files, and undo/redo changes. You can also use the text field to quickly find and access open files, and to trigger keywords.

New

Allows you to create an audio file, audio montage, or podcast.

Open

Allows you to open an audio file, audio montage, or podcast.

Save

Saves the active file.

Save As

Allows you to save the active file. You can specify the name, file format, and location. You can also save a copy of the active file.

Undo

Allows you to undo changes.

Redo

Allows you to redo changes that were undone.

Navigate Backwards/Navigate Forwards

In the **Audio Editor** and **Audio Montage** window, this allows you to navigate to the previous/next cursor position, zoom factor, or selection range without undoing/redoing the edit operation.

Customize Command Bar

Allows you to select the buttons that you want to display on the command bar.

Maximize Window

Maximizes the window. To restore the window size, click the button again.

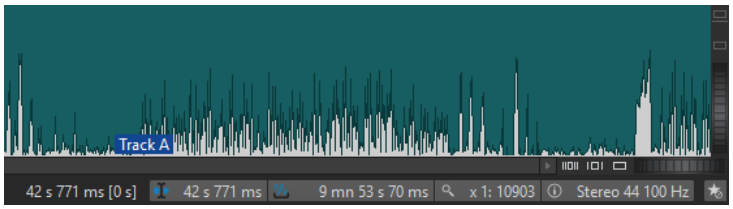
Layout Options

Allows you to determine the position of the command bar and transport bar.

Status Bar

The status bar at the bottom of the screen of the **Audio Editor** and the **Audio Montage** window shows information about the active window using the units specified in the rulers.

The information displayed on the status bar is updated depending on the cursor position and on the audio selection that you have made.



Time/Level (dB)

Displays the time of the audio file at the mouse cursor position. In the **Audio Editor**, it also displays the level.

The value in brackets shows the time from the edit cursor position to the mouse cursor position.

Audio Information at Edit Cursor

Displays the time at the position of the edit cursor. This information changes if you reposition the cursor.

- To define the cursor position, click the **Audio Information at Edit Cursor** field to open the **Cursor Position** dialog.
- To focus the cursor position, right-click the **Audio Information at Edit Cursor** field.

Audio Selection Indicator (Audio Editor)/Audio Range Indicator (Audio Montage)

In the **Audio Editor**, this displays the length of the current selection, or the total length of the audio file if no selection has been made.

In the **Audio Montage** window, this displays the length of the audio selection if a clip is selected, or the size of the audio montage.

If you have zoomed in, you can right-click the indicator to display the selected audio range, the active clip, or the whole file. Left-click the indicator to open the **Audio Range** dialog, where you can define or refine a selection.

Zoom Indicator

Displays the current zoom factor.

- To open a pop-up menu, that allows you to make additional zoom settings, click the indicator.

- To open the **Zoom Factor** dialog, that allows you to edit the zoom factor, right-click the indicator.

Audio File Properties/Audio Montage Properties

In the **Audio Editor**, this displays the sample precision and the sample rate. It also indicates whether the audio file is mono or stereo. Click the indicator to open the **Audio Properties** dialog.

In the **Audio Montage** window, this displays the sample rate of the audio montage. Click the indicator to open the **Sample Rate** dialog.

Bypass Master Section

If this option is deactivated, the **Master Section** is ignored during playback. However, rendering still takes all plug-ins into account.

Background Information

The status bar shows the progress of some background operations, such as rendering an effect. The operation can be paused or canceled using the provided buttons.

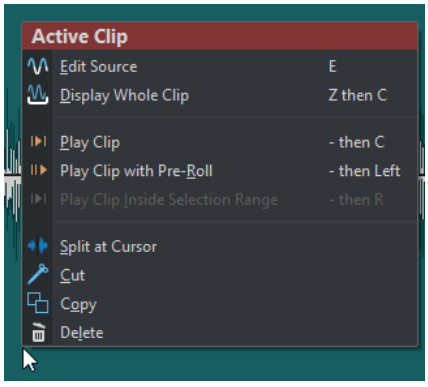
Context Menus

Throughout WaveLab LE, various context menus are available. These menus group the commands and/or options that are specific to the active window.

The context menus appear if you right-click specific areas and are useful for speeding up your workflow.

For example, right-click a file tab to open a context menu with some relevant file options. Right-clicking the ruler of the waveform window brings up the **Time Ruler** context menu that allows you to access a number of options for changing the time ruler display format.

You can find most context menu commands in the tabs, in the file window and in the main menus, but some commands are only available in context menus. If you search for a function, right-click the current working window to check if it has a context menu.



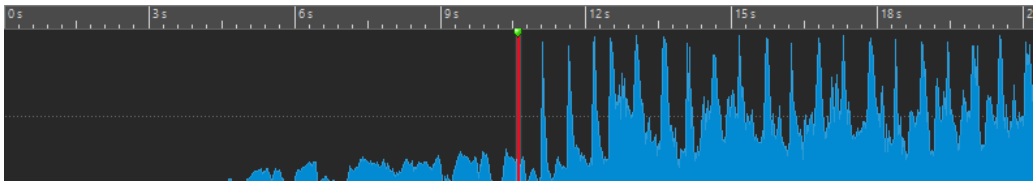
Context menu in the montage window

Time Ruler and Level Ruler

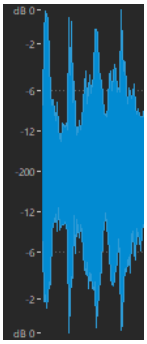
In the **Audio Editor**, you can display a time and a level ruler in the wave window. In the **Audio Montage** window, you can display a time ruler in the montage window.

You can also determine which time and level units the rulers show.

Time Ruler



Level Ruler (Audio Editor only)



Time Ruler and Level Ruler Options

You can specify the time and level (amplitude) formats for each ruler in each wave window and the time formats for each ruler in the montage window separately by right-clicking the ruler and selecting a format from the pop-up menu.

Time Ruler Menu

Timecode

Displays frames per second for various SMPTE timecode types and for CD resolution.

You can specify the timecode type in the **Time Format** dialog.

Clock

Displays time units.

Samples

Displays positions as number of samples. The number of samples per second depends on the sample rate of the audio file. For example, at 44.1 kHz, there are 44100 samples per second.

Bars and Beats

Displays bars and beats.

File Size (Audio Editor only)

Displays positions in megabytes. Decimals represent kilobytes.

Show grid (Audio Montage window only)

Displays vertical lines in the montage window, aligned with time ruler marks.

Time Format

Opens the **Time Format** dialog, that allows you to edit the appearance of the time ruler formats.

Save Current Settings as Default

If this option is activated, the time ruler uses the current time format in all new wave windows or montage windows.

Set Ruler's Origin to Start of File

If this option is activated, the ruler's zero position is set to the beginning of the first sample.

Set Ruler's Origin at Cursor

If this option is activated, the ruler's zero position is set to the current edit cursor position.

RELATED LINKS
Time Format Dialog on page 34

Level Ruler Menu (Audio Editor only)

dB

Sets the level format to decibels.

+-100 %

Sets the level format to percentage.

Normalized +1/-1

Sets the level format to a ruler gradation corresponding to 64-bit float audio.

16-bit Range

Sets the level format to a ruler gradation corresponding to 16-bit audio.

24-bit Range

Sets the level format to a ruler gradation corresponding to 24-bit audio.

Save Current Settings as Default

If this option is activated, the level ruler uses the current level format in all new wave windows.

Working With a Meter-Based Display

If your working material is tempo-based, you can select the meter format (bars, beats, and ticks) for the ruler legend. This makes it easier to find musically related cutting points.

PROCEDURE

1. In the wave window or the montage window, right-click the time ruler, and select **Bars and Beats**.
2. Right-click the time ruler, and select **Time Format**.
3. On the **Meter** tab, set the **Time Signature** and **Tempo** to values that match your audio file.
4. Set **Ticks per Quarter Note** to a number that you feel comfortable with.
   For example, this can be the same value that is used by your MIDI sequencer.
5. Click **OK**.

Setting the Edit Cursor Position

Many operations, such as playback and selection, depend on the current edit cursor position. For example, playback often starts at the edit cursor position. The current edit cursor position is indicated by a vertical flashing line.

There are various ways to move the edit cursor:

- Click somewhere in the wave window, the montage window, or the time ruler. If you have made a selection, click the time ruler to prevent deselecting.

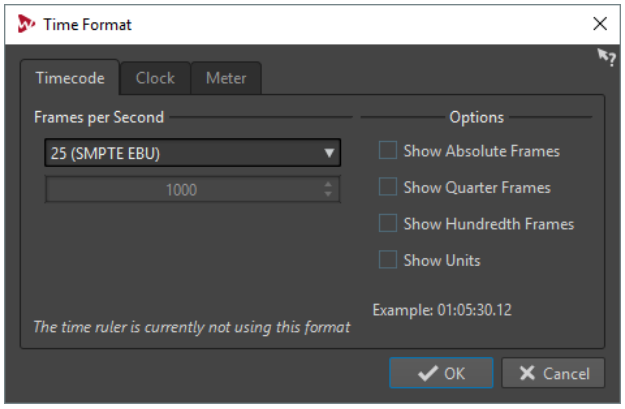
- Click and drag in the time ruler.
- Use the transport controls.
- In the **Audio Editor** and **Audio Montage** window, select the **View** tab and use the options in the **Cursor** section.
- Use the cursor keys.
- Double-click a marker.

Time Format Dialog

In this dialog, you can customize the time format of the ruler. The time format of the ruler is also used in various time fields, for example, the status bar and some dialogs.

- To open the **Time Format** dialog, right-click the ruler in the **Audio Editor** or **Audio Montage** window, and select **Time Format**.

  In the **Audio Editor**, you can set different time formats for the overview display and the main display.



Timecode Tab

On this tab, you can configure the appearance of the **Timecode**.

Frames per Second

Lists standard frame rates. From the pop-up menu, select **Other** to enter a custom frame rate. You can also choose which frames or units are displayed.

Show Absolute Frames

Shows the time format as a number of frames, without other time elements.

Show Quarter Frames

Adds the quarter frame number to the time format.

Show Hundredth Frames

Adds the number of a hundredth of a frame to the time format.

Show Units

Adds time units to the time format of the ruler.

Clock Tab

On this tab, you can configure the appearance of the **Clock** option.

Show Units

Adds time units to the time format of the ruler.

Compact

Shows the time without unit indicators.

Meter Tab

On this tab, you can configure the appearance of the **Bars and Beats** option.

Time Signature

Lets you edit the time signature used to display the time represented as a musical notation.

Tempo

Lets you edit the tempo used to display the time represented as a musical notation.

Ticks per Quarter Note

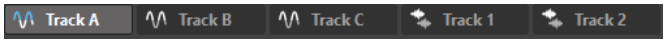
Lets you edit the number of ticks per quarter note. These are used to display times that are compatible with your sequencer.

Managing Tabs

A tab is a container for a file in WaveLab LE. You can open several tabs, but only one can be active at a time. The **Tabs** context menu offer tab related options.

File Tabs

The following options are available when you right-click a file tab.



Add to

Allows you to add the active file to another editor.

Close

Closes the active tab.

Close All But This

Closes all files but the active file.

Close All Audio Files

Closes all audio files.

Info

Displays information about the active file.

Reveal in File Explorer/macOS Finder

Opens the File Explorer/macOS Finder to show the location of the file.

Copy to Clipboard

Opens a menu, from which you can select which information about the file you want to copy to the clipboard.

Recent Files

Allows you to open recently used files.

Activating Full Screen Mode

PROCEDURE

- Select **Workspace** > **Full Screen**.

Resetting the Default Workspace Layout

PROCEDURE

- Select **Workspace** > **Reset Default Layout**.

Project Handling

Opening Files

PROCEDURE

1. Select **File** > **Open**.
2. Select the file type that you want to open.
   For example, **Audio File**.
3. From the file browser, select the file that you want to open.
4. Click **Open**.

Opening Files from the Clipboard

You can open files in WaveLab LE that you have previously copied to the clipboard in the File Explorer/macOS Finder.

PROCEDURE

1. In the File Explorer/macOS Finder, copy the files that you want to open to the clipboard.
2. In WaveLab LE, select **File** > **Open**.
3. Click **Open Files from Clipboard**.

RESULT

The files open in new file tabs.

Value Editing

At various places in the program, numerical values can be edited by using a combination of text fields and knobs.

Values are sometimes composed of several elements, for example, 12 mn 30 sec 120 ms. Each value can be edited by using any of the following methods:

- To change a value, click in a value field and type a new value, or click the small arrows in the value field.
- To change the value by one unit at a time, press the **Left Arrow** and **Right Arrow** keys.
- To change the value by several units, press the **Page Up** and **Page Down** keys.
- To change the value using the mouse wheel, position the mouse cursor over a value, and use the mouse wheel, or use the AI knob of your MIDI controller.
- To change the value with the mouse, click a value and drag the mouse up or down.
- To jump to the maximum and minimum values, press the **Home** and **End** keys.

- To move from one element of the value to another, press the **Left Arrow** and **Right Arrow** keys.

Drag Operations

WaveLab LE makes much use of drag-and-drop techniques to perform various operations, some of which can only be performed this way. These are referred to as drag operations in this documentation.

- To drag an object, click and hold with the mouse when positioned on the object and drag it. Drop the object by releasing the button.

Many types of objects can be dragged between different source and destination locations, for example, files, text, clips, items in a list, and markers.

NOTE

It is also possible to drag and drop files from WaveLab LE to Steinberg's Nuendo.

- To reorder a tab within its own tabbed group, drag horizontally. To move a tab to another window, drag vertically.
- To open a file, drag it from the **File Browser** window of WaveLab LE, from the file browser of your operating system, or from another application to the tab bar.
- To create a copy of a file, drag its tab vertically to another position of the tab bar, then press **Ctrl/Cmd**, and release the mouse button.
- You can dock and undock tool windows and meter windows via dragging.

RELATED LINKS
Docking and Undocking Tool Windows and Meter Windows on page 28

Dragging in the Audio Editor and Audio Montage Window

- To insert an audio file in another audio file, drag the title bar of the file onto the waveform of another file. You can also drag an audio file from the **File Browser** window, the file browser of your operating system, or from another application into the **Audio Editor**.
- To move a marker, drag it to another position on the time ruler.
- To create a copy of a marker, press **Shift**, and drag it to another position on the time ruler.
- To delete a marker, drag it upwards outside the time ruler.
- To copy an audio selection, drag a selected region of audio onto the waveform area of the same file or another file.
- To change the extent of a selection range, position the edit cursor at the start/end of the selection range, and drag to the left or right.
- To move the edit cursor without losing the current selection, and to snap it to an anchor, press **Shift**, and move the mouse near the audio file/montage cursor. The mouse cursor shape changes and you can drag the cursor left and right.
- To move the edit cursor without changing or losing the current selection, press **Shift**, click the edit cursor, and drag it to another position.
- To scroll the waveform horizontally, click the bar above the time ruler and drag left or right. You can also click anywhere on the waveform using the 3rd mouse button, and drag left or right.
- To create a generic marker from a selected text, drop the text that you have selected in an external application onto the time ruler. The text becomes the marker name.

- To create a stereo copy of a mono file, or a mixed copy of a stereo file, drag a tab to another position of the tab bar, press **Ctrl**-**Alt** (Windows) or **Option**-**Ctrl** (Mac), and release the mouse button.

Dragging in the Podcast Window

- To reorder episodes in the episodes list, drag them to another position.

Dragging in the Master Section

- To change the order of processing, drag effects between different effects slots.

Undoing and Redoing Actions

You can undo and redo as many steps as you like. The only limitation is the available hard disk space.

When undoing or redoing any operation in the **Audio Editor** or the **Audio Montage** window, the zoom factor, cursor position, scroll position, clip selection status, and time range are restored to the state before the operation.

- To undo or redo a step, click **Undo** or **Redo** in the title bar of the **Audio Editor** or **Audio Montage** window.

Navigating Backwards and Forwards

In audio files and audio montages, you can navigate to the previous/next cursor position, zoom factor, and selection range without undoing/redoing the edit operation.

- To navigate backwards or forwards, click **Navigate Backwards** or **Navigate Forwards** in the title bar of the **Audio Editor** or **Audio Montage** window.

Zooming

Horizontal Zooming

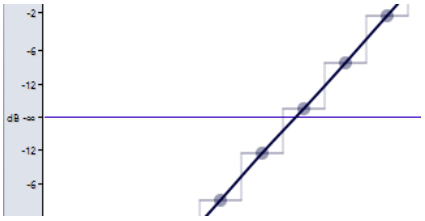
- When you zoom out as far as possible, the entire file fits in the window.
- When you zoom in as far as possible, each sample occupies several pixels on the screen. This allows for sample-accurate editing of waveforms.

Vertical Zooming

- When you zoom out as far as possible, the height of the wave fits in the window.
- As you progressively zoom in, the display only shows a part of the total height. The vertical scrollbar lets you adjust exactly which section is shown. Check the ruler to see which part of the waveform is shown in the display.
- To optimize the vertical zoom of the waveform, press **Ctrl/Cmd**, the time ruler, keep the mouse button pressed, and drag the mouse up or down.

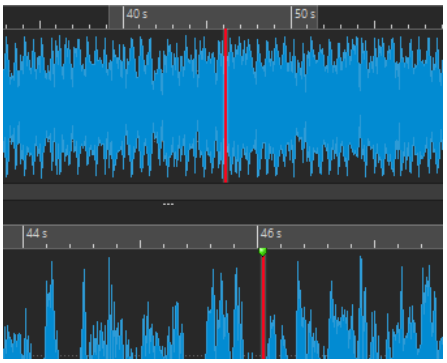
High Zoom Level

- When the zooming level is very high, each sample is shown with a step and a bullet. The steps show the real digitized state, while the bullets make it easier to see the samples, especially for zeroed samples.
- The curve also represents an estimation of the analog reconstructed signal to give hints on true peaks.

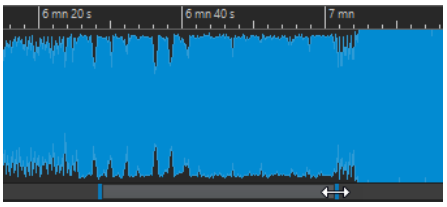


Zooming in the Overview and Main View Sections (Audio Editor Only)

- You can have different zoom levels in the overview and in the main view section. In the overview, a range indicator on the time ruler indicates which section of the file is displayed in the main view.
- To adjust the zoom level, drag the edges of the range indicator.
- To scroll in the main view, drag the range indicator. The range indicator is located at the top of the overview display.

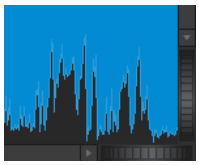


- To adjust the zoom level using the scrollbar, drag the edges of the scrollbar.



Zooming Using the Zoom Controls

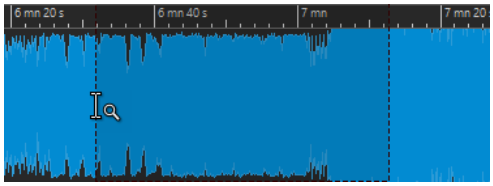
Both the main view and the overview have horizontal and vertical zoom controls.



- To zoom horizontally, click the **Horizontal Zoom** control, and drag left or right, or use the mouse wheel.
- To zoom vertically, click the **Vertical Zoom** control, and drag up or down, or use the mouse wheel.
- To fully zoom-out, double-click the zoom controls.

Zooming Using the Zoom Tool

The **Zoom** tool is used to zoom in a specific section of the waveform so that it occupies the entire wave window. This is only available in the **Audio Editor**.



Using the Zoom Tool in the Main View

The selection that you make in the main view of the wave window is magnified and fills up the entire main view.

PROCEDURE

1. In the **Audio Editor**, select the **View** tab.
2. In the **Zoom** section, click **Zoom**.
3. In the main view of the wave window, click and drag left or right, and release the mouse button.

   The selected part of the wave now occupies the entire main view.

Using the Zoom Tool in the Overview

The selection that you make in the overview of the wave window is displayed in the main view.

PROCEDURE

- In the overview of the wave window, click and drag left or right, and release the mouse button.

RESULT

The selected range of the waveform is shown in the main view.

Zooming Using the Mouse

With the mouse, you can change the zoom factor by clicking and dragging or by using the mouse wheel.

- To zoom horizontally, in the wave window or the montage window, position the mouse cursor over the time ruler, click, and drag up or down.
- To zoom horizontally while maintaining the cursor position, position the mouse cursor over the time ruler, press **Shift**, and drag up or down.

  For this, you can also use the mouse wheel. Press **Ctrl/Cmd**-**Shift**, point at a waveform, and use the mouse wheel.
- To zoom horizontally around the mouse cursor position using the mouse wheel, press **Ctrl/Cmd**, point at a waveform, and use the mouse wheel.
- To zoom horizontally around the edit cursor position, press **Ctrl/Cmd**-**Shift**, point at a waveform, and use the mouse wheel.
- To zoom vertically using the mouse wheel, press **Shift**, point at a waveform, and use the mouse wheel.

Audio Editor Only

- To zoom vertically, in the wave window, position the mouse cursor over the level ruler, click, and drag left or right.
- To reset the vertical zoom to 0 dB, double-click the level ruler.
- To set the vertical zoom to the best value, that is, the current minimum and maximum displayed samples, make sure that the level ruler is set to 0 dB, and double-click the level ruler.

Zooming Using the Keyboard

A quick way to zoom the active wave or montage window is to use the arrow keys on the computer keyboard.

- To zoom horizontally in the active wave window or montage window, press **Up Arrow** or **Down Arrow**.
- To zoom vertically in the active wave/montage window, hold **Shift**, and press **Up Arrow** or **Down Arrow**.
- To zoom vertically to fit the available height, press **Ctrl/Cmd-Shift-Up Arrow**.
- To zoom out fully, press **Ctrl/Cmd-Down Arrow**.
- To zoom in fully, press **Ctrl/Cmd-Up Arrow**.

RELATED LINKS
Global Preferences on page 162

Zoom Options

The zoom options allow you to quickly access various zoom settings.

The zoom options are available in the **Audio Editor** and the **Audio Montage** window on the **View** tab in the **Zoom** section.

Time

Opens a pop-up menu that allows you to adjust the zoom to display the selected time range. **Zoom in 1:1** zooms in so that one pixel on the screen represents one sample.

To edit the zoom factor, click **Edit Zoom Factor**. This opens the **Zoom Factor** dialog, where you can edit the following settings:

- **Set Time Range** allows you to specify the time range that you want to display.
- **Samples per Screen Point** allows you to specify how many audio samples are summarized in each screen point.
- **Screen Points per Sample** allows you to specify how many screen points are used to represent a single audio sample.

Zoom

Activates the **Zoom** tool that allows you to define a time range that is zoomed in.

Zoom Selection

Zooms the window so that the current selection occupies the entire montage window.

Display Whole Clip (Audio Montage window only)

Adjusts the view to display the active clip.

View All

Displays the entire audio range.

Microscope

Zooms in as far as possible.

Zoom in Audio (10x)/Zoom out Audio (10x)

Zooms in/out in big steps.

Zoom in Audio/Zoom out Audio

Zooms in/out in small steps.

Level

Adjusts the zoom to only display samples below the selected dB value.

Optimize Vertical Zoom (Audio Editor only)

Changes the vertical zoom factor so that the peaks are clearly visible. This adjustment is done according to the section of the wave that is visible in the wave/montage window.

Reset Zoom to 0 dB

Adjusts the zoom to display audio levels up to 0 dB.

Zoom in Vertically/Zoom out Vertically

Zooms in/out to show waveforms with a lower/higher level.

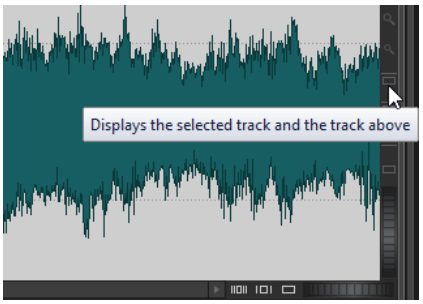
Zooming in Audio Montages

Zooming options in the **Audio Montage** window are almost similar to those in the **Audio Editor**. However, there are additional zooming options for tracks.

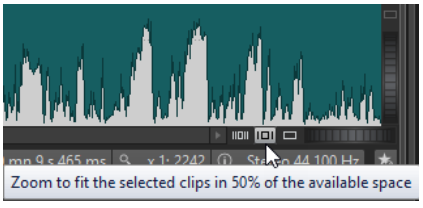
Zoom Buttons in the Audio Montage

The zoom buttons in the **Audio Montage** window allow you to apply zoom presets.

- To only display the selected track, or also the tracks below and/or above the selected track, click the corresponding buttons.



- To set the zoom setting to fit the active clips in 25 %, 50 %, or 100 % of the available space, click the corresponding buttons.

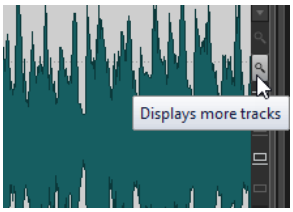


- To select a specific area, click **Ctrl/Cmd**, and drag the rectangle over the tracks and clips that you want to zoom in on.

Displaying More or Less Tracks

The number of tracks that are displayed in the **Audio Montage** window can be changed with the zoom controls in the lower right corner of the montage window.

- To display more tracks, click the smaller magnifying glass icon.



- To display fewer tracks, click the larger magnifying glass icon.
- To make a single track fit the whole montage window, click the numbered button in the track control area, and select **Zoom** from the pop-up menu.

  You can also right-click the lower area of a track, and select **Display Whole Clip** from the pop-up menu.

Presets

You can create presets to save commonly used settings. WaveLab LE provides a selection of factory presets that can be used by most dialogs.

You can save customized presets. The next time that you load the program, the presets are available.

Presets are saved as single files and can be organized in subfolders. The root folder of the preset is different for each type of preset and cannot be changed.

Saving a Preset

PROCEDURE

1. Open the dialog that you want to use and modify the parameters.
2. Open the **Presets** pop-up menu and select **Save As**.
3. Optional: Click the folder icon and enter a name for the subfolder that you want to use as the location for this preset.
4. Type in a name.
5. Click **Save**.

Loading Presets

To apply a saved preset or a factory preset to a dialog or plug-in, you must load the preset.

PROCEDURE

1. In the dialog, open the **Presets** pop-up menu.
2. Select the preset that you want to apply.

Modifying a Preset

You can modify a preset and save the changes.

PROCEDURE

1. Open the dialog that you want to use.
2. Load the preset that you want to modify.
3. Modify the parameters of the dialog.
4. Open the **Presets** pop-up menu and select **Save**.

Deleting a Preset

PROCEDURE

1. Open the dialog that you want to use.
2. Select the preset that you want to delete.
3. Open the **Presets** pop-up menu and select **Organize Presets**.
4. In the File Explorer/macOS Finder, select the preset file that you want to delete, and press **Delete**.

Saving and Restoring Temporary Presets

Some dialogs allow you to save and load up to 5 temporary presets. This is useful if you want to quickly test and compare different settings.

Saving Presets Temporarily

PROCEDURE

1. Open the dialog that you want to use and make your settings.
2. Open the **Presets** pop-up menu.
3. From the **Store Temporarily** submenu, select a slot.

Restoring Temporary Presets

PROCEDURE

1. Open the dialog in which you have saved a preset.
2. Open the **Presets** pop-up menu.
3. From the **Restore** submenu, select a preset.

File Operations

Recently Used Files

All files that you have recently used in WaveLab LE are saved in a list. This helps you to gain fast access to recent projects. You can open recently used files via the **File** menu.

Opening Recently Used Files

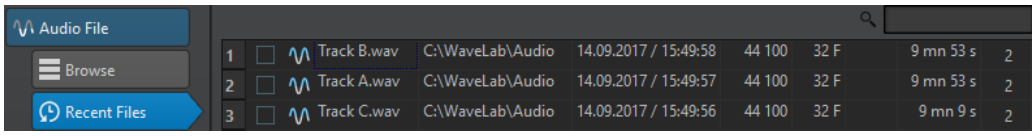
PROCEDURE

1. Select **File** > **Open**.
2. Select the file type that you want to open.
3. Click **Recent Files**.
4. Optional: Use the search field to enter the name of the file that you are looking for.
5. Select the file that you want to open.
6. Click **Open**.

Recent Files Tab

This tab allows you to view and manage all the files that you have recently used in WaveLab LE. You can search for files, open multiple files at once, and remove individual files or files that cannot be located.

- To open the **Recent Files** tab, select **File** > **Open**, select one of the file types, and click **Recent Files**.



Only Show Files Created by WaveLab LE

Only shows the files that have not been opened since they were created by WaveLab LE. For example, a file that is rendered has this status until it is opened.

Search field

Lets you search for text in the **Name** or **Path** column, depending on which column is selected.

Remove Non-Existing Files

Removes those files from the list that cannot be located on the medium.

Remove Selected Files

Removes all selected files from the list.

Open

Opens the selected files.

Filtering Recently Used Files by Name

The search field in the **Recent Files** tab allows you to filter the files list by name.

- To specify whether the **Name** or the **Path** column is used, click the **Name** or **Path** column header.
- To search for a file, enter the text that you want to search for in the search field.
- To switch the focus from the search field to the list of recently used files, press **Down Arrow**.
- To switch the focus from the list of recently used files to the search field, press **Ctrl/Cmd-F**.

Setting the Number of Recently Used Files to Display

PROCEDURE

1. Select **File** > **Preferences** > **Global**.
2. In the **Global Preferences** window, select the **Display** tab.
3. In the **History** section, set the maximum number of items to be listed on the **Recent File** menu.

Save and Save As

- Once a file has been saved, select **File** > **Save**, or press **Ctrl/Cmd-S** to update the file and make the changes permanent.
- If you want to specify a new name, location, and/or file format, select **File** > **Save As**.

NOTE

In the **Audio Editor**, all save operations except **Save Copy** clear the undo history, which means that after saving you cannot undo or redo.

Tab Colors

The colored tab corner gives information on whether a file is saved or not.

White

The file is not modified.

Green (Audio Editor only)

The file uses a decoded file format and is saved.

Red

The file has been modified and changes have not been saved yet.

Unsaved Changes Indicator

When you have made changes to a file, an asterisk is displayed next to the file name until you save the file.

Saving Multiple Files at Once

You can save some or all open files at once.

PROCEDURE

1. Open the **File** window and click **Save All**.
2. Select the files that you want to save.
3. Click **Save**.

Saving Copies of Files

You can save copies of files that you are working on.

PROCEDURE

1. Select **File** > **Save As**.
2. Specify a name and location.
3. Right-click **Save** and select **Save Copy**.

Reverting to Saved File

You can revert the file that you are working on back to its last saved state. This undoes all the changes made to the file since it was last saved.

PROCEDURE

1. Select **File** > **Open**.
2. Select the file type that you want to open.
3. Click **Revert to Saved File**.
4. In the warning dialog, click **Yes** to revert to the last saved state.

RESULT

The last saved version of the file is loaded from disk.

Automatic Backups

You can automatically create backups of your files.

For example, if you select **Save As** and specify a file name that is already used in that folder, you will be asked if you want to replace the existing file or replace the existing file and rename the old file. If you click **Replace and Keep Old**, the backup name of the audio file that is replaced will be the original name, with `.bak` added at the end.

Saving Audio Montages

The saving operations for audio montages are the same as for audio files. However, there are things to note when saving audio montages.

- Audio montage files only contain references to audio files. If you want to rename audio files that are referenced by audio montages, rename the audio files in the **Info** window of the **Audio Editor**. All clip references are updated automatically.
- If the audio montage contains clips that refer to untitled audio files, save these audio files before saving the audio montage.

RELATED LINKS
Renaming Files on page 49
Save and Save As on page 47

File Renaming

You can rename a file and update all references automatically. For example, if you rename an audio file named `India` to `Sitar`, all open files that reference the file `India` are updated to reference the file as `Sitar`.

Audio files, peak files, and marker files are also renamed accordingly.

Renaming Files

PREREQUISITE

If you want to rename a file that is referenced by other files, open the files that reference the file that you are about to rename in WaveLab LE.

PROCEDURE

1. Open the file that you want to rename.
2. Select the **File** tab.
3. Click **Info**.
4. In the **Name** section, enter the new name and/or a new file location.
5. Select a file suffix from the pop-up menu.
6. Click **Apply Changes**.

Deleting Files

You can delete the active file from within WaveLab LE.

PREREQUISITE

The file that you want to delete is not copied to the clipboard, is not pasted into another file that is open, and is not open in another application.

PROCEDURE

1. Open the file that you want to delete.
2. Select the **File** tab.
3. Click **Info**.
4. Click **Delete**.
5. Click **OK**.

RESULT

The file, including its peak and marker files, is deleted.

Temporary Files

WaveLab LE creates temporary files to store intermediary results of the audio file processing and for the undo/redo functions. You can specify where WaveLab LE saves its temporary files and the processing precision of temporary files.

By default, WaveLab LE creates temporary files in 32-bit float. Use the **64 bit float** option if you want to create 64-bit float audio files or 32-bit PCM files.

NOTE

Temporary files in 64-bit float have double precision but take longer to read and write than 32-bit float and their file size is twice as big.

You can change the processing precision of temporary files with the **Processing Precision** option. You can set this option in the **Global Preferences** on the **Audio** tab.

RELATED LINKS
Specifying Folders on page 50
Audio Tab on page 163

Work Folders vs. Document Folders

WaveLab LE distinguishes between two types of folders: work folders and document folders.

- In work folders, temporary files are saved.
- Document folders contain WaveLab LE-specific files, such as audio files, audio montages, etc.

Specifying Folders

You can specify which document folder should open when you perform an open or save operation. You can also specify up to three work folders for temporary files.

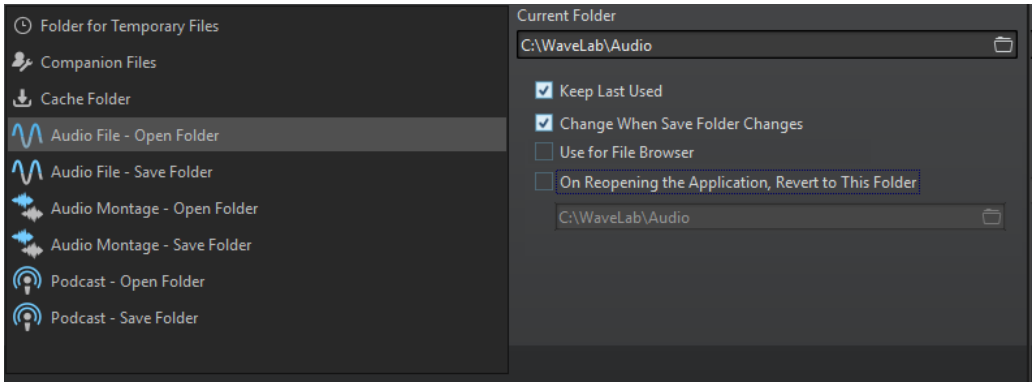
PROCEDURE

1. Open the file for which you want to specify folders.
2. Select **File** > **Preferences** > **Folders**.
3. On the **Folders** tab, click the type of folder for which you want to specify a location.
4. Specify a location in the **Folder** field.
5. Optional: Depending on the selected type of folder, you can make additional settings.

Folders Tab

On this tab, you can specify default document folders and work folders for each file type.

- To open the **Folders** tab, select **File** > **Preferences** > **Folders**.



In the list on the left, you specify the folder type that you want to make settings for.

Folder for Temporary Files

Specify a folder for saving temporary files.

Companion Files

Specify a folder for saving companion files, that is, view settings for audio files.

Cache Folder

Activate **Use Cache Folder for Decoded Files** to specify a cache folder. The cache folder contains wave files that are created when you are working with files in compressed file formats, such as MP3 files. To prevent the cache folder from growing indefinitely, WaveLab LE checks the date of each file in this folder and deletes files that were created before a specific number of days. You can specify the number of days with the **Delete Files Older Than** option.

If **Use Cache Folder for Decoded Files** is deactivated, the compressed files are decoded each time they are opened.

Audio File – Open Folder/Save Folder

The default open and save folders for audio files.

Audio Montage – Open Folder/Save Folder

The default open and save folders for audio montage files.

Depending on the selected item, different settings are available on the right side of the dialog.

Current Folder

In this field, the folder that is used as default is displayed. You can click the folder button to the right to navigate to a folder, or to create a new folder.

Keep Last Used

Uses the last folder for saving or opening files of the selected type.

Change When Save Folder Changes/Change When Open Folder Changes

Updates the default open folder when you change the default save folder, and vice versa. Activate this option for both the save folder and the open folder if you want a specific file type to use the same folder for saving and for opening this type of file.

Use for File Browser

In the **File Browser**, the folder does not change when you switch between file types by default.

If you activate **Use for File Browser** and deactivate **Keep Last Used**, the folder location that you have selected in the **Current Folder** field of each file type is displayed when you switch between file types in the **File Browser**.

If you activate **Use for File Browser** and **Keep Last Used**, the folder that you have selected in the **Current Folder** field of each file type is displayed when you select

a file type for the first time. When you then browse to another folder in the **File Browser**, the **Keep Last Used** behavior is used. That is, the last used folder for this file type is displayed when you select the file type.

You can make these settings for each file type independently.

On Reopening the Application, Revert to This Folder

Activate this option to restore a specific folder each time you open WaveLab LE. This way, any changes to save/open folders are only temporary and are reset when you restart WaveLab LE.

Exporting to SoundCloud

SoundCloud is an online platform for uploading and sharing your audio recordings. You can export an audio file from WaveLab LE to your SoundCloud account.

If you do not have a SoundCloud account, visit www.soundcloud.com to register.

PROCEDURE

1. Select **File** > **Export**.
2. Click **Export to SoundCloud**.
3. Once you have logged in to your SoundCloud account, the file upload starts.

AFTER COMPLETING THIS TASK

After uploading the audio file, you can edit the privacy settings and add metadata in SoundCloud.

Copying Audio Information to the Clipboard

You can copy information about the name and location of the selected audio file, including any selection information and cursor position. This information can be pasted into an external text application.

This is useful if you need accurate file path/selection information when writing a script, for example.

PROCEDURE

1. Click the **File** tab.
2. Click **Info**.
3. Click **Copy to Clipboard** and select the information that you want to copy to the clipboard.

Setting the Focus on the Current File

If you are editing inside a floating window or a tool window and you want to switch the focus back to a wave/montage window, you can use the **Set Focus on Current File** option.

PROCEDURE

- In any window, press **Ctrl/Cmd-F12**, to set the focus on the wave/montage window.

Playback

This chapter describes the methods for controlling playback and transport functions.

Transport Bar

With this command bar you can control playback of an audio file or audio montage, navigate between various positions in an audio file or audio montage, and open the **Recording** dialog.

The transport bar is available in the **Audio Editor** and in the **Audio Montage** window.

Move Cursor to Start of File/Move Cursor to End of File

Moves the edit cursor to the start/end of the file.

Move Playback Position Backwards/Move Playback Position Forwards

Moves the edit cursor position to the left/right. If you click during playback, playback jumps to the new edit cursor position.

To move the edit cursor to the start/end of the file, press Ctrl/Cmd, and click the **Move Playback Position Backwards/Move Playback Position Forwards** buttons.

Navigation anchors allow you to move the edit cursor to specific positions in the audio file or audio montage. Right-click the **Move Playback Position Backwards/ Move Playback Position Forwards** buttons to open the **Navigation Anchors** pop-up menu. Here, you can set the type of navigation anchor. If you click during playback, playback continues from the anchor position.

Loop

Activates the loop mode. Right-click the loop button to select whether to loop continuously or only a few times.

Stop Playback

Stops playback. If playback is already stopped, the edit cursor is moved to the previous start position.

Start Playback from Edit Cursor

Starts playing back the active audio file or audio montage from the edit cursor position.

If the audio being played back is not the active audio file, the **Play** button has a different color. This happens if you switch to another file window during playback, for example.

The playback button when playing back in the active window (left) and when playing in another window (right).

Record

Opens the **Recording** dialog.

Time Display

Displays the edit cursor or playback position. Click to select another time unit.

Transport Bar in the Podcast Editor

In the **Podcast Editor**, a simplified transport bar allows you to play back the selected podcast episode.

Play Button

Clicking the **Play** button on the transport bar starts playing back the active audio file or audio montage from the edit cursor position.

You can also use the Space bar or the Enter key on your keyboard to start playback. Pressing Space during playback stops playback, pressing Enter during playback makes playback restart from the last start position.

If the **Loop** button is activated, the audio selection is looped, if available. If there is no selection range, the entire file is looped.

Stop Button

The result of clicking the **Stop** button or on the transport bar or 0 on your numeric keypad depends on the current situation.

- If you trigger **Stop** in stop mode, the edit cursor moves either to the previous playback start marker, or to the selection start (whatever is closer), until the start of the file is reached.
- If there is no selection or if the edit cursor is positioned to the left of the selection, it is moved to the beginning of the file instead.

Loop Playback

Loop points are updated continuously during playback. If you change the loop start or end during playback, the loop changes. This way, you can audition selection points for rhythmic material.

If you loop a section in an audio montage, playback loops within the boundaries of the current selection range. This selection range may be on any track, even if it is empty. The vertical position of the selection range is of no relevance for loop playback, only the left and right selection boundaries matter.

Playback Shortcuts

In addition to the buttons on the transport bar, there are shortcuts to control the playback.

Space bar

Start/Stop playback. This shortcut can be used even when the wave window or montage window is not the active window.

0 on numeric keypad

Stops playback. If the playback is stopped and you press this shortcut, the edit cursor moves either to the previous playback start marker, or to the selection start (whatever is closer), until the start of the file is reached. This is the same as clicking **Stop** on the transport bar. This shortcut can be used even if the wave window or montage window is not the active window.

Enter

Starts playback. If pressed during playback, playback restarts from the previous start position. This is the same as clicking **Start Playback from Edit Cursor** on the transport bar.

Alt-Space

Starts playback from the mouse cursor position.

F6

Starts playback of the selected range, depending on the selected option in the **Ranges** section of the transport bar.

Changing the Position of the Transport Bar

You can position the transport bar at the top, middle, or bottom of the file window.

PROCEDURE

1. In the title bar of the **Audio Editor** or **Audio Montage** window, click **Layout Options** .
2. In the **Transport Bar** section, select whether to position the transport bar at the **Top**, **Middle**, or **Bottom**.

Hiding the Transport Bar

PROCEDURE

1. In the title bar of the **Audio Editor** or **Audio Montage** window, click **Layout Options**.
2. In the **Transport Bar** section, select **Hidden**.

Starting Playback From the Ruler

You can use the ruler to jump to a position and start playback from there.

- Double-clicking the ruler starts playback from that position. Playback continues until you click **Stop Playback** or until the end of the audio file or audio montage.
- To set the playback position to a specific position, click the ruler during playback. This also applies for clicking the time rulers of another audio file or audio montage, which allows you to quickly switch playback between audio files or audio montages.
- To start playback from a marker position, press **Ctrl/Cmd** and double-click the marker.

Using the Play Tool

This tool allows you to play back from any position on one or both stereo channels.

PROCEDURE

1. In the **Audio Editor**, select the **Edit** tab.
2. In the **Tools** section, select the **Play** tool, or press and hold **Alt**.
3. In the wave window, click at the position where you want playback to start.

   The cursor shape indicates whether the left (L) or the right (R) channel is played back. Using the Play tool in the middle of the channels plays back both channels.

RESULT

Playback continues for as long as you keep the mouse button pressed, or until the audio file ends. After playback has stopped, the cursor is moved to the playback start position.

Playback Scrubbing

Playback scrubbing helps you find a specific position in an audio file, by restarting playback repeatedly when you click and drag on the time ruler during playback or when using the **Play** tool.

Scrubbing Using the Play Tool

PROCEDURE

1. In the **Audio Editor**, select the **Edit** tab.
2. In the **Tools** section, select the **Play** tool, or press and hold **Alt**.
3. Click in the wave window.
   Playback starts at the position where you clicked.

RELATED LINKS

Playback Scrubbing Preferences on page 56

Scrubbing Using the Time Ruler

PROCEDURE

1. Start playback.
2. Click the time ruler and hold the mouse button pressed, and drag left or right.

3. When you are done scrubbing, release the mouse button.
   The audio is played back from the edit cursor position and a small section is looped once.

Playback Scrubbing Preferences

You can define the behavior of the **Play** tool in the **Audio Files Preferences**.

Select **File** > **Preferences** > **Audio Files**. The following options are available in the **Playback Scrubbing** section.

- If **Restrict to Play Tool** is activated, scrubbing is not available when you click and drag on the time ruler during playback.
- The **Sensitivity** setting determines the length of the audio loop that is played once when click and drag on the time ruler with the **Play** tool.

Scroll During Playback

You can determine how the view should be scrolled in **Play** mode.

- To set the scroll mode, open the **Audio Editor** or the **Audio Montage** window, select the **View** tab, and activate one of the options in the **Playback** section.

Static View

Disables scrolling.

View Follows Cursor

The view automatically scrolls to keep the playback cursor visible.

Playback in the Audio Montage Window

Playback in the **Audio Montage** window works the same way as in the **Audio Editor**. However, there are some things to note.

Mute and Solo Tracks

You can mute or solo tracks in an audio montage by using the corresponding menu in the track control area.

Click the number, and select **Mute** and/or **Solo**.

RELATED LINKS
Track Control Area on page 96

Playing Back Individual Clips

You can play back an individual clip on a track. Overlapping clips or clips on other tracks are muted.

PROCEDURE

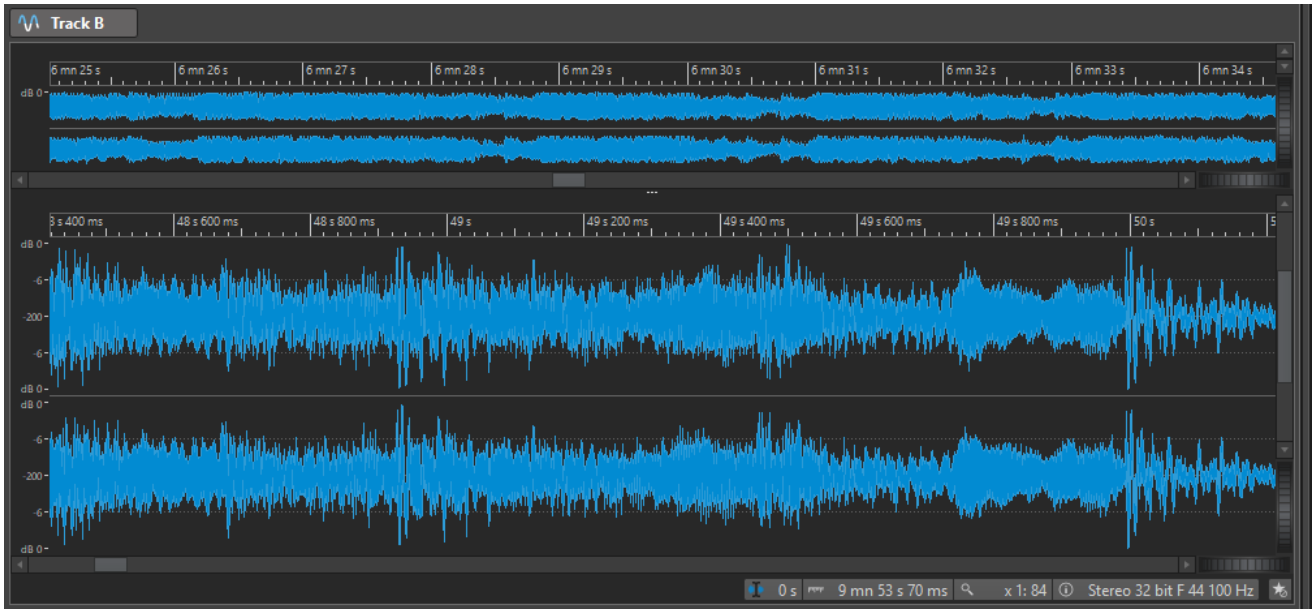
1. In the montage window, right-click the lower part of the clip that you want to play back.
2. On the menu, select one of the following play options:
   - To play back the clip, select **Play Clip**.
   - To play back the clip with pre-roll, select **Play Clip with Pre-Roll**.

Audio File Editing

Audio file editing refers to opening, editing, and saving audio files.

Wave Window

The wave window displays audio files graphically. Here, you view, play back, and edit individual audio files.

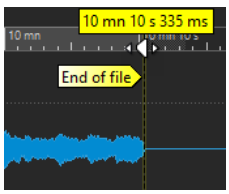


The wave window consists of two displays. You can use one display as an overview to navigate through the project and the other as the main view for editing.

Magnetic Bounds in Audio Files

Some positions, such as markers or selection edges, can be defined as magnetic. Dragged elements can snap to these positions. This makes it easier to position items accurately.

For example, if you move a marker and it gets close to one of the magnetic bounds, the marker snaps to this position. A label is displayed, indicating the snap position.



To place the cursor at a magnetic position, click the time line and keep the mouse button pressed. When you now move the cursor, it jumps to the next magnetic bound.

Magnets Menu

On this pop-up menu, you can specify which positions should be magnetic. If **Snap to Magnets** is activated, items that you move snap to these positions.

- To open the **Magnets** pop-up menu, select the **Edit** tab in the **Audio Editor**, and click **Magnets** in the **Snapping** section.

You can let items snap to the following positions:

Start of File/End of File
: Elements snap to the start/end of the file when they are moved near these positions.

Time Ruler Marks
: Elements snap to the time ruler grid when they are moved near these positions.

Markers
: Elements snap to marker positions when they are moved near these positions.

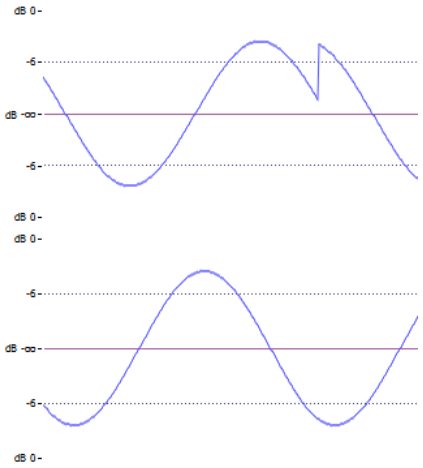
Selection Edges
: Elements snap to the selection edges when they are moved near these positions.

Cursor
: Elements snap to the edit cursor when they are moved near the cursor.

Zero Crossing

A zero crossing is a point where the waveform crosses the zero level axis. When you perform editing operations, such as cutting, pasting, or dragging, make sure that the material is inserted at a zero crossing.

If you do not perform these operations at zero crossings, this can result in discontinuities in the wave, which are perceived as clicks or pops in the sound.



Activate **Zero-Crossing** on the **Edit** tab of the **Audio Editor** to make sure that the selections that you make are always adjusted so that they start and end at the nearest zero crossing.

Setting Up the Zero Crossing Detection

You can let selection edges automatically snap to the nearest zero crossing point. In the **Audio Files Preferences** dialog, you can specify whether to allow snap at high zoom factors, and specify the scan range for the zero crossing detection.

PROCEDURE

1. In the **Audio Editor**, select the **Edit** tab.

2. In the **Snapping** section, activate **Zero-Crossing**.
3. Select **File** > **Preferences** > **Audio Files**.
4. In the **Audio Files Preferences** tab, select the **Editing** tab.
5. Make your settings in the **Snap Selection to Zero-Crossing** section.
6. Click **OK**.

Moving the Cursor Position to the Closest Zero Crossing

You can automatically move the cursor position to the closest zero crossing.

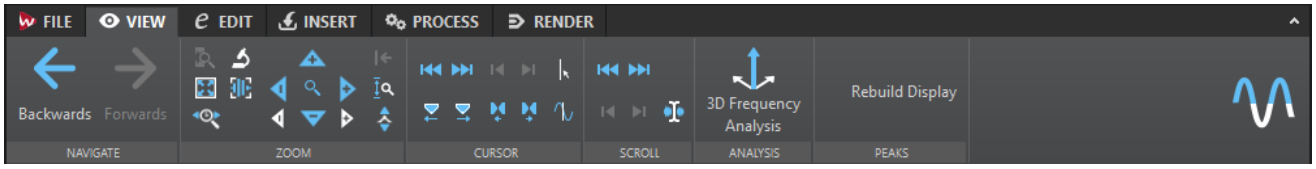
PROCEDURE

1. In the **Audio Editor**, select the **View** tab.
2. In the **Cursor** section, click **Snap to Zero-Crossing**.

Audio Editor Tabs

The tabs in the **Audio Editor** give you access to the tools and options you need to edit audio files.

View Tab



Navigate

Backwards/Forwards

Navigates to the previous/next cursor position, zoom factor, and selection range.

Zoom

Time

Opens a pop-up menu that allows you to adjust the zoom to display the selected time range. **Zoom in 1:1** zooms in so that one pixel on the screen represents one sample.

To edit the zoom factor, click **Edit Zoom Factor**. This opens the **Zoom Factor** dialog, where you can edit the following settings:

- **Set Time Range** allows you to specify the time range that you want to display.
- **Samples per Screen Point** allows you to specify how many audio samples are summarized in each screen point.
- **Screen Points per Sample** allows you to specify how many screen points are used to represent a single audio sample.

Zoom

Activates the **Zoom** tool that allows you to define a time range that is zoomed in.

Zoom Selection

Zooms the window so that the current selection occupies the entire montage window.

Microscope

Zooms in as far as possible.

Zoom in Audio (10x)/Zoom out Audio (10x)

Zooms in/out in big steps.

View All

Zooms out as far as possible.

Zoom in Audio/Zoom out Audio

Zooms in/out in small steps.

Level

Adjusts the zoom to only display samples below the selected dB value.

Optimize Vertical Zoom

Changes the vertical zoom factor so that the peaks are clearly visible. This adjustment is done according to the section of the wave that is visible in the wave/montage window.

Reset Zoom to 0 dB

Adjusts the zoom to display audio levels up to 0 dB.

Zoom in Vertically/Zoom out Vertically

Zooms in/out to show waveforms with a lower/higher level.

Cursor

Move Cursor to Start of File/Move Cursor to End of File

Moves the cursor to the start/end of the file.

Previous Marker/Next Marker

Moves the cursor to the previous/next marker.

Start of Selection/End of Selection

Moves the cursor to the start/end of the selected time range.

Previous Region Edge/Next Region Edge

Moves the cursor to the previous/next region edge.

Snap to Zero-Crossing

Moves the edit cursor to the nearest zero crossing point.

Edit Cursor Position

Opens the **Cursor Position** dialog where you can edit the cursor position.

Scroll

Start/End

Displays the start/end of the audio without moving the cursor.

Start of Selection/End of Selection

Displays the start/end of the audio selection without moving the cursor.

Cursor

Displays the cursor position.

Playback

Static View

Deactivates scrolling.

View Follows Cursor

Automatically scrolls the view to keep the playback cursor visible.

Scroll View

Scrolls the view to keep the playback cursor centered.

Analysis

3D Frequency Analysis

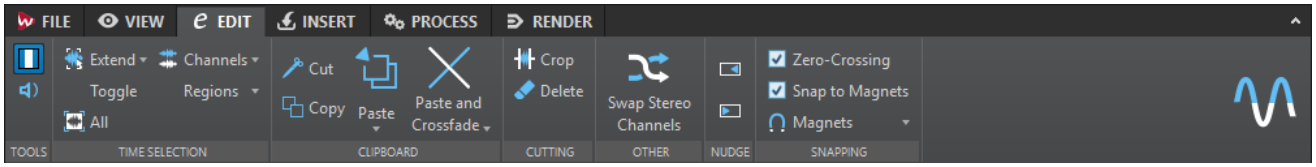
Opens the **3D Frequency Analysis** dialog where you can define which frequency range is analyzed and modify the appearance of the graph for the 3D frequency analysis.

Peaks

Rebuild Peak Display

Normally, peak files are automatically updated when the date of the peak file is older than the date of the audio file. However, it can happen that the date of the audio file is wrong and therefore not automatically updated. In this option allows you to rebuild the peak file.

Edit Tab



Tools

Time Selection

Tool that allows you to select a time range.

Play

Tool that allows you to play back the audio file at the position where you click.

Time Selection

Extend

This pop-up menu contains various options for creating or extending selection ranges.

Toggle

Toggles the current audio selection.

All

Selects the entire waveform.

Channels

This pop-up menu allows you to change the channel selection.

- **Extend to All Channels** extends the current selection range to all channels.

- **Left Channel Only** reduces the current selection range to the left channel only.
- **Right Channel Only** reduces the current selection range to the right channel only.

Regions

This pop-up menu allows you to select a range between two markers.

- **Generic Region** selects the range between the two generic markers that encompass the edit cursor.

Clipboard

Cut

Cuts the active clip to the clipboard.

Copy

Copies the active clip to the clipboard.

Paste

Pastes the clipboard content.

Right-click **Paste** to open a pop-up menu that allows you to select a paste type.

- **Overwrite** replaces the audio at the paste position.
- **Append** adds the pasted audio after the end of the file.
- **Prepend** adds the pasted audio before the beginning of the file.
- **Multiple Copies** opens a dialog in which you can enter the number of copies that you want to create.
- **Mix** blends two files into each other, starting at the selection or, if there is no selection, at the cursor position.

  If you select **Mix**, a dialog opens, allowing you to specify the gain and phase for the audio on the clipboard and at the destination. The clipboard data is always mixed in, regardless of the length of the selection.

Paste and Crossfade

Pastes the clipboard content and creates a crossfade.

Right-click **Paste and Crossfade** to open a pop-up menu that allows you to select a crossfade type for pasting.

- **Linear (Equal Gain)** changes the level linearly.
- **Sinus (Equal Power)** changes the level according to a sine curve, the power of the mix remains constant.
- **Square-Root (Equal Power)** changes the level according to a square-root curve, the power of the mix remains constant.

Cutting

Crop

Deletes the data outside the selection.

Delete

Deletes the selection. The audio to the right of the selection is moved to the left to fill the gap.

Swap Stereo Channels

Moves the audio in the left channel to the right channel, and vice versa.

Nudge

Nudge Left

Nudges the audio selection to the left.

Nudge Right

Nudges the audio selection to the right.

Snapping

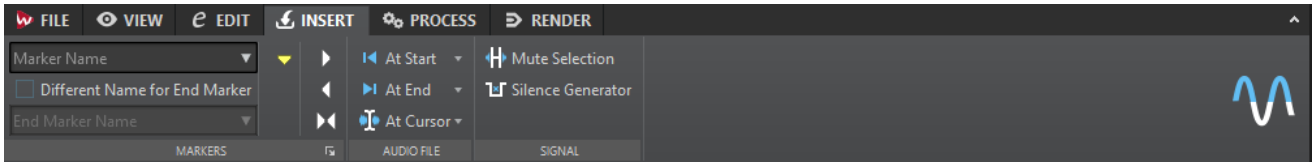
Zero-Crossing

If this option is activated, the start and the end of a selected range always snap to a zero-crossing point of the waveform.

Snap to Magnets

If this option is activated, moved elements such as clip edges, time selection edges, cursor, and markers snap to the magnets that are activated on the **Magnets** pop-up menu.

Insert Tab



Markers

Marker Name

Allows you to enter the name of the start and end marker. If nothing is entered, a generic name is used.

To edit the default names, open the **Markers** window, and select **Functions** > **Default Marker Names**.

Different Name for End Marker

If this option is activated, you can enter a different name for the end marker.

If this option is deactivated, the name of the start marker is also used for the end marker.

Create Marker

Allows you to create markers and marker pairs at the edit cursor position.

Audio File

At Start

Allows you to insert an audio file at the start of the active audio file.

At End

Allows you to insert an audio file at the end of the active audio file.

At Cursor

Allows you to insert an audio file at the cursor position.

Signal

Mute Selection

Replaces the audio selection with silence.

Silence Generator

Opens the **Silence Generator** dialog that allows you to insert silence in an audio file.

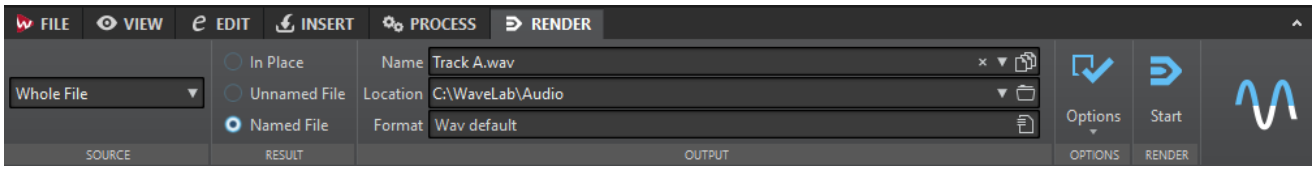
RELATED LINKS
Silence Generator Dialog on page 81

Process Tab

This tab provides access to the offline processing tools.

RELATED LINKS
Offline Processing on page 87

Render Tab



Source

The **Source** pop-up menu allows you to select which part of the audio file you want to process. The following options are available:

Whole File

Processes and renders the whole audio range.

Specific Region

Processes and renders a specific audio range to an independent file.

Specify the region to process on the pop-up menu.

Result

In Place

If this option is activated, the rendered audio range replaces the source audio range.

Unnamed File

If this option is activated, a temporary untitled file is rendered.

Named File

If this option is activated, you can specify a name for the rendered file.

Output

Name

Allows you to enter a name for the rendered file. Clicking the arrow icon opens a pop-up menu that offers you several naming options.

Location

Allows you to select a destination folder for the rendered files.

Format

Opens a pop-up menu where you can select a file format.

Options

Depending on the selected source, different options are available.

Bypass Master Section

If this option is activated, the plug-ins and gain of the **Master Section** are bypassed when rendering.

No Reverb Tail

If this option is activated, the audio tail produced by effects such as reverb is not included in the rendered file.

Some plug-ins do not transfer information on the tail duration to WaveLab. In this case, this option has no effect. For such plug-ins, you can add the **Silence** plug-in to add extra samples at the end of the file.

Copy Markers

If this option is activated, the markers that are included in the range to process are copied to the rendered file.

Skip Exclusion Region

If this option is activated, muted audio ranges are skipped and not included in the result.

Open Resulting Audio File

If this option is activated, every rendered file is opened in a new window.

Bypass Master Section on Resulting Audio File

If this option is activated, playback of the resulting audio file bypasses the entire **Master Section**. This setting can be toggled by clicking the button at the bottom right of the wave window or montage window.

NOTE

It is recommended to activate this option, because this way, you do not monitor new files through the effects that have already been applied to them.

Upload to SoundCloud

If this option is activated, the rendered file is uploaded to SoundCloud.

Render

Start

Starts the rendering process.

File Handling in the Audio Editor

Mono/Stereo Handling

WaveLab LE is very flexible in its handling of stereo. All editing operations can be performed on either one channel or on both.

Supported File Formats

WaveLab LE can open and save audio files in a number of file formats.

Wave (.wav)

The following sample precisions are supported: 8 bit, 16 bit, 20 bit, 24 bit, 32 bit float, and 64 bit float.

WavPack (.wv/.wvc)

This file format allows digital audio to be losslessly compressed, including 32 bit float audio files.

AIFF (.aif, .aiff, .snd)

Audio Interchange File Format, a standard defined by Apple Computers Inc. The following sample precisions are supported: 8 bit, 16 bit, 20 bit, and 24 bit.

MPEG-1 Layer 3 (.mp3)

The most common audio compression format. The major advantage of MPEG compression is that the file size is significantly reduced, while there is little degradation of sound quality.

NOTE

When you open an MPEG compressed file in WaveLab LE, the file is converted to a temporary wave file. On saving, the temporary wave file is converted back to MP3.

Original Sound Quality (.osq, read-only)

This is the proprietary lossless compressed audio format of WaveLab.

Ogg Vorbis (.ogg)

Ogg Vorbis is a compressed file format that is open, patent-free, and which creates very small audio files maintaining comparatively high audio quality.

Windows Media Audio (.wma, .asf)

Microsoft's own compressed format. WaveLab LE lets you import/export audio in this format (Windows only). To import/export audio in WMA surround format, Windows Media Player 9 or later must be installed on your system.

Ensoniq Paris (.paf)

Used by the Ensoniq Paris™ system. The following sample precisions are supported: 16 bit and 24 bit.

FLAC (.flac)

Free Lossless Audio Codec (FLAC) is a codec which allows digital audio to be losslessly compressed.

Apple formats (.caf, .3gp, .3g2, .caf)

If Quicktime is installed on your system, these formats are available (read-only and only on 32-bit Windows or Mac systems).

AAC (.aac, read-only)

Advanced Audio Coding (AAC) is a codec that allows lossy compression and encoding scheme for digital audio.

NOTE

The "$$$" file type is a temporary file format of WaveLab LE. If you experience a computer crash, you may restore some of your work by opening any "$$$" files on your hard disk.

20-bit, 24-bit, and 32-bit Float Files

You do not need a 20-bit or 24-bit audio card to take advantage of the fact that WaveLab LE can handle 20-bit and 24-bit audio files. Any processing or editing performed on the files is always done at full precision (64-bit float), even if your card does not support the full precision.

For playback, WaveLab LE automatically adapts to the card that you have installed.

Creating a New Audio File

You can create an empty audio file, to assemble material from other audio files, for example.

PROCEDURE

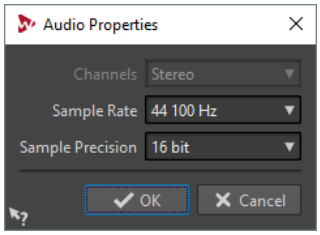
1. Select **File** > **New**.
2. Click **Audio File** > **Custom**.
3. Specify the audio properties and click **Create**.

Audio Properties

You can define the channels, the sample rate, and the sample precision of the audio file.

You can set these properties when you create a new audio file.

- To change the properties for the selected audio file, select the **File** tab and click **Info**, or click the **Audio Properties** button at the bottom right of the wave window.



Channels

Allows you to select the number of audio channels.

Sample Rate

Allows you to select the number of audio samples per second.

Sample Precision

Allows you to select the accuracy of samples in the audio stream.

Saving an Audio File

PROCEDURE

1. Do one of the following:
   - To save an audio file that has never been saved before, select **File** > **Save As**.
   - To save an audio file that has been saved before, click the **Save** button, or select **File** > **Save**.
2. In the **Save As** window, specify a file name and location.
3. Click **Save**.

Saving in Another Format

You can change the file format, sampling frequency, sample precision, and stereo/mono status when saving.

PROCEDURE

1. Select **File** > **Save As**.
2. In the **Save As** window, specify a file name and location.

3. Click in the **Format** field and select **Edit**.
4. In the **Audio File Format** dialog, set the file format and specify the properties.
5. Click **OK**.
6. Click **Save**.

RESULT

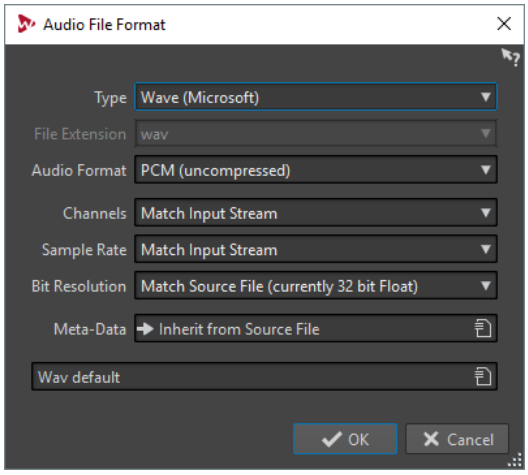
A new file is created. The original file is not affected by the operation.

Audio File Format Dialog

In this dialog, you can change various file settings when saving.

- To open the **Audio File Format** dialog, select **File** > **Export**, and select **Render**. Then activate **Named File**, click in the **Format** field, and select **Edit**.

This dialog can also be opened from various other locations in WaveLab LE.



Type

Select an audio file type. This affects which options are available on the **Audio Format** menu.

File Extension

Select a file extension that is compatible with the current file type.

Audio Format

Select an audio format that is compatible with the current file type.

Channels

Specify the number of audio channels for the files to be created.

Sample Rate

Select a sample rate for the audio file. If you change this setting, a sample rate conversion takes place.

IMPORTANT

Use this only for simple conversions. For professional results, use the **Resample** plug-in and add limiting and dithering.

Sample Precision

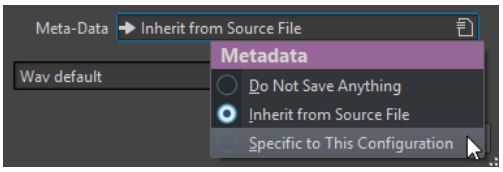
Select a sample precision for the audio file. This option is only available for specific file types.

IMPORTANT

Reducing the sample precision is only advised for simple conversions. For professional results, it is recommended to add dithering in the **Master Section**.

Metadata

Lets you make metadata settings that are saved with the file. This option is only available for some file types.



- If **Do Not Save Anything** is selected, no metadata are saved with the file.
- If **Inherit from Source File** is selected, the metadata of the source file are used. If the source metadata is empty, the default metadata is used, if available.
- If selecting **Specific to This Configuration** is selected, you can edit the metadata, or replace it with a metadata preset. To edit the metadata, open the metadata pop-up menu again, and select **Edit**.

Changing the Format

When changing the sample rate, sample precision, and number of channels of an audio file, several operations are performed.

Sample Rate

If a new sample rate is specified, a sample rate conversion is performed.

Sample Precision

If a different sample precision is specified, the file is either truncated down to 8 bits, or padded up to 64 bits. If you are converting to a lower sample precision, you should consider adding dithering.

Mono/Stereo

If the file is converted from mono to stereo, the same material is used in both channels. If the conversion is from stereo to mono, a mix of the two channels is created.

NOTE

- If you only want to change the sample precision, you can do this in the **Audio Properties** section of the **Info** window instead, and then save the audio file.
- For high quality mastering purposes, it is not recommended to change the sample rate and number of channels using the **Audio Properties** section, but instead use plug-ins and functions of the **Master Section**.

Saving a Selection as an Audio File

You can save a selection in the open audio file as a new audio file.

PROCEDURE

1. In the wave window, make a selection range.
2. In the **Audio Editor**, select the **Render** tab.
3. In the **Source** section, open the pop-up menu and select **Selected Audio Range**.

4. In the **Output** section, specify a file name and location.
5. Open the **Format** menu and select **Edit Single Format**.
6. In the **Audio File Format** dialog, specify the output format and click **OK**.
7. In the **Render** section, click **Start**.

Saving Left/Right Channel as Audio File

You can save each channel individually into a separate file. Use this option when editing dual mono files, for example.

PROCEDURE

1. In the **Audio Editor**, select the **Render** tab.
2. In the **Output** section, specify a file name and location.
3. Open the **Format** menu and select **Edit Single Format**.
4. In the **Audio File Format** dialog, open the **Channels** pop-up menu, and select **Left Channel** or **Right Channel**.
5. Make additional output settings and click **OK**.
6. In the **Render** section, click **Start**.

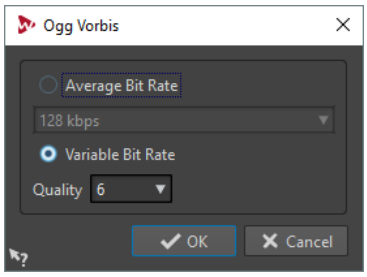
Encoding Audio Files

Audio can be saved in different formats. The process of converting audio to another format is called encoding. When saving audio files, you can specify various encoding options for some file formats.

Ogg Vorbis Dialog

You can edit the encoding options when you save an Ogg Vorbis audio file.

You can open the **Ogg Vorbis** dialog from most places where you can select an output file format. For example, open an audio file, select **File** > **Save As**, click in the **Format** field, and select **Edit**. In the **Audio File Format** dialog, select **Ogg Vorbis** as type, click the **Encoding** field, and select **Edit**.



Average Bit Rate

If this option is activated, the average bit rate in the file remains constant during encoding. Because the file size is proportional to time, the localization of a given point is easier, but it can result in a lower quality compared to the **Variable Bit Rate** option.

Variable Bit Rate

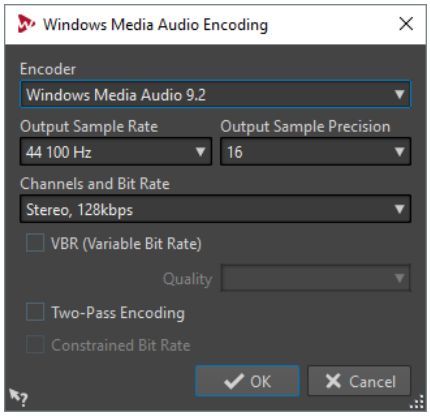
If this option is activated, the bit rate in the file will vary during encoding, depending on the complexity of the material. This can give a better quality/size ratio in the resulting file.

In the **Quality** field, select the quality. Lower quality settings result in smaller files.

Windows Media Audio Encoding Dialog

You can edit the encoding options when you save a Windows Media Audio (WMA) audio file. This dialog is only available in on Windows systems.

You can open the **Windows Media Audio** dialog from most places where you can select an output file format. For example, open an audio file, select **File** > **Save As**, click in the **Format** field, and select **Edit**. In the **Audio File Format** dialog, select **Windows Media Audio (WMA)** as type, click the **Encoding** field, and select **Edit**.



Encoder

Sets the encoder.

Output Sample Rate

Sets the output sample rate of the encoded file. The higher the sample rate, the higher the quality, but the larger the output file.

Output Sample Precision

Sets the output sample precision of the encoded file. This parameter is not available for all encoders.

Channels and Bit Rate

The available items here depend on the selected encoding method and the output sample rate.

VBR (Variable Bit Rate)

If this option is activated, the bit rate in the file will vary during the encoding, depending on the complexity of the material. This can produce a better quality/size ratio in the output file.

In the **Quality** field, select the quality. Lower quality settings result in smaller files.

Two-Pass Encoding

If this option is activated, the encoding quality increases, but the process takes twice as long.

Constrained Bit Rate

This option is available when the **VBR** and **Two-Pass Encoding** options are activated. This is used to maintain the bit rate within limits to avoid peaks. This is recommended for media, such as CD or DVD.

Creating an Audio Montage from an Audio File

You can export audio files to an audio montage, including all markers that you have set in the audio file.

PROCEDURE

1. In the **Audio Editor**, open the audio file that you want export to an audio montage.
2. Optional: If you want to use a specific time range of the audio file, create a selection range in the wave window.
3. Select **File** > **New**.
4. Select **Audio Montage** > **From Current File**.
5. In the **From Current Audio File** section, click **Insert Audio File in New Montage**.
6. Click **Create**.
7. In the **Create Audio Montage from Audio File** dialog, select whether to import the whole file or the selected audio range.
8. Optional: Decide if you want to perform any of the following marker operations:
   - **Import Markers**
   - **Split at Generic Region Markers**
9. Click **OK**.

Inserting Audio Files into Another Audio File

You can assemble an audio file from several audio files.

PROCEDURE

1. In the **Audio Editor**, open the audio file in which you want to insert another audio file.
2. If you want to insert an audio file at the edit cursor position, make sure that **Snap to Magnets** is activated, and that **Cursor** is activated on the **Magnet** pop-up menu.

   The edit cursor snaps to the nearest zero crossing. This avoids glitches.
3. Select the **Insert** tab.
4. In the **Audio File** section, select one of the following insert options:
   - **At Start**
   - **At End**
   - **At Cursor**

   If you select **At Cursor**, the audio file is cut at the insert position. The part after the cut is moved to the right.
5. On the pop-up menu, select the audio file that you want to insert.

RELATED LINKS

Magnetic Bounds in Audio Files on page 58

Turning Selections Into New Files

You can turn selections into new files via drag and drop or by using the **Render** tab in the **Audio Editor**.

Turning Selections Into New Files By Dragging

PROCEDURE

1. Make a selection in the wave window.
2. Drag the selection to the tab bar above the wave window and release the mouse button.

RESULT

The selection opens in a new stereo window.

Turning Selections Into New Files Using the Menu

PROCEDURE

1. Make a selection in the wave window.
2. Right-click the selection and select **Copy Selection to New Window**.
3. From the submenu, select one of the following options:
   - **Duplicate**
   - **Stereo Version**
   - **Mono Mixdown**
   - **Mono Mixdown (Subtract Right Channel from Left Channel)**

RESULT

The selection opens in a new stereo or mono window.

Converting From Stereo to Mono and From Mono to Stereo

You can convert audio files from mono to stereo and from stereo to mono. Converting a mono file into a stereo file produces an audio file that contains the same material in both channels, for example for further processing into real stereo. Converting a stereo file into a mono file mixes the stereo channels to a mono channel.

Converting a Selection From Stereo to Mono

PROCEDURE

1. Make a stereo selection in the wave window.
2. Select **File** > **New**.
3. Select **Audio File** > **From Current File**.
4. Select one of the following options:
   - To mix the left and right stereo channels when converting to mono, click **Mono Mixdown**.
   - To mix the left channel with the inverse of the right channel when converting to mono, click **Mono Mixdown (Subtract Right Channel from Left Channel)**.

     The resulting mono wave contains the difference between the channels. For example, this allows you to verify that a wave file really is a true stereo file rather than a mono file converted to stereo format.

RESULT

The selection opens in a new mono window.

Converting From Stereo to Mono While Saving

PROCEDURE

1. Make a stereo selection in the wave window.
2. Select **File** > **Save As**.
3. In the **Save As** window, specify a file name and location.
4. Click in the **Format** field and select **Edit**.
5. In the **Audio File Format** dialog, open the **Channels** menu and select one of the mono settings.

   For example, when selecting **Mono (Mix -3 dB)**, the resulting audio file is attenuated by 3 dB.
6. Click **OK**.
7. Click **Save**.

Converting a Selection From Mono to Stereo

PROCEDURE

1. Make a mono selection in the wave window.
2. Select **File** > **New**.
3. Select **Audio File** > **From Current File**.
4. Click **Stereo Version**.
5. Click **Create**.

RESULT

The selection opens in a new stereo window.

Swapping Channels in a Stereo File

You can swap the two channels in an audio file, that is, you can move the audio in the left channel to the right channel, and the audio in the right channel to the left channel.

- To swap the channels of the whole audio file in the **Audio Editor**, select the **Edit** tab, and in the **Cutting** section, click **Swap Stereo Channels**.
- To swap the channels only a selected range of the audio file, make a selection range in the wave window, select the **Edit** tab, and in the **Cutting** section, click **Swap Stereo Channels**.

Special Paste Options

On the **Paste** pop-up menu in the **Audio Editor**, you find additional paste options.

- To access the special paste option, open the **Audio Editor**, select the **Edit** tab, and in the **Clipboard** section, right-click **Paste**.

Overwrite

Overwrites data in the destination file, rather than moving data to make room for the inserted audio. How much is overwritten depends on the selection in the destination file:

- If there is no selection in the destination file, a section with the same length as the pasted selection is overwritten.
- If there is a selection in the destination file, the pasted selection replaces that selection.

Append

Adds the pasted audio after the end of the file.

Prepend

Adds the pasted audio before the beginning of the file.

Multiple Copies

Opens a dialog in which you can enter the number of copies that you want to create.

Mix

Blends two files into each other, starting at the selection or, if there is no selection, at the cursor position.

- When you select the **Mix** option, a dialog opens, allowing you to specify the gain for the audio on the clipboard and at the destination.
- All the data on the clipboard is always mixed in, regardless of the length of the selection.

Moving Audio

You can rearrange the order of the audio in a file by dragging, and cutting and pasting.

Moving Audio by Dragging

PREREQUISITE

Decide whether you want to use **Snap Selection to Zero-Crossing**.

PROCEDURE

1. In the wave window, make a selection.
2. Drag the selection to a position outside the selection in the same file, or to another wave window.

RESULT

The selection is removed from its original position and inserted where you drop it.

NOTE

To undo a move between two files you must first undo the paste in the destination window and then undo the cut operation in the source window.

Moving Audio Using Cut and Paste

PREREQUISITE

Decide whether you want to use **Snap Selection to Zero-Crossing**.

PROCEDURE

1. In the wave window, make a selection.
2. Use one of the following copy methods:
   - In the **Audio Editor**, select the **Edit** tab, and click **Cut**.

- Press **Ctrl/Cmd-X**.

3. Select how you want to insert the selection:
   - If you want to insert the audio, click once at the position in the same file or in another file.
   - If you want to replace a section of audio, select it.
4. To paste the selection, do one of the following:
   - In the **Audio Editor**, select the **Edit** tab, and click **Paste**.
   - Press **Ctrl/Cmd-V**.

RESULT

The selection is removed from its original position and inserted where you drop it.

NOTE

To undo a move between two files you must first undo the paste in the destination window and then undo the cut operation in the source window.

Moving Audio by Nudging

The nudge left/right tools can be used to move the audio in small steps within a file.

PROCEDURE

1. In the wave window, make a selection.
2. In the **Audio Editor**, select the **Edit** tab.
3. In the **Nudge** section, click **Nudge Left** or **Nudge Right**.

RESULT

The audio is moved one pixel. Exactly how much this is depends on how far you are zoomed in. For example, if the status bar displays **x1:256**, the selection is moved 256 samples. The moved section overwrites the audio at that position.

Copying Audio

You can copy sections of audio within the same file or between audio files.

Stereo/Mono Handling

When you drag or copy stereo or mono files to other locations, the target location determines how the files are inserted.

Stereo/Mono is handled as follows when you drag between files:

Dragged section	Drop wave	Action
Stereo	Stereo	The dragged audio is always inserted into both channels.
Stereo	Mono	Only the left channel is inserted.
Mono	Stereo	What happens depends on the vertical drop position. This is indicated by the cursor shape. The selection can be inserted into only one of the channels, or the same material can be inserted into both channels.

Stereo/Mono is handled as follows when you copy and paste files:

Copied section	Paste wave	Action
Stereo	Stereo	If the wave cursor extends across both channels of the destination file, the material is inserted into both channels.
Stereo	Stereo	If the wave cursor is only in one channel, the audio is only pasted in that channel. Material from the left channel is pasted in the left channel and material from the right channel is pasted in the right channel.
Stereo	Mono	Only the left channel is pasted.
Mono	Stereo	What happens depends on whether the wave cursor is in one channel or both. The audio is either pasted in one of the channels, or the same material is inserted into both channels.

Sample Rate Conflicts

If you copy or move audio from one window to another, and the sample rates of the two files are not the same, the copied/moved sound plays back at the wrong pitch (speed). The program warns you if this is about to happen.

While mixing sample rates can be used as an effect, it is most often not intended. There are two ways to get around this:

- Convert the sample rate of the source file to the same rate as the destination file before editing.
- Convert the sample rate of the destination file to the same rate as the source file before adding the audio.

Copying Audio Using Copy and Paste

PREREQUISITE

Decide whether you want to use **Snap Selection to Zero-Crossing**.

PROCEDURE

1. In the wave window, make a selection.
2. Use one of the following copy methods:
   - In the **Audio Editor**, select the **Edit** tab, and click **Copy**.
   - Press **Ctrl/Cmd-C**.
3. Select how you want to insert the selection:
   - If you want to insert the audio, click once at the position in the same file or in another file.
   - If you want to replace a section of audio, select it.
4. To paste the selection, do one of the following:
   - In the **Audio Editor**, select the **Edit** tab, and click **Paste**.
   - Press **Ctrl/Cmd-V**.

Copying Audio by Dragging

PREREQUISITE

Decide whether you want to use **Snap Selection to Zero-Crossing**.

PROCEDURE

1. In the wave window, make a selection.
2. Click the middle of the selection, and drag it to a position outside the selection in the same file, or to another wave window.

RESULT

The selection is inserted at the indicated point. The audio that previously began at that point is moved to the right.

Changing the Audio Properties

You can change the sample rate and sample precision of audio files.

Changing these values does not process the audio file in any way (in contrast to using **Save As**). However, the following rules apply:

- If you change the sample rate, the file plays back at a new pitch.
- If you change the sample precision, the file is converted to the new precision the next time you save it.

NOTE

There is no undo for this. If you save a file with a lower sample precision, the file is converted permanently.

PROCEDURE

1. In the **Audio Editor**, open an audio file.
2. Select the **File** tab.
3. Click **Info**.
4. In the **Audio Properties** section, specify a new **Sample Rate** and/or **Sample Precision**.
5. Click **Apply Changes**.

RELATED LINKS

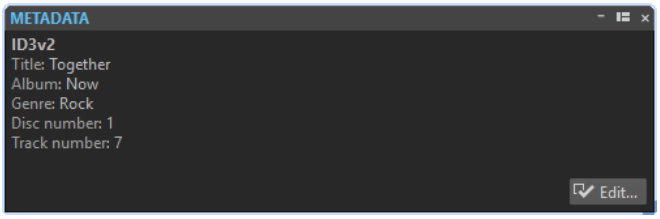
Info Tab on page 26

Metadata

Metadata consists of attributes that describe the audio contents, for example, the title of the track, the author, or the date the track was recorded. Depending on the file format of the selected audio file, this data varies.

When opening an audio file or audio montage, the metadata found in the file is loaded. You can create different metadata presets for audio files and audio montages.

A preview of the metadata is displayed in the **Metadata** window. To view the complete metadata of a file and to be able to edit the metadata, select **Tool Windows** > **Metadata** and click the **Edit** button.



Not all file formats can save metadata. Depending on the output file format, all metadata or only part of the metadata is saved in an audio file. The following file formats can contain metadata:

- .wav
- .mp3
- .ogg
- .wma
- .flac

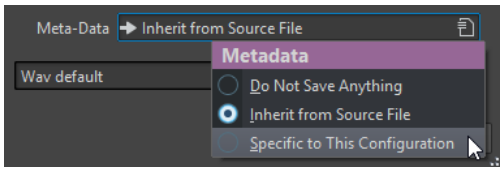
For MP3, the following metadata types are available:

- ID3 v1 and ID3 v2, including picture support

For WAV, the following metadata types are available:

- RIFF
- BWF
- ID3, including picture support

When saving or recording an audio file in the **Audio File Format** dialog, you can specify whether not to use any metadata, inherit the metadata from the source file, or edit the metadata of the file.



Metadata can be entered manually or generated automatically.

The following options can be generated automatically:

- USID (**BWF**, **Basics** tab)

WaveLab LE includes several metadata presets. They are used as examples and can be customized to your needs. You can load metadata presets from the **Metadata Presets** pop-up menu in the **Audio File Format** dialog, or from the **Metadata** dialog.

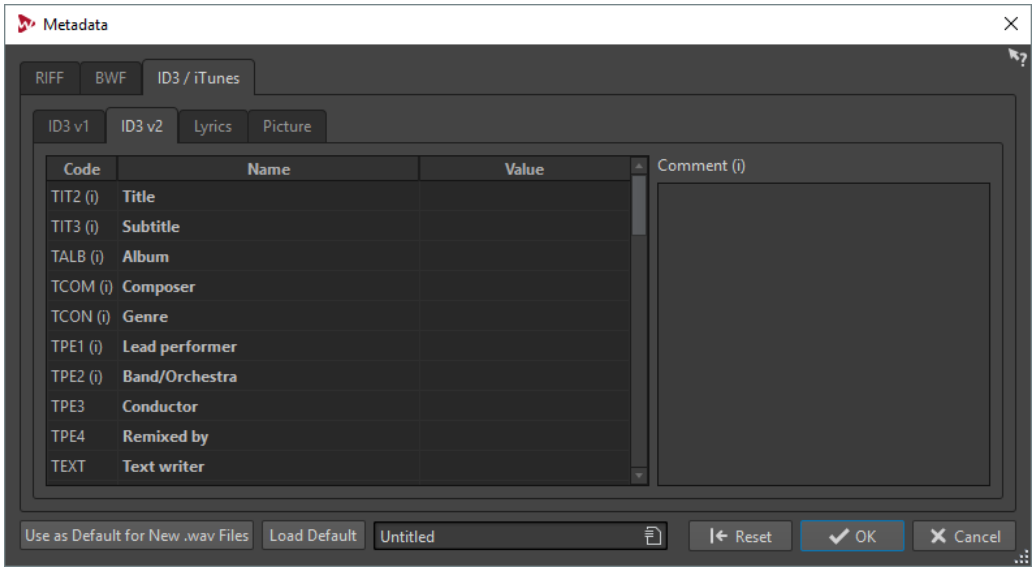
RELATED LINKS
Audio File Format Dialog on page 69

Metadata Dialog

This dialog allows you to define the metadata to be embedded in your audio file.

- To open the **Metadata** dialog, open the **Metadata** window and click **Edit**.

Depending on the file type, the metadata is handled differently.



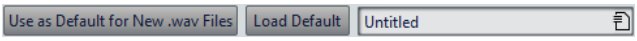
Metadata dialog for WAV files

When opening the **Metadata** dialog for files in the **Audio Editor**, you can edit the metadata that is saved in the audio file. This metadata is saved to disk later.

When opening the **Metadata** dialog for files in the **Audio Montage** window, you can edit the metadata for the audio files that are created when rendering the audio montage. If you render to WAV format, the metadata will be associated to these files.

Metadata Presets

In the **Metadata** dialog, you can save metadata presets and apply these presets to other files. Metadata presets can be applied to WAV, MP3, and AAC files.



The **Use as Default for New .wav Files** option allows you to define a set of metadata as default.

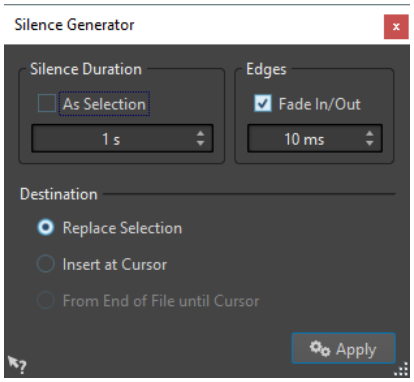
When you create a new file, and do not add any metadata, this default metadata is applied to the file when saving or rendering it. For example, you can save or record WAV files with BWF metadata and automatically add a Unique Material Identifier.

To edit the default metadata preset, select **Load Default**, and edit the preset.

Silence Generator Dialog

This dialog allows you to insert silence in an audio file.

- To open the **Silence Generator** dialog, select the **Insert** tab in the **Audio Editor**, and click **Silence Generator**.



Silence Duration

As Selection uses the duration of the active audio selection as the duration of the silent section. Specify the duration of the silent section in the value field below.

Edges

Fade In/Fade Out performs a crossfade at the start and end of the silent section for smoother transitions. Specify the fade time in the value field below.

Destination

- **Replace Selection** replaces the current audio selection with the silent section.
- **Insert at Cursor** inserts the silent section at the cursor position.
- **From End of File Until Cursor** extends the audio file with silence up to the cursor position. Activating this option also defines the silence duration and ignores the **Silence Duration** setting.

Replacing a Selection with Silence

You can replace a section of an audio file with silence.

PROCEDURE

1. In the **Audio Editor**, make a selection.
2. Select the **Insert** tab.
3. In the **Signal** section, click **Silence Generator**.
4. Set the silence duration to **As Selection**, and the destination to **Replace Selection**.
5. Click **Apply**.

Inserting Silence

You can insert a specified length of silence at any position of the audio file.

PROCEDURE

1. In the **Audio Editor**, set the cursor where you want the inserted silence to begin.
2. Select the **Insert** tab.
3. In the **Signal** section, click **Silence Generator**.
4. Deactivate **As Selection**, and specify the length.
5. Set the destination to **Insert at Cursor**.
6. Click **Apply**.

Muting a Selection

The **Mute Selection** function replaces the selection with true silence.

PROCEDURE

1. In the wave window of the **Audio Editor**, make a selection.
2. Select the **Insert** tab.
3. In the **Signal** section, click **Mute Selection**.

Audio Analysis

WaveLab LE provides you with a 3D Frequency Analysis for analyzing your audio.

3D Frequency Analysis

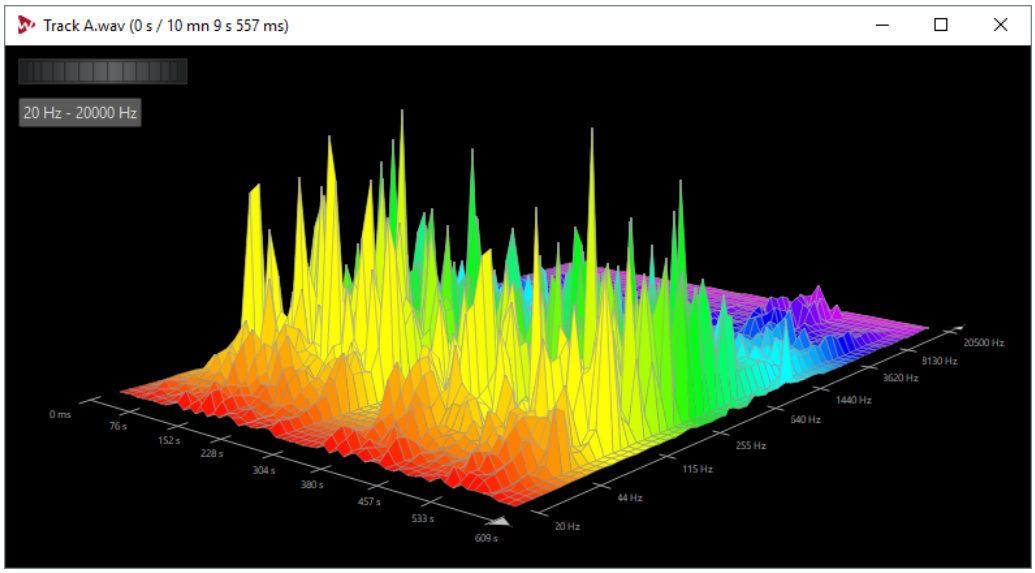
Using the 3D Frequency Analysis, you can view an audio file in the frequency domain.

Use the 3D Frequency Analysis for the following:

- Viewing the frequency spectrum distribution in a mix
- Identifying which frequencies can be reduced or boosted as a basis for equalizing
- Viewing how different sounds are built

A wave display (time domain) informs you about the start and end of a sound in a file, but lacks information about the timbral contents of the file that a frequency graph (frequency domain) provides. The graph that is used in WaveLab LE is often referred to as an FFT (Fast Fourier Transform) plot. If you select a stereo recording, a mix of the two channels is analyzed.

The wheel control allows you to view the frequency spectrum from different angles. For example, you can open several 3D Frequency Analysis windows, each with a different perspective. This allows you to get a better view of an otherwise crowded graph.

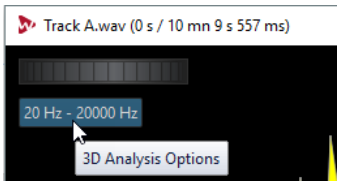


Creating a Graph for 3D Frequency Analysis

The length of the selected audio affects the accuracy of the analysis. For short selections, the result is more detailed. Consider making a separate analysis of the attack in which the most drastic variations occur.

PROCEDURE

1. In the wave window, select the section of the file that you want to analyze.
   If you make no selection, the whole audio file is analyzed.
2. In the **Audio Editor**, select the **View** tab.
3. In the **Analysis** section, click **3D Frequency Analysis**.
4. To edit the analysis parameters, click **3D Analysis Options**.

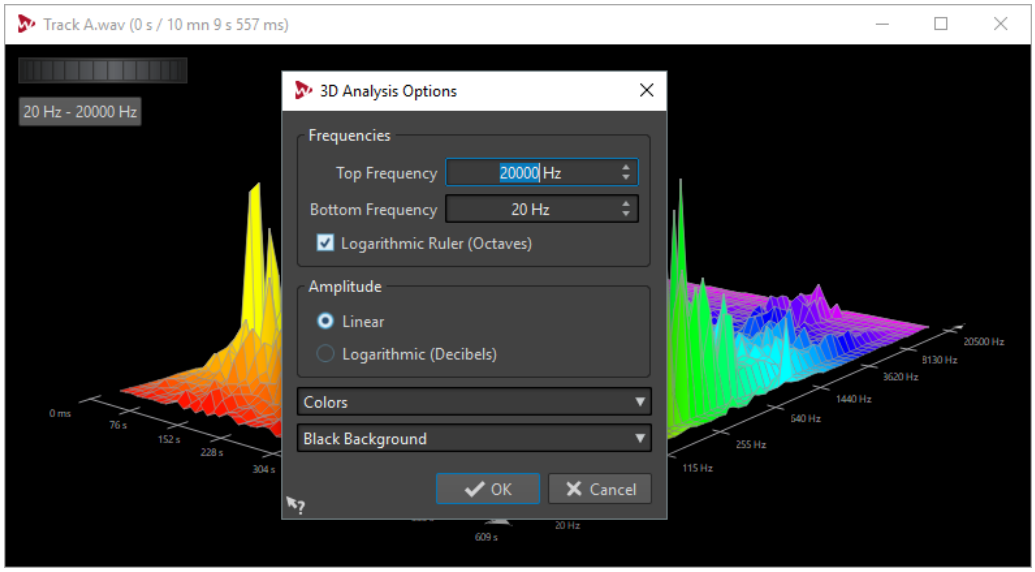


5. Adjust the parameters and click **OK**.
   The audio is re-analyzed.

3D Analysis Options

In the options dialog of the **3D Frequency Analysis** dialog, you can define which frequency range is analyzed and modify the appearance of the graph for the 3D frequency analysis.

- In the **3D Frequency Analysis** dialog, click the **3D Analysis Options** button.



Top/Bottom Frequency

Specifies the highest/lowest frequency of the range.

Logarithmic Ruler (Octaves)

Divides the frequency ruler in equally spaced octaves.

Amplitude

Select whether you want the peaks to be proportional to their amplitude (**Linear**) or to their power (**Logarithmic with Decibel Scale**).

Colors

Defines the color scheme of the graph.

Background

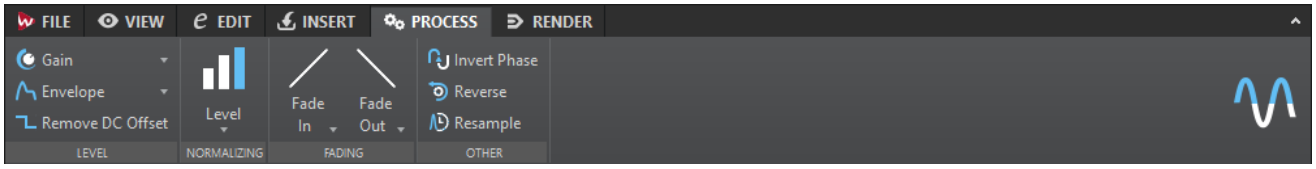
Defines the background color.

Offline Processing

Offline processes are useful for a variety of editing purposes and creative effects, for example, if the computer is too slow for real-time processing or if the editing requires more than one pass.

After the processing, the audio file is permanently altered.

Process Tab



Level

Gain

Opens the **Gain** dialog where you can apply a gain to change the level of an audio file.

Envelope

Opens the **Envelope** dialog where you can create a level envelope which can be applied to a selected range or an entire audio file.

This is useful if you want to even out loud and quiet parts or create a sophisticated fade in/fade out, for example.

Remove DC Offset

DC offset in a file affects the loudness. **Remove DC Offset** sets the DC offset to zero.

Normalizing

Level

Opens the **Level Normalizer** dialog where you can change the peak level of an audio file.

Fading

Fade In/Fade Out

Allows you to apply a fade in or fade out. Right-click the button to open the **Curve** pop-up menu.

Curve

Allows you to select preset fade curves.

- **Linear** changes the level linearly.
- **Sinus (*)** changes the level according to a sine curve. When used in a crossfade, the loudness (RMS) remains constant during the transition.

- **Square-Root (*)** changes the level according to a square-root curve. When used in a crossfade, the loudness (RMS) remains constant during the transition.
- **Sinusoid** changes the level according to a sine curve.
- **Logarithmic** changes the level according to a logarithmic curve.
- **Exponential** changes the level according to an exponential curve.
- **Exponential+** changes the level according to a more pronounced exponential curve.

Other

Invert Phase

Turns the signal upside down.

Reverse

Creates a backwards-tape effect.

Resample

Opens the **Sample Rate** dialog where you can change the sample rate of a recording.

Applying Processing

Processing can be applied to a selection or to a whole file. For some operations processing the entire file is necessary.

NOTE

If **Process Whole File If There Is No Selection** is activated in the **Editing** tab of the **Audio Files Preferences**, the whole file is automatically processed if no selection exists.

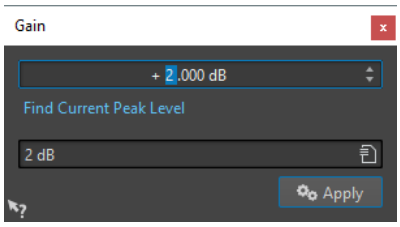
PROCEDURE

1. In the wave window, make a selection.
2. In the **Audio Editor**, select the **Process** tab.
3. Select the type of processing that you want to apply.
4. If a dialog opens, make the settings and click **Apply** to render the effect to file.

Gain Dialog

In this dialog, you can apply a gain to change the level of an audio file.

- To open the **Gain** dialog, select the **Process** tab in the **Audio Editor**, and click **Gain** in the **Level** section.



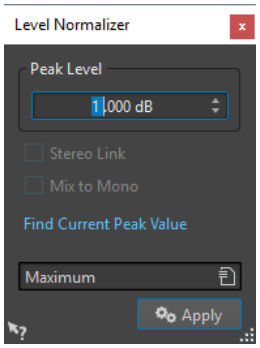
Click **Find Current Peak Level** to obtain a report on the peak level of the audio selection, or the whole file if there is no selection. This is useful if you want to calculate how much you can increase the overall gain of a file without clipping (exceeding 0 dB), for example.

This processor also lets you add clipping. Clipping happens when the gain is raised to a point where distortion is added. While this is normally not intended, mild clipping can add some punch, for example, to accentuate the attack of a drum sound.

Level Normalizer Dialog

In this dialog, you can change the peak level of an audio file.

- To open the **Level Normalizer** dialog, select the **Process** tab in the **Audio Editor**, and click **Level** in the **Normalizing** section.



Peak Level

Enter the peak level (in dB) that you want the audio selection to have.

Stereo Link

Applies the gain to both channels.

Mix to Mono

Mixes the left and the right channel. The resulting mono file has the specified peak level. This ensures a mix without clipping.

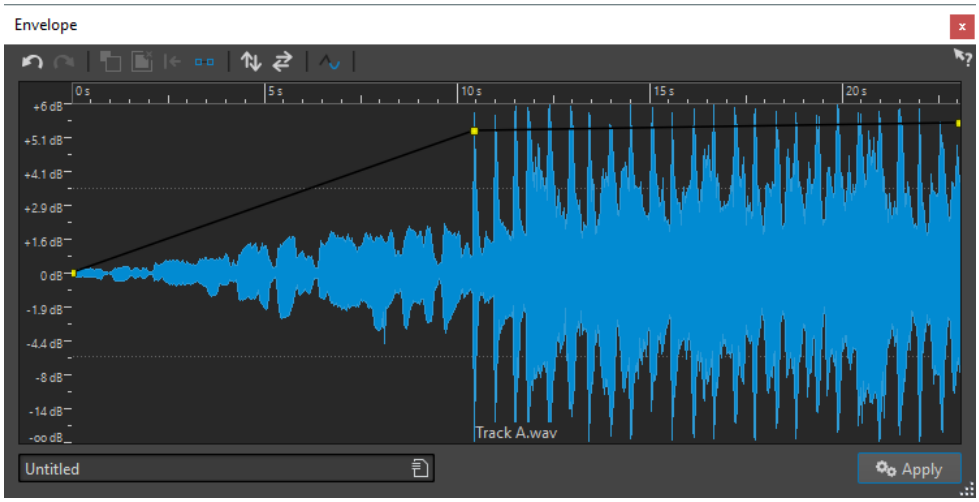
Find Current Peak Value

Creates a report on the peak level of the current audio selection or the whole audio file if there is no selection.

Envelope Dialog

In this dialog, you can create a level envelope which can be applied to a selected range or a whole audio file. This is useful if you want to even-out loud and quiet parts or create a sophisticated fade in or fade out, for example.

- To open the **Envelope** dialog, select the **Process** tab in the **Audio Editor**, and click **Envelope** in the **Level** section.



The dialog shows a waveform with an envelope curve (initially a straight line). A vertical ruler displays the level in dB, and the horizontal ruler displays the timeline.

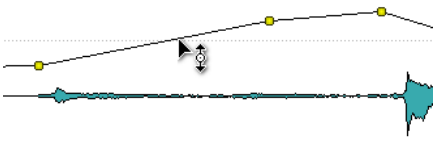
The following options are available:

- **Undo/Redo the Last Operation**
- **Deselect the Envelope Points**
- **Delete the Selected Envelope Points**
- **Reset the Selected Envelope Points**
- **Reset the Whole Envelope**
- **Flip the Envelope Around the Horizontal Axis**
- **Reverse the Envelope Time Sequence**
- **Toggle the Envelope Smoothing**

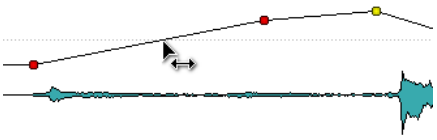
Basic Envelope Operations

By adding points to the envelope curve, you can create an envelope curve that changes the volume of the material over time. When you point the mouse in the display or move a point, the current position and level change is shown in the field above the display.

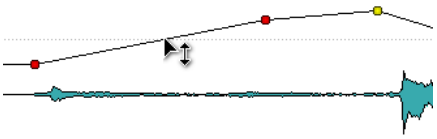
- To add a point, double click the envelope curve.
- To select a point, click it.
- To select several points, click and drag the selection rectangle.
- To move a point, click and drag it. If more than one point is selected, all points are moved.
- To move the whole curve up or down, click the envelope curve, and drag up or down.



- To move the curve segments vertically, click the curve and drag up or down.
- To move two points horizontally, press **Shift**, click the curve segment between two points, and drag left or right.



- To move two points vertically, press **Ctrl/Cmd**, click the curve segment between two points, and drag up or down.



Fades in Audio Files

A fade in is a gradual increase in level and a fade out is a gradual decrease in level.

You can create fades by selecting an individual fading type for each fade in/fade out.

Creating a Fade In and Fade Out

PROCEDURE

1. In the wave window, make a selection.
2. In the **Audio Editor**, select the **Process** tab.
3. Depending whether you want to create a fade in or a fade out, select one of the following options in the **Fading** section:
   - To apply the default fade type, click the **Fade In** or **Fade Out** icon.
   - To select another fade type, click **Fade In** or **Fade Out** below the fade icon. From the pop-up menu, select the type of fade that you want to create.

Applying Easy Fades

The **Easy Fade** function allows you to quickly apply a default fade in or fade out to an audio file via shortcut.

The shape of the fade is governed by the **Fade In** and **Fade Out** settings in the **Fading** section of the **Process** tab.

PROCEDURE

1. In the **Audio Editor**, make one of the following selections:
   - From the start of the audio file to where you want the fade in to end.
   - From the position where you want the fade out to start to the end of the audio file.
2. Click **Ctrl/Cmd-D**.

Crossfades

A crossfade is a gradual fade between two sounds, where one is faded in and the other faded out. You can automatically create a crossfade when pasting an audio section into another.

Creating Crossfades

The material that you want to crossfade can either be in two different sections of the same audio file or in two different audio files.

PROCEDURE

1. In the wave window, select the section that you want to fade in.
2. Select the **Edit** tab.
3. In the **Clipboard** section, click **Copy**.
4. Select the section that you want to fade out.

   The length of this selection determines the length of the actual crossfade (check the length on the status bar). The section can be within the selected audio file or in another wave window. However, the selection must not be longer than the selection that you just copied.
5. Depending whether you want to create a fade in or a fade out, select one of the following options in the **Clipboard** section:
   - To apply the default crossfade type, click the **Paste and Crossfade** icon.
   - To select another crossfade type, click **Paste and Crossfade** below the crossfade icon. From the pop-up menu, select the type of crossfade that you want to create.

RESULT

The crossfade is created. Any material that originally appeared after the selection in the file into which you paste, is moved so that it now appears after the pasted material.

Any excess material in the copied selection appears after the fade at full level.

NOTE

If both files already have full level sections in the crossfade area (for example, if you have normalized both files), clipping and distortion might occur. If this happens, reduce the amplitude of both files by 3 dB to 6 dB and try again.

AFTER COMPLETING THIS TASK

Play back the file and adjust the crossfade if necessary.

Paste and Crossfade Options

These options allow you to select a crossfade type for pasting.

- Select the **Edit** tab in the **Audio Editor**, and click **Paste and Crossfade** in the **Clipboard** section.

Linear (Equal Gain)

Level changes linearly.

Sinus (Equal Power)

Level changes according to a sine curve, the power of the mix remains constant.

Square-Root (Equal Power)

Level changes according to a square-root curve, the power of the mix remains constant.

Phase Inverting

Inverting the phase turns the signal upside down. The most common use for this function is to fix a stereo recording if one of the channels has been recorded out of phase with the other.

Inverting the Audio Phase

PROCEDURE

1. Optional: If you only want to invert the phase for a specific time range of the audio file, create a selection range in the wave window.
2. In the **Audio Editor**, select the **Process** tab.
3. In the **Other** section, click **Invert Phase**.

Reversing Audio

You can reverse an audio file or a part of an audio file as if playing a tape backwards.

PROCEDURE

1. Optional: If you only want to reverse a specific time range of the audio file, create a selection range in the wave window.
2. In the **Audio Editor**, select the **Process** tab.
3. In the **Time & Pitch** section, click **Reverse**.

DC Offset

DC offset means that there is a too large DC (direct current) component in the signal. This most often occurs due to mismatches between various types of recording equipment.

A DC offset is problematic for the following reasons:

- It affects the zero crossing position.
- Some processing options do not give optimal results when performed on files with a DC offset.

Removing DC Offset

PROCEDURE

1. In the **Audio Editor**, open the audio file that you want to check for DC offset and that you want to fix.
2. Select the **Process** tab.
3. In the **Level** section, click **Remove DC Offset**.

   A dialog opens, stating the amount of DC offset in the audio file. You can also create a selection range in the wave window and select this option to only show the DC offset in the selection range.

   NOTE

   This function should be applied to whole files, because the problem is normally present throughout the entire recording.

4. Click **OK** to remove the DC offset.

Resample

You can change the sample rate of a recording. This is useful if the file that you want to use in an audio system was recorded at a sample rate that this system does not support.

NOTE

- Sample rate conversion from a low frequency upwards does not improve the sound quality. The high frequencies that were lost cannot be restored by a conversion.
- If you resample to a lower frequency, high frequency material is lost. Therefore, converting down and then up again leads to a degradation in sound quality.

Converting a Sample Rate

NOTE

Sample rate conversion is always applied to the entire file.

PROCEDURE

1. In the **Audio Editor**, select the **Process** tab.
2. In the **Time & Pitch** section, click **Resample**.
3. In the **Sample Rate** dialog, select a sample rate from the pop-up menu.
4. Click **OK**.

Audio Montage

The audio montage is a multitrack non-destructive editing environment that allows you to arrange, edit, play back, and record audio clips.

Non-destructive means that when you delete or change a part of an audio file, the audio is not deleted or permanently changed. Instead, a set of pointers keeps track of all the edits, so that these can be readily reversed.

The audio montage is a great tool for mastering, multimedia work, radio spot production, etc.

Basic Terminology

Audio montages can contain up to 2 stereo or mono audio tracks. You can use them to structure the work graphically.

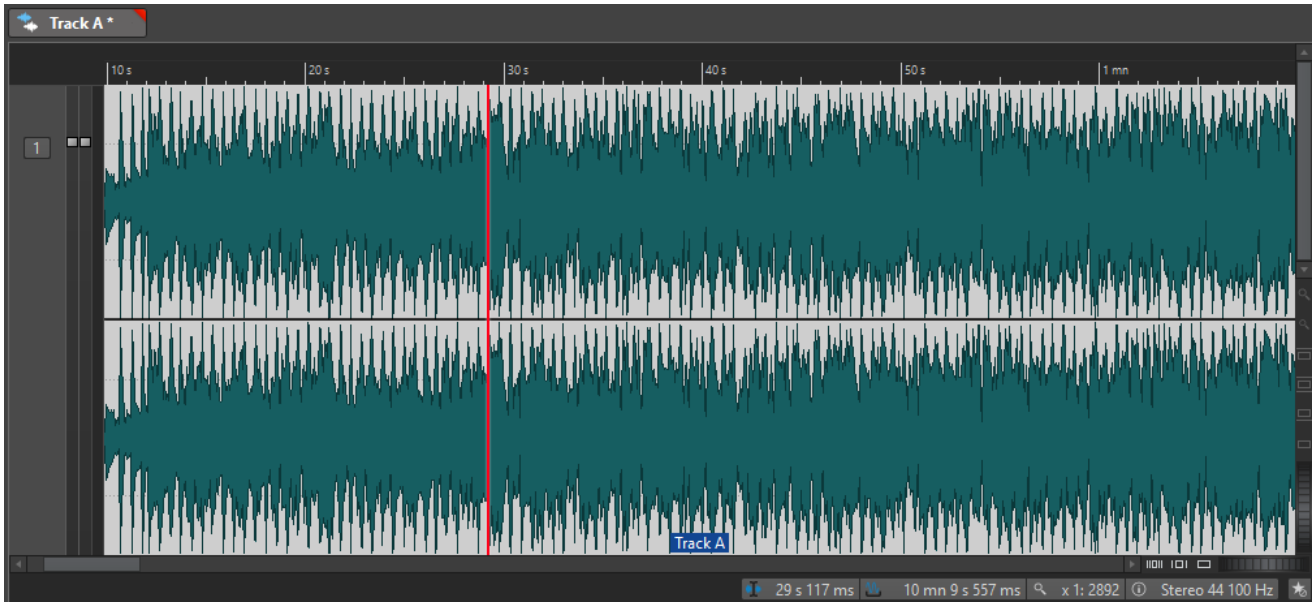
On an audio track, you can place any number of clips. Clips are containers for the audio, and include a number of settings and functions such as envelope curves, fades, etc.

A clip contains a reference to a source audio file on your hard disk, as well as start and end positions in the file, which means that clips can play back sections of the source audio files. Any number of clips can reference the same source file.

Montage Window

The montage window is where you assemble your audio montage. This is where you view, play back, and edit audio montages.

The montage window gives you a graphical representation of the tracks and clips.



Track Control Area

The track control area offers several options regarding the track.

Track number button

Opens the track menu that contains track-related options.

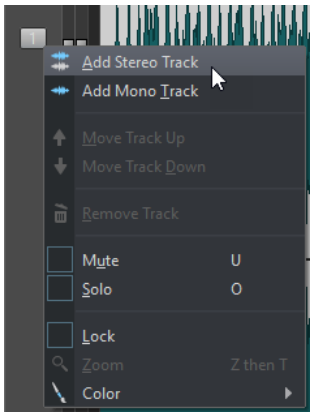
Track gain sliders

Allows you to set the gain for the track.

Track Pop-up Menu

This pop-up menu contains all track-related options.

- To open the **Track** pop-up menu, click the number button of a track in the track control area.



Add Stereo Track

Adds a stereo track below the active track.

Add Mono Track

Adds a mono track below the active track.

Move Track Up

Moves the track one position up in the track list.

Move Track Down

Moves the track one position down in the track list.

Remove Track

Deletes the active track.

Mute

Mutes the active track.

Solo

Solos the active track.

Lock

If this option is activated, you cannot edit the track.

Zoom

Shows the active track in the full available height.

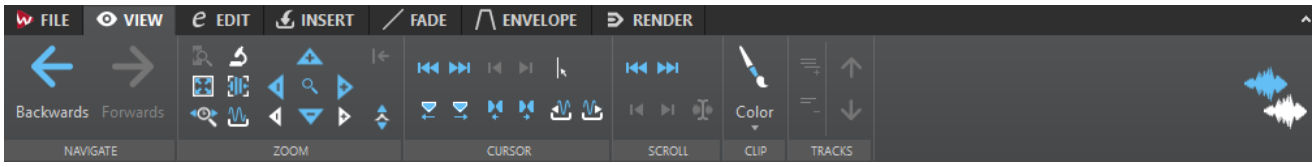
Color

Opens a submenu where you can select a color for the active track.

Audio Montage Tabs

The tabs in the **Audio Montage** window give you access to the tools and options you need for editing audio montages. For example, you can edit the envelope curves and fades in clips, make zoom settings, analyze the audio, and render the audio montage.

View Tab



Navigate

Backwards/Forwards

Navigates to the previous/next cursor position, zoom factor, and selection range.

Zoom

Zoom

Activates the **Zoom** tool that allows you to define a time range that is zoomed in.

Time

Opens a pop-up menu that allows you to adjust the zoom to display the selected time range. **Zoom in 1:1** zooms in so that one pixel on the screen represents one sample.

To edit the zoom factor, click **Edit Zoom Factor**. This opens the **Zoom Factor** dialog, where you can edit the following settings:

- **Set Time Range** allows you to specify the time range that you want to display.
- **Samples per Screen Point** allows you to specify how many audio samples are summarized in each screen point.
- **Screen Points per Sample** allows you to specify how many screen points are used to represent a single audio sample.

Zoom Selection

Zooms the window so that the current selection occupies the entire montage window.

Microscope

Zooms in as far as possible.

View All

Zooms out as far as possible.

Display Whole Clip

Adjusts the view to display the active clip.

Zoom in Audio (10x)/Zoom out Audio (10x)

Zooms in/out in big steps.

Zoom in Audio/Zoom out Audio

Zooms in/out in small steps.

Zoom in Vertically/Zoom out Vertically

Zooms in/out to show waveforms with a lower/higher level.

Level

Adjusts the zoom to only display samples below the selected dB value.

Reset Zoom to 0 dB

Adjusts the zoom to display audio levels up to 0 dB.

Cursor

Move Cursor to Start of File/Move Cursor to End of File

Moves the cursor to the start/end of the file.

Previous Marker/Next Marker

Moves the cursor to the previous/next marker.

Start of Selection/End of Selection

Moves the cursor to the start/end of the selected time range.

Previous Region Edge/Next Region Edge

Moves the cursor to the previous/next region edge.

Edit Cursor Position

Opens the **Cursor Position** dialog where you can edit the cursor position.

Previous Clip Edge/Next Clip Edge

Moves the cursor to the previous/next clip edge.

Scroll

Start/End

Displays the start/end of the audio without moving the cursor.

Start of Selection/End of Selection

Displays the start/end of the audio selection without moving the cursor.

Cursor

Displays the cursor position.

Playback

Static View

Deactivates scrolling.

View Follows Cursor

Automatically scrolls the view to keep the playback cursor visible.

Scroll View

Scrolls the view to keep the playback cursor centered.

Clip

Color

Allows you to apply a color to the active clip.

Tracks

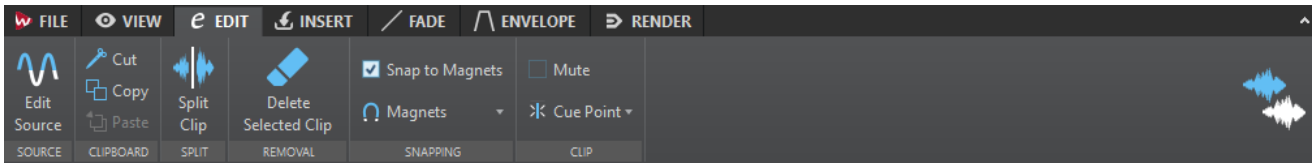
Display More Tracks/Display Fewer Tracks

Allows you to change the number of tracks that are displayed in the montage window.

Focus on Previous Track/Focus on Next Track

Sets the focus on the previous/next track.

Edit Tab



Source

Edit Source

Opens source file of the clip in the **Audio Editor**.

Clipboard

Cut

Cuts the active clip to the clipboard.

Copy

Copies the active clip to the clipboard.

Paste

Pastes the clipboard content.

Split

Split at Silences

Splits the files so that each non-silent section becomes a separate region. If you select this option, you can specify the minimum region duration, the minimum duration of a silent section, and the signal level that should be considered as silence.

Split Clip

Splits the active clip into two clips.

Removal

Delete Selected Clips

Deletes the part of the clip that lies inside the selection range on the selected track and moves the right section of the clip to the left to fill the gap.

If there is no selection range, the selected clip is deleted.

Snapping

Snap to Magnets

If this option is activated, moved elements such as clip edges, time selection edges, cursor, and markers snap to the magnets that are activated on the **Magnets** pop-up menu.

Magnets

This pop-up menu allows you to select which items should be magnetic.

Clip

Mute

Mutes the active clip.

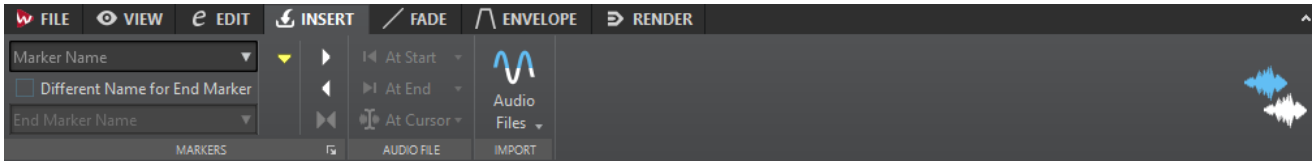
Cue Point

This pop-up menu allows you to make cue point settings.

- **Set at Cursor** sets the cue point to a fixed position from the start of the clip.
- **Set at Default Gap Position** sets the cue point before the start of the clip, at a distance governed by the default pre-gap position.
- **Follows Fade In End Point** sets the cue point to the fade in end point.
- **Follows Fade Out Start Point** sets the cue point to the fade out start point.
- If **Custom Cue End** is activated, you can set the end cue point at a custom position from the end of the clip. This option allows you to edit the gap individually for each clip.

  If this option is deactivated, a 2 seconds default gap is used.
- **End Offset** opens the **End Cue Point Offset** dialog that allows you to set the end cue point at a custom position from the end of the clip.

Insert Tab



Markers

Marker Name

Allows you to enter the name of the start and end marker. If nothing is entered, a generic name is used.

To edit the default names, open the **Markers** window, and select **Functions** > **Default Marker Names**.

Different Name for End Marker

If this option is activated, you can enter a different name for the end marker.

If this option is deactivated, the name of the start marker is also used for the end marker.

Create Marker

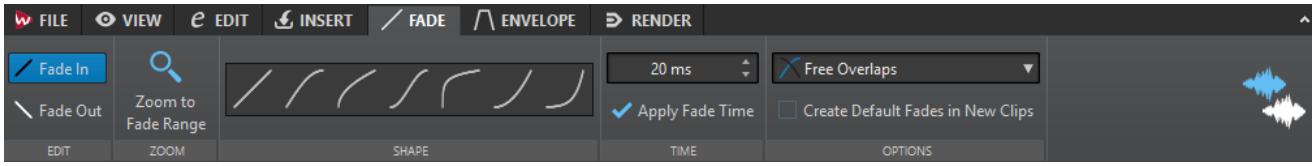
Allows you to create markers and marker pairs at the edit cursor position.

Import

Audio Files

Allows you to select one or more audio files to insert at the edit cursor position on the selected track.

Fade Tab



Edit

Fade In/Fade Out

Allows you to switch between the fade in and the fade out settings.

Zoom

Zoom to Fade Range

Adjusts the view to display the fade in/fade out part of the active clip.

Shape

Curve

Allows you to select preset fade curves.

- **Linear** changes the level linearly.
- **Sinus (*)** changes the level according to a sine curve. When used in a crossfade, the loudness (RMS) remains constant during the transition.
- **Square-Root (*)** changes the level according to a square-root curve. When used in a crossfade, the loudness (RMS) remains constant during the transition.
- **Sinusoid** changes the level according to a sine curve.
- **Logarithmic** changes the level according to a logarithmic curve.
- **Exponential** changes the level according to an exponential curve.
- **Exponential+** changes the level according to a more pronounced exponential curve.

Time

Fade Time

Allows you to specify a fade in/fade out time for the clip.

Apply Fade Time

Applies the specified clip fade in/fade out time.

Options

Overlaps

This pop-up menu allows you to set the automatic crossfading behavior.

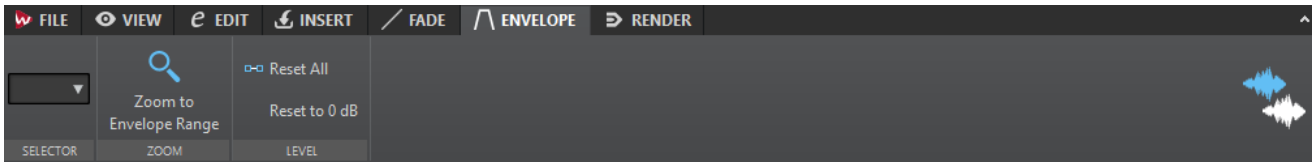
- If **No Automatic Crossfading** is activated, no automatic crossfading is performed when clips overlap.

- If **Free Overlaps** is activated, automatic crossfades are created when a clip overlaps another clip on the same track. The length of the overlap determines the length of the crossfade.

Create Default Fades in New Clips

If this option is activated, all new clips get the default fade in and fade out shape and length. For clips that are created by splitting a clip, only the default fade time is used.

Envelope Tab



Selector

Envelope Type

Sets the type of the envelope. Depending on the selected type, different options are available.

Zoom

Zoom to Envelope Range

Adjusts the view to display the active envelope of the active clip.

Level

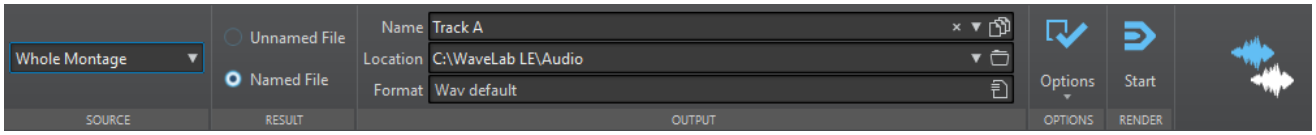
Reset All

Resets the envelope to its neutral form.

Reset to 0 dB

Replaces the segments between the fade in and fade out points with a single neutral segment.

Render Tab



Source

Whole Montage

Processes and renders the whole audio range.

Specific Region

Processes and renders a specific audio range to an independent file.

Specify the region to process on the pop-up menu.

Result

Unnamed File

If this option is activated, a temporary untitled file is rendered.

Named File

If this option is activated, you can specify a name for the rendered file.

Output

Name

Allows you to enter a name for the rendered file. Clicking the arrow icon opens a pop-up menu that offers you several naming options.

Location

Allows you to select a destination folder for the rendered files.

Format

Opens a pop-up menu where you can select a file format.

Options

Depending on the selected source, different options are available.

Bypass Master Section

If this option is activated, the plug-ins and gain of the **Master Section** are bypassed when rendering.

Auto Save Master Section Preset

If this option is activated, the **Master Section** preset is automatically saved in the audio montage when you render the file. You can load the **Master Section** preset via the **Load Master Section Preset** option in the lower right corner of the montage window.

No Reverb Tail

If this option is activated, the audio tail produced by effects such as reverb is not included in the rendered file.

Some plug-ins do not transfer information on the tail duration to WaveLab. In this case, this option has no effect. For such plug-ins, you can add the **Silence** plug-in to add extra samples at the end of the file.

Copy Markers

If this option is activated, the markers that are included in the range to process are copied to the rendered file.

Open Resulting Audio File

If this option is activated, every rendered file is opened in a new window.

Bypass Master Section on Resulting Audio File

If this option is activated, playback of the resulting audio file bypasses the entire **Master Section**. This setting can be toggled by clicking the button at the bottom right of the wave window or montage window.

NOTE

It is recommended to activate this option, because this way, you do not monitor new files through the effects that have already been applied to them.

Upload to SoundCloud

If this option is activated, the rendered file is uploaded to SoundCloud.

Render

Start

Starts the rendering process.

Signal Path in the Audio Montage

The audio signal passes through the various sections of WaveLab LE in a certain way.

1. The audio samples are read.
2. Clip envelope
3. Clips are mixed into the track slot (for example, overlapping clips).
4. Track level settings
5. Each track is mixed into the stereo bus sent to the **Master Section**.

Signal Path in the Master Section

1. Channels/Sample rate can change at each plug-in slot.
2. **Master Section** meters
3. Playback or file format rendering

Creating New Audio Montages

PROCEDURE

1. Select **File** > **New**.
2. Select **Audio Montage** > **Custom**.
3. Specify the audio properties and click **Create**.

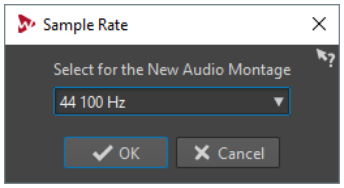
   The audio files that you want to use in the audio montage must have the sample rate that you select here.

Audio Montage Properties

You can set the sample rate of the audio montage.

You can set the sample rate when you create a new audio montage.

- To change the sample rate for the selected audio montage, select the **File** tab and click **Info**, or click the **Audio Montage Properties** button at the bottom right of the montage window.



Alternative Ways of Creating New Audio Montages

There are several ways to create a new audio montage.

- Convert wave files to an audio montage
- Duplicating audio montages
- Press **Ctrl**/**Option** and drag a montage tab on the tab bar.

RELATED LINKS
Audio Montage Duplicates on page 105

Audio Montage Duplicates

You can create duplicates of audio montages.

Empty (With Same Properties)

Creates a new audio montage with the channel settings and sample rate of the original audio montage, without any clips.

Exact Duplicate (Using the Same Audio Files)

Creates an exact duplicate of the original audio montage and lets the new clips reference to the original audio files. The duplicated audio montage uses the channel settings and sample rate of the original audio montage.

This is useful if you want to create several versions of the audio montage, for example, to experiment with variations. However, any processing or editing that you apply to the actual audio files are reflected in all audio montages.

You can also press **Ctrl/Cmd**, drag a tab, and drop it on the tab bar to create a exact duplicate of an audio montage.

RELATED LINKS
Duplicating Audio Montages on page 105

Duplicating Audio Montages

PROCEDURE

1. Open the audio montage that you want to duplicate.
2. In the **Audio Montage** window, select the **File** tab.
3. Select **New** > **Audio Montage** > **From Current File**.
4. In the **From Current Audio Montage** section, select one of the following:
   - **Empty (With Same Properties)**
   - **Exact Duplicate (Using the Same Audio Files)**
5. Click **Create**.

RESULT

A duplicate of the audio montage opens in another tab.

Creating an Audio Montage from an Audio File

You can export audio files to an audio montage, including all markers that you have set in the audio file.

PROCEDURE

1. In the **Audio Editor**, open the audio file that you want export to an audio montage.
2. Optional: If you want to use a specific time range of the audio file, create a selection range in the wave window.
3. Select **File** > **New**.
4. Select **Audio Montage** > **From Current File**.
5. In the **From Current Audio File** section, click **Insert Audio File in New Montage**.

6. Click **Create**.
7. In the **Create Audio Montage from Audio File** dialog, select whether to import the whole file or the selected audio range.
8. Optional: Decide if you want to perform any of the following marker operations:
   - **Import Markers**
   - **Split at Generic Region Markers**
9. Click **OK**.

Import Options for Audio Montages

You can import audio files and Audio CD tracks into your audio montage.

The following import option is available via the **Import** section on the **Insert** tab of the **Audio Montage** window:

- To import audio files, click **Audio Files** and select the audio files that you want to import at the edit cursor position on the selected track.

  If you import a single audio file, the **Paste** pop-up menu opens. Here, you can specify how the clip should be inserted, whether existing clips should be affected, etc.

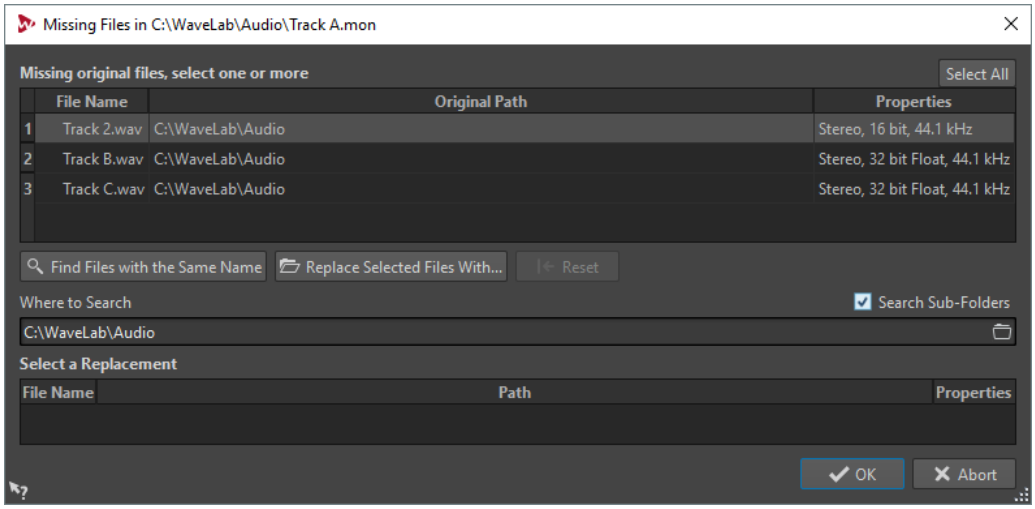
  If you import multiple audio files, the **Insert Audio Files** dialog opens. Here, you can specify where to insert the files.

To access the following import options, select **File** > **Import**.

- To import audio files, click **Audio File to Montage**, select the audio files that you want to import, and click **Import**.
- To import CD tracks from an audio CD, click **Audio CD**. Via the **Import Audio CD** dialog, browse for the audio CD tracks to extract.

Missing Files Dialog

This dialog opens when you open an audio montage, and some audio files that the audio montage refers to cannot be found. You can then search for the files or select a replacement.



Missing Original Files

Lists the files that cannot be found. Each file can be replaced by an existing file. To search replacements for multiple files, select the files and specify a new path in the **Where to Search** field.

A file with a green checkmark is associated with a valid replacement. A file with a red checkmark is not yet associated with a valid replacement, but there are possible replacement candidates available at the bottom of this dialog.

Find Files with the Same Name

Instructs WaveLab LE to find all files with the same name in the folder specified in the **Where to Search** field.

Replace Selected Files With

Replaces the missing files with a single specific file.

Reset

Removes all possible replacements for the selected missing files.

Where to Search

Lets you specify a location for searching files. Click **Find Files with the Same Name** to start the search.

Replacement List

Lists the files that can be used as a replacement. You can also drag a file into the list from the File Explorer/macOS Finder.

Assembling the Audio Montage

You assemble your audio montage by adding tracks and clips.

In the audio montage, only one track can be selected at a time. This selected track has a different color for the track control area. Some WaveLab LE functions are always applied to the selected track.

Tracks

Tracks are the structure used to organize clips. The tracks can be mono or stereo audio tracks.

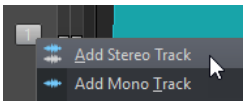
Audio tracks allow you to add clips to an audio montage.

Adding Tracks

You can add stereo tracks and mono tracks.

PROCEDURE

1. In the **Audio Montage** window, click the number button of a track to open the **Track** pop-up menu.



2. Select the track type that you want to add to your audio montage.

RESULT

The new track is added below the selected track. If you want to place it above the selected track, press **Ctrl/Cmd** when adding the new track.

Moving Tracks in the Track View

You can change the order of the tracks in the montage window.

PROCEDURE

1. In the **Audio Montage** window, click the number button of a track.
2. On the pop-up menu, select **Move Track Up** or **Move Track Down**.

Removing Tracks

Removing a track with clips also removes the clips. However, the audio files to which the clips refer are not affected.

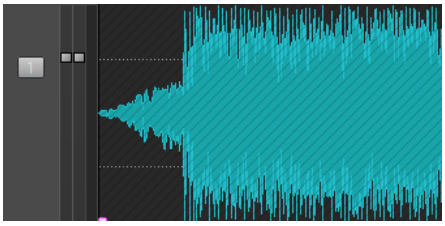
PROCEDURE

1. In the **Audio Montage** window, click the number button of the track that you want to remove.
2. On the pop-up menu, select **Remove Track**.

Locking and Unlocking Tracks

You can lock tracks to prevent them from being accidentally moved, edited, or deleted.

- To lock a track, click the number button of the track and activate **Lock**.



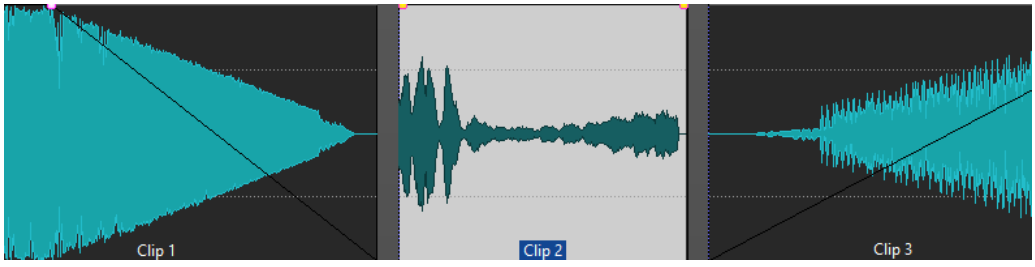
- To unlock a track, click the locked track, or click the number button of the track, and deactivate **Lock**.

Clips

A clip contains a reference to a source audio file on your hard disk, as well as start and end positions in the file, envelope curves, fades, etc. This allows clips to play back smaller sections of their source audio files.

Any number of clips can reference the same source file. Because a clip only references to the original source file, it contains no audio data. Any number of clips can reference the same source file.

You can see the clips of the active audio montage in the **Clips** window.



3 clips on a track

Adding Audio Clips to the Audio Montage

You create clips by inserting audio into the audio montage. There are several ways to do this.

NOTE

You cannot add a mono clip to a stereo track or vice versa.

Dragging Audio from the Wave Window

PROCEDURE

1. In the wave window of the **Audio Editor**, select the audio section that you want the clip to refer to.
2. Drag the selection onto a track of the audio montage.
   If you want to add the whole audio file, drag the tab on a track.

RESULT

A clip is created, named after the original file.

Inserting Audio from Open Wave Windows Using the Insert Menu

PROCEDURE

1. In the montage window, right-click an empty area of a track.
2. From the pop-up menu, select the audio file that you want to insert as clip.

Inserting Audio Using Copy and Paste

PROCEDURE

1. In the wave window of the **Audio Editor**, select the audio section to which you want the clip to refer to.
2. Select the **Edit** tab and click **Copy**, or press **Ctrl/Cmd-C**.
3. In the montage window, select the track where you want to insert the clip.
   The clip insert position is indicated by the edit cursor.
4. Select the **Edit** tab and click **Paste**, or press **Ctrl/Cmd-V**.
5. Select an insert option from the pop-up menu.

Inserting Audio from the File Explorer/macOS Finder Using Copy and Paste

PROCEDURE

1. In the File Explorer/macOS Finder, select an audio file and press **Ctrl/Cmd-C**.
2. In the montage window, select the track where you want to insert the clip.
   The clip insert position is indicated by the edit cursor.
3. Select the **Edit** tab and click **Paste**, or press **Ctrl/Cmd-V**.
4. Select an insert option from the pop-up menu.

Dragging Audio Files From the File Browser Tool Window

NOTE

The following can also be done from the File Explorer/macOS Finder.

PROCEDURE

1. Select **Tool Windows** > **File Browser**.
2. In the **File Browser** window, select the audio files to which you want the clip to refer, and drag them on a track.

Dragging Regions From the File Browser Tool Window

If you have defined marker regions in an audio file, you can drag these regions from the **File Browser** window onto a track.

PROCEDURE

1. Select **Tool Windows** > **File Browser**.
2. In the **File Browser** window, select the audio file to which you want the clip to refer.
   On the right side of the **File Browser** window, a list shows the available audio regions of the selected file.
3. Drag any region to the track.

RELATED LINKS
File Browser Window on page 21

Importing Audio Files

PROCEDURE

1. In the montage window, select the track on which you want to insert the clip.
   The clip insert position is indicated by the edit cursor.
2. Right-click an empty area on the track, and select **Insert Audio Files** from the pop-up menu.
3. Select the files that you want to insert.

Copying Clips From Another Audio Montage

If you have opened more than one audio montage, you can copy clips from one audio montage to another, either by using drag and drop or by using copy and paste.

Dragging Clips From the Clips Tool Window

You can add clips by dragging them from the same audio montage.

PROCEDURE

1. Select **Tool Windows** > **Clips**.
2. Select one or several clips, and drag them to a track.
   If you drag a single clip on a clip on the track, you must select an insert option from the pop-up menu.

Rearranging Clips

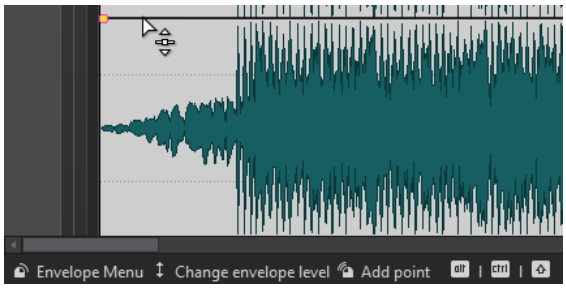
You can freely arrange clips in the montage window.

Active Clips

An active clip is the clip that you selected, clicked, or edited last. Only one clip can be active at a time. By default, the active clip is distinguished by a highlighted name label. Some functions can only be processed on a active clip. Right-clicking a clip opens the **Active Clip** menu.

Info Line

The info line at the bottom of the **Audio Montage** window shows what happens when you click the mouse button with or without modifier keys, depending on the cursor position.



The following symbols are used on the info line:

Single-click

Indicates what happens when you click.

Double-click

Indicates what happens when you double-click.

Right-click

Indicates that you can right-click to display a menu. The name of the menu is displayed to the right of the symbol.

Ctrl/Cmd-click

Indicates that you can **Ctrl/Cmd**-click for an additional function.

Alt-click

Indicates that you can **Alt**-click for an additional function.

Shift-click

Indicates that you can **Shift**-click for an additional function.

Drag up/down

Indicates what happens when you click and drag up or down.

Drag left/right

Indicates what happens when you click and drag left or right.

Drag in any direction

Indicates what happens when you click and drag an item in any direction within the audio montage.

Drag out of the audio montage

Indicates what happens when you click and drag an item out of the audio montage.

Moving/Resizing clips or changing envelope values

This indicates that you are moving or resizing clips, or changing envelope values, for example.

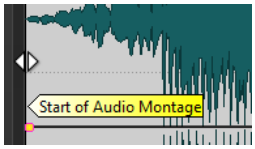
Combined modifier keys

Indicates that you can use combined modifier keys.

Magnetic Bounds in Audio Montages

Some positions, such as markers or the start and end of a clip, are magnetic. Dragged elements can snap to these positions. This makes it easier to position items accurately.

For example, when you move or resize a clip, and its edges or its cue point get close to one of the magnetic bounds, the clip snaps to this position. A label is displayed, indicating the snap position.



To place the cursor at a magnetic position, click the time line and hold the mouse button pressed. When you now move the cursor vertically, the cursor jumps to the next magnetic bound.

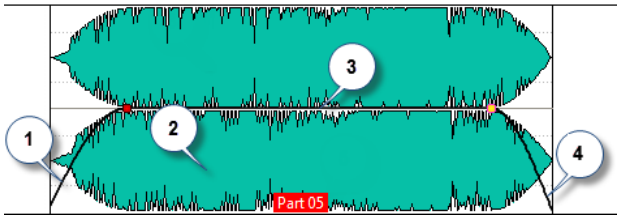
Selecting Clips

You can edit multiple selected clips at once.

- To select a clip, click it. Selected clips are displayed in a different color.
- To select multiple clips, **Ctrl/Cmd**-click the clips.

Clip Context Menus

Many editing functions for clips can be accessed via the clip context menus. Depending on where you right-click the clip, different context menus are available.



1 **Fade in section**

Opens the **Fade In** pop-up menu where you can edit the fade in.

2 **Any area of a clip**

Opens the **Active Clip** pop-up menu where you can edit the active clip.

3 **Sustain section**

Opens the **Envelope** pop-up menu where you can edit the envelope.

4 **Fade out section**

Opens the **Fade Out** pop-up menu where you can edit the fade out.

Clip Editing

All clips are displayed in the **Clips** window. In this window, you can edit and rearrange clips and drag them into the audio montage.

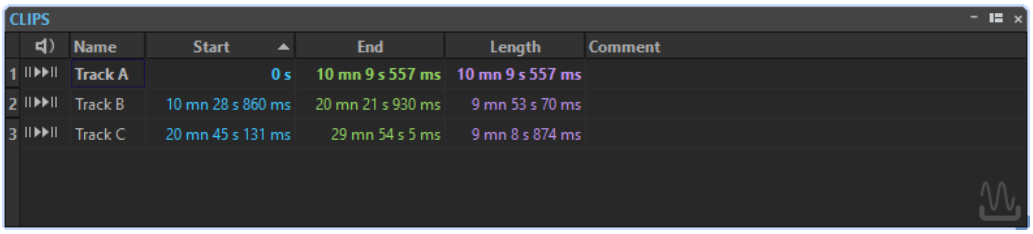
The active clip is highlighted in the clips list.

RELATED LINKS
Clips Window on page 113

Clips Window

This window contains a list of the clips that are placed in the active audio montage together with additional information about the clips.

- To open the **Clips** window, open an audio montage and select **Tool Windows** > **Clips**.



Clip List

In the clip list columns, you can see the following settings for each clip:

- Name
- Start and end time
- Length
- Comment

You can also play back a clip with or without pre-gap. The following playback buttons are available:

From Start with Pre-Roll

Playback from start with a pre-roll.

You can also press **Alt** and click **From Start with Pre-Roll** to play back from the start with a short pre-roll.

From Start

Playback from start.

Reordering Clips in Audio Montages By Dragging

In the **Clips** window, you can re-order clips by dragging them to another position in the list.

PROCEDURE

1. Open the **Clips** window.
2. In the clip list, drag a clip to another position in the list.

   You can move more than one clip at the same time, by selecting multiple clips and dragging them. If more than one clip is selected, all clips between the leftmost selected clip and the rightmost selected clips are moved.

RELATED LINKS

Clips Window on page 113

Moving and Crossfading Clips

You can let clips overlap other clips, move them, and create crossfades between clips.

Moving Clips

NOTE

The channel configuration of the clip must match the destination track.

PROCEDURE

1. In the montage window, select the clips that you want to move.
2. Click the clip area, and drag the clips in any direction.

   While dragging, the info line displays the current start position of the clip.

Overlapping Clips

You can move clips so that they overlap each other.

Note the following:

- The tracks in the audio montage are polyphonic, which means that each track can play back several overlapping clips at the same time. Overlapping clips are transparent, allowing you to see the underlying clips and their waveforms.
- There are crossfading options that automatically adjust the level envelope curves when you overlap clips.

Duplicating Clips

NOTE

The channel configuration of the clip must match the destination track.

PROCEDURE

1. In the montage window, select one or more clips.
2. Click the upper clip area and drag the clips in any direction.
   While you are dragging, a dotted line indicates where the first of the copied clips will be placed. The position is also indicated on the info line.
   The ripple settings are taken into account.

Duplicating with Ripple

If you duplicate more than one clip, the ripple settings affect the result.

The following options are available on the **Edit** tab, in the **Ripple** section:

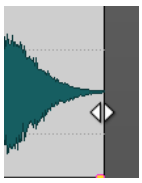
- If **Track** is activated and you move a clip horizontally, all clips on the selected track that are located to the right of the edited clip are also moved.
- If **Global** is activated and you move a clip horizontally, all clips on all tracks that are located to the right of the edited clip are also moved.

Clip Resizing

In this context, resizing usually means moving the start and end points of a clip. This reveals more or less of the original audio file.

To resize a clip, click the left or right edge of the clip, and move the start or end point to the left or to the right. You cannot drag the edge of a clip past the start or end point of the audio file it refers to.

If you press **Alt** when resizing, all selected clips are resized by the same amount.

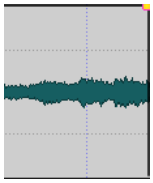


Deleting Clips

- Right-click a clip and select **Delete**.
- Select a clip and press **Delete**.

Clips and Cue Points

A cue point is a defined position marker that belongs to a clip. It may be positioned inside or outside the clip. Cue points are displayed as dotted vertical lines.



When you move a clip, its cue point is magnetic to any edges, markers, or positions. There are several uses for this:

- Set the cue point at a relevant position in the audio to align the clip with other clips, etc.
- Set the cue point before the start of a clip to position clips in a row with pre-defined spaces.
- Set the cue point at the fade in or fade out point of a clip to maintain defined fade lengths when crossfading.

NOTE

Each clip can only have one cue point. If you select another cue point insert option, the cue point is moved to a new position.

Adding Cue Points

You can add one cue point for each clip.

PROCEDURE

1. In the audio montage, click the clip position where you want to set a cue point.
2. Select the **Edit** tab.
3. In the **Clip** section, open the **Cue Point** pop-up menu.
4. Select one of the following options:
   - **Set at Cursor**
   - **Set at Default Gap Position**
   - **Follows Fade In End Point**
   - **Follows Fade Out Start Point**
5. Optional: Select **Custom Cue End** and specify a custom cue end point.

Track Activity Indicator

The track activity indicator shows the volume level for audio tracks. It is located on the right side of the track control area in the **Audio Montage** window.

The track activity indicator provides an overview of which tracks are playing back audio at what approximate level.

Envelopes for Clips

For clips in the audio montage, you can create envelopes for volume and fades.

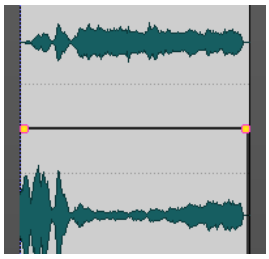
You can create an independent level envelope curve to automate level, to create fades and crossfades, and to mute clip sections.

Edit the envelope settings in the **Envelope** tab, or by right-clicking an envelope curve. The settings menu is different, depending on whether you click the fade in part, the fade out part, or the sustain part.

How Envelopes are Displayed

By default, all clips display a level envelope curve. You can view the envelope as three separate envelopes: the fade in part, the sustain part, and the fade out part.

The points on the left and right side of the curve are the fade in and fade out junction points that separate the fade parts from the sustain part.



The envelope curve indicates if points, fade ins, or fade outs have been defined. In addition to the curve, changes in the level envelope are also reflected in the waveform.

Clip Envelope Editing

Curve points allow you to create volume curves and fade curves for a clip. You can edit the envelope curve by adding and moving curve points.

Editing Curve Points

Many of the editing operations that are commonly used in the context of your computer operating system can be applied when editing curve points. On top of these, a number of specific procedures apply.

- To add a curve point, double-click the envelope curve.
- To delete a curve point, double-click the curve point. The curve point between the sustain and fade parts of the envelope cannot be deleted.
- To delete multiple curve points, select the curve points that you want to delete, right-click one of the points, and select **Delete Selected Points**.
- To select a range of points, **Alt**-click and drag to create a selection rectangle.
- To move all selected points, click one of the selected points and drag.
- To raise or lower the value of two consecutive curve points, **Ctrl/Cmd**-click the segment between the points and drag up or down.
- To change the time position of two consecutive curve points, **Shift**-click the segment between the points and drag left or right.

- To raise or lower the entire envelope curve, make sure that no curve point is selected, click the envelope curve, and drag up or down. Do not drag a segment that is limited by selected points.
- To adjust the envelopes in all selected clips, hold down **Alt**, and drag any envelope curve up or down. This is a quick way to adjust the level or pan of multiple clips at the same time and also to adjust both sides of a stereo envelope simultaneously.
- To move a fade in/fade out point vertically, **Ctrl/Cmd**-click and drag the fade point.
- To change the level or the fade in/out time of multiple envelopes at the same time, select the clips that you want to edit, press **Alt**, and edit the envelope with the mouse.

Resetting Curve Points

You can reset curve points to the default level 0 dB.

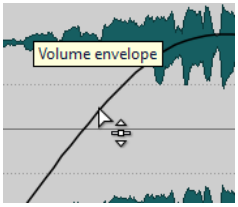
- To reset a single point to 0 dB, select the point, right-click it, and select **Reset Selected Points**.
- To reset the whole envelope curve to default, right-click the envelope curve, and select **Reset Level to 0 dB**.

Changing Overall Level Envelopes of Clips

The default envelope curve contains no level envelope points, but you can use it to change the overall level for a clip.

PROCEDURE

1. In the montage window, place the mouse cursor on the envelope curve.
   The mouse cursor takes the shape of a circle with two arrows that point up and down.



2. Click and drag the curve up or down to change the clip envelope level.

Fades and Crossfades in Audio Montages

A fade in is a gradual increase in level and a fade out is a gradual decrease in level. A crossfade is a gradual fade between two sounds, where one is faded in and the other faded out.

Creating Fades

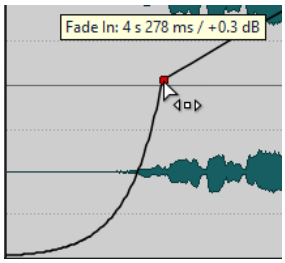
By default, all clips display fade in and fade out junction points. These can be dragged horizontally to create a fade in or fade out for a clip.

You can add envelope points to a fade just as with level envelopes.

- To create a fade in, click the fade in point at the start of a clip, and drag it to the right.
- To create a fade out, click the fade out point at the end of a clip, and drag it to the left.
- To create a fade in or fade out at a specific time position, use set **Apply Fade Time** option in the **Fade** tab. Enter the time value in the time field and click **Apply Fade Time**.
- To move a fade in/fade out point vertically, press **Ctrl/Cmd** while dragging.

- To create a crossfade, move a clip on another. A crossfade is automatically created at the junction point.

The resulting fade in/fade out curve is displayed in the clip, and the fade is also reflected in the waveform. If you position the mouse over the fade in point, the fade in time is displayed in seconds and milliseconds and the volume in dB.



Fade In and Fade Out Menus

In this menu, you can select various preset fade curves and other fade-related options.

- To open the **Fade In** or **Fade Out** pop-up menu, right-click the fade in or fade out points.

Zoom to Fade In Range/Zoom to Fade Out Range

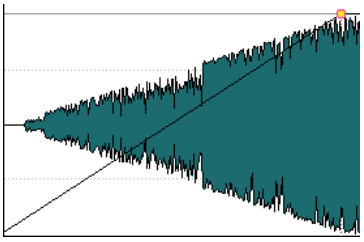
Adjusts the view to mainly display the fade in/fade out part of the active clip.

Paste

Replaces the fade in/fade out shape and length with the shape and length that was copied to the clipboard.

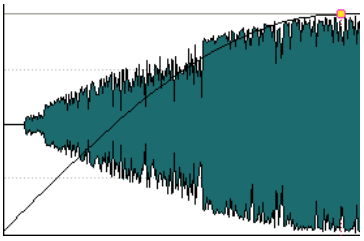
Linear

Changes the level linearly.



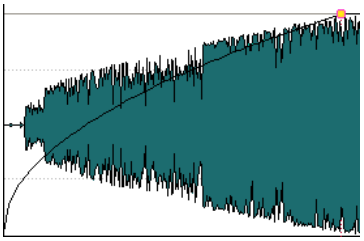
Sinus (*)

Changes the level according to the first quarter period of the sine curve. When used in a crossfade, the loudness (RMS) remains constant during the transition.



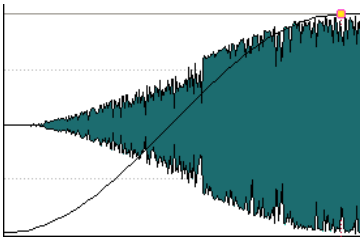
Square-root (*)

Changes the level according to the square-root curve. When used in a crossfade, the loudness (RMS) remains constant during the transition.



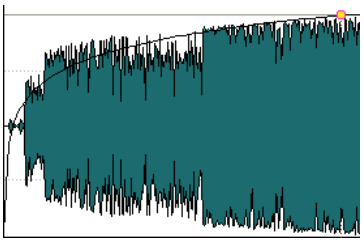
Sinusoid

Changes the level according to a half period part of the sine curve.



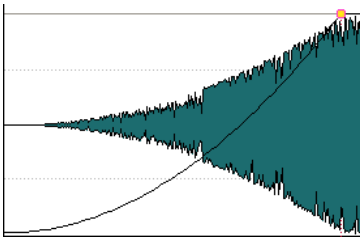
Logarithmic

Changes the level logarithmically.



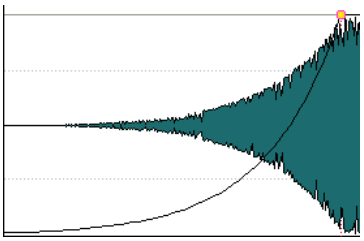
Exponential

Changes the level exponentially.



Exponential+

Changes the level strongly exponential.

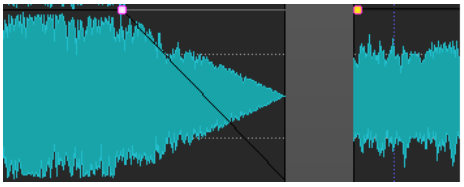


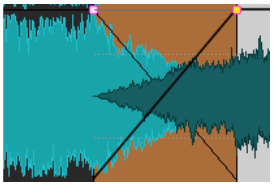
Crossfade Editing

You can create crossfades with independent shapes and lengths for the fade in and fade out curves.

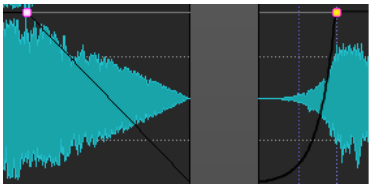
The default automatic crossfade is linear. It uses the same shape and fade lengths for fade in and fade out. The following rules apply:

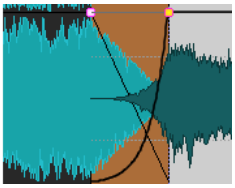
- A crossfade includes fade in and fade out.
- You can edit the fade in and fade out curves in crossfades in the same way as fades.
- To resize the crossfade time symmetrically, press **Shift**, click the crossfade area, and drag left and right.
- To move the crossfade region while keeping its length, press **Ctrl/Cmd**, click the crossfade area, and drag left and right.
- When you move a clip so that it overlaps another clip to create a crossfade, and neither clip has a defined fade in the overlap, a default crossfade is created.
- When moving a clip with a defined fade curve so that it overlaps another clip without a defined fade, the unmoved clip automatically gets the same fade shape as the moved clip, with amplitude compensation. This only applies if the fade out length of the unmoved clip is set to zero.





- If both clips have different defined fade curves, an asymmetrical crossfade is created.





Mixing Down – The Render Function

The **Render** function allows you to mix down the whole audio montage or a region of it to a single audio file.

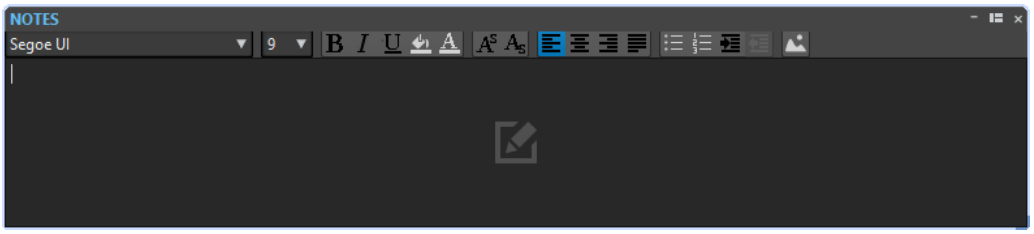
A mixdown is necessary to produce an audio file from the audio montage.

RELATED LINKS
Rendering on page 133

Notes Window

This window allows you to enter notes about the current audio montage session.

- To open the **Notes** window, open an audio montage and select **Tool Windows** > **Notes**.



You can enter the text directly in this window and use the standard HTML text editor controls to format the text, and to add images and lists. The notes are saved with the audio montage.

Recording

You can record audio in the **Audio Editor** and in the **Audio Montage** window.

Setting Up the Recording Dialog

Before you start recording, set up the **Recording** dialog.

PROCEDURE

1. In the **Audio Editor** or the **Audio Montage** window, click the **Record** button, or press * on the numeric key pad.
2. In the **File to Create** section, open the pop-up menu, and select whether you want to record a named file or a temporary file.
3. In the **File to Create** section, select a file name and the location where you want to save your file.
4. Select the audio format by doing one of the following:
   - Click the down arrow button to select a preset audio format.
   - Click the audio format text to open the **Audio File Format** dialog, select the format, and click **OK**.
5. Select whether you want to record to an audio file or an audio montage track, by selecting one of the following options:
   - **Create New Audio File Window**
   - **Add to Active Audio File**
   - **Add to Selected Track of Montage**
6. Select whether you want the **Level** or the **Spectrum** display.
7. Click **Record** to start recording.
   The background of the **Recording** dialog turns red to indicate that you are recording.
8. Optional: Pause the recording by clicking the **Pause** button.
9. Optional: Drop markers during recording by clicking the drop marker buttons.
10. When you have finished recording, click **Stop**.
11. Optional: If you want to record another take, click **Record** again.

Dropping Markers During Recording

When you are recording, you can click the marker buttons to add markers to the recorded file.

PROCEDURE

1. Open the **Recording** dialog.
2. Make your settings and start recording.
3. Select the type of marker that you want to drop.

- To drop a numbered generic marker, click the yellow marker button, or press **Ctrl/Cmd**-M.
- To drop numbered generic region start and end markers, click the white buttons, or press **Ctrl/Cmd**-L/**Ctrl/Cmd**-R.

RESULT

A marker is dropped each time that you click the marker button.

NOTE

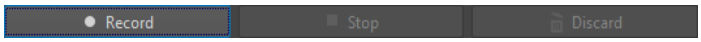
If you insert two or more region start markers in a row with no region end markers in between, only the last of these start markers is kept. The same applies for region end markers.

Recording Dialog

In this dialog, you can make recording settings and start recording an audio file.

- To open the **Recording** dialog, open the **Audio Editor** or the **Audio Montage** window, and on the transport bar, click **Record**.

Main Buttons



Record

Starts recording. Depending on the recording options, the **Pause** mode is activated.

Stop

Stops recording.

Discard

Stops recording and deletes anything recorded so far.

Settings

File to Create

Specify whether you want to record a **Temporary File** to be saved later, or record a **Named File** with a specific name and location.

Name

The name of the file to be written, without the path. When typing, all files in the selected folder that start with the same letters are displayed. To display all files in the selected folder, click the list icon.

Location

Specifies the folder where you want to save the recording.

Audio File Format

Opens the **Audio File Format** dialog, where you can specify the file format.

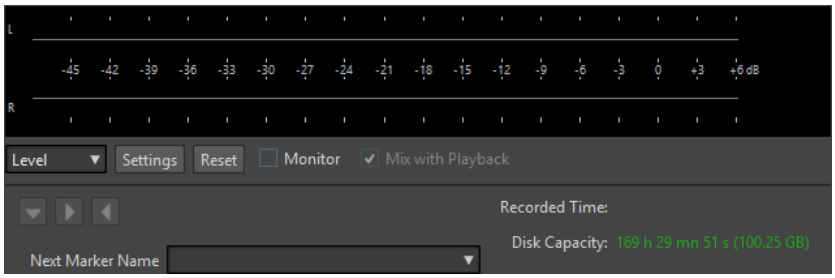
Location of the Recording

Specifies where the audio is recorded:

- If **Create New Audio File Window** is selected, the audio is recorded in a new audio file window.
- If **Add to Active Audio File** is selected, the audio is recorded in the active audio file window at the edit cursor position (if no audio file window exists, a new one is created).

- If **Add to Selected Track of Montage** is selected, the audio is recorded in an existing audio montage at the edit cursor position (if no audio montage exists, a new one is created).

Meter Display



Level/Spectrum

Specifies which meter to display.

Settings

Opens the **Level/Pan Meter Settings** dialog, where you can customize the meter settings.

Reset

Resets the peak values.

Monitor

If this option is activated, the audio input is also sent to the output ports (not available if Windows MME drivers are used).

Mix with Playback

If this option is activated and the same audio ports are selected for monitoring and for playback (in the **VST Audio Connections** tab), the signals are mixed. If this is not activated, the monitoring signal has priority.

This allows you to toggle between the auditioning of the recorded signal and the playback signal, and to have full control over the monitor outputs.

Marker

Allows you to set markers during the recording.

Next Marker Name

Edit the name of the next marker to insert.

Meter Display

In the lower part of the **Recording** dialog, you find a meter display. This is useful for checking the input level and the frequency spectrum of the input signal.

You can activate the meters by activating the **Monitor** checkbox.

To reset the meters, click the **Reset** button.

Level Meter

In the **Level Meter**, horizontal bars show the peak level (outer bars) and average loudness (VU, inner bars) of each channel. Values are also shown numerically. When you click the **Settings** button, the **Level/Pan Meter Settings** dialog opens.

Spectrometer

The **Spectrometer** shows a bar diagram, providing a continuous graphical representation of the frequency spectrum. From the **Settings** pop-up menu you can choose whether to restrict to high audio levels, or to include medium or low audio levels.

Disk Capacity Indicator

This indicator at the bottom of the **Recording** dialog indicates the approximate amount of available disk space on the hard disk specified in the **File to Create** section, or the hard disk that you have selected for temporary files.

NOTE

When there is less than 30 seconds of available hard disk space left, the disk capacity indication is displayed in red.

Master Section

The **Master Section** is the final block in the signal path before the audio is sent to the audio hardware, to an audio file, or to the audio meters. This is where you adjust the master levels and add effects.

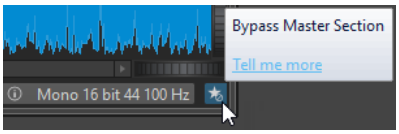
The settings and effects in the **Master Section** are taken into account in the following cases:

- When playing back an audio file in the wave window.
- When playing back an audio montage.
- When using the **Render** function.

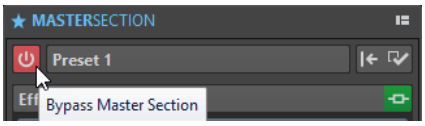
Bypassing the Master Section

By default, the **Master Section** is active. You can bypass it for each file individually or globally. If the **Master Section** is bypassed, only the **Playback Processing** pane of the **Master Section** is active during playback.

- To bypass the **Master Section** for individual audio files or audio montages, activate the **Bypass Master Section** button at the bottom of the wave/montage window.



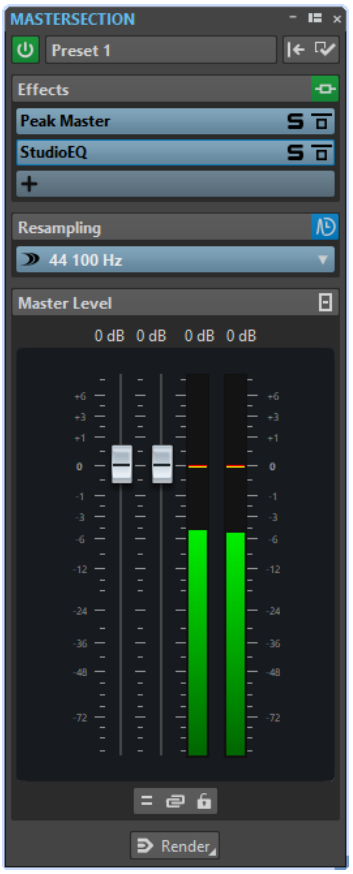
- To bypass the **Master Section** globally, activate the **Bypass Master Section** button at the top left of the **Master Section**.



Master Section Window

In this window, you can apply effect plug-ins, adjust the master level, and render the audio file or audio montage.

- To open the **Master Section** window, select **Tool Windows** > **Master Section**.



The **Master Section** consists of the following panes:

- **Effects**
- **Resampling**
- **Master Level**

Signal Path

The panes in the **Master Section** window correspond to the processing blocks of the **Master Section**.

The signal passes through these blocks from top to bottom:

1. Audio from WaveLab LE
2. Effects

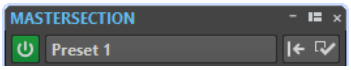
   Reordering the effect slots affects the signal path.
3. Resampling
4. Master Level

   The **Master Section** meters monitor the signal between the **Master Level** pane and the audio hardware or file on disk.
5. Audio hardware or file on disk

In the **Master Section**, the signal passes all plug-ins, even if some plug-ins are soloed. However, the sound is not affected by this because the muted plug-ins are bypassed from the playback process stream.

Master Section Tools

The tools and options at the top of the **Master Section** window allow you to make various settings before rendering the file, make bypass settings, and decide whether the playback signal passes the **Master Section**.



Bypass Master Section

If this option is deactivated, the **Master Section** is ignored during playback. However, rendering to file still takes into account all plug-ins.

Presets

Lets you save and recall **Master Section** presets. The **Presets** menu offers additional options to save and load default banks and effects.

Reset Master Section

Removes all active effects from the slots and sets the master output to 0 dB.

Settings

Opens the **Settings** pop-up menu, where you can make settings for the **Master Section**.

Settings Pop-up Menu

Hide Plug-in Windows when Master Section is not Visible

If this option is activated, plug-in windows are hidden when the **Master Section** is not visible.

Show Plug-in Controls in the Plug-in Window

If this option is activated, the plug-in controls are displayed in plug-in windows.

Use Plug-in Chain Window

Shows all open plug-ins in the plug-in window as tabs, which allows you to quickly switch between the plug-ins.

Plug-in Windows Move with Master Section

If this option is activated, the plug-in windows are also moved when you move the floating **Master Section**.

Section Visibility

Allows you to show or hide the **Master Section** sections.

Rearrange

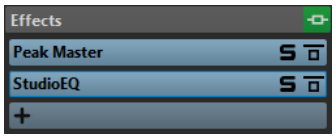
Rearranges the **Master Section** according to the sample rate and channel configuration of the active audio file. The internal bus of the **Master Section** and any active plug-ins are configured accordingly.

This operation is performed automatically before playback or rendering. It is sometimes helpful to manually rearrange the **Master Section**, because some plug-ins do not accept a mono or stereo signal as input, or a given sample rate. In that case, clicking the button informs you about any problems, before playback or rendering.

This operation has no effect if playback is already in progress or if there is no active audio file.

Effects Pane

This pane in the **Master Section** allows you to add up to 4 effect plug-ins in series, and manage them.



Fold/Unfold Pane

Expands or collapses the pane.

Bypass All Effects

Bypasses any effect processing during playback and optionally when rendering.

Add Effect

Allows you to add an effect to an empty effect slot.

Effect plug-in name

Once you have added a plug-in to a slot, you can click the plug-in name to open and close the corresponding plug-in window.

Presets pop-up menu

Lets you save and recall preset settings. The **Presets** pop-up menu offers additional options to save and load default banks and effects.

Effect Options pop-up menu

Allows you to load another effect to the effect slot. Furthermore, the following options are available:

- **Remove Plug-in** removes the effect from the slot.
- **Shift All Plug-ins Down**/**Shift All Plug-ins Up** allows you to move the effects to another position.
- If **Active** is activated, the effect is active. If **Active** is deactivated, the effect is excluded from playback and rendering.

Solo (Bypass)

Soloes the plug-in.

Bypass Processing

Bypasses the plug-in during playback and optionally during rendering. The signal is still processed by the plug-in, but is not injected in the audible stream.

Supported Effect Plug-in Formats

WaveLab LE supports WaveLab LE-specific plug-ins, VST 2 plug-ins, and VST 3 plug-ins.

WaveLab LE-specific Plug-ins

Some specific plug-ins are included in WaveLab LE, for example, the Resampler plug-in.

VST Plug-ins

Steinberg's VST plug-in format is supported by a lot of programs and plug-in manufacturers. You find a number of VST plug-ins included with WaveLab LE. Other plug-ins can be purchased separately from Steinberg or other manufacturers.

Setting Up Effects

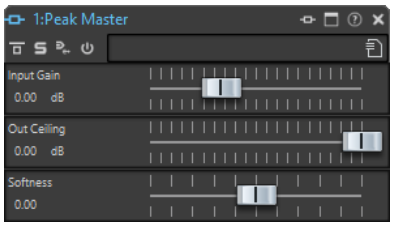
The number of available effects depends on the number and format of the plug-ins that you have installed.

- To select an effect plug-in for a slot, click the slot, and select an effect from the pop-up menu. When you have selected an effect, it is automatically activated, and its control panel opens.
- To turn off an effect, right-click the slot, and deactivate **Active**. To activate the effect, activate **Active** again.
- To remove an effect plug-in, right-click the slot and select **Remove Plug-in** from the pop-up menu.
- To show/hide a plug-in window, click the effect slot.
- To solo an effect, click its **Solo (Bypass)** button. This allows you to check the sound of that effect only. You can also bypass effects via their control panels.
- To change the order of the slots, that is, the order in which the signal passes through the effects, click a slot, and drag it to a new position.

Master Section Plug-in Window

In the plug-in windows of the **Master Section**, you can make settings for a **Master Section** effect plug-in.

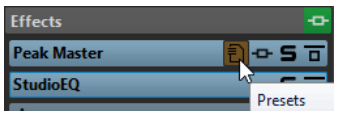
- To show a plug-in window, click the effect slot.



Effect Plug-in Presets

With WaveLab LE comes a number of factory presets for the included effect plug-ins. You can use them as they are or as a starting point for your own settings.

Third-party plug-ins can provide their own factory presets. To access the presets for an effect, click the **Presets** button in its control panel window or the **Presets** button for its effect slot. The available functions depend on the type of plug-in.



Presets for VST 2 Plug-ins

VST 2 plug-ins have their own preset handling.

When you click the **Presets** button for this type of effect, a pop-up menu with the following options opens:

Load/Save Bank

Loads and saves complete sets of presets. The file format is compatible with Cubase.

Load/Save Default Bank

Loads the default set of presets or saves the current set of presets as the default bank.

Load/Save Effect

Loads or saves a preset. This is also compatible with Cubase.

Edit Name of Current Program

Allows you to define a name for the preset.

Preset List

Allows you to select one of the loaded presets.

Resampling Pane

This pane in the **Master Section** allows you to resample the signal. With the Resampling plug-in, you can check the peaks before the master gain and meters, and before limiting and dithering.

Fold/Unfold Pane

Expands or collapses the pane.

Off

Deactivates the resampling effect.

Use Preferred Sample Rate

If this option is activated, resampling matches the sample rate that is specified as the preferred sample rate on the **Audio Connections** tab.

NOTE

The sample rate is used for playback only. This allows you to play back sample rates that your audio device does not support.

Sample Rate menu

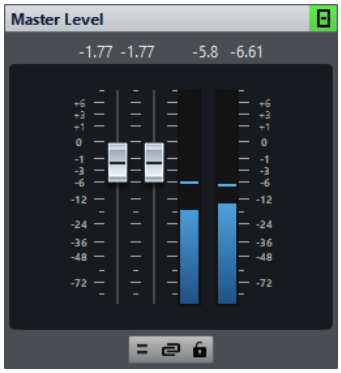
Allows you to select a sample rate.

RELATED LINKS

Audio Connections Tab on page 9

Master Level Pane

This pane in the **Master Section** allows you to control the master level of the active audio file.



Faders

The faders in the **Master Level** pane govern the final output level. Use the faders to optimize the level of the signal that is sent to the audio hardware.

NOTE

It is important to avoid clipping, especially when mastering. Clipping is indicated by the clip indicators of the **Master Section**.

- To lock the faders, activate **Lock Faders** below the fader section.

  Locked faders cannot be changed with the mouse. Other editing methods, for example via remote control or shortcut, are still possible.

Meters

The **Master Section** meters show the signal level.

Use these meters to get an overview of the signal levels. The numeric fields above the faders show the peak levels for each channel. The peak indicators turn red whenever the signal clips. If this happens, you should do the following:

- Lower the faders.
- Right-click the clip indicators and select **Reset Peaks** to reset the clip indicators.
- Play back the section again until no clipping occurs.

Mixing Stereo Channels into Mono Channels

The **Mix to Mono** option on the **Audio Channel Monitoring** pop-up menu allows you to transform the left and right channels of a stereo track into two mono channels. In this case, the output level is automatically reduced by -6 dB to avoid clipping. The **Mix to Mono** option is useful for checking the mono compatibility of stereo mixes, etc.

NOTE

If **Mix to Mono** is activated, the indicator for the **Master Level** pane is lit, even if the master level is not adjusted. This helps you avoid accidentally leaving **Mix to Mono** activated.

Unlink Faders

Determines whether you can adjust the faders individually or together.

If **Unlink Faders** is deactivated, moving one fader also moves the other by the same amount. Activating **Unlink Faders** allows you to correct improper stereo balancing by adjusting the level of the channels individually.

If you offset the faders with **Unlink Faders** activated and then deactivate **Unlink Faders**, you can adjust the overall level without changing the level offset between the channels.

Fader offsets are not preserved at the end of the range of movement or once the mouse button is released.

Rendering

By rendering the effects using the **Render** function in the **Master Section**, they become a permanent part of a file. So instead of performing all processing in real-time during playback, you can save the audio output to a file on disk.

Writing the output of the **Master Section** to a file on disk allows you to apply **Master Section** processing to an audio file, or mix down an audio montage to an audio file.

Rendering Files

PREREQUISITE

Set up your audio file or audio montage.

PROCEDURE

1. In the **Master Section**, make your settings.
2. On the bottom of the **Master Section**, click **Render**.
3. Make your rendering settings.
4. In the **Result** section, activate **Named File**.
5. Click the **Format** field and select **Edit Format**.
6. Make your settings in the **Audio File Format** dialog and click **OK**.
7. When you have set up the rendering process, click **Start**.

RESULT

The file is rendered.

NOTE

Several rendering operations can be performed at the same time when using different files.

RELATED LINKS

Audio File Format Dialog on page 69
Creating Audio File Format Presets on page 134

Creating Audio File Format Presets

PROCEDURE

1. In the **Audio File Format** dialog, specify the audio file format.
2. Open the **Presets** pop-up menu and select **Save As**.
3. Enter a name for the preset and click **Save**.

RELATED LINKS

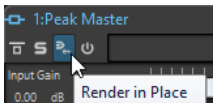
Audio File Format Dialog on page 69

In-Place Rendering

In the **Audio Editor**, you can process a section of an audio file or the whole audio file. This is a quick way to process several audio sections in an audio file, or test the effect of different plug-ins on an audio file.

You can select the **Render in Place** function in the following places:

- On the **Render** tab of the **Audio Editor**
- In the **Master Section**, in the context menu of the **Render** button
- In the command bar of a plug-in window



When selecting **Render in Place** via the **Render** tab, you can make additional render settings on the **Options** pop-up menu. When selecting **Render in Place** via the **Master Section** or a plug-in window, the following render settings are always active:

- Fade in/out at boundaries
- Exclude bypassed plug-ins

NOTE

Once an audio section has been processed, there is no automatic bypass of plug-ins or the **Master Section**.

An example for using in-place rendering:

Let's say that you are restoring a file and have 3 favorite plug-ins, for example, 3 **DeClicker** plug-ins. Now you want to use the one that gives the best results.

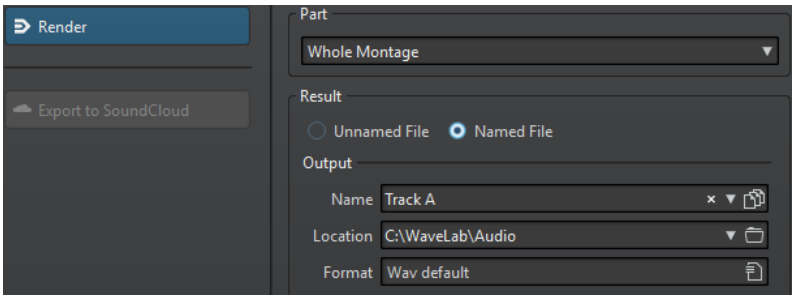
1. Load all 3 plug-ins in the **Master Section**.
2. Select a region, solo plug-in #1, and play the region.
3. Solo plug-in #2, and play the region.
4. Solo plug-in #3, and play the region.
5. Solo the plug-in that you think sounded the best, and click **Render in Place**, or press Alt-A.

RELATED LINKS
Render Tab on page 135

Render Tab

This tab allows you to select which parts of an audio file to render, and into which format.

- To open the **Render** tab, click **Render** at the bottom of the **Master Section**.



The following options are available for rendering audio files and audio montages.

Part

- **Selected Audio Range** processes and renders the selected audio range.
- **Specific Region** processes and renders an audio range that is specified using region markers. In the pop-up menu next to this option, select the region that you want to render.

In Place

If this option is activated, the rendered audio range replaces the source audio range.

Unnamed File

If this option is activated, the file is named `untitled`.

Named File

If this option is activated, you can specify a name for the rendered file.

Name

Enter a name for the rendered file. Clicking the arrow icon opens a menu that offers you several automatic naming options.

Location

Select a folder for the rendered file.

Format

Opens the **Multi Audio File Format** dialog, where you can select the file format.

Bypass Master Section

If this option is activated, the plug-ins and gain of the **Master Section** are bypassed when rendering.

Auto Save Master Section Preset

If this option is activated, the **Master Section** preset is automatically saved in the audio file or audio montage when you render the file. You can load the **Master Section** preset via the **Load Master Section Preset** option in the lower right corner of the wave window or the montage window.

Fade In/Out at Boundaries

If this option is activated, a fade is performed at the audio range boundaries when a new file is created, or a crossfade with the audio neighborhood is created if the audio range is processed in place.

No Reverb Tail

If this option is activated, the audio tail produced by effects such as reverb is not included in the rendered file.

Some plug-ins do not provide a tail duration to WaveLab LE. In this case, this option has no effect. For such plug-ins, you could add the **Silence** plug-in to add extra samples at the end of the file.

Copy Markers

If this option is activated, markers that are included in the range to process are copied to the rendered file.

Skip Exclusion Regions

If this option is activated, audio ranges that are marked as muted are skipped and not included in the result.

Open Resulting Audio File

If this option is activated, the rendered files are opened in a new file group.

Bypass Master Section on Resulting Audio File

If this option is activated, playback of the resulting audio file bypasses the entire **Master Section** after rendering. This setting can be toggled by clicking on the button at the bottom right of the wave window or montage window.

NOTE

It is recommended to activate this option, because you do not need to monitor this new file through the effects again when the effects have been applied to a file.

Export to SoundCloud

If this option is activated, the rendered file is uploaded to SoundCloud after the rendering process is finished.

Render Tab for Audio Files

The following options on the **Render** tab are exclusive to rendering audio files.

Part

Whole File processes and renders the whole file.

In Place

If this option is activated, the rendered audio range replaces the source audio range.

Render Tab for Audio Montages

The following option on the **Render** tab is exclusive to rendering audio montages.

Part

Whole Montage processes and renders the whole audio montage.

Monitoring Background Tasks

When rendering, you can monitor the process, and pause or cancel tasks.

A status bar below the wave window and the montage window shows the progress of the current rendering process. You can cancel or pause the rendering with the corresponding buttons.

RELATED LINKS
Global Preferences on page 162

Dropouts

A dropout most likely occurs when your computer does not have the processing power to handle all used effect processors.

To avoid dropouts, try the following:

- Use fewer effects.
- Consider rendering the processing rather than running it in real time. Then master from the processed file without applying effects. Dropouts never occur when rendering to a file.
- Do not process any files in the background.
- If neither of the above helps, check the audio card preference settings. You might need to adjust the audio buffer settings. If a dropout occurs during a real-time mastering process we recommend that you re-master. Stop playback, click the dropout indicator to reset it, and try again.

Markers

Markers allow you to save and name specific positions in a file. Markers are useful for editing and playback.

For example, markers can be used for the following:

- Indicate cue points or absolute time locations.
- Highlight problem sections.
- Visually separate tracks.
- Set the wave cursor to a specific position.
- Select all audio between two positions.

NOTE

The functions in the **Markers** window are the same for audio files and audio montages. However, the **Markers** window for audio montages offers additional options regarding clips.

Marker Types

The following marker types are available:

Generic markers

Allow you to locate positions and select all the audio between two points, for example. Generic markers can be created during recording.

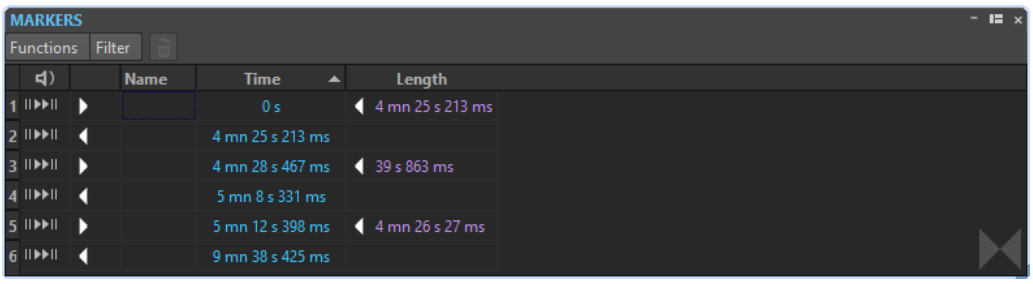
Region start and end markers

Define start and end points for generic regions. Region start and end markers can be created during recording and are used in pairs.

Markers Window

In this window, you can create, edit, and use markers while working on an audio file or audio montage.

- To open the **Markers** window, open an audio file or audio montage and select **Tool Windows** > **Markers**.



Markers List

The **Markers** window contains a list of all markers of the active file along with their details and controls. You can create and edit markers from the markers list.

Marker numbers

Clicking the number of a marker scrolls the waveform to reveal the corresponding marker.

Play Pre-Roll

Plays back the audio from the marker position with a pre-roll.

You can also press **Alt** and click **Play Pre-Roll** to play back from the marker position with a short pre-roll.

Play

Plays back the audio from the marker position.

Marker type

Shows the marker type. To change the marker type, click the marker icon and select another marker type from the pop-up list.

Name

Shows the marker name. To change the name, double-click in the corresponding cell and enter a new name.

Time

Shows the marker position on the time ruler. To change the position, double-click in the corresponding cell and enter a new value.

Length

Shows the time between the marker start position and the corresponding end marker.

- To zoom in on the region between a start and end marker, click the corresponding cell in the **Length** column.
- To select the region between a start and end marker, double-click the corresponding cell in the **Length** column. This function is only available for markers in the **Audio Editor**.

Clip Reference (only available for markers in the Audio Montage window)

A marker can be attached to the left or right edge of a clip, and to its waveform. When you move a clip, the corresponding marker moves along. The clip reference column shows the name of the clip.

Offset (only available for markers in the Audio Montage window)

Shows the distance between the marker and the reference point.

Functions Menu

Depending on whether the **Audio Editor** or the **Audio Montage** window is open, different options are available. The following options are available for audio files and audio montages:

Select All

Selects all markers in the markers list.

Invert Selection States

Inverts the selection status of all markers.

Deselect All

Deselects all markers.

Delete Selected Markers

Deletes all markers that are selected.

Default Marker Names

Opens the **Default Marker Names** dialog, where you can select default marker names for each marker type.

Customize Command Bar

Opens a dialog where you can customize marker-related menus and shortcuts.

The following options of the **Functions** menu are only available for audio files:

Select in Time Range

Selects the markers located in the selection range in the wave window.

The following options of the **Functions** menu are only available for audio montages:

Bind Selected Markers to Start of Active Clip

Makes the marker position relative to the start of the active clip. When the start of this clip moves, the marker moves, too.

Bind Selected Markers to End of Active Clip

Makes the marker position relative to the end of the active clip. When the end of this clip moves, the marker moves, too.

Detach Selected Markers from Their Associated Clip

Makes the marker position relative to the start of the audio montage.

Full Clip Attachment

Attaches markers to a clip so that they are copied or deleted when the clip is copied or deleted.

Customize Command Bar

Opens the **Customize Commands** dialog which contains options to hide or show specific command bar buttons.

Filter Menu

Use the **Filter** menu to determine which types of markers are displayed in the markers list and on the timeline.

About Creating Markers

Markers can be created during playback or in stop mode. You can create specific markers if you already know what you want to mark, or create generic markers.

Creating Markers

You can create markers in the wave window and montage window in stop mode or during playback.

PROCEDURE

1. Do one of the following:
   - Start playback.

- In the wave/montage window, set the cursor to the position where you want to insert the marker.

2. Do one of the following:
   - In the **Audio Editor** or **Audio Montage** window, select the **Insert** tab, and click a marker icon in the **Markers** section.
   - Right-click the upper part of the time ruler, and select a marker from the context menu.
   - Press **Insert**/**M**. This creates a generic marker.

Creating Markers at Selection Start and End

You can mark a selection for looping or review, for example.

PROCEDURE

1. In the wave window, create a selection range.
2. Do one of the following:
   - In the **Audio Editor** or the **Audio Montage** window, select the **Insert** tab and select a marker pair in the **Markers** section.
   - In the wave window, make a selection range, right-click it, and select one of the marker pairs.
   - In the wave window or the montage window, create a selection range, right-click above the time ruler, and select one of the marker pairs.

Duplicating Markers

This is a quick way to create a marker from an existing marker.

PROCEDURE

- In the wave window or the montage window, hold down **Shift**, click a marker, and drag.

Deleting Markers

Markers can be deleted in the wave window or the montage window, and in the **Markers** window.

Deleting Markers in the Wave/Montage Window

- In the wave/montage window, right-click a marker and select **Delete**.
- Drag and drop a marker icon upwards outside the time ruler.

Deleting Markers in the Markers Window

This is useful if your project has many markers or if the marker that you want to delete is not visible in the wave/montage window.

PROCEDURE

1. In the **Markers** window, select one or several markers.
   You can also select **Functions** > **Select All**.

2. Click **Delete Selected Markers** or select **Functions** > **Delete Selected Markers**.

Moving Markers

You can adjust marker positions in the wave window and the montage window.

PROCEDURE

- In the wave/montage window, drag a marker to a new position on the time ruler.
  If **Snap to Magnets** is activated, the marker snaps to the cursor position, or the beginning/end of a selection or waveform.

Navigating to Markers

You can jump to the previous or next marker using the corresponding marker buttons.

- To jump to the previous/next marker, select the **View** tab, and, in the **Cursor** section, click **Previous Marker**/**Next Marker**.
- To set the wave cursor to a marker position, in the wave window or the montage window, double-click a marker triangle.

Hiding Markers of a Specific Type

For a better overview, you can hide marker types.

PROCEDURE

1. In the **Markers** window, select **Filter**.
2. Deactivate the marker type that you want to hide.
   You can make the markers visible again by activating the corresponding marker type.

Converting Marker Types

You can convert markers of a specific type to another type.

Converting the Type of a Single Marker

PROCEDURE

1. In the **Markers** window, click the marker icon that you want to convert.
2. Select a new marker type from the list.

Renaming Markers

You can change the names of markers.

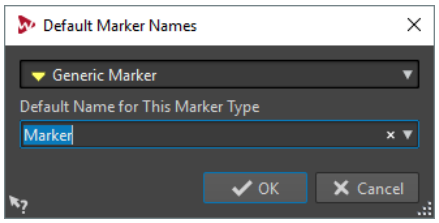
- To rename a marker in the wave window or the montage window, right-click a marker, select **Rename**, and enter a new name.
- To rename markers in the **Markers** window, double-click a marker name in the **Name** column, and enter a new name.

- To edit the default names, in the **Markers** window, select **Functions** > **Default Marker Names**.

Default Marker Names Dialog

In this dialog, you can specify the default marker names.

- To open the **Default Marker Names** dialog, open the **Markers** window and select **Functions** > **Default Marker Names**.



Marker type

Lets you select the type of marker for which you want to specify the default name.

Default Name for This Marker Type

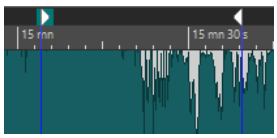
Lets you specify the default name for the selected marker type.

Selecting Markers

There are several ways to select markers.

- In the wave window or the montage window, click a marker.
- In the **Markers** window, click in a cell. The corresponding marker is selected.
- Use **Ctrl/Cmd** and **Shift** to select multiple markers.

The marker icon changes its background to indicate the selected marker.



Selecting the Audio Between Markers

You can select the audio between two adjacent markers or between any two markers. This allows you to select a section that has been marked.

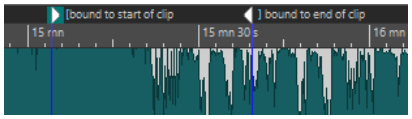
- To select the audio between two adjacent markers, double-click between two adjacent markers in the wave window or the montage window.
- To select several regions between two adjacent markers, double-click between two adjacent markers, and after the second click, drag to select the adjacent regions.
- To select the audio between a region marker pair, hold down **Shift**, and double-click a region marker.
- To extend the selection until the end of a marker region, in the wave/montage window, hold down **Shift**, and double-click in the marker region that you want to select.
- To open the **Markers** window and display further information about a specific marker, hold down **Alt**, and double-click a marker.

Binding Markers to Clips in the Audio Montage

In the **Audio Montage** window, you can bind markers to clips. By doing this, the marker remains in the same position relative to the clip start/end, even if the clip is moved or resized in the audio montage.

You can find the options regarding binding clips and markers on the **Functions** menu of the **Markers** window, and when right-clicking a marker.

When a marker is bound to a clip element, its name is preceded by a blue character.



RELATED LINKS
Markers Window on page 138

How Marker Information is Saved

WaveLab LE uses MRK files as a way to save information that is independent of the file format. However, to make marker information exchangeable between applications, WaveLab LE also saves some information in the Wave headers.

This makes saving files quicker if only a marker setting was changed. However, this only applies if **Write Markers in WAV File Header** is deactivated in the **Audio Files Preferences** on the **File** tab. By default, MRK files are created and information are saved in the Wave headers.

- When you open a file that includes markers that were added in WaveLab LE, and markers that were added in another application, all markers are displayed in WaveLab LE.

Importing Audio CD Tracks

You can read audio tracks from regular CDs and save them as a digital copy in any audio format on your hard disk.

Although WaveLab LE supports a large number of CD drives, there are some restrictions you need to be aware of:

- Observe and respect any copyright notices on the CDs from which you are importing tracks.

When importing tracks, they are named “Track XX” by default, where XX is a number starting at 01. The numbering scheme can be changed.

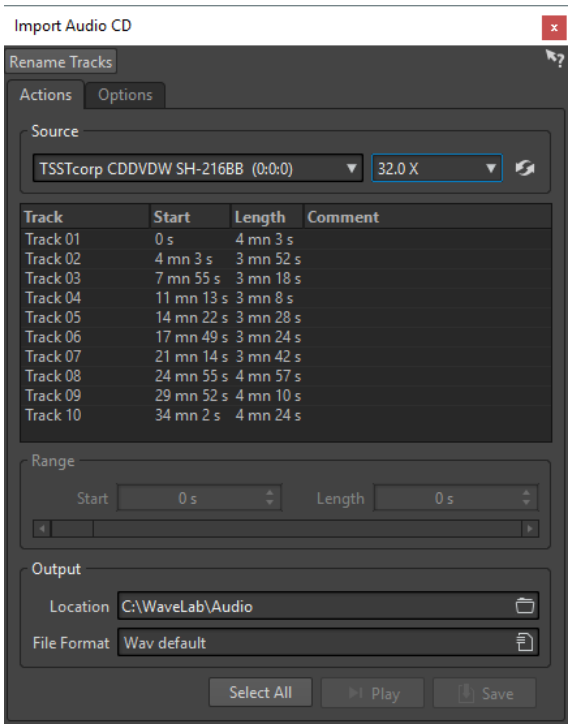
NOTE

Importing audio CD tracks is technically more complicated than reading files from a CD-ROM or hard disk, because audio sectors can be hard to detect. Some CDs which do not conform completely to the CD standard may cause problems, especially when they are copy protected.

Import Audio CD Dialog

In this dialog, you can import one or more tracks from an audio CD.

- To open the **Import Audio CD** dialog, select **File** > **Import**, and click **Audio CD**.



Rename Tracks Menu

Name

Renames the tracks according to the selected renaming scheme.

Actions Tab

Source

On Windows systems, select the CD drive from which you want to import audio CD tracks. On **macOS** systems, select a file path.

Speed

Allows you to set the writing speed. The highest speed depends on your writing device and on of the medium present in the device.

Refresh

If you insert a CD while the **Import Audio CD** dialog is open, you need to click this button to show the contents of that CD in the list.

Eject Optical Medium

Ejects the medium from the selected drive.

Track List

Shows the tracks on the CD.

Range – Start/Length

If you want to import only a section of a track, use the **Start** and **Length** fields to define a start point and length.

Output – Location

Allows you to set the output location.

Output – File Format

Allows you to set the output file format.

Select All

Selects all CD tracks in the track list.

Play

Plays back the selected CD track.

Options Tab

Trim Silence

If this option is activated, silence between imported tracks is removed. Only digital silence is removed, that is, samples with a zero level.

Automatically Refresh on CD Change

If this option is activated, WaveLab LE checks for the presence of a new CD in the drive several times a second. If a new CD is found, the track list display is refreshed.

Importing Audio CD Tracks

PROCEDURE

1. Insert a CD into the CD-ROM/CD-R device.
2. Select **File** > **Import**.
3. Click **Import Audio CD**.

4. In the **Import Audio CD** dialog, in the **Source** section, select the drive from which you want to read, and specify the read speed.
5. In the track list, select the tracks that you want to import.
6. Optional: If you have only selected one file, in the **Range** section, you can define a **Start** and **Length**, to import just a part of the track.
7. In the **Output** section, click the folder icon, and select an output location.

   You can also drag one or more CD tracks onto an audio montage track.
8. In the **Output** section, click the file format field, and select a file format for the imported audio files.
9. Click **Save**.

RESULT

The tracks are imported to the specified location.

Podcasts

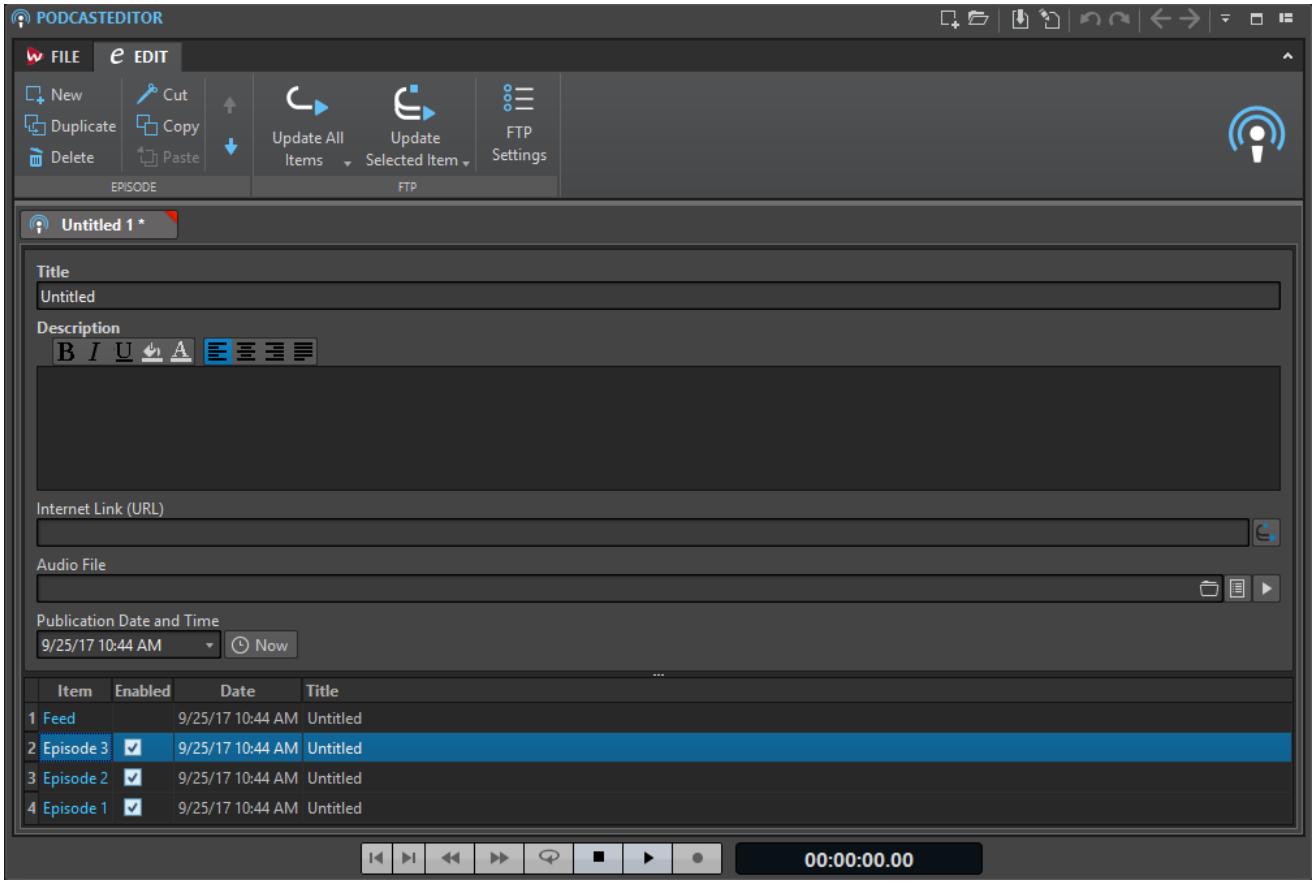
Podcasting is a method of distributing multimedia files over the Internet, for example, for playback on mobile devices and personal computers.

A podcast can be downloaded automatically, using software that is capable of reading RSS feeds. RSS (Really Simple Syndication) is a standard for distributing news and other information via the Internet. An RSS news feed sends short messages on a specific topic from a specific web site. In order to read the messages, the user employs a program that has the ability to monitor multiple feeds and automatically download new messages on a regular basis. This can be a special feed reader or an Internet browser, for example.

A podcast is an RSS feed including data content, such as audio or video files. This can be a show of which new episodes are released regularly. The file formats .mp4a, .mp3, and .ogg are commonly used for podcasts.

Podcast Editor

The **Podcast Editor** is divided into two panes. The upper pane shows the information for the feed or an episode, depending on the item that is selected in the list below. This is where you can add files, Internet links, or textual information to the podcast feed and its episodes. The lower pane shows an item list of the basic feed and all episodes that are included in the podcast.



Episode Section

In the **Episode** section, you can create, delete, and move individual podcast episodes.

New

Adds a new untitled episode.

Duplicate

Adds a new episode, copying all the information from the existing episode to the new one.

Delete

Deletes the selected episode. Alternatively, you can exclude an episode from the podcast by deactivating the **Enabled** box.

Cut/Copy/Paste

Cuts, copies, and pastes the selected episode.

Move Up/Move Down

Moves the selected episode one position up or down in the list. Alternatively, use drag and drop.

FTP Section

In the **FTP** section, you can define where your podcast is going to be uploaded via FTP.

Update All Items

Uploads/updates the XML podcast file on the FTP server. It also uploads all associated media files, but only if they are not yet available on the FTP server. This is the most common function to upload and update your podcast.

Update Selected Item

Uploads/updates the XML podcast file on the FTP server. It also uploads the media file of the selected item in the list, but only if it is not yet available on the FTP server.

Upload/Replace All Items

This is the same as above, but it always uploads/replaces all of the media files belonging to the item. This is useful if you have changed the audio data, for example.

Upload/Replace Selected Items

This is the same as above, but it always uploads/replaces the media file of the selected item in the list. This is useful if you have changed the audio data, for example.

FTP Settings

Opens the **FTP Settings** dialog, which allows you to edit the FTP settings that are related to this podcast.

Podcast Section

View Published Podcast

Opens your podcast (via the URL that is specified in your FTP site settings) using your default browser.

Global Options

Edit the automatic picture resizing, set a time offset with Greenwich Mean Time, and specify the path of the HTML editor.

Main Tab

On the **Main** tab, you can assign parameters to your podcast. The available parameters change, depending on whether you select a feed or an episode. Field labels in bold letters mark fields that are mandatory to fill.

Title

Sets the title of the feed, for example, the topic of your podcast.

Description

Gives space for a further description of the feed content.

Internet Link (URL)

The main link of the feed that the user sees. Use this to direct people to a web site that is related to your feed. Clicking the world icon opens the specified URL in your default Internet browser.

Audio File (only available for episodes)

This sets the path to the audio file that you want to add to the episode. The audio file can be of any file type that is supported by the media reader of your browser. An MP3 file provides best compatibility. Click the icon to list the audio files that are already open in WaveLab LE. Select one for your episode.

Alternatively, you can drag the list icon of an audio file into the audio file pane. Click the play icon to open the specified file in the default media player or viewer of your system, for previewing or checking purposes.

Picture (only available for feeds)

According to the RSS standard, this picture may not be larger than 144 x 400 pixels, so the picture is automatically resized. Clicking the picture icon opens the specified picture in your default image viewer of your system.

Picture icon

Publication Date and Time

Sets the publication date and time of the feed or episode. Clicking the **Now** button transfers the current date and time of your system.

As Most Recent Episode (only available for feeds)

If this option is activated, the date and time of the most recent episode are automatically matched.

Creating a Podcast

There are several ways to create a new podcast feed or episode.

- To create a new podcast, select **File** > **New** and click **Create Podcast**.
- To add a new untitled episode to a podcast, in the **Podcast Editor**, select the **Edit** tab, and click **New**.
- To add an audio file to the selected episode, select the **Main** tab, click in the **Audio File** field, and select **Select File Using Standard Selector**. Select the audio file in the file browser and click **Open**.

  You can also drag an audio file from the **File Browser** window to the **Audio File** field.
- To duplicate the selected episode, select the **Edit** tab, and click **Duplicate**. This adds a new episode, and copies all information from the existing episode to the new one.

Setting Up a FTP for Podcast Publishing

To be able to upload a podcast to your FTP server, you must enter the FTP server details first.

PROCEDURE

1. In the **Podcast Editor**, select the **Edit** tab.
2. In the **Podcast** section, click **FTP Settings**.
3. In the **FTP Settings** dialog, enter the following details:
   - The log-in details for your FTP server.
   - The relative path and file name of the podcast (extension `.xml`).
   - Your web site address including the path to the feed.
4. Click **OK**.

Publishing Podcasts

You can upload a podcast from within WaveLab LE to your FTP server.

PREREQUISITE

Set up your FTP settings within WaveLab LE.

PROCEDURE

1. In the **Podcast Editor**, select the **Edit** tab.
2. In the **FTP** section, select one of the following options:
   - Update All Items
   - Update Selected Item
   - Upload/Replace All Items
   - Upload/Replace Selected Items

3. In the **FTP Settings** dialog, check if the FTP settings are correct, and click **OK**.

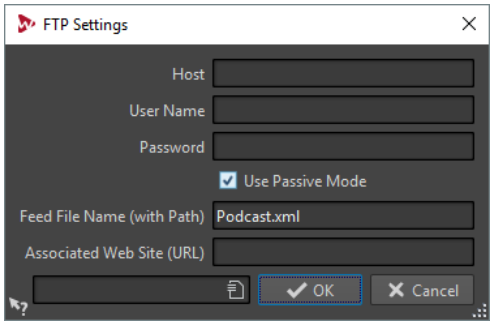
RESULT

The podcast is uploaded to your FTP site.

FTP Settings Dialog

In the **FTP Settings** dialog, you can manage all required information for the podcast upload process.

- To open the **FTP Settings** dialog, open the **Podcast Editor**, select the **Edit** tab, and click **FTP Settings**.



Host

The host name or IP address of the FTP server.

User Name

The login name to your FTP server.

Password

The password to the login.

Use Passive Mode

Keep this activated and only change this if you experience problems with the FTP connection.

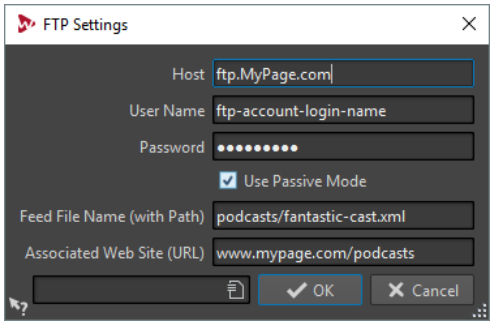
Feed File Name (with Path)

The podcast file name that is displayed on your FTP server (extension `.xml`), including the relative path. File name and path are part of the final public Internet address of the podcast, so you may want to avoid long names.

Associated Web Site (URL)

Your own web site address including the path to the feed.

FTP Settings Example



- Your FTP host address is “ftp.MyPage.com”, your public web site address is “www.MyPage.com”.
- The feed file name setting is “podcasts/fantastic-cast.xml”, the associated web site setting is “www.MyPage.com/podcasts”.
- The media files of the podcast will be uploaded to the FTP server at “ftp.MyPage.com/podcasts”.
- The podcast file itself and the Internet address to be distributed will be found at “www.MyPage.com/podcasts/fantastic-cast.xml”.

Each podcast saves its own complete FTP site information. It is also possible to save and recall FTP site presets using the **Preset** functions at the bottom of the dialog.

Checking the Podcast

After creating and publishing a podcast, you can check if the upload was successful.

- To open your default Internet browser and receive the podcast that you have just published from the Internet, open the **Podcast Editor**, select the **Edit** tab, and click **View Published Podcast**.

Customizing

Customizing means making settings so that the program behaves and looks the way that you want it to.

Customizing the Wave Window and the Montage Window

You can set up the wave/montage window by adjusting colors of waveforms, background, cursor lines, etc., and changing the look of the ruler and other window details.

Customizing can be done in the following ways:

- By changing the default style.
- By assigning different styles, according to specific conditions. For example, a specific file type or a specific file name.

Assigning Custom Colors to the Wave Window or the Montage Window

PROCEDURE

1. Depending on whether you want to customize the colors of the wave window or the montage window, do the following:
   - For the wave window, select **File** > **Preferences** > **Audio Files** and select the **Style** tab.
   - For the montage window, select **File** > **Preferences** > **Audio Montages** and select the **Style** tab.
2. Select the part that you want to color from the **Parts** list.
3. Specify a color using the color picker or the RGB fields.

Assigning Custom Colors According to Conditions

You can apply different color schemes automatically to different clips, according to their names or the properties of their audio files.

IMPORTANT

If you redefine colors, be careful not to choose colors that cause other elements to disappear.

PROCEDURE

1. Depending on whether you want to customize the colors of the wave window or the montage window, do one of the following:
   - For the wave window, select **File** > **Preferences** > **Audio Files** and select the **Style** tab.

- For the montage window, select **File** > **Preferences** > **Audio Montages** and select the **Style** tab.

2. Do one of the following:
   - In the **Audio Files Preferences**, select one of the **Conditional** options from the pop-up menu at the top of the dialog.
   - In the **Audio Montages Preferences**, in the **Parts** list, select one of the **Custom** entries.
3. Specify a color using the color picker or the RGB fields.
4. In the **This Style Is Used If These Conditions Apply** section, specify the conditions.
5. Click **OK**.

Copying Color Settings

You can copy the color settings of one part, or all parts of a custom color schema.

- To copy a color setting, select the part from which you want to copy the color, and select **Copy Color**. Then select the part to which you want to copy the color, and select **Paste**.
- To copy all color settings of a custom color setting, drag the name of a custom color setting onto another custom color name, and click **OK**.

Customizing Shortcuts

In WaveLab LE, you can control many functions via shortcuts to speed up your workflow. You can edit existing shortcuts and create new shortcuts.

Most shortcuts are restricted to a specific editor, which means that you can reuse the same shortcut combination in different editors. The exception is the **Master Section** where all shortcuts are global to the application.

The shortcuts in the **Navigation (Numeric Pad)** and **View and Navigation** sections on the **Shortcuts** tab are dedicated to navigating through WaveLab LE.

Shortcuts that cannot be edited are grayed out. The shortcuts that you created are displayed in blue in the editor.

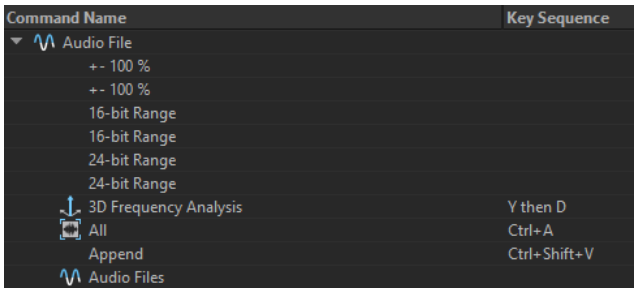
You can create a new shortcut by specifying a key sequence of up to four keys that must be pressed in a specific order to invoke the operation.

RELATED LINKS
Shortcuts Tab on page 157

Indexed Key Commands

Indexed key commands allow you to quickly jump to specific locations in your project, for example, to a specific marker or **Master Section** slot.

The available indexed key commands are listed on the **Shortcuts** tab, in the **Navigation (Numeric Pad)** section.



- To trigger an index key command, type the number of the item that you want to jump to and press the corresponding key on your keyboard.

EXAMPLE

If you want to jump to the 5th marker in your file window, press **5** on your keyboard and then press **M**.

If you want to jump to the 10th file tab, press **10** on your keyboard and then press **F**.

RELATED LINKS

Shortcuts Tab on page 157

Editing Shortcuts

You can see the list of all shortcuts in the **Shortcuts** tab, and edit and define shortcuts on the **Shortcut Definitions** dialog.

The **Shortcuts** tab provides a different command set for each menu or dialog.

- To open the **Shortcut Definitions** dialog, select **File** > **Preferences** > **Shortcuts**, select a command, and click **Edit Shortcut**.
- You can define one key shortcut per command. Each shortcut can be a sequence of up to four keystrokes.
- To reset some or all types of shortcuts to their factory default use the **Reset** button.

Defining Key Sequences

You can define key sequences for a keyboard.

PREREQUISITE

On a Mac, commands for the main menus must consist of a single key command.

When using multiple key stroke commands, make sure that the key commands do not interfere with each other. For example, when you have one shortcut **Shift**+L, M and define another to be **Shift**+L, this second shortcut has no effect.

PROCEDURE

1. Select **File** > **Preferences** > **Shortcuts**.
2. In the commands list, select the command for which you want to define a key sequence, and click **Edit Shortcut**, or double-click the **Key Sequence** column of the corresponding command.
3. In the **Shortcut Definitions** dialog, click in the **Key Stroke** fields and press the buttons that you want to use as the key sequence.
4. Click **OK**.

RESULT

When you now press the keys/buttons specified in the dialog, the corresponding operation is performed. The key strokes must be executed one after the other.

RELATED LINKS

Remote Devices Tab on page 11

Generating a List of All Shortcuts

You can generate an HTML file or print out a list that contains all shortcuts.

PREREQUISITE

If you want to print out the list, make sure a printer is connected to your system.

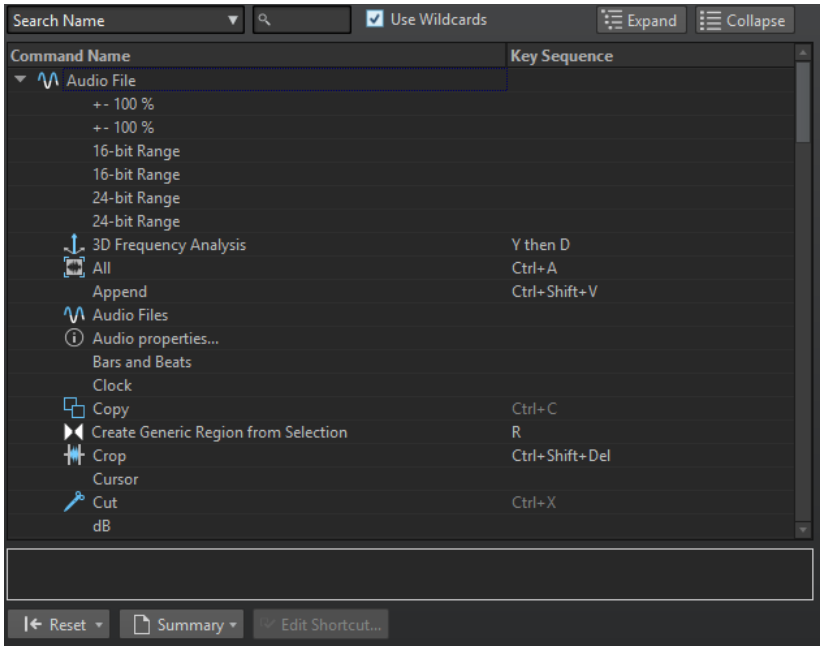
PROCEDURE

1. Select **File** > **Preferences** > **Shortcuts**.
2. Click **Summary**, and select one of the following options:
   - To open the **Print Preview** dialog, from which you can print out the list of all shortcuts, select **Print Preview**. For **Print Preview** to be available, a printer must be connected.
   - To open the list of all shortcuts in the HTML file format in the standard browser, select **HTML Report**.

Shortcuts Tab

This tab allows you to customize your own shortcuts for WaveLab LE. It shows a list of the assigned shortcuts for WaveLab LE commands and menu options.

- To open the **Shortcuts** tab, select **File** > **Preferences** > **Shortcuts**.



Search pop-up menu

Allows you to select the part of the commands list in which the search is performed.

Search field

Allows you to search for a command.

Use Wildcards

If this option is activated, the wildcard characters “*” and “?” can be used.

“*” substitutes zero or more characters, and “?” substitutes any character.

For example, if **Search Keyboard Shortcut** is selected, type “*” to display all commands that are already associated with a shortcut.

Expand/Collapse

Expands/Collapses the folder tree.

Commands list

Shows all commands and their shortcuts.

Reset

Resets the commands to the factory settings.

Summary

Opens a menu from which you can generate a list of all commands and their shortcuts, either in HTML or as a print out.

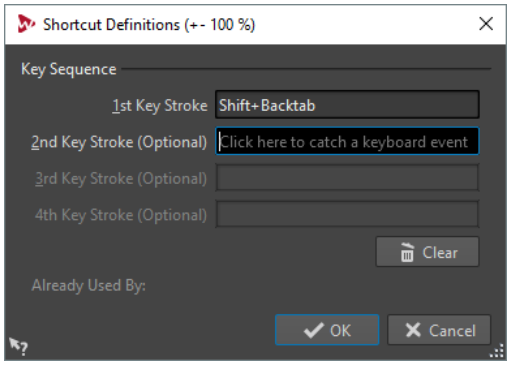
Edit Shortcut

Opens the **Shortcut Definitions** dialog where you can edit the shortcuts for the selected command.

Shortcut Definitions Dialog

This dialog allows you to define your own customized shortcuts for a particular function.

- To open the **Shortcut Definitions** dialog, select **File** > **Preferences** > **Shortcuts**, select a command, and click **Edit Shortcut**.



Key Sequence

1st Key Stroke

Lets you select the first key of a sequence that can consist of up to four keys. Set the focus to the key stroke field, then press the key combination. If nothing is displayed, a key is not allowed in this context.

2nd/3rd/4th Key Stroke (optional)

Lets you select additional keys that must be used to execute the command. The command is only executed if this key event happens after the first one.

Clear

Erases all key event fields.

Plug-in Organization

WaveLab LE comes with various plug-ins, and additional plug-ins can be added.

RELATED LINKS
Plug-ins Preferences on page 159

Adding Additional VST Plug-ins

You can specify folders where additional VST plug-ins can be found. This is useful if you are using third-party VST plug-ins that you do not want to save in the standard VST folder.

PROCEDURE

1. Select **File** > **Preferences** > **Plug-ins**.
2. In the **Additional VST Plug-in Folder (WaveLab Specific)** section, click the folder icon, and navigate to the folder that contains the VST plug-ins that you want to add.

Excluding Plug-ins

You can specify a list of plug-ins that WaveLab LE does not open.

PROCEDURE

1. Select **File** > **Preferences** > **Plug-ins**.
2. In the **Do Not Load the Following Plug-ins** section, type in the name of the plug-in that you do not want to open:
   - Enter the exact file name, without path and without file extension.
   - Enter one name per line.
   - If you put “*” in front of the name, any plug-in that contains the name is ignored.

Plug-ins Preferences

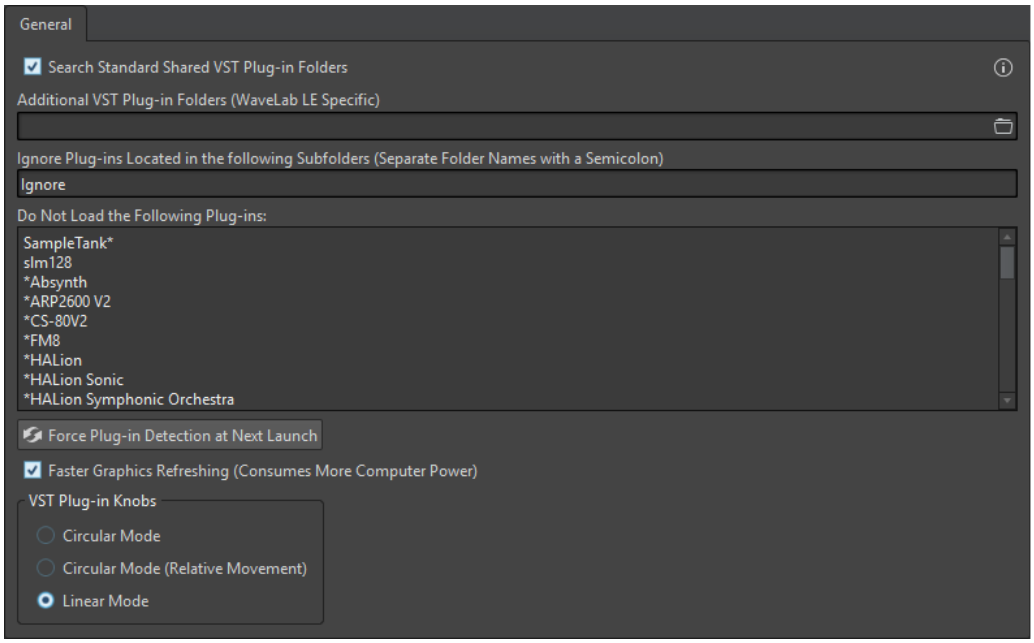
On this tab, you can access a number of options for managing your VST plug-ins.

You can specify where WaveLab LE should search for your VST plug-ins and which ones it should ignore. It also allows you to choose how your VST plug-in controls respond to mouse actions and how frequently graphics are updated.

If you use your own file structure to organize and save VST plug-ins, this dialog allows you to gain full control over which plug-ins are loaded and which are ignored. This is useful if you want to deactivate a particular plug-in or if you want to ignore plug-ins that you never want to use with WaveLab LE.

- To open the **Plug-ins Preferences**, select **File** > **Preferences** > **Plug-ins**.

General Tab

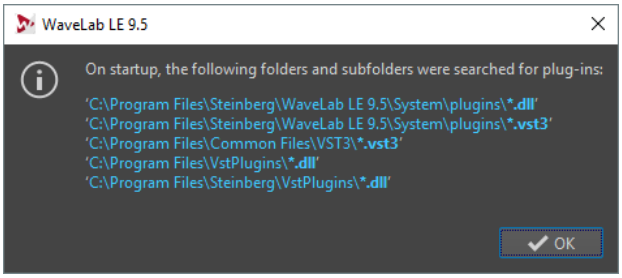


Search Standard VST Plug-in Shared Folders

If this option is activated, WaveLab LE searches for VST plug-ins in the default VST plug-in folders.

Information About the Searched Folders

Click on the info icon to see in which folders WaveLab LE searched for plug-ins when it was launched. If you cannot find a plug-in in WaveLab LE, this helps you to determine whether you have specified the correct folder, for example.



Additional VST Plug-in Folders (WaveLab LE Specific)

Lets you specify additional folders where VST plug-ins can be found.

Ignore Plug-ins Located in the following Subfolders (Separate Folder Names with a Semicolon)

Lets you specify folder names that WaveLab LE skips when searching for VST plug-ins.

Do Not Load the following Plug-ins

Lets you specify plug-ins that WaveLab LE does not open. Enter the file names, without path and without file extension. Write each plug-in on a new line.

If you put the character * in front of the name, any plug-in that contains the name is ignored.

Force Plug-in Detection at Next Launch

Analyzes the plug-ins when launching WaveLab LE the next time. To reduce the start time of WaveLab LE, the plug-ins are not analyzed every time WaveLab LE is started. However, WaveLab LE keeps a list of plug-ins and updates this automatically when a date or size change is detected.

Keep Plug-ins in Memory until WaveLab LE Quits

If this option is activated, the plug-ins are kept in memory even when they are no longer used. This results in a faster reopening of plug-ins. However, if you use many plug-ins, too much memory could be used after a specific time, which slows down the application.

Faster Graphics Refreshing (Consumes More Computer Power)

Refreshes the graphics of VST plug-ins more quickly.

VST Plug-in Knobs

Lets you set the mode for using knobs in plug-ins. You can set the mode to **Circular**, **Circular Mode (Relative Movement)**, and **Linear**.

Touch Bar (macOS only)

The Touch Bar at the top of your keyboard gives you shortcuts to the WaveLab LE functions. The Touch Bar changes automatically based on where you are in WaveLab LE and offers a subset of the available options. You can customize the Touch Bar according to your needs.

NOTE

The Touch Bar is only available on certain Apple products.

Customizing the Touch Bar (macOS only)

- To open the Touch Bar customization window, select **WaveLab LE 9.5** > **Customize Touch Bar**.
- To add an option to the Touch Bar, use your cursor to drag your favorite options from the customization window down into the Touch Bar.

  When you are done, tap **Done** in the Touch Bar or click **Done** on the screen.
- To rearrange options within the Touch Bar, drag them to the left or right.
- To remove options from the Touch Bar, drag them up and out of the Touch Bar.

Configuring WaveLab LE

You can configure WaveLab LE according to your needs.

NOTE

The settings that you make in the preferences are applied when you switch to another WaveLab LE window.

Global Preferences

Global Preferences are preferences that apply throughout WaveLab LE. Before you start working with WaveLab LE, it is recommended to edit these preferences according to your needs.

- To open the **Global Preferences**, select **File** > **Preferences** > **Global**.

General Tab

This tab allows you to change the user interface language. You must restart the application for changes to take effect.

Display Tab

This tab allows you to change many aspects of the user interface that apply across the whole application. These options provide information and usability functions but can be deactivated to streamline the interface.

Theme

Theme

Allows you to switch between the WaveLab LE color schemes.

Miscellaneous Options

Show Application in High DPI (Windows only)

If this option is activated and your display supports high resolution, WaveLab LE is displayed in high resolution. If your display does not support high resolution, this option will be ignored.

NOTE

Plug-in windows are not displayed in high-resolution. If plug-in windows appear too small, deactivate **Show Application in High DPI**.

Use the System File Selector to Open Files

If this option is activated, the standard file selector opens when you select the **Save As** option.

Open Quick File Selector When Saving Files

If this option is activated and you save a file via the save shortcut, a dialog opens instead of the **File** tab.

Show WaveLab LE Logo on Startup

Determines whether the WaveLab LE logo is displayed during initialization.

Show Tooltips

If this option is activated, tooltips are displayed when you move the mouse cursor over markers or command bar buttons.

Hide Top Level Windows When the Application Is Not Active (Windows only)

If this option is activated, all floating windows are automatically hidden when another application becomes active. If this option is deactivated, floating windows remain on top of other application windows.

History

Maximum Number of Items in Recent File Menus

Sets the maximum number of files that are listed in recent file menus.

Audio Tab

Processing Precision

Plug-in Processing allows you to select the processing precision for plug-ins.

- If you select **64 bit float** and a plug-in is capable of processing 64-bit samples, processing takes place in lossless 64 bit.

  If a plug-in is only capable of handling 32-bit samples, WaveLab LE converts all 64-bit float samples to 32-bit float before sending them to the plug-in. After the plug-in processing is completed, WaveLab LE converts the 32-bit float samples back to 64-bit float without loss.
- If you select **32 bit float**, WaveLab LE converts all 64-bit float samples to 32-bit float before sending them to the plug-in. After the plug-in processing is completed, WaveLab LE converts the 32-bit float samples back to 64-bit float without loss.

In the plug-in menus, the “32F” and “64F” indicators next to the plug-in name show whether a plug-in is capable of 32-bit float or 64-bit float.

NOTE

Processing in 64-bit float means double precision but slightly longer process time than 32-bit float.

Temporary Files allows you to select the precision of temporary files that WaveLab LE creates when processing audio.

By default, WaveLab LE creates temporary files in 32-bit float. Use the **64 bit float** option if you want to create 64-bit float audio files or 32-bit PCM files.

NOTE

Temporary files in 64-bit float have double precision but take longer to read and write than 32-bit float and their file size is twice as big.

RELATED LINKS

Temporary Files on page 50

Options Tab

This tab allows you to control application-wide start-up options. You can also reset the default message boxes.

Reset Default Answers

Resets all message box options to their default settings. For example, all “Do not show again” options are deactivated.

Audio Files Preferences

This dialog allows you to define settings for editing in the **Audio Editor**. However, these settings also effect other parts of WaveLab LE. You can choose defaults for editing and playback, adjust the visual appearance of the waveform displays, and determine how WaveLab LE works with audio and peak files.

- To open the **Audio Files Preferences** dialog, select **File** > **Preferences** > **Audio Files**.

Editing Tab

Display

Show Overview when Opening new Audio Files

If this option is activated and you open an audio file, the overview is also displayed. If this option is deactivated, only the main view is displayed.

Overview: Passive Range Indicator Also Covers the Waveform

If this option is activated, the range indicator that is displayed in the time ruler of the overview also covers the waveform area. Unlike the time ruler indicator, the range indicator is passive and cannot be modified.

Analog Waveform Emulation at Sample Level Zooming

If this option is activated and a waveform is zoomed at the sample level in the timeline, an analog emulation of the waveform is displayed.

Auto-Zoom for Overviews

If this option is activated and you open an audio file, the zoom of the overview is set to display the whole file.

Display File Extension on Tabs

If this option is activated, tabs display file names with their extension. For example, “piano.mp3” instead of “piano”.

Number of Seconds to Display on Opening

Lets you specify the time range to display when opening an audio file for the first time. WaveLab LE converts this time range to the appropriate zoom factor.

Whole Audio File

If this option is activated, the horizontal zoom is set to display the whole file.

Editing

Select All Channels with the Mouse

If this option is activated and you select a range with the mouse in a stereo file, both channels are selected. To select the channels individually, press **Shift** while selecting. To switch from one channel selection to the other, press **Tab**.

Process Whole File If There is No Selection

If this option is activated and a process is to be applied to an audio file, the whole file is processed if no audio is selected. In the same situation, if the option is deactivated, a warning appears.

Playback Scrubbing

Restrict to Play Tool

If this option is activated, this function only works if the **Play Tool** is used.

Sensitivity

Lets you set the micro audio loop duration that is performed when you move the mouse cursor over the time ruler.

Snap Selection to Zero-Crossing

Do Not Snap at High Zoom Factors

If this option is activated, snapping does not occur if the waveform is displayed at a high zoom factor.

Scan Range

Lets you define how far WaveLab LE searches a zero-crossing point in the left and right direction.

Style Tab

This tab allows you to specify custom colors for parts of the wave window.

Styles

Lets you select the default style and conditional styles.

Parts

Shows parts that can be colorized. Click a part to edit the color.

Hide (for specific parts only)

Hides the selected part.

Dotted Line (for specific parts only)

Changes the line to a dotted line.

Transparency (for specific parts only)

Lets you edit the degree of transparency of the selected element.

Element Size (for specific parts only)

Lets you edit the size of the selected element.

Change Both Channels

Allows you to make separate color settings for the left and the right side of a stereo file. If this option is activated, settings for the left side of a file are automatically mirrored on the right side, and vice versa.

Change Both Main View and Overview

Allows you to make separate color settings for the main view and the overview. If this option is activated, settings for the main view are automatically mirrored on the overview, and vice versa.

Color Picker

Lets you select the color for the selected part. Click the surrounding circle to select the hue. Click in the triangle to adjust the saturation and lightness.

Red/Green/Blue

Lets you specify the red, green, and blue components of the RGB color spectrum.

Copy Color

Copies the current color to the clipboard.

Paste

Pastes the color from the clipboard.

This Style Is Used If These Conditions Apply

Lets you define conditions under which a specific color style is applied.

File Extension Is Any Of

If this option is activated, the color style is applied to files with the specified extension. Separate extensions with a ";" character.

Name Contains Any of These Keywords

If this option is activated, the color style is applied to files with specific keywords in their name. Separate keywords with a ";" character.

Sample Rate Is in the Range

If this option is activated, the color style is applied to files that have a sample rate within the specified range.

Sample Precision Is in the Range

If this option is activated, the color style is applied to files that have a sample precision within the specified range.

Number of Channels Is

If this option is activated, the color style is applied to files that have the specified number of channels.

Color Elements in the Audio Editor

You can assign custom colors to various elements of the **Audio Editor**. Depending on the selected element, additional settings can be made for transparency, appearance, or whether a line should be dotted, for example.

Left/Right Channel

Waveform

The waveform color.

Waveform (Selected)

The waveform color of the selected part of the waveform.

Waveform Outline

The outline color of the waveform.

Waveform Outline (Selected)

The outline color of the selected part of the waveform.

Background Top

The color of the background top.

Background Top (Selected)

The color of the selected part of the background top.

Background Bottom

The color of the background bottom.

Background Bottom (Selected)

The color of the selected part of the background bottom.

Waveform Main Axis

The color of the waveform main axis and its style.

Waveform 50 % Axis

The color of the waveform 50 % axis and its style.

Waveform Elements

Channel Separator

The color of the channel separator line.

Cursor (Edit)

The color of the edit cursor, its width, and transparency.

Cursor (Edit, No Focus)

The color of the edit cursor for a file that does not have the focus.

Cursor (Play)

The color of the cursor during playback.

Marker Line

The color of the marker lines and an optional transparency.

End of File Indicator

The color of the end of the file indicator.

Time Ruler Style

The color of the time ruler and its style.

Time Ruler Font

The color of the font on the time ruler and the font size.

Level Ruler Style

The color of the level ruler, its style, and transparency.

Level Ruler Font

The color of the font on the level ruler and the font size.

Audio Montages Preferences

This dialog allows you to set up general parameters for all audio montages or for the active audio montage only.

- To open the **Audio Montages Preferences** tab, select **File** > **Preferences** > **Audio Montages**.

Style Tab

This tab allows you to specify custom colors to clips and parts of a clip in the montage window.

Parts

Shows parts that can be colorized. Click a part to edit the color.

Checkbox

Allows you to select multiple parts to colorize multiple parts at the same time.

Undo

Undoes the last change.

Redo

Allows you to redo changes that were undone.

Hide

Hides the selected part.

Change Both Channels

It is possible to make separate color settings for the left and the right side of stereo clips. If this option is activated, settings for the left side of a clip are automatically mirrored on the right side, and vice versa.

Color Picker

Lets you select the color for the selected part. Click the surrounding circle to select the hue. Click in the triangle to adjust the saturation and brightness.

Red/Green/Blue

Lets you specify the red, green, and blue components of the RGB color spectrum.

Copy Color

Copies the current color to the clipboard.

Paste

Pastes the color from the clipboard.

This Style Is Used If These Conditions Apply

Lets you define conditions under which a specific color style is applied.

File Extension Is Any Of

If this option is activated, the color style is applied to clips referencing a file with the specified extension. Separate extensions with a ";" character.

Name Contains Any of These Keywords

If this option is activated, the color style is applied to clips with specific keywords in their name. Separate keywords with a ";" character.

Sample Rate Is in the Range

If this option is activated, the color style is applied to clips referencing a file that has a sample rate within the specified range.

Sample Precision Is in the Range

If this option is activated, the color style is applied to clips referencing a file that has a sample precision within the specified range.

Number of Channels Is

If this option is activated, the color style is applied to clips that have the specified number of channels.

Color Elements in the Audio Montage

You can assign custom colors to various elements of the montage window.

Clip Colors

The following clip types are available:

Crossfade Region

Allows you to set the background color for overlapping clip sections.

Default

The default colors, used for clips for which you have not selected any specific color.

Locked

The colors used for fully locked clips.

Muted

The colors used for muted clips.

Custom

These options correspond to the items on the color submenus. You can set up conditions in the **This Style Is Used If These Conditions Apply** section for when these should be automatically applied.

The following color elements are available:

Background Top/Bottom

The background colors of the clip. The resulting display backgrounds are gradient fades from the top colors to the bottom colors.

Waveform (Normal/Selected)

The waveform color for selected and unselected clips.

Waveform Outline (Normal/Selected)

The color of the waveform outline for selected and unselected clips.

Edge

The left and right edge of the clip.

Edge (Selected)

The left and right edge of a selected clip.

Axis (Level Zero)

The color of the horizontal dotted line in the middle of a clip, indicating the zero level.

Axis (Half Level)

The color of the horizontal dotted lines halfway up and down from the middle of a clip, indicating 50 % level.

Channel Separator (Stereo Clip)

The line dividing the two sides in a stereo clip.

Clip Name

The name label of the clip.

Active Clip Name

The name label of the active clip.

Active Clip Name Background

The name label background of the active clip.

Miscellaneous

Background Top/Bottom

The background colors of the track view for areas without a clip.

Background (Selected Range) Top/Bottom

The background colors in selected ranges.

Cursor (Edit)/Cursor (Edit, No Focus)/Cursor (Playback)

The color of the corresponding cursor.

Marker Line

The color of the marker lines in the audio montage.

Cue Point Line/End Cue Point Line

The color of the vertical dotted cue point lines and end cue point lines.

Time Grid Lines

The color of the time grid if activated in the menu of the time ruler.

Index

D

E

F

G

H

I

K

L

M

N

O

P

R

S