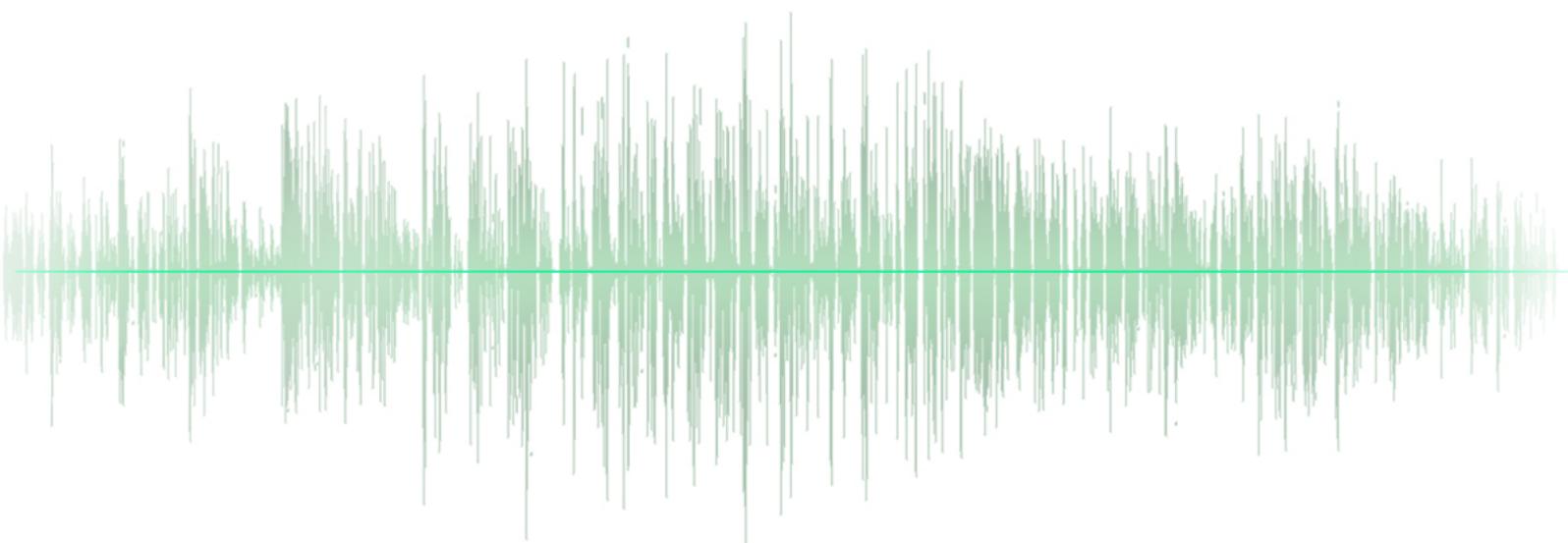


# Operation Manual



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.

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# Introduction

## Platform-Independent Documentation

The documentation applies to the operating systems Windows and Mac OS.

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 Mac OS.

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 Mac OS.

## 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](http://steinberg.help).

- To visit [steinberg.help](http://steinberg.help), enter `steinberg.help` in the address bar of your web browser or open WaveLab Yellowtec Edition and select **Help > WaveLab Yellowtec Edition Help**.
- To show tooltips, move the mouse over an interface icon.
- To open the help for an active dialog on [steinberg.help](http://steinberg.help), click the question mark icon on the title bar (Windows) or in the dialog (Mac OS) to show the **Help** button, and then click the **Help** button, or press **F1** (Windows) or **Cmd-?** (Mac OS).
- 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 (Mac OS), 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 99

## 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 undertake 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 **Meta-Data** dialog, open the **Meta-Data** 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.

For example, the default key command for **Undo** is **Ctrl-Z** on Windows and **Cmd-Z** on Mac OS. When key commands with modifier keys are described in this manual, they are shown with the Windows modifier key first, in the following way:

- Windows modifier key/Mac OS modifier key-key

---

EXAMPLE

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

---

## How You Can Reach Us

On the **Help** menu in WaveLab Yellowtec Edition, 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 Yellowtec Edition, other applications cannot access the audio card. Likewise, if another application uses the audio card, WaveLab Yellowtec Edition is unable to play back. The Windows MME driver is an exception from this.

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

---

### PROCEDURE

1. Select **File > Preferences > VST Audio Connections**.
  2. Select the **Options** tab.
  3. Activate **Release Driver when WaveLab Yellowtec Edition 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 Yellowtec Edition.

When working with WaveLab Yellowtec Edition, 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 **VST Audio Connections**, or increase the buffer size in the ASIO control panel, specific to the audio card.

RELATED LINKS

[VST Audio Connections Tab](#) on page 10

## Defining VST Audio Connections

To be able to play back and record audio in WaveLab Yellowtec Edition, you must specify how the internal input and output channels in WaveLab Yellowtec Edition 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

[VST Audio Connections Tab](#) on page 10

## 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 > VST 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 > VST 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.
-

## VST Audio Connections Tab

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

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

#### 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 Yellowtec Edition together with other applications and always give the active application access to the audio card.

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

# WaveLab Yellowtec Edition Concepts

This chapter describes general concepts that you will use when working with WaveLab Yellowtec Edition. 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

### Create

#### Empty Window

Creates an empty WaveLab Yellowtec Edition window.

### Open

#### Last Files

Opens the files that you last used in WaveLab Yellowtec Edition.

#### 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 Yellowtec Edition.

## Shortcuts

In WaveLab Yellowtec Edition, you can control many functions via shortcuts to speed up your workflow.

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 **View and Navigation** sections on the **Shortcuts** tab are dedicated to navigating through WaveLab Yellowtec Edition.

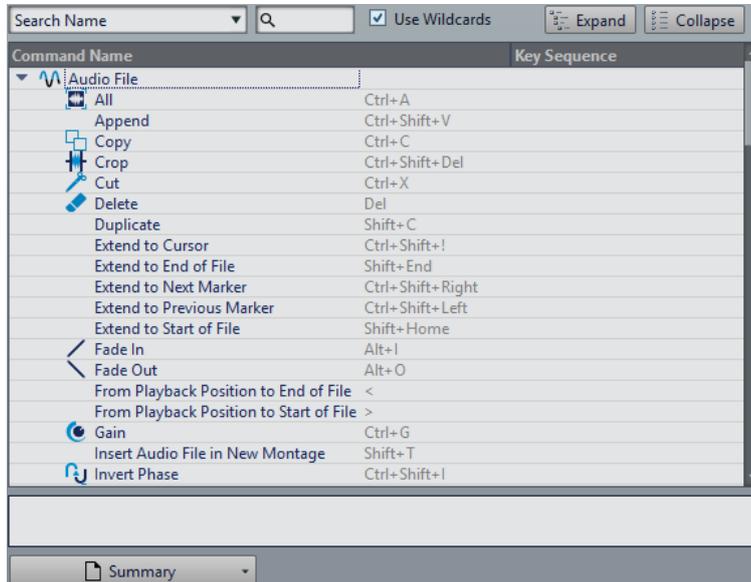
#### RELATED LINKS

[Shortcuts Tab](#) on page 13

## Shortcuts Tab

This tab allows you to customize your own shortcuts for WaveLab Yellowtec Edition. It shows a list of the assigned shortcuts for WaveLab Yellowtec Edition 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.

### 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.

## Basic Window Handling

WaveLab Yellowtec Edition follows the basic guidelines for the Windows/Mac OS interface, which means that Windows/Mac OS standard procedures apply.

### Closing Windows

- 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 cycle between the files, hold **Ctrl/Cmd**, and press **Tab** continuously.
- To cycle back and forth between the last two active files, press **Ctrl/Cmd-Tab**. Between each step you have to release all keys.
- To cycle 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 Yellowtec Edition 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.

## 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.

## 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

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 **Yellowtec** 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 Yellowtec Edition, 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

- 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 Yellowtec Edition. The **Auto Play Mode** is useful for speeding up the process of auditioning sound files.

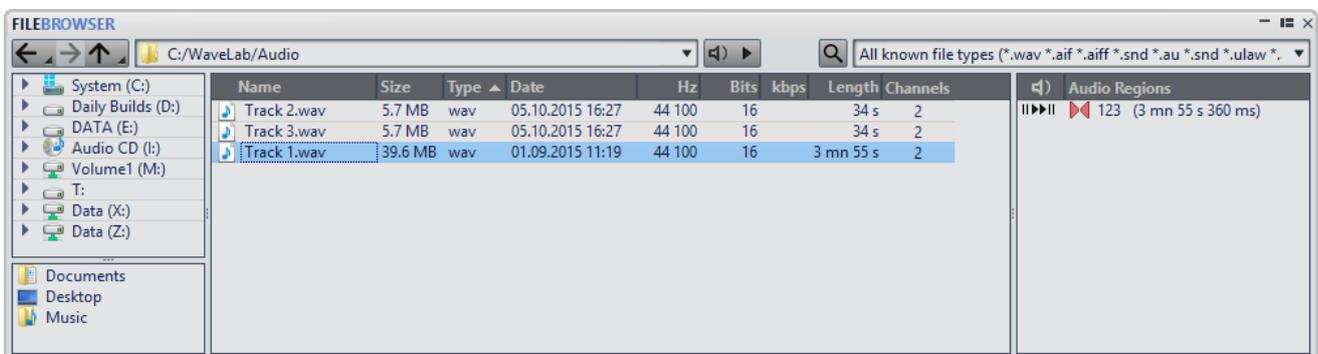
The **File Browser** window provides you with all the standard browsing functions. It features additional controls to audition audio files and any marker defined regions. You can use it to open or insert files by dragging them to another location.

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 Yellowtec Edition.

- 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 lets you 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 format list**

Allows you to select which 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.

### **File list**

Shows the file name, size, type, modification date, and other information about the file.

### **Create Folder**

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

## **Peak Files**

A peak file (extension `.gpk`) is automatically created by WaveLab Yellowtec Edition each time an audio file is modified or opened in WaveLab Yellowtec Edition 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.

# 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.

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
- Tabs 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 55

## 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 87

## File Tab

The **File** tab is the control center of WaveLab Yellowtec Edition. 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 Yellowtec Edition 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 or audio montage.

### Open

Allows you to open audio files or audio montages.

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

### 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.

### Render

Allows you to render the active file.

### Preferences

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

- **Global**
- **VST Audio Connections**
- **Shortcuts**
- **Plug-ins**
- **Audio Files**

### RELATED LINKS

[Info Tab](#) on page 20

[Configuring the Software](#) on page 139

## 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 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.

### **Meta-Data**

Displays the meta data 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/Mac OS Finder**

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

### **Delete**

Deletes the active file.

## **Tool Windows**

Throughout WaveLab Yellowtec Edition 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.

## **Meter Windows**

WaveLab Yellowtec Edition contains a variety of audio meters that you can use for monitoring and analyzing audio. Meters can be used to monitor audio during playback, rendering, and recording. Furthermore, you can use them to analyze audio sections when playback is stopped.

The meter windows can be accessed via the **Meters** menu.

## Opening and Closing Meter Windows

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

- To open a meter window, select **Meters** and select a meter window.
- To close a docked meter window, right-click the meter window tab and select **Hide**.
- To close an undocked meter 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

## 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.

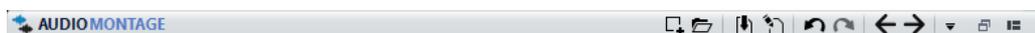
- To undock a tool window or meter window, drag the corresponding tab to another position.  
Now the tool window or meter window is a floating window which can be freely moved.
- To dock a tool window or meter window, click and hold the caption bar or click the **Options** button on the right of the 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 22

## 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 or audio montage.

### Open

Allows you to open an audio file or audio montage.

### 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.

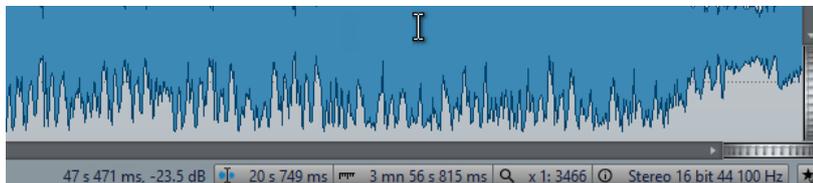
### Layout Options

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.

### 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 bit resolution 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 button is activated, the **Master Section** is bypassed. If the button is deactivated, the audio is played through the **Master Section**.

### 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.



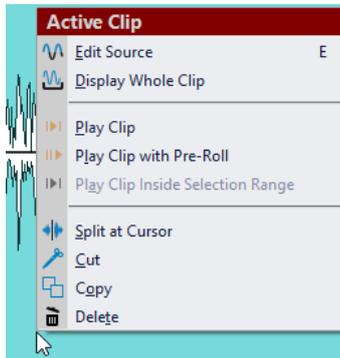
## Context Menus

Throughout WaveLab Yellowtec Edition, 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.



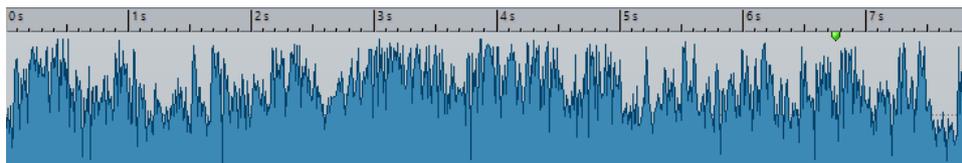
Context menu in the montage window

## Time Ruler and Level Ruler

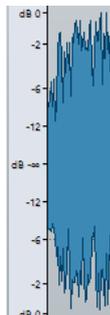
In the **Audio Editor**, you can display a time and a level ruler in the wave window. In the **Audio Montage** window, you can display a time ruler in the montage window.

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.

#### RELATED LINKS

[Time Format Dialog](#) on page 27

### 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 32-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.

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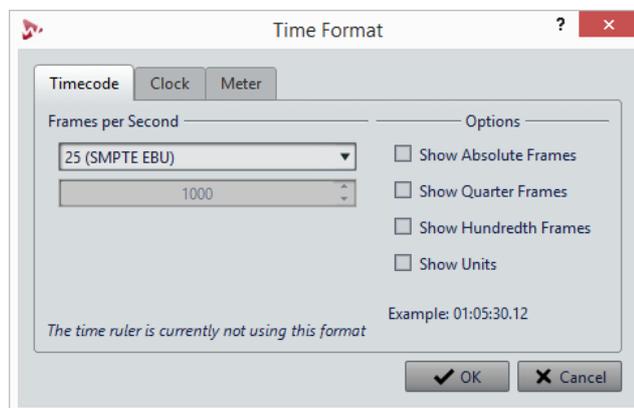
### PROCEDURE

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 the **Ticks per Quarter Note** setting 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**.
- 

## 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** option.

### 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

## 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/Mac OS Finder

Opens the File Explorer/Mac OS 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**.
-

# 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 Yellowtec Edition that you have previously copied to the clipboard in the File Explorer/Mac OS Finder.

---

### PROCEDURE

1. In the File Explorer/Mac OS Finder, copy the files that you want to open to the clipboard.
  2. In WaveLab Yellowtec Edition, 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 Yellowtec Edition 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 Yellowtec Edition 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 Yellowtec Edition, 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 22

## 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 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.

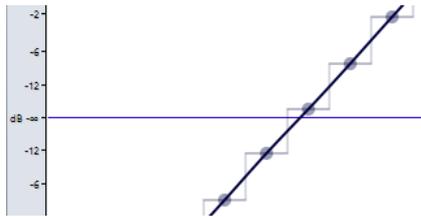
### Vertical Zooming

- 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.

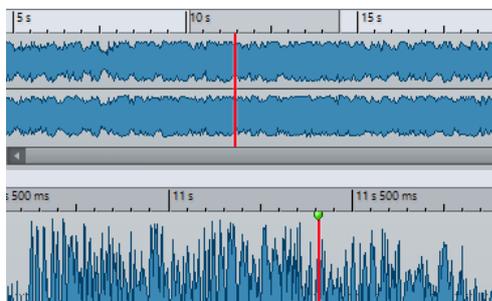
### High Zoom Level

- 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.

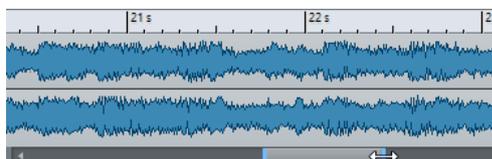


### Zooming in the Overview and Main View Sections (Audio Editor Only)

- 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.

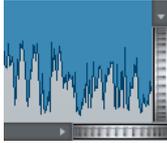


- To adjust the zoom level using the scrollbar, drag the edges of the scrollbar.



## Zooming Using the Zoom Controls

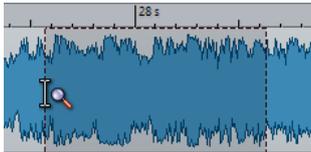
Both the main view and the overview have horizontal and vertical zoom controls.



- 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 **Yellowtec** 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 139

## Zoom Options

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

The zoom options are available in the **Audio Editor** on the **Yellowtec** tab and in the **Audio Montage** window on the **Edit** tab.

## 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 the Audio Montage

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

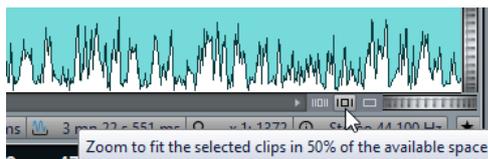
### Zoom Buttons in the Audio Montage

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.

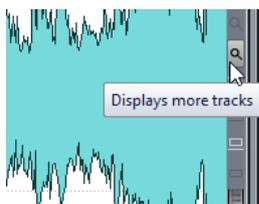


- To select a specific area, click **Ctrl/Cmd**, and drag the rectangle over the tracks and clips that you want to zoom in on.

### 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 Yellowtec Edition 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/Mac OS 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 Yellowtec Edition 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

---

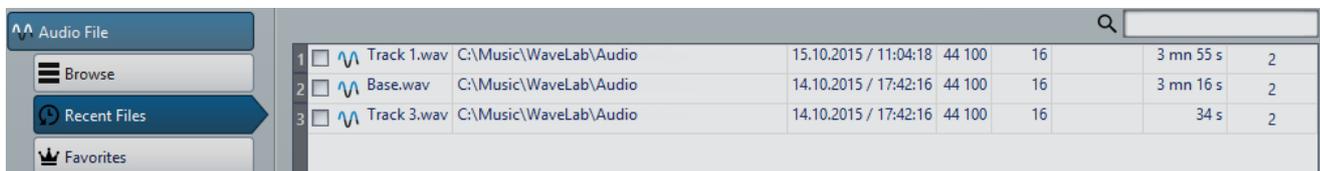
### PROCEDURE

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 Yellowtec Edition. 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 Yellowtec Edition

Only shows the files that have not been opened since they were created by WaveLab Yellowtec Edition. 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 media.

### 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**.

## Favorite Files

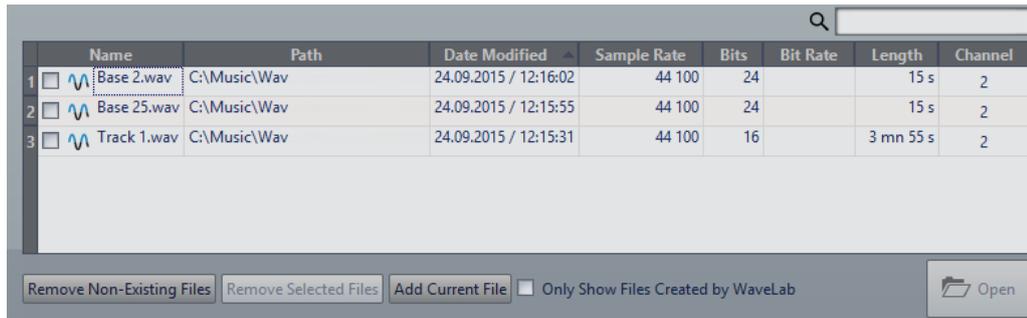
You can add files that you are using regularly to the favorite files list.

- To open the favorite files list, select **File > Open**, select the file type, and click **Favorites**.
- To add the open file to the favorite files list, click **Add Current File**.
- To open a file from the favorite files list, select a file from the file list, and click **Open**.
- To remove files from the favorite files list, select the files that you want to remove, and click **Remove Selected Files**.
- To remove files from the list that are no longer present on the media, click **Remove Non-Existing Files**.

## Favorite Files Tab

This tab allows you to display and edit the favorite files list.

- To open the **Favorite Files** tab, select **File > Open**, select the file type, and click **Favorites**.



### List of favorite files

Shows the favorite files.

### Search

Lets you filter the favorite files list by name.

### Remove Non-Existing Files

Removes files from the list that are no longer present on the media.

### Remove Selected Files

Removes all selected files from the list.

### Add Current File

Adds the open file to the favorites list.

### Only Show Files Created by WaveLab Yellowtec Edition

If this option is activated, the list displays only files that were created by WaveLab Yellowtec Edition, but have not yet been opened.

This allows you to quickly access files that were created in WaveLab Yellowtec Edition via the **Save As** or **Render** option, for example.

### Open

Opens the selected files in WaveLab Yellowtec Edition.

## Filtering Favorite Files

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

- In the **Favorite Files** tab, enter the text that you want to search for in the search field.
- To switch the focus from the search field to the favorite files list, press **Down Arrow**.
- To switch the focus from the favorite files list to the search field, press **Ctrl/Cmd-F**.

### RELATED LINKS

[Favorite Files Tab](#) on page 41

## 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**.

## 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)

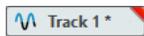
The file uses a decoded file format and is saved.

### 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.



## 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 44

[Save and Save As](#) on page 42

## 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 Yellowtec Edition.

---

#### 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 drop-down list.
  6. Click **Apply Changes**.
- 

## Deleting Files

You can delete the active file from within WaveLab Yellowtec Edition.

#### 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.

## 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.
-



and use the shortcuts to trigger playback. This is useful to find a loop, for example.

This option works even when the automated selection mode is deactivated.

- If **Solo Track When Editing** is activated and you keep the mouse button pressed when editing anchors in the montage window, the track is soloed when you start playback using the shortcut for **Play from Anchor**.

You can select which anchor to use as reference for the command **Play from Anchor**. When there are multiple possibilities, for example, multiple markers, the last selected item is used as a reference anchor or, if no item was selected, the closest item near the edit cursor position is used.

You can select one of the following anchors:

- **Edit Cursor**
- **Start of File**
- **Start of Selected Time Range**
- **End of Selected Time Range**
- **Any Marker**

#### **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. Right-click the button to open the **Move Cursor Back to Start Position** pop-up menu.

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

- If **After Standard Playback** is activated, the edit cursor jumps back to the start position when regular playback stops.
- If **After Automated Playback** is activated, the edit cursor jumps back to the start position when playback stops after the **Play from Anchor** or **Play Audio Range** options.

### Start Playback from 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).

You can also start playback from the last stop position. Right-click the button to open the **Lead Sequence** pop-up menu.

- If you select **Start**, playback starts from the cursor position.
- If you select **Resume from Last Interruption**, playback starts from the last stop position.

### Record

Opens the **Recording** dialog.

### Time Display

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

## 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.

## 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.

## Playing Back Audio Ranges

You can play back audio ranges using the **Play Audio Range** options on the transport bar.

---

### PROCEDURE

1. On the transport bar, right-click **Play Audio Range** and select the range type that you want to play back.

2. Optional: Activate **Perform Pre-Roll** and/or **Perform Post-Roll**.
  3. Position the edit cursor inside the range that you want to play back or make a selection range.
  4. To play back the selected range, click **Play Audio Range** on the transport bar or press **F6**.
- 

#### RESULT

The selected range is played back. Pre-roll and post-roll settings are taken into account. If the **Loop** mode is active, pre-roll is used before the first loop only, and post-roll is only used after the last loop.

## Playing Back From an Anchor

You can play back audio from an anchor using the **Play from Anchor** option on the transport bar.

---

#### PROCEDURE

1. On the transport bar, right-click **Play from Anchor** and select an anchor type.
  2. Depending on the selected anchor type, position the edit cursor in the wave window or montage window inside the range that you want to play back.
  3. Optional: Activate **Perform Pre-Roll** and/or **Perform Post-Roll**.
  4. To play back from the anchor marker, click the **Play From Anchor** button on the transport bar or press **F7**.
- 

#### RESULT

Playback starts from the anchor. Pre-roll and post-roll settings are taken into account.

## "Play From Anchor" Functions

You can play back audio from an anchor using the **Play from Anchor** function on the transport bar. These playback functions behave differently depending on the pre-roll and post-roll settings.

#### Play from Anchor

- If post-roll is activated, playback starts at the anchor position and stops after the post-roll time. If no post-roll is selected, playback continues until the end of the audio file or audio montage.
- If pre-roll is activated, playback starts from the selected anchor, minus the pre-roll time.
- If pre-roll and post-roll are activated, playback starts from the selected anchor, minus the pre-roll time and stops after the anchor point plus the post roll time.
- If the loop mode is activated, the pre-roll and post-roll settings are taken into account. This way you can play a loop around the edit cursor position, without having to make further range settings.

## Using the Auto Selection Mode

You can use the auto selection mode in combination with the playback shortcuts to play back anchors. This makes it easy to monitor your editing actions.

---

### PROCEDURE

1. On the transport bar, right-click the **Play From Anchor** button and activate **Auto Select Anchor**.
  2. In the wave window or the montage window, do one of the following:
    - Make a selection range.
    - Click a fade in, fade out, or crossfade.
    - Click anywhere in the wave/montage window.
    - Drag a marker.Depending on your action, the most appropriate anchor is selected.
  3. Press **F7** to play back from an anchor.
- 

## Using Auto Replay While Editing

You can automatically re-trigger playback while editing audio with the mouse. This is useful if you want to monitor the adjustment of a selection boundary, for example.

---

### PROCEDURE

1. On the transport bar, right-click the **Play From Anchor** button and activate **Auto Replay While Editing**.
  2. In the wave window or the montage window, make a selection range and keep the mouse button pressed.
  3. Press **F7** to start playback from an anchor.
  4. Drag the cursor to the right or left.  
The selection range is adjusted and played back until you release the mouse button. When playback ends, the new selection range is played back.
- 

## Loop Playback

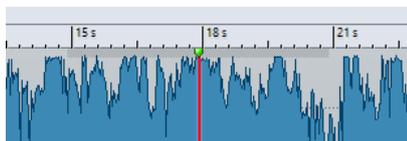
Loop points are updated continuously during playback. If you change the loop start or end during playback, the loop changes. This way, you can audition selection points for rhythmic material.

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.

## Pre-Roll and Post-Roll

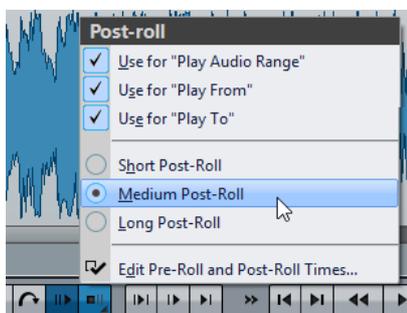
You can start playback slightly before a specific position (pre-roll) and stop playback slightly after another position (post-roll). This gives you a brief context if you are auditioning a clip, for example.

The position can be an anchor or the start or end of a range. The pre-roll and post-roll times are displayed in the time ruler.



To activate pre-roll and/or post-roll, activate **Perform Post-Roll** and **Perform Pre-Roll** on the transport bar.

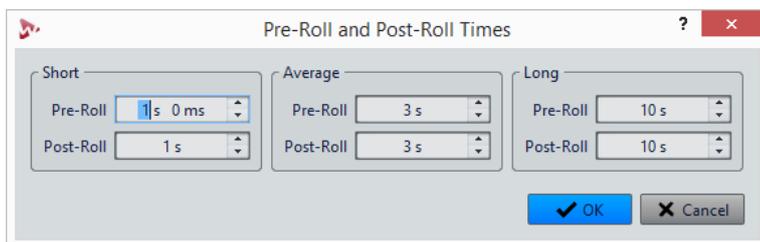
When right-clicking the pre-roll or post-roll button on the transport bar, you can select a pre-roll/post-roll time. Here, you can also select a play option for the pre-roll/post-roll, and you can open the **Pre-Roll and Post-Roll Times** dialog.



## Pre-Roll and Post-Roll Times Dialog

This dialog allows you to define a short, an average, and a long pre-roll and post-roll time. These settings are global to WaveLab Yellowtec Edition.

- To open the **Pre-Roll and Post-Roll Times** dialog, right-click the pre-roll or post-roll button on the transport bar, and select **Edit Pre-Roll and Post-Roll Times**.



## 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 Cursor** on the transport bar.

### F6

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

### F7

Starts playback from the selected anchor, depending on the selected option in the **Anchors** 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 **Yellowtec** 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

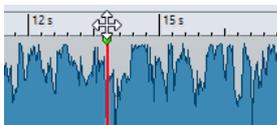
1. In the **Audio Editor**, select the **Yellowtec** tab.
2. In the **Tools** section, select the **Play** tool, or press and hold **Alt**.
3. Click in the wave window.  
Playback starts at the position where you clicked.

## 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 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 88

### 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 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

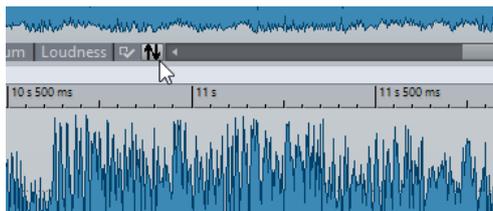
Audio file editing refers to opening, editing, and saving audio files.

## 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.

You can synchronize the waveform displays so that they display the same part of the audio file, by clicking **Sync with Other View**.



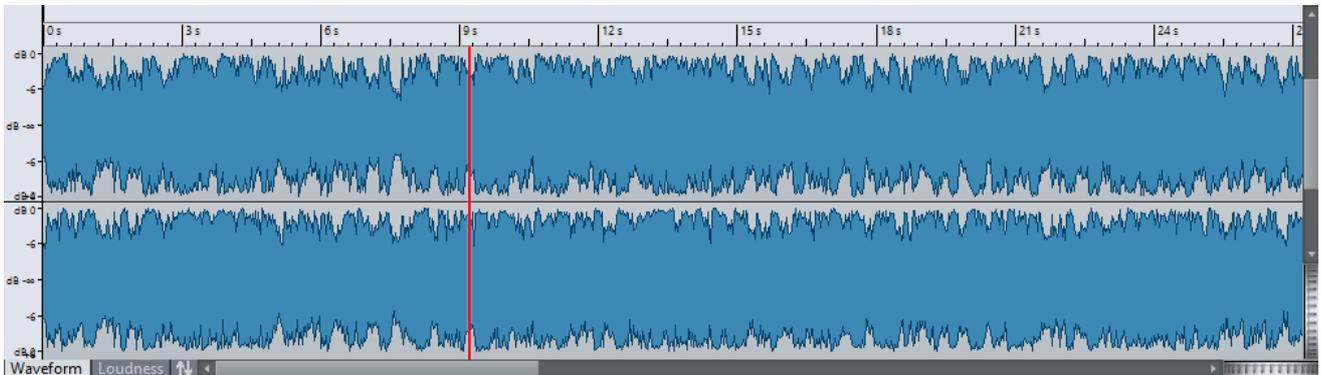
## Display Modes

In the wave window, the upper and the lower displays can independently be set to one of three display modes.

- The **Waveform** tab displays the waveform of the audio file.
- The **Loudness** tab displays the loudness graphs of the audio file.

## Waveform Tab

The **Waveform** tab displays the waveform of the audio file. The horizontal axis shows the time and the vertical axis the amplitude.



## Loudness Tab

The curves on the **Loudness** tab represent the loudness over time in an audio file.



Because isolated peaks do not alter the perceived loudness of audio material very much, this display represents the loudness of an audio file more accurately than the waveform display.

This display mode also gives you an overview of the compression or dynamic range of an audio file. For example, the more peaks and valley expressions in the curve, the more dynamics in the audio. An even curve with few peaks indicates that the material is compressed with a limited dynamic range.

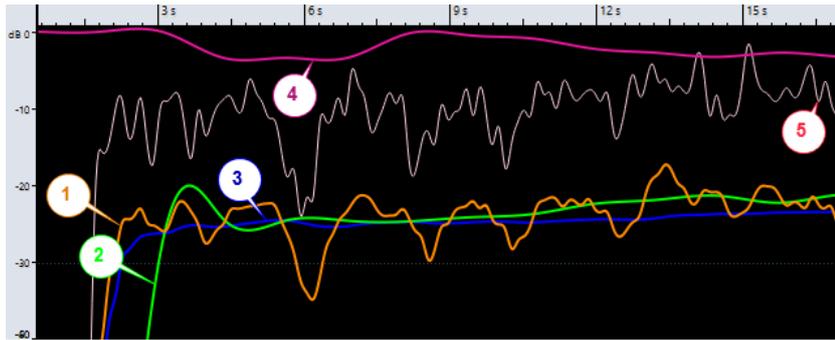
### RELATED LINKS

[EBU Loudness Standard R-128](#)

## Loudness Envelope Curves

The loudness envelope curves represent the average loudness of the signal in different areas of the frequency spectrum. These curves are shown in the **Loudness** display of the wave window.

The following loudness curves are available:



1. Momentary loudness (100 ms resolution)
2. Short-term loudness (1 sec resolution)
3. Integrated loudness (loudness of the entire file)
4. Loudness range
5. True peak hints

The curves can be shown individually or in any combination. Which curves are displayed and what frequency area they represent is specified in the **Loudness Display Settings** dialog.

#### NOTE

The resolution is 100 ms, which means the momentary loudness information is collected every 100 ms and the short-term loudness every second to match the EBU standard. This is the same for true peaks. A clipping indicator is displayed when a 400 ms audio region contains one or more over peaks.

---

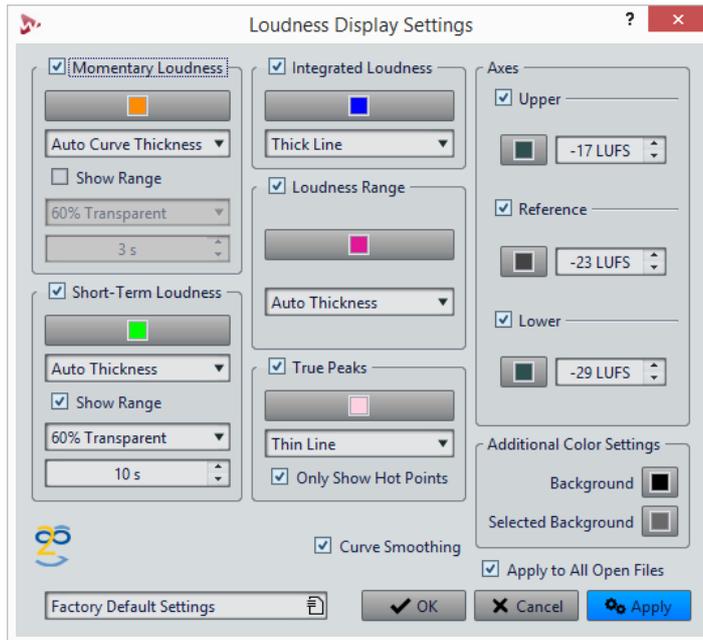
#### RELATED LINKS

[Loudness Display Settings Dialog](#) on page 57

## Loudness Display Settings Dialog

In this dialog, you can specify how the loudness waveform is displayed.

- To open the **Loudness Display Settings** dialog, select the **Loudness** tab in the **Audio Editor**, and click **Edit Settings**.



## Momentary Loudness/Short-Term Loudness

### Color

Lets you edit the color of the associated element.

### Curve Thickness

Lets you customize the curve thickness. If **Auto Thickness** is selected, the curve thickness increases when zooming in.

### Show Range

If this option is activated, the dynamic range is visualized. This displays the difference between the recent minimum and maximum loudness values. The wider the band, the wider the dynamics.

### Range Transparency

Lets you specify the transparency of the range section.

### Range Inertia

Determines the inertia of the loudness range, that is, how fast the range edges meet each other after a new minimum or maximum loudness is reported.

## Integrated Loudness/Loudness Range/True Peaks

### Color

Lets you edit the color of the associated element.

### Curve Thickness

Lets you customize the curve thickness. If **Auto Thickness** is selected, the curve thickness increases when zooming in.

### Only Show Hot Points (True Peaks section only)

If this option is activated, the curve is hidden and only the peak overloads are displayed as red bullets.

### Axes

#### Upper/Reference/Lower

Lets you activate several axes, and edit their color and position in the loudness tab to get a visual reference.

### Additional Color Settings

#### Background/Selected Background

Lets you edit the color of the associated element.

### Additional Options

#### Curve Smoothing

If this option is activated, the transitions between the loudness measurements are smoothly drawn. This is less accurate when abrupt changes occur.

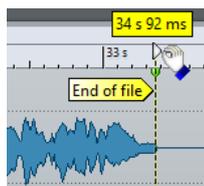
#### Apply to All Open Files

If this option is activated, the settings are applied to all open audio files when you click **OK**.

## 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.

## Audio Editor Tabs

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

### Yellowtec Tab

## Tools

### Time Selection

Tool that allows you to select a time range.

### Pen

Tool that allows you to redraw the waveform in the wave window. This can be used to quickly repair waveform errors.

### Play

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

## 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.

### View All

Zooms out 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.

### Zoom in Vertically/Zoom out Vertically

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

### Reset Zoom to 0 dB

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

### 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.

### Level

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

## 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.

### Mute Selection

Replaces the audio selection with silence.

### Silence Generator

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

### Swap Stereo Channels

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

## Clipboard

### Cut

Cuts 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 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.

## 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.

## Normalizing

### Level

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

### Loudness

Opens the **Loudness Normalizer** dialog where you can specify the loudness of a file.

### Pan

Opens the **Pan Normalizer** dialog which allows you to ensure that both channels of a stereo file have the same level or loudness, and helps you to get the best possible stereo balance.

## 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.

## Markers

### Create Generic Marker

Allows you to create a generic marker at the cursor position.

## Output

### Render

Opens the **Render** tab that allows you to render your audio file.

## File Handling in the Audio Editor

### Mono/Stereo Handling

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

#### Wave (.wav)

The following bit resolutions are supported: 8 bit, 16 bit, 20 bit, 24 bit, and 32 bit (float).

#### Wave 64 (.w64)

This file format is very similar to the Wave format but with one important difference: it allows you to record and/or edit files of virtually any length. Standard Wave files are limited to 2 GB (stereo files) in WaveLab Yellowtec Edition.

#### NOTE

Wave 64 does not support meta-data. If you need large files and meta-data, use Wave files and activate the RF64 option.

#### RF64

In the **Audio Files Preferences**, you can activate the RF64 file format support. If this is activated, the standard Wave file format switches automatically to the RF64 file format as soon as the file size exceeds 2 GB, without any performance loss or interruption. This is useful when recording very long sessions. A RF64 file has the extension `.wav`, but it can only be opened with an application that supports the RF64 standard if the file exceeds 2 GB.

#### AIFF (.aif, .aiff, .snd)

Audio Interchange File Format, a standard defined by Apple Computers Inc. The following bit resolutions 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 Yellowtec Edition, the file is converted to a temporary wave file. On saving, the temporary wave file is converted back to MP3.

#### MPEG-1 Layer 2 (.mp2, .mpa, .mpg, .mus)

MP2 (sometimes referred to as "Musicam files") is a common file format in the broadcast industry.

### Ogg Vorbis (.ogg, read-only)

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, read-only)

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

### FLAC (.flac, read-only)

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

### 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 Yellowtec Edition. 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 Yellowtec Edition can handle 20-bit and 24-bit audio files. Any processing or editing performed on the files is always done at full resolution (32-bit float), even if your card does not support the full resolution.

For playback, WaveLab Yellowtec Edition 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

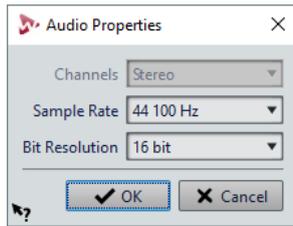
1. Select **File > New**.
  2. Click **Audio File > Custom**.
  3. Specify the audio properties and click **Create**.
- 

## Audio Properties

You can define the channels, the sample rate, and the bit resolution 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.

### Bit Resolution

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, bit resolution, 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

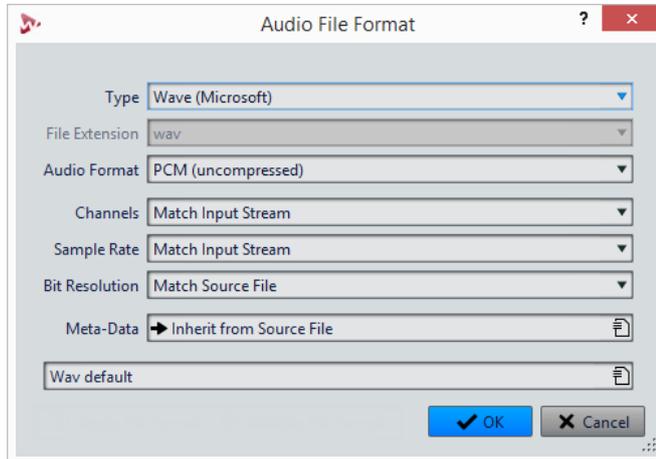
A new file is created. The original file is not affected by the operation.

## Audio File Format Dialog

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

- To open the **Audio File Format** dialog, select the **File** tab 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 Yellowtec Edition.



### 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.

---

### Bit Resolution

Select a bit resolution for the audio file. This option is only available for specific file types.

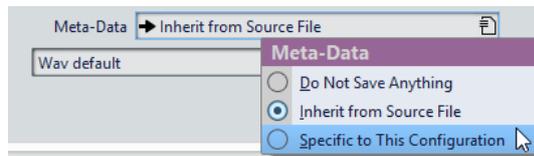
#### IMPORTANT

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

---

## Meta-Data

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



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

## Changing the Format

When changing the sample rate, bit resolution, 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.

### Bit Resolution

If a different bit resolution is specified, the file is either truncated down to 8 bits, or padded up to 64 bits. If you are converting to a lower bit resolution, 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.

## 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 **Yellowtec** tab.
  3. In the **Output** section, click **Render**.
  4. Open the **Part** menu and select **Selected Audio Range**.
  5. In the **Output** section, specify a file name and location.
  6. Open the **Format** menu and select **Edit Single Format**.
  7. In the **Audio File Format** dialog, specify the output format and click **OK**.
  8. In the **Render** section, click **Start**.
-

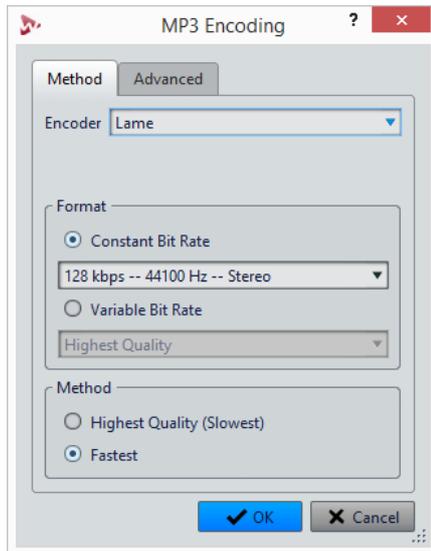
## Encoding Audio Files

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.

### MP3 Encoding Dialog

You can edit the encoding options when you save an MP3 audio file.

You can open the **MP3 Encoding** 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 **MPEG-1 Layer 3 (MP3)** as type, click the **Encoding** field, and select **Edit**.



#### Encoder

Lets you select the encoder (**Fraunhofer** or **Lame**).

#### Constant/Variable Bit Rate

The bit rate is related to the quantity of data used to encode the audio signal. The higher the value, the better the quality, but the larger the output file. If you choose **Variable Bit Rate**, the rate changes, according to the complexity of the audio material.

#### Highest Quality (Slowest)/Fastest

Select the quality that you want to achieve. The higher the quality, the more resources and time are required to analyze and compress the audio signal.

#### NOTE

**Highest Quality (Slowest)** can require a specific sample rate for the audio file. If this is the case and the sample rate is different from the input sample rate, a message is displayed.

---

When you use the **Lame** encoder, you can make additional settings on the **Advanced** tab.

### Allow Intensity Stereo Coding

Decreases the bit rate by reorganizing the intensity information between the channels.

### Specify as Original Recording

Marks the encoded file as the original recording.

### Write Private Bit

This is a custom flag.

### Write Copyright Flag

Marks the encoded file as copyright protected.

### Write Check-Sum

Allows other applications to check the integrity of the file.

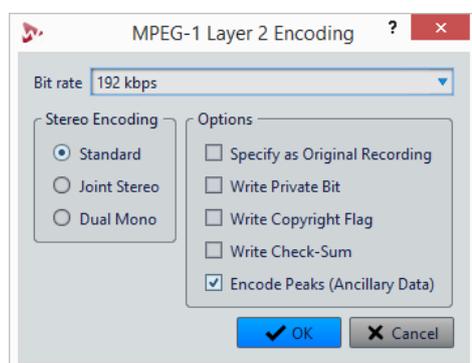
### Create Long Frames

Saves space by writing fewer headers in the file (not compatible with all decoders).

## MPEG-1 Layer 2 Encoding Dialog

You can edit the encoding options when you save an MPEG-1 Layer 2 (MP2) audio file.

You can open the **MPEG-1 Layer 2 Encoding** 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 **MPEG-1 Layer 2** as type, click the **Encoding** field, and select **Edit**.



### Bit Rate

Determines the bit rate. The bit rate is related to the quantity of data that is used to encode the audio signal. The higher the value, the better the quality, but the larger the output file.

### Stereo Encoding

In **Standard** mode, the encoder does not use the correlation between channels. However, the encoder can take space from a channel that is easy to encode and use it for a complicated channel.

In **Joint** mode, the encoder uses the existing correlations between the two channels to increase the ratio quality/space.

In **Dual** mode, both channels are independently encoded. This mode is recommended for signals with independent channels.

#### **Specify as Original Recording**

Marks the encoded file as the original recording.

#### **Write Private Bit**

This is a custom flag.

#### **Write Copyright Flag**

Marks the encoded file as copyright protected.

#### **Write Check-Sum**

Allows other applications to check the integrity of the file.

#### **Encode Peaks (Ancillary Data)**

This must be activated for compatibility with specific systems, for example, DIGAS.

## **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: Activate **Import Markers**.
  9. Click **OK**.
- 

## **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 **Yellowtec** 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 **Yellowtec** 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 **Yellowtec** 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

---

#### 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

---

### PROCEDURE

1. In the wave window, make a selection.
  2. Use one of the following copy methods:
    - In the **Audio Editor**, select the **Yellowtec** 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 **Yellowtec** 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.

---

## 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

---

### PROCEDURE

1. In the wave window, make a selection.
  2. Use one of the following copy methods:
    - In the **Audio Editor**, select the **Yellowtec** 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 **Yellowtec** tab, and click **Paste**.
    - Press **Ctrl/Cmd-V**.
-

## Copying Audio by Dragging

---

### 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 bit resolution 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 bit resolution, the file is converted to the new resolution the next time you save it.

### NOTE

There is no undo for this. If you save a file with a lower bit resolution, 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 **Bit Resolution**.
  5. Click **Apply Changes**.
- 

### RELATED LINKS

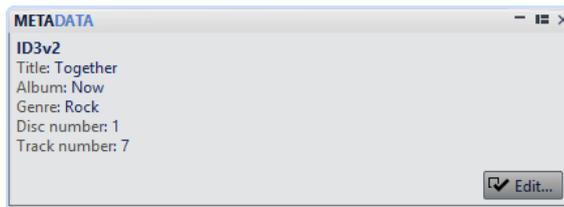
[Info Tab](#) on page 20

## Meta-Data

Meta-data 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 meta-data found in the file is loaded. You can create different meta-data presets for audio files and audio montages.

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



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

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

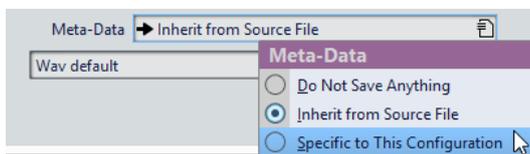
For MP3, the following meta-data types are available:

- ID3 v1 and ID3 v2, including picture support

For WAV, the following meta-data types are available:

- 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 meta-data, inherit the meta-data from the source file, or edit the meta-data of the file.



Meta-data can be entered manually or generated automatically.

The following options can be generated automatically:

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

WaveLab Yellowtec Edition includes several meta-data presets. They are used as examples and can be customized to your needs. You can load meta-data presets from the **Meta-Data Presets** pop-up menu in the **Audio File Format** dialog, or from the **Meta-Data** dialog.

#### RELATED LINKS

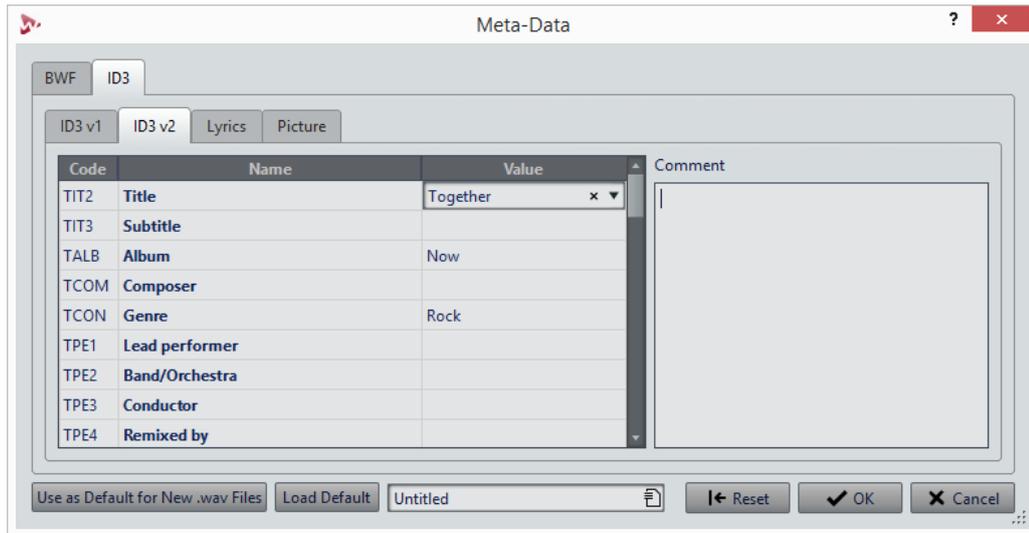
[Audio File Format Dialog](#) on page 66

## Meta-Data Dialog

This dialog allows you to define the meta-data to be embedded in your audio file.

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

Depending on the file type, the meta-data is handled differently.

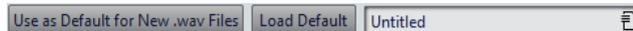


Meta-Data dialog for WAV files

When opening the **Meta-Data** dialog for files in the **Audio Editor**, you can edit the meta-data that is saved in the audio file. This meta-data is saved to disk later.

## Meta-Data Presets

In the **Meta-Data** dialog, you can save meta-data presets and apply these presets to other files. Meta-data 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 meta-data as default.

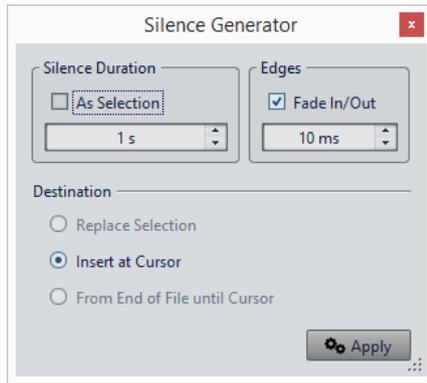
When you create a new file, and do not add any meta-data, this default meta-data is applied to the file when saving it. For example, you can save or record WAV files with BWF meta-data and automatically add a Unique Material Identifier.

To edit the default meta-data preset, select **Load Default**, and edit the preset.

## Silence Generator Dialog

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

- To open the **Silence Generator** dialog, select the **Yellowtec** 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 **Yellowtec** tab.
  3. In the **Cutting** 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 **Yellowtec** tab.
3. In the **Cutting** 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 **Yellowtec** tab.
  3. In the **Cutting** section, click **Mute Selection**.
-

# Offline Processing

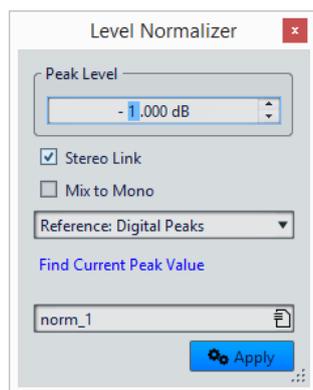
Offline processes are useful for a variety of editing purposes and creative effects, for example, if the computer is too slow for real-time processing or if the editing requires more than one pass.

After the processing the audio file is permanently altered.

## Level Normalizer Dialog

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

- To open the **Level Normalizer** dialog, select the **Yellowtec** 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.

### Reference

In this pop-up menu, select whether WaveLab Yellowtec Edition uses sample values (digital peaks) or analog reconstructed values (true peaks).

### 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.

## Loudness Normalizer

You can use the **Loudness Normalizer** to achieve a specific loudness.

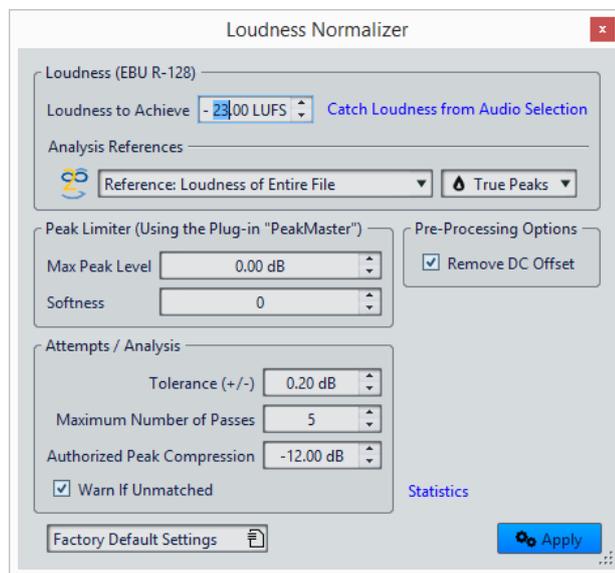
### NOTE

Increasing the loudness to a specific value can provoke clipping.

## Loudness Normalizer Dialog

In this dialog, you can specify the loudness of a file.

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



### Loudness (EBU R-128)

#### Loudness to Achieve

If the loudness cannot be achieved with a simple positive gain change, a limiter must come into action to prevent clipping.

Here, specify the loudness that you want to achieve. The EBU R-128 recommendation for broadcast is -23 dB.

Specifying high values might require a gain outside the normal capabilities of the limiter, which can cause distortion.

It is recommended to use **Statistics** after specifying a loudness. This way you know how much the gain needs to be raised and if peak limiting needs to be applied. If heavy limiting is necessary this might degrade the audio quality. In such cases a warning is shown after applying the process, allowing you to undo it.

#### Catch Loudness from Audio Selection

Sets the **Loudness to Achieve** value to the average loudness found in the audio file.

## Reference

This pop-up menu allows you to select a reference: the loudness of the entire file (EBU R-128 recommendation), the average loudest 3 second audio section (**Top of Loudness Range**), or the loudest 3 seconds audio section (**Maximum Short-Term Loudness**).

## Peaks

In this pop-up menu, select whether WaveLab Yellowtec Edition should limit the sample values (**Digital Peaks**) or the analog reconstructed samples (**True Peaks**).

## Peak Limiter

### Max Peak Level

Here, specify the maximum peak level of the resulting audio. The lower this value, the lower the loudness.

### Softness

Affects how the peak master operates. A high setting maximizes the perceived loudness effect, but can result in a slight harshness of the sound.

Adjust this parameter to optimize the balance between sound quality and the effect that you want to achieve.

## Pre-Processing Options

### Remove DC Offset

DC offset in the file affects the loudness computation. Therefore it is recommended that you keep this option activated.

## Attempts/Analysis

### Tolerance (+/-)

If the **Loudness to Achieve** requires peak limiting, this also reduces the loudness to some degree. This cannot be computed in advance and cannot be automatically applied to the gain change. Instead, several simulation passes are performed to find the best possible gain. This option lets you define the precision of the result that you want to achieve.

### Maximum Number of Passes

WaveLab Yellowtec Edition performs as many analysis passes as needed to match the precision that you want to achieve. Use this option to specify the maximum number of passes to be performed.

### Authorized Peak Compression

As too much compression degrades the audio quality, you can specify a limit for the applied compression. The value can be set between -1 and -20 dB. Consider to lower the **Loudness to Achieve**, as this renders better results.

### Warn If Unmatched

If this option is activated, you are warned if the normalizing process does not meet the specified loudness/precision. This option is not available during batch processing.

### Statistics

Opens a window that shows you information about the file to be processed. It shows any DC offset, the current loudness, the current peak level, and the required gain to achieve the specified loudness. Furthermore, you are informed if limiting is required.

### RELATED LINKS

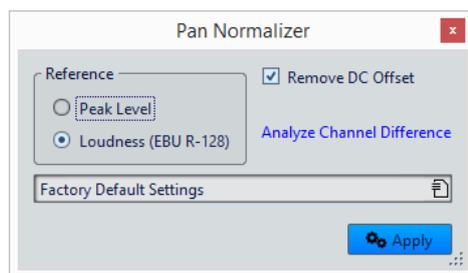
[EBU Loudness Standard R-128](#)

## Pan Normalizer Dialog

This dialog allows you to ensure that both channels of a stereo file have the same level or loudness, and helps you to get the best possible stereo balance.

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

This dialog is also available as a multipass plug-in in the **Batch Processor** window.



This process first analyzes the audio and then renders any required level changes. You must have a stereo selection in a stereo file to apply this process.

### Peak Level

Raises the channel with the lowest peak level to match the peak level of the other channel.

### Loudness (EBU R-128)

Analyzes the loudness of both channels and adjusts their gain so that both channels get the same loudness. No clipping can be introduced using the pan normalizer.

### Remove DC Offset

Removes DC offsets which affect the loudness computation. We recommend to keep this option activated.

### Analyze Channel Difference

Shows the current loudness ratio between the left and right channels. The result changes depending on the selected **Peak/Loudness** mode.

## 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 **Yellowtec** 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.
- 

## 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 **Yellowtec** 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 **Yellowtec** 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.

# 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.

## Basic Terminology

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

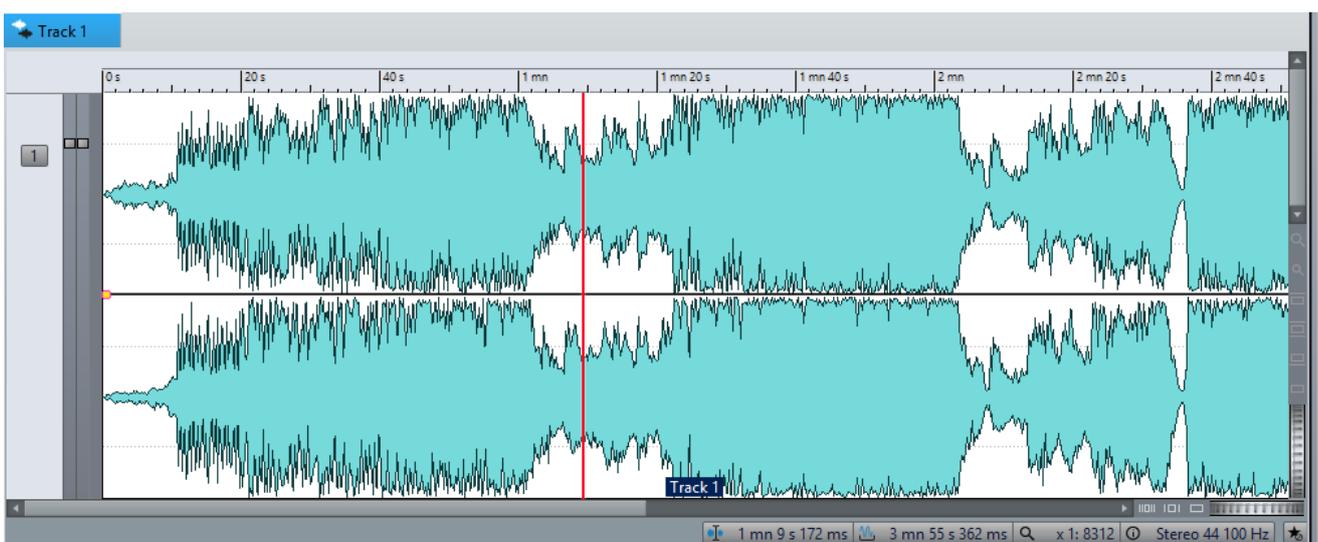
On an audio track, you can place any number of clips. Clips are containers for the audio, and include a number of settings and functions such as envelope curves, fades, etc.

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

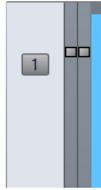
The montage window is where you assemble your audio montage. This is where you view, play back, and edit audio montages.

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.



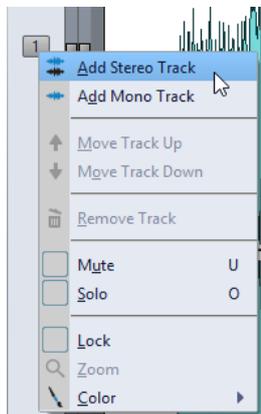
### Track number button

Opens the track menu that contains track-related options.

## Track 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.

## Edit Tab

### Source

#### Edit Source

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

### 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.

### **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.

### **Reset Zoom to 0 dB**

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

### **Level**

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

### **Color**

#### **Color**

Allows you to apply a color to the clip.

### **Clipboard**

#### **Cut**

Cuts the active clip to the clipboard.

#### **Copy**

Copies the active clip to the clipboard.

#### **Paste**

Pastes the clipboard content.

### **Split**

#### **Split Clip**

Splits the active clip into two clips.

### **Removal**

#### **Delete Selected Clip**

Deletes the selected clip.

## 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.
- **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.

## Marker

### Create Generic Marker

Allows you to create a generic marker at the cursor position.

## Output

### Render

Opens the **Render** tab that allows you to render your audio montage.

## 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.

## Signal Path in the Audio Montage

The audio signal passes through the various sections of WaveLab Yellowtec Edition in a certain way.

### 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

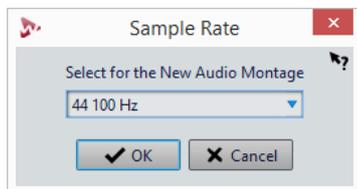
1. Select **File > New**.
  2. Select **Audio Montage > Custom**.
  3. Specify the audio properties and click **Create**.
- 

## 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 93

## 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 94

## 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)**

---

### 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.

---

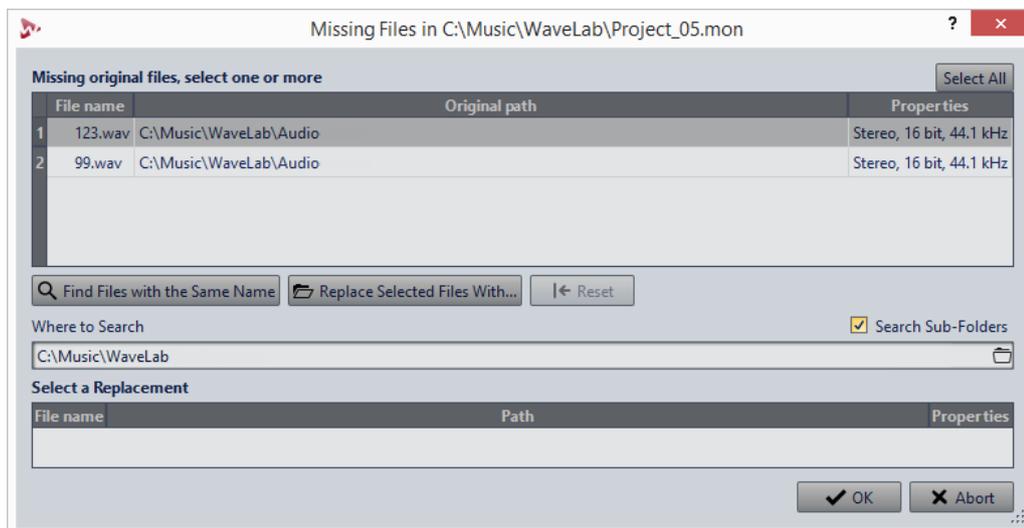
### PROCEDURE

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.

- Optional: Activate **Import Markers**.
  - Click **OK**.
- 

## 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 Yellowtec Edition 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/Mac OS 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 Yellowtec Edition 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.

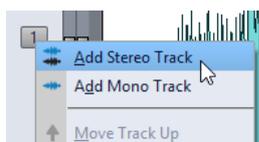
### Adding Tracks

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.

---

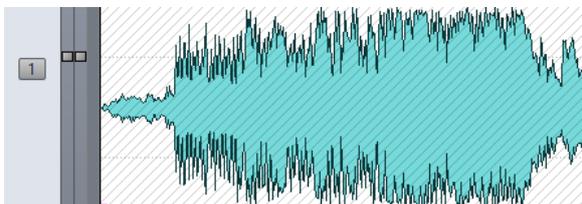
#### PROCEDURE

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**.

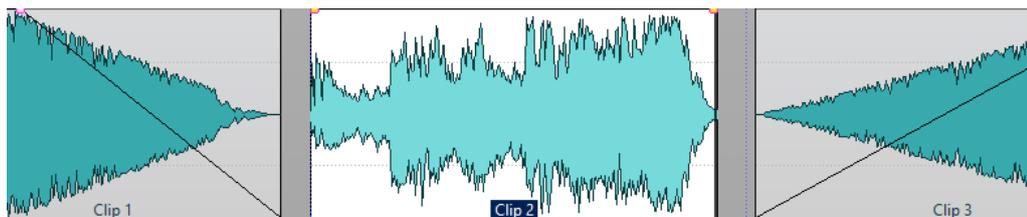


- To unlock a track, click the locked track, or click the number button of the track, and deactivate **Lock**.

## 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.



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.
- 

## Dragging Audio Files From the File Browser Tool Window

### NOTE

The following can also be done from the File Explorer/Mac OS 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.
- 

## 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.

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### 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.
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## Rearranging Clips

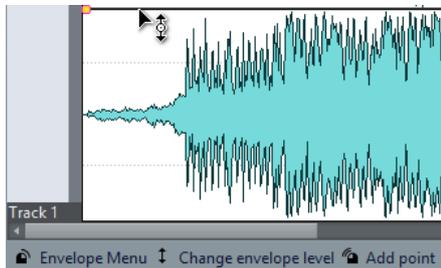
You can freely arrange clips in the montage window.

## 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 a clips start and end, 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.

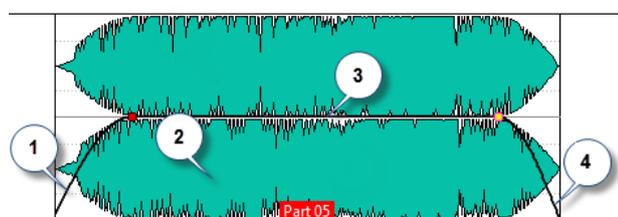
## Selecting Clips

You can edit multiple selected clips at once.

- To select 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

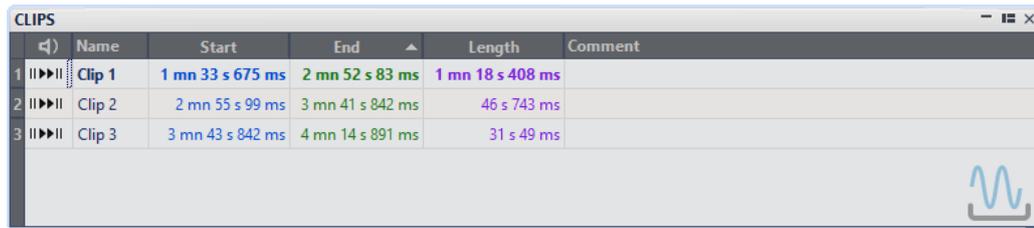
All clips are displayed in the **Clips** window. In this window, you can edit and rearrange clips and drag them into the audio montage.

The active clip is highlighted in the clips list.

## 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**.



	Name	Start	End	Length	Comment
1	Clip 1	1 mn 33 s 675 ms	2 mn 52 s 83 ms	1 mn 18 s 408 ms	
2	Clip 2	2 mn 55 s 99 ms	3 mn 41 s 842 ms	46 s 743 ms	
3	Clip 3	3 mn 43 s 842 ms	4 mn 14 s 891 ms	31 s 49 ms	

## 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.

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### 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.

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### RELATED LINKS

[Clips Window](#) on page 101

## 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.

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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.

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PROCEDURE

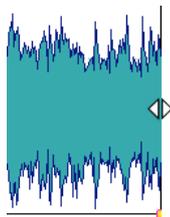
1. In the montage window, select one or more clips.
  2. Click the upper clip area and drag the clips in any direction.  
While you are dragging, a dotted line indicates where the first of the copied clips will be placed. The position is also indicated on the info line.
- 

## 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.



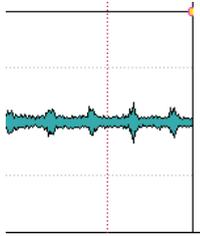
## Deleting Clips

- 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.

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## Adding Cue Points

You can add one cue point for each clip.

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### 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.

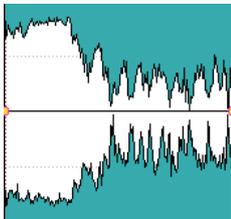
You can create an independent level envelope curve to automate level, to create fades and crossfades, and to mute clip sections.

Edit the envelope settings 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**.

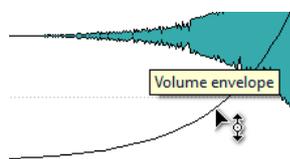
## Changing Overall Level Envelopes of Clips

The default envelope curve contains no level envelope points, but you can use it to change the overall level for a clip.

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### 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.

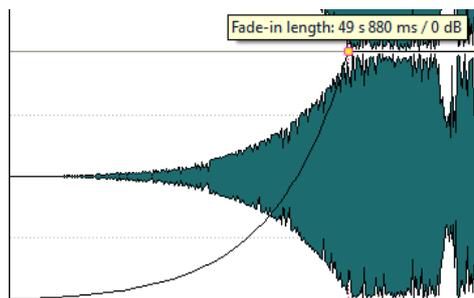
### Creating Fades

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

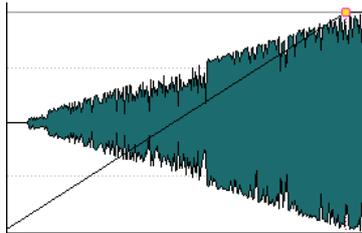
Adjusts the view to mainly display the fade in/fade out part of the active clip.

#### Paste

Replaces the fade in/fade out shape and length with the shape and length that was copied to the clipboard.

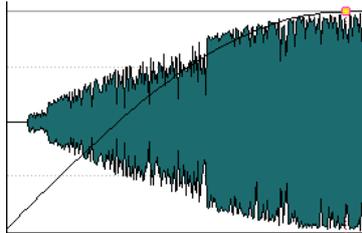
#### Linear

Changes the level linearly.



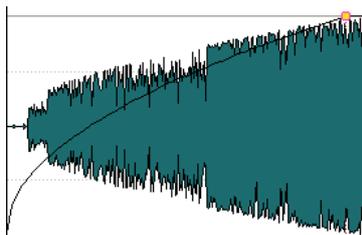
**Sinus (\*)**

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.



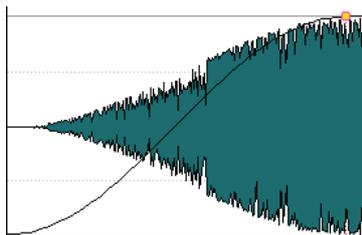
**Square-root (\*)**

Changes the level according to the square-root curve. When used in a crossfade, the loudness (RMS) remains constant during the transition.



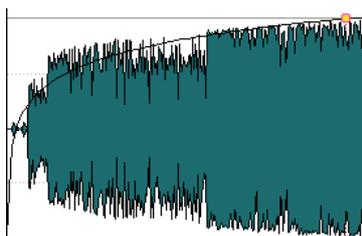
**Sinusoid**

Changes the level according to a half period part of the sine curve.



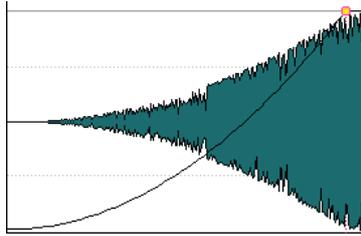
**Logarithmic**

Changes the level logarithmically.



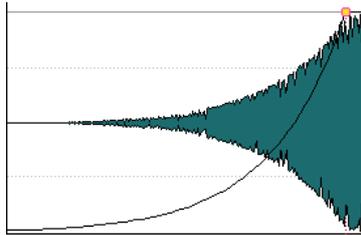
### Exponential

Changes the level exponentially.



### Exponential+

Changes the level strongly exponential.

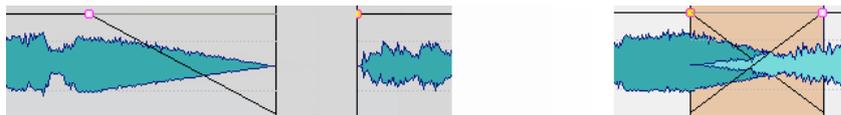


## Crossfade Editing

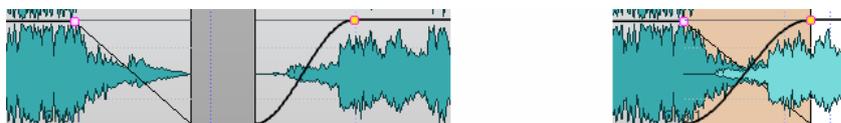
You can create crossfades with independent shapes and lengths for the fade in and fade out curves.

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 to a single audio file.

A mixdown is necessary to produce an audio file from the audio montage.

RELATED LINKS

[Rendering](#) on page 120

# 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.

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### 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.

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### PROCEDURE

1. Open the **Recording** dialog.
2. Make your settings and start recording.
3. Click the marker button.

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### RESULT

A marker is dropped each time that you click the marker button.

## 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 to a 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.

### Meter 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.

## Meter Display

In the lower part of the **Recording** dialog, you find a meter display.

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.

## 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.

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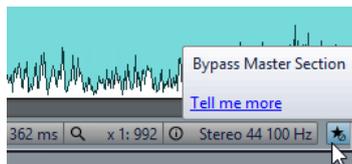
# Master Section

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.

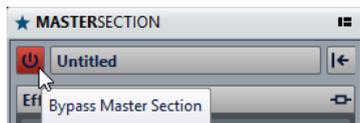
The settings and effects in the **Master Section** are taken into account in the following cases:

- When playing back an audio file in the wave window.
- When playing back an audio montage.
- When using the **Render** function.

By default, the **Master Section** is active. You can turn it off for each file individually by activating the **Bypass Master Section** button at the bottom of the wave/montage window.



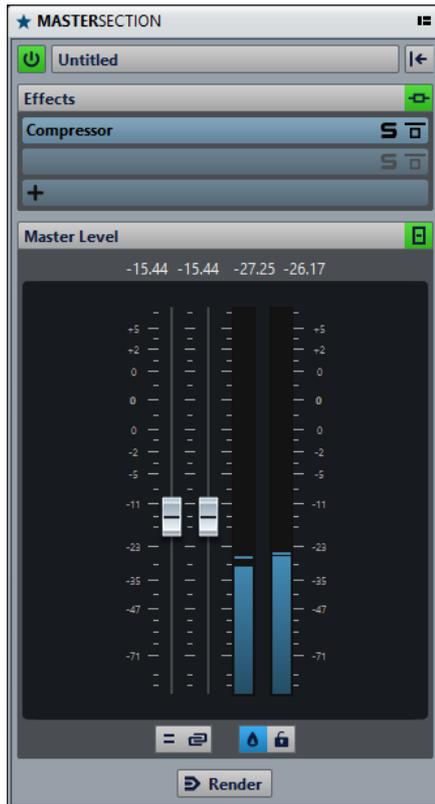
To turn the **Master Section** off globally, activate the **Bypass Master Section** button at the top left of the **Master Section**.



## 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**
- **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 Yellowtec Edition
2. Effects  
Reordering the effect slots affects the signal path.
3. Master Level
4. 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

### Bypass Master Section

If this option is deactivated, the **Master Section** is ignored during playback. However, rendering to file is still possible. If playback is activated when you change this option, it stops and restarts.

### Presets

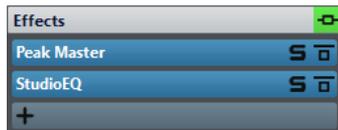
Lets you save and recall **Master Section** presets. The **Presets** menu offers additional options to save and load default banks and effects.

### Reset Master Section

Removes all active effects from the slots and sets the master output to 0 dB.

## Effects Pane

This pane in the **Master Section** allows you to add up to 5 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 Yellowtec Edition supports WaveLab Yellowtec Edition-specific plug-ins, VST 2 plug-ins, and VST 3 plug-ins.

### 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 Yellowtec Edition. 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.

### Bypass Processing

If this option is activated, this plug-in is bypassed during playback, and optionally for a rendering operation. To deactivate an effect when rendering, right-click an effect slot, and deactivate **Active** in the **Effects** pane of the **Master Section**.

### Solo (Bypass)

Soloes the plug-in.

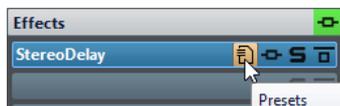
### Switch Effect On/Off

If you deactivate a plug-in, it is excluded from both playback and rendering.

## Effect Plug-in Presets

With WaveLab Yellowtec Edition 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

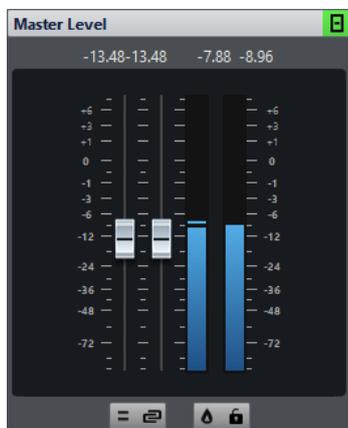
Allows you to define a name for the preset.

#### Preset List

Allows you to select one of the loaded presets.

## 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.

## True Peak Analyzer Button

If **True Peak Analyzer** is activated, the analog reconstructed peaks (true peaks) are displayed in the **Master Level** meter. If this button is deactivated, the sample values (digital peaks) are displayed.

## 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. 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 66

[Creating Audio File Format Presets](#) on page 120

## 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 66

## 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

- **Whole File** processes and renders the whole audio file.
- **Whole Montage** processes and renders the whole audio montage.
- **Selected Audio Range** processes and renders the selected 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.

### Exclude Master Section Bypassed Plug-ins

If this option is activated, the plug-ins that are bypassed during playback are not used for rendering.

#### NOTE

This applies to the bypass states managed by WaveLab Yellowtec Edition, not any bypass state that is under the control of the plug-ins.

---

### 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 Yellowtec Edition. 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.

### 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

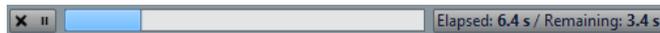
It is recommended to activate this option, because you do not want to monitor this new file through the effects again when the effects have been applied to a file.

---

## 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 139

## 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.

## 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.

### **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.

### **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.

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.

## About Creating Markers

Markers can be created during playback or in stop mode.

## 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 Montage** window, select the **Edit** tab, and click the marker icon in the **Markers** section.
    - In the **Audio Editor**, select the **Yellowtec** tab, and click the 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.
- 

## 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.
- 

## Renaming Markers

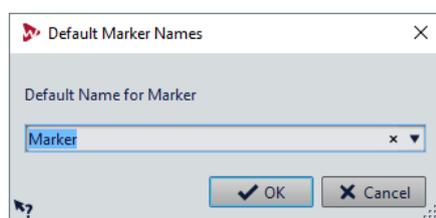
You can change the names of markers.

- 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**.



### 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 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 123

# Metering

WaveLab Yellowtec Edition contains a variety of audio meters that you can use for monitoring and analyzing audio. Meters can be used to monitor audio during playback, rendering, and recording. Furthermore, you can use them to analyze audio sections when playback is stopped.

## Meter Settings

You can set up most meters in the corresponding settings dialogs. For example, you can adjust the behavior, scale, and color of the meters.

- To open the settings dialog for a meter, select **Functions > Settings**.
- To check the results after changing the settings without closing the settings dialog, click **Apply**.
- To close the settings dialog and discard any changes that you have made, even if you have clicked the **Apply** button before, click **Cancel**.

## Resetting the Meters

You can reset the display of some meters, for example, the **Level Meter**.

---

### PROCEDURE

- In the meter window, click **Reset** , or select **Functions > Reset**.

---

### RESULT

All values and numerical indicators of the meter are reset.

## Level Meter

The **Level Meter** displays the peak and average loudness/decibel levels of your audio file, and the balance between the left and right channels in a stereo file.

- To open the **Level Meter**, select **Meters > Level Meter**.

### Level Meters

The upper part of the window shows the peak level and the average loudness in the following way:

- The peak level meters display the peak levels of each channel, graphically and numerically.

- The VU meters measure the average loudness (RMS) of each channel. These meters have a built-in inertia, evening out loudness variations over a user-defined time span. If you are monitoring playback or the audio input, you can see two vertical lines following each VU meter bar. These lines indicate the average of the most recent minimum RMS values (left line) and the average of the most recent maximum RMS values (right line). To the left, the difference between the minimum and maximum average values is displayed. This gives you an overview of the dynamic range of the audio material.
- Recording levels should be set so that they only rarely clip. If the master level is set too high, the sound quality and frequency response are compromised at high recording levels, with unwanted clipping effects. If the level is set too low, noise levels can be high relative to the main sound being recorded.

## Pan Meters

The lower part of the window shows the difference in level between the left and right channel of a stereo audio file.

- The upper pan meters show the peak level difference between the channels. The level bars can go to the left or right, indicating which channel is loudest.
- The lower pan meters show the average difference in loudness between the channels. This gives you a visual indication of whether a stereo recording is properly centered, for example.
- If you are monitoring real-time audio (playback or input), the maximum balance difference values (peak and loudness) for each channel are displayed numerically to the left and right of the meter bars.

## Level/Pan Meter Settings

In the **Level/Pan Meter Settings** dialog, you can adjust the behavior, scale, and color of the meters.

- To open the **Level/Pan Meter Settings** dialog, open the **Level Meter** window, and select **Functions > Settings**.

### Peak Meter Section

#### Peaks pop-up menu

On this pop-up menu, select **Digital Peaks** if you want WaveLab Yellowtec Edition to use sample values and **True Peaks** if you want WaveLab Yellowtec Edition to use analog reconstructed values.

#### Ballistics – Release Rate

Determines how fast the peak level meter falls after a peak.

#### Ballistics – Peak Hold Time

Determines how long a peak value is displayed. The peak can be displayed as a line or a number. If the meter's height is too narrow, only the line is displayed.

### Top/Middle/Low Zone

The color buttons allow you to select colors for the low, middle, and top zones of the level meter. You can define the range for the top and middle zones by changing the corresponding values.

## VU Meter (Loudness) Section

### VU Meter (Loudness)

Activates/Deactivates the VU meter.

### Ballistics – Resolution

Sets the time that is used to determine the loudness. The smaller this value, the more the VU meter behaves like the peak meter.

### Ballistics – Range Inertia

Sets the time that is used to determine the recent minimum and maximum value lines, and therefore determines how quickly these respond to changes in loudness.

## Panning Meter Section

### Panning Meter

Shows/Hides the panning meter in the **Level Meter** window.

### Range

Determines the dB range of the panning meter.

### Peak and Loudness Left/Right, Global Colors

Lets you specify the colors for the different elements.

## Global Colors Section

In this section, you select colors for the meter background, marks (scale units), and grid lines.

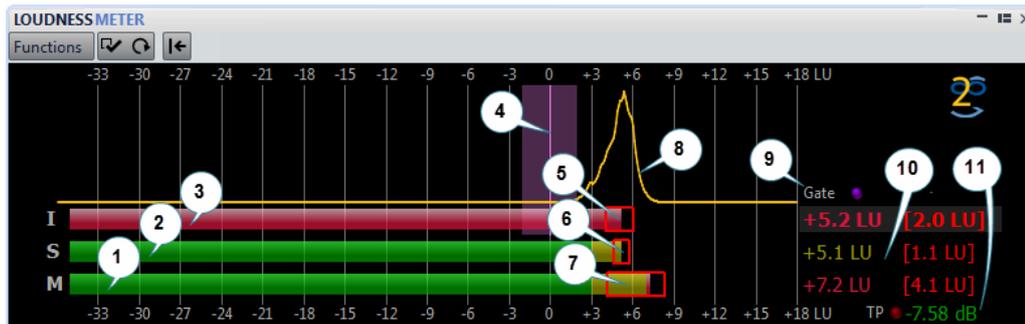
## Global Range (Peak and VU Meter) Section

In this section, you specify the minimum and maximum values of the displayed level range.

# Loudness Meter

The **Loudness Meter** is an audio meter for monitoring loudness, according to the EBU R-128 standard.

- To open the **Loudness Meter**, select **Meters > Loudness Meter**.



### 1) Momentary loudness bar

Displays the loudness of a 400 milliseconds slice that is evaluated every 100 milliseconds.

### 2) Short-term loudness bar

Displays the loudness of a 3 seconds slice that is evaluated every second.

### 3) Integrated loudness bar

Displays the average loudness. This bar is evolving over time, because it makes an average of the loudness by measuring 400 millisecond slices every 100 milliseconds.

### 4) Target loudness

The purple vertical line corresponds to the target loudness defined in the **Loudness Meter Settings** dialog. The purple shadow around it corresponds to the acceptable deviation.

### 5) EBU R-128 Loudness Range (LRA)

This loudness range displays the difference between the estimates of the 10th and the 95th percentiles of the loudness distribution. The lower percentile of 10 % can, for example, prevent the fade out of a music track from dominating the loudness range. The upper percentile of 95 % ensures that an unusually loud sound, such as a gunshot in a movie, is not responsible for a large loudness range.

The EBU R-128 loudness range, the dynamics range of the short-term loudness, and the dynamics range of the momentary loudness help to decide if dynamic compression is necessary, by giving instant feedback about the dynamics (too low, good, too much).

### 6) Dynamics range of the short-term loudness

This loudness range monitors the recent minimum/maximum loudness measurements to provide a hint about the short-term dynamics.

### 7) Dynamics range of the momentary loudness

This loudness range monitors the recent minimum/maximum loudness measurements to provide a hint about the momentary dynamics.

### 8) Loudness curve

This curve shows where the loudness is distributed in a song. The audio signal is divided into small blocks, and the loudness of each block is computed. The curve

informs about how often audio events with a given loudness appear in the file in comparison to all other events. If the curve has a peak, the given loudness often appears in the song.

The curve is always normalized. The peak shows which loudness is the most represented in a song. The curve is related to the LRA as the LRA starts at the left part of the curve and ends at the right part, with a 10%/95% tolerance.

#### 9) Gate LED

The **Gate** LED lights up when audio is discarded from measurement. The EBU standard discards audio below a specific level, relative to the average loudness.

#### 10) Numerical values of the bars

This section shows the numerical values of the bars. The values in brackets are the loudness ranges.

#### 11) True Peak LED

The **True Peak** LED is based on a true peak analysis and lights up when clipping is detected.

#### RELATED LINKS

[EBU Loudness Standard R-128](#)

## Loudness Meter Settings

In the **Loudness Meter Settings** dialog, you can set up the appearance of the **Loudness Meter** window.

- To open the **Loudness Meter Settings** dialog, open the **Loudness Meter** window, and select **Functions > Settings**.

### Short-term Loudness/Momentary Loudness

#### Top Zone/Middle Zone/Low Zone

Here, you can specify the colors for the top, middle, and low zones of the meter.

#### From

Allows you to specify the starting point for the middle and top zones.

#### Show Maximum Values

If this option is activated, the maximum short-term and momentary values are displayed instead of the loudness range values.

#### Loudness Range

If this option is activated, a moving rectangle is displayed, which symbolizes the short-term loudness range/momentary loudness.

#### Ballistics

Determines the inertia of the loudness range for the short-term loudness/momentary loudness, that is, how fast the range edges meet each other after a new minimum or maximum loudness is reported.

## Integrated Loudness

### Target Loudness

Allows you to specify the ideal loudness to match. The EBU R-128 recommendation for broadcast is -23 dB.

### Acceptable Deviation

Allows you to specify the loudness range that is considered to be an acceptable deviation from the target loudness.

### Outside the Acceptable Deviation

Allows you to specify a color for the range that is outside the acceptable deviation.

## Loudness Range

### Range Color

Lets you specify the range colors if the range size is above the associated value (**Too Much**), exactly as the associated value (**Good**), or below the associated value (**Not Enough**).

### Below/From

A loudness range that you consider to be not enough (**Below**) and too much (**From**).

### Transition

Lets you specify how fast the color changes from **Good** to **Too Much**, and from **Good** to **Not Enough**. 0 % means that the color changes abruptly when a threshold is reached. 100 % means that the color changes gradually.

## Additional Settings

### Background/Marks/Grid/Curve

Lets you set the colors for the meter background, marks, grid lines, and the loudness distribution curve of the **Loudness Meter**.

### Peak Hold Time

Determines how long the peak LED remains lit after a true peak.

### Show Loudness Histogram

If this option is activated, a loudness histogram is displayed in the **Loudness Meter**.

## Scale

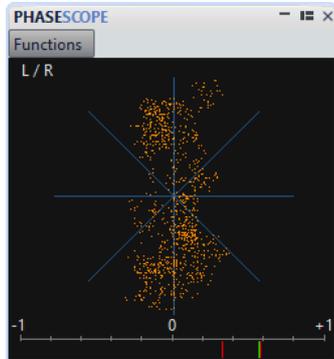
In this section, you can specify the low and high end of the displayed level range.

The EBU +9 scale and the EBU +18 scale are EBU recommendations. Both of these scales are centered around 0 LU, which represents -23 LUFs, the recommended EBU loudness.

## Phasescope

The **Phasescope** indicates the phase and amplitude relationship between two stereo channels.

- To open the **Phasescope**, select **Meters > Phasescope**.



### Reading the Phasescope

The **Phasescope** works as follows:

- A vertical line indicates a perfect mono signal (the left and right channels are the same).
- A horizontal line indicates that the left channel is the same as the right, but with an inverse phase.
- A fairly round shape indicates a well balanced stereo signal. If the shape leans to one side, there is more energy in the corresponding channel.
- A perfect circle indicates a sine wave on one channel, and the same sine wave shifted by  $45^\circ$  on the other.
- Generally, the more you can see a thread, the more bass is in the signal, and the more spray-like the display, the more high frequencies are in the signal.

### Phase Correlation Meter

The phase correlation meter at the bottom of the display works as follows:

- The green line shows the current phase correlation, and the two red lines show the recent minimum and maximum values.
- With a mono signal, the meter shows +1, indicating that both channels are perfectly in phase.
- If the meter shows -1, the two channels are the same, but one is inverted.
- Generally, for a good mix, the meter should show a value between 0 and +1.

## Phasescope Settings

In the **Phasescope Settings** dialog, you can adjust the behavior, scale, and color of the meters.

- To open the **Phasescope Settings** dialog, open the **Phasescope** window, and select **Functions > Settings**.

### **Background**

Click this to change the background color.

### **Coil Display**

Allows you to adjust the color for the grid and phase coil display.

### **Auto-Size (Maximize)**

If this option is activated, the display is optimized to fit in the window.

### **Correlation Display**

This is where you select colors for the elements in the phase correlation meter display, and adjust the peak hold time for the maximum and the minimum indicator.

### **Number of Samples to Display**

This setting affects the length of the phase coil and the density of the display. For audio with high sample rates, you might want to raise this value.

# Customizing

Customizing means making settings so that the program behaves and looks the way that you want it to.

## Plug-in Organization

WaveLab Yellowtec Edition comes with various plug-ins, and additional plug-ins can be added.

RELATED LINKS

[Plug-ins Preferences](#) on page 137

## 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 Yellowtec Edition 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 Yellowtec Edition 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 Yellowtec Edition.

- To open the plug-in preferences, select **File > Preferences > Plug-ins**.

### General Tab

#### Search Standard VST Plug-in Shared Folders

If this option is activated, WaveLab Yellowtec Edition 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 Yellowtec Edition searched for plug-ins when it was launched. If you cannot find a plug-in in WaveLab Yellowtec Edition, this helps you to determine whether you have specified the correct folder, for example.

#### Additional VST Plug-in Folders (WaveLab Yellowtec Edition 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 Yellowtec Edition skips when searching for VST plug-ins.

#### Do Not Load the following Plug-ins

Lets you specify plug-ins that WaveLab Yellowtec Edition 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 Yellowtec Edition the next time. To reduce the start time of WaveLab Yellowtec Edition, the plug-ins are not analyzed every time WaveLab Yellowtec Edition is started. However, WaveLab Yellowtec Edition 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 Yellowtec Edition 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**.

# Configuring the Software

You can configure WaveLab Yellowtec Edition according to your needs.

## NOTE

The settings that you make in the preferences are applied when you switch to another WaveLab Yellowtec Edition window.

---

## Global Preferences

Global preferences are preferences that apply throughout WaveLab Yellowtec Edition. Before you start working with WaveLab Yellowtec Edition, it is recommended to edit these preferences according to your needs.

- To open the global preferences, select **File > Preferences > Global**.

### Language

Allows you to select the user interface language.

### Theme

Allows you to switch between the WaveLab Yellowtec Edition color schemes.

### 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 Yellowtec Edition. You can choose defaults for editing and playback, adjust the visual appearance of the waveform displays, and determine how WaveLab Yellowtec Edition works with audio and peak files.

- To open the **Audio Files Preferences** dialog, select **File > Preferences > Audio Files**.

### Support RF64 File Format

If this option is activated, WaveLab Yellowtec Edition creates **WAV** files that can be larger than 2 GB.

## NOTE

This file format is not supported by all applications.

---

**Write Markers in WAV File Header (Riff Format/BWF Format)**

If this option is activated, markers are written in WAV file headers. Thus, the markers are always available even if you open the files in another application.

# Plug-in Reference

## Compressor

This plug-in reduces the dynamic range of the audio, making softer sounds louder or louder sounds softer, or both.



Compressor features a separate display that graphically illustrates the compressor curve that is shaped according to the **Threshold** and **Ratio** parameter settings. Compressor also features a **Gain Reduction** meter that shows the amount of gain reduction in dB, **Soft knee**/**Hard knee** compression modes, and a program-dependent auto feature for the **Release** parameter.

### Threshold (-60 to 0 dB)

Determines the level where the compressor kicks in. Only signal levels above the set threshold are processed.

### Ratio

Sets the amount of gain reduction applied to signals above the set threshold. A ratio of 3:1 means that for every 3 dB the input level increases, the output level increases by 1 dB.

### Soft Knee

If this button is deactivated, signals above the threshold are compressed instantly according to the set ratio (hard knee). If **Soft Knee** is activated, the onset of compression is more gradual, producing a less drastic result.

#### **Make-Up (0 to 24 dB or Auto mode)**

Compensates for output gain loss, caused by compression. If the **Auto** button is activated, the knob becomes dark and the output is automatically adjusted for gain loss.

#### **Attack (0.1 to 100 ms)**

Determines how fast the compressor responds to signals above the set threshold. If the attack time is long, more of the early part of the signal passes through unprocessed.

#### **Hold (0 to 5000 ms)**

Sets the time the applied compression affects the signal after exceeding the threshold. Short hold times are useful for DJ-style ducking, while longer hold times are required for music ducking, for example, when working on a documentary film.

#### **Release (10 to 1000 ms or Auto mode)**

Sets the time after which the gain returns to its original level when the signal drops below the threshold. If the **Auto** button is activated, the plug-in automatically finds the best release setting for the audio material.

#### **Analysis (Pure Peak to Pure RMS)**

Determines whether the input signal is analyzed according to peak or RMS values, or a mixture of both. A value of 0 is pure peak and 100 pure RMS. **RMS** mode operates using the average power of the audio signal as a basis, whereas **Peak** mode operates more on peak levels. As a general guideline, **RMS** mode works better on material with few transients such as vocals, and **Peak** mode works better for percussive material with a lot of transient peaks.

#### **Live**

If this button is activated, the look-ahead feature of the effect is deactivated. Look-ahead produces more accurate processing, but adds a specific amount of latency as a trade-off. If **Live** mode is activated, there is no latency, which is better for live processing.

## DeEsser

This effect reduces excessive sibilance, primarily for vocal recordings. It is a special type of compressor that is tuned to be sensitive to the frequencies produced by the s-sound.



Close proximity microphone placement and equalizing can lead to situations where the overall sound is just right, but there is a problem with sibilants.

### Display

Shows the spectrum of the input signal.

- To adjust the frequency band, drag the border lines or click in the middle of the band and drag.
- To change the width of the frequency band, hold **Shift** and drag to the left or right.

### Filter

#### Lo/Hi

Sets the left and right border of the frequency band. You can set the frequency either in Hz or as a note value. If you enter a note value, the frequency is automatically displayed in Hz accordingly. For example, a note value of A3 sets the frequency to 440 Hz. When you enter a note value, you can also enter a cent offset. For example, enter A5 -23 or C4 +49.

**NOTE**

Make sure that you enter a space between the note and the cent offset. Only in this case, the cent offsets are taken into account.

---

**Solo**

Solos the frequency band. This helps you to find the appropriate position and width of that band.

**Diff**

Plays back what DeEsser removed from the signal. This help you to adjust the frequency band, threshold, and reduction parameters, so that only sharp s-sounds are removed, for example.

**Dynamics**

**Reduction**

Controls the intensity of the de-essing effect.

**Threshold (-50 to 0 dB)**

If the **Auto** option is deactivated, you can use this control to set a threshold for the incoming signal level above which the plug-in starts to reduce the sibilants.

**Release (1 to 1000 ms)**

Sets the time after which the de-essing effect returns to zero when the signal drops below the threshold.

**Auto**

Automatically and continually sets an optimum threshold setting independent of the input signal. The **Auto** option does not work for low-level signals (< -30 db peak level). To reduce the sibilants in such a file, set the threshold manually.

**Side-Chain**

**Freq (25 Hz to 20 kHz)**

If the **Side-Chain** button is activated, this sets the frequency of the filter. You can set the frequency either in Hz or as a note value. If you enter a note value, the frequency is automatically displayed in Hz accordingly. For example, a note value of A3 sets the frequency to 440 Hz. When you enter a note value, you can also enter a cent offset. For example, enter A5 -23 or C4 +49.

**NOTE**

Make sure that you enter a space between the note and the cent offset. Only in this case, the cent offsets are taken into account.

---

**Q-Factor**

If the **Side-Chain** button is activated, this sets the resonance or width of the filter.

### Side

Activates the internal side-chain filter. You can now shape the input signal according to the filter parameters. Internal side-chaining can be useful for tailoring how the gate operates.

### Monitor

Allows you to monitor the filtered signal.

### Live

If this button is activated, the look-ahead feature of the effect is deactivated. Look-ahead produces more accurate processing, but adds a specific amount of latency as a trade-off. If **Live** mode is activated, there is no latency, which is better for live processing.

## Positioning the DeEsser in the Signal Chain

When recording a voice, the DeEsser's position in the signal chain is usually located after the microphone pre-amp and before a compressor/limiter. This keeps the compressor/limiter from unnecessarily limiting the overall signal dynamics.

## Expander

Expander reduces the output level in relation to the input level for signals below the set threshold. This is useful if you want to enhance the dynamic range or reduce the noise in quiet passages.

You can either use the knobs or drag the breakpoints in the graphical display to change the **Threshold** and the **Ratio** parameter values.



### Threshold (-60 to 0 dB)

Determines the level where the expansion kicks in. Only signal levels below the set threshold are processed.

### Ratio

Sets the amount of gain boost applied to signals below the threshold.

### Soft Knee

If this button is deactivated, signals below the threshold are expanded instantly according to the set ratio (hard knee). If **Soft Knee** is activated, the onset of expansion is more gradual, producing less drastic results.

### Fall (0.1 to 100 ms)

Determines how fast the expander responds to signals below the set threshold. If the fall time is long, more of the early part of the signal passes through unprocessed.

### Hold (0 to 2000 ms)

Sets the time the applied expansion affects the signal below the threshold.

### Rise (10 to 1000 ms or Auto mode)

Sets the time after which the gain returns to its original level when the signal exceeds the threshold. If the **Auto Rise** button is activated, the plug-in automatically finds the best rise setting for the audio material.

### Analysis (Pure Peak to Pure RMS)

Determines whether the input signal is analyzed according to peak or RMS values, or a mixture of both. A value of 0 is pure peak and 100 pure RMS. **RMS** mode operates using the average power of the audio signal as a basis, whereas **Peak** mode operates more on peak levels. As a general guideline, **RMS** mode works better on material with few transients such as vocals, and **Peak** mode works better for percussive material with a lot of transient peaks.

### Live

If this button is activated, the look-ahead feature of the effect is deactivated. Look-ahead produces more accurate processing, but adds a specific amount of latency as a trade-off. If **Live** mode is activated, there is no latency, which is better for live processing.

## Gate

Gating, or noise gating, silences audio signals below a set threshold. As soon as the signal level exceeds the threshold, the gate opens to let the signal through.



### Attack (0.1 to 1000 ms)

Sets the time after which the gate opens when it is triggered.

#### NOTE

Deactivate the **Live** button to make sure that the gate is already open when a signal above the threshold is played back.

---

### Hold (0 to 2000 ms)

Determines how long the gate remains open after the signal drops below the threshold level.

### Release (10 to 1000 ms or Auto mode)

Sets the time after which the gate closes (after the set **Hold** time). If **Auto Release** is activated, Gate automatically finds the best release setting for the audio material.

### Threshold (-60 to 0 dB)

Determines the level where the gate is activated. Signal levels above the set threshold trigger the gate to open, and signal levels below the set threshold close the gate.

### State LED

Indicates whether the gate is open (LED lights up in green), closed (LED lights up in red) or in an intermediate state (LED lights up in yellow).

### Analysis (Pure Peak to Pure RMS)

Determines whether the input signal is analyzed according to peak or RMS values, or a mixture of both. A value of 0 is pure peak and 100 pure RMS. **RMS** mode operates using the average power of the audio signal as a basis, whereas **Peak** mode operates more on peak levels. As a general guideline, **RMS** mode works better on material with few transients such as vocals, and **Peak** mode works better for percussive material with a lot of transient peaks.

### Range

Adjusts the attenuation of the gate when it is shut. If **Range** is set to minus infinite , the gate is completely shut. The higher the value, the higher the level of the signal that passes through the shut gate.

### Live

If this button is activated, the look-ahead feature of the effect is deactivated. Look-ahead produces more accurate processing, but adds a specific amount of latency as a trade-off. If **Live** mode is activated, there is no latency, which is better for live processing.

## Side-Chain Section

### Side-Chain

Activates the internal side-chain filter. The input signal can then be shaped according to the filter parameters. Internal side-chaining is useful for tailoring how the gate operates.

### Monitor

Allows you to monitor the filtered signal.

### Center (50 to 20000 Hz)

If the **Side-Chain** button is activated, this sets the center frequency of the filter.

### Q-Factor

If the **Side-Chain** button is activated, this sets the resonance or width of the filter.

### Filter buttons (LP, BP, and HP)

If the **Side-Chain** button is activated, you can use these buttons to set the filter type to low-pass, band-pass, or high-pass.

## Limiter

This plug-in is designed to ensure that the output level never exceeds a set output level, to avoid clipping in following devices.



Limiter can adjust and optimize the **Release** parameter automatically according to the audio material, or it can be set manually. Limiter also features separate meters for the input, output and the amount of limiting (middle meters).

### Input (-24 to 24 dB)

Sets the input gain.

### Release (0.1 to 1000 ms or Auto mode)

Sets the time after which the gain returns to its original level. If **Auto Release** is activated, the plug-in automatically finds the best release setting for the audio material.

### Output

Sets the maximum output level.

## Brickwall Limiter

Brickwall Limiter ensures that the output level never exceeds a set limit.



Due to its fast attack time, Brickwall Limiter can reduce even short audio level peaks without creating audible artifacts. However, this plug-in creates a latency of 1ms. Brickwall Limiter features separate meters for input, output, and the amount of limiting. Position this plug-in at the end of the signal chain, before dithering.

### Threshold (-20 to 0 dB)

Determines the level where the limiter kicks in. Only signal levels above the set threshold are processed.

### Release (3 to 1000 ms or Auto mode)

Sets the time after which the gain returns to the original level when the signal drops below the threshold. If the **Auto** button is activated, the plug-in automatically finds the best release setting for the audio material.

### Link

If this button is activated, Brickwall Limiter uses the channel with the highest level to analyze the input signal. If the button is deactivated, each channel is analyzed separately.

### Detect Intersample Clipping

If this option is activated, Brickwall Limiter uses oversampling to detect and limit signal levels between two samples to prevent distortion when converting digital signals into analog signals.

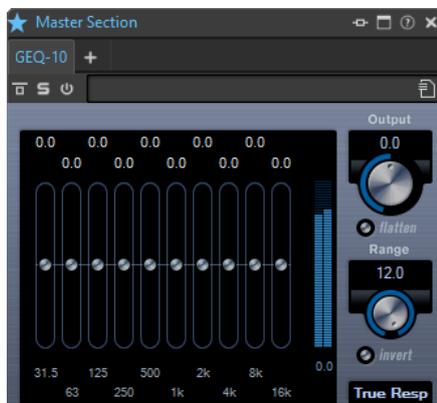
### NOTE

Brickwall Limiter is designed for the reduction of occasional peaks in the signal. If the **Gain Reduction** meter indicates constant limiting, try raising the threshold or lowering the overall level of the input signal.

---

## GEQ-10/GEQ-30

These graphic equalizers are identical, except for the number of available frequency bands (10 and 30).



Each band can be attenuated or boosted by up to 12 dB, allowing for fine control of the frequency response. In addition, there are several preset modes available that can add color to the sound of GEQ-10/GEQ-30.

You can draw response curves in the main display by clicking and dragging with the mouse. You have to click one of the sliders before you drag across the display.

At the bottom of the window, the individual frequency bands are shown in Hz. At the top of the display, the amount of attenuation/boost is shown in dB.

### Output

Sets the overall gain of the equalizer.

### Flatten

Resets all the frequency bands to 0 dB.

### Range

Allows you to adjust how much a set curve cuts or boosts the signal.

### Invert

Inverts the current response curve.

### Mode pop-up menu

This pop-up menu allows you to set the filter mode that determines how the various frequency band controls interact to create the response curve.

### EQ Modes

The **Mode** pop-up menu in the lower right corner allows you to select an EQ mode, which add color or character to the equalized output in various ways.

### True Response

Applies serial filters with an accurate frequency response.

### Digi Standard

In this mode, the resonance of the last band depends on the sample rate.

### Classic

Applies a classic parallel filter structure where the response does not follow the set gain values accurately.

### VariableQ

Applies parallel filters where the resonance depends on the amount of gain.

### ConstQ u

Applies parallel filters where the resonance of the first and last bands depends on the sample rate.

### ConstQ s

Applies parallel filters where the resonance is raised when boosting the gain and vice versa.

### Resonant

Applies serial filters where a gain increase of one band lowers the gain in adjacent bands.

## StudioEQ

Studio EQ is a high-quality 4-band parametric stereo equalizer with two fully parametric mid-range bands. The low and high bands can act as either shelving filters (three types), or as peak filter (band-pass), or as cut filter (low-pass/high-pass).



### Gain (-20 to +24 dB)

Sets the amount of attenuation/boost for the corresponding band.

### Inv

Inverts the gain value of the filter. Use this button to filter out unwanted noise. When looking for the frequency to omit, it sometimes helps to boost it in the first

place (set the filter to positive gain). After you have found the frequency of the noise, you can use the **Inv** button to cancel it out.

### Freq (20 to 20000 Hz)

Sets the frequency of the corresponding band. You can set the frequency either in Hz or as a note value. If you enter a note value, the frequency is automatically changed to Hz. For example, a note value of A3 sets the frequency to 440 Hz. When you enter a note value, you can also enter a cent offset. For example, enter A5 -23 or C4 +49.

#### NOTE

Ensure that you enter a space between the note and the cent offset. Only in this case, the cent offsets are taken into account.

---

### Q-Factor

Controls the width, or resonance, of the corresponding band.

### Filter mode

For the low and high band, you can choose between three types of shelving filters, a peak filter (band-pass), and a cut filter (lowpass/high-pass). If **Cut** mode is selected, the **Gain** parameter is fixed.

- **Shelf I** adds resonance in the opposite gain direction slightly above the set frequency.
- **Shelf II** adds resonance in the gain direction at the set frequency.
- **Shelf III** is a combination of **Shelf I** and **II**.

### Output (-24 to +24 dB)

This knob on the top right of the plug-in panel allows you to adjust the overall output level.

### Auto Gain

If this button is activated, the gain is automatically adjusted, keeping the output level constant regardless of the EQ settings.

### Spectrum

Shows the spectrum before and after filtering.

### Reset

Resets the EQ settings.

## PostFilter

This effect allows quick and easy filtering of unwanted frequencies, creating room for the important sounds in your mix.



The PostFilter plug-in combines a low-cut filter, a notch filter, and a high-cut filter. You can make settings by dragging the curve points in the graphical display, or by adjusting the controls below the display section.

### Level meter

Shows the output level, giving you an indication of how the filtering affects the overall level of the edited audio.

### Low Cut Freq (20 Hz to 1 kHz, or Off)

Allows you to eliminate low-frequency noise. The filter is inactive if the curve point is located all the way to the left. You can set the frequency either in Hz or as a note value. If you enter a note value, the frequency is automatically changed to Hz. For example, a note value of A3 sets the frequency to 440 Hz. When you enter a note value, you can also enter a cent offset. For example, enter A5 -23 or C4 +49.

#### NOTE

Ensure that you enter a space between the note and the cent offset. Only in this case, the cent offsets are taken into account.

### Low Cut Slope

Allows you to choose a slope value for the low-cut filter.

### Low Cut Preview

Use this button between the **Low Cut Freq** button and the graphical display to switch the filter to a complementary high-cut filter. This deactivates any other filters, allowing you to listen only to the frequencies that you want to filter out.

### Notch Freq

Sets the frequency of the notch filter. You can set the frequency either in Hz or as a note value. If you enter a note value, the frequency is automatically changed to Hz. For example, a note value of A3 sets the frequency to 440 Hz. When you enter a note value, you can also enter a cent offset. For example, enter A5 -23 or C4 +49.

#### NOTE

Ensure that you enter a space between the note and the cent offset. Only in this case, the cent offsets are taken into account.

---

### Notch Gain

Adjusts the gain of the selected frequency. Use positive values to identify the frequencies that you want to filter out.

### Notch Gain Invert

This button inverts the gain value of the notch filter. Use this button to filter out unwanted noise. When looking for the frequency to omit, it sometimes helps to boost it first (set the notch filter to positive gain). After you have found frequency of the noise, you can use the **Invert** button to cancel it out.

### Notch Q-Factor

Sets the width of the notch filter.

### Notch Preview

Use the **Preview** button between the notch filter buttons and the graphical display to create a band-pass filter with the peak filter's frequency and Q. This deactivates any other filters, allowing you to listen only to the frequencies you want to filter out.

### Notches buttons (1, 2, 4, 8)

These buttons add additional notch filters to filter out harmonics.

### High Cut Freq (3 Hz to 20 kHz, or Off)

This high-cut filter allows you to remove high-frequency noise. The filter is inactive if the curve point is located all the way to the right. You can set the frequency either in Hz or as a note value. If you enter a note value, the frequency is automatically changed to Hz. For example, a note value of A3 sets the frequency to 440 Hz. When you enter a note value, you can also enter a cent offset. For example, enter A5 -23 or C4 +49.

#### NOTE

Ensure that you enter a space between the note and the cent offset. Only in this case, the cent offsets are taken into account.

---

### High Cut Slope

Allows you to choose a slope value for the high-cut filter.

### High Cut Preview

This button between the **High Cut Freq** button and the graphical display allows you to switch the filter to a complementary low-cut filter. This deactivates any other filters, allowing you to listen only to the frequencies you want to filter out.

## RoomWorks

RoomWorks is a highly adjustable reverb plug-in for creating realistic room ambience and reverb effects in stereo and surround formats. The CPU usage is adjustable to fit the needs of any system. From short room reflections to cavern-sized reverb, this plug-in delivers high quality reverberation.



### Input Filters

#### Lo Freq

Determines the frequency at which the low-shelving filter takes effect. Both the high and low settings filter the input signal prior to reverb processing.

#### Hi Freq

Determines the frequency at which the high-shelving filter takes effect. Both the high and low settings filter the input signal prior to reverb processing.

#### Lo Gain

Sets the amount of boost or attenuation for the low-shelving filter.

#### Hi Gain

Sets the amount of boost or attenuation for the high-shelving filter.

### Reverb Character

#### Pre-Delay

Determines how much time passes before the reverb is applied. This allows you to simulate larger rooms by increasing the time it takes for the first reflections to reach the listener.

### **Reverb Time**

Allows you to set the reverb time in seconds.

### **Size**

Alters the delay times of the early reflections to simulate larger or smaller spaces.

### **Diffusion**

Affects the character of the reverb tail. Higher values lead to more diffusion and a smoother sound, while lower values lead to a clearer sound.

### **Width**

Controls the width of the stereo image. At a setting of 0 %, the output of the reverb is mono, at 100 % it is stereo.

### **Variation**

Clicking this button generates a new version of the same reverb program using altered reflection patterns. This is helpful if some sounds are causing odd ringing or undesirable results. Creating a new variation often solves these issues. There are 1000 possible variations.

### **Hold**

Activating this button freezes the reverb buffer in an infinite loop. You can create some interesting pad sounds using this feature.

## **Damping**

### **Lo Freq**

Determines the frequency below which low-frequency damping occurs.

### **Hi Freq**

Determines the frequency above which high-frequency damping occurs.

### **Lo Level**

Affects the decay time of the low frequencies. Normal room reverb decays quicker in the high- and low-frequency range than in the mid-range. Lowering the level percentage causes low frequencies to decay quicker. Values above 100 % cause low frequencies to decay more slowly than the mid-range frequencies.

### **Hi Level**

Affects the decay time of the high frequencies. Normal room reverb decays quicker in the high- and low-frequency range than in the mid-range. Lowering the level percentage causes high frequencies to decay quicker. Values above 100 % cause high frequencies to decay more slowly than the mid-range frequencies.

## Envelope

### Amount

Determines how much the envelope attack and release controls affect the reverb itself. Lower values have a more subtle effect while higher values lead to a more drastic sound.

### Attack

The envelope settings in RoomWorks control how the reverb follows the dynamics of the input signal in a fashion similar to a noise gate or downward expander. Attack determines how long it takes for the reverb to reach full volume after a signal peak (in milliseconds). This is similar to a pre-delay, but the reverb is ramping up instead of starting all at once.

### Release

Determines how long after a signal peak the reverb can be heard before being cut off, similar to a release time of a gate.

## Output

### Mix

Sets the level balance between the dry signal and the wet signal. If RoomWorks is used as an insert effect for an FX channel, you most likely want to set this to 100 % or use the **wet only** button.

### Wet only

This button deactivates the **Mix** parameter, setting the effect to 100 % wet or affected signal. This button should normally be activated if RoomWorks is used as a send effect for an FX channel or a group channel.

### Efficiency

Determines how much processing power is used for RoomWorks. The lower the value, the more CPU resources are used, and the higher the quality of the reverb. Interesting effects can be created with very high Efficiency settings (>90 %).

### Export

Determines if during audio export RoomWorks uses the maximum CPU power for the highest quality reverb. During export, you may want to keep a higher efficiency setting to achieve a specific effect. If you want the highest quality reverb during export, make sure this button is activated.

### Output meter

Indicates the level of the output signal.

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