

# Operation Manual



# NUENDO

Advanced Live Production System

*live 2*

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# Introduction

Nuendo Live is a quick and easy-to-use solution for live-recording engineers.

## Platform-Independent Documentation

The documentation applies to the operating systems Windows and macOS.

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

Some points to consider:

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

## Conventions

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

## Typographical Elements

The following typographical elements mark the following purposes.

### **PREREQUISITE**

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

### **PROCEDURE**

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

### **IMPORTANT**

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

### **NOTE**

Informs you about issues that you should consider.

### **EXAMPLE**

Provides you with an example.

### **RESULT**

Shows the result of the procedure.

### **AFTER COMPLETING THIS TASK**

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

### RELATED LINKS

Lists related topics that you can find in this documentation.

## Markup

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

---

#### EXAMPLE

To record with the **Record** panel, click **RECORD**.

---

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

---

#### EXAMPLE

Select **Project > Show Marker Track**.

---

## Key Commands

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

When key commands with modifier keys are described in this manual, they are shown with the Windows modifier key first, in the following way:

- Windows modifier key/macOS modifier key-Z

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#### EXAMPLE

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

---

## How You Can Reach Us

On the **Help** menu, 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 Nuendo Live

To be able to record and play back a performance, you must first establish all physical connections between Nuendo Live and the other components of your system, set up the audio interface, and select the playback output mode.

## IMPORTANT


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

## Setting Up Nuendo Live for Recording

### PREREQUISITE

You have set up the physical connections between the components of your system. See the documentation of your hardware for more information.

### PROCEDURE

1. Start Nuendo Live.
2. On the toolbar, click **Settings** .
3. In the **Audio System** section of the **Settings** dialog, select the ASIO driver that you want to use.
4. Optional: In the **Audio Ports** section, deactivate **Use** for any input ports that you do not want to use.

When you create a new project, one track is added for each active input port.

### NOTE

If you use digital connections, we recommend that you define the mixing console as the word clock master within your setup. When Nuendo Live receives word clock signals from the master device, it displays the corresponding hardware sample rate.

### AFTER COMPLETING THIS TASK

You can start recording.

### IMPORTANT

To avoid performance issues and to keep the computer from going into sleep mode during long recordings, deactivate any power saving options on your computer before starting a recording. It is also recommended to deactivate the screen saver.

### RELATED LINKS

[Audio System](#) on page 8

[Creating a Project](#) on page 12


[Recording](#) on page 22

## Setting Up Nuendo Live for Playback

The options in the **Output Mode** section of the **Settings** dialog determine how your recording is played back.

---

### PROCEDURE

1. On the toolbar, click **Settings** .
2. In the **Output Mode** section of the **Settings** dialog, do one of the following:
  - Select **Multi Track Mode**.  
In this mode, the recorded audio tracks are played back via their corresponding output ports. This allows you to make a soundcheck without having the artists present, for example.
  - Select **Stereo Mode**.  
In this mode, all tracks are mixed down to two output ports.

### NOTE

During playback, you can control the mixdown process using the **Stereo Out Level** that is displayed at the global track control, as well as the sliders **Volume in Stereo Mix** and **Pan in Stereo Mix** that are displayed at the track control of each track.

3. Optional: Click **Control Panel** to make further settings for your ASIO driver.
4. Optional: In the **Audio Ports** section, deactivate **Use** for any output ports that you do not want to use.

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### RELATED LINKS

[Output Mode](#) on page 9


[Defining a Cycle Range for Looped Playback](#) on page 29

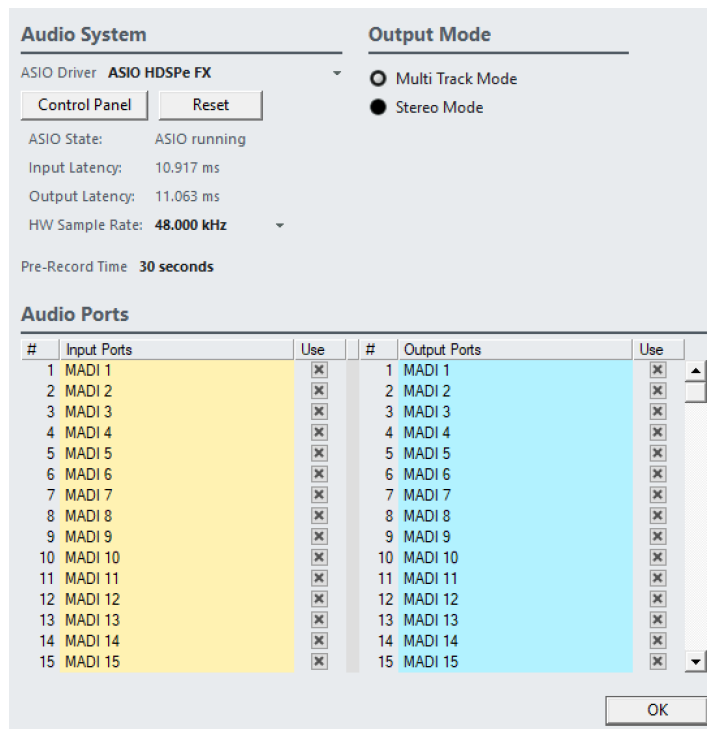
[Excluding Ranges from Playback](#) on page 30

## Audio Settings

In the **Settings** dialog, you establish the connections between Nuendo Live and the audio device of your computer, and select an output mode for your recording.

To open the **Settings** dialog, do one of the following:

- On the toolbar, click **Settings** .
- Open the **File** menu and select **Settings**.
- Press **F2**.



#### RELATED LINKS

[Audio System](#) on page 8

[Output Mode](#) on page 9

[Audio Ports](#) on page 9

## Audio System

In the **Audio System** section of the **Settings** dialog, you can select the ASIO driver for your recording and make settings for it.

### ASIO Driver

Allows you to select the ASIO driver that you want to use.

### Control Panel

Opens the control panel for the selected ASIO driver. The available options depend on your audio hardware.

### Reset

Resets the ASIO driver and re-establishes the communication between the audio card and Nuendo Live. Use this function to solve problems with your audio system.

### ASIO State

If the ASIO driver is not working properly, an error message is displayed here.

### Input Latency

Shows the input latency of your audio system.

### Output Latency

Shows the output latency of your audio system.

### HW Sample Rate

Shows the sample rate of the hardware.



### Pre-Record Time

When you record-enable a track, all incoming audio is automatically recorded to a pre-record buffer. This parameter defines the size of the buffer.

#### RELATED LINKS

[Pre-Record Buffer](#) on page 28

## Output Mode

In the **Output Mode** section of the **Settings** dialog, you can select an output mode for your recording.

### Multi Track Mode

If this option is activated, each audio track is sent to a separate output on your audio card.

### Stereo Mode

If this option is activated, all audio tracks are output as a stereo downmix.

#### NOTE

When opening a project in the full version of Nuendo, any level and pan settings made in **Stereo Mode** are assigned to Aux Send 1.

---

## Audio Ports

In the **Audio Ports** section of the **Settings** dialog, you can specify the input ports for recording and the output ports for playback.

### Input Ports

Allows you to define which input ports are used for recording.

- The **#** column shows the port number.
- The **Input Ports** column shows the port name.
- The **Use** column allows you to activate/deactivate the corresponding input port for recording.

#### NOTE

When you create a new project, one track is created for each active input port.

---

### Output Ports

Allows you to define which output ports are used for playback.

- The **#** column shows the port number.
- The **Output Ports** column shows the port name.
- The **Use** column allows you to activate/deactivate the corresponding output port for playback.

#### RELATED LINKS

[Changing the Track Routing](#) on page 36

## Switching the Program Language

You can switch the program language via the **File** menu.

---

### PROCEDURE

1. On the **File** menu, select another language from the **Language** submenu.
  2. Restart the program for the change to take effect.
- 

## Key Commands

You can control many of the functions in Nuendo Live by using key commands. The available commands are listed in the **Key Commands** dialog.

### NOTE

You cannot add or change key commands.

---

- To open the **Key Commands** dialog, select **File > Key Commands**.

# Project Handling

The recordings that you make with Nuendo Live are saved as projects.

## RELATED LINKS

[Project Files](#) on page 11

[Projects Dialog](#) on page 12

## Project Files

Project files contain all data that is created during a recording.

A project is opened in the **Project** window, which is the main window in Nuendo Live. For project files, the following applies:

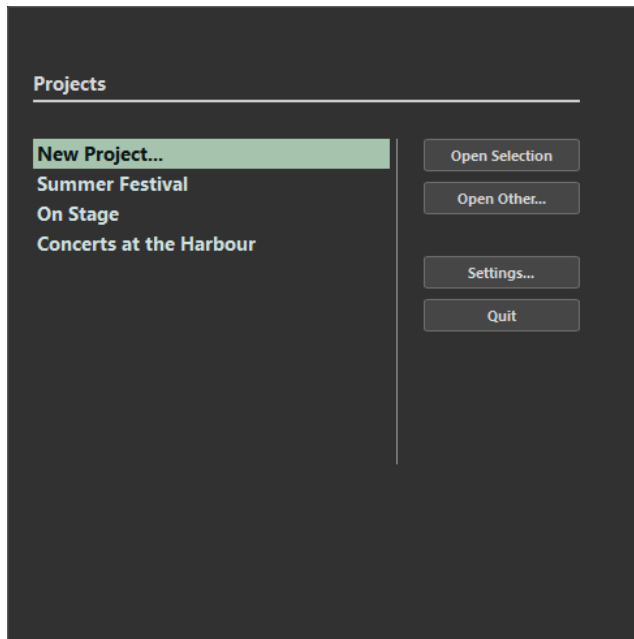
- The file name extension is `.n1pr`.
- Only one project can be open at a time.
- Project files from Nuendo Live can be opened in Nuendo 5.5.4 or higher.

## RELATED LINKS

[Project Window](#) on page 15

## Projects Dialog

The **Projects** dialog is displayed when you open Nuendo Live. It allows you to open an existing project or to create a new project.



### Open Selection

Opens the project that is selected in the list on the left. Select **New Project** to open a new empty project.

### Open Other

Opens a file dialog where you can navigate to a project.

### Settings

Opens the **Settings** dialog.

### Quit

Closes the program.

### RELATED LINKS

[Project Files](#) on page 11

[Creating a Project](#) on page 12

[Audio Settings](#) on page 7

## Creating a Project

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### PROCEDURE

1. Start Nuendo Live and set up the parameters in the **Settings** dialog according to the requirements of your project.
  2. In the **Projects** dialog, select **New Project** and click **Open Selection**.
  3. In the file dialog, select the folder where you want to save the new project and click **OK**.
-

#### RESULT

A project file and the required record folders are created inside the project folder. The folder name is used as the project name. The project is opened in Nuendo Live. For each active input port, one track is created.

#### AFTER COMPLETING THIS TASK

You can change the file path of the record folders, even to a location outside the project folder. This can be useful, for example, if your current project location is running out of disk space.

#### RELATED LINKS

[Audio Settings](#) on page 7

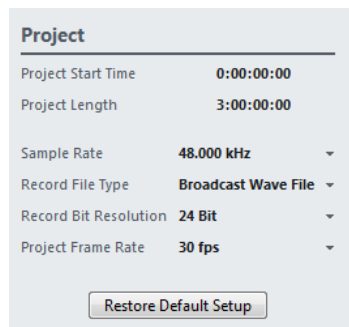
[Changing the Record Location](#) on page 27

[Project Settings](#) on page 13

## Project Settings

You can make project-specific settings in the **Settings** dialog. The **Project** section is only displayed in the **Settings** dialog if a project is open.

To open the **Settings** dialog, click **Settings**  on the toolbar or press **F2**.



### Project Start Time

Shows the start time of the project. The value that you specify here is displayed as the start value of the ruler. The format is displayed in hours, minutes, seconds, frames: HH:MM:SS:FF.

### Project Length

Shows the length of the timeline of the project. The format is displayed in hours, minutes, seconds, frames: HH:MM:SS:FF.

#### NOTE

When your recording exceeds this length, the project length is automatically extended. No recorded data is lost.

### Sample Rate

Allows you to specify the sample rate of the recording.

#### NOTE

The sample rate must correspond to the hardware sample rate.

### Record File Type

Allows you to select the file type for your recordings.

For recordings larger than 4 GB, the EBU RIFF 64 standard is used. If a FAT 32 hard disk is used, audio files are split automatically.

The following file types are available:

- **Broadcast Wave File** is the most commonly used format. It can store metadata, such as timecode position or artist, without loss in quality.
- Select **Wave File** if you want to use the recorded files in a system that does not support Broadcast Wave files. Note that in this format, you cannot record files that exceed 4 hours at 48 kHz.
- **Wave 64 File** supports recordings larger than 4 GB. This format is not widely supported. You can use it if you want to use the recording in an older Nuendo system.

#### Record Bit Resolution

Allows you to select the bit resolution for your recordings.

- **16 Bit** allows for smaller file sizes. When recording audio with very low levels, this can have an impact on the quality.
- **24 Bit** is the most commonly used resolution.
- **32 Bit Float** offers the best quality for postproduction. Use this setting if you want to process the recorded files in a Nuendo system.

#### Project Frame Rate

Allows you to select the frame rate for the project.

If you want to synchronize your recordings to video during production, select a compatible frame rate. If Nuendo Live receives timecode information during recording, this value is set automatically.

#### Restore Default Setup

Restores the default setup and makes sure that for each activated input port, an audio track is available and assigned to that port. If necessary, new tracks are created or surplus tracks are removed.

#### RELATED LINKS

[Audio System](#) on page 8

[Audio Ports](#) on page 9

## Project-Related Information

Nuendo Live offers two ways of saving project-related information.

- You can save metadata such as production, artist, engineer, and director via the **Record** panel. To open the panel, click **Record Panel** on the toolbar.
- You can use the **Notepad** to enter and save further information about your project. To open the **Notepad**, select **Project > Notepad** on the toolbar.

#### RELATED LINKS

[Record Panel](#) on page 25

[Toolbar](#) on page 15

# Project Window

The **Project** window provides an overview of the project. It allows you to navigate to specific positions, to monitor the level of your input channels, and to perform editing operations.

The **Project** window features a toolbar and an info line, and allows you to toggle between two tabs, **Track View** and **Meter View**. When you open or create a new project, the **Track View** tab is shown per default.

## NOTE

You can toggle between the **Track View** and the **Meter View** tabs by pressing **Alt-V**.

## RELATED LINKS

[Toolbar](#) on page 15

[Info Line](#) on page 16

[Track View](#) on page 17

[Meter View](#) on page 20

[Editing Audio Events](#) on page 37

## Toolbar

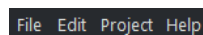
The toolbar provides access to the main dialogs, menus, editing tools and options, and transport controls.

### Settings



Opens the **Settings** dialog.

### Menu bar



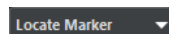
The menus on the toolbar contain various project commands and functions.

### Record Panel



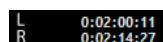
Opens the **Record** panel in a separate window.

### Locate Marker



Allows you to move the project cursor to a marker position.

### Locators



The buttons on the left allow you to move the project cursor to the left/right locator position.

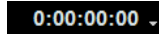
The fields on the right show the locator positions. You can modify these values to change the locator positions.

#### Transport buttons



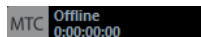
The transport buttons allow you to move the project cursor to marker positions, to play back a section of the project in a loop, or to start and stop playback or recording.

#### Time display



Shows the position of the project cursor in the selected time format. To select another time format, click the arrow icon on the right.

#### Timecode display



Shows the timecode state and the incoming MIDI timecode, and allows you to activate/deactivate the recording of timecode information and to select a timecode source.

#### VST Performance display



Shows the current **Average Performance Load** and **Disk Cache Load**. Double-click the display to open it in a separate window.

#### RELATED LINKS

[Audio Settings](#) on page 7

[Record Panel](#) on page 25

[Moving to Markers](#) on page 34

[Recording with MIDI Timecode Information](#) on page 29

## Info Line

The info line displays project-related information. You can change some of the parameters in the **Settings** dialog.

#### RELATED LINKS

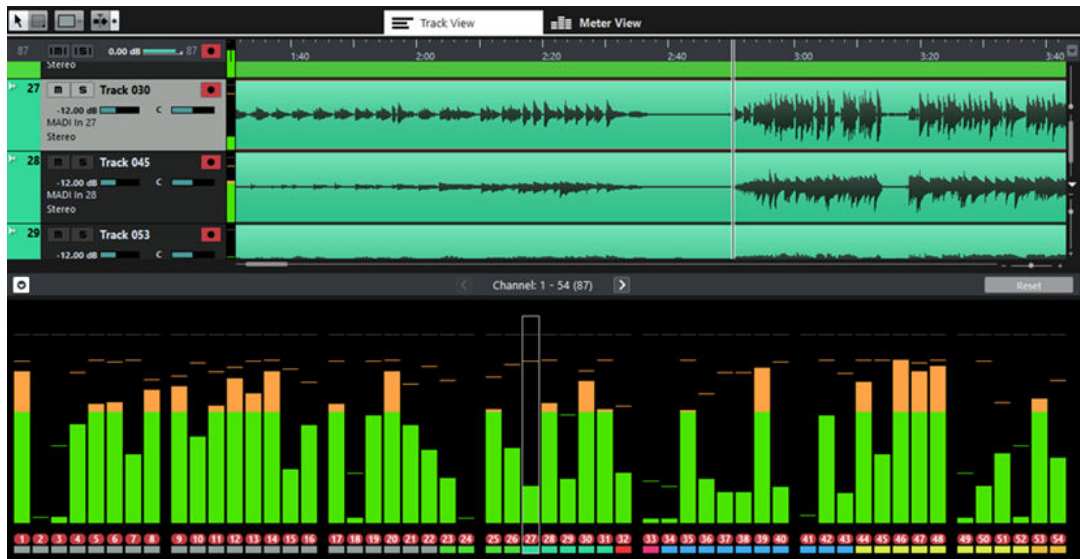
[Audio Settings](#) on page 7

[Project Settings](#) on page 13



## Track View

The **Track View** tab shows the track list and the event display. Its meter bridge allows you to monitor the levels of your channels.



### Object Selection/Range Selection



You can use these tools to select either one or several events or a time range in the event display.

### Select Colors



Allows you to select different colors for the tracks or events in your projects.

### Auto-Scroll



Allows you to keep the project cursor visible during playback.

Activate the button on the right to suspend **Auto-Scroll** when you are editing your project.

## Track list

The track list shows all tracks of the project and provides controls for each track.

You can show/hide the marker track above the audio tracks.

### Global controls

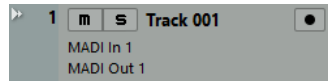


At the top of the track list, you can find the global controls. The digit on the left shows the number of tracks in the project. **Mute** and **Solo** allow you to unmute all tracks or deactivate all solo states. The digit on the right, next to the global record-enabled button, shows the number of record-enabled tracks.

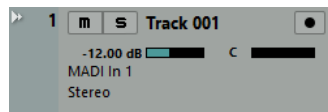
### Track controls

The controls on a track allow you to mute, solo, and record-enable this track.

In **Multi Track Mode**, the names of the input and output ports that are used by the track are displayed.

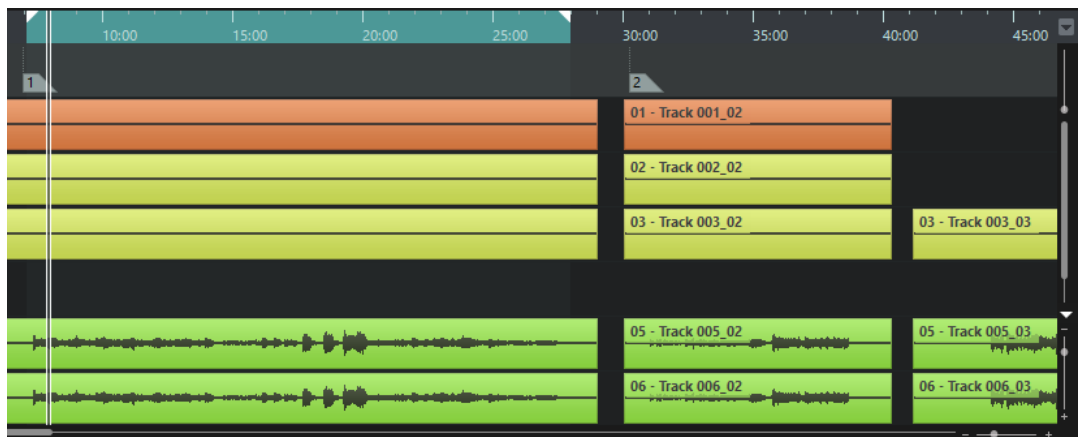


In **Stereo Mode**, you can set the volume and the pan position for the track in the stereo mix.



## Event display

The event display to the right of the track list shows the audio events. If the marker track is displayed, the markers are also shown. A ruler, zoom controls, and the project cursor help you to navigate within your project.



### Ruler

The ruler above the display shows the timeline. The two triangular markers on the ruler are the locators. They define the cycle area.

### Locators



The left and right locators are a pair of markers that you can use to set up cycle boundaries for playing back a section of the project in a loop.

### Waveform zoom slider

To zoom in on the contents of events vertically, use the waveform zoom slider in the top right corner of the event display.

This is useful when viewing quiet audio passages.

#### NOTE

To get an approximate reading on the level of the audio events by viewing the waveforms, make sure this slider is all the way down. Otherwise, zoomed waveforms may be mistaken for clipped audio.

### Project cursor


The white vertical line is the project cursor. It indicates the playback or recording position. When playback or recording are stopped, it defines the position where editing is performed.

**NOTE**

During recording, the project cursor cannot be moved. In stop mode, you can set the cursor by clicking on the timeline. Double-clicking starts/stops playback.

---

**Zoom controls**

The horizontal and vertical zoom sliders in the lower right of the event display allow you to zoom within the main display. When you click the triangle above the vertical zoom slider , the zoom pop-up menu opens, from which you can select a zoom preset.

**Meter section**

**Show/Hide Meter Bridge**



Allows you to show/hide the meter bridge on the **Track View** tab.

**Show Previous Page/Show Next Page**

Allows you to scroll through the meter pages.

**NOTE**

You can also scroll through the meter pages pressing **Alt-P**.

---

**Meter bridge**

Allows you to monitor the levels of your channels.

**Reset**

Resets all peak hold values.

RELATED LINKS

[Showing the Marker Track](#) on page 32

[Output Mode](#) on page 9

[Editing Audio Events](#) on page 37

[Resetting Meters](#) on page 21

## Meter View

The **Meter View** tab shows the meters for all tracks of your project, allowing you to monitor the levels of the input channels. The panel on the left combines all recording-related parameters and controls.



### Record panel

Provides the same parameters and controls as the **Record** panel that opens in a separate window.

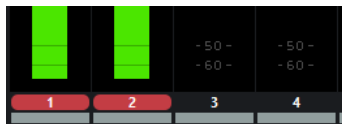
### Meter section

Shows the meters for all tracks of your project. Depending on the meter size, numerical peak values and level scales are shown.

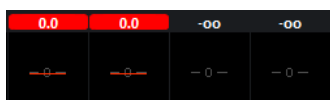
#### NOTE

The size of the meters is determined by the window size and the number of meters that are shown per page.

If a track is record-enabled, the track number at the bottom of the corresponding meter is highlighted in red.



If a peak overload is detected, the peak value at the top of the corresponding meter is highlighted in bright red.



### Meters per Page

Sets the number of meters that are shown per page.

### Show Previous Page/Show Next Page

Allows you to scroll through the meter pages.

**NOTE**

You can also scroll through the meter pages by pressing **Alt-P**.

---

**Reset**

Resets all peak hold values.

RELATED LINKS

[Record Panel](#) on page 25

[Resetting Meters](#) on page 21

## Resetting Meters

You can reset the peak values for all meters on the **Track View** and the **Meter View** tab.

---

PROCEDURE

- Do one of the following:
    - Click **Reset**.
    - Right-click a meter.
    - Press **Alt-S**.
- 

RELATED LINKS

[Track View](#) on page 17

[Meter View](#) on page 20

# Recording

Nuendo Live allows you to start recording on all tracks instantly. If needed, you can also make detailed settings such as specifying file format, record location, and pre-record buffer length, excluding tracks from recording, or saving metadata and timecode information in the files.

## IMPORTANT

To avoid performance issues and to keep the computer from going into sleep mode during long recordings, deactivate any power saving options on your computer before starting a recording. It is also recommended to deactivate the screen saver.

## RELATED LINKS

- [Recording in a Few Simple Steps](#) on page 22
- [Performing a More Complex Recording](#) on page 23
- [Easy Recording](#) on page 22
- [Recording with the Record Panel](#) on page 23
- [MIDI Timecode](#) on page 29

## Recording in a Few Simple Steps

To get ready and start recording, very few steps are necessary.

### PROCEDURE

1. Start Nuendo Live.
2. Create a new project.
3. Open the **Record** panel and click **RECORD**.  
All tracks are record-enabled automatically and recording starts on all the tracks.
4. To stop recording, click **RECORD** again.

## RELATED LINKS

- [Creating a Project](#) on page 12
- [Record Panel](#) on page 25

## Easy Recording

Nuendo Live allows you to start recording immediately clicking **Easy Record** or using key commands. This can be helpful in live situations where the artists begin performing without waiting for the recording preparations to complete.

### PROCEDURE

1. Do one of the following:

- On the **Record** panel or in the record section of the **Meter View** tab in the **Project** window, click **Easy Record**.
- Press **Ctrl/Cmd-Return** or **Ctrl/Cmd-Num-\***.

The following happens:

- All tracks are record-enabled.
  - Recording starts.
  - **Lock Recording** is activated, which means that all functions and buttons are locked to prevent unintended operations by key commands or mouse clicks.
2. To stop recording, deactivate **Lock Recording** and click **RECORD**.
- 

#### RELATED LINKS

[Record Panel](#) on page 25

[Key Commands](#) on page 10

## Performing a More Complex Recording

You can make detailed settings before starting the recording. For example, you can specify metadata such as **Artist** or **Engineer** to be saved automatically in the recorded files, you can exclude particular tracks from the recording, and specify file name and record location.

---

#### PROCEDURE

1. Start Nuendo Live.
2. Create a new project.
3. Open the **Settings** dialog and make the settings for your project and the required audio configuration.

#### NOTE

For each activated input port in the **Audio Ports** section, a track is created in your project.

---

4. Optional: If you do not want to record on all tracks, record-enable the tracks that you want to record on by clicking their **Record Enable**  button in the track list.
  5. Open the **Record** panel and set up the parameters according to the requirements of your project.
  6. To start recording, click **RECORD**.
  7. To stop recording, click **RECORD** again.
- 

#### RELATED LINKS

[Project Settings](#) on page 13

[Audio Settings](#) on page 7

[Record Panel](#) on page 25

## Recording with the Record Panel

On the **Record** panel, you can make recording-related settings and start recording.

---

#### PROCEDURE

1. To open the **Record** panel, click **Record Panel** on the toolbar.
2. Select the tracks for recording:
  - To select all tracks for recording, click **Arm All Tracks** on the **Record** panel.

- To select single tracks for recording, use the corresponding track control on the **Track View** tab.
3. Optional: On the **Record** panel, click **Locate End**.  
This moves the project cursor to the end of the last recording.
  4. Optional: Fill out the metadata section.

**NOTE**

The recorded files and the folders in which they are saved are named based on these settings. You can change the metadata during a recording session. The folder and file names are changed when you pause the recording.

---

5. Click **RECORD**.  
Recording starts and audio events are created in the **Project** window.
  6. Optional: Click **Lock Recording**.  
All functions and buttons are locked to prevent unintended operations by key commands or mouse clicks.  
Before you can stop recording, you must unlock the interface. To unlock, click **Lock Recording** again.
  7. To stop recording, click **RECORD**.
- 

RELATED LINKS

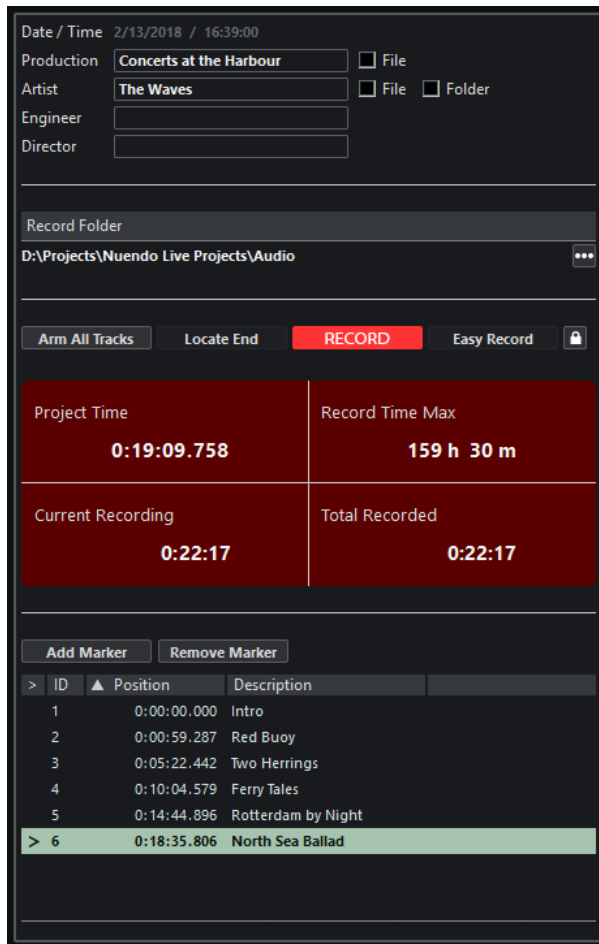
[Record Panel](#) on page 25

[Key Commands](#) on page 10



## Record Panel

The **Record** panel provides all recording-related parameters and controls.



### Metadata Section

The metadata information in the section at the top left is saved in Broadcast Wave files.

#### NOTE

- You can change the metadata during a recording session, even if **Lock Recording** is activated. The folder and file names are changed when you pause the recording.

#### Date/Time

Shows the current date and time.

#### Production

Allows you to enter the name of the production.

If you want the name to be added to the file name automatically, activate **Include Production in File Name** to the right of the **Production** field.

#### Artist

Allows you to enter the name of the artist.

If you want the name to be added to the file name automatically, activate **Include Artist in File Name** to the right of the **Artist** field. Activate **Create Subfolder for Artist** to save the recording in a subfolder of the project folder, named after the artist.

### **Engineer**

Allows you to enter the name of the sound engineer of the project.

### **Director**

Allows you to enter the name of the director of the project.

## **Record Section**

### **Record Folder**

Displays the name of the folder in which your recordings are saved. Click **Select Record Folder** to modify the record location.

### **Arm All Tracks**

Enables/Disables recording for all audio tracks that are assigned to an audio input.

### **Locate End**

Positions the project cursor at the end of the last recording.

### **RECORD**

Starts/Stops recording.

### **Easy Record**

Starts recording on all tracks and activates **Lock Recording**.

### **Lock Recording**

Locks/Unlocks the user interface. This button is only available during recording.

If this button is activated, functions and buttons are locked to prevent unintended operations by key commands or mouse clicks. Before you can stop recording, you must unlock the user interface.

## **Time Displays Section**

### **Project Time**

Shows the current position of the project cursor.

### **Record Time Max**

Shows the time that is left for recording, depending on the project settings and the available hard disk space.

#### **NOTE**

This value is calculated for the disk currently used for recording. The calculation is based on the total number of tracks in the project, regardless of whether they are record-enabled or not.

---

### **Current Recording**

Shows the length of the current recording.

### **Total Recorded**

Shows the total length of the recorded audio in the current project. Only the time of the actual recordings is taken into account, not the pauses between recordings.

## **Marker Section**

### **Add Marker**

Adds a marker at the project cursor position.

### **Remove Marker**

Removes the selected marker.

### Marker List

The markers are listed according to their time positions.

- In the first column, a greater-than symbol indicates which marker is active.
- The **ID** column shows the marker ID.
- The **Position** column shows the marker position. You can change this value to move the marker.
- In the **Description** column, you can enter a name or description for the marker.

#### RELATED LINKS

[Project Settings](#) on page 13

[Project-Related Information](#) on page 14

[Recording with the Record Panel](#) on page 23

[Changing the Record Location](#) on page 27

[Easy Recording](#) on page 22

[Markers](#) on page 32

## Changing the Record Location

You can change the location of the record folder at any time. This is useful if the current record location is running out of disk space, for example.

---

#### PROCEDURE

1. On the **Record** panel, click **Select Record Folder**.
2. In the file dialog, do one of the following:
  - Select a folder.
  - Create a new folder.
3. Click **OK**.

---

#### RESULT

If you start recording, the new record location is used. If **Create Subfolder for Artist** is activated on the **Record** panel, the subfolder is automatically created inside the new record folder.

#### NOTE

- The audio files of a project are numbered consecutively, even if you change the record location.
- If the active record folder is not available, for example, because the project is opened on a different system, the record location is automatically set to the project folder.

---

#### RELATED LINKS

[Consecutive File Numbering](#) on page 28

[Record Panel](#) on page 25

## Consecutive File Numbering

The audio files of a project are numbered consecutively, even if you change the record location. This is useful if you want to transfer files from different folders to one single folder at a later stage.

Recording takes of a project are numbered globally. Tracks that are not record-enabled are numbered in the background. This means, if these tracks are record-enabled for a later take, the global take number is applied.

When new audio files are created during recording, the following naming scheme is used:

<track number> - <track name>\_<global take number>

---

### EXAMPLE

Create a new project and make a recording on track **1**, named **bass**. In your active record folder, the file 01 - bass\_01.wav is created. Then change the record location to another empty folder and record the next take. The first file in the new folder is automatically named 01 - bass\_02.wav.

---

### EXAMPLE

Create a new project and record a first take on track **1**, named **guitar**, and track **2**, named **bass**. In your active record folder, the files 01 - guitar\_01.wav and 02 - bass\_01.wav are created. For the second take, exclude track **2** from recording. The file 01 - guitar\_02.wav is created. For the third take record-enable track **2** again. As a result, the files 01 - guitar\_03.wav and 02 - bass\_03.wav are created.

---

### RELATED LINKS

[Changing the Record Location](#) on page 27

[Renaming Tracks](#) on page 35

## Pre-Record Buffer

When you record-enable a track, all incoming audio is automatically recorded to a buffer. This allows you to recover the beginning of a performance if you have started recording too late.

For all record-enabled tracks, up to 60 seconds of audio can be recorded and recovered.

You can set the size of the pre-record buffer with the **Pre-Record Time** parameter in the **Audio System** section of the **Settings** dialog.

- To recover the pre-recorded audio, drag the event start border to the left.

### NOTE

- The pre-record function takes up RAM for every input. At high sample rates (96 kHz, 192 kHz), this can exceed the memory available on your computer. As a general rule, a pre-record time of 1 minute takes up 8 MB per track at 48 kHz, and 16 MB at 96 kHz.
  - When recording more than 64 tracks, high pre-record settings can result in a lower performance of the user interface.
- 

### RELATED LINKS

[Audio System](#) on page 8

[Editing Audio Events](#) on page 37

## MIDI Timecode

Productions that contain video usually also contain timecode information. Nuendo Live allows you to save MIDI timecode (MTC) in your recordings to make it easy to match up the timelines of video and audio during postproduction.

For using MIDI timecode information in Nuendo Live, the following applies:

- Incoming MIDI timecode is automatically recognized and displayed on the toolbar.
- The timecode information is written into the timestamp of Broadcast Wave Format (BWF) files.
- The transport functions are not locked by incoming timecode information. This means that you can always freely navigate through the timeline and start recording at any position.
- Wrong timecode settings or corrupt incoming timecode information do never prevent Nuendo Live from recording.
- You can use Steinberg Nuendo SyncStation to generate MIDI timecode, for example, from longitudinal timecode (LTC).
- MIDI Machine Control (MMC) via timecode or VST System Link is not supported.

### RELATED LINKS

[Toolbar](#) on page 15

[Recording with MIDI Timecode Information](#) on page 29

## Recording with MIDI Timecode Information

Nuendo Live can receive and record MIDI timecode (MTC). The timecode is written into the timestamp of Broadcast Wave Format (BWF) files.

### PREREQUISITE

In the **Project** settings, **Broadcast Wave File** is selected as **Record File Type**.

---

### PROCEDURE

1. Click the **MTC** button on the toolbar to activate MIDI timecode information.
2. Click the timecode display on the right of the **MTC** button and select the input source for the MIDI timecode.
3. Start recording.

---

### RESULT

BWF files are recorded with MIDI timecode information.

### RELATED LINKS

[MIDI Timecode](#) on page 29

[Project Settings](#) on page 13

[Toolbar](#) on page 15

## Defining a Cycle Range for Looped Playback

You can play back a range of your recording in a loop.

---

### PROCEDURE

1. Move the mouse pointer over the top section of the ruler.  
The mouse pointer changes to a pencil.

2. Click at the position where you want the loop to start and drag to the right to define the cycle range.
- 

#### RESULT

The selected range is played back in a loop if **Transport Cycle On/Off** is activated on the toolbar.

## Excluding Ranges from Playback

You can use the locators to exclude a range of your recording from playback.

---

#### PROCEDURE

1. Move the mouse pointer over the top section of the ruler.
  2. Click and drag to the left to define the range that you want to exclude.
- 

#### RESULT

The selected range is skipped during playback if **Transport Cycle On/Off** is activated on the toolbar.

## Exporting Your Recording

Nuendo Live allows you to export your recordings as an audio mixdown or as an AAF file.

#### RELATED LINKS

[Exporting an Audio Mixdown](#) on page 30

[Exporting to AAF](#) on page 31

## Exporting an Audio Mixdown

You can create a stereo mix of your recording and export it as a single file.

#### PREREQUISITE

You have selected **Stereo Mode** in the **Settings** dialog.

---

#### PROCEDURE

1. Balance the mix using the **Volume in Stereo Mix** and **Pan in Stereo Mix** parameters on the tracks.
  2. Set the master level using the global **Stereo Out Level** control above the track list.
  3. Optional: If you want to export only a specific range of your project, set the left and right locators to encompass this range.
  4. Select **File > Audio Mixdown**.
  5. Specify whether you want to save the recording as a .wav or .mp3 file.
  6. Specify whether you want to export the entire project or only the cycle range.
  7. Click **OK**.
- 

#### RESULT

The project or project range is exported as a single file to the project folder. The mixdown file has the same name as the project.

#### RELATED LINKS

[Output Mode](#) on page 9

[Defining a Cycle Range for Looped Playback](#) on page 29

## Exporting to AAF

If you want to edit your recordings in DAW software other than Nuendo, you can export the project as an AAF file.

### PREREQUISITE

In the **Project** settings, **Broadcast Wave File** is selected as **Record File Type**.

---

### PROCEDURE

- Select **File** > **Export AAF File**.

---

### RESULT

The project is exported to the project folder as a single AAF file.

### IMPORTANT

The AAF file only contains references to the audio files that are used in the project. If you want to edit your project after the export, the DAW must have access to the original audio files.

---

### RELATED LINKS

[Project Settings](#) on page 13

# Markers

Markers identify specific positions within your project. You can add markers to determine the start and end of a passage in a longer recording or mark a position for editing, for example.

You can add and edit markers using the **Record** panel or the marker track.

## RELATED LINKS

[Record Panel](#) on page 25

[Showing the Marker Track](#) on page 32

## Showing the Marker Track

The marker track can be shown or hidden. This does not have any impact on the marker functions. Existing markers can be used even if you cannot see them in the **Project** window.

---

### PROCEDURE

- Do one of the following:
  - On the menu bar, select **Project > Show Marker Track/Hide Marker Track**.
  - Press **K**.

---

### RESULT

This opens the marker track above the audio tracks on the **Track View** tab.

## RELATED LINKS

[Toolbar](#) on page 15

[Track View](#) on page 17


## Adding Markers

You can add markers using the **Record** panel or the marker track.

Markers are inserted at the cursor position. You can set markers on-the-fly while recording or after recording.

---

### PROCEDURE

- Do one of the following:
  - In the marker section of the **Record** panel, click **Add Marker**.  
This automatically opens the **Description** field for editing, allowing you to enter a name for the marker.
  - On the marker track, click **Add Marker** .



#### RESULT

A marker is inserted at the cursor position.

#### RELATED LINKS

[Recording with the Record Panel](#) on page 23

[Showing the Marker Track](#) on page 32

[Naming Markers](#) on page 33

## Naming Markers

You can name and rename markers using the **Record** panel.

---

#### PROCEDURE

1. In the marker section of the **Record** panel, select the marker that you want to name or rename.
2. Click in the **Description** field and enter a new name for the marker.

---

#### RELATED LINKS

[Record Panel](#) on page 25

## Moving Markers

You can move markers using the **Record** panel or the marker track.

---

#### PROCEDURE

- To move a marker, do one of the following:
  - In the marker section of the **Record** panel, click in the corresponding **Position** field and enter a new value.
  - On the marker track, drag the marker to another position.

---

#### RELATED LINKS

[Record Panel](#) on page 25

[Showing the Marker Track](#) on page 32

## Deleting Markers

You can delete markers using the **Record** panel or the marker track.

---

#### PROCEDURE

- Do one of the following:
  - In the marker section of the **Record** panel, select a marker and click **Remove Marker**.
  - On the marker track, select a marker and press **Delete**.

---

#### RELATED LINKS

[Record Panel](#) on page 25

[Showing the Marker Track](#) on page 32

## Moving to Markers

Nuendo Live offers several methods to move the project cursor to a marker position.

---

### PROCEDURE

- Do one of the following:
  - On the marker track, click **Locate** and select a marker from the list.
  - Double-click on a marker on the marker track.
  - On the toolbar, click **Locate Markers** and select a marker from the list.

### NOTE

If the list of markers is very long, you can use the text search to narrow down the list.

---

- In the marker section of the **Record** panel, click in the leftmost column for a marker.
  - To move to the next marker, click the **Go to Next Marker** transport button on the toolbar.
  - To move to the previous marker, click the **Go to Previous Marker/Zero** transport button on the toolbar.
- 

### RELATED LINKS

[Showing the Marker Track](#) on page 32

[Record Panel](#) on page 25

[Toolbar](#) on page 15

# Track Handling

Tracks allow you to record and edit audio. They are listed from top to bottom in the track list and extend horizontally across the **Track View** tab.

## RELATED LINKS

[Track View](#) on page 17

[Selecting Tracks](#) on page 35

[Renaming Tracks](#) on page 35

[Coloring Tracks and Events](#) on page 36

[Adding Tracks](#) on page 36

[Changing the Track Routing](#) on page 36

## Selecting Tracks

One track is always selected in the **Project** window. You can use several methods to select tracks.

---

### PROCEDURE

- Do one of the following:
    - To select one track, click on it in the track list or click the corresponding meter.
    - To select multiple tracks, hold down **Ctrl/Cmd** and click on them.
    - To select multiple contiguous tracks, click on the first, then hold down **Shift** and click on the last track that you want to select.
    - To select the track above/below the current track, press **Up Arrow/Down Arrow**.
    - To extend the selection upwards/downwards, hold down **Shift** and use the arrow keys.
- 

## Renaming Tracks

You can rename tracks according to the instruments that you want to record, for example. This helps you to keep an overview of your project.

---

### PROCEDURE

1. Double-click the track name and type in a new name.
2. Optional: Press **Tab** on your computer keyboard to select the next track name, and continue naming the tracks in your project.

### NOTE

Recorded events are named according to the track name. The names of existing events and files on a track do not change when you change the track name.

---

## Coloring Tracks and Events

Colors can help you to identify tracks and events that belong together.

---

### PROCEDURE

1. On the **Track View** tab, do one of the following:
  - To color a track, select the track and make sure that no event is selected.
  - To color an event, select the event.
2. Click **Select Colors** above the track list and select a color.

---

### RESULT

Tracks and events are shown in the selected color. Meters show the color of the corresponding track.

## Adding Tracks

You can add tracks to the project manually.

---

### PROCEDURE

1. Select **Project > Add Audio Tracks**.
  2. Specify the number of audio tracks that you want to add.
  3. Click **OK**.
- 

## Changing the Track Routing

The tracks are always routed to the available inputs from top to bottom. You can change the routing by dragging tracks to another position in the track list. This can become necessary if an instrument is connected to another input on the console, for example.

# Editing Audio Events

Before moving your project to a different DAW for further editing, consider cleaning up your recording.

Nuendo Live provides editing options and tools that allow you to make your project more manageable. You can then perform detailed editing in your preferred DAW.

## RELATED LINKS

[Selecting Events](#) on page 37

[Moving Events and Range Selections](#) on page 39

[Duplicating Events and Range Selections](#) on page 39

[Splitting Events](#) on page 38

[Trimming the Event Start and End](#) on page 38

[Coloring Tracks and Events](#) on page 36

## Global Editing

You can decide whether you want to apply your editing operations to one track or to all tracks.

Normally, editing is applied to the selected event, the selected range, or the event on which you click with a tool. If you select **Edit > Global Editing (All Tracks)**, the editing is performed on all tracks.

## Selecting Events

If the **Object Selection** tool is activated on the **Track View** tab, you can select audio events on the event display for editing.

## RELATED LINKS

[Track View](#) on page 17

## Selecting All Events Under the Cursor

You can select all events at the same time position. This makes it easy to apply the same editing to all events that belong together.

## PREREQUISITE

On the **Track View** tab, **Object Selection**  is activated.

---

## PROCEDURE

1. Place the project cursor at the position where you want to select the events.
  2. Select **Edit > Select Under Cursor**.
-

#### RESULT

All audio events and markers that are touched by the cursor are selected.

#### RELATED LINKS

[Track View](#) on page 17

## Splitting Events

You can split one audio event or all audio events.

- To split an audio event, press **Alt**, position the mouse over the split position in the event, and click.
- To split all audio events at the same time position, place the project cursor at this position, and select **Edit > Split at Cursor**.

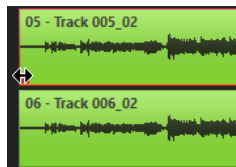
## Trimming the Event Start and End

You can drag the event borders to hide sections of a recording or to recover audio from the pre-record buffer, for example.

---

#### PROCEDURE

1. Position the mouse on the lower right or left corner of an event so that a double arrow is shown.



2. Click and drag.  
How much you can drag depends on the length of the recording. An event cannot be extended beyond the start or end of the audio recording.

#### NOTE

When you release the mouse button, a fade of 10 ms is added to create smoother transitions.

---

#### RELATED LINKS

[Pre-Record Buffer](#) on page 28

## Selecting Ranges

You can select ranges in your project for editing. The range can span multiple tracks.

#### PREREQUISITE

On the **Track View** tab, **Range Selection**  is activated.

---

#### PROCEDURE

- To select a range, click and drag in the event display until the selection encompasses the range that you want to select.
-

AFTER COMPLETING THIS TASK

- You can drag the borders of a selected range to expand or to reduce it, or to include more or fewer tracks.
- You can move a selected range to another position by dragging.

NOTE

If the range includes sections of events, these events are cut at the range selection borders.

---

RELATED LINKS

[Moving Events and Range Selections](#) on page 39

[Duplicating Events and Range Selections](#) on page 39

## Moving Events and Range Selections

You can move events and range selections by dragging.

---

PROCEDURE

1. Select one or multiple audio events or a range.
  2. Drag the event or range to the position where you want to insert it.
- 

## Duplicating Events and Range Selections

You can duplicate events or ranges to use the same recordings in several places.

---

PROCEDURE

1. Select one or multiple audio events or a range.
  2. Do one of the following:
    - Select **Edit > Duplicate**.  
This creates a duplicate to the right of the original event or range.
    - Hold down **Alt** and drag the event or range to the position where you want to insert it.
-

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