

New Features in Nuendo 6.5



NUENDO 6.5

Advanced Post and Audio Production System

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Working with the New Features

TrackVersions

TrackVersions allow you to create and manage multiple versions of events and parts on the same track.

TrackVersions are available for audio, MIDI, and instrument tracks. You can also have TrackVersions of the chord track, the signature track, and the tempo track.

TrackVersions are useful for the following tasks:

- Starting new recordings from scratch.
- Comparing different takes and comps.
- Managing takes that were recorded in a multi-track recording.

NOTE

TrackVersions are not available for automation tracks.

TrackVersions are included in track archives and project backups. When you work with the networking feature, only the active TrackVersion is committed.

The TrackVersion key commands can be found in the **TrackVersions** category of the **Key Commands** dialog.

TrackVersions Pop-Up Menu

The **TrackVersions** pop-up menu is available for all track types that support TrackVersions. It contains the most important functions for managing TrackVersions and a TrackVersions list.

To open the **TrackVersions** pop-up menu for a track, click the arrow to the right of the track name.

TrackVersion List

Lists all TrackVersions of the track for which you opened the **TrackVersions** pop-up menu and allows you to activate a TrackVersion.

New Version

Creates a new, empty TrackVersion for the selected tracks.

Duplicate Version

Creates a copy of the active TrackVersion for the selected tracks.

Rename Version

Opens a dialog that allows you to change the TrackVersion name for the selected tracks.

Delete Version

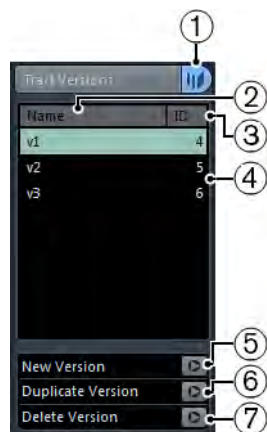
Deletes the active TrackVersion for the selected tracks.

Select Tracks with Same Version ID

Selects all tracks that have a TrackVersion with the same ID.

TrackVersions Inspector Section

The **TrackVersions** Inspector section allows you to view and manage TrackVersions for a selected track. It is available for audio tracks, MIDI tracks, instrument tracks, and the chord track.



To open the **TrackVersions Inspector** section for a track, select the track, and in the **Inspector**, click the **TrackVersions** tab.

1) **Track Version Indicator**

Indicates that more than one TrackVersion exists.

2) **Name column**

Shows the version name. Double-click to change it. The name will be changed for all selected tracks.

3) **ID column**

Shows the TrackVersion ID.

4) **Track Version list**

Lists all TrackVersions and allows you to activate one of them for all selected tracks.

5) **New Version**

Creates a new, empty TrackVersion for all selected tracks.

6) **Duplicate Version**

Creates a copy of the active TrackVersion for all selected tracks.

7) **Delete Version**

Deletes the active TrackVersion for all selected tracks. This function is only available if the track has more than one TrackVersion.

Creating TrackVersions

You can create new, empty TrackVersions for selected tracks.

PROCEDURE

1. In the track list, select the tracks for which you want to create a new TrackVersion.
2. Select **Project > TrackVersions > New Version**.

NOTE

You can also use the **TrackVersions Inspector** (only available for audio tracks, MIDI tracks, instrument tracks, and the chord track) or the **TrackVersions** pop-up menu in the track list to create a new TrackVersion.

RESULT

The event display shows a new, empty TrackVersion. Events of previous TrackVersions are hidden. The track list shows a default version name.



RELATED LINKS

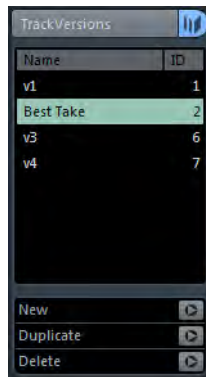
[TrackVersions Inspector Section on page 5](#)

[TrackVersions Pop-Up Menu on page 4](#)

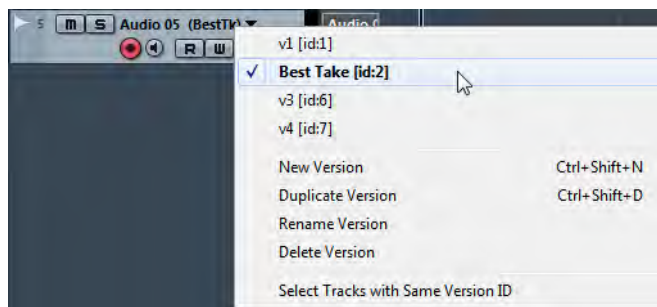
TrackVersion IDs

All TrackVersions are automatically assigned an ID. TrackVersions that are created together get the same TrackVersion ID and can be selected together.

In the **TrackVersions** Inspector, the TrackVersion ID is shown in the **ID** column of the TrackVersion list.



In the track list, you can open the **TrackVersions** pop-up menu to see the TrackVersion ID.



Selecting Tracks by TrackVersion ID

You can simultaneously select all tracks that share the same TrackVersion ID.

PROCEDURE

1. Activate the desired TrackVersion.
 2. Select **Project > TrackVersions > Select Tracks with same Version ID**.
-

RESULT

All tracks that have TrackVersions with the same ID are selected.

Assigning a Common ID

TrackVersions on different tracks that were not created together have different TrackVersion IDs. TrackVersions with different IDs cannot be activated together. To do this, you must assign a new version ID to these tracks.

PROCEDURE

1. Select the tracks and activate the TrackVersions to which you want to assign a common version ID.
 2. Select **Project > TrackVersions > Assign Common Version ID**.
-

RESULT

A new ID is assigned to all active TrackVersions on the selected tracks. The tracks are now marked as belonging together. You can now activate them together.

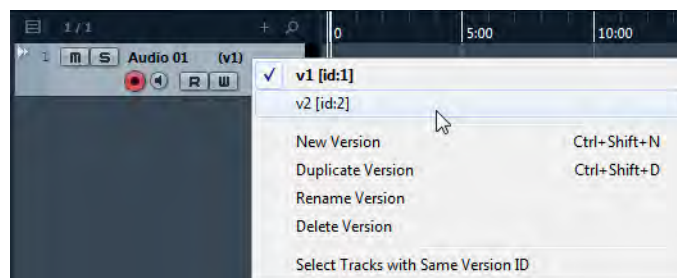
About the Active TrackVersion

If you created more than one TrackVersion for a track, you can show the events of a specific TrackVersion in the event display. This process is referred to as activating TrackVersions.

Activating TrackVersions

PROCEDURE

1. Click the arrow to the right of the track name to open the **TrackVersions** pop-up menu.



2. Select the TrackVersion that you want to activate.
-

RESULT

The selected version is activated and its events are shown in the event display.

NOTE

If you work with audio tracks, MIDI tracks, instrument tracks, or the chord track, you can also use the **TrackVersions Inspector** to activate a TrackVersion.

RELATED LINKS

[TrackVersions Inspector Section on page 5](#)

Activating TrackVersions on Multiple Tracks

You can simultaneously activate TrackVersions on multiple tracks if these TrackVersions share the same ID.

PROCEDURE

1. Select all tracks for which you want to activate a specific TrackVersion.
 2. Click the arrow to the right of the track name to open the **TrackVersions** pop-up menu.
 3. Select the TrackVersion that you want to activate from the list.
-

RESULT

The selected TrackVersion is activated for all selected tracks, and the corresponding events are shown in the event display.

NOTE

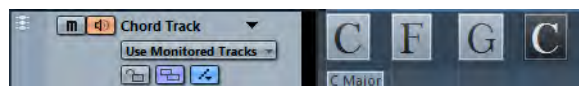
If you work with audio tracks, MIDI tracks, instrument tracks, or the chord track, you can also use the **TrackVersions Inspector** to activate a TrackVersion.

Duplicating TrackVersions

You can duplicate a TrackVersion by creating a new TrackVersion that contains a copy of the active TrackVersion.

PROCEDURE

1. In the track list, select the tracks and activate the TrackVersion that you want to duplicate.



2. Select **Project > TrackVersions > Duplicate Version.**

In the event display, a duplicate TrackVersion is displayed. In the track list, a default version name for the duplicate is shown.



NOTE

You can also use the **TrackVersions Inspector** (only available for audio tracks, MIDI tracks, instrument tracks, and the chord track) or the **TrackVersions** pop-up menu in the track list to duplicate a TrackVersion.

RELATED LINKS

[TrackVersions Inspector Section on page 5](#)

[TrackVersions Pop-Up Menu on page 4](#)

Deleting TrackVersions

You can delete the active TrackVersions for the selected tracks.

PROCEDURE

1. Select the tracks and activate the TrackVersions that you want to delete.
2. Select **Project > TrackVersions > Delete Version.**

NOTE

You can also use the **TrackVersions Inspector** (only available for audio tracks, MIDI tracks, instrument tracks, and the chord track) or the **TrackVersions** pop-up menu in the track list to delete the active TrackVersion for selected tracks.

RELATED LINKS

[TrackVersions Inspector Section on page 5](#)

[TrackVersions Pop-Up Menu on page 4](#)

Deleting Inactive TrackVersions

You can remove inactive TrackVersions on one or multiple tracks. This is useful, if you are sure that you do not need these TrackVersions anymore. You can undo this operation, and no audio files are deleted.

PROCEDURE

1. Activate the TrackVersions that you want to keep.
 2. Do one of the following:
 - Select the tracks that contain the inactive TrackVersions that you want to delete, and select **Project > TrackVersions > Delete Inactive Versions of Selected Tracks**.
 - Select **Project > TrackVersions > Delete Inactive Versions of All Tracks**.
-

RESULT

A message informs you how many TrackVersions have been deleted from how many tracks.

NOTE

If you also want to delete the audio files, use **File > Cleanup**.

Copying and Pasting Selection Ranges Between TrackVersions

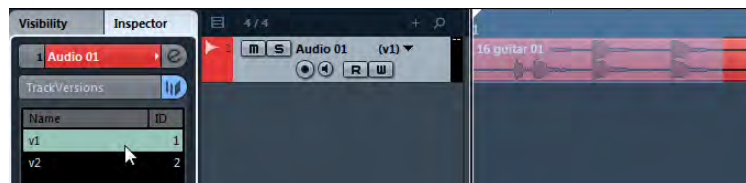
You can copy and paste ranges between different TrackVersions, even across multiple tracks.

PREREQUISITE

You have at least 2 TrackVersions.

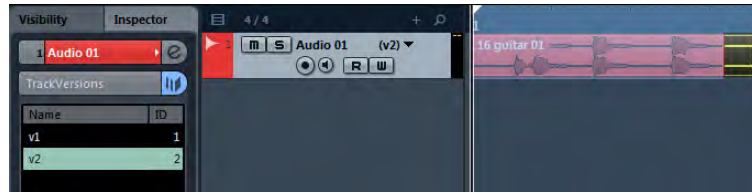
PROCEDURE

1. Select the **Range Selection** tool.
2. Select a range of the TrackVersion that you want to copy.



3. Select **Edit > Copy**.
4. Activate the TrackVersion into which you want to insert the copied range.

5. Select **Edit > Paste**.



RESULT

The copied range from the first TrackVersion is pasted to the second TrackVersion at the exact same position.

NOTE

If you want to perform more complicated comping tasks, we recommend to select **Project > TrackVersions > Create Lanes from Versions** and proceed with the **Comp** tool.

RELATED LINKS

[Creating Lanes from TrackVersions on page 15](#)

Copying and Pasting Selected Events between TrackVersions

You can copy and paste selected events between different TrackVersions, even across multiple tracks.

PREREQUISITE

You have at least 2 TrackVersions, and you have split the corresponding events with the **Cut** tool, for example.

PROCEDURE

1. Select the **Object Selection** tool.
2. Select the events that you want to copy.
3. Select **Edit > Copy**.
4. Activate the TrackVersion into which you want to insert the copied events.
5. Select **Edit > Functions > Paste at Origin**.

This ensures that the events are inserted at the exact same position.

RESULT

The copied events from the first TrackVersion are pasted to the second TrackVersion at the exact same position.

TrackVersion Names

Each TrackVersion has a default TrackVersion name.

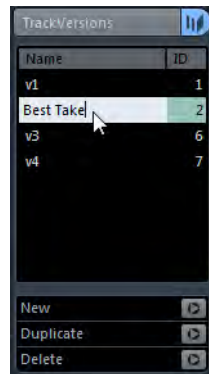
If more than one version is available for the track, the TrackVersion name is shown in the track list and in the **TrackVersions Inspector** section. By default, TrackVersions are named v1, v2, etc. However, you can rename each TrackVersion to your liking.

Renaming a TrackVersion

PROCEDURE

- In the **TrackVersions Inspector** section, double-click the TrackVersion name and enter a new name.

The name is changed. If the available space in the track list is too small, the name is abbreviated automatically.



Renaming TrackVersions on Multiple Tracks

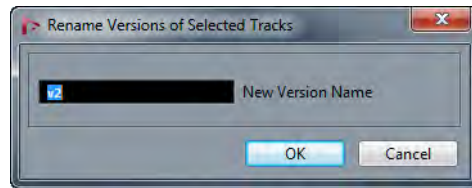
PROCEDURE

1. Activate all TrackVersions that you want to rename, and select the corresponding tracks.



2. Select **Project > TrackVersions > Rename Version**.

3. Enter a new TrackVersion name and click **OK**.



RESULT

In the track list, the new TrackVersion name is shown.



NOTE

If you want to assign the same ID to TrackVersions, select **Project > TrackVersions > Assign Common Version ID**.

RELATED LINKS

[Assigning a Common ID on page 8](#)

Adjusting the Track Name Width

PROCEDURE

1. Select **File > Preferences > Event Display > Tracks**.
2. Enter a value in the **Default Track Name Width** field.
This changes the default track name width for all track types that support a track name.

NOTE

The **Default Name Width** setting is also available in the **Track Controls Settings** window. Here, you can also make individual settings for the different track types.

TrackVersions and Group Editing

You can move TrackVersions to a folder track and use **Group Editing** mode to create and edit the different TrackVersions simultaneously.

If **Group Editing** is activated, all TrackVersion functions affect all TrackVersions within the folder track.

Refer to the “Working with tracks and lanes” chapter of the “Operation Manual” for further details about Group Editing.

TrackVersions and Global Editing Functions

The global editing functions affect only the active TrackVersion. However, there are a few exceptions.

The following functions affect all TrackVersions, including inactive TrackVersions:

- **Edit > Range > Delete Time**
- **Edit > Range > Insert Silence**
- **Project > Tempo Track > Open Process Bars Dialog > Insert/Delete Bars**

TrackVersions vs. Lanes

TrackVersions and lanes are individual features that complement each other. Every TrackVersion can have its own set of lanes.

Creating Lanes from TrackVersions

If your project contains TrackVersions and you want to continue working with lanes, using the **Comp** tool, for example, you can create lanes from TrackVersions.

PROCEDURE

1. Select the tracks for which you want to create lanes.
 2. Select **Project > TrackVersions > Create Lanes from Versions**.
A new TrackVersion named **Lanes from Version** is added. This TrackVersion contains all TrackVersions on separate lanes. The original TrackVersions are kept. Lanes that you create from MIDI TrackVersions are muted.
 3. In the track list or in the **Inspector**, activate the **Show Lanes** button for the track.
 4. In the **Project** window toolbar, activate the **Comp** tool and continue as usual.
-

Creating TrackVersions from Lanes

If your project contains lanes and you want to continue working with the TrackVersion functions, you can create TrackVersions from lanes.

PROCEDURE

1. Select the tracks for which you want to create TrackVersions.
If you only want to convert specific lanes, select these lanes.
 2. Select **Project > TrackVersions > Create Versions from Lanes**.
-

RESULT

New TrackVersions are added, one for each separate lane. The original lanes are kept. Any crossfades that you have created between different lanes are discarded.

Instrument Tracks

The handling of instrument tracks has been improved. Instruments that you add via instrument tracks now support the same features as rack instruments.

- Instrument tracks support multiple audio outputs.
This allows you to play back, mix and record different instrument outputs of VST instruments that support multiple outputs.
- Instrument tracks support multiple MIDI inputs.
This allows you to route additional MIDI tracks to multi-timbral instruments that are loaded in an instrument track.
- Instrument track presets allow you to save and load all VSTi audio outputs for the instrument track. Also they save and load volume and pan settings.
- Multitrack presets allow you to save all connected MIDI tracks.

Activating Multiple Outputs for Instrument Tracks

PROCEDURE

1. Select **Project > Add Track > Instrument**.
2. In the **Add Instrument Track** dialog, select an instrument and click **Add Track**.
An instrument track is added to your project.
3. In the instrument track Inspector, click the **Activate Outputs** button, and activate all required outputs.
The corresponding number of channels is added to the MixConsole.

4. Click **Edit Instrument** to open the instrument panel, and assign the instrument outputs to the activated audio outputs.
For more details on how to assign instrument outputs, refer to the description of the instrument.
-

RESULT

Your instrument outputs are now routed to dedicated audio outputs and you can mix them using the instrument channels in the MixConsole.

Routing Multiple MIDI Tracks to Multi-Timbral Instruments

PROCEDURE

1. Select **Project > Add Track > Instrument**.
 2. In the **Add Instrument Track** dialog, select an instrument and click **Add Track**.
An instrument track is added to your project.
 3. In the **Inspector**, click **Edit Instrument** to open the instrument panel and load a sound to the first program slot.
 4. Select **Project > Add Track > MIDI**.
The output of the new MIDI track is automatically routed to the instrument, and the next available MIDI channel is set.
 5. In the **Inspector**, click **Edit Instrument** to open the instrument panel and load a sound to the next available program slot.
-

RESULT

You can now play back and record different sounds on different tracks. You can also play back and record MIDI events for chords, melody, or MIDI control change messages on separate MIDI tracks.

NOTE

To save your settings as multi track preset, select the instrument track and the related MIDI tracks, and select **Save Track Preset** from the context menu.

AFTER COMPLETING THIS TASK:

You can now route your instrument outputs to different audio outputs in the instrument panel.

RELATED LINKS

[Activating Multiple Outputs for Instrument Tracks on page 16](#)

VST Instruments

The new **VST Instruments** window allows you to add VST instruments for MIDI and instrument tracks, giving you an overview of all instruments used in a project. It also offers you access to 8 quick controls for each added instrument.



The following controls can be found in the VST Instruments window:



- 1) **Add Track Instrument**
Opens the **Add Instrument Track** dialog that allows you to select an instrument and add an instrument track that is associated to this instrument.
- 2) **Find Instruments**
Opens a selector that allows you to find an instrument in the **VST Instruments** window.
- 3) **Set Remote-Control Focus for VST Quick Controls to Previous/Next Instrument**
Shows and activates the quick controls for the next/previous instrument in the **VST Instruments** window.
- 4) **Show/Hide all VST Quick Controls**
Shows/hides the default quick controls for all loaded instruments.

5) Settings

Opens the **Settings** menu, where you can activate/deactivate the following modes:

Show VST Quick Controls for One Slot Only shows the VST Quick Controls exclusively for the selected instrument.

MIDI Channel follows track selection ensures that the **Channel** selector follows the MIDI track selection in the **Project** window. Use this if you work with multitimbral instruments.

Remote-Control Focus for VST Quick Controls follows track selection ensures that the VST Quick Control remote-control focus follows the track selection.

The following controls are available on each instrument:



1) Activate Instrument

Activates/deactivates the instrument.

2) Edit Instrument

Opens the instrument panel.

3) Freeze Instrument

Freezes the instrument. This allows you to save CPU power.

4) Instrument Selector

Allows you to select another instrument. Double-click to rename the instrument. The name is shown in the **VST Instruments** window in the **Output Routing** pop-up menu for MIDI tracks. This is useful when you work with several instances of the same instrument.

5) Input Options

This lights up when MIDI data is received by the instrument. Click this button to open a pop-up menu that allows you to select, mute/unmute, solo/unsolo for tracks that send MIDI to the instrument (inputs).

6) Activate Outputs

Allows you to activate one or more outputs for the instrument.

7) Preset Browser

Allows you to load or save an instrument preset.

8) Load Previous/Next Program

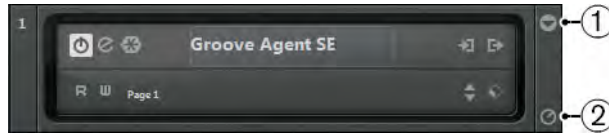
Allows you to load the previous/next program.

9) **Select Quick Control Layer**

Allows you to select a program.

10) **Read/Write Automation**

Allows you to read/write automation for the instrument parameter settings.



1) **Show/Hide VST Quick Controls**

Allows you to show/hide the VST Quick Controls for the instrument.

2) **Set Remote-Control Focus for VST Quick Controls**

Allows you to activate the VST Quick Controls to remote-control the instrument.

VST Instruments Window Context Menu

The following functions are available in the **VST Instruments** window context menu:

- **Always on Top**

If activated, the **VST Instruments** window is always on top.

- **Add Track Instrument**

Opens the **Add Instrument Track** dialog that allows you to select an instrument and add an instrument track associated to this instrument.

- **Add Rack Instrument**

Opens a selector that allows you to add a VST instrument.

Instruments Context Menu

The following functions are only available in the instruments context menu:

- **Copy/Paste instrument Setting**

Allows you to copy the instrument settings and paste them to another instrument.

- **Load/Save Preset**

Allows you to load/save an instrument preset.

- **Default Preset**

Allows you to define and save a default preset.

- **Switch to B Setting**

Allows you to activate the setting B.

- **Copy A to B**

Allows you to copy the effect parameters of effect setting A to effect setting B.

- **Activate Outputs**
Allows you to activate one or more outputs for the instrument.
- **Remote Control Editor**
Opens the **Remote Control Editor**.

VST Quick Controls

VST Quick Controls allow you to remote-control a VST instrument from within the **VST Instruments** window.

- To show the VST Quick Controls on the **VST Instruments** window, activate the **Show/Hide VST Quick Controls** button.

Connecting Quick Controls to a Remote Controller

Quick controls become really powerful when used in combination with a remote controller.

PREREQUISITE

Your remote device is connected to Nuendo via MIDI.

PROCEDURE

1. Select **Devices > Device Setup**.
 2. In the **Devices** list, select **VST Quick Controls**.
 3. From the **MIDI Input** pop-up menu, select the MIDI port on your computer.
 - If your remote controller has its own MIDI input and supports MIDI feedback, you can connect your computer to the device input. Select the corresponding MIDI port in the **MIDI Output** pop-up menu.
 4. Click **Apply**.
 5. Activate **Learn**.
 6. In the **Control Name** column, select **QuickControl1**.
 7. On your remote control device, move the control that you want to use for the first quick control.
 8. Select the next slot in the **Control Name** column and repeat the previous steps.
 9. Click **OK**.
-

RESULT

The quick controls are now associated with control elements on your external remote controller. If you move a control element, the value of the parameter that is assigned to the corresponding quick control changes accordingly.

Track Visibility Management

Configuring the Track List

You can configure which tracks are shown or hidden in the track list.

You can configure the visibility of tracks in the track list using the following functions:

- **Filter Track Types**
- **Visibility Inspector** tab
- **Track Visibility Agents**
- **Track Visibility Configurations**

NOTE

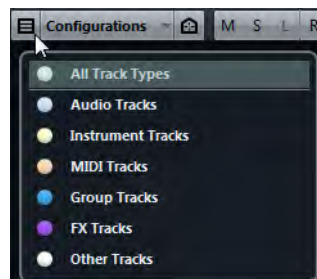
You cannot use these features to show or hide lanes.

Track Types Filter

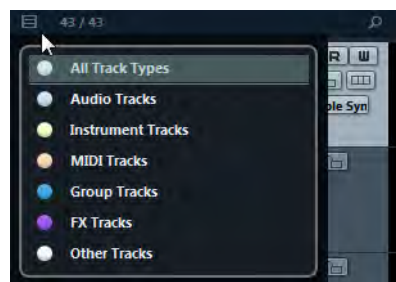
The track types filter allows you to determine which track types are shown.

To set up the track types filter, click the **Filter Track Types** button. This can be found at the following locations:

- On the **Project** window toolbar.



- Above the track list.



Filtering Track Types

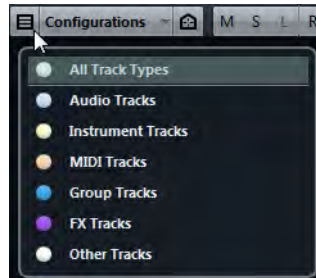
PROCEDURE

1. On the **Project** window toolbar, click the **Filter Track Types** button.



This opens the **Track Types** filter.

2. Click a dot to the left of a track type to hide it.



RESULT

Tracks of the filtered type are removed from the track list and the color of the **Filter Track Types** button changes to indicate that a track type is hidden.



Visibility Tab

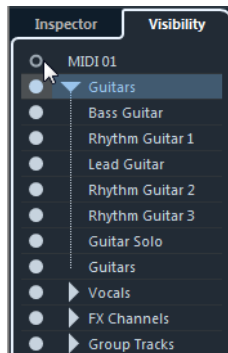
The **Project** window **Inspector** features two tabs: **Inspector** and **Visibility**. The **Visibility** tab allows you to determine which individual tracks are shown in the track list.



- To open the **Visibility** tab, click its tab or use the **Toggle Inspector tabs** key command in the **Inspector** category of the **Key Commands** dialog.

Showing/Hiding Individual Tracks

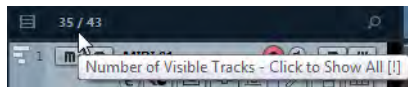
The **Visibility Inspector** tab shows a list of all current tracks. Here you can show and hide individual tracks.



- To show or hide a track in the track list, click a dot to the left of a track.
- To activate or deactivate several tracks at the same time, select them and press [Return].
- To show a hidden track exclusively, [Shift]-click the dot.
- To expand or collapse a folder, click the triangle to the left of a folder track.

Number of Visible Tracks

The number of visible tracks is indicated above the track list. This lets you know how many tracks are hidden.



- Click the number of visible tracks to show all tracks.

NOTE

Tracks that are hidden through the track types filter cannot be shown by clicking the number of visible tracks.

Track Visibility Agents

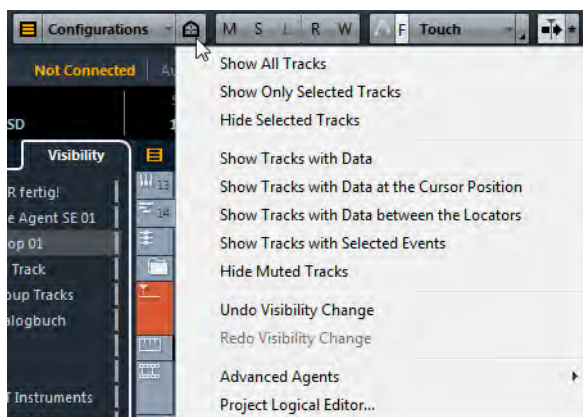
Track visibility agents allow you to show or hide all tracks, selected tracks, or tracks with certain properties.

NOTE

If you divide the track list, the top part of the list is not affected by visibility agents.

To open the **Track Visibility Agents** pop-up menu, perform one of the following actions:

- Click the **Track Visibility Agents** button on the toolbar.



- Open the **Visibility Inspector** tab and right-click to open the context menu.

RELATED LINKS

[Visibility Tab on page 23](#)

Showing Tracks with Specific Properties

- To open the **Track Visibility Agents** pop-up menu, click the **Track Visibility Agents** button in the toolbar.

Show All Tracks

Shows all tracks of your project.

Show Only Selected Tracks

Shows only the tracks that are selected.

Hide Selected Tracks

Hides all tracks that are selected.

Show Tracks with Data

Shows all tracks with events or parts. The tempo track, the signature track, and the chord track are always shown.

Show Tracks with Data at the Cursor Position

Shows all tracks with events or parts at the cursor position.

Show Tracks with Data between the Locators

Shows all tracks with events or parts between the left and right locators.

Show Tracks with Selected Events

Shows all tracks with selected events or parts.

Hide Muted Tracks

Hides all tracks that are muted.

NOTE

You can assign key commands for the track visibility agents in the **Channel & Track Visibility** category of the **Key Commands** dialog.

Undoing Visibility Changes

You can undo/redo up to 10 visibility changes.

PROCEDURE

1. In the **Project** window toolbar, click the **Track Visibility Agents** button.
 2. Select **Undo Visibility Change**.
-

Advanced Agents

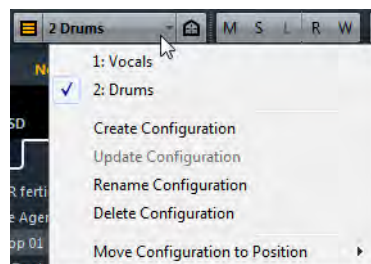
The **Advanced Agents** submenu features **Project Logical Editor** presets that allow you to show or hide tracks with specific properties.

- Click the **Track Visibility Agents** button in the **Project** window toolbar, and select **Advanced Agents** to open a submenu.

Try out the different presets to show or hide your tracks, or use them as a starting point for your own presets in the **Project Logical Editor**.

Track Visibility Configurations

The **Track Visibility Configurations** button on the **Project** window toolbar allows you to create configurations that are useful for switching quickly between different visibility setups. Track visibility configurations are saved with the project.



Track Visibility Configurations

This toolbar button displays the name of the active configuration.

Configurations List

A list of configurations is shown as soon as you create at least one configuration. To load a configuration, select it from this list.

Create Configuration

Opens the **Create Configuration** dialog that allows you to save the configuration and enter a name for it.

Update Configuration

If you change the active configuration, this is indicated by an asterisk after the configuration name. Use this function to save changes to the active configuration.

Rename Configuration

Opens the **Rename Configuration** dialog that allows you to rename the active configuration.

Delete Configuration

Allows you to delete the active configuration.

Move Configuration to Position

This function becomes available if 2 or more configurations exist. It allows you to change the position of the active configuration on the menu. This is useful, as you can assign key commands to the first 8 configurations in the **Channel & Track Visibility** category of the **Key Commands** dialog.

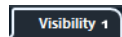
Synchronizing Track and Channel Visibility

You can synchronize the track visibility in the **Project** window with the channel visibility in the **MixConsole**.

PROCEDURE

1. In the **Inspector**, open the **Visibility** tab and click the dot to open the **Sync Track/Channel Visibility** menu.
2. Select **Sync Project and MixConsole** to synchronize the track visibility with the channel visibility.

The dot in the **Visibility** tab changes to indicate that the track and channel visibility are synchronized.



NOTE

You can only synchronize the track visibility in the **Project** window with the channel visibility of one **MixConsole**. If you enable **Sync Track/Channel Visibility** for a second **MixConsole**, the first link is lost.

NOTE

If you divide the track list, the top part of the list is not affected. Likewise, channels in the left or right zones of the **MixConsole** are not synchronized.

Finding Tracks

The **Find Tracks** function allows you to find specific tracks. This is useful if you have a large project with many tracks or if you have hidden tracks using the track visibility features.

PROCEDURE

1. Click **Find Tracks** above the track list, to open a selector that lists all tracks.



2. In the search field, enter the name of the track.
As you type, the selector updates automatically.
3. In the selector, select the track and press [Return].
The selector closes and the track is selected in the track list.

NOTE

If the track was outside the view or hidden, it is now shown. Tracks that are hidden using **Filter Track Types** are not shown.

Automatic Hitpoint Detection

When you add an audio file to your project by recording or by importing, Nuendo automatically detects hitpoints. This allows you to navigate to hitpoints of an audio file from within the **Project** window.

For long audio files, hitpoint detection may take a while. All operations that are based on hitpoints are disabled during the calculation.

- To disable automatic hitpoint detection, select **File > Preferences > Editing > Audio**, and deactivate **Enable Automatic Hitpoint Detection**.

NOTE

In the **Project** window, hitpoints are shown for the selected event, provided that the zoom factor is high enough. To hide them, select **File > Preferences > Event Display > Audio** and disable **Show Hitpoints on Selected Events**.

RELATED LINKS

[Using Hitpoints to Locate Audio Positions in the Project Window on page 29](#)

Using Hitpoints to Locate Audio Positions in the Project Window

You can navigate through the hitpoints of an audio event in the **Project** window.

PREREQUISITE

Enable Automatic Hitpoint Detection is activated in the **Preferences** dialog (**Editing–Audio**).

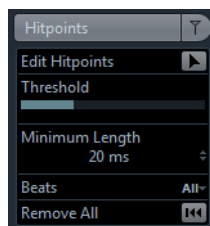
PROCEDURE

1. Select the audio track that contains the audio event for which you want to locate hitpoints.
 2. Press [Alt]/[Option]-[N] to navigate to the next hitpoint, or [Alt]/[Option]-[B] to navigate to the previous hitpoint.
The project cursor jumps to the respective hitpoint.
-

Filtering Hitpoints

You can filter hitpoints in the **Hitpoints** Inspector tab of the **Sample Editor**.

You can use the following parameters to filter hitpoints:



Threshold

This filters hitpoints by their peaks. This allows you to discard hitpoints of quieter crosstalk signals, for example.

Minimum Length

This filters hitpoints by the distance between two hitpoints. This allows you to avoid creating slices that are too short.

Beats

This allows you to filter hitpoints by their musical position. This allows you to discard hitpoints that do not fit within a certain range of a defined beat value.

Score Editor Improvements (NEK only)

Score Inspector

The **Score Editor Inspector** now features two **Inspector** tabs: **Symbols** and **Inspector**.

To open an **Inspector** tab, click its header.



- The **Symbols** tab contains score-related functions. For a description of these functions, refer to the chapter “Working with symbols” in “Part II: Score layout and printing” of the “Operation Manual”.
- The **Inspector** tab contains MIDI-related functions. For a description of these functions, refer to the description of the **Key Editor Inspector** in the chapter “The MIDI Editors” in the “Operation Manual”.

NOTE

The **Quick Staff Setup** section has been moved from the **Symbols** tab to the **Inspector** tab.

Re-Record Mode

The **Re-Record** mode allows you to reinitiate a recording with a single click.

The first recording is canceled, the events are removed, and recording is restarted from the exact same position.

Re-Recording

PROCEDURE

1. Activate **Transport > Re-Record**.
 2. Activate recording as usual.
 3. Hit the **Record** button again to restart recording.
-

RESULT

The project cursor jumps back to the record start position and recording is reinitiated. Pre-roll and pre-count settings are taken into account.

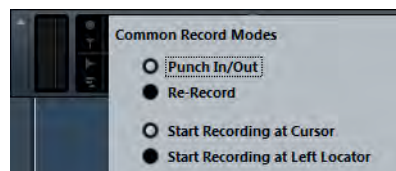
NOTE

The previous recordings are removed from the project and cannot be retrieved using **Undo**. However, they remain in the **Pool**.

Common Record Modes

The **Common Record Modes** determine what happens if you click the **Record** button during an audio or MIDI recording.

- In the **Transport** panel, click the upper part of the **Record Modes** section to open the **Common Record Modes** pop-up menu.



Punch In/Out

In this mode, the recording is stopped.

Re-Record

In this mode, the recording is removed and recording is restarted.

Start Recording at Cursor

In this mode, recording starts from the cursor position.

Start Recording at Left Locator

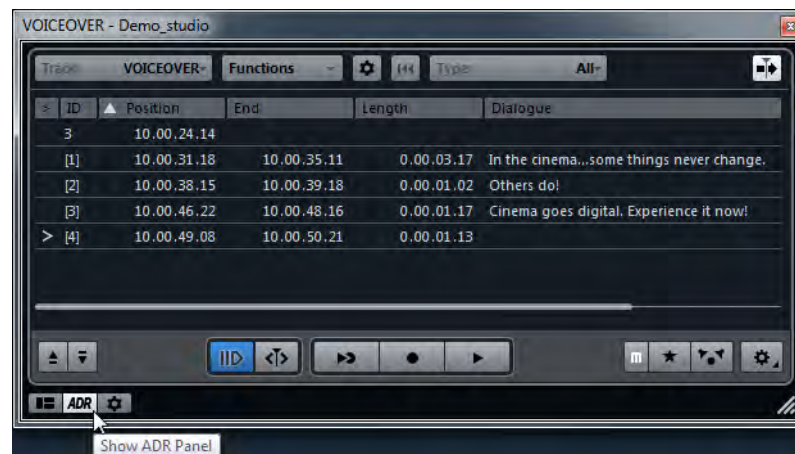
In this mode, recording starts from the left locator.

ADR

The **ADR** panel allows you to perform ADR and language dubbing tasks.

Sometimes, you must re-record dialogue from production tracks or dub them in a different language. When you do this, the original takes are played back to allow the dubbing actor to listen to the original production track as a guide. The actor can then rehearse the dialogue and re-record it. These tasks can be performed with the ADR functions that are located in the **ADR** panel of the **Marker** window.

To open the ADR panel, select **Project > Markers** and click **ADR** at the bottom of the **Marker** window.



To get the most out of the ADR functions, it is important that you understand the following concepts:

- ADR and Selecting Markers
- ADR Statuses (Rehearse, Record, Review)
- ADR Modes (Automatic, Free Run)

ADR and Marker Selection

The ADR functionality makes extensive use of markers.

In the marker list, you can select cycle markers to set the start and end position for **Rehearse**, **Record**, and **Review**.

If you select position markers, only the start position is set.

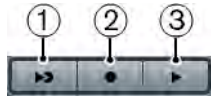
If no marker is selected, the start position for any ADR status in **Automatic** mode is determined by the left locator. In **Free Run** mode, the start position is determined by the project cursor position.

NOTE

You can also select multiple markers, for example, to combine multiple takes.

ADR Statuses

The ADR statuses **Rehearse**, **Record**, and **Review** are transport functions that have been designed specifically for ADR tasks.



1) **Rehearse**

Allows you to play back the take, so that the artist can rehearse it.

2) **Record**

Allows you to record the take on the record-enabled track.

3) **Review**

Allows you to play back the recorded take for review.

The ADR statuses take into account all settings in the **ADR Setup** window.

RELATED LINKS

[ADR Setup on page 36](#)

ADR Modes

You can select either **Automatic** mode or **Free Run** mode.

NOTE

The ADR modes take into account all settings in the ADR Setup window.

- **Automatic**

This mode is activated by default. It allows you to record a take according to the position and length of the selected marker. In the different ADR statuses, the following happens:

If you click **Rehearse**, a locator range according to the position and length of the selected markers is selected in the **Project** window ruler. The project cursor jumps to the start of the **Pre-roll** phase and playback starts. At the end, the project cursor automatically jumps back to the start position.

If you click **Record**, the project cursor jumps to the start of the **Pre-roll** phase and playback starts. When the left locator is reached, recording starts. At the end of the **Post-roll** phase, recording stops automatically and the project cursor jumps back to the left locator. The recorded event is automatically resized to this position.

If you click **Review**, the project cursor jumps to the start of the **Pre-roll** phase and playback starts. At the end of the **Post-roll** phase, playback stops automatically and the project cursor jumps back to the take start position.

- **Free Run**



Activate this mode for more flexibility. It allows you to use the project cursor position as the ADR start position. You can set the project cursor position manually or using a marker in the marker list. Free run mode works as follows:

If you click **Rehearse**, the left locator is set to the project cursor position and playback starts from there. If **Pre** is enabled, playback starts with the pre-roll that you defined in the **ADR Setup** window. Playback stops when you click **Stop**.

If you click **Record**, the project cursor jumps to the take start position and recording starts. If **Pre** is enabled, playback starts at the beginning of the pre-roll phase and recording starts when the take start position is reached. Recording stops when you click **Stop**.

If you click **Review**, the project cursor jumps to the take start position and playback starts. If **Pre** is enabled, playback starts at the beginning of the pre-roll phase. Playback stops when you click **Stop**.

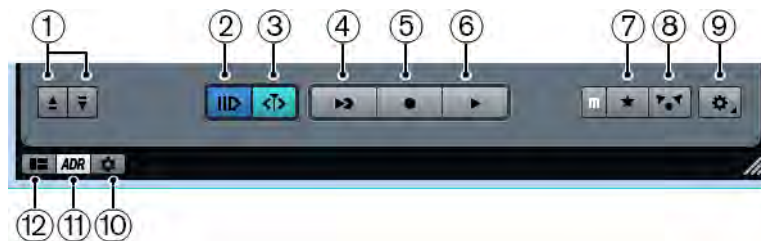
NOTE

If **Return to Start Position on Stop** is activated in the **Preferences** dialog (**Transport** page), the project cursor returns to the take start position.

ADR Panel

The **ADR** panel is located in the lower part of the **Marker** window.

Select **Project > Markers** and click **ADR** at the bottom of the **Marker** window.



1) **Locate Previous/Next Marker in Marker Window**

Allows you to select the previous/next marker in the marker list. If **Sync Selection** is activated in the **Marker Preferences**, the corresponding locator range is also selected in the **Project** window ruler.

2) **Pre-Roll On/Off**

Allows you to activate/deactivate a pre-roll for the Free run mode.

3) **Free Run Mode On/Off**

Activate this mode to start from the project cursor position. On stop, the cursor returns to the start position by default. You can change this by deactivating **Return to Start Position on Stop** in the **Preferences** dialog (**Transport** page).

Deactivate this mode to use the selected cycle marker. Pre-roll and post-roll are determined by the settings on the **General** tab in the **ADR Setup** window.

4) **Rehearse**

Plays back the selected take so that the artist can rehearse it.

5) **Record**

Records the selected take on the record-enabled track.

6) **Review**

Plays back the take for review. To enable this, on the **Signal Switchboard**, activate **Take** in **Review** mode for **Other Audio** for the **Control Room** and **Cue 1**.

7) **Guide Track for Cue 1 On/Off**

Allows you to mute the guide track for cue 1.

8) **Guide Track for Control Room On/Off**

Allows you to mute the guide track for the Control Room.

9) **Setup**

Allows you to open the **ADR Setup** window.

10) **Marker Preferences**

Allows you to show the marker preferences.

11) **Show ADR Panel**

Allows you to show/hide the **ADR** panel.

12) **Show Details View**

Allows you to show/hide the details view.

RELATED LINKS

[ADR Modes on page 33](#)

ADR Setup

General Tab



1) **Pre-roll/Post-roll**

Allows you to enter a pre-roll/post-roll value.

NOTE

In the **Preferences** dialog (**Record–Audio** page) you can set a value for **Audio Pre-Record Seconds**. The post record time corresponds to the post-roll time.

2) **ADR Track Assignment**

Allows you to specify which tracks you want to use as guide, M&E, and mic signal.

3) **Record Enable Target Track**

Allows you to automatically record-enable the target track. To enable this, you must set up the **Target Track** marker attribute.

4) **Record File Naming Scheme**

Allows you to specify a naming scheme for the recorded files that is added to the track name as a suffix.

RELATED LINKS

[Enabling Automatic Record-Enabling for Target Tracks on page 45](#)

Video Tab



1) Pre-roll/Post-roll

Allows you to enter a pre-roll/post-roll value.

NOTE

In the **Preferences** dialog (**Record–Audio** page) you can set a value for **Audio Pre-Record Seconds**. The post record time corresponds to the post-roll time.

2) Primary Swipe

Activate this to display a bar that swipes from the left to the right side of the **Video Player** window as a take start indicator. The pre-roll value defines the duration of the swipe.

Activate **Swipe to Center** to display two bars that swipe from the left and right sides to the center of the **Video Player** window.

3) Counter

Activate this to display a count-in by numbers as a take start indicator in the **Video Player** window. Specify a start number in the value field to the right. The interval between each count is one second. The metronome is automatically synchronized with the counter.

Activate **Invert Counter** to invert the order of the displayed numbers.

Activate **Show Black during Pre-/Post-roll** to show a black picture during pre-roll and post-roll.

4) **Show Dialogue during ADR/Always show Dialogue**

These options allow you to show the dialogue attribute of the selected marker.

Activate **Show Dialogue during ADR** to display the **Dialogue** marker attribute as a video overlay in the **Video Player** window during one of the ADR modes.

Activate **Always show Dialogue** to always display the dialogue marker attribute.

5) **Take Length Indicator**

Activate this to show a take length indicator at the bottom of the **Video Player** window.

6) **ADR Status Indicator**

Activate this to show an ADR status indicator at the top left corner of the **Video Player** window.

Rehearse status is indicated with a yellow indicator, record status with a red indicator, and review with a green indicator.

7) **Secondary Swipe**

If you selected multiple markers, activating this option displays a swipe as a pre-roll for every take.

8) **Marker Pre-roll**

Allows you to define a pre-roll for the secondary swipes.

Signal Switchboard Tab

The **Signal Switchboard** tab allows you to define which signals are heard during the different ADR phases. This helps you to set up different schemes for the dubbing artist and the ADR operator, for example.



1) **Control Room section**

Allows you to specify the track that you hear in the Control Room channel during **Rehearse**, **Record**, and **Review**. Furthermore, you can determine if you want to hear the signal during the preroll, take, and postroll phases.

2) **Cue selectors**

Allow you to switch to another cue channel.

3) **Cue section**

Allows you to specify the track that you hear in the selected Cue channel during rehearse, record, and review. Furthermore, you can determine if you hear the signal during the preroll, take, and postroll phases.

NOTE

In the **MixConsole**, make sure that the Control Room and cue channels are set up correctly.

Setting Up ADR Tracks

To use the available functions in the ADR panel, you must set up your project first.

Creating Guide Tracks

The guide track is to play back the original dialogue that you want to replace.

PROCEDURE

1. Create an audio track or a group and name it so that you can recognize it as the guide track.
 2. Set the **Output Routing** pop-up menu to the stereo out output bus that is set as the Main Mix.
-

Creating M & E (Music and Effects) Tracks

The M&E track is designed to play back music and effects.

PROCEDURE

1. Create an audio track or group and name it so that you can recognize it as the M&E track.
 2. Set the **Output Routing** pop-up menu to the stereo out output bus that is set as the Main Mix.
-

Creating Mic Tracks

The mic track is designed to lead the signal that is to be recorded. For this to work, you must activate its **Monitor** button.

PROCEDURE

1. Create an audio track for the mic signal.
2. In the **Inspector**, set the **Input Routing** pop-up menu to your microphone input bus.
3. Set the **Output Routing** pop-up menu to the output bus that is set as the Main Mix.

4. Activate **Monitor** for the mic signal track.

NOTE

If you use a mic signal track, set the **Auto Monitoring** mode in the **Preferences** dialog (**VST** page) to **Manual**. Otherwise, select **Tapemachine Style**.

Creating Other Tracks

The other tracks are designed for recording and for playback of your recordings.

PROCEDURE

1. Create as many other audio tracks as you need.
 2. In the **Inspector** of each track, set the **Input Routing** pop-up menu to your microphone bus.
 3. Set the **Output Routing** pop-up menu to the output bus that is set as the Main Mix.
-

Creating Cue Channels

Cue channels are used for sending cue mixes, also known as headphone mixes, to performers in the studio during recording.

PROCEDURE

1. Select **Devices > VST Connections > Studio**.
 2. Activate **Enable/Disable Control Room**.
 3. Click **Add Channel** and add at least one cue channel.
-

Setting Up the ADR Environment

Setting up your ADR environment includes importing files and defining takes, assigning ADR tracks, setting up the routing, configuring video overlays, and enabling automatic record for target tracks.

Importing Files and Defining Takes

Import your files and define the takes that you want to record by creating cycle markers.

PROCEDURE

1. Select **File > Import > Video File** and navigate to the video file that you want to import.
2. Select the guide track, select **File > Import > Audio File** and import the audio file for the dialogue that you want to replace.
3. Select the M&E track, select **File > Import > Audio File** and import the music and effect sounds.
4. Play back the guide track and set up cycle markers for all dialogue that you want to re-record.

NOTE

If you have a take list from a dedicated ADR taker application or an Excel sheet, you can also import this.

Assigning ADR Tracks

You must define which of your tracks or groups correspond to a specific ADR track. This is useful for setting up the signal switchboard. The track assignment is stored with the project.

PROCEDURE

1. Select **Project > Markers**.
The **Marker** window opens.
 2. Activate **Show ADR Panel**.
 3. Click **Setup**.
The **ADR Setup** window opens.
 4. Click **General**.
 5. In the **ADR Track Assignment** section, use the **Guide**, **M&E**, and **Mic Signal** pop-up menus to select the tracks that you want to use as guide, M&E, and mic signal tracks.
-

Setting Up the Routing for Individual Mixes

You can define which signals are heard during the different ADR phases and set up different schemes for the dubbing artist and the ADR operator, for example. The routing that you set up is automatically applied when you use the ADR modes. The settings are saved globally.

PROCEDURE

1. On the ADR panel, click **Setup**.
2. In the **ADR Setup** window, click **Signal Switchboard**.
The signal switchboard shows all ADR tracks (sources) for the Control Room (destination) in the upper section and the cues 1 to 4 (destinations) in the lower section.
3. Activate the checkboxes for the signals that you want to hear on each ADR track.
To hear the source signal of a specific ADR track during pre-roll, activate the **Pre** option for that track. To hear the signal during the take, activate **Take**. To hear the signal during post-roll, activate **Post**.

NOTE

In the **MixConsole**, make sure that the Control Room and cue channels are set up correctly.

RELATED LINKS

[Signal Switchboard Tab on page 39](#)

Configuring Video Overlays

You can set up different video overlays that may be helpful for the dubbing artist.

PROCEDURE

1. On the ADR panel, click **Setup**.
2. Select the **General** tab and enter values for **Pre-roll** and **Post-roll**.

NOTE

You might also want to set a value for **Audio Pre-Record Seconds** in the **Preferences** dialog (**Record–Audio** page). The post record time corresponds to the post-roll time.

3. Select the **Video** tab.

4. In the **Video Overlays** section, configure which overlays are displayed in the **Video Player** window.

NOTE

To enable the timecode display as an overlay in the **Video Player** window, select **Devices > Device Setup > Video Player**. In the **Video Playback** section, activate **Show Timecode**. To adjust the display position, use the **Position** pop-up menu.

RELATED LINKS

[General Tab on page 36](#)

Enabling Dialogue Display in the Video Player

You can display the dialogue that must be replaced or dubbed in the **Video Player** window or on a dedicated video output device.

PREREQUISITE

The **Dialogue** attribute is assigned manually or has been imported via a CSV file.

PROCEDURE

1. In the **Marker** window, click **Set up Attribute Columns**, and activate **ADR > Dialogue**.
The **Dialogue** column is displayed in the **Marker** window.
 2. On the ADR panel, click **Setup**.
 3. In the **ADR Setup** window, click **Video**.
 4. In the **Video Overlays** section, activate **Show Dialogue during ADR**.
-

RESULT

The dialogue of the selected marker is shown in the **Video Player** window during Rehearse, Record, and Review.

NOTE

You can activate **Always Show Dialogue** if you want to see the dialogue always, not only during ADR.

Enabling Automatic Record-Enabling for Target Tracks

You can automatically record-enable a track when clicking **Rehearse**, **Record**, or **Review**.

PROCEDURE

1. In the **Marker** window, click **Set up Attribute Columns**, and activate **General > Target Track**.
The **Target Track** column is displayed in the **Marker** window.
 2. On the ADR panel, click **Setup**.
 3. In the **ADR Setup** window, click **General**.
 4. In the **Recording** section, activate **Record-Enable Target Track**.
-

RESULT

You can now use the **Target Track** column of the **Marker** window to type in the number of the track. If you have imported this attribute with the take list, it is shown automatically.

NOTE

Only numbers are allowed as values for the target track attribute.

Rehearsing Takes

PREREQUISITE

You have defined takes by creating cycle markers, and set up the signal Switchboard as required.

PROCEDURE

1. In the markers list, select the marker for the take that you want to record.
 2. On the **ADR** panel, click **Rehearse**.
-

Switching from Rehearse to Record

You can switch from **Rehearse** to **Record** without stopping playback. This is useful, if you realize during rehearsing that you want to record straight away.

PREREQUISITE

You are rehearsing a take.

PROCEDURE

1. On the ADR panel, click **Record**.
 - If you click **Record** during the pre-roll phase, playback continues and recording starts only at the take start position.
 - If you click **Record** during the take phase, recording starts directly at the cursor position.
-

Recording Takes

PREREQUISITE

The dubbing artist has rehearsed the take and is ready to record. You have record-enabled the track on which you want to record.

NOTE

You can combine track selection and record-enabling. Selecting **File > Preferences > Editing > Project & MixConsole** and activate **Enable Record on Selected Audio Track**.

PROCEDURE

- On the **ADR** panel, click **Record**.
The take is recorded.
-

Reviewing Takes

PROCEDURE

- On the **ADR** panel, click **Review**.
The take is played back so that the director and the artist can review it.

NOTE

If you cannot hear the recorded take, open the **Signal Switchboard** and make sure that **Take** is activated in **Review** mode for **Other Audio** for the **Control Room** and **Cue 1**.

AFTER COMPLETING THIS TASK:

If you are satisfied with the recording, proceed with the next take.

NOTE

You can select the next marker in the marker list by clicking **Locate Next Marker in Marker Window**. If **Sync Selection** is activated in the **Marker Preferences**, the corresponding take is also selected in the **Project** window. Make sure that **Track Selection Follows Event Selection** is deactivated in the **Preferences** dialog (**Editing** page).

Control Room

The Control Room features allow you to divide the studio environment into the performing area (studio) and the engineer/producer area (control room).

To open the Control Room mixer you have 2 options:

- Select **Devices > Control Room Mixer**.
This opens the **Control Room** in a separate window.
- Select **Devices > MixConsole > Set up Window Layout > Control Room/Meter**.
This opens the **Control Room** section in the **MixConsole**.

The Control Room mixer itself is divided into 2 sections that you open by clicking the tabs at the bottom.

- The **Mixer** tab contains all controls that you use regularly during recording, mixing, and mastering, for example.
- The **Setup** tab contains settings that you most probably use only once for a project.

Adding Channels to the Control Room

To be able to use the Control Room, you need to add the channels that you need first.

PROCEDURE

1. Select **Devices > VST Connections**.
2. Click **Studio**.
3. Click **Add Channel**.
A pop-up menu lists all available channel types and shows how many instances of each type are available.
4. Select a channel type.
For most channel types, a dialog opens, that allows you to choose the channel configuration.
5. Click the **Audio Device** column to set an audio device for the channel type.
6. Click the **Device Port** column to assign a port for the channel.

NOTE

You cannot assign the same device port to a bus or channel and a Control Room channel at the same time.

RESULT

The Control Room functions are available for use. If you disable the Control Room, the configuration is saved and will be restored when you reenable the Control Room.

Output Routing

The channel width of the Control Room can only be as wide as the Main Mix bus.

All other outputs are not routed through the **Control Room Mixer**.

However, they can be added as additional monitor sources in the **VST Connections** window. When the Control Room is enabled, the Main Mix bus is automatically shown on the Studio tab. The reason is that the Main Mix is always available as a monitor source in the **Control Room Mixer**.

Exclusive Assignment of Monitor Channels

Generally, the port assignment to the Control Room channels is exclusive. However, it can be useful to create monitor channels that share device ports with each other as well as inputs and outputs. This can be helpful if you use the same speakers as a stereo pair and also as the left and right channels of a surround speaker configuration, for example. Switching between monitors that share device ports is seamless, multi-channel audio is mixed down to stereo as needed. Only one monitor set can be active at a time.

If your scenario does not require you to assign ports to several monitor channels, it is recommended to activate the **Exclusive Device Ports for Monitor Channels** option in the **Preferences** dialog (**VST–Control Room** page). This way, you can make sure that you do not accidentally assign ports to inputs/outputs and monitor channels at the same time.

NOTE

The state of the **Exclusive Device Ports for Monitor Channels** preference is saved together with the Control Room presets. Therefore, if you recall a preset, your current setting in the **Preferences** dialog might be overwritten.

Control Room Channels

Each Control Room channel type that you create defines an input or output of the **Control Room Mixer**.

Monitor Channels

A monitor channel represents a set of outputs that are connected to monitor speakers in the Control Room.

You can create up to 4 monitor channels for a mono, stereo, or surround speaker configuration. Each monitor can have its own custom downmix settings, input gain, and input phase settings.

NOTE

Monitor channels can share hardware inputs or outputs with another bus or channel. When you create the connections for the monitor channels, device ports that are already used for other busses or channels are shown in red on the **Device Port** pop-up menu. If you select a used port, its previous connection is lost.

Monitor Sources

You can set up different monitor sources and use the **Control Room Mixer** to select the mix sources that you want to listen to. Different monitor sources for dialogue, sound effects, and music are useful in post production setups that require more than one mix bus.

You can create up to 8 monitor sources for a mono, stereo or surround speaker configuration. These can be input or output busses that you set up in the **Inputs/Outputs** tab of the **VST Connections** window, or a group channel.

NOTE

If you select a monitor source with a wider configuration than the Main Mix bus, automatic downmixing occurs.

Phones Channel

You can use the phones channel in the Control Room to listen to cue mixes.

You can create 1 phones channel for a stereo configuration. It allows you to listen to the main mix or cue mixes or to external inputs on a pair of headphones. You can also use it for previewing.

Cue Channels

You can use cue channels for sending cue mixes, also known as headphone mixes, to performers in the studio during recording.

You can create up to 4 cue channels in mono or stereo for 4 discrete cue mixes. Cue channels have talkback and click functions. They allow you to monitor the main mix, external inputs, or a dedicated cue mix.

EXAMPLE

If you have 2 available headphone amplifiers for performers, you can create 1 cue channel for each cue mix and name them according to their function: vocalist mix, bass player mix, etc.

Cue Channels and Cue Sends

For every cue channel that you define in the **VST Connections** window, each channel in the **MixConsole** has a cue send with level, pan, and pre/post-fader selection. These cue sends can be used to create discrete cue mixes that performers can listen to.

- In the **MixConsole**, activate **Racks > Cue Sends** to show the cue sends.

External Inputs

You can use external inputs for monitoring external devices, such as CD players, multi-channel recorders, or any other audio source.

You can create up to 6 external inputs for a mono, stereo, or surround speaker configuration.

NOTE

If you select external inputs as input source of an audio channel, you can record them. In this case, you do not need to assign the device ports to the input channel.

Talkback Channels

You can use talkback channels for communication between the Control Room and performers in the studio.

You can create up to 4 talkback channels and assign a mono input channel to each one of them.

You can also use talkback channels as input source for audio tracks and record them. You can route them to each cue channel and use different levels.

You can insert effects like a compressor or limiter on talkback channels. This ensures that erratic levels do not disturb performers and that clear communication with everyone is possible.

NOTE

In the **Preferences** dialog (**VST–Control Room** page) the **Auto Disable Talkback Mode** allows you to specify how talkback works during playback and recording.

Metering Channel

You can use a metering channel for connecting a hardware metering device.

The metering channel allows you to meter monitoring sources without having the listening volume affect the meter. This channel is a physical ASIO output which feeds the same signal that goes through the meter channel.

NOTE

The metering channel does not appear in the project.

Control Room Mixer

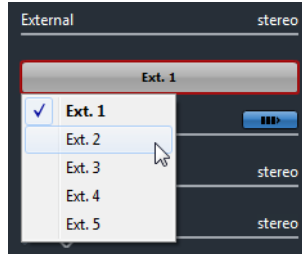
The **Control Room Mixer** displays information and controls for the channels that you define on the **Studio** tab in the **VST Connections** window.

The **Control Room Mixer** is divided into a number of sections that you open by clicking their header. To open several sections simultaneously, use [Ctrl]/[Command]-click.



External

The **External** section is only shown if you have added more than one external input in the **VST Connections** window.



To switch to another external input, click the input name and select a new external input from the pop-up menu.

Monitor Sources

The **Monitor Sources** section allows you to select which monitor sources are routed to the Control Room.



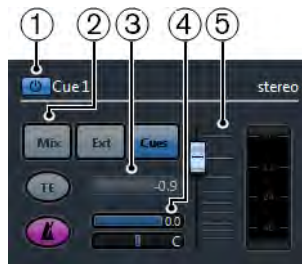
1) Multiple Monitor Sources

Allows you to listen to several submixes at the same time. For this to work, you must activate the monitor sources that you want to include.

2) Monitor Sources

Allows you to listen to a monitor source. If you want to listen to only one source, deactivate **Multiple Monitor Sources**. If you [Alt]/[Option]-click a monitor source, you can listen to it exclusively, even if **Multiple Monitor Sources** is activated. If you [Shift]-click a monitor source, you can activate several monitor sources, even if **Multiple Monitor Sources** is deactivated.

Cue Channel



1) **Activate Cue Channel**

Allows you to activate/deactivate the cue channel.

2) **Source Selectors**

Allow you to select the source for the cue channel: monitor mix (Mix), external inputs (Ext), or the cue sends (Cues). The signal presence indicators in the upper left corner light up when the source channel is sending data to the cue channel.

3) **Enable Talkback to Cue Channel**

Allows you to activate talkback for communication between the Control Room and the performers in the studio. You can set the level of the talkback signal with the slider.

4) **Activate Metronome Click**

Activates the metronome click. Use the **Click Level** and **Click Pan** controls to set the volume and the pan position of the metronome click.

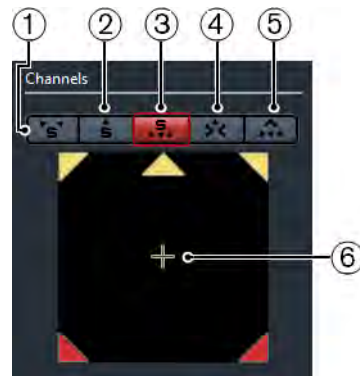
5) **Signal Level**

Allows you to set the signal level.

Channels

The **Channels** section shows the speaker arrangement of the Main Mix bus.

You can use the solo functions to listen to individual channels of the Main Mix. You can also use this to test your multi-channel speaker system and make sure that the correct channels are routed to the speakers.



1) **Solo Left and Right Channels**

Allows you to solo the left and right channels.

2) **Solo Front Channels**

Allows you to solo the front channels.

3) **Solo Surround Channels**

Allows you to solo the surround channels.

4) **Listen to Solo Channels on Center Channel**

Allows you to listen to all soloed speakers in the center channel. If the center channel is not available, the channels are distributed equally to the left and right.

5) **Listen to Surround Channels on Front Channels**

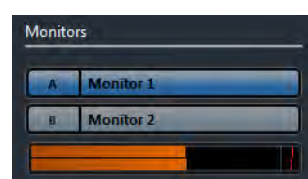
Allows you to solo the surround channels and route them to the front speakers.

6) **Solo LFE Channel**

Allows you to solo the LFE channel.

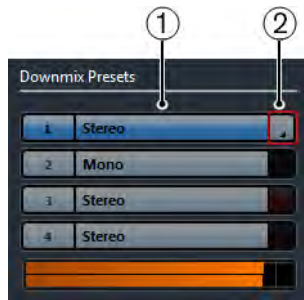
Monitors

The **Monitors** section allows you to select and configure the monitor sets.



Downmix Presets

The **Downmix Presets** section allows you to configure downmix presets.



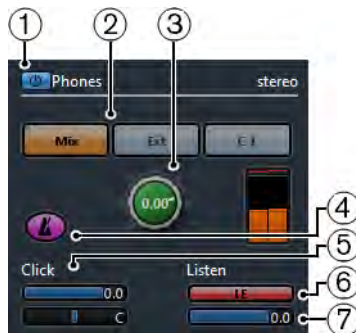
1) **Assign Downmix Preset**

Allows you to configure a downmix preset for the monitor that is selected in the **Monitors** section.

2) **Select Output Configuration**

Allows you to select an output channel configuration.

Phones Channel



1) **Activate Phones Channel**

Allows you to activate/deactivate the phones channel.

2) **Source Selectors**

Allow you to select the source for the phones channel: monitor mix (Mix), external inputs (Ext), or the cue sends (Cues). The signal presence indicators in the upper left corner light up when the source channel is sending data to the Phones channel.

3) **Signal Level**

Allows you to set the signal level. [Ctrl]/[Command]-click to set the level to the reference level specified in the **Preferences** dialog (**VST–Control Room page**).

4) **Activate Metronome Click**

Activates the metronome click.

5) **Click Level and Click Pan**

Use the **Click Level** and **Click Pan** controls to set the volume and the pan position of the metronome click.

6) **Enable Listen for Output**

Enables the listen bus function.

7) **Listen Level**

Allows you to set the listen level.

Control Room Channel

The Control Room channel is the representation of the bus that is set up as the Main Mix bus on the **Outputs** tab in the **VST Connections** window or the one that is selected as monitor source.



The following section contains a description of the individual controls.



1) **Activate Control Room Channel**

Allows you to activate/deactivate the Control Room channel.

2) **Signal Level**

Allows you to set the volume for the Control Room output. This does not affect the recording input level or the Main Mix level for exporting mixdowns. [Ctrl]/[Command]-click to set the level to the reference level specified in the **Preferences** dialog (**VST-Control Room** page).

3) **Signal Meter**

Shows the volume for the Control Room output.



1) **Source Selectors**

Allow you to select the source for the Control Room channel. The available sources depend on the channels that you added to the Control Room. The signal presence indicators in the upper left corner light up when the source channel is sending data to the Control Room channel.

2) **Dim Signal**

Activate this to lower the Control Room level by a fixed amount. This allows a quick reduction in monitor volume without disturbing the current monitor level. Clicking the **DIM** button again returns the monitor level to the previous setting.

3) **Use Reference Level**

Enable this button to set the Control Room level to the reference level specified in the **Preferences** dialog (**VST–Control Room** page). The reference level is the level that is used in calibrated mixing environments, such as film dubbing stages.

4) **Activate Metronome Click**

Activates the metronome click.



1) **Monitor Selectors**

Allow you to select another monitor source.

2) **Downmix Preset Selectors**

Allow you to select another downmix preset.

3) **Activate Talkback**

Allows you to activate talkback for communication between the Control Room and the performers in the studio. Click to activate, click and hold for momentary mode.

4) **Talk Off**

If you add more than 1 talkback channel, **Talk Off** becomes available. This allows you to deactivate all activated talkback channels.



1) **Click Level and Click Pan**

Use the **Click Level** and **Click Pan** controls to set the volume and the pan position of the metronome click for the Control Room channel.

2) **AFL/PFL**

Allows you to determine whether the signal of a listen-enabled channel is routed to the Control Room channel after applying the fader and pan settings (AFL) or before applying the fader and pan settings (PFL).

3) **Enable Listen for Output**

Enables the listen bus function for the Control Room output.

4) **Listen Level**

Allows you to adjust the volume of listen bus signals that are routed to the Control Room output.

5) **Listen Dim**

Allows you to adjust the volume of the Main Mix (or monitor source) when channels are in listen mode. This keeps listen-enabled channels in context with the Main Mix. If the **Listen DIM** level is set to the minimum value, you only hear the listen-enabled channels.

6) **Talk Dim**

When **Talkback** is active, this slider controls how much the output of all the channels in the Control Room Mixer is reduced, to prevent unwanted feedback.

Control Room Setup

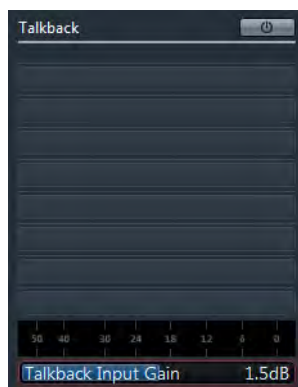
The **Control Room** setup contains additional settings for the channels.

- To open the **Control Room** setup, click the **Setup** tab at the bottom right of the Control Room.

The **Control Room** setup is divided into a number of sections that you open by clicking their headers.



Input Gain

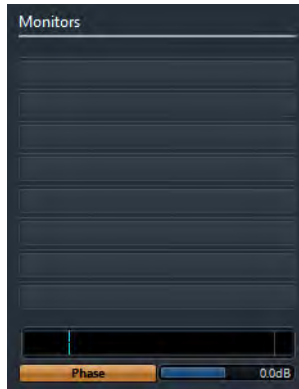


Setting up the input gain can be useful in the following situations:

- To balance the level of external inputs, that is CD players and other sources to the Main Mix level, for A/B comparisons.

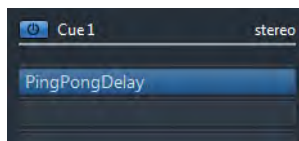
- To balance the level of your monitor systems, so that switching between sets of speakers does not change the playback volume.

Input Phase



Reversing the input phase can be useful for external inputs and monitor speaker outputs.

Insert Effects



Each Control Room channel has a set of insert effect slots.

- Use the inserts on the Control Room channel for metering and spectral analysis plug-ins.

All solos including the Listen bus will come through the Control Room channel and allow analysis of individual sounds. A brickwall limiter in the last insert slot of the Control Room channel can prevent accidental overloads and damage to speaker systems.

- Use the inserts for the talkback channel to control the dynamics of the talkback microphone.

This will help protect performers' hearing and ensure that everyone can be heard over the talkback microphone.

- Use the monitor inserts for surround decoding or brickwall limiting to protect sensitive monitor speakers.

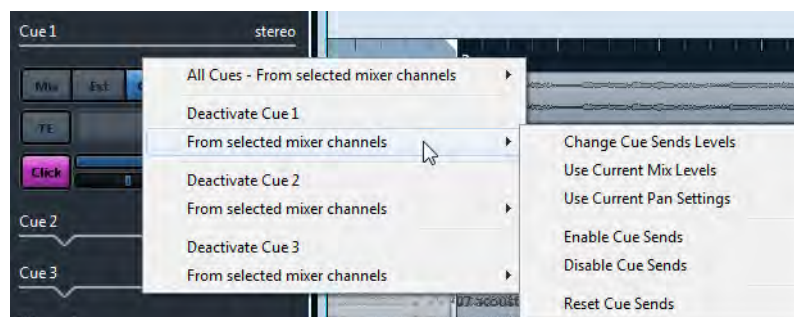
Each monitor channel has a set of eight inserts, all of which are post Control Room fader.

Setting Up a Cue Mix

You can create a cue mix from the fader and pan levels that are used in the **MixConsole** and change them to meet the needs of the individual performers.

PROCEDURE

1. In the **MixConsole**, select the channels from which you want to copy the settings.
2. In the **Control Room**, right-click on a cue channel to open the context menu. This applies the function only to this cue channel.
 - If you want to apply the function all cue channels, click anywhere but on a cue channel to open the context menu.
3. Select **From selected mixer channels** and select one of the functions.



Cue Mix Context Menu

Change Cue Sends Levels

Allows you to adjust multiple send levels at the same time.

Use Current Mix Levels

Allows you to copy the fader levels of the selected tracks to the cue sends. This sets all cue send levels for the selected tracks to the level of the main channel fader. It also changes the cue send status to pre-fader, so that changes in the main mix do not affect the cue sends.

Use Current Pan Settings

Allows you to copy pan information from the main mix to the cue sends of the selected tracks. If the cue send is mono, the pan setting is copied, but the output of the cue send is the sum of the left and right channels.

Enable Cue Sends

Allows you to activate the cue sends of the selected channels. To be able to hear the cue mix for a cue channel, the cue sends must be enabled.

Disable Cue Sends

Allows you to disable the cue sends of the selected channels.

Reset Cue Sends

Allows you to deactivate the cue sends, to change the send level of all selected channels to 0 dB and to set the signal source to post-fader. This way, any changes to the main mix also change the cue mix. To raise the level of individual cue channels, raise the level on that channel.

Adjusting the Overall Cue Send Level

You can adjust multiple send levels at the same time for the cue send mix, keeping the blend intact while lowering the overall volume. This is sometimes necessary, because the levels in the main mix are often optimized for the loudest possible signal level without clipping. This means that when you create a “more me” mix, you may find that there is not enough headroom available in the cue send to raise levels without introducing clipping.

PROCEDURE

1. In the **MixConsole**, select the channels that you want to modify.
 2. In the **Control Room**, right-click a cue channel to open the context menu.
 3. Select **From selected mixer channels > Change Cue Sends Levels**.
 4. Activate **Relative Mode**.
This way, you adjust the existing levels. By deactivating **Relative Mode**, all cue sends are set to the same absolute level.
 5. Adjust the level as necessary.
The level of all selected cue sends is adjusted by the set amount.
 6. Click **OK**.
-

Loudness

Nuendo allows you to measure the loudness in compliance with the loudness recommendation R 128 of the European Broadcasting Union (EBU). Measurements that correspond to this recommendation consider loudness, loudness range, and maximum true peak level values.

Loudness Measurement

The following measurements are performed:

- **Integrated Loudness**

Average loudness that is measured over the whole track in LUFS (Loudness Unit, referenced to Full Scale).

According to the loudness recommendation R 128, audio should be normalized at -23 LUFS (± 1 LU).

- **Short-Term Loudness**

Loudness that is measured every second on an audio block of 3 seconds. This gives information about the loudest audio passages.

- **Momentary Loudness**

Maximum value of all momentary loudness values that are measured every 100ms in an audio range of 400ms.

Loudness Range

This measures the dynamic range over the whole title in LU (Loudness Units). It reports the ratio between the loudest and the quietest non-silent sections. The audio is divided into small blocks. Every second there is one audio block, and each block lasts 3 seconds so that the analyzed blocks overlap.

The top 10% of the quiet blocks and the top 5% of the loud blocks are excluded from the final analysis. The calculated loudness range is the ratio between the loudest and quietest remaining audio blocks. This measurement helps you to decide if and how much compression or expansion you can or should apply to the audio.

True Peaks

When a digital signal is converted to an analog signal, EBU R 128 recommends that you rather measure an estimation of the real peaks instead of relying on digital peaks. This avoids clipping and distortion.

Naming and Units

The EBU R 128 proposes the following naming and units conventions:

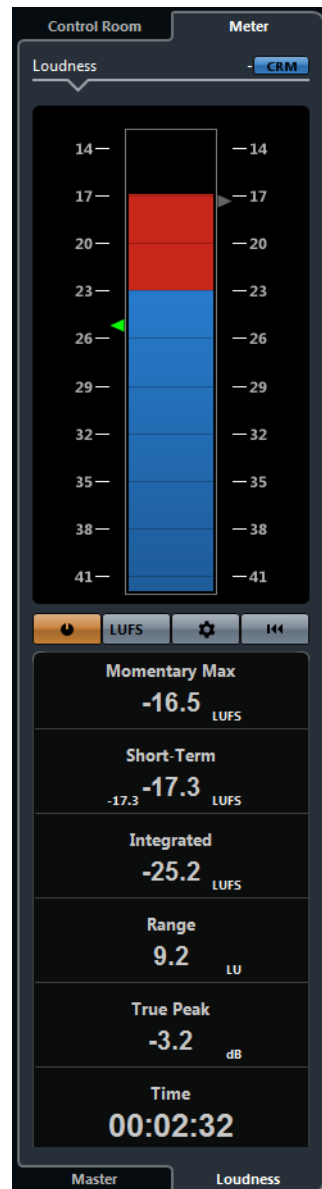
- A relative measurement, such as a value that is relative to a reference level: LU as Loudness Unit (1 LU is 1 dB).
- An absolute measurement, LUFS as Loudness Unit referenced to Full Scale. 1 LUFS can be understood as 1 dB in the AES-17 scaling.

Loudness Meter

The loudness meter allows you to analyze, measure, and monitor the loudness of your project in real-time during playback or mixing.

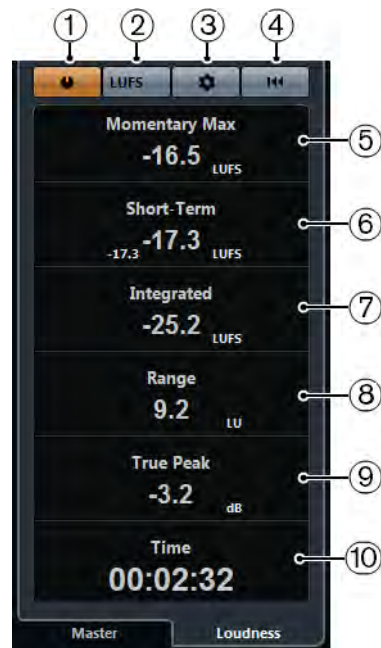
NAVIGATION PATH

Devices > Control Room Mixer > Meter > Loudness > Configure Loudness Settings



- The green triangle on the left side shows the integrated loudness value.
- The gray triangle on the right side shows the short-term loudness.

The following parameters are available:



- 1) **Measure Loudness**
Allows you to activate the loudness measurement.
- 2) **Switch between LU and LUFS**
Allows you to switch the meter scale between LU (relative values) and LUFS (absolute values).
- 3) **Configure Loudness Settings**
Opens a dialog with further loudness settings.
- 4) **Reset Loudness**
Allows you to reset the loudness measurement.
- 5) **Momentary Max.**
Shows the maximum of all measured momentary loudness values.
- 6) **Short-Term**
Shows the loudness that is measured over a duration of 3s.
- 7) **Integrated**
Shows the average loudness that is measured from start to stop. The period of measurement is shown in the **Time** display. The recommended value for the integrated loudness is -23LUFS. This absolute value is the reference point for the relative LU scale where -23LUFS equals 0LU.
- 8) **Range**
Shows the dynamic range of the audio that is measured from start to stop. This value helps you to decide how much dynamic compression you can apply. The range that is recommended for highly dynamic audio, like film music, for example, is 20 LU.

9) **True Peak**

Shows the true peak level of the audio. The maximum permitted true peak level in production is -1 dB.

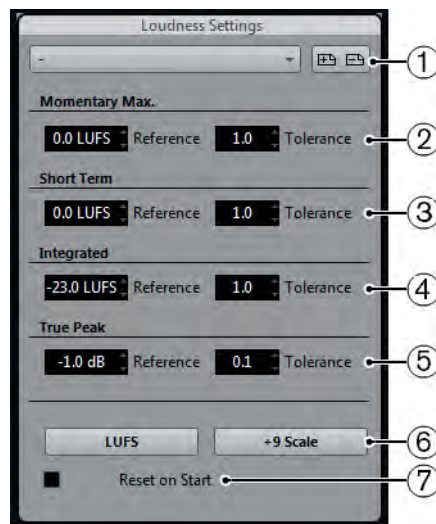
10) **Time**

Shows the duration of integrated loudness measurement.

Loudness Settings

NAVIGATION PATH

Devices > Control Room Mixer > Meter > Loudness > Configure Loudness Settings



The following parameters are available:

1) **Select Preset**

Allows you to create, load, and remove loudness presets.

2) **Momentary Max.**

Allows you to specify a reference value and a tolerance value for the maximum momentary loudness. If higher values are detected, the clipping indicator in the loudness meter turns red.

3) **Short-Term**

Allows you to specify a reference value and a tolerance value for the short-term loudness. If higher values are detected, the clipping indicator in the loudness meter turns red.

4) **Integrated**

Allows you to specify a reference value and a tolerance value for the integrated loudness. If higher values are detected, the clipping indicator in the loudness meter turns red.

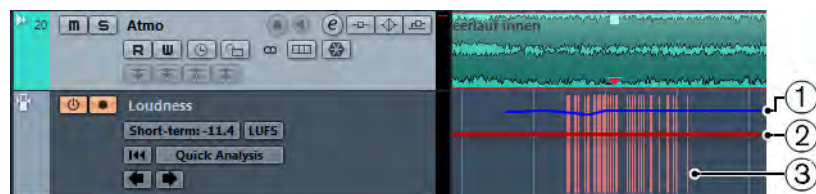
- 5) **True Peak**
Allows you to specify a reference value and a tolerance value for the true peak level. If higher values are detected, the clipping indicator in the loudness meter turns red.
- 6) **Switch between LUFS and LU**
Allows you to switch the meter scale between LUFS (absolute values) and LU (relative values).
- 7) **Switch between EBU +9 Scale and EBU +18 Scale**
Allows you to switch the meter scale between EBU +9 and EBU +18.
- 8) **Reset on Start**
Activate this to reset all values on playback start.

Loudness Track

The loudness track allows you to record the loudness of your whole project or of specific sections.

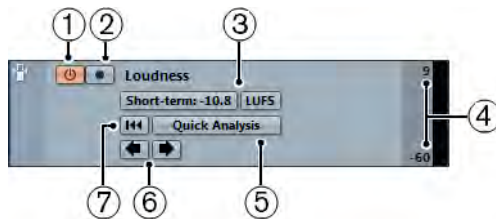
NAVIGATION PATH

Project > Add Track > Loudness



- 1) **Loudness curve**
Shows the loudness values that were detected during the loudness measurement.
- 2) **Reference loudness level**
Shows the EBU R-128 reference loudness level of -23 LUFS (0 LU).
- 3) **True peaks**
Shows the detected true peaks that exceed the reference value that you can set up in the **Loudness Settings** dialog.

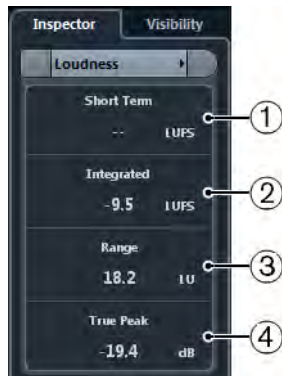
Loudness Track Controls



- 1) **Activate Loudness Calculation**
Allows you to activate the loudness calculation.
- 2) **Enable Recording of Loudness Curve**
Allows you to record the loudness curve on the loudness track.
- 3) **Switch Between LU and LUFS**
Allows you to switch the meter scale between LU (relative values) and LUFS (absolute values).
- 4) **Visible Loudness - upper/lower limit**
Allows you to adjust the visible loudness. Click the values for the upper or lower limit, and drag the slider up or down.
- 5) **Quick loudness analysis**
Allows you to perform a quick loudness analysis of the section that is encompassed by the left and right locators.
- 6) **Jump to previous/next True Peak**
Allows you to jump to the previous/next true peak in the loudness curve.
- 7) **Clear Loudness Curve**
Allows you to clear the loudness curve.

Loudness Track Inspector

The loudness track inspector shows the most important values of the loudness meter.



1) **Short Term**

Shows the loudness that is measured over a duration of 3 s.

2) **Integrated**

Shows the average loudness that is measured from start to stop. The period of measurement is shown in the **Time** display. The recommended value for the integrated loudness is -23LUFS. This absolute value is the reference point for the relative LU scale where -23LUFS equals 0LU.

3) **Range**

Shows the dynamic range of the audio measured from start to stop. This value helps you to decide how much dynamic compression you can apply. The range that is recommended for highly dynamic audio like film music is 20 LU.

4) **True Peak**

Shows the true peak level of the audio. The maximum permitted true peak level in production is -1 dB.

Measuring Short-Term Loudness during Playback

You can record and display the short-term loudness during playback as a curve on the loudness track.

PREREQUISITE

You have added the loudness track to your project.

PROCEDURE

1. In the track list for the loudness track, activate **Activate Loudness Calculation**.

By default, loudness calculation is deactivated for performance reasons.

2. Activate **Enable Recording of Loudness Curve**.
 3. Play back your project.
-

RESULT

The short-term loudness level is measured in real-time at the cursor position. The corresponding loudness curve is written to the loudness track.

Measuring Short-Term Loudness Off-Line

You can record and display the short-term loudness for a defined section only on the loudness track using off-line analysis.

PREREQUISITE

You have added the loudness track to your project.

PROCEDURE

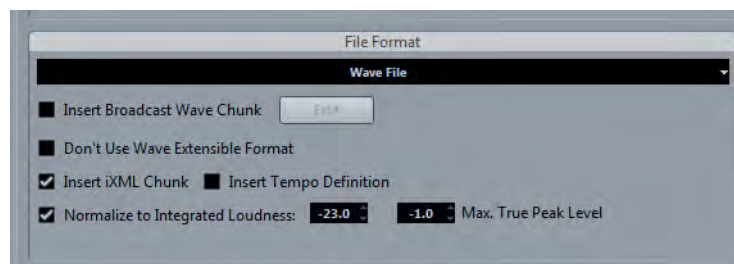
1. Set up the left and right locators to encompass the section that you want to analyze.
 2. In the track list for the loudness track, activate **Activate Loudness Calculation**.
By default, loudness calculation is deactivated for performance reasons.
 3. Click **Quick Analysis**.
-

RESULT

The loudness curve is created for the defined section and displayed on the loudness track.

Normalizing Loudness on Export

You can normalize your audio to the integrated loudness on export. However, this is only suited for small level deviations and does not compensate for proper mixing.



- **Normalize to Integrated Loudness**
Activate this to normalize your audio to the integrated loudness value specified in the field to the right.
- **Max. True Peak Level**
Activate this to limit the peak levels to the value specified in the field to the right.

New Plug-Ins

About the New Plug-Ins

The new plug-ins are listed below.

Bass Manager

This plug-in allows you to achieve full-range sound even if your speakers or your LFE are small.

REVeLation

This plug-in produces a high-quality algorithmic reverb with early reflections and reverb tail.

Magneto II

This distortion plug-in simulates the saturation and compression of recordings on analog tape machines.

LoopMash FX

This plug-in is a live performance effect offering DJ effects that can be controlled by a MIDI keyboard.

Gate Improvements

This plug-in now features an additional **Range** parameter which defines the amount of attenuation when the gate is closed. This new parameter is also available in the **Channel Strip** module of the **MixConsole**.

HALion Sonic SE 2

This synth is the successor to HALion Sonic SE with a revised graphical user interface and the new analogue synth module Trip.

Groove Agent SE 4 (NEK only)

This drum sampler is the successor to Groove Agent ONE with enhanced functionality. Its familiar MPC-style layout with 128 pads allows you to create your beats.

VST Connect SE 2

This plug-in is the successor to VST Connect SE. It allows you to collaborate with other musicians around the globe and communicate peer-to-peer. Record your performances with sample-accurate sync and use the video feed, talkback, and chat functions.

NOTE

For detailed information, refer to the following separate documents: “Plug-in Reference”, “HALion Sonic SE”, “Groove Agent SE”, “VST Connect SE”.

Further Improvements

Steinberg Hub

When you start Nuendo, when you open projects, or when you create new projects using the File menu, Steinberg Hub opens. Steinberg Hub keeps you up to date with the latest information and assists you with organizing your projects.

- If you do not want to make use of the functions of Steinberg Hub, select **File > Preferences > General** and deactivate **Use Steinberg Hub**.
- To open the last project on startup, select **File > Preferences > General** and activate **Open last Project on Start Up**.

Drum Maps and VST3 Instruments (NEK only)

If you select a VST3 instrument such as Groove Agent SE 4 as an output for a MIDI or instrument track, you can create a new drum map that contains the pitch and name data that is provided by the instrument.

Creating a Drum Map for Groove Agent SE

You can create a drum map for MIDI or instrument tracks that are routed to Groove Agent SE.

PREREQUISITE

You have created a MIDI or instrument track and loaded Groove Agent SE.

PROCEDURE

1. In the **Inspector** for the track, open the **Drum Maps** pop-up menu, and select **Create Drum Map From Instrument**.
2. In the **Drum Maps** pop-up menu, select **Drum Map Setup**.

3. In the **Drum Maps** list of the **Drum Map Setup** dialog, select Groove Agent SE.

The sounds and settings of the Groove Agent SE drum map are displayed to the right. The instruments and pitches correspond exactly those shown in Groove Agent SE.

NOTE

If you select a MIDI part and select **MIDI > Open Drum Editor**, the drum sound list shows exactly the same settings.

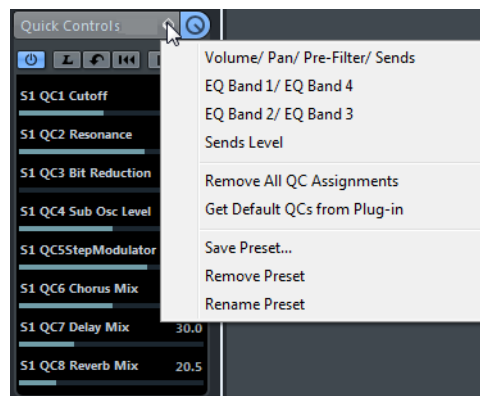
Track Quick Control Presets

For audio, instrument, MIDI, FX, and group tracks, you can now save and load your own Quick Control assignments as presets or use the factory presets.

Saving/Loading Track Quick Control Assignments as Presets

PROCEDURE

1. In the **Inspector** for your track, open the **Quick Controls** section.
For instrument tracks, the track quick controls are set to the 8 default VST quick controls of the loaded instrument by default.
2. Click **Preset Management** in the top right corner of the **Inspector** section and select one of the presets.



The Track Quick Control assignment changes and gives you access to the channel parameters.

NOTE

You can also make your own assignments and save them as presets and delete, rename, or reset the presets to the default assignments.

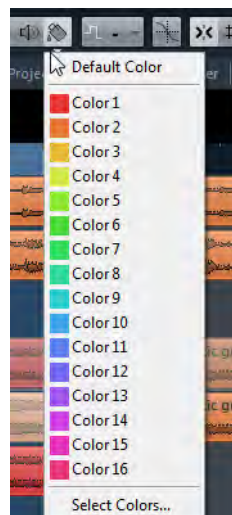
Color Management

Coloring Tracks, Parts, or Events Manually

The **Color** tool on the **Project** window toolbar allows you to color each track, part, or event individually.

PROCEDURE

1. In the **Project** window, do one of the following:
 - To change the color of an event or part, select it.
 - To change the color of a track, select the track and deselect all its events or parts.
2. On the toolbar, select the **Color** tool, then click again, and select a color from the pop-up menu.



The color is applied to the selected item. If you change the color of a track, the new color is used for all events on the track and for the corresponding channel in the **MixConsole**.

NOTE

If you assign a different color to individual parts or events, they no longer follow color changes of the track.

Resetting the Default Color

You can reset the color of a track, part, or event to the default color.

PROCEDURE

1. In the **Project** window, select the event or part that you want to reset to the default color.
 2. On the toolbar, select the **Color** tool, then click again, and select **Default Color** from the pop-up menu.
-

Project Colors Dialog

The **Project Colors** dialog allows you to set up a different set of colors for items in the **Project** window.

- To open the **Project Colors** dialog, select the **Color** tool in the **Project** window toolbar. Click again to open a pop-up menu and select **Project Colors**.



Color fields

Click a field to open a color selector pane that allows you to specify a new color.

Click **Options** for the following options.

Append New Color

Adds a new color button at the bottom of the color list.

Insert New Color before Selection

Adds a new color button above the selected color button.

Remove Selected Color

Removes the selected color.

Reset Selected Color

Resets the selected color to the factory settings.

Increase/Reduce Intensity of all Colors

Increases or reduces the intensity of all colors.

Increase/Reduce Brightness of all Colors

Increases or reduces the brightness of all colors.

Save Current Set as Program Defaults

Saves the current set of colors as default.

Load Program Defaults to Current Set

Applies the default set of colors.

Reset Current Set to Factory Settings

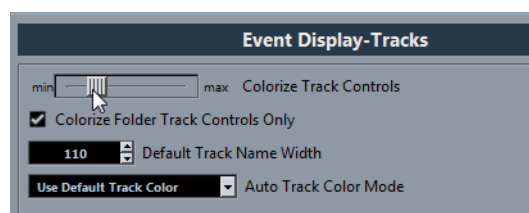
Returns to the standard color palette.

Colorize Only Folder Track Controls

You can restrict the effect of the **Colorize Track Control** function to folder tracks only. This is useful in projects with a large number of tracks and folder tracks.

PROCEDURE

1. Select **File > Preferences > Event Display > Tracks**.
2. Drag the **Colorize Track Controls** slider to the right.



3. Activate **Colorize Only Folder Track Controls**.
 4. Click **OK**.
 5. In the track list, select the folder track that you want to colorize.
 6. In the **Project** window toolbar, select the **Color Tool** and click again to select a color.
-

RESULT

Only the folder track controls are colorized.

Project Logical Editor Improvements

The **Project Logical Editor** has been expanded by additional parameters that allow you to edit the visibility of tracks.

NOTE

Automation tracks are only affected if they are open. The visibility of scale events cannot be edited.

New Parameters

New options have been added to the **Project Logical Editor**.

- Select **Edit > Process Project Logical Editor > Visibility**, and select a visibility option from the menu.

If you create your own Project Logical Editor visibility presets, you can also move them to the **Visibility** folder.

Media Type

For the filter target **Media type**, the parameters **Video**, **Group**, and **Effect** have been added.

Property

For the filter target **Property**, the parameters **Is Hidden** and **Has Track Version** have been added.

Track Operation

For the action target **Track Operation**, the operation **Hide Track** has been added. The available parameters are **Enable**, **Disable**, and **Toggle**.

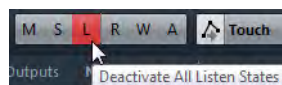
Project Window Improvements

The **Project** window toolbar has been expanded by additional tools.

New Project Window Tools

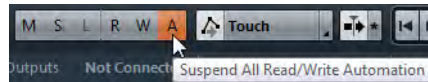
Deactivate All Listen States

Allows you to deactivate all listen states simultaneously.



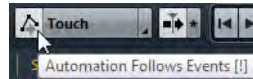
Suspend All Read/Write Automation

Allows you to suspend all read or write automation.



Automation Follows Events

Activate this button if you want your automation events to follow automatically when you move an event or part on a track.



MIDI Monitoring Improvements

MIDI Record Preference

If you are recording MIDI data and monitor via an external MIDI sound generator, you can activate a new MIDI record preference. This option prevents hearing doubled notes on record-enabled tracks that have a VST instrument assigned.

NAVIGATION PATH

Preferences > Record > MIDI

Deactivate MIDI Thru for Record Enable

Activate this option if you do not want record-enabled MIDI or instrument tracks to echo incoming MIDI data.