

Additional new features in Nuendo 4

New Feature	Description
VST Plug-in Bridge	The new VST Plug-in Bridge in Nuendo 4.1 ensures maximum compatibility of plug-ins. 32-bit Windows versions of plug-ins and instruments can be used in Vista 64. Mac PPC-only versions of plug-ins can be used in Nuendo on Macs with Intel processors. Although not free of additional performance load, VST Plug-in Bridge can provide invaluable plug-in compatibility where a native (64-bit or Universal Binary) version of a plug-in or instrument is not available.
Updated WK-Audio ID Support	Support for the WK Audio ID controller has been improved by mapping numerous additional Nuendo functions onto the ID surface. The new Nuendo 4 automation system can be controlled from ID making Nuendo 4 and ID an even better couple during mixing situations. Also the Jog/Scrub wheel of the ID has been upgraded and outfitted with a range of new functionalities to allow Wheel Editing such as trimming, slipping and zooming events as well as modifying their fades easily with help of the wheel. Many smaller workflow improvements have been made such as the ability to switch Studio Sends Pre/Post, assign even more User Buttons or switch the operational range of the VU meters on the hardware.
Use Mouse Wheel for Event Volume and Fades	A new preference allows usage of the mouse wheel to manipulate Event Volume and Fades by simply rolling over an event and access the volume or fade curve (with a key modifier) by using the mouse wheel.
Fade Handles always-on-top option	A new preference called "Fade handles always on Top" grants improved access to fade in/out handles even if the Event volume is at a very low level and thus the fade handles become harder to grab.
Advanced QuickTime 7 Support 	<p>QuickTime compatibility has improved for Nuendo 4 in several areas making Nuendo compatible with the latest and most popular video formats and offering more flexibility and enhanced image quality.</p> <ul style="list-style-type: none"> • MPEG1/ MPEG4 formats and .H264 codec are now supported • "Replace Audio in Video File" now works with every QuickTime audio file format • "HQ" flag support (high-resolution video playback) • Quick access to Half/Double Size support of the video window
Separate <i>Goto Timecode</i> command window	The much used <i>Goto Timecode</i> command which in earlier Nuendo versions did always open the complete Transport Bar has been reduced to a very small and separate window that pops up when the "Shift P" key command is executed and the Transport bar is not open. The cursor is now awaiting the user entry in the "seconds field" and simply pressing the Enter button executes the jump to the new desired Timecode position and closes the timecode entry field.
Load Projects inactive	Support for multiple projects opened at the same time is one of the major advantages of Nuendo. In version 4, this feature has become even more useful. With one or more projects opened at the same time, opening another project brings up this message: "Do you want to activate the project?" Opening a project inactive significantly reduces loading time, especially for large projects. With multiple projects opened, parts or entire sections can easily be copied (also drag and drop) from one project to another.
Apple Remote support 	Mac users who are in the possession of an Apple Remote will be pleased to find their little infrared remote control is available as a remote device in Nuendo 4. "Apple Remote Control" is now available from the device setup window. It is already programmed with preset functions but it's fully programmable with hundreds of available functions. (OSX-only)
Direct X ASIO 64 Bit	An ASIO DirectX Full Duplex Driver can be installed with Nuendo to support DirectX audio support of Nuendo in 64-bit Windows Vista.
New File Type: MIDI Loop	Nuendo 4 supports a new file type "MIDI Loop". By our definition, a MIDI Loop is a combination of a MIDI file and an associated track preset.

Arranger Track (formerly “Play Order Track”) New performance functions	<p>For consistency reasons, the “Play Order Track” has been renamed “Arranger Track”. In addition, some major features have been added to this part of Nuendo:</p> <ul style="list-style-type: none">• Arranger parts can be triggered live (by clicking in the part list) to experiment with different arrangements• Special playback modes allow for new live performance applications: Normal (part is played back with a specified number of repeats); Repeat Forever (part is looped indefinitely, until the space bar is pressed and the chain continues to the next part); Pause After Repeats (Chain is stopped after the current part has finished; hitting the Space continues playback with the next step).• Various “Flatten” options have been added to the Arranger Track edit window. One, multiple or all Chains can be flattened with a single command; the Arranger Track can be kept after flattening;
MP3 Surround	<p>The latest Fraunhofer MP3 codecs are included with Nuendo 4. MP3 Surround is a special extension to the existing MP3 format which encodes multi-channel audio information into a compressed file that is playable on both stereo and surround playback systems. MP3 Surround is a convenient way to deliver multi-channel audio files in a space-saving compressed format. With the great benefit of backwards-compatibility to MP3 Stereo, a single MP3 Surround file can be used even if there’s no surround playback hardware present.</p>
Global Track Transpose	<p>A new track type has been added: Transpose. With the global Transpose track it is easy to sketch out arrangements based on loops, or experiment with chord progressions without having to edit each part on each track individually. It affects all Audio, MIDI and Instrument Tracks. Transpose events can be entered using the pen tool and edited by clicking on the value. The Transpose Track can be deactivated using a Mute button. As a special feature, it includes a “Bound” function to keep transpose within the range of one octave. It keeps transpositions within a musical range and prevents unnatural-sounding artefacts when audio events are transposed. In addition to the global Transpose Track, there’s a new Project Root Key, which – when edited – affects the entire project including the Transpose Track.</p>
New Trim Tool	<p>A long requested feature from MIDI power-users is now included in Nuendo 4: The key editor has a new tool to cut the heads or tails of multiple selected MIDI events which is great when for example creating arpeggiated chords, strums or more accurate note-offs.</p>

Important Product Improvements

In direct consultation with users and industry partners, Steinberg has implemented a range of enhancements to existing Nuendo functionality to offer more streamlined and powerful tools in a range of tasks and processes.

Improvement	Description
Improvement for Output Configuration of VSTi's	Virtual Instruments with multiple outputs no longer create return channels for each available output. Instead, the user can change the output configuration on the fly so that managing multiple-output VSTi's has become a lot more flexible.
Improved Channel Strip	Just like the Track Inspector, the Channel Strip window for audio and MIDI tracks can now be custom configured as well. Sections can be switched on or off, and their left-to-right order can be changed as well. Configurations can be saved as view presets allowing for greater flexibility in working with the Channel Strip view.
Improved Waveform Resolution	The waveform zoom slider has been re-scaled to provide a much enhanced graphical waveform view. While former versions of Nuendo only granted a usable graphical representation of levels down to approximately -55 dB, Nuendo 4 allows you to easily view the waveform of events with levels as low as -75 dB or less.
Improved Audio Warp Real-time Transpose	A new real-time audio pitch-shifting and time-stretching algorithm has been added to provide formant preservation. Solo tracks such as vocals or single instruments can now be transposed in real-time without the unwanted artifacts of formant shifting.
Track Control Context Functions Improvements	All functions of the Track Controls Context menu are applied to all selected tracks instead of having separate entries at the bottom of the menu (e.g. remove track / remove selected tracks).
Improvements on the Track Inspector	With more and more items added to the Track Inspector, visibility has suffered especially on smaller monitors but as part of the UI redesign, the track inspector can now be custom configured for each track type. Any Inspector section can be switched on or off, plus the order of sections can be changed. Furthermore, configurations can be stored as view presets and quickly recalled. With the new configuration features, Nuendo users can customize the Track Inspector to their taste and improve overall usability of this important Nuendo feature.
Improved Audio & MIDI Hardware Setup	Audio and MIDI Hardware Setup control panels have been consolidated and simplified. Management of missing or replaced hardware has been improved as well. This not only improves the entire hardware setup and management process, it also speeds up the entire workflow, especially when projects are exchanged between users working on different hardware setups. The parameters of the Audio and MIDI Hardware Setup panels are now consolidated and better organized plus the port handling has been simplified.
Track Sheet Printing Improvements	The Track Sheet Printing functionality in Nuendo has been improved by integration of automated word-wraps to display even longer event naming and a switch to enable or disable the "Merge Events" function which joins Events in the Track Sheet display depending on the length of the gap between them.
Time Displays Windows Improvements	The Time Display windows which display Timecode, Feet & Frames, Samples and Bars and Beats now display the selected format in the top of their window to allow quick identification of content especially when multiple Time Display windows should be in use.
Improved Remote Controller Support	Aside from the massive updates to the EuCon adapter and the WK-Audio ID Controller the support for many additional remote controllers has been improved in Nuendo 4. The list of controllers which have been improved include the Mackie Control and Mackie HUI, Steinberg's Houston, SAC-2K, Yamaha 01X and DM 2000. Depending on the individual hardware feature sets of the different controllers, new functionalities include support for Instrument Tracks, Track Quick Controls, Studio Sends as well as support for relevant parts of the Nuendo 4 automation system.

Improved XML scripts for EuCon mapping of VST plug-in parameters

Nuendo 4 also introduces an improved way for controlling the order of plug-in parameters as they appear on the Euphonix hardware remote controller. Nuendo 4 supports custom mapping (XML programming know-how required) using powerful XML scripts even better than before. These new scripts allow customizing order, display-naming, knob-behaviour, linking, duplicating, or grouping of parameters – and more! Probably the most powerful implementation of its kind, this new XML mapping allows the deepest Euphonix hardware controller integration ever in any version of Nuendo. The XML scripts can be created (XML programming know-how required) per plug-in by plug-in developer, HW-controller developers or even by the user himself using simple XML editing tools.

ADM (ASIO Direct Monitoring) Improvements

Handling of the ASIO Direct Monitoring (ADM) technology has been improved. The calculations of the signal levels which Nuendo 4 reports to the ASIO device for ADM monitoring signals have been updated now taking into account the complete Nuendo Mixer signal flow. This way the reported information used by the external audio device to control the level of the ADM Signal is more accurate by calculating the level settings throughout the signal flow from the input channel to the audio channel through groups and FX returns to output objects.