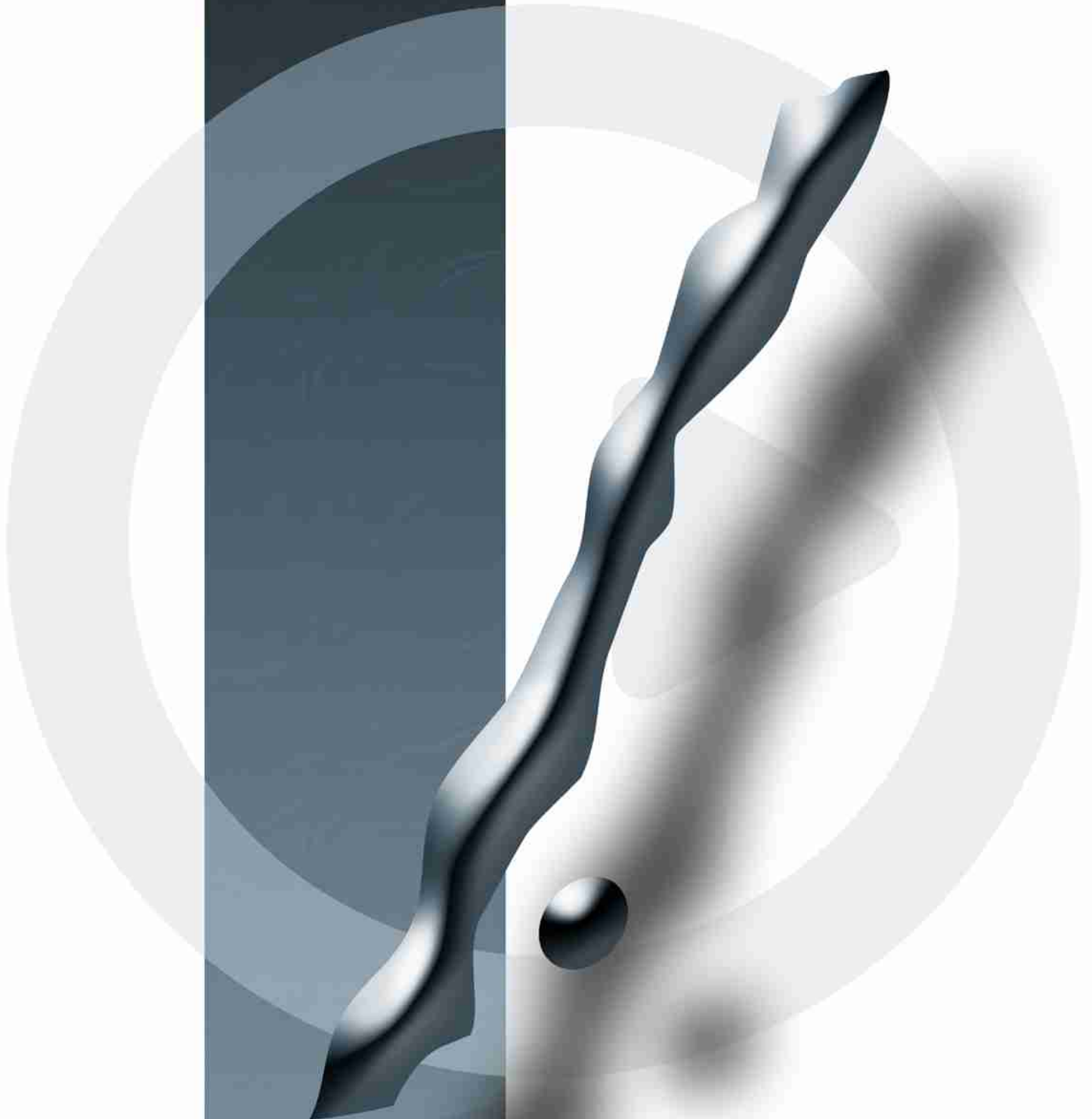


NUENDO^{2.0}

media production system



Contents

- 3 Introduction
- 4 - 5 Nuendo Versatility: Do It Your Way
- 6 - 7 Audio Recording and Editing
- 10 - 13 Mixing in Nuendo 2.0
- 14 - 15 Applications for Nuendo
- 16 - 17 Surround Components
- 18 - 19 Audio Recording Hardware
- 20 Nuendo Timebase Synchroniser
- 21 Nuendo 2.0 Feature List



The Nuendo Media Production System.

You decide.

Audio professionals today are confronted with a huge range of audio production solutions, based on different software technologies, system standards and hardware platforms. It can be difficult keeping an overview of all the competing systems on the market. While the Nuendo Media Production System is not the only one available, we at Steinberg firmly believe it can give you what you're looking for. Nuendo is the alternative you might want to take seriously.

Ahead of its time

Since its launch in the year 2000, the Nuendo Media Production System has become a byword for innovation and flexibility. Meticulously engineered to meet the needs of audio professionals in music, post production, film, broadcasting, game-sound and multimedia, the latest version of the Nuendo audio software forms the basis of the most forward-looking and versatile media production system available.

Not only does Nuendo 2.0 set new standards in efficiency and performance, Steinberg also offers a complete range of additional top-quality Nuendo hardware and software components that make up the Nuendo Media Production System. Carefully designed for total compatibility and seamless integration, these combine with Nuendo 2.0 to form an audio produc-

tion system unrivalled in its adaptability and cost effectiveness.

The Nuendo Media Production System offers top-quality recording hardware featuring all of today's common interface technologies. Solutions for large-scale input/output environments are available alongside small and portable units for use with laptop computers. A completely redesigned Synchroniser with VST System Link support offers synchronization to tape and video equipment over a host of other formats. Additional software suites like the Nuendo Surround Edition, the Dolby Digital and DTS Encoders or the new Urban Atmospheres 5.1 recorded surround content take full advantage of the groundbreaking surround implementation in the Nuendo 2.0 software.

The culmination of years of expert engineering research, Nuendo 2.0 has been developed to take the advantages of flexible, native systems to a new level of versatility. We believe that Nuendo 2.0 is the pinnacle of professional media production, offering you not just top-flight levels of performance but the ergonomics and adaptiveness to channel that performance more effectively and creatively.



Do things your way

Nuendo doesn't just offer a host of features for audio production, radio broadcast preproduction, multimedia, music, surround mixing and post production. It is customizable for any of those purposes, giving you the clearest oversight possible over your project and optimizing your workflow. At Steinberg, we believe that flexibility and versatility are two of the hallmarks of professional audio software. Embodied in Steinberg's open audio industry standards VST and ASIO, this ethos also forms the guiding principle behind the most advanced audio production software we have ever produced: **Nuendo 2.0**

How does Nuendo 2.0 implement this philosophy? To start with, you can choose which computer platform and operating system you wish to use, because Nuendo 2.0 supports Mac OS X as well as Windows 2000 and XP.

Nuendo 2.0 can increase workflow efficiency for your projects by allowing you to "hide" menu entries and commands that are not needed for that particular project.

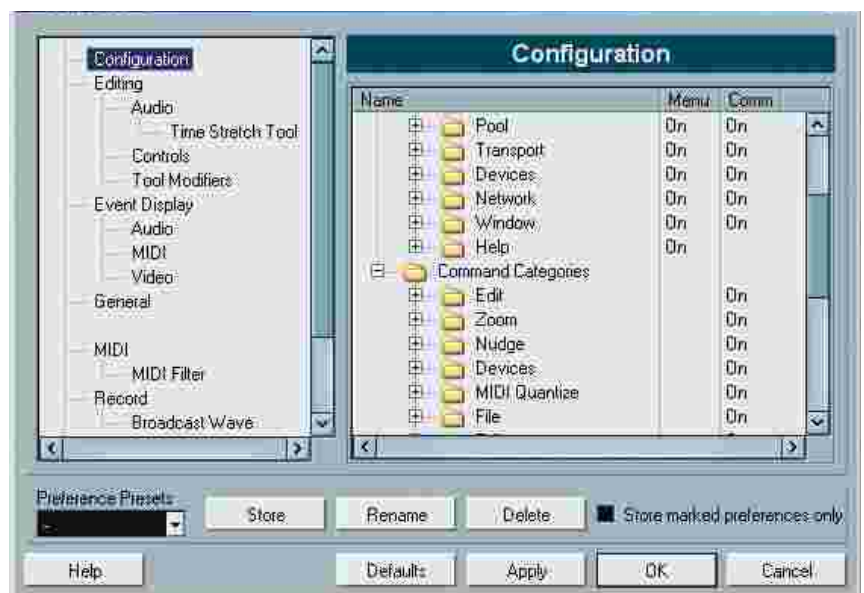
Creative performance

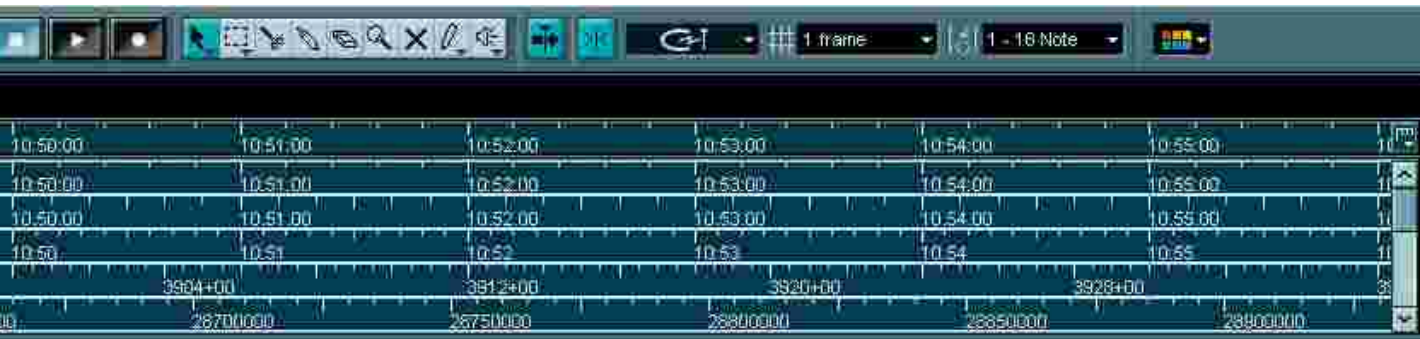
To make the most out of the limitless mixing possibilities Nuendo 2.0 offers, it is also constantly working to make the most out of the processor power available. Because Nuendo 2.0 already supports the new Hyperthreading technology, it can make the most out of the latest generation Intel Hyperthreading-capable processors with an increase in performance of up to 30 percent. You can choose your preferred CPU configuration, because although Nuendo 2.0 is quite happy running on single CPU systems, it also optimized for multithreading across any number of CPUs, ensuring that the work is spread equally between each CPU in your computer.



Command and Control

Nuendo 2.0 offers you the option to hide menu entries that are either generally or temporarily not needed. The configuration menu in the preferences is very easy to use and allows you to hide entire menus including all submenus or even each menu entry individually. These settings naturally also affect the context menus, speeding up your workflow in Nuendo 2.0 immensely. Sometimes less really is more. And because the program settings in Nuendo 2.0 are savable, presets for certain projects or work stages can be constructed and stored. Important presets such as "No MIDI", "No Network Functionality" or "No Video" are provided.





But Nuendo does not stop here. You can also configure the controls for each track to suit your personal way of working. If, for example, you are engaged in audio recordings, Nuendo can instantly be adapted as a pure audio tracker with only a record and a monitoring button on each track. After finishing your recordings you can "unhide" additional functionality as it is needed or switch to a template which immediately gives you access to all track controls again. Nuendo 2.0 lets you do not just what you want, but also choose how you want to do it.

User presets

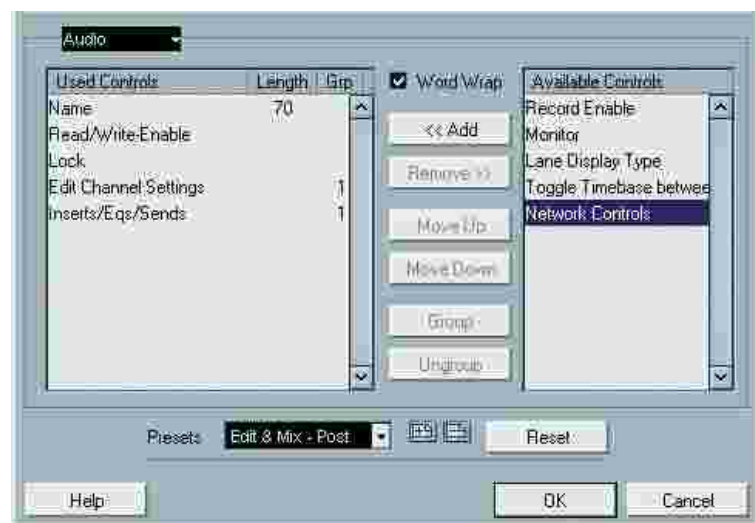
Nuendo 2.0 allows for the storing and recall of user preferences presets. This allows you to recall different system settings for various working situations but also take your preferred settings with you and apply them to another system when you are working on a Nuendo system at another location.

- Cross-platform support for Windows XP, Windows 2000 and Mac OS X
- Steinberg VST and ASIO technologies, with DirectX plug-in support
- Multi-processor support
- Configurable mixer, menus, key commands and track controls

Define your project

Nuendo 2.0 offers a wide range of timeline formats for just about any situation in audio production, including samples, beats/bars, seconds, feet:frame rates of 16mm and 35mm as well as a freely definable frame rate. Using multiple ruler tracks with various timeline formats, you have the correct position in overview for any of your audio, video or MIDI events. Also, the new mixer allows you to show or hide track classes and channel strip sections to adapt to your visual needs.

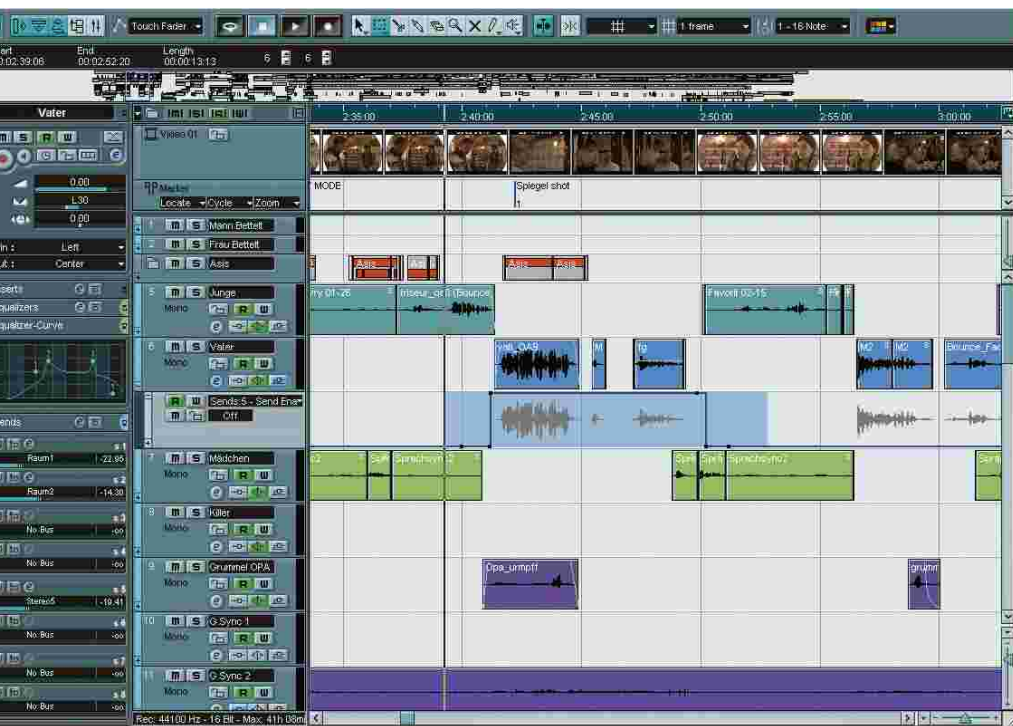
Multiple timelines can be used simultaneously in your project; just choose the timeline suitable for any track.



Multiple track controls configurations for each type of track can be saved as presets, ready for instant recall.



Highest Fidelity. Lowest Hassle.



The Nuendo Project Window gives you a complete, transparent overview of your entire project, with immediate access to track parameters, views "zoom-able" right down to sample level and much more.

Supersonic Recording

The pristine audio quality of up to 32 Bit float, with supported recording sample rates of up to 192 kHz will capture every nuance of your source audio. Processing audio internally at 32 Bit floating point gives you a theoretical headroom of several hundred dB, making it practically impossible to introduce digital clipping. You have the choice of a variety of record formats, including Wave, Broadcast Wave, AIFF and Wave64, for long duration recordings. A variety of record modes suit any approach, with the new stacked record mode allowing the compiling of takes directly in the Project Window.

The innovative multi-channel Nuendo 2.0 architecture¹ lets you record not only in mono, stereo and 5.1 but in all common surround formats up to 10.2. Record your surround material either as individual files or interleaved as one file, in the destination folder of your choice.

- Unlimited Undo/Redo
- 192 kHz, 32 Bit Float pristine audio quality
- Non-destructive editing system
- Surround recording
- Offline Processing with History



Creating and editing detailed crossfades has never been easier than with the new Nuendo 2.0 Crossfade Editor.

Recording to timecode is no longer a chore. The online recording function puts Nuendo 2.0 in record mode as soon as a valid timecode signal is received. When used with the Nuendo Audiolink 96 hardware PCMCIA card², Nuendo offers all these recording features as a mobile system, turning your laptop into a top-of-the-line recording station.

Frank Filipetti

Producer/Engineer

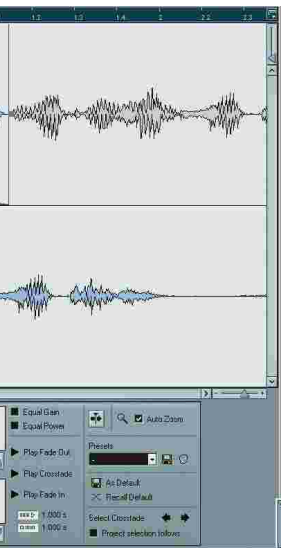
(Korn, Mariah Carey, Rod Stewart, Hole)



"I recently had to do some in-depth work with the major competing system, and it really made me appreciate Nuendo a lot!

I was asked to mix a live recording, so there were very large files, but the other system only allows one session to be loaded at a time. Every time I wanted to listen to a different song, it took two and a half minutes to load it in, which was a real pain. In Nuendo, you can have multiple files open at once, so you can just switch between songs instantly."

Supersonic Editing



Nuendo 2.0 has one of the most powerful editing engines around, with unlimited undo/redo as a standard asset. Not only can you undo cuts, fades or other basic edits, but also bouncing, offline processing and removal of complete tracks can be undone. The Edit History window lists all actions made on your project down to every single event, ready to undo or redo by moving a handle to the point where you want to work from. Even track and event commits from other editors over a TCP/IP network are listed here³.

Every single audio file shown in the pool or used in the project window has its own offline process history. All processing carried out on a file can be removed, changed or replaced by another audio process or plug-in, no matter how much processing has

taken place in the meantime. All later processes will be reprocessed automatically for you in the blink of an eye.

Nuendo 2.0 also supports various kinds of editing styles, depending on your work style. Traditional cuts, nudging, trims and fades can be made using a variety of tools: object based, range based or using a jog wheel from any of the supported remote controllers.

Mouse, keyboard or remote control can be used separately or combined for optimal workflow speed.

All editing of your project can not only be performed in the sample accurate project window which features a set of comfortable zooming features. You can also do all editing within the integrated sample editor. This opens an additional range of features guaranteeing an even faster workflow: easy creation of regions, bouncing these into a library, creating processed regions or tuning sync points by scrubbing the audio with them.

Nuendo 2.0 assures that your edits can be accomplished faster and more flexibly than ever before.



The Offline Process History gives you complete control over all processes performed on an event or file, no matter how many processes are performed afterwards.

The Edit History lets you undo and redo all your editing and processing steps as desired.

- 1 For more on the Nuendo multi-channel audio engine, please see pages 12 to 15
- 2 More details on the Nuendo Audiolink 96 audio hardware can be found on pages 20 and 21
- 3 For more on Nuendo 2.0 network features, please see page 6 and 7





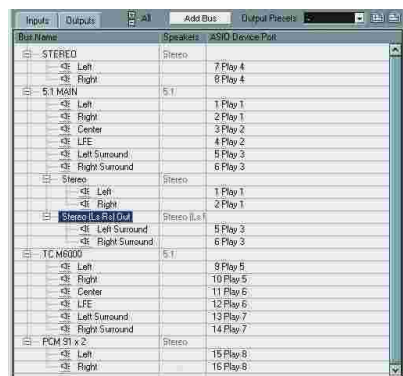
Open up New



Perspectives

NUENDO^{2.0}

media production system



With VST Connections you can set up input busses for multiple recording configurations as well as mono, stereo and surround outputs to route to your monitoring system and out-board gear.



Nuendo Surround Panner plug-in in 10.2 mode



All critical mixing parameters are clearly displayed in the Channel Settings window. The Sends (pictured right) have up to 12 speaker channels, here a 5.1 signal is sent to the TC Surround Verb using a surround panner.

The next generation mixing environment. The next generation mixing environment.

Start your engine

Nuendo 2.0 is powered by the most advanced audio engine currently available. A groundbreaking new multi-channel architecture means that every input, audio track, send, effect return, group and output now offers up to 12 discrete channels, ready for full-scale surround productions in any common format – up to 10.2. Nuendo 2.0 offers you the choice of surround recording to individual or interleaved files, in any of the supported formats.

The new architecture not only lets you record in surround, but also means that managing a surround project is so much easier. Nuendo 2.0 comes complete with a range of new tools designed to take advantage of the new multi-channel architecture, putting all its possibilities directly under your control. You don't have to think anymore about what part of the signal chain is, say, 5.1 and what isn't, because any mismatch in the number of channels can be taken care of in the new mixer with the new Patch Editor. Also new is the surround panner for sends. This allows you

to focus the source position for a 5.1 surround reverb, for example. For stereo tracks, Nuendo 2.0 offers a choice between three panning modes: balance, dual and combined, both for the channel and for sends.

Back to the routes

To make routing in the project even more transparent, Steinberg has developed a new way of organizing inputs and outputs allowing the user to customize multiple multi-channel input/output configurations

Supported Surround Formats in Nuendo 2.0

- (Mono)
- (Stereo)
- LCRS
- LCR
- LRS
- LCR+LFE
- LRS+LFE
- Quadro
- LCRS+LFE
- Quadro+LFE

- 5.0
- 5.1
- 6.0 Cine
- 6.0 Music
- 6.1 Cine
- 6.1 Music
- 7.0 Cine
- 7.0 Music
- 7.1 Cine
- 7.1 Music

- 8.0 Cine
- 8.0 Music
- 8.1 Cine
- 8.1 Music
- 10.2



The new, configurable 32 Bit floating point mixer in Nuendo 2.0 is the basis for the most flexible mixing experience currently available.

Next generation audio technology by Steinberg.

and store them as presets. This is achieved through the new VST Connection Device, which allows you to quickly and easily create multiple input and output bus objects with respective sub busses and connect them to the desired ASIO ports. Any mixer channel can be routed to and from any of the input or output busses as desired. Several input and output busses can be utilized at the same time, with any type of configuration possible – mono, stereo or any of a wide range of surround formats.

Mix it up

We've gone to great lengths to make Nuendo 2.0 the most flexible mixing experience in digital media production. Nuendo 2.0 not only offers an unlimited number of channels, effect returns, VSTi and group channels, it gives you the versatility to harness that power effectively and creatively. This begins with the mixer graphic interface. The new mixer itself is user-configurable, allowing you to choose between a variety of display options. Above the normal mixer with the fader section you can display either insert effects, effect sends, EQs or an additional view with input

and output settings including gain change and phase invert per channel. The mixer is also available in a narrow view for simultaneous display of many channels. The 32 Bit floating point mixer has been completely reengineered and now features effect return channels as well as input channels that allow effects to be processed while recording, if desired. This allows effects to be printed directly into the recorded audio. You can also open up to 4 instances of the mixer in Nuendo 2.0 simultaneously, and configure each one differently.

Plug-in Quality

Because it supports the Steinberg's VST and the Windows DirectX interfaces, Nuendo 2.0 automatically gives you a huge range of high-quality plug-ins to choose from. Among the renowned names of third party manufacturers producing their outstanding plug-ins for these two platforms are TC Works, Waves, PSP, Spectral Design and Universal Audio. Nuendo 2.0 features a wide range of quality virtual dynamics and effect processors, EQs and mixdown plug-ins. Highlights among the supplied plug-ins are the Nuendo Multiband

Compressor, the acclaimed Q equalizer as well as the excellent DeClicker and DeNoiser restoration plug-ins. A range of MIDI plug-ins is also included.

Nowhere are the benefits of the Nuendo mixing environment more apparent than in signal routing for virtual effect processors. Nuendo 2.0 provides complete flexibility in signal routing to and from virtual effects – for each and every track

and, again, with multi-channel capabilities. Inserts can use the new routing editors in case mono, stereo or multi-channel routings are used simultaneously, and sends feature a variety of panners.

Don't Delay

Most plug-ins cause a delay in the signal path, which although relatively small can affect your mix. Unlike some other systems, Nuendo 2.0 compensates for every delay caused by every plug-in at any point in the signal path, ensuring your mix is absolutely tight. Nuendo 2.0 also offers lightning-quick offline rendering of effects into your audio files. And thanks to the offline process history for each and every audio event in your project, you can render as many effect processes into your audio files as you want, and remove or change or replace any of the effects you have already used. All subsequent offline processes are then automatically reapplied.



Nuendo 2.0 offers a range of plug-ins that are provided as standard; support for VST and DirectX gives you a huge range of third-party plug-ins to choose from.



- Surround architecture with 12 discrete channels
- Extremely flexible matrix routing
- Multiple delivery format configurations
- Full plug-in delay compensation
- Configurable mixer



Whatever you want

This next generation digital audio workstation by Steinberg doesn't just offer a host of features for audio production, media creation, surround mixing and post production. It is customizable for any of those purposes, giving you the clearest oversight possible over your project and optimizing your workflow.

Pro Post Pro

Nuendo exceeds the daily demands of film, television and video work. Not only can Nuendo handle most common video files internally, syncing to external video equipment is also achieved via SMPTE or Sony 9-Pin. Fast alignment of sound to picture is ensured by a completely new scrubbing engine and fast access to audio file sync points.

Nuendo is even prepared for the final processing of your project to delivery formats like Dolby Surround, Dolby Digital or DTS with the optional Nuendo Dolby Digital and DTS encoders¹. The advanced file management of Nuendo lets you create, handle and access huge sound libraries locally as well as via a network. This supports the creative process in sound design and ensures data security.

Nuendo offers various video playback screen formats, including a full screen mode and video thumbnail track.



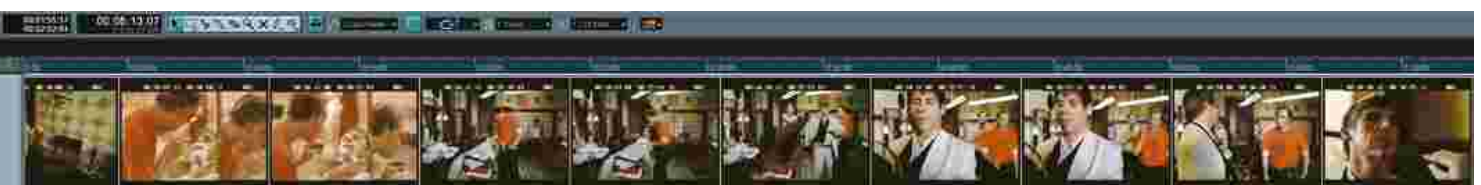
Nuendo also features the ability to split large projects and work on them in parallel by appointing multiple editors in networking pools. This is just one of the features especially designed for post production customers that speed up the pace of your production.

Radio Activity

Designing expressive commercials or jingles, creating radio news stories or working on multi-part radio plays requires that the audio workstation used offers all the tools needed. The Nuendo Media Production System is fully equipped for all the above and more. The Nuendo project concept means that both pitch and time elements of your projects can freely be manipulated, and guarantees intuitive, single-layer editing, fast browsing of sound archives and concise arranging of content.

Dynamic modules for compression and limiting, superb filters and restoration tools are just as easily available as fast event level handling, extensive automation and a professional crossfade editor – all to get the best sounding mix. Nuendo enables reporters, editors and engineers to compile original recordings, interview files accompanied by music, narrator texts and additional sound effects quickly and efficiently, molding them into impressive master mixes ready to go on air.

- Post Production
- Radio Broadcast Preproduction
- Multimedia audio content
- Extended MIDI Functionality



Steve Tushar
producer

"It's the most pro thing I've ever used and the code is way more streamlined than the other programs out there. Even the ones with proprietary hardware."



Multifaceted for multimedia

Nuendo, one of the best known media production systems, is capable of always delivering the right sound regardless of the medium, be it games, educational CDs, corporate video, promotional or informational internet sites, video clips or any other multimedia application.

The creative process for music and sound design is supported by integrated sound modules and many features for automatic creation of impressive audio collages. A large set of tools to synthesize and match sound to any kind of visual make Nuendo a real time-saver when creating audio for your project. The integrated video player supports all important video files and lets you keep the focus on your product while you are adding audio information. All files can be stored in libraries for fast and extensive file archiving with drag and drop. All edits, regions and sync points prepared are stored for later use.

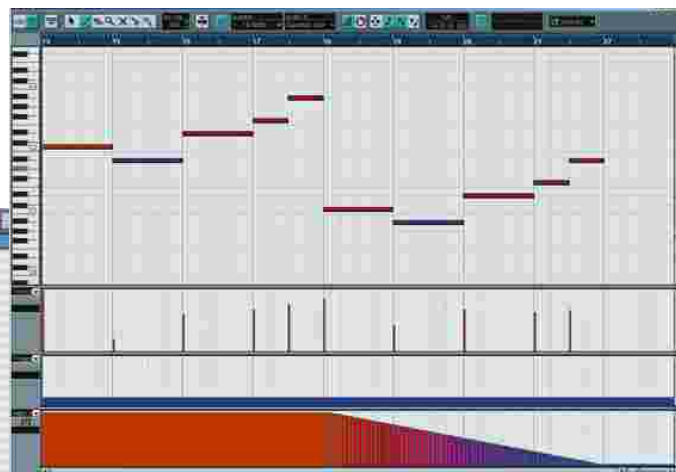
Once you have created your audio, Nuendo again displays the ability to adapt to the needs of audio production for any media. Nuendo offers a range of export options that reflects the variety of the multimedia industry itself, be it small files for fast delivery via the internet or high quality audio files for CD-ROMs and DVD.

Move to the music

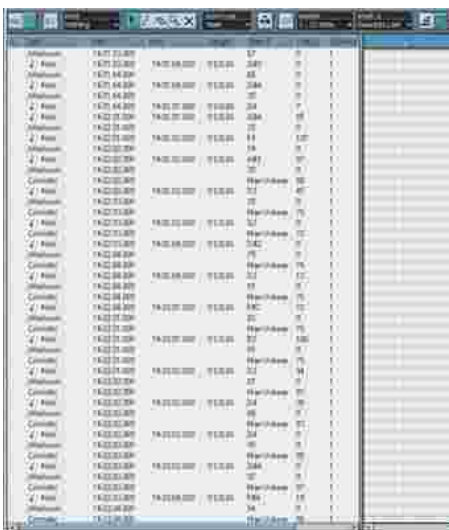
Nuendo now features extensive MIDI capabilities. The fully reengineered MIDI device handling makes it even easier to set up and configure MIDI devices for use with Nuendo. The large range of MIDI editors (Drum, Logical, SysEx, Key and List) make editing MIDI information in Nuendo more intuitive than ever before.

The raft of new MIDI plug-ins such as Quantizer, MIDI Echo and Compressor ensure more creative possibilities and flexibility when working with MIDI, be they external devices or one of the included virtual instruments. Nuendo 2.0 now features extended support of virtual instruments, as up to 64 VSTi's can now be loaded simultaneously.

The Nuendo automation system also extends to all MIDI parameters, letting you draw MIDI automation data with any of the mathematical shape tools. Multiple controller lanes within the editors give you a clear oversight over your MIDI data, as all data can now be displayed on the same page.



Multiple controller lanes is a feature of the MIDI Key Editor; the new List Editor displays all data by position for a detailed overview.



1 For more on how you can configure Nuendo 2.0 to meet the needs of your projects, please see pages 4 to 5

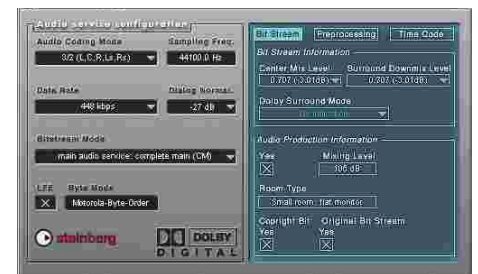


Nuendo surround components

The Nuendo Media Production System offers the ideal platform for surround production and encoding. Not only does the unique Nuendo 2.0 multi-channel architecture offer the perfect environment for surround mixing, the additional surround components for Nuendo give you Dolby and DTS encoding from within the software, top quality surround effect plug-ins and surround audio material that is as authentic as it is well organized.

Nuendo Dolby Digital Encoder

The AC-3 encoding format is available as an export format within Nuendo. The implementation is simplicity itself with the smart integration of the AC-3 file format in Nuendo's export dialogue. The necessary routines are all automated so that the user merely needs to define which files should be AC-3 encoded and the resulting encoded files are placed in the chosen folder ready for use in the authoring stage. AC-3 files can be converted on import to verify the correctness of the exported file.



Nuendo DTS Encoder

Available Q2, 2003

The Nuendo DTS Encoder now makes easy and quick DTS encoding available to professionals using the Nuendo Media Production System.

The Nuendo DTS Encoder incorporates the DTS Coherent Acoustics audio compression algorithm. Using this plug-in couldn't be easier. Seamless integration into the Nuendo export dialog, the same way as the Nuendo Dolby Encoder, makes assembling DTS 5.1 files simple and straightforward. All routines are automated, you merely need to specify the six files that are to be encoded. The resulting DTS files are placed on the desktop, ready for you to begin the authoring stage.



Isao Tomita
composer, Japan

“Professionals can learn an innovative way of working in a very short space of time that lets them produce their surround projects more efficiently.

Nuendo is the high-end software for surround and music, and I work with Nuendo like I would a multifunctional music instrument.”



Nuendo Surround Edition

To fully complement Nuendo's innovative surround mixing tools Steinberg have produced a suite of six 8-channel-capable real-time VST Plug-ins specifically to address the special needs of surround sound mixing and multi-channel audio file creation. These state-of-the-art plug-ins provide all the processing and 'finishing' tools needed to produce mixes for both 5.1 and 7.1 productions. All of these plug-ins are supplied together as the Nuendo Surround Edition.

OctoQ:

5-band EQ with 2 filters

OctoMaxx:

Soft/hard gain maximiser

Octoverb:

Reverb/Ambience plug-in

OctoComp:

State-of-the-art compressor

LFE Splitter:

24 dB brickwall filter with low cut filters for adding LFE material to up to 7 channels

LFE Combiner:

Adjustable low frequency filters to extract an LFE channel from up to 7 front/rear channels



TC Surround Verb

TC Surround Verb supplies Nuendo users with native TC-quality 5.1 reverb, seamlessly integrated into the Nuendo Media Production System. It features a fast and easy to use interface, with graphic displays visualizing the reverb components, a powerful algorithm core delivering dense and convincing studio quality reverbs.

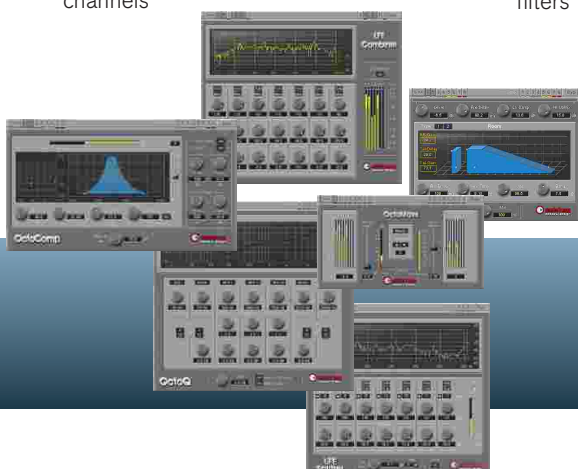
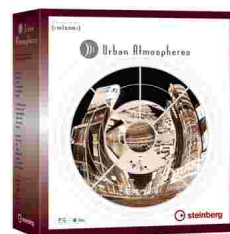
TC Surround Verb provides control over all the key components required for reverb design, from room shape and size to diffusion and separate controls for early reflections and tail. The reverb tail supplies three independent bands for low, mid and high with sweepable band crossovers and an additional EQ stage with low and high shelf filters for ultimate sound flexibility.

Urban Atmospheres

Real 5.1 Audio Surroundings Of Urban Locations

Urban Atmospheres are high-end sound environments professionally recorded in 5.1 surround that offer unequalled spatial characteristics and pristine sound quality. The SPL Atmos System was used to record 23 indoor and outdoor urban locations, spanning 95 scenes. These astoundingly authentic recordings were compiled onto 9 DVDs in AIFF format, ready for immediate use in any pro audio system – format independent.

Because the unique construction kits containing background atmospheric recordings with no conspicuous audio events are combinable with the included foreground events, you can mould the material to suit any requirements or even build your own, even more complex acoustic environments with no additional software required.



The Nuendo Studio System One 96k



The Nuendo Studio System One 96k comprising the Nuendo software, the Nuendo 96/52 DSP PCI card and Nuendo 8-I/O 96k converter (see below) and Nuendo Surround Edition (see page 19) is a complete solution to the audio production process, whether for music,

post-production or indeed Surround Sound authoring for Film, TV and DVD projects. In the Nuendo software you have a complete set of tools to record, edit, process and mixdown audio. These are complemented by the additional processor plug-ins of the Surround Edition which allow

the building of high quality surround productions from standard source material.

Nuendo 8-I/O 96k

8-channel 24 Bit 96 kHz AD/DA Converter

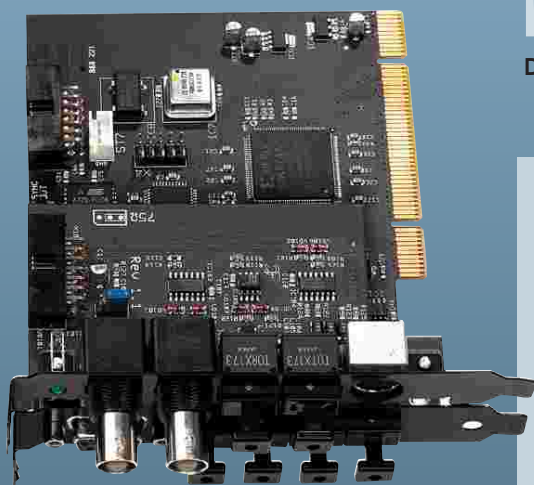


- 8 channel top-quality AD-Converters
- 24 Bit ADAT Optical Outputs
- 24 Bit TDIF-1 interface
- 24 Bit ADAT Optical Inputs
- 8 channel DA-Converters
- 25 pin D-Sub connections for XLR connectors
- 44.1 kHz up to 96 kHz for 8 channels



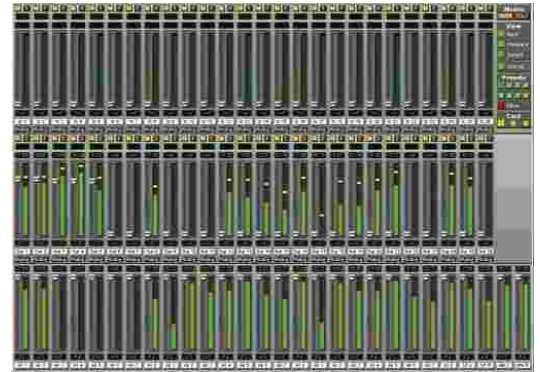
Nuendo 96/52 DSP Audio Card

Digital 24 Bit/96 kHz I/O audio card for PC and Mac



- 3 x ADAT digital In/Out
- 1 x S/PDIF digital In/Out
- 1 x Breakout cable for coaxial S/PDIF
- 1 x WordClock In/Out (BNC) on the supplied expansion board
- 1 x ADAT Sync In (9-Pin Sub-D) for sample accurate transfers
- 2 x MIDI I/O, 32 channels high-speed MIDI via breakout cable
- S/MUX: 12 channel 96 kHz/24 Bit record/playback on ADAT optical
- Includes TotalMix digital mixer software
- Freely scalable level meters, peak and RMS calculation in hardware

Nuendo AudioLink 96



The TotalMix digital mixer software gives complete monitoring and routing flexibility for your audio.

The new Nuendo Audioliink 96 Series offers the same low latency, ASIO 2.0 performance on high channel counts that has made the Nuendo 96/52 DSP PCI card the audio interface of choice for the professional. However, the increased flexibility which the components in this series offer enable Nuendo users to build up a system which meets the specific demands of their current working environment. Studio or Location, Laptop or Desktop, Macintosh or PC, there is a combination of card, interface box and driver that is perfect for everyone. All of the system components share the same impressive specifications: 24 Bit/96 kHz, Multi-channel digital and/or analog I/O; ADAT, S-PDIF, ADAT Sync and Word Clock are all available, with latencies down to 1.5 ms.

Nuendo Audioliink 96 series is not only a self-contained construction kit for audio interfacing. The ADAT connectors on the Nuendo Digiset and Multiset I/O boxes enable Nuendo users to hook up to all existing Nuendo converter racks.

The Nuendo Audioliink 96 Series consists of two interface cards, two breakout boxes and the TotalMix digital mixer software, which gives complete monitoring and routing flexibility for your audio into and out of your computer system.

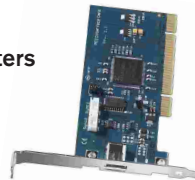
Nuendo Audioliink 96 Mobile Card

PCMCIA Type II CardBus Interface for Laptops



Nuendo Audioliink 96 PCI Card

PCI Interface for Desktop Computers



Nuendo Audioliink 96 Digiset

Digital I/O Box for Nuendo Audioliink CardBus and PCI cards



Nuendo Audioliink 96 Multiset

Analog/Digital I/O Box for Nuendo Audioliink CardBus and PCI cards



- PCMCIA type II, 32 Bit CardBus
- Zero Wait State CardBus Busmaster Interface
- Current load: ca. 300 mA
- Output: Closed LAN connector

- Short PCI 2.0 compliant PCI card
- Zero wait state PCI Busmaster interface
- Zero CPU load
- Output: IEEE 1394 connector

- 3 x ADAT digital I/O
- 1 x S/PDIF digital I/O
- 1 x ADAT Sync In (9-pin) for sample accurate transfers
- 1 x Word clock I/O (BNC)
- 1 x Analog Line/headphone output, separate submix
- 2 x MIDI I/O, 32 channels high-speed MIDI
- DIGICheck DSP: Level meter in hardware

- 8 x Analog Line I/O, 96 kHz/24 Bit
- 1 x ADAT digital I/O
- 1 x S/PDIF digital I/O
- 1 x ADAT Sync In (9-pin) for sample accurate transfers
- 1 x Word clock I/O (BNC)
- 1 x Analog Line/headphone output, separate submix
- 1 x MIDI I/O, 16 channels high-speed MIDI
- DIGICheck DSP: Level meter in hardware

TIME BASE

VST SYSTEM SYNCHRONISER



Nuendo TimeBase Synchroniser

The first professional synchronizer with VST System Link support

Available Q2, 2003

Nuendo Time Base is the first synchronizer supporting Steinberg's VST System Link technology. This makes Nuendo Time Base the perfect solution for sample accurate cueing of tape-based audio and 9-pin video machines from Nuendo Audio Production Systems.

All functions can be controlled and edited from within Nuendo software. The outstanding feature set of Nuendo Time Base makes it the most versatile and precise synchronizer available today.

Nuendo Time Base can also be used as a standalone unit. Any Nuendo Audio Production System can be used as a 9-pin Slave – just hit "Start" and Nuendo will immediately follow every command (Virtual Machine Option).



Features:

- Synchronization of digital audio and video systems (hard disk recorders, mixers, etc.) via house sync (Blackburst), AES-EBU, LTC, VITC, with analog/digital audio and video tape machines, sequencers, etc. with separate inputs for video sync and VITC R/W
- Read, generate and regenerate timecode: LTC, VITC, MTC and VST System Link
- Burn visible timecode readout into video picture – 2 different sizes, 4 display styles, freely positionable
- Supports all sample rates from 16 to 192 kHz incl. NTSC Pull up/down
- 9-pin interface – integration of machine control e.g. for Betacam, Tascam DA88, DA98, MMR8, etc.
- Ergonomic practical operation using 4 key pads and text display to show all functions and conditions, guarantees the user full comprehension and intuitive usability
- Optional: Virtual 9-pin Machine. Emulation of 4 different 9-pin machines, allows to run Nuendo as a slave machine on professional 9-pin editors and (console integrated) controllers

General

- Support of ASIO, MME, DirectX, mLAN and CoreAudio
- Optimized multithreading: unlimited amount of processors supported, processor load is dynamically spread over all processors
- Support of Intel Hyperthreading Technology
- Timeline Formats: Timecode, Feet:Frames (16mm, 35mm), Seconds, Samples, Bars and Beats
- Multiple timelines showing various formats at once
- 1 user definable frame rate possible
- Extensive event display possibilities
- Complete user configurability: unused menu entries can be hidden, key commands can be disabled, preferences, key commands and the menu structure can be stored and recalled
- Toggle alternate key command sets
- User configurable project templates store windows settings, layouts, track heights/sizes, project settings, channel settings, plug-ins and their parameters as well as folders and files in the pool
- Easily configurable window layouts
- Configurable track controls, toolbar and track inspector
- 2nd track list for fixed tracks

Import Formats

- Audio: import of AIFF, AIFF, Wave, Broadcast Wave, Wave 64, MPEG (MP2, MP3), Dolby Digital AC-3 (with optional Nuendo Dolby Digital Encoder), Ogg Vorbis, WMA (PC only), WMA Pro (PC only), WMV (PC only), WMV Pro (PC only), REX I & II files, SD2, up to 384 kHz depending on the file format
- AES31
- Cubase SX project
- Open TL 3.0
- DMF 1 & 2, embedded audio or file references. Complete DMF revision in Nuendo 2.0
- Premiere Generic EDL
- Ability to convert interleaved multichannel file into multiple mono files on import
- CD audio grabbing (selection inside track possible)
- MIDI File import
- MPEG, AVI, DV AVI, WMV (PC only), WMV Pro (PC only) and QT movies video import
- Extract audio from video file
- Nuendo tracks including media files, mixer channel settings & automation

Export Formats

- Mixdown to AIFF, Broadcast Wave, Wave, Wave 64, MP3, MP3 Pro, RealAudio G2, Windows Media Audio (PC), Windows Media Audio Pro (PC), SD2 (Mac), Ogg Vorbis, Dolby Digital AC-3 (optional encoder), DTS (optional encoder, coming soon)
- Supported export sampling frequencies up to 384 kHz (Broadcast Wave, Wave, AIFF), up to 32 Bit float.
- Audio mixdown to a mono or multi-channel file up to 12 channels
- AES31
- Open TL 3.0
- DMF 1 & 2, embedded audio or file references. Complete DMF revision in Nuendo 2.0
- MIDI File
- Track sheet printing, smart track sheet functions for better overview
- Real-time mixdown option
- Nuendo tracks including media files, mixer channel settings & automation

Synchronization

- VST System Link for sample accurate sync, audio and MIDI transport between multiple Nuendo systems
- Sync to MTC, ASIO Positioning Protocol or send MTC and MIDI clock
- Send 9-pin & MMC machine control
- SMPTE Generator plug-in
- Fast locate and sync lock up
- Sample accurate sync with ASIO 2.0
- MMC slave with track arming support

Recording/Playback

- Record of 16 Bit, 24 Bit and 32 Bit float audio files; all sample rates up to 192 kHz are supported, depending on the audio card
- Recording of multiple channels of audio simultaneously per track, split or interleaved
- Record of AIFF, Wave, Broadcast Wave and Wave 64 for long duration recordings
- Jog and scrub of the complete project
- Project shutting with fixed speeds, with custom editable key commands, and lock to zoom setting option
- Linear Record modes: Normal, Merge, Replace
- New cycle record modes: Mix (MIDI only), Overwrite (MIDI only), Keep Last
- Online recording: record starts when a valid timecode signal is received
- Separate pre roll / post roll settings and separate activity displays in transport
- Multiple user-definable record destinations

File Management

- Pool with logical structure and extensive file information
- Import and export of pool files
- Advanced search field with preview option
- Advanced file converter
- Offline processing from the pool
- Minimize function to delete silence & unused material from audio files
- Archive and backup functions
- Libraries can be created and opened including files, file references, regions, subfolders and sync points

Editing

- Real-time non-destructive crossfades
- Advanced crossfade editor with pre & post roll
- Auto-fade and auto-crossfades with user definable fade times for smooth transitions into and out of audio events
- Sample editor with region list and sync point editing
- Unlimited undo/redo with edit history list
- Second tracklist with fixed tracks (always visible)
- Timestretch tool allows fast snap-based stretching of material
- Preset curve tools for automation editing
- Various options to lock events in size, fade-length, position and others
- Folder tracks for group-based overview
- Browser view allows all data (events, automation, etc.) to be edited numerically
- Edit mode for syncing events & fades to the picture
- Sync points available in events and regions, s-points scrub the audio
- Detect & strip silence
- Drag and drop regions from the sample editor to the project window
- Hit point detection for loop editing and cue splitting
- Autoselect event under cursor on selected track(s)
- Zoom presets in the project window and part editor
- Zoom undo/redo

- Analysis: statistics, FFT based spectral analyzer
- Automation data move with the audio events
- Range selection drawn on playback

Processing

- Integrated processes: Acoustic Stamp, Envelope, Fade In/Out, Gain, Merge Clipboard, Noise Gate, Normalize, Phase Reverse, Pitch-shift, Remove DC Offset, Reverse, Silence, Stereo Flip, Time Stretch, Resampling
- Process history with the ability to modify, disable/enable or replace previous processes
- Batch processor: Offline Process History can be saved as a batch process
- All VST and DX plug-ins can be processed offline

Video

- Video track with thumbnail preview
- Video playback with QuickTime™, DirectShow, DirectX or Video for Windows
- Audio extraction from video files, replace audio in video files
- Full screen Video option

Mixing

- Configurable mixer, showing selected channels and channel strip sections at wish
- Up to 4 mixers available at the same time, for more overview for groups, VSTi's etc.
- Unlimited amount of channels*
- Unlimited amount of physical inputs and outputs supported**
- Unlimited amount of effect returns, VSTi & group channels*
- VST Connection window: ASIO & master bus routing with preset management
- Up to 12 speaker channels available for inputs, audio tracks, effects, groups and outputs
- Multiple output configurations for mono, stereo and surround formats at the same time
- Plug-in delay compensation throughout the complete signal path
- Interleaved surround recording and playback
- Switchable dual mono panner, combined panner or stereo balance on stereo tracks
- Flexible effect or dry recording from any physical input to any audio track
- 8 inserts on inputs channels, audio channels, effect return channels, group channels, VSTi, ReWire and output channels with global and individual soft-bypass
- 8 auxiliary sends per input, audio, VSTi and group channel with up to 12 channels
- Phase invert and gain on all channels
- Access to internal effect plug-ins or external effects patched via the audio hardware
- Automation tracks for each audio track, group channel and for plug-ins
- Waveform display visible on automation background
- Automation modes Touch, Autolatch and X-Over for all parameters
- Automation modes Overwrite and Trim for volume
- VST 2.3 support: improved I/O routing of plugins
- Copy and save/load channel settings is possible

Plug-ins

- Real-time support for VST plug-ins (may also be applied offline)
- Real-time support for DirectX plug-ins (may also be applied offline)
- STEREO PLUG-INS : Flanger, Phaser, Overdrive, Chorus, Symphonic, Reverb A, Reverb B, QuadraFuzz, SPL DeEsser, Double Delay, ModDelay, Dynamics, Magneto, DaTube, Chopper, Transformer, Metalizer, Rotary, Vocoder, StepFilter, Bitcrusher, Ringmodulator, Grungelizer, MIDI Gate, UV22 HR (Apogee), MultibandCompressor, Test Generator, DeNoiser, DeClicker, Q, Nuendo EQ2
- SURROUND PLUG-INS: MatrixDecoder, MatrixEncoder, Mix8To2, Mix6To2, SurroundPan, MultiScope, MixerDelay (distance compensation)

Remote Control

- Steinberg Houston, J.L. Cooper MCS-3000, J.L. Cooper CS-10, Mackie Control, Mackie HUI, Mackie Baby HUI, Roland MCR-8, Yamaha O1V, Yamaha DM1000, Yamaha DM2000, Yamaha O1V96, Yamaha O2R96, CM Automation Motormix, Radikal SAC-2K, Tascam US-428, Tascam US-224
- Additional remote controllers & digital mixers can be supported by the Generic Remote Module

Surround

- Surround architecture: mixer is fully multi-channel based, in every aspect, up to 12 speaker channels
- Plug-In based surround panning in channels & sends
- Surround encoding: downmix plug-in for fast monitoring in other multi-channel formats
- Submixer and distance compensation plug-in
- Matrix Encoder/Decoder for LCRS or 3/2 encoding
- Optional Dolby Digital Encoding/Decoding
- Optional DTS encoding (coming soon)

Network

- VST System Link for sample accurate sync, audio and MIDI transport between multiple Nuendo systems
- Peer to peer collaboration with track-locking over TCP/IP LAN
- Permission sets of users with individual read/write permissions allow hierarchical sharing of complete projects down to single tracks using TCP/IP
- Multiple projects can be shared on the network by each user
- Standard network access allows Nuendo to record, play back and copy files from dedicated servers, other workstations or library servers. A regular TCP/IP LAN is sufficient

MIDI/Music

- Tempo-lock option is available on tracks to allow events to maintain their relative bar and beat position as the tempo changes
- MIDI Device Manager for naming and hiding MIDI devices
- 64 VST instrument slots
- MIDI, ReWire and VSTi channels available in the mixer
- User definable PPQ display resolution
- Key editor
- List editor
- Score editor
- Score printing
- Logical editor
- Drum editor
- MIDI step recording
- Multiple controller lanes in MIDI editors
- Beat calculator
- Audio & MIDI metronome
- Rewire 2

* Depending on your computer hardware

** Depending on used ASIO hardware

PC Minimum System Requirements

Pentium / Athlon 800 MHz, 384 MB RAM
Windows 2000, Windows XP
USB Port required
Supports ASIO 2 specification for high-end multichannel audio
Supports Windows MME / DirectSound for standard soundcards
Display resolution 1024 x 768 pixels

Recommended

Pentium / Athlon 1.4 GHz or faster, 512 MB RAM
Display resolution 1152 x 864 pixels, dual monitor setup

Mac Minimum System Requirements

Power Mac G4 867 MHz, 384 MB RAM
Mac OS X 10.2.5 or higher
USB Port required
Supports Mac OS X compatible soundcards
Display resolution 1024 x 768 pixels

Recommended

Power Mac G4 Dual 1,25 GHz or faster, 512 MB RAM
Display resolution 1152 x 864 pixels, dual monitor setup

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