

# Cubase SX/SL 3.1

---

## Review Guide – Addendum



# Cubase SX/SL 3.1

---

## Update Information

With Cubase SX/SL 3.1, Steinberg adds major new features to its flagship music production software, including Studio Connections Audio Integration, further expanded hardware integration, support for Dolby Digital and DTS encoders, improved editing and mixing functions, as well as various performance enhancements.

Although delivering a total of more than 60 new features, Cubase SX/SL 3.1 is a FREE update for all Cubase SX/SL3 users and will be available August 2005.

## Top 10 New Features

- **Studio Connections Phase II: Audio Integration\***  
Conveniently Monitor and Mix Studio Manager Devices just like virtual instruments in the powerful Cubase SX VST audio mixer.
- **External Instruments\***  
Mix and monitor any external instrument connected to your audio hardware using the VST audio mixer
- **External Effects MIDI Integration\***  
Control external hardware effects devices via MIDI
- **Support for Steinberg Dolby Digital and DTS Encoders**  
Formerly only available for Nuendo, these encoders are now supported in Cubase SX as well.
- **Freeze MIDI Track Play Parameters**  
Quickly and permanently render playback parameters into MIDI data
- **New “Equal-Power” Panner**  
Chose this alternative panner to maintain equal power across the entire panning range
- **Expanded Track Archive functions**  
Exclude media from export or select any of multiple tracks when importing a track archive
- **Extended Copy Function for Mixer Channels**  
Conveniently copy and paste entire mixer channels, even with multiple channels selected
- **New Mixer Key Commands**  
Control the entire VST mixer using customized key commands
- **MIDI Output Delay Compensation for External Instruments**  
Maintain proper timing – even when using external MIDI instruments mixed/monitored through the VST audio mixer

(\*Cubase SX only; not available in Cubase SL)

## Other New Key Features

- **Glue multiple Parts with single command**
- **New Crosshair Cursor option**
- **Process Bars in Tempo Track\***
- **Incremental Auto-Save function**
- **Convert Controller Lanes to Automation**
- **Track Folding**
- **Access to MIDI Device Mixer Panels from hardware remotes\***
- **Auto Track Coloring**
- **Auto-Enlarge selected Track**
- **Additional Processor Optimization (PC Multiprocessor and DualCore Systems)**

## Studio Connections – Phase II

With **Studio Connections Audio Integration**, Steinberg and Yamaha introduce the much anticipated second stage of software-hardware integration under the Studio Connections alliance. After introducing Studio Connections Phase I: Total Recall last year, Steinberg users now enjoy full audio integration for all of their Studio Manager components like Yamaha's Motif ES synthesizers or any other instrument supporting the Studio Connections standard.



## Audio Integration

Traditionally, studios equipped with a large arsenal of outboard gear – specifically keyboards, sound-modules and effects processors – require a hardware mixer (analog or digital) for connecting these devices and mixing their signal with the signals coming from a computer/DAW. With the introduction of Studio Connections Audio Integration, these hardware devices can be directly connected to a multi-channel computer audio interface and mixed directly within Cubase, side-by-side with audio and software instruments.

### **The clear advantages:**

Link between Audio and MIDI – external instruments and effects behave like virtual instruments and plug-ins

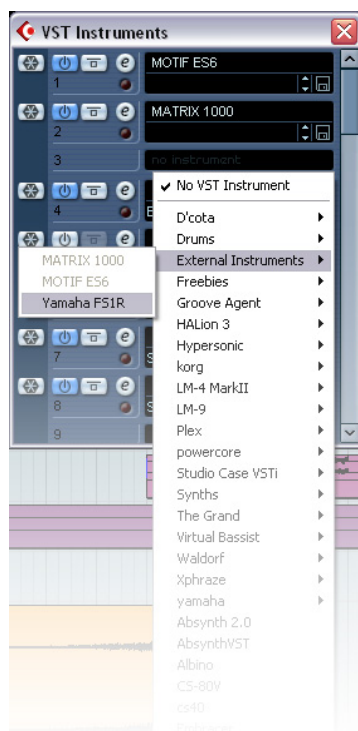
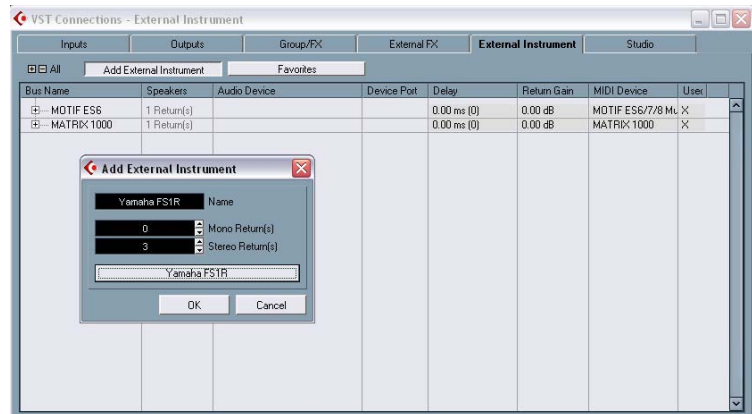
- Mix and master all sources within Cubase
- Run external signals through VST effects or vice-versa
- Manage external instruments using favorites
- One-step audio mixdown and even Freeze

### **PLUS all advantages of Studio Connections Recall:**

- Total Recall of hardware controlled via Studio Manager
- Save a complete Studio Setup within a Cubase project

## How it works

There's a new tab in the VST Connections window called "External Instruments". Here the user can define new external instruments, assign hardware inputs and MIDI inputs, manage Favorites (like different audio output configurations) which then are available in every Cubase SX project.



From this point on, the external synth can be used like a virtual instrument within Cubase SX:

- The external instrument can be loaded into the VST Instrument rack
- Instrument channels are created in the VST mixer
- Plug-ins can be applied to the instrument
- The Studio Manager component editor can be opened by clicking the plug-in Edit button anywhere in the program

The audio integration of external instruments even includes Cubase SX's powerful system-wide plug-in delay compensation. When a VST plug-in is applied to an external instrument mixer channel, the MIDI data sent to the instrument is automatically compensating for the plug-ins latency. This ensures sample-accurate timing across the entire system – both for software and hardware instruments.

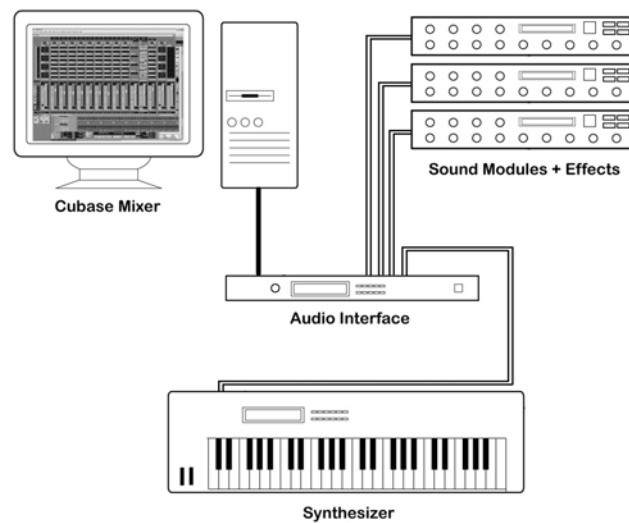
## External FX in 3.1

External FX which were introduced in Cubase SX3 also benefit from this new version release. External hardware effects processors equipped with MIDI can easily be integrated as MIDI devices and then offer full MIDI control and editing capabilities within Cubase SX.

## Ext. Instruments and MIDI Devices

Both External FX and External Instruments can be used in conjunction with Cubase SX's own MIDI Devices – which represents an alternative for hardware currently not supported by Studio Connections.

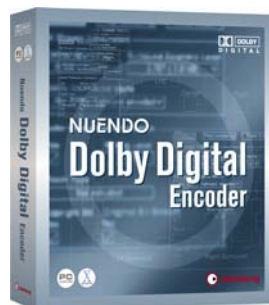
For example: any external synth that has been defined as a MIDI Device and comes with a Device Panel for editing, can be set-up as an External Instrument in the VST Connections window. It then also offers full audio and MIDI integration, including delay compensation and plug-in-style editing.



External Instruments and Effects – Setup Example

## Dolby Digital and DTS

Cubase SX 3.1 is the first version of Cubase to offer full support for Steinberg's Dolby Digital and DTS encoders, which have been previously available for Nuendo only. This allows Cubase SX users to export their surround projects in two of the most popular professional multi-channel audio formats.



Both encoders are protected by the Steinberg Key. Once installed, they are available via the Cubase SX mixdown dialog as additional output formats.

### Freeze MIDI Track Play Parameters

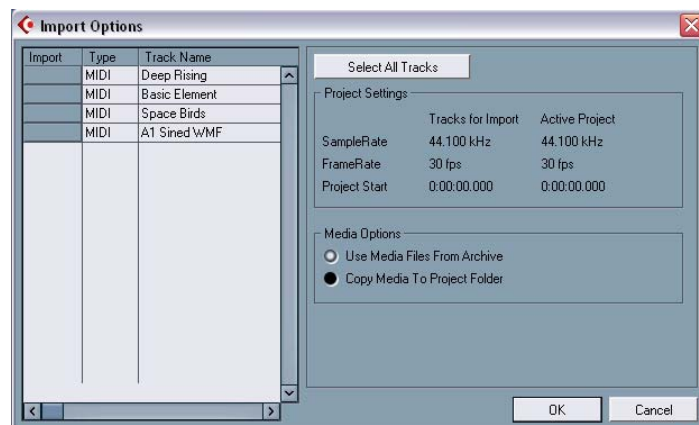
Many of the Cubase MIDI track parameters, like transpose, velocity shift, velocity compression and length compression can now be rendered permanently into the MIDI track by changing the actual MIDI data on the track. All track parameters are then reset to zero. This is a great way to prepare a project for export into other applications or simply to “clean up” a project and avoid accidental changes of any of these parameters.

### New Equal Power Panner

In addition to the existing “Equal Gain” panning laws a new “Equal Power” panning law has been added to the pan modes which are available in the project setup dialog of Cubase. This can result in smoother pans across the stereo or surround field since the power of the signal will remain the same regardless of the pan position.

### Expanded Track Archive functions

Several new options have been made available for importing and exporting track archives. During import, a new dialog allows for importing selected tracks only instead of an entire archive. An optional sample rate conversion is available. Export of a track archive is now also possible without copying the actual audio files associated with the tracks. A simple reference to the existing files is stored instead.

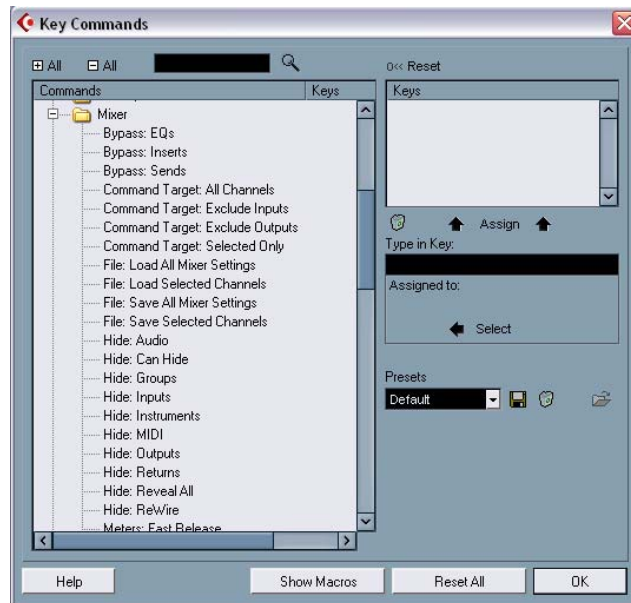


### Copy multiple Mixer Channels

The ability to copy and paste entire mixer channels using the clipboard has not been new to Cubase. In fact, this has been possible since the first version of Cubase SX. New in version 3.1 is the ability to copy a mixer channel’s settings to multiple channels at once – or even copy multiple channels at once and paste their setting to the same number of different mixer channels.

## Full Set of Key Commands for Mixer

Professional Cubase users rely heavily on key commands to speed up their workflow and to facilitate repetitive tasks. With version 3.1, Cubase offers a whole set of new key commands to control the VST mixer. These key commands include practically any menu command available in the mixer section of the program. These can now be freely assigned to key commands. Hiding mixer channels, switching views, saving and loading channel settings, and even special commands like changing the meter's release time are now directly accessible from the keyboard.



## PDC for External Instruments

Full Plug-in Delay Compensation (PDC) across the entire signal path has been one of Cubase's strengths since version 2.0. But what about using external hardware like signal processors and synthesizers? External effects also benefit from latency compensation by applying the proper pre-delay to external insert effects loops. And now with the introduction of external instruments and the possibility to mix an entire studio within Cubase SX, plug-in delay compensation is also applied to MIDI tracks controlling external instruments.

**Plug-in Delay Compensation for external hardware** is a key-element for Studio Connections and total hardware integration. With Cubase SX 3.1, Steinberg is now offering the most complete and accurate solution for integrated software and hardware instruments and effects. In a properly configured system, every bit of sound that went through the Cubase mixer is perfectly synchronized when it reaches the master fader.

## Additional Key Features at a Glance

Feature	What it does
<b>Glue multiple Parts with single command</b>	Use a single click or key command to glue multiple selected parts at once – even across multiple tracks
<b>New Crosshair Cursor option</b>	A fine horizontal and vertical line at the cursor position helps navigating and positioning when moving a part or event
<b>Process Bars in Tempo Track</b>	This powerful processing tool allows global “insert silence” and “delete time” calculations with awareness of tempo and time signature changes. A powerful tool for film composers or anyone working with music to picture. A huge time-saver, too.
<b>Incremental Auto-Save function</b>	Users can now define the number of backup files to be kept as safety copies when using the “Auto-Save” option.
<b>Convert Controller Lanes to Automation</b>	The separation between part-based controller lanes and track-based automation has become a lot more transparent with this function. Any controller data can now easily be converted to automation.
<b>Track Folding</b>	A whole new section has been added to the Project Menu, allowing for several new ways to fold/unfold tracks and automation lanes quickly. This also includes a set of corresponding key commands
<b>Access to MIDI Device Mixer Panels from hardware remotes</b>	The following hardware controllers can now access MIDI Device Panels (User Panels) in the mixer channel strip: Houston, Mackie Control, Mackie HUI, Yamaha DMxxxx series, Yamaha 02r96/01v96, Radical SAC2K und CM Motormix
<b>Auto Track Coloring</b>	Based on the new track coloring feature introduced in 3.0, colors can now be assigned to new tracks automatically
<b>Auto-Enlarge selected Track</b>	Activate this option to enter a mode where the selected track in the Project window will be enlarged. When this option is activated and you select another track in the Track list, this is automatically enlarged and the previously selected track is displayed in its previous size again.

## Pricing and Availability

Cubase SX/SL 3.1 is a **free update** for all registered Cubase SX/SL 3 customers.



**Available for download August 2005**

## System Requirements

### Macintosh

#### Required:

Power Mac G4 867 MHz  
384 MB RAM  
OS X Version 10.3.3 or higher  
Display Resolution 1024 x 768 pixels  
CoreAudio compatible audio hardware  
DVD-ROM drive  
USB component port for copy protection key

#### Recommended:

Power Mac G5 Dual 1.8 GHz or faster  
512 MB RAM  
Display Resolution 1152 x 864 pixels,  
dual monitor setup

### Windows

#### Required:

Pentium / Athlon 800 MHz  
384 MB RAM  
Windows XP Home and XP Professional  
Display Resolution 1024 x 768 pixels  
Windows MME compatible audio hardware  
ASIO compatible audio hardware recommended  
DVD-ROM drive  
USB component port for copy protection key

#### Recommended:

Pentium / Athlon 2.8 GHz or faster  
512 MB RAM  
Display Resolution 1152 x 864 pixels,  
dual monitor setup

## Cubase SX/SL 3.1 – Complete List of New Features

---

### Mixing

---

Mixing and Monitoring of External Instruments in VST Mixer (SX-only)

Copy/Paste channel settings for multiple selected channels in one go

New Panner Mode: Equal Power

Panner Bypass Function

New Key Command Set for Mixer functions

Command Target filters for Mixer functions

Inspector sub-section for MIDI Tracks routed to a VST Insert Plug-in

### Files and Formats (Import and Export)

---

Extended Search functions in Pool (SX-only)

Exclude Media when exporting Tracks as Track Archive (SX-only)

Select individual Tracks when importing a Track Archive (SX-only)

Support for Steinberg Dolby Digital and DTS encoders (SX-only)

Automatic level compensation for MP3 export

### Recording and playback

---

Smart controller reset after recording

Recovery of audio recordings after system failure

New precount options, sensitive to tempo and time signature changes

Optional Sample-Rate Conversion when importing Tracks

### Editing

---

Freeze Function for External Instruments and FX (SX-only)

Glue multiple parts with single mouse-click

Glue all following parts on selected track

New Crosshair-Cursor option

Process Bars in Tempo Track

Duplicate Track option

Freeze MIDI Track Play Parameters

Optimize Display when dissolving Parts

Apply Legato to selected notes only

Select equal Pitch > all Octaves/same Octave for all Positions

Transpose for single or multiple Audio Events via Info Line

### Project/General

---

New "External Instruments" options in VST Connections (SX-only)

External Instruments added to VST Instrument Rack (SX-only)

Associated External Instruments Track Inspector added to MIDI Track Inspector

Associated Audio Track Inspector added to MIDI track inspector routed to VST Insert Plug-in

External FX/Instruments Favorites (SX-only)

Advanced CPU-saving scrubbing mode (SX-only)

New Appearance options: Brightness, Contrast and Saturation

Sophisticated user-definable level meter coloring (SX-only)

Automatic Track Coloring

Incremental Auto-Save

Track Folding: Toggle Selected Track

Track Folding: Fold/Unfold Tracks

Track Folding: Flip Fold States

Resize Tracks without selecting

OSX Performance Optimization: integrated support for MacOSX Quartz 2D graphics system

Additional Processor Optimization: support for DualCore, Dual Processor and Quad Processor PC systems)

Safe Recovery of corrupt projects after system failure

### MIDI & Music

---

MIDI Output Delay Compensation for External Instruments (SX-only)

Associate MIDI Device to External FX (SX-only)

Associate MIDI Device to External Instruments (SX-only)

Option to convert MIDI Controller Lane volume data to Track Automation volume data

### Studio Connections

---

Studio Connections Audio Integration (SX-only)

### Remote

---

Access Mixer Device Panels (user Panels) from Hardware Remote Controllers (SX-only, for Houston, Mackie Control/HUI, Yamaha DMxxxx series, 02r96/01v96, Radical SAC2K und CM Motormix)

### Various

---

Preferences: Redesigned Appearance settings panel

New preference: Use Up/Down Navigation Commands for selecting Tracks only

New Preference: Default Track Time Type (Audio and MIDI)

New Preference: Auto Track Color Mode

New Preference: Sync Project and Mixer Selection

New Preference: Deep Track Folding

New Preference: Enlarge Selected Track

New Preference: Select Channel/Track on Solo

New Preference: Select Channel/Track on Edit Setting

New Preference: Maximum Backup Files

New Preference: Insert Reset Events after Record

New Preference: Chase Events – Chase not limited to Part Boundaries

New Preference: Option to export warnings as text file

New Preference: Warn on Processing Overloads

New Preference: global Tail value for External Instruments and FX (SX-only)

New Preference: Map Input Bus Metering to Audio Track (in Direct Monitoring)

Single Key command to open and close Pool Window

New Key Command to open Device for selected Track

Appearance: User-definable intensity for active drum lane

New Key Command to toggle status of "Select Channel/Track on Edit Settings"