Supplement

**What's new in Cubase 4.1?**

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Sample Editor Function Inspector

Just like the Score Editor, the Cubase 4.1 Sample Editor now has a new Inspector-style section to the left, which consolidates all audio editing functions; especially those used for musical tempo operations (including Musical Mode, AudioWarp and Hitpoints). Things that were spread across different parts of the program are now in one place. The first two tabs include everything needed to identify an audio event's tempo and timing, as well as to apply quantize ("Straighten Up") or audio warp.
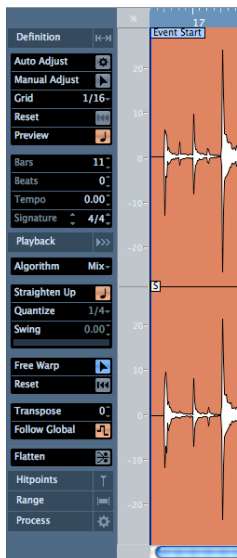
The first tab "Definition" is used to define an audio event's tempo and timing (grid). The second tab "Playback" is used to apply audio quantize or audio warp. The third tab includes all Hitpoint related functions. Tabs four and five contain tools for setting/adjusting a range selection, as well as for access to any other audio editing and processing functions (duplicating the respective menu items and combining them in one place).

The new Inspector doesn't replace the existing audio menu functions. However, it does replace the previous "Musical Mode" function, which is now integrated.

For step-by-step instructions on how to use the new Sample Editor, please read the Tutorial "Editing Audio II – Tempo and Groove" from the "Getting Started" manual.

Side-Chain Input for VST3 Plug-ins

Side-Chain inputs are now available on most VST3 plug-ins included with Cubase 4.1. Thanks to the new "free" routing (see below) basically any signal in the VST mixer can be used as a Side-Chain input signal. Side-Chain is a crucial function for audio-controlled effects such as ducking (compression controlled by an audio source). The Side-Chain function can be activated/deactivated using a new button in the plug-in window menu bar. There are no user-editable controls. Side-Chain control functions are pre-defined for each supported plug-in:

Side-Chain signals on dynamics plug-ins (Compressor, Expander, Gate) control the signal gain, modulation effects (Chorus, Phaser, Flanger, etc.) have LFO control, delay effects have mix control, and for the WahWah plug-in the pedal position is controlled via audio.

ⓘ   To activate Side-Chain on a suitable plug-in, click on the "Activate Side-Chain" button in the plug-in menu bar. Then, route the output of another audio track to the Side-Chain input of the plug-in. Alternatively, activate a Send bus routed to the Side-Chain input.

For more details on Side-Chain, see the chapter "Audio Effects/Using the Side-Chain Input" in the Operation Manual.

Although there are no used-editable parameters for the Side-Chain input, the amount of the effect can be precisely controlled. For example: using the send level of a send bus routed to a plug-in Side-Chain input, or using volume automation on an audio track routed directly to a Side-Chain input.

Free Routing + Recording from Summing Objects*

While previous versions of the routing system included some restrictions, the new routing capabilities allow totally unlimited routing between group channels regardless of their order, and supports sending from groups to FX returns as well as from FX returns into group channels. In addition, audio tracks can not only send signals into groups and FX returns with help of the pre fader sends, but now also patch signals post fader from the output tab to group channels and FX returns.
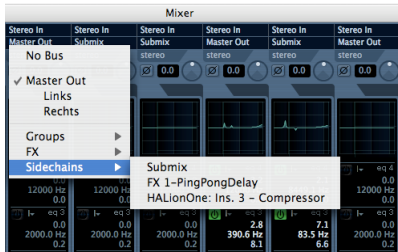
The ability to re-route signals of all summing objects such as buses, FX returns and groups directly into audio tracks allows you to instantly re-record signals from summing objects onto audio tracks in real-time. A typical use-case for this new feature would be creation of so-called "Stems" (which are sub-mixes of instrument groups or sections, such as drums, backing vocals, keyboards, strings, brass, etc.).

Advanced Media Bay Options

The powerful MediaBay in Cubase has seen some major improvements in version 4.1:

- In the Browser section, the user can now define which folders or media drives are to be managed by MediaBay. Only managed folders/drives are scanned and added to the MediaBay database catalogue. Unchecked folders/drives are excluded. This speeds up scanning and searching and improves overall performance. It also helps to keep the database organized.

- MediaBay now also supports the file type "MIDI Loop". A dedicated tab has been added to the Viewer Filter section.

- Also in the Viewer Filter section, an activity indicator has been added to show any MediaBay search or index activity.

- Many of the smaller MediaBay windows and dialogs have been graphically adapted for increased consistency.

For more details on new MediaBay options, see the chapter "The Media Bay/Scanning Operations" in the Operation Manual.

Track Quick Controls

A new section has been added to the Track Inspector: Quick Controls. This set of eight user-definable realtime controllers can be assigned to any parameter available on the current track. Quick Controls are available for Audio, MIDI and Instrument Tracks. These parameters include any mixer parameters (for audio and instrument tracks), insert plug-in parameters, VSTi parameters, MIDI controllers (for MIDI and instrument tracks). Track Quick Control assignments are per track and saved with the project. In addition, they're also saved in Track Presets.
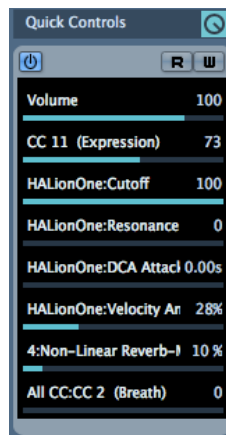

These new quick controls develop their full potential when used in combination with a remote controller. Setup is easy thanks to a MIDI learn function. Once assigned,

remote control knobs or fader functions will follow the track selection.

Global Transpose Track

A new track type has been added: Transpose. With the global Transpose track it is easy to create diversified musical arrangements based on loops, or experiment with chord progressions without having to edit each part on each track individually. It controls 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.
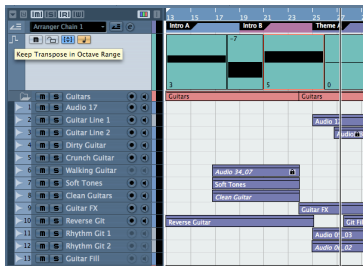
As a special feature, it includes a "Bound" function to keep transpose within the range of one octave. It keeps transpositions within a musical range and prevents unnatural-sounding artifacts when audio events are transposed. In addition to the global Transpose Track, there's a new Project Root Key, which – when edited – affects the entire project including the Transpose Track.

ⓘ   To set up a global transpose track, first choose "Transpose" from the Project>Add Track menu (or right-click on the track controls area and select "Add Transpose Track"). Select the draw tool to add transpose events. To change transpose values, double-click on the value and type a numeric value, or click/drag on the value field.

For more details on the Transpose track, see the chapter "The Transpose Functions" in the Operation Manual.

Advanced Arranger (Play Order Track)

For consistency reasons, the "Play Order Track" has been renamed "Arranger Track". But that's not all! Some major features have been added to this part of Cubase:

- 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 Enter key is pressed and the chain continues to the next part); Pause After Repeats (Chain is stopped after the current part has finished; hitting "Enter" on the keyboard 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.

For more details on the new Arranger Track, see the chapter "The Arranger Track" in the Operation Manual.

Project Logical Editorn
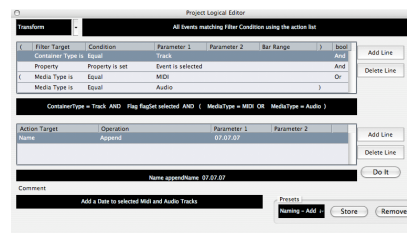
The powerful Logical Editor is now available on the project level! This feature opens up countless new possibilities for task automation and project-wide "power-editing".

The Project Logical Editor allows manipulation of tracks and parts/events, including folder tracks. Using the

Logical Editor, it's easy to apply actions to any, all or multiple selected parts/tracks in one single step. But that's not all. The Project Logical Editor comes with a large selection of Logical Editor Presets, which are available directly from the Edit menu. In addition, users can create their own presets, which are automatically added to the Preset menu. To top things off, all Project Logical Editor Presets are also available as targets for user definable key commands.

Here are just a few examples for possible Logical Editor operations:

- "Select all MIDI parts named 'drum'"
- "Trim selected automation by 10%"
- "Delete all muted tracks"
- "Mute track if name contains 'Vocal'"
- Add a date to selected MIDI and Audio Tracks

ⓘ To execute Project Logical Editor presets, choose any of the presets listed in the "Process Logical Edit Project" menu in the Edit menu. To set up a new process or create a custom preset, select "Logical Edit Project…" from the Edit menu.

For more details on the Project Logical Editor, see the chapter "The Project Logical Editor" of the Operation Manual.

The Project Logical Editor is an extremely powerful tool and should be handled with care! However, if used wisely, it can significantly speed up the production and editing workflow.

SEQUEL Project Import and Content Compatibility

SEQUEL is Steinberg's entry-level Music Creation and Performance software. Cubase 4.1 now supports import, playback and editing of SEQUEL projects. SEQUEL projects can be opened just like regular Cubase projects. No conversion is needed.

All sounds and effects are available, as well as Transpose Track and Arranger information. Of course, all sounds and effects can now be fully edited within Cubase. The project can then be saved in Cubase 4 format.


In addition to project import, Cubase 4.1 also provides full access to the extensive loop library included with SEQUEL (provided, that SEQUEL is installed on the same system). This means access to up to 5000 exciting audio and MIDI loops covering a wide variety of current music styles. These loops automatically follow the project tempo and transpose tracks. Browsing and searching for loops from this library is just as simple as in SEQUEL – thanks to the powerful MediaBay.

ⓘ To open a Sequel project in Cubase, select "Open…" from the File menu and locate your Sequel Projects folder. Select any project and click OK.

Sequel projects are loaded just like Cubase projects and need no import function.

MusicXML Import & Export
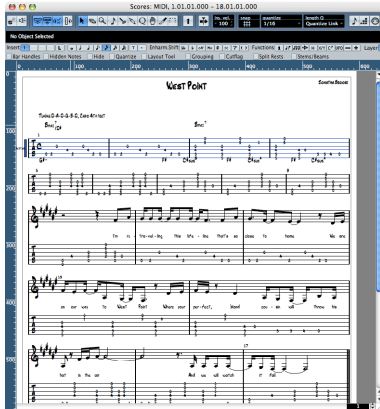
MusicXML is a data format for interchange of musical scores. It's supported by more and more companies to facilitate the exchange of musical scores between applications. Cubase 4.1 now supports both MusicXML import and export, allowing it to become the center of a multi-platform and multi-application music score workflow. In comparison to MIDI files, MusicXML includes not just note information, but layout information as well. A MusicXML file is a graphically rich yet compact document comparable to a PDF, where a MIDI file would be just plain text.

With MusicXML Import, Cubase 4.1 can read scanned scores from applications such as SmartScore, Capella-Scan, PhotoScore Professional and others. MusicXML Export allows for transfer of scores to specialized score layout/publishing software such as Finale, Sibelius, or capella Media Producer.

ⓘ   To import a MusicXML file into Cubase 4.1, select "Import Music XML…" from the File>Import menu. To export a Cubase 4.1 score project as MusicXML, choose "Music XML…" from the File>Export menu.

More than 60 software applications currently support MusicXML. A current overview and more information about MusicXML can be found here:

http://www.recordare.com/xml/software.html#NowBoth

For more details on Music XML support in Cubase 4.1, see the chapter "Working with Music XML" in the Operation Manual.

Windows Vista 32-bit and 64-bit support

Cubase 4.1 now fully supports Windows Vista (32-bit and 64-bit). Running on a 64-bit Vista system, Cubase 4.1 (32-bit version) supports up to 4GB of RAM. Furthermore, a 64-bit native version of Cubase 4.1 is available for Windows Vista64. Please refer to the Steinberg website for more information and availability. XP64 is not supported.

New VST3 Plug-ins

The following new or updated plug-ins have been added to Cubase 4.1 and Cubase Studio 4.1:

Group	Plug-in	Description
Distortion	Distortion	Simple distortion effect with Drive, Feedback, and Tone controls.
Filter	DualFilter	This unique effect combines low-pass and high-pass filters with single Cutoff and Resonance controls. Great for DJ-style filter effects.
Modulation	Chorus	This single-stage Chorus is identical to the Studio Chorus, but with a single modulation stage only.
Reverb	Roomworks / Roomworks SE	Both Roomworks and Roomworks SE are now available as VST3 plug-ins, offering the same great features as the entire VST 3 plug-in set. This includes the "silence flag" support, which ensures that the plug-in only draws CPU performance when audio signals are passing.
Other	UV22 HR	The Apogee UV22HR dithering plug-ins is back as a VST3 plug-in, thereby being available on all system platforms (including Intel Mac and Vista64)

A detailed description of all new plug-ins can be found in the Cubase 4.1 "Plug-in Reference" manual.

VST Plug-in Bridge

The new VST Plug-in Bridge in Cubase 4.1 ensures maximum compatibility of plug-ins. 32-bit Windows versions of plug-ins and instruments can be used in Vista 64 Cubase. Mac PPC-only versions of plug-ins can be used in Cubase on Macs with Intel processors. In both cases performance drawbacks must be expected. Therefore it is generally wise to use native (64-bit or Universal Binary) versions of plug-ins or instruments whenever available.

ⓘ   To determine if a plug-in is bridged, note the symbol in front of every plug-in name listed in the plug-in menu. VST3 plug-ins are indicated by "///". VST 2.x plug-ins have no symbol. Bridged (32-bit Windows or Mac PPC) plug-ins are indicated by a framed "//".

Improved QuickTime 7 Support

QuickTime compatibility has improved in Cubase 4.1 in several areas:

- MPEG1, MPEG4, .H264 formats are now supported

- "Replace Audio in Video File" now works with every audio file format supported by QuickTime

- "HQ" flag support (high-resolution video playback)

- Half/Double Size support

Cubase 4.1 is now compatible with the latest and most popular video formats and offers more flexibility and enhanced image quality.

Drum Editing Enhancements

Several enhancements have been added for better drum editing:

- Velocity data can now be edited for multiple pitches simultaneously.

- Instrument names are shown in the key editor, when selecting/moving events (if a drum map has been assigned).

- Instrument names are also shown in the drum editor info line, as well as the context display when selecting/moving events.
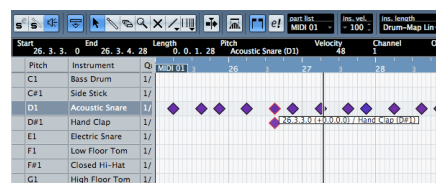
For more details on the Drum Editor, see the chapter "The MIDI Editors/The Drum Editor" in the Operation Manual.

Remote Control Extensions

Hardware remote controllers now have access to Instrument Tracks and the Studio Sends (Control Room), as well as the new Track Quick Controls in Cubase 4.1. For instrument tracks, instrument parameters can now be accessed from a remote control device. The list of controllers using these new functions includes Mackie Control, Mackie HUI, Steinberg Houston, SAC-2K, Yamaha 01X and Yamaha DM2000.

Apple Remote Support

Mac users who are in the possession of an Apple Remote will be pleased to find their little infrared remote control to be available as a remote device in Cubase 4.1. "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)

For more details on Apple Remote Support, see the "Remote Control Devices" PDF.

Load Projects inactive

Support for multiple projects open at the same time is one major advantage of Cubase. In version 4.1, 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 load times, especially for large projects. With multiple projects opened, parts or entire sections can easily be copied from one project to another.

MIDI File Playback using HALionOne

Cubase 4 and Cubase Studio 4 owners have access to hundreds of great-sounding instruments using HALionOne, which is delivered with sample-content taken from Yamaha's award-winning Motif synthesizers. This sound library also includes a complete General-MIDI Sound-Set. With Cubase 4.1, Standard MIDI Files can be imported and played directly using HALionOne's GM Sound-Set. With the new "Import To Instrument Tracks" preference enabled, dragging a MIDI File into Cubase will automatically set up instrument tracks with HALionOne and select the correct GM sound. Users may now edit or replace sounds, add effects, and so on.
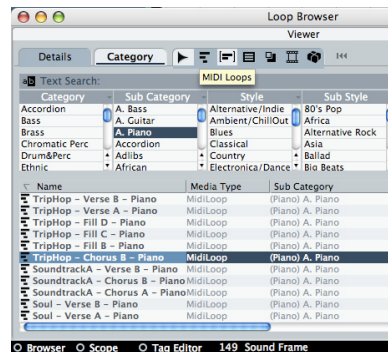
ⓘ   To import a Standard MIDI File song into Cubase 4.1 and playback with HALionONE, first check the MIDI preferences. Open the Preferences window and select "MIDI File". Locate the Import Options. Make sure "Auto Dissolve Format 0" and "Import To Instrument Tracks" are both checked. Click "OK" to save the preferences and close the window. Next, select "MIDI File…" from the File>Import menu and chose a MIDI File in SMF format. Alternatively, drag & drop a MIDI file directly into the project window.

New file type: MIDI Loop

Cubase 4.1 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. Any MIDI part on an instrument track – for example a great bass line, synth pattern or drum groove – can be exported as a MIDI Loop. The file contains both the note data and the entire track preset (instrument, preset, EQ, plug-ins, and more). Tagged with SoundFrame attributes, this MIDI Loop is now available in MediaBay and can be imported into other projects.

SEQUEL comes with more than 2000 of such MIDI Loops. With Cubase 4.1, users not only have access to these loops when SEQUEL is present, they can also create their own MIDI Loops. Dragging a MIDI Loop into a new project creates a new Instrument Track with the associated sound and imports the MIDI data onto that track.

Bonus Feature: over 400 new presets for Embracer, Prologue, Spector, and Mystic*

Cubase 4.1 comes bundled with four additional preset sound banks – one each for the built-in synths Embracer, Prologue, Spector, and Mystic. These are:

Embracer	"Filmscapes"	96 sounds
Prologue	"Studio Essentials"	102 sounds
Spector	"Studio Essentials"	104 sounds
Mystic	"Studio Essentials"	100 sounds

(* Available in Cubase 4.1 only)