

Remote Control Devices



# NUENDO<sub>4</sub>

Advanced Audio and Post Production System



Revision and Quality Control:

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**Remote controlling Nuendo**

## About this manual

It is possible to control Nuendo via MIDI. A large number of MIDI control devices is supported. This manual describes how to set up Nuendo for remote control, and lists the supported devices.

- There is also a Generic Remote Device option, allowing you to use any MIDI controller to remote control Nuendo. How to set this up is described in the section ["The Generic Remote device"](#) on [page 8](#).

## Setting Up

### Connecting the remote device

Connect the MIDI Out on the remote unit to a MIDI In on your MIDI interface. Depending on the remote unit model, you may also need to connect a MIDI Out on the interface to a MIDI In on the remote unit (this is necessary if the remote unit features "feedback devices" such as indicators, motorized faders, etc.).

If you will be recording MIDI tracks, you don't want any MIDI data from the remote unit to accidentally be recorded as well. To avoid this, you should also make the following setting:

1. Open the Device Setup dialog from the Devices menu.
2. Select "MIDI Port Setup" in the list to the left.
3. Check the table to the right and locate the MIDI input to which you have connected the MIDI remote unit.
4. Deactivate the check box in the "In 'All MIDI Inputs'" column for that input, so that the State column reads "Inactive".
5. Click OK to close the Device Setup dialog.

Now you have removed the remote unit input from the "All MIDI Inputs" group. This means that you can record MIDI tracks with the "All MIDI Inputs" port selected without risking to record the data from the remote unit at the same time.

### Selecting a remote device

1. Pull down the Devices menu and select Device Setup. A dialog window opens with a list of device categories and devices shown in the left part of the window.

2. If you can't find the remote device you are looking for, click on the plus sign in the top left corner and select the device from the pop-up that appears.

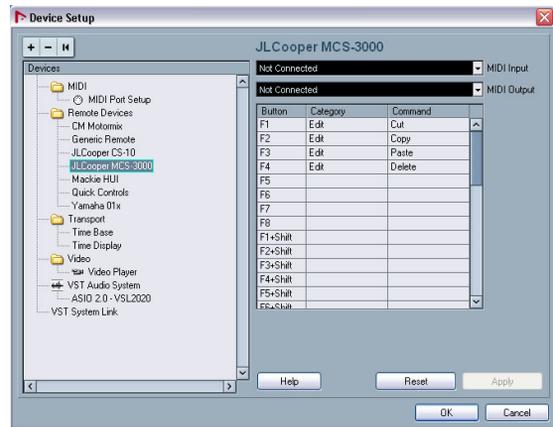
The selected device is added to the Devices list.

- Note that it is possible to select more than one remote device of the same type.

If you have more than one remote device of the same type, these will be numbered in the Devices list. For example, to be able to use a Mackie Control Extender, you must install a second Mackie control device.

3. Now select your MIDI control device model from the Devices list.

Depending on the selected device, either a list of programmable function commands or a blank panel is shown in the right half of the dialog window.



A JL Cooper MCS-3000 selected as remote control device.

4. Select the correct MIDI input from the pop-up menu. If necessary, select the correct MIDI output from the pop-up menu.

## 5. Click OK to close the dialog.

You can now use the MIDI control device to move faders and knobs, activate Mute and Solo, etc. The exact parameter configuration depends on which external MIDI control device you are using.

⚠ Sometimes communication between Nuendo and a remote device is interrupted or the handshaking protocol fails to create a connection. To re-establish communication with any device in the Devices list, select it and click the Reset button in the Device Setup dialog. Also, the “Send Reset Message to all Devices” button at the top of the dialog will reset every device in the Devices list.

# Operations

## Writing automation using remote controls

Automating the mixer in Touch mode using a remote control device is done in the same way as when you operate on-screen controls in Write mode. However, when it comes to replacing existing automation data, there is one important difference:

- If you activate Write mode and move a control on the remote control device, all data for the corresponding parameter is replaced from the position where you moved the control, up until the position where playback is stopped! In other words, as soon as you move a control in Write mode, it remains “active” until you stop playback. The reason for this is explained below.

As a consequence, an additional precaution must be taken:

- Make sure you move only the controller you want to replace!

In order to replace existing automation data for a control in Touch mode, the computer needs to know how long the user actually “grabbed” or used the control. When doing this “on screen”, the program simply detects when the mouse button is pressed and released. When you are using an external remote control device, however, there is no mouse button involved, and Nuendo cannot tell whether

you “grab and hold” a fader, or simply move it and release it. Instead, you have to indicate that you have “released” the control by stopping playback.

⚠ The above does not apply to the JLCooper MCS 3000 or any other remote control device with touch sensitive controls. These devices will stop writing as they have touch sensitive faders, which means that they stop writing as soon as you release the fader.

⚠ This is only relevant when you are using a remote control device in Touch mode and Write mode is activated in the mixer.

## Assigning remote key commands

For some of the supported remote devices, you can assign any Nuendo function (to which a key command can be assigned) to generic buttons, wheels or other controls. As of this writing, these devices are:

- JL Cooper MCS 3000
- JL Cooper CS-10
- Tascam US-428
- Yamaha 01x
- Yamaha DM 2000v2
- Yamaha DM 1000v2
- Radical SAC-2k
- Steinberg Houston

Proceed as follows:

1. Open the Device Setup dialog and select one of the remote devices that support this feature. On the right side of the window you will find a three column table. This is where you assign commands.
2. Use the “Button” column to locate a remote device control or button to which you wish to assign a Nuendo function.
3. Click in the “Category” column for the control, and select one of the Nuendo function categories from the pop-up menu that appears.
4. Click in the “Command” column, and select the desired Nuendo function from the pop-up menu that appears. The available items on the pop-up menu depend on the selected category.
5. Click “Apply” when you are done.

The selected function is now assigned to the button or control on the remote device.

## A note about remote controlling MIDI tracks

While most remote control devices will be able to control both MIDI and audio channels in Nuendo, the parameter setup may be different. For example, audio-specific controls (such as EQ) will be disregarded when controlling MIDI channels.

## Accessing user panel parameters via remote control devices

Nuendo allows you to control external MIDI devices through user device panels. When you have assigned project parameters to a device panel to be displayed in the Mixer (i.e. when creating the panel, you must select the Channel Strip Size option in the Add Panel dialog), you can access these parameters through some of the remote control devices supported by Nuendo.

This feature is supported for the following devices:

- Steinberg Houston
- Mackie Control
- Mackie HUI
- Yamaha DM 2000
- CM Motormix
- SAC2K

These remote control devices provide an extra display page in the Inserts section for the selected channel.

This page is called User and is displayed as the 9th insert page for audio channels and as the 5th insert page for MIDI channels. It allows you to control the parameters assigned to your user device panel from your remote control device.

## The Generic Remote device

If you have a generic MIDI controller, you can use this for remote control of Nuendo by setting up the Generic Remote device:

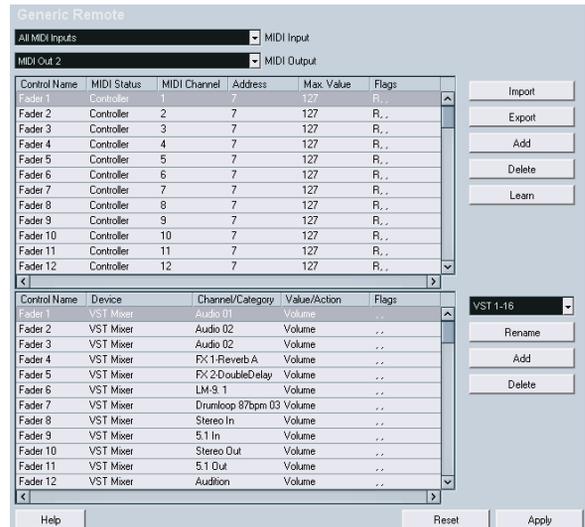
1. Open the Device Setup dialog on the Devices menu. If the Generic Remote device isn't on the Devices list, you need to add it.
2. Click the "+" sign in the top left corner and select the "Generic Remote" device from the pop-up menu.
  - When the Generic Remote device is added in the Device Setup dialog, you can open the corresponding window by selecting "Generic Remote" from the Devices menu.



The Generic Remote window

3. Select the Generic Remote device in the Devices list to the left.

The settings for the Generic Remote device are displayed, allowing you to specify which control on your device should control which parameter in Nuendo.



4. Use the MIDI Input and Output pop-up menus to select the MIDI port(s) to which your remote device is connected.

5. Use the pop-up menu to the right to select a bank. Banks are combinations of a certain number of channels, and are used because most MIDI devices can control only a limited number of channels at a time (often 8 or 16). For example, if your MIDI control device has 16 volume faders, and you are using 32 mixer channels in Nuendo, you would need two banks of 16 channels each. When the first bank is selected you control channel 1 to 16; when the second Bank is selected you control channel 17 to 32. Since you can control Transport functions as well, you may need several banks.

6. Set up the table at the top according to the controls on your MIDI control device.

The columns have the following functionality:

Column	Description
Control Name	Double clicking this field allows you to enter a descriptive name for the control (typically a name written on the console). This name is automatically reflected in the Control Name column in the lower table.
MIDI Status	Clicking in this column pulls down a pop-up menu, allowing you to specify the type of MIDI message sent by the control. The options are Controller, Program Change, Note On, Note Off, Aftertouch and Polyphonic Pressure. Also available are Continuous Control NRPN and RPN, a way to extend the available control messages. The "Ctrl JLCooper" option is a special version of a Continuous Controller where the 3rd byte of a MIDI message is used as address instead of the 2nd byte (a method supported by various JL-Cooper remote devices).
MIDI Channel	Clicking in this column opens a pop-up menu, allowing you to select the MIDI channel on which the controller is transmitted.
Address	The Continuous Controller number, the pitch of a note or the address of a NRPN/RPN Continuous Controller.
Max. Value	The maximum value the control will transmit. This value is used by the program to "scale" the value range of the MIDI controller to the value range of the program parameter.
Flags	Clicking in this column pulls down a pop-up menu, allowing you to activate or deactivate three flags: Receive – activate this if the MIDI message should be processed on reception. Transmit – activate this if a MIDI message should be transmitted when the corresponding value in the program changes. Relative – activate this if the control is an "endless" dial, which reports the number of turns instead of an absolute value.

▪ If you find that the table at the top holds too many or too few controls, you can add or remove controls with the Add and Delete buttons to the right of the table.

▪ If you are uncertain of which MIDI message a certain controller sends, you can use the Learn function:

Select the control in the upper table (by clicking in the Control Name column), move the corresponding control on your MIDI device and click the Learn button to the right of the table. The MIDI Status, MIDI Channel and Address values are automatically set to those of the moved control.

7. Use the table at the bottom to specify which Nuendo parameters you want to control.

Each row in the table is associated to the controller in the corresponding row in the first table (as indicated by the Control Name column). The other columns have the following functionality:

Column	Description
Device	Clicking in this column pulls down a pop-up menu, used for determining which device in Nuendo should be controlled. The special option "Command" allows you to perform certain command actions by remote control. One example of this is the selection of remote banks.
Channel/Category	This is where you select the channel to be controlled or, if the "Command" Device option is selected, the Command category.
Value/Action	Clicking in this column pulls down a pop-up menu, allowing you to select the parameter of the channel to be controlled (typically, if the "VST Mixer" Device option is selected you can choose between volume, pan, send levels, EQ, etc.). If the "Command" Device option is selected, this is where you specify the "Action" of the category.
Flags	Clicking in this column pulls down a pop-up menu, allowing you to activate or deactivate three flags: Push Button – When activated, the parameter is only changed if the received MIDI message shows a value unequal to 0. Toggle – When activated, the parameter value is switched between minimum and maximum value each time a MIDI message is received. The combination of Push Button and Toggle is useful for remote controls which do not latch the state of a button. One example is controlling mute status with a device on which pressing the Mute button turns it on, and releasing the Mute button turns it off. If Push Button and Toggle are activated, the Mute status will change between on and off whenever the button is pressed on the console. Not Automated – When activated, the parameter will not be automated.

8. If necessary, select another bank and make settings for it.

Note that you only need to make settings in the bottom table for this bank. The table at the top is already set up according to the MIDI remote device.

▪ If necessary, you can add banks by clicking the Add button below the Bank pop-up.

Clicking the Rename button allows you to assign a new name to the currently selected bank, and you can remove an unneeded bank by selecting it and clicking the Delete button.

9. When you are finished, close the Device Setup window. Now, you can control the specified Nuendo parameters from the MIDI remote device. To select another bank, use the pop-up menu in the Remote Status window (or use a control on the MIDI remote device, if you have assigned one for this).

### Importing and exporting remote setups

The Export button in the top right corner of the Generic Remote Setup window allows you to export the current setup, including the Control configuration (the table at the top) and all banks. The setup is saved as a file (with the Windows file extension “.xml”). Clicking the Import button allows you to import saved remote setup files.

- The last imported or exported remote setup will automatically be loaded when the program starts or the Generic Remote control is added in the Device Setup dialog.

## Track Quick Controls

If you have an external remote control device, you can set it up to control up to eight parameters of each audio track, MIDI track or instrument track. How to set up your device and how to assign parameters to it is described in the Track Controls chapter in the Operation Manual.

## Deactivating joysticks

When you have a joystick connected to your system, but do not want to use it with Nuendo, you can deactivate it:

1. Open the Device Setup dialog from the Devices menu.
2. Select the device in the list to the left in the dialog. The corresponding settings are shown to the right.
3. You can now activate/deactivate the joystick by activating or deactivating the respective dialog option.

## The supported remote control devices

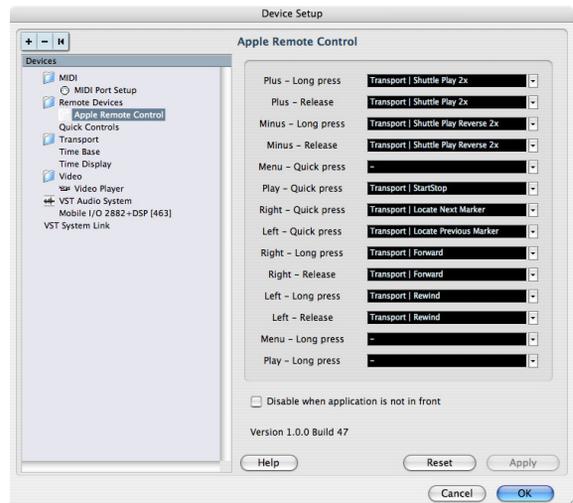
In the following sections, the remote control devices supported by Nuendo are listed along with a brief description of the corresponding feature set.

### Apple Remote (Macintosh only)

Many Apple computers come with an Apple Remote Control, a small hand-held device akin to TV remote controls. It allows you to remotely control certain features in Nuendo.

1. Open the Device Setup dialog and select Apple Remote Control from the Add Device pop-up.
2. In the list on the right, the Apple Remote's buttons are listed. For each button you can open a pop-up menu from which you can select a Nuendo parameter.

The parameter you select will be assigned to the corresponding button on the Apple Remote.



By default, the Apple Remote always controls the application that currently has the focus on your Macintosh computer (provided that this application supports the Apple Remote).

- When the option “Disable when application is not in front” is not selected, the Apple Remote will control Nuendo even if it does not have the focus.

## CM Automation Motor Mix

### Specifications

The CM Motor Mix can control any number of channels in groups of 8.

- Press the “<” and “>” buttons (at the top of the View section) to select channels 1–8, 9–16 etc. Hold down Shift and press “<” or “>” to shift the fader assignment in steps of one channel.
- Press F1 to disable/enable the fader motors.
- Use the Select buttons (the row of buttons next to the display) to select a single track for detailed settings.
- The Mute and Solo buttons are used to mute or solo a track.
- The assignment of the buttons in the first row below the dials depends on the selected parameter group.
- In the View section, select Rec/Rdy to use the second row of buttons below the dials for arming a track for recording.
- In the View section, select Write or “fnct B” to control the Write or Read buttons in the Nuendo mixer. When Write/fnct B is selected, selecting the All button in the bottom left section of the CM Motor Mix controls the Write All/Read All buttons in the Nuendo mixer.
- The Auto Enbl button controls Start/Stop in Nuendo.
- The Suspend button controls the Record function in Nuendo.
- Press the DSP button to move the project cursor to the start of the project.  
Hold down Shift and press the DSP button to move the project cursor to the end of the project.
- Press the Window button to move the project cursor to the left locator.  
Hold down Shift and press the Window button to move the project cursor to the right locator.
- Press the Default button to switch automatic punch in on or off.  
Hold down Shift and press the Default button to switch automatic punch out on or off.
- Press the Undo button to undo the last action in Nuendo.  
Hold down Shift and press the Undo button to “undo the undo”.

In the Rotary section, use the Rotary dial to change the assignment of the four buttons below the dial (indicated in the ROTARY display):

#### ROTARY: PA

- equaliz button: Fader Set mode Panning
- dynmics button: Fader Set mode Routing
- delay button: Selected Channel mode Panning
- special button: Selected Channel mode Routing

#### ROTARY: EQ

- equaliz button: Fader Set mode EQ Low (EQ1)
- dynmics button: Fader Set mode EQ Mid-Low (EQ2)
- delay button: Fader Set mode EQ Mid-High (EQ3)
- special button: Fader Set mode EQ High (EQ4)

#### ROTARY: S1

- equaliz button: Fader Set mode Send 1
- dynmics button: Fader Set mode Send 2
- delay button: Fader Set mode Send 3
- special button: Fader Set mode Send 4

#### ROTARY: S2

- equaliz button: Fader Set mode Send 5
  - dynmics button: Fader Set mode Send 6
  - delay button: Fader Set mode Send 7
  - special button: Fader Set mode Send 8
- Use the Bank Up button in the View section for page up. Hold down Shift and press the Bank Up button to jump to the last page.
  - Use the Bank Down button in the View section for page down. Hold down Shift and press the Bank Down button to jump to the first page.
  - Press the Rotary dial to switch the display of names of the available parameters or the page name on or off.

#### Fader Set mode Panning:

- Page 1 – panning left/right
- Page 2 – panning front/rear
- Buttons below dials: monitor

#### Fader Set mode Routing:

- Page 1 – Output Bus
- Page 2 – Monitor
- Page 3 – Input Bus
- Page 4 – Input Gain
- Page 5 – Input Phase
- Buttons below dials: monitor

Selected Channel mode Panning:

- Page 1 – panning left/right, panning front/rear
- Buttons below dials: monitor

Selected Channel mode Routing:

- Page 1 – Output Bus, Monitor, Input Bus, Input Gain, Input Phase
- Buttons below dials: monitor

Fader Set mode EQ1 to EQ4 (e.g. EQ1):

- Page 01 – EQ Low Gain
- Page 02 – EQ Low Frequency
- Page 03 – EQ Low Q
- Page 04 – EQ Low Enable
- Page 05 – Bypass EQs
- Buttons below dials: bypass EQs

Fader Set mode Send1 to Send8 (e.g. Send1):

- Page 01 – Send1 Level
- Page 02 – Send1 Enable
- Page 03 – Send1 Pre/Post
- Page 04 – Send1 Bus
- Page 05 – Bypass Sends
- Buttons below dials: bypass sends

F2 button: Selected Channel mode EQ:

- Page 1 – Gain, Frequency, Q and Enable for the lo band, Gain, Frequency, Q and Enable for the lo mid band
- Page 2 – Gain, Frequency, Q and Enable for the hi mid band, Gain, Frequency, Q and Enable for the hi band
- Buttons below dials: bypass EQs

Holding down Shift and pressing the F2 button gives you a variation of Selected Channel mode EQ:

- Page 1 – Gain and Frequency for all bands
- Page 2 – Q and Enable for all bands
- Buttons below dials: bypass EQs

F3 button: Selected Channel mode Sends

- Page 1 – Level, Enable, Pre/Post and Bus for Send 1 and Send 2
- Page 2 – Level, Enable, Pre/Post and Bus for Send 3 and Send 4
- Page 3 – Level, Enable, Pre/Post and Bus for Send 5 and Send 6
- Page 4 – Level, Enable, Pre/Post and Bus for Send 7 and Send 8
- Buttons below dials: bypass sends

Holding down Shift and pressing the F3 button gives you a variation of Selected Channel mode Sends:

- Page 1 – Level for Send 1 to Send 8
- Page 2 – Enable for Send 1 to Send 8
- Page 3 – Pre/Post for Send 1 to Send 8
- Page 4 – Bus for Send 1 to Send 8
- Buttons below dials: bypass sends

For a description of the functionalities for the F4 button: Selected Channel mode Inserts, Next button: Global mode Send Effects, Last button: Global mode Master Effects, and Enter button: Global mode Instruments, see the separate pdf document “Mackie Control and Nuendo”.

## Steinberg Houston

Houston is a MIDI/USB remote control device designed especially for use with VST audio applications such as Nuendo. With clearly laid out controls (including touch sensitive motorized faders, rotary knobs, transport controls and a jog/shuttle wheel) Houston allows you to control virtually Nuendo, without having to use the computer keyboard or mouse.

- For details about parameters and hands-on mixing techniques, please see the Houston documentation.

In this version of Nuendo, the following functions have been added:

[Dyn/User1]: Studio Send for selected channel

- Page 01 – Level
- Page 02 – Enable
- Page 03 – Pre/Post
- Page 04 – Pan Left/Right

[User2]: Instrument for selected channel (Instrument tracks and MIDI track to VSTi from the Rack)

- Page 1 – Select instrument
- Page 2-n – Instrument parameter

### Fader Set Section:

- [Shift]+[FX Send1]: Studio Send 1
- [Shift]+[FX Send2]: Studio Send 2
- [Shift]+[FX Send3]: Studio Send 3
- [Shift]+[FX Send4]: Studio Send 4
- Page 1 – Level
- Page 2 – Enable
- Page 3 – Pre/Post
- Page 4 – Pan Left/Right

## JL Cooper CS-10

### Specifications

The CS-10 can remote control 32 channels (in groups of 8). The following CS-10 controls will remote control the following parameters for each channel strip:

- Fader: volume
- Solo and Mute: solo and mute
- Sel: select channel for editing

The following parameters can be remote controlled for each selected channel using the six rotary knobs on the CS-10:

Dial	Parameter
Send 1	Effect send 1
Send 2	Effect send 2
Pan	Pan
Boost/cut	EQ 1 Gain
Frequency	EQ 1 Frequency
Bandwidth	EQ 1 Q Factor

- The CS-10 function keys 1–4 are used to select channels 1–32 in groups of 8.

Function key 1 selects channels 1–8, function key 2 selects channels 9–16, and so on.

- If you hold down the function key “Shift” and then move a fader, the two indicators beside the fader will indicate whether the fader position is below or above the current fader level in Nuendo.

If the upper indicator is lit, the fader position on the panel is above the fader level in Nuendo and vice versa. When both indicators are dark, the fader positions are matched for that channel.

- The CS-10 Play, Stop, Record, Rewind and Fast Forward transport controls control the equivalent functions in Nuendo.

- ⚠ The CS-10 supports “MIDI Feedback”, allowing the mute, solo and selection status of channels in Nuendo to be indicated on the panel. For this (and the fader position indication described above) to work, you need a two-way MIDI connection between the CS-10 and Nuendo.

## JL Cooper MCS-3000

### Specifications

The MCS-3000 can control 32 mixer channels remotely (in groups of 8). The following MCS-3000 controls will remote control the following mixer parameter for each channel strip:

- Fader: volume
- Solo and Mute: solo and mute
- Sel: Select channel for editing

These parameters can be remote controlled for each selected channel using the dials on the MCS-3000 and switching between Pages 1–4:

Page 1		Page 2	
Dial	Parameter	Dial	Parameter
1	Pan	1	EQ 1 Gain
2	Effect send 1	2	EQ 1 Freq
3	Effect send 2	3	EQ 1 “Q”
4	Effect send 3	4	EQ 1 Low Limit
5	Effect send 4	5	EQ 1 High Limit

Page 3		Page 4	
Dial	Parameter	Dial	Parameter
1	EQ 2 Gain	1	EQ 3 Gain
2	EQ 2 Freq	2	EQ 3 Freq
3	EQ 2 “Q”	3	EQ 3 “Q”
4	EQ 2 Low Limit	4	EQ 3 Low Limit
5	EQ 2 High Limit	5	EQ 3 High Limit

- The MCS-3000 bank keys 1–4 are used to select channels 1–32 in groups of 8. Bank key 1 selects channels 1–8, bank key 2 selects channels 9–16 and so on.

- You can create markers by pressing the “Set Locate” key on the MCS-3000, typing in a marker ID and pressing [Return].
- To locate to a marker, press “Locate”, type in a marker ID and press [Return].
- The MCS-3000 Play, Stop, Record, Rewind and Fast Forward transport controls will have the equivalent functionality in Nuendo.

⚠ The MCS-3000 supports “MIDI Feedback”, allowing fader settings and channel mute, solo and selection status to be indicated on the panel. For this to work, you need a two-way MIDI connection between the MCS-3000 and Nuendo.

## Mackie Control

Mackie Control is an automated touch-sensitive control surface. It is a nine-fader (eight channels and master) MIDI controller that provides in-depth mixing, editing, automation and navigational control for any supported digital audio workstation.

A special Lexan overlay that shows all Steinberg-specific key assignments for the Mackie Control device is available to customize the controller for Nuendo.

- For details about parameters and hands-on mixing techniques, please see the separate pdf documentation describing the use of Mackie Control with Nuendo.

## Mackie HUI

### Specifications

Mackie HUI can control any number of channels in groups of 8.

- Use the left and right Bank buttons to select channels 1–8, 9–16 etc.
- Use the left and right Channel buttons to shift the fader assignment in steps of one channel.
- The Fader button in the Auto Enable section is used to disable/enable the motors.
- The Mute, Pan, Send, Plug In and Send Mute buttons in the Auto Enable section are currently not supported.
- Use the Rec/Rdy buttons to arm a track for recording.

- Use the Select buttons to select a single track for detailed settings.
- With the Mute and Solo buttons you can mute or solo a track.
- Use the Default button to un-solo all tracks.
- Use the Assign button to un-mute all tracks.
- To the right of the time display, you find an LED labeled “Rude Solo Light”. This LED lights up as soon as any channel is soloed.
- Use the Insert buttons to bypass all inserts of one track.

Pan button in the Select Assign section:

- Fader Set: panning left/right or panning front/rear. Press button repeatedly to cycle through the assignments (the eight V-Pots control the pan parameters).
- V-Sel button in the Select Assign section: monitor track.

Send A to Send E buttons in the Select Assign section:

- Fader Set: Send 1 level to Send 8 level (Send A to Send D assigns Send 1 to Send 4, Send E assigns Send 5 to Send 8: press button repeatedly to cycle through the assignments).
- V-Sel button in the Select Assign section: send on/off switch (depending on selected Send).
- V-Sel button with Shift in the Select Assign section selected: pre/post fader switch (depending on selected Send).
- The SELECT ASSIGN four character display in the Select Assign section displays Send or Pan assignment for V-Pots and V-Sel buttons.
- The four character displays above the Select buttons display the assigned track names.
- The Bypass button in the Select Assign section is always selected to indicate the bypass function of the Insert buttons.
- The Mute, Rec/Rdy All, Input and Output buttons in the Select Assign section are currently not supported.
- Use the Auto buttons to control the status of the Read and Write buttons in the Mixer of Nuendo, depending on the Read/Write status in the Auto Mode section.
- Use the Off button in the Auto Mode section to control the Read All or Write All button in the mixer of Nuendo, depending on the Read/Write status in the Auto Mode section.

- The Touch, Latch and Trim buttons in the Auto Mode section are currently not supported.
- Use the Transport button in the Window section to open or close the Transport panel.
- Use the Edit button in the Window section to bring the current Project window to the front.
- Use the Status button in the Window section to open or close the VST Performance window.
- Use the Mix button in the Window section to open or close the Mixer window.
- Use the Mem-Loc button in the Window section to open the Marker window.
- The Alt button in the Window section is used for user-assigned functions.
- The Undo button in the Keyboard Shortcuts section undoes the last performed operation in Nuendo.  
Hold down the Shift button and press Undo to redo the last undone operation.
- Press the Save button in the Keyboard Shortcuts section to save the current project.  
Hold down the Shift button and press the Save button to save a backup copy of the current project.
- The Edit Mode, Edit Tool, Option/All, Ctrl/Clutch and Alt/Fine buttons in the Keyboard Shortcuts section are currently not supported.
- The Cut, Copy, Paste and Delete buttons in the Edit section control the equivalent Nuendo functions.
- The Capture and Separate buttons in the Edit section are currently not supported.
- The buttons in the Status/Group section are currently not supported.
- Use the In and Out buttons above the transport controls to set the project cursor to the positions of the left or right locators.  
Hold down the Shift button and press the In or Out button to move the left or right locator to the current project cursor position.
- Use the RTZ and END buttons to set the project cursor to the beginning or the end of the project.
- Press the Quick Punch button to switch automatic punch in on or off.  
Hold down the Shift button and press the Quick Punch button to switch automatic punch out on or off.
- Press the Loop button to switch Cycle mode on or off.
- Press the On Line button to switch Synchronisation on or off.
- The Audition, Pre and Post buttons are used for user assignable functions (see function keys F1 to F7).
- The Mackie HUI Play, Stop, Record, Rewind and Fast Forward transport controls control the equivalent functions in Nuendo.
- The jog wheel is used for moving the project cursor position in Nuendo.
- The Scrub and Shuttle buttons are currently not supported.
- Pressing the cursor keys located to the left of the jog wheel is the same as pressing the arrow keys on your computer keyboard.  
When the Mode button is selected, pressing the cursor keys will control zooming in the Project window.
- Use the Scroll control in the DSP Edit/Assign section to scroll through the pages of one parameter group.
- Use the Compare button in the DSP Edit/Assign section for page up.  
Hold down the Shift button in the Keyboard Shortcuts section and press the Compare button to jump to the last page.
- Use the Bypass button in the DSP Edit/Assign section for page down.  
Hold down the Shift button in the Keyboard Shortcuts section and press the Bypass button to jump to the first page.
- Use the Insert/Param button in the DSP Edit/Assign section to switch the display of names of the available parameters in the lower row on or off.

F1 button: Selected Channel: EQ

- Page 1 – Gain, Frequency, Q and Enable for the lo band
- Page 2 – Gain, Frequency, Q and Enable for the lo mid band
- Page 3 – Gain, Frequency, Q and Enable for the hi mid band
- Page 4 – Gain, Frequency, Q and Enable for the hi band
- Buttons above dials: bypass EQs

F2 button: Selected Channel: Sends

- Pages 1 to 8 – Level, Enable, Pre/Post and Bus for Sends 1 to 8
- Buttons above dials: bypass sends

F3 button: Selected Channel: Routing

- Page 1 – Output Bus, Monitor, Input Bus, Input Gain
- Page 2 – Input Phase
- Buttons above dials: monitor
- For a description of the functionalities for the F4 button: Selected Channel: Inserts, F5 button: Global mode Send Effects, F6 button: Global mode Master Effects, F7 button: Global mode Instruments, see the separate pdf document “Mackie Control and Nuendo”.
- Use the Locate/Numerics buttons to set the project cursor position.

- Immediately after you enter a numeric character, the Mackie HUI time display will no longer show the project cursor position, but the new value.
- You don't have to enter decimal points, colons, or semicolons for a new value.
- Use the CLR button to delete the last character. Holding down Shift (in the Keyboard Shortcuts section) and pressing the CLR button will delete the new value.
- Press the Enter button to set the project cursor to the position according to the new value.
- Use the “+” and “-” buttons to shift the project cursor position forward or backward by the amount of time set with the new value.
- The three LEDs left of the time display indicate whether Bars+Beats (BEATS), a frame based timecode (TIME CODE), Feet+Frames (FEET) or Samples (all LEDs off) is selected.

In this version of Nuendo, the following functions have been added:

F8 button: Selected channel: Instrument

- Page 1 – Select instrument
- Page 2-n – Instrument parameter

## Radikal Technologies SAC-2K

### Specifications

The SAC-2K can control 32 channels (8 channels at a time).

- Press the “17–24” and “25–32” buttons to switch from one set of eight channels to the next.
- Use the “1–8” and “9–16” buttons to shift the fader assignment in steps of one channel.
- Use the Select button above the master fader to disable/enable the motors.
- Press the Mute/Solo button (the button on the far left) repeatedly to cycle through the assignments for the Mute/Solo and Select buttons of every channel.

The current assignments are indicated by the LED in the button:

LED status	Mute/Solo buttons	Select buttons
Off	Mute track.	Select a single track for detailed settings.
On	Solo track.	Select a single track.
Blinking	Control the status of the Write buttons in the Nuendo mixer.	Control the status of the Read buttons in the Nuendo mixer.

- Use the From and To buttons to set the project cursor to the position of the left or right locator. Hold down Shift and press the From or To button to move the left or right locator to the current project cursor position. If you hold down Shift and press the “<<” or “>>” buttons, the project cursor is set to the beginning or the end of the project
- Press the Store Marker button to create a marker at the project cursor position. Hold down Shift and press the Store Marker button to open the Marker window.
- Use the Recall Marker button to move the project cursor to the closest marker to the right. Hold down Shift and press the Recall Marker button to move the project cursor to the closest marker to the left.
- The Play, Stop, Record, “<<” and “>>” transport controls control the equivalent functions in Nuendo.
- The jog wheel is used to move the project cursor position in Nuendo.
- The Scrub button is currently not supported.

- The status of the Num button (in the Software Navigation section) determines the assignment of the “1” to “0” and Enter buttons:

With Num-LED on, use the buttons to set the project cursor position:

- Immediately after you enter a numeric character, the SAC-2k time display will no longer show the project cursor position but the new value.
- You don’t have to enter decimal points, colons, or semicolons for a new value.
- Num button: delete the new value and deactivate locate functionality.
- Enter button: set the project cursor to the position according to the new value.
- Store Marker button: set the project cursor to the position according to the new value, and create a marker at the new project cursor position.

With the Num-LED off:

- Use the “1” button for page up (step through pages of one parameter group).
- Hold down Shift and press the “1” button to jump to the last page.
- Use the “6” button for page down.
- Hold down Shift and press the “6” button to jump to the first page.
- Press the Enter button to switch the display of names of the available parameters in the lower row on or off.
- The function keys “2” to “5”, “7” to “0” and function key combinations with the Shift button can be used to access functions in Nuendo. Refer to the Nuendo operation manual for information about how to assign program functions to remote controller function keys.

Some of the keys are already pre-assigned (and/but can be modified):

“5” button: undo the last operation in Nuendo. Hold down Shift and press the “5” button to “undo the undo”.

“7” button: copy; hold down Shift and press the “7” button to cut.

“9” button: paste.

“0” button: save the current project; hold down Shift and press the “0” button to save a backup copy of the current project.

Hold down Shift and press the “2”, “3”, “4” or “8” buttons to control zooming in the Project window.

Pan button in the Mixer-Mode section: Fader Set mode Panning:

- Page 1 – Pan left/right
- Page 2 – Pan front/rear
- Pressing a V-Pot will toggle Monitor for that channel.

High button: Fader Set mode EQ High:

- Page 1 – Gain
- Page 2 – Frequency
- Page 3 – Q
- Page 4 – Enable
- Pressing a V-Pot will bypass EQs for that channel.

HiMid, LowMid, Low button: Fader Set mode EQ Mid-High, Mid-Low, Low (same functionality as above).

Snd/Ins 1 button: Fader Set mode Send 1:

- Page 1 – Level
- Page 2 – Enable
- Page 3 – Pre/Post
- Page 4 – Bus
- Pressing a V-Pot will bypass sends for that channel.

Snd/Ins 2 to 4 buttons: Fader Set mode Send 2 to Send 4 (same functionality as above). Depending on the Snd/Ins button status (above Snd/Ins 1 button) Snd/Ins 1 to Snd/Ins 4 buttons are assigned to Send 1 to Send 4 or Send 5 to Send 8.

EQs button (Channel-Strips section): Selected Channel mode EQ:

- Page 1 – Gain, Frequency, Q and Enable for the lo band, Gain, Frequency, Q and Enable for the lo mid band
- Page 2 – Gain, Frequency, Q and Enable for the hi mid band, Gain, Frequency, Q and Enable for the hi band
- Pressing a V-Pot will bypass EQs.

Inserts/Sends button: Selected Channel mode Sends:

- Page 1 – Level for Send 1 to Send 8
- Page 2 – Enable for Send 1 to Send 8
- Page 3 – Pre/Post for Send 1 to Send 8
- Page 4 – Bus for Send 1 to Send 8
- Pressing a V-Pot will bypass sends.

Dynamics button: Selected Channel mode Routing:

- Page 1 – Output Bus, Monitor, Input Bus, Input Gain, Input Phase
- Pressing a V-Pot will toggle Monitor.

For a description of the functionalities for the MIDI button: Selected Channel mode Inserts, Shift+Inserts/Sends button: Global mode Send Effects, Shift+Dynamics button: Global mode Master Effects, Shift+MIDI button: Global mode Instruments, see the separate pdf document “Mackie Control and Nuendo”.

In this version of Nuendo, the following functions have been added:

Instrument button: Selected channel mode Instrument:

- Page 1 – Select instrument
- Page 2-n – Instrument parameter

## Roland MCR-8

### Specifications

⚠ Before you can initiate remote control operation, the MCR-8 “Mode” switch must be set to “4”.

The Roland MCR-8 can control 16 mixer channels, plus transport control. The “A/B switch” is used to switch between controlling channels 1–8 and 9–16. The following MCR-8 parameters control the equivalent parameters for each channel strip:

- Fader level, mute, solo and pan.

The following MCR-8 transport controls control the equivalent Nuendo functions:

- Play, Stop, Record, Rewind, Fast Forward.

⚠ The MCR-8 does not support “MIDI feedback”, that is, the current status of parameters in Nuendo is not indicated on the MCR-8. Therefore, you only need a one-way MIDI connection between the MCR-8 and Nuendo.

## Tascam US-428

### Specifications

The US-428 can remote control up to 64 mixer channels.

- When the Tascam US-428 device is added in the Device Setup dialog, you can open the Remote Status window by selecting “Tascam US-428” from the Devices menu.

This indicates which bank (group of eight channels in Nuendo) is currently being controlled by the remote device. To select another bank, use the pop-up menu in the window or use the Bank Left/Right buttons on the remote device.

- The US-428 transport keys will have the equivalent functionality in Nuendo.

- To set markers, hold down “Set” while pressing a locator key.

- If you hold down the function key [Null] and move a fader, the Select and Rec indicators above the fader will indicate whether the fader position is below or above the current fader level in Nuendo.

If the upper indicator is lit, the fader position on the panel is above the fader level in Nuendo and vice versa. When both indicators are dark, fader positions are matched for that channel.

⚠ The US-428 supports “MIDI Feedback”, allowing for mute/solo, channel selection, EQ band, Aux 1 to 4 and transport status to be indicated on the panel. For this (and the fader position indication described above) to work, you need to select the “US-428 Control” port as input and output.

### Nuendo mixer

The following US-428 controls will remote control the following mixer parameter for each channel strip:

- Fader: volume
- Mute/Solo: mute and solo (selected via the Solo switch)
- Select: selects channel for editing
- Pan-Dial: pan
- EQ-Gain

Controls the EQ gain for each band selected with the Low, LoMid, HiMid and High buttons. These correspond to the four EQ bands in Nuendo, starting from the leftmost band.

- **EQ-Freq**

Controls the EQ frequency for each band selected with the Low, LoMid, HiMid and High buttons. These correspond to the four EQ bands in Nuendo, starting from the leftmost band.

- **EQ-“Q”**

Controls the EQ “Q” for each band selected with the Low, LoMid, HiMid and High buttons. These correspond to the four EQ bands in Nuendo, starting from the leftmost band.

- **Aux 1 to Aux 4 and shuttle wheel:**

The effect send levels for sends 1 to 4.

- The shuttle wheel will act as position shuttle if no Aux send button is selected.

Press the activated button to deselect it.

- Holding down the “Asgn” button and pressing the Low, LoMid, HiMid and High EQ buttons switches the corresponding EQ band “On” button status.

- Holding down the “Asgn” button and pressing the Aux1 to Aux4 buttons switches the corresponding Effect Send 1–4 “On” button status.

## Gallery Software ADRStudio

Gallery's ADRStudio is a software application that helps you realizing ADR (Automated Dialog Replacement) sessions. You can run ADRStudio on a separate computer and connect it to your Nuendo system via MIDI ports.

1. Open the Device Setup dialog and select Gallery Software ADRStudio from the Add Device pop-up menu.

2. Configure the MIDI In and Out ports accordingly, and assign Nuendo commands to ADRStudio's Audition and Window/Alt buttons.

The parameters you select will be assigned to the corresponding buttons in the Gallery Software ADRStudio.

The ADRStudio will control Nuendo, turning it into an extended tape machine. ADRStudio controls recording, in and out times, track naming, and general management.

- For detailed information about features, parameters, etc., please see the documentation which comes with the Gallery Software.

## WK-Audio ID

The WK Audio ID Controller is suitable for audio work, e.g. post production, music tracking and sound design, and can control Nuendo.

1. Open the Device Setup dialog and select WK-Audio ID from the Add Device pop-up menu.

2. Configure the MIDI In and Out ports accordingly, and assign Nuendo commands to WK-Audio ID User buttons. The parameters you select will be assigned to the corresponding buttons in the WK-Audio ID Controller.

- For detailed information about features, parameters, etc., please see the documentation which comes with the WK-Audio ID controller.

## Yamaha 01V

### Specifications

The Yamaha 01V can remote control Nuendo. Before you can initiate remote control operation, the 01V must be set up in the following way:

- MIDI Parameter Change and Receive must be enabled.
- MIDI Control Change and Receive must be disabled.
- Device ID / MIDI Channel Receive must be set to “1”.
- Local Control should be set to “Off”.

As soon as Local Control is set to “Off”, remote control is enabled.

The 01V remote operation of Nuendo is very straightforward, with (almost) every parameter having the equivalent parameter controller in the 01V mixer. The current status of all controllable parameters is fed back to the 01V and indicated on the panel, using the motorized faders, indicators, etc. (for this to work, you need a twoway MIDI connection between the 01V and Nuendo).

To facilitate 32 channel remote control, two separate control “Layouts” are used, each controlling 16 mixer channels. The “Memory” button on the 01V is used to switch between VST layout 1 and 2. Page 1 displays VST Layout 1, and page 2 VST Layout 2.

The following parameters are remote controllable for channels 1–32 in the mixer:

 The value ranges for the parameters in the 01V may not match the ranges for the corresponding parameters in all cases.

- Fader level, mute and pan.

01V controls for these parameters control the equivalent Nuendo parameters.

- Effect sends 1–6.

01V Aux 1–4 control effect send 1–4, 01V effect 1 and 2 control effect send 5 and 6.

- EQ Frequency, Gain and Q (4 bands).

01V controls for these parameters control the equivalent Nuendo parameters.

- Stereo Master Volume.

The 01V control for this parameter controls the equivalent Nuendo parameter.

- Send effects master volume 1–4 are controlled by 01V Aux Master 1–4. Send effects master 5 and 6 are controlled by 01V effect master 1 and 2.

With Layout 1 the 01V controls the following channels:

- Channel 1–12, 13/14 and 15/16 will control channels 1–14.

- 01V Return 1 and 2 will control channels 15 and 16.

With Layout 2 the 01V controls the following channels:

- Channel 1–12, 13/14 and 15/16 will control channels 17–30.

- 01V Return 1 and 2 will control channels 31 and 32.

## Yamaha DM2000/DM 2000v2

The Yamaha DM2000 is a digital mixing console that provides full automation of virtually all console parameters. It is designed to integrate effectively with digital audio workstations such as Nuendo.

- For detailed information about features, parameters, etc., please see the documentation which comes with the Yamaha DM2000.

In this version of Nuendo, the following functions have been added:

### Automix Section

User defined keys	DM 2000 Button	Nuendo function
#0	Display	Open/Close Automation Panel
#1	Enable	Preview mode
#2	Rec	Punch Preview
#3	Abort	Drop out mode Touch
#4	Auto rec	Drop out mode Latch
#5	Return	Drop out mode X-Over
#6	Relative	Trim mode
#7	Touch sense	Toggle Write Enable All Tracks

### Set and User defined key:

User defined keys	DM 2000 Button	Nuendo function
#1	Set + suspend	Suspend Preview
#2	Set + write	Punch on play
#3	Set + touch	Punch log: load selected
#4	Set + latch	Punch log: keep selected
#5	Set + read	Fill to punch
#6	Set + trim	Fill loop
#7	Set + off	Fill to end
#8	Fader	Suspend Writing Volume
#9	ON	Suspend Writing Mute
#10	PAN	Suspend Writing Pan
#11	Surround	Suspend Writing Inserts
#12	AUX	Suspend Writing Sends
#13	AUX on	Suspend Writing Others
#14	EQ	Suspend Writing EQ
#8	Set + Fader	Suspend Reading Volume
#9	Set + ON	Suspend Reading Mute

User defined keys	DM 2000 Button	Nuendo function
#10	Set + PAN	Suspend Reading Pan
#11	Set + Surround	Suspend Reading Inserts
#12	Set + AUX	Suspend Reading Sends
#13	Set + AUX on	Suspend Reading Others
#14	Set + EQ	Suspend Reading EQ

User defined key:

User defined keys	DM 2000 Button	Nuendo function
#8	Fader	Suspend Writing Volume
#9	ON	Suspend Writing Mute
#10	PAN	Suspend Writing Pan
#11	Surround	Suspend Writing Inserts
#12	AUX	Suspend Writing Sends
#13	AUX on	Suspend Writing Others
#14	EQ	Suspend Writing EQ
#8	Set + Fader	Suspend Reading Volume
#9	Set + ON	Suspend Reading Mute
#10	Set + PAN	Suspend Reading Pan
#11	Set + Surround	Suspend Reading Inserts
#12	Set + AUX	Suspend Reading Sends
#13	Set + AUX on	Suspend Reading Others
#14	Set + EQ	Suspend Reading EQ

Set and User defined key:

User defined keys	DM 2000 Button	Nuendo function
#8	Set + Fader	Suspend Reading Volume
#9	Set + ON	Suspend Reading Mute
#10	Set + PAN	Suspend Reading Pan
#11	Set + Surround	Suspend Reading Inserts
#12	Set + AUX	Suspend Reading Sends
#13	Set + AUX on	Suspend Reading Others
#14	Set + EQ	Suspend Reading EQ

- [Auto]: write enable
- [Set] + [Auto]: read enable
- Studio 1–4 added as [Aux9]–[Aux12] to the DM2000 - Operation is identical to Sends (volume, on/off, pre/post supported)

- Matrix [Aux9]–[Aux12] will assign Studio 1–4 to the encoders above the faders
- Selected Channel Aux9–12 will assign Studio 1–4

## Yamaha DM1000v2

The Yamaha DM1000v2 is a digital mixing console that provides full automation of virtually all console parameters. It is designed to integrate effectively with digital audio workstations such as Nuendo.

- For detailed information about features, parameters, etc., please see the documentation which comes with the Yamaha DM1000v2.

## Yamaha 01v96v2

The Yamaha 01v96v2 is a digital mixing console that provides full automation of virtually all console parameters. It is designed to integrate effectively with digital audio workstations such as Nuendo.

- For detailed information about features, parameters, etc., please see the documentation which comes with the Yamaha 01v96v2.

## Yamaha 02r96v2

The Yamaha 02r96v2 is a digital mixing console that provides full automation of virtually all console parameters. It is designed to integrate effectively with digital audio workstations such as Nuendo.

- For detailed information about features, parameters, etc., please see the documentation which comes with the Yamaha 02r96v2.

## Yamaha 01x

The Yamaha 01x is a digital mixing console that provides full automation of virtually all console parameters. It is designed to integrate effectively with digital audio workstations such as Nuendo.

- For detailed information about features, parameters, etc., please see the documentation which comes with the Yamaha 01x.

In this version of Nuendo, the following functions have been added:

[Shift]+[Send FX]: Studio Sends for selected channel

- Page 1 – Level
- Page 2 – Enable
- Page 3 – Pre/Post
- Page 4 – Pan Left/Right

[Instruments]: Instrument for selected channel (Instrument tracks and MIDI track to VSTi from the Rack)

- Page 1 – Select instrument
- Page 2-n – Instrument parameter
- [Shift]+[Instruments]: VST Instrument Rack access (as v3.x)

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