User Manual
Nord Sample Editor

Version 2.x

NORD Sample Editor User Manual

Table of Contents

What is the Nord Sample Editor?

The Nord Sample Editor is the application that allows you to edit, create and load collections of samples to and from the sample memory area of a Sample Library compatible Nord instrument.

The Nord Sample Editor will assist you in your editing efforts; it contains powerful tools for various actions that can be applied to a sample. These tools will for instance help you in setting a start point of a sample, creating a loop and other tasks that are essential in making the samples ready for use in the Nord Sample Editor. The Editor also has functions for automatic mapping of samples across the keyboard and much more.

Non-destructive editing

Any editing that takes place in the Nord Sample Editor software is completely non-destructive. The audio files on your hard disk will not be altered in any way even though the Nord Sample Editor will e.g. truncate samples before they are downloaded to the Nord instrument. If you edit any audio file that is used by the Nord Sample Editor with some other application, that edit will also affect that particular file in the Nord Sample Editor.

System Requirements

Windows PC

The Nord Sample Editor requires a computer with Windows XP or Vista. Additionally you need one free USB port plus a DVD ROM drive if you want to install the software from the DVD.

Mac

The Nord Sample Editor requires a Mac with one USB-port, a DVD ROM unit to install the software and OSX 10.4 or later.

Nord

You will also need a Sample Library compatible Nord instrument to be able to download the samples. The Nord units that are compatible with the Sample Editor and the Nord Sample Library are: Nord Wave with OS v2.x and later and the Nord Electro 3 with OS 1.x or later.

Getting Started

Let's begin with a brief description of the terminology used in this chapter, followed by a typical workflow scenario to give you an overview of the functions of the Nord Sample Editor.

Project, sample memory

All the parts that are needed to assemble a sample waveform in the Nord Sample Editor – references to audio files, samples, mappings, start-, stop- and loop markers etc. - are organized in Projects.

All Project related settings is done on your computer, and you can preview edits via the computer audio card. A Project links to the actual audio files on the hard drive, if you e.g. delete or edit an audio file that is included in a Project, that Project will be affected.

You can save Project files on the hard drive, just like any other computer file. When you are satisfied with a Project, you can generate a Sample Instrument, which can be downloaded to the Flash memory in the Nord Sample Editor.

WYDIWYH

What You Do Is What You Hear. Every function in the Nord Sample Editor can be applied to a sample in real time. If the sample is playing back through the computer audio card, you can e.g. listen to how the loop changes if you move the loop markers or if you adjust the crossfade settings or the start point of the sample.

Working offline

Project or sample editing does not require a connected Nord unit; you can create and edit Projects using only the computer and then connect to the unit at some other time in order to download the result of the Project to the Nord Sample Editor.

Sample, Zone

When an audio file is added to a Project, it can be used as the source for one or several samples. A sample can be assigned to a range on the keyboard; this range is called a Zone. The sample parameters that determine the range of its zone is the Root Key and the Upper Key.

Sample Instrument

A set of samples with zone settings is a Sample Instrument; the maximum number of zones in a Sample Instrument is 91. The Sample Instrument can be selected in the Nord Wave oscillator 2 as a waveform and by choosing the SampLib type and model in the Electro 3.

Any kind of sample may be assigned to any zone, which means that a Sample Instrument can consist of several different sounds, mapped across the keyboard. You can e.g. create a drum type Sample Instrument with one sound for each key, or create multiple splits by assigning different samples to different keyboard ranges – e.g. bass samples in the lower register, followed by piano samples higher up on the keyboard.

Sample editing, loop markers, crossfade

Setting a starting point for a sample to e.g. eliminate any unwanted audio at the beginning, is a one-click function in the Nord Sample Editor.

The Editor has some very powerful loop functions that make creating perfect, seamless loops a breeze. The loop makes it possible to use shorter samples that still can be played for a duration that is longer than the sample itself. The loop functions also includes a crossfade option that can be monitored in real time, with various options for the length, crossfade curves etc.

Generate, upload, download

When a Project is completed, you can generate a Sample Instrument and automatically download the wave data to the Flash memory in the Nord unit. The real estate of the Flash memory has a fixed capacity and to keep track on how much room you have left, there is an indicator in the Nord Sample Editor that will help you to manage the available space.

Installation

Installation of the USB driver

Before the Nord Sample Editor can communicate with a Windows PC, you need to install a Clavia USB driver for the Windows operating system. Mac users may skip this paragraph. To install the USB driver, follow these instructions:

1. Insert the 'Nord DVD' installation DVD into the DVD-ROM drive or get the driver from the Nord Wave download area at www.nordkeyboards.com.

2. Connect the USB cable between the Nord Sample Editor and the computer and power up the unit. The 'Found New Hardware' wizard should appear, accompanied by its reassuring alert sound.

3. Let the wizard search the installation DVD for the USB driver and install it, or point the wizard to the folder where the driver is.

Installation Windows PC

1. Insert the 'Nord DVD' into the DVD-ROM drive.

2. Run the Install Nord Sample Editor v2.xx.exe and follow the instructions in the setup program.

3. The Nord Sample Editor will be installed in the Program Files folder on the hard disk.

During the installation you will have the option to select an alternative location for the application.

4. Confirm every window in the installation procedure by clicking on the Next button. The installation may be aborted at any time by clicking on Cancel. When the installation is complete, click the Close button to return to the Windows desktop.

Installation Mac OSX

1. Insert the 'Nord DVD' into the DVD-ROM drive.

2. Open the image file (.dmg) that is located in the Nord Sample Editor folder on the DVD and drag the Nord Sample Editor v2.xx.app to the Applications folder.

☼ *When new versions of the Nord Sample Editor are released, they will be available as a free download at www.nordkeyboards.com.*

The Quick Tour

Let us go through a few things we know you are curious about and get acquainted with the Nord Sample Editor at the same time.
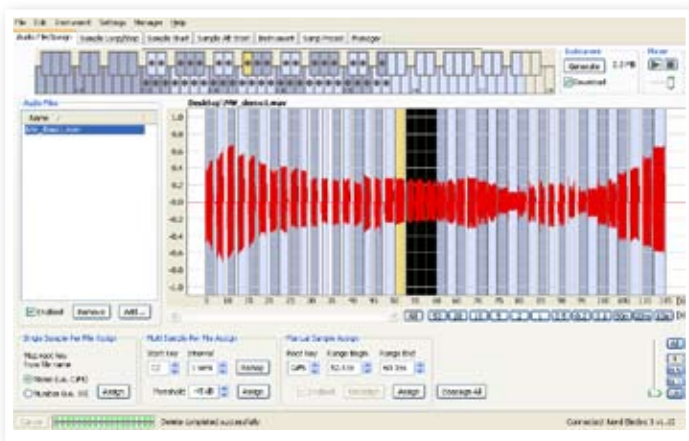

Nord Sample Editor Audio File/Assign tab with an audio file, with assigned samples

First Light

1. Make sure that the Nord unit is powered up, and connected to the computer, to a USB port.

2. Launch the Nord Sample Editor from the Program Files folder or the Start Menu (PC) or from the Applications folder (Mac OSX).

During the start-up procedure, the Editor will automatically try and establish contact with the Nord unit.

If a Nord unit is not connected, you can still work on a Project with sample editing, mapping and other functions. When the Editor finds a unit this will be indicated at the lower, right corner of the Editor window and the Manager tab will open automatically. A list with all the current Samples in the unit's Flash memory will appear in the Nord Sample Editor window.
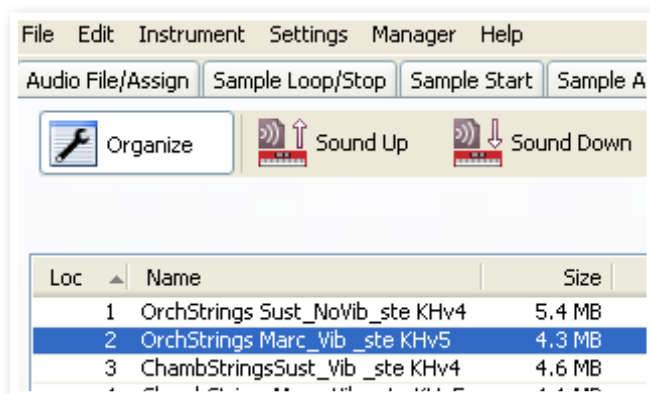
☼ *In order for the Nord Sample Editor to be able to playback samples, you need to select a driver for your audio card. This is done in the Settings/Audio menu.*

❶ *On a XP or Vista system, select an available Direct X driver. In order to be compatible with as many XP and Vista computer systems as possible, the Nord Sample Editor uses Direct X drivers.*

Download Sample Instruments

You can find new Sample Instruments at the www.nordkeyboards.com website. These can be downloaded from the website free of charge. Here's how to download a Sample Instrument from the computer hard drive to the Nord unit:

1. Browse to www.nordkeyboards.com and go to the Nord Sample Library area.

2. Select the Sample Instrument archives that you wish to get and save the file (or folder) to a location on your hard drive and unzip it.

The file extension of the file will be .nsmp for Sample Instruments. Read more about the file types the Editor uses on page 17.

3. In the Nord Sample Editor, open the Manager tab.

4. Select the Organize option in the Manager menu and you will see a grid with all the available memory locations.

To add new Sample Instruments to the Nord unit just drag the files from the hard drive to an empty location in the list of Sample Instruments in the Manager tab.

⚠ *Audio files have to be added to a Project in the Audio File/Assign tab and "generated" to become a Sample Instrument before they can be used in the Nord unit. Only Sample Instruments in the .nsmp format can be downloaded using the method described above.*

Upload Sample Instruments

Using the Nord Sample Editor, it is very easy to upload samples from the Nord unit to the computer hard drive. These actions also take place in the Manager tab.

1. Open the Manager tab.

2. Right-click on a sample and select Upload.

The data will be saved in the same folder as the Editor application lives in or in a folder chosen by you. Sample Instruments will be saved as .nsmp files. Read more about the file types the Editor uses on page 17.

☼ *By combining the techniques for down- and uploading the Sample Instruments, you are now able to share Sample Instruments with other Nord Wave or Nord Electro 3 users if you wish.*

Create a new Sample Instrument

Time to get creative; let's create a new Sample Instrument.

1. Copy the NW_demo1.wav file from the Nord DVD to the folder where the Nord Sample Editor is installed.

You may of course use any other audio file in the .wav format but this particular file will demonstrate a very powerful feature of the Nord Sample Editor.

2. Open a new Project from the File menu.

Only one Project can be open in the Editor, you will be prompted to save any changes before any Project that has been edited is closed.

☀ *A quick way to open a new Project is to hit Ctrl+N on the computer keyboard. Ctrl+S will save the current Project. The name you give to a Project will also be the name of the Sample Instrument that is downloaded to the Nord unit.s*

③ Select the Audio File/Assign tab.
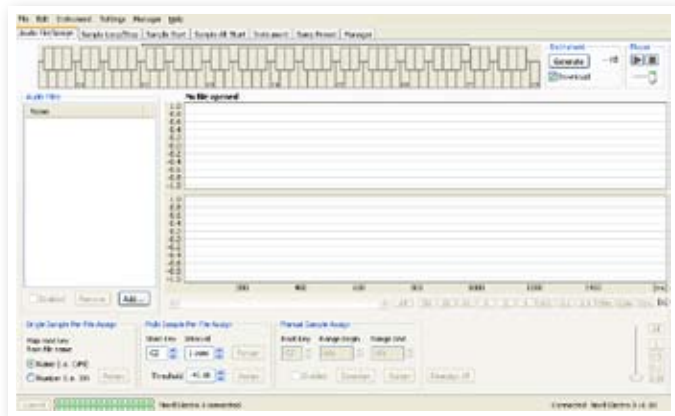
④ Click on the Add button below the Audio Files area or type Ctrl+F. Browse to the location of the NW_demo1.wav file and click Open.


The two progress bars at the lower left corner of the Project window will indicate that the file(s) are added to the Project. The amount of time it takes to add one or several files will vary, depending on the file size(s) and your computer.

☀ *You can select and add several samples at once, as long as they are in the same location on your hard drive. To add all the audio files from an entire folder, use the Add Folder (Ctrl+D) command from the File menu.*

⑤ When a file has been added, you will see a representation of its content as a waveform graph in the Editor window.

Please note that the NW_demo1.wav is one file, which consists of several recorded notes from a Nord C1 organ. Nothing fancy, just some simple sounds to show you a cool feature. Let's do some magic now and have the Editor create several samples, mapped in Zones across the keyboard from this audio file.
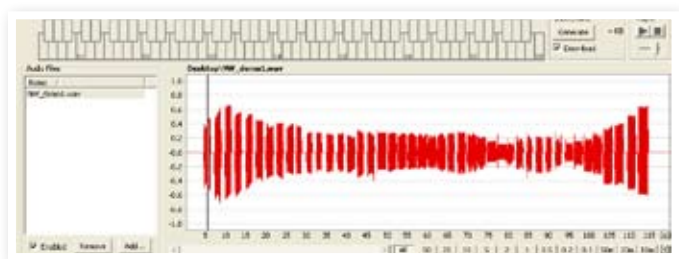
⑥ Locate the section labeled Multi Sample Per File Assign at the lower part of the Editor window. Set the Start Note to C2, the interval to 1 semi, the Threshold to -45 dB and then click on Assign.

When the Nord Sample Editor has completed the analysis of the file, samples with Root Key and Upper Key settings are created and these settings are translated into zones. These zones will be indicated in the Keyboard Grid at the top of the Editor window.
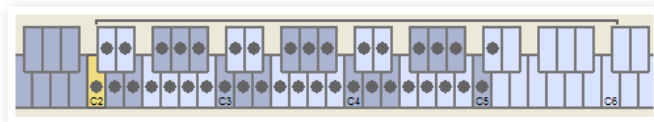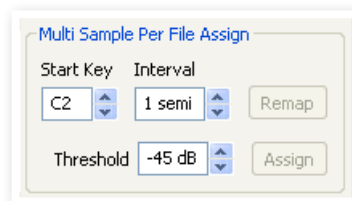
⑦ The sample that is highlighted in yellow is the focused sample.

This means that this sample is active for further editing and ready for playback.

☀ *Pressing the space bar on the computer keyboard, or clicking on the ▶ symbol in the Player at the upper right corner will start the playback of the file.*

⑧ The dot-marker on a key (●) in the keyboard display indicates that this is the Root Key of a sample. The sample is also assigned to the corresponding range that surrounds the dot-marked key, indicated in grey or blue.

If you right-click on a dotted key, you can disable a sample temporarily from the Project which will be indicated with a circle (O). You can also de-assign the sample – this means that it will be removed from the Project.

☀ *Disabling a sample from a zone is a great way to determine how many samples you need in order to cover a particular range of a multi sampled instrument or sound. Any settings that have been made to a sample will be kept even if it is disabled. When you re-enable a sample, these settings will be restored.*

☀ *You can use the arrow keys on the computer keyboard to quickly move the focus from one sample to another.*

⑨ Save the Project by selecting Save in the File menu or type Ctrl+S on the computer keyboard.

Adding Audio files with individual samples

You may want to add audio files that only contain one sample each. Here is how you assign individual samples to Zones:

① Open a new Project, select the Audio Files/Assign tab and click the Add button.

☀ *The Nord Sample Editor can use stereo or mono audio files as sample sources, with up to 44.1 kHz sample rate, 24 bits resolution.*

② Navigate to a folder that contain the audio files you wish to use, select the files and click Open to add them to the Project.

③ The files will be listed, one by one in the Audio Files area. Select the first file that you wish to assign to a zone.

The waveform graph will show a representation of the audio file.
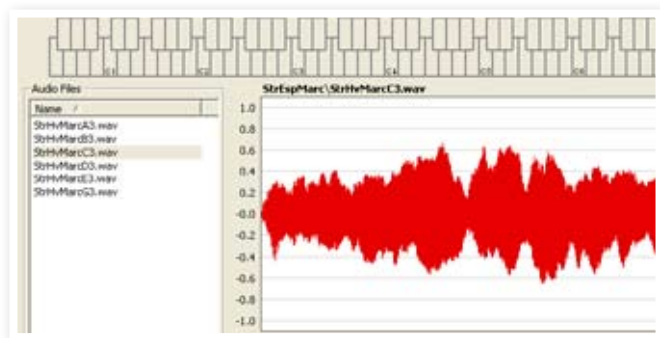
(4) Click and drag to select the entire waveform in the graph, and look at the Manual Sample Assign area in the lower part of the window.
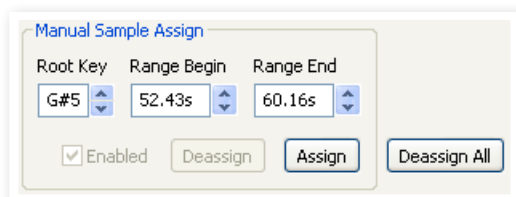
(5) Enter the Root Key; the key where the sample will play back at its original pitch, and click Assign.

(6) Select the next file and click and drag in the waveform graph to select the entire audio snippet.

(7) Enter the Root Key for the next sample/zone.

☀ *The first zone that you create will span a range of two octaves above the Root Key. The range of a zone is determined by two parameters, the Root Key and the Upper Key for each sample. The range is also depending on any other sample that may be assigned further down on the keyboard. A zone's lower key will reach all the way down to any previous sample's Upper Key or the F0 key if it is the "first" sample assigned. A sample will always reach down to the previous sample's Upper Key.*

☀ *A zone in a range cannot be empty, i.e. without an assigned sample. If you want to have some keys that are silent somewhere in a Sample Instrument, just make a selection in the waveform graph of an area that is silent (or Add an audio file that is short, and contains no audio data). Then map this silent sample to a range of keys.*

Single Sample Per File Assign

If you have audio files on your hard drive where the file name contains an identifier or marker of the file's pitch, the Single Sample Per File Assign function can automatically map these samples.

(1) Use the Add function to add some audio files to the Project.

The Single Sample Per File Assign function can use identifiers that refer to a pitch name – if the file name is e.g. cello_C#4.wav – or note number – like e.g. cello_39.wav.

(2) Select all the files in the File List that has these indicators and click on Assign.
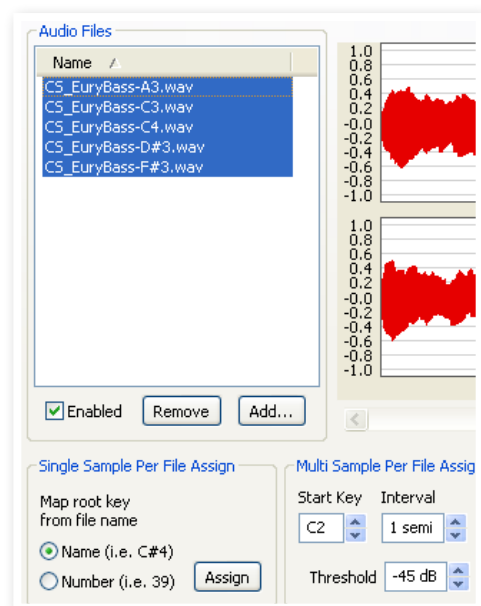
(3) The samples will be mapped to zones according to the markers in the file names.

Editing

Let's continue to edit a sample; in order to prepare it a bit more before we download the Sample Instrument to the Nord Sample Editor:

(1) Make sure that you have at least one sample in the Project and that this sample is assigned to a zone and in focus.

(2) Click on the Instrument tab.

This is where you can adjust the gain, and fine-tune the pitch of the entire Sample Instrument or any individual samples. You adjust these functions by entering values in the input boxes or by using the increment/decrement buttons.


☀ *Move the sample focus by using the horizontal arrow keys on the computer keyboard.*

(3) Click on the Sample Start tab.

This is where you can adjust the starting point of the sample. This is useful if you have audio files that contain unwanted material before the actual sound begins. The Nord Sample Editor will automatically place a starting point when a sample is assigned to a zone.

This marker can easily be changed if you prefer to have manual control of this function. You can manually set the start point by entering a value in the Start input box, using the slider or by simply clicking in the waveform graph.
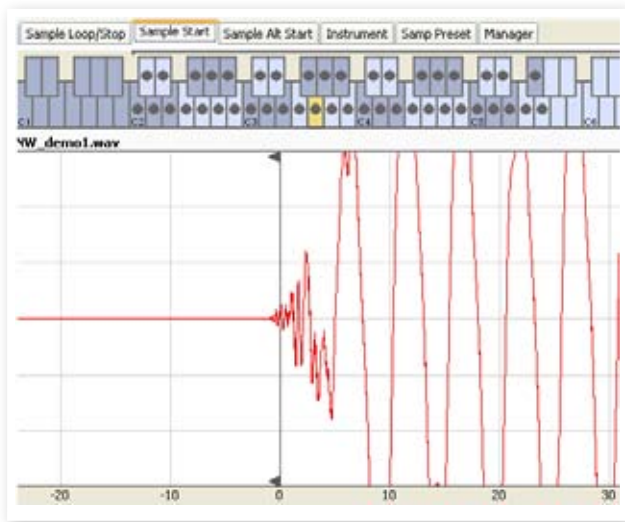
☀ *When the Sample Start tab is opened, the Editor will zoom in closer in the waveform graph to make it easier to distinguish noise from the actual sound. You can change the zoom settings by using the buttons below the waveform graph for the horizontal axis, and the slider or the buttons to the right, for the vertical axis.*

Looping

Loops are very useful in order to make a sample play back or sound beyond its own length. Loops will also reduce a sample's size, since everything after the loop end marker will be discarded when you download a Sample Instrument to the Nord Sample Editor.

Let's take a closer look at a loop.

A loop is automatically generated when a sample is assigned to a zone.

1 To view or edit the loop settings, just click on the Sample Loop/Stop tab. The loop is indicated in the waveform graph as a colored area.
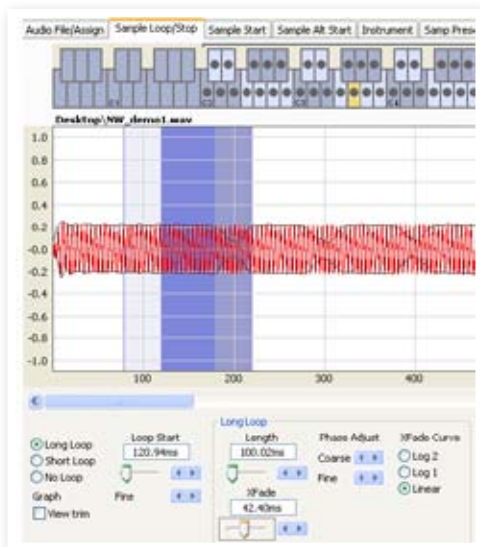
To set a new beginning of the loop - the loop Start marker - just click on the waveform graph. To set the length of the loop, just right-click anywhere to the right of the indication of the loop start. You can also enter values for these parameters in the input boxes or use the sliders.

There are three loop options available, Long Loop, Short Loop and No Loop.

The Long Loop option is useful for various instrument samples and sounds which contain non-periodic variations. When you select this option, a loop start marker and a loop end marker are created. These two loop markers will be separated by the actual loop section which is indicated as the blue area in the waveform graph.

The long Loop option will also include a crossfade to ensure that the loop will sound as smooth as possible. The two segments of the cross-fade are indicated as the light grey area immediately before the loop start marker, and the darker area before the loop end marker.

☀ *Hit the space bar on the computer keyboard to start the playback and adjust the settings for the crossfade or move the loop markers by clicking in the waveform graph. What You Do Is What You Hear, any change you make will be monitored in real time during playback.*

The Short Loop option will create a loop from one single period in the sample. This option can be successful on sounds where the harmonic content changes a lot. It can also be very efficient in reducing the size of a sample. If you have concerns about making as many samples fit in the Nord unit as possible, this should be explored.

The Short Loop option uses either a pitch estimate or the Root Key as the reference for its length, since the length will have consequences on the pitch of the sound when it is looping.

☀ *If you can find a smooth short loop early in a sample, the envelope generators in the Nord unit can be used to emulate a natural decay, and you can save lots of space in the Flash memory.*

The No Loop option may seem self explanatory, but the important thing here is to remember that no sample data after the end marker will be downloaded to the Flash memory. Click on the waveform graph to position the end marker.

Please go to page 12 for a detailed description of all the functions in the Loop/Stop tab.

Generate a Sample Instrument

When you have added all the audio files to the Project and are satisfied with the sample edits, it is time to create a Sample Instrument and to download this to the Nord unit

1 If you haven't saved your Project, now would be an excellent time to do so.

By saving and giving a Project a name, you are also providing the name for the Sample Instrument when it is downloaded to the unit.

☀ *If you change your mind about the current name on the Project, use Save As… to give it a new one. A Sample Instrument that is created from an unsaved Project will get the default name "Untitled" in the unit*

2 Go to the Instrument Menu and select Generate Only.

A Sample Instrument with all the samples, zones and edits that you have made in this Project will be generated and automatically saved to the hard drive as a "Project name".nsmp file.

③ If you select Generate and Download, the Sample Instrument will also be downloaded to the Flash memory in the Nord unit

Sample Instruments are added incrementally to the Flash memory, to the first available free location.
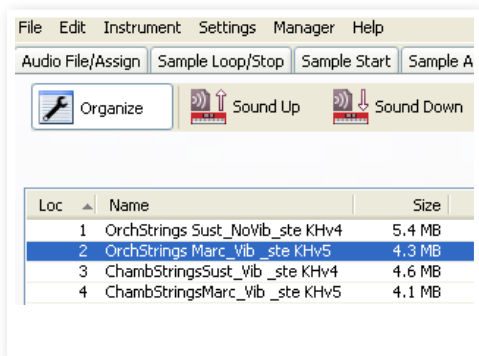
☼ *All of the tabs – except the Manager tab – have an Instrument area, up to the right in the Editor window. If Download is checked, the Sample Instrument will automatically be downloaded to the Nord unit when it is generated.*

☼ *You can also double-click on a sample in the list, in order to select it in the Nord unit*

This concludes our guided tour; we hope you have enjoyed the show so far. The rest of this chapter contains the Editor Reference section where all the functions in the Nord Sample Editor will be explained in detail.

Menu Reference

File Menu

In the Nord Sample Editor, the usual Windows XP and Mac OSX keyboard commands are available. The drop-down menus can be accessed by pressing the Alt key and the under-lined letter in the menu bar.

Most of the commands can also be accessed by pressing the Ctrl (Command on the Mac) key together with the letter shown next to the command name in the drop-down menus.

New Project [Ctrl+N]

Creates a new, empty Project window.

Open Project... [Ctrl+O]

Brings up the file selector and allows you to open a Project file from a storage device on the computer. If another Project is already open you will be prompted to save any unsaved changes before it is closed.

Save Project [Ctrl+S]

This command will save the current Project to a storage device on the computer. A Project file has the extension .nwiproj.

Save Project As...

This command will prompt you for a file name and destination folder before saving the Project to a storage device on the computer. This is useful for renaming a Project file before saving it, leaving any original Project intact on the storage device.

Close Project [Ctrl+W]

Closes the current Project. You will be prompted to save any unsaved changes before it is closed.

Add Files... [Ctrl+F]

Brings up the Add Files dialog where you select the audio files to be added to your project. Multiple files can be selected. The same functionality is available in the Audio File/Assign tab by pressing the Add button. The added audio files will appear in the Audio File/Assign tab, in the Audio Files list.

⚠ *Audio data is not copied to the actual Project when you add a file; a Project has only references to the audio files. Any changes you make to an original audio file on the hard drive will affect your project.*

Add Folder... [Ctrl+D]

Brings up the Add Folder dialog where you can browse to and select an entire folder to be added to your project. All supported audio files within that folder will be added. The added audio files will appear in the Audio File/Assign tab, in the Audio Files list.

The Nord Sample Editor can use audio files in the .wav format, up to a 24 bit, 44.1 kHz resolution.
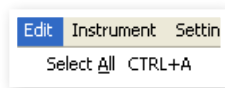
Exit [Ctrl+Q]

Closes the Nord Sample Editor. You will be prompted to save any unsaved changes to an open Project.

Edit Menu

Select All [Ctrl+A]

This command will select all available items,
e.g. all the audio files or all the Sample Instruments.

Instrument Menu

Generate And Download [Ctrl+G]

Creates a Sample Instrument from the current Project and stores it on the hard drive as an .nsmp file. The Sample Instrument will also be downloaded to the first available location in a connected Nord unit.
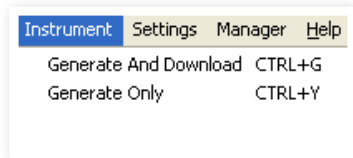
This process automatically encodes the samples with Clavia's proprietary lossless compression algorithm, in order to reduce the sizes of the samples. Samples will also be cropped before the sample start points and after the loop end marker.

The duration of this process may take several minutes depending on the amount of samples being used. You can use this file to share your Sample Instrument with other Nord Wave or Nord Electro 3 users.

Generate Only [Ctrl+Y]

Creates a Sample Instrument from the current Project and stores it on the hard drive as an .nsmp-file. This process automatically encodes the samples with Clavia's proprietary lossless compression algorithm, in order to reduce the sizes of the samples.

The audio will also be cropped before the start points and after the loop end marker. The duration of this process may last several minutes depending on the amount of samples being used. The file is saved in the same folder as your Project.

Settings Menu

Audio...

Brings up the Audio Settings dialog box where you select the driver for any audio card that is connected to or installed in your computer. The output level can also be set in this dialog. The selected audio card will be used to play back samples by the Nord Sample Editor.
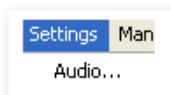
The Nord Sample Editor is compatible with Direct X drivers on a Windows XP or Vista system, and with the native Mac OSX drivers.
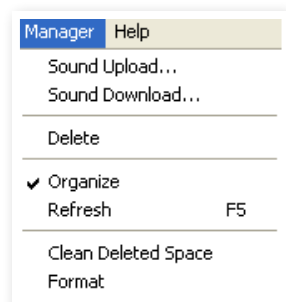
Manager Menu

Sound Upload

Use this function to upload one or several sounds from the Nord unit to the computer hard drive.

Sound Download

Use this function to download one or several Sample Instruments from the computer hard drive to the Nord unit.

Delete

Allows you to delete a selected Sample Instrument from the Nord unit's memory.

Organize

When this option is checked, the list will show all the available locations in the memory and not only the occupied ones. This will for instance make it easier to drag a file to a specific free location in the middle of the list. If this is unchecked, only the occupied locations will be shown.

Refresh F5

This function refreshes the content of the current window in the Nord Sample Editor.

Clean Deleted Space

This function will clean up the space where any deleted Sample Instruments have been before they were removed. If nothing has been deleted, this button will be blanked out.
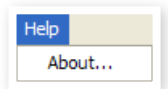
Format

This is a radical function; it will format the entire Sample memory in the Nord unit and prepare it for some brand new content. You will be asked to confirm this action.

Help Menu

About...

Brings up the About box with information regarding the version of the Nord Sample Editor. You will also see a list of compatible instruments and OS versions.

Tab Reference

Each of the tabs opens up a set of functions that will assist you in mapping the samples, setting the start point of samples, loop the samples and to manage the Sample Instruments in the Flash memory in the Nord unit.

☼ *You can select the different tabs one after each other, by typing Ctrl+Tab on the computer keyboard.*

Common area

The common area will be present at the top of all the tabs except for the Manager tab. It contains functions that are used to view the mapping, to change the focus of the samples, to generate a Sample Instrument and to start and stop playback.
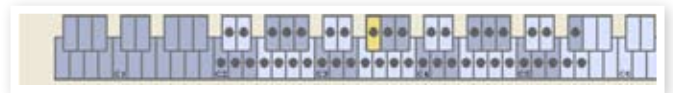
The Keyboard Grid

The Keyboard Grid represents the total keyboard range that the Zones can cover - from F0 to C8. The middle C in the Nord unit - when the Octave Shift is set to 0 - is the C4 key, MIDI Note Number 60.

• A key with a dot (●) indicates the Root Key - a sample is assigned to this key and the sample plays back at its original pitch. The Zone that this sample is assigned to is presented in a color scheme, with alternating blue and gray colors to separate the Zones from each other.

• A key with a circle (○) indicates that the sample that has been mapped to this zone is de-assigned, but may be re-assigned with its settings intact.

• A key that is yellow indicates that this sample is in focus - this sample is the active sample that you edit with the other functions in the Nord Sample Editor.

If a Nord unit is connected to the computer, any keys you play on the unit, will be indicated in the keyboard area of the Editor.

You can use the horizontal arrow keys on the computer keyboard to move the focus. When a sample is in focus, the audio file that the sample originated from will be automatically selected in the Audio File list and the corresponding part of the waveform in the graph will be also is presented in the yellow color.

Instrument area

This is a shortcut to the Generate functions that also is available in the Instrument Menu. If the Download box is checked, clicking on the Generate button will generate a Sample Instrument from the current Project, and automatically download this to the Nord unit.

Player

This contains two standard transport buttons, for starting and stopping the playback of the sample in focus. You can also set the output level of the audio card in your computer with the slider. Pressing the space bar on the computer keyboard will also start and stop the playback.

The Footer

The footer area is located at the bottom of the Nord Sample Editor window.
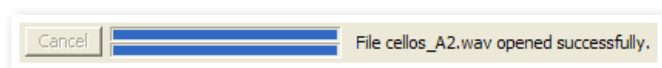
The footer contains mostly informational stuff, and a Cancel button that can be used to abort some of the ongoing processes.

Progress bars

When you start a task in the Nord Sample Editor, the execution may take a few moments, depending on what it is you want to do. One major task may consist of several smaller tasks, and the progress of these is displayed with the Progress bars.

Cancel button

Use this button to cancel any ongoing task that the Nord Sample Editor is in the process of performing.

Upper Progress bar

The upper Progress bar will show the progress of the current task being performed, the name of which is displayed in the message area, to the immediate right of the Progress bar.

Lower Progress bar

The lower Progress bar will show the progress of an ongoing task.

In the lower right corner is an indication that tells you if a Nord unit is connected to the computer, or not.

Audio File/Assign Tab
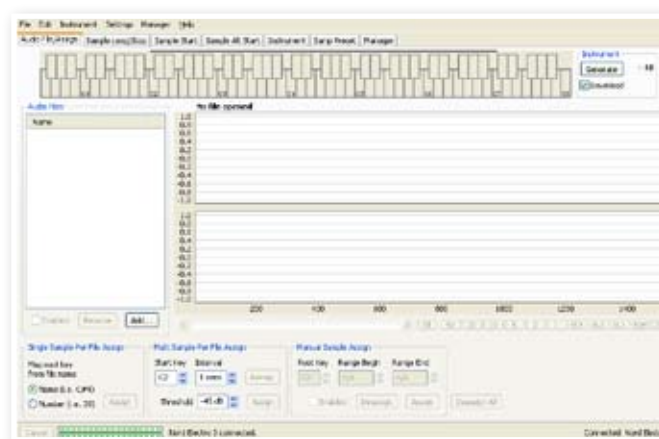
This area is used to add audio files to your project, and assign sections within the audio file to be used as samples.

Several scenarios to automatically analyze and assign samples are available in the Nord Sample Editor. You can either add a group of audio files, where each file contains a single note and has a name identifying the note by name or number, or you can add a single file containing several notes one after the other.

Audio Files

This section contains the list of audio files that are included in the current Project. The list will be empty when you create a new Project, if you open a previously saved Project there may be files in the list.

It is in this list that you select the referenced audio file you wish to use to create samples and assign these samples to Zones. When a file is selected, a graphical representation of its waveform will appear in the waveform graph if the Enabled box is checked.

Only audio files or parts of the audio files that have been assigned as samples in the Project are included when a Sample Instrument is generated.

Name

The files in the list may be sorted alphabetically in an ascending or descending manner by selecting Name and changing direction by clicking on the arrow.

Add Button

Brings up the Add Files dialog where you choose audio files, to be added to your project. Multiple files can be selected.

ℹ️ *A Project uses references to the audio files on the hard drive, and does not copy or load any actual audio data. Any changes that you do to the original audio files will also affect the Project.*

Remove Button

To remove an audio file from the Project, click on the Remove button. This will also remove any samples from the Project that are associated with this audio file.

Enabled box

To temporarily remove an audio file from the Project, un-check the Enabled box. All samples from the audio file in the Project will be disabled. All the Zones that have these samples assigned to them will be removed. The neighboring zones will cover the ranges, which the disabled samples used to occupy. The settings of the disabled samples and zones will be retained, when the box is checked, the samples and zones will be restored.

Waveform graph

This is a visual representation of the audio file that is selected in the file list. This graph will appear in other tabs as well, with minor alterations in order to assist you in the editing process. If the audio file is in mono, a single graph is drawn, if the audio file is in stereo, the left and right channel will be presented in two parallel graphs. You can select a part of, or an entire audio file by a standard click-and-drag procedure with the mouse.
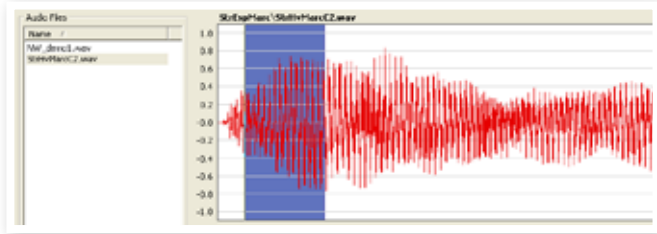
If the entire duration of the audio file will not fit in the waveform graph, you can scroll the content of the graph by using the scroll bar below the graph display.

Waveform Graph Colors

Colors are used to define areas and elements in the graph. The actual waveform data is drawn in red. An undefined area is illustrated by a gray background; a selected (but unassigned) area will have a dark blue background.

If you right-click on a selected area, you can assign this selection as a sample, with the Root Key setting from the Manual Sample Assign area.

When one or several parts of a audio file has been assigned as one or several samples, this will be indicated in the waveform with alternating lighter and darker colors, in the same fashion as the zones are indicated in the Keyboard Grid. If the sample is in focus, this will be illustrated with a yellow color.

Zoom buttons and slider

Zoom in on the waveform using the zoom buttons and the zoom slider.
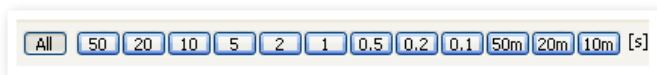
The buttons below the graph labeled All, 50, 20 etc are the zoom buttons for the X-axis - the duration of the audio expressed in seconds. If you select All, the entire duration will fit in the graph, if you e.g. select 2, 2 seconds of the audio will fit in the graph. Clicking on the 50m, 20m or 10m buttons will show 50, 20, and 10 milliseconds sections of the audio file.

The zoom factor for the Y-axis - the amplitude - is done with the selectors and/or the slider at the lower, right corner. The level of 1.0 represents the full amplitude - 0 dBFS- relative to the bit depth of the audio file.
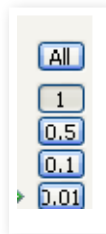
Single Sample Per File Assign

This function allows you to easily map samples to a Zone, where the Root Key of the sample is based on a certain string of characters in the audio file's filename.
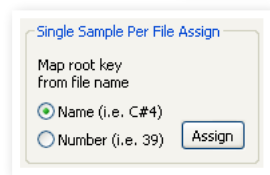
Name

This function use a naming convention where the pitch or note name is indicated in the actual file name. A file that has the name celloC#4.wav will be mapped with the Root Key on C sharp, in the middle octave - when the Octave Shift on the Nord unit is set to 0. The function can interpret the Root Key, a sharp sign (#) and the octave.

Number

Uses a number in the file name and interprets this as a Root Key number. The middle C, C4 on the Nord unit keyboard - when the Octave Shift is set to 0 - is key number 60.

Select one or several audio files in the Audio File list and click on Assign to assign the samples to Zones. You can use the Ctrl key (or right-click) to select nonconsecutive files in the list.

Multi Sample Per File Assign

This function can create several samples and assign these to zones from a single audio file with recordings of several individual notes, one after the other.
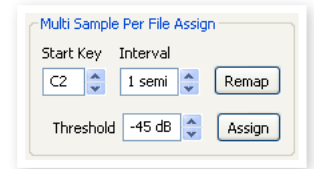
Start Note

Set this to the match the pitch of the first recorded note in the audio file.

Range: F0 - C8

Interval

Set this to match the intervals between the recorded notes in the audio file.

Range -48 - 48 semitones

Threshold

The threshold setting is used to distinguish or separate the individual notes from one and another in the audio file.

Range: -80 - 0 dB

Remap button

Select this to map the audio file again.

Assign button

This activates the assignment of the selected audio file, using the settings you have entered for the parameters for the Multi Sample Assign function.

Manual Sample Assign

This function can create and assign a sample from a selection in the current audio file. Click and drag in the waveform graph to select a part of, or the entire current audio file.
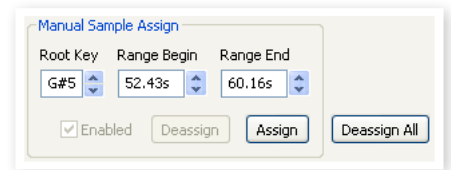
Root Key

This is the note where the sample will play back at its original pitch (or speed if the sample is non-pitched or a performance loop). If you make consecutive selections, the setting will increase in steps of one semi tone for each time you have assigned a sample.

You can also use this setting to adjust the Root Key of a mapped sample. Put the sample in focus and adjust the value to the next available key.

Range: F0 - C8

☀ *It is not possible to assign two samples to the same key.*

Range Begin

This will indicate where the selection you have made in the graph begins. Use the increment/decrement buttons to adjust the beginning of the selection.

Range End

This will indicate where the selection you have made in the graph ends. Use the increment/decrement buttons to adjust the end of the selection.

Enabled box

This enables or disables the assignment of the sample in focus. It will default to the checked state when you click the Assign button. Uncheck it to temporarily disable an assignment to the sample in focus. The sample and the settings will be kept in the Project, just check the box again to put it right back in business.

Assign button

This activates the assignment of the selected audio file, using the settings you have entered for the parameters for the Manual Sample Assign function.
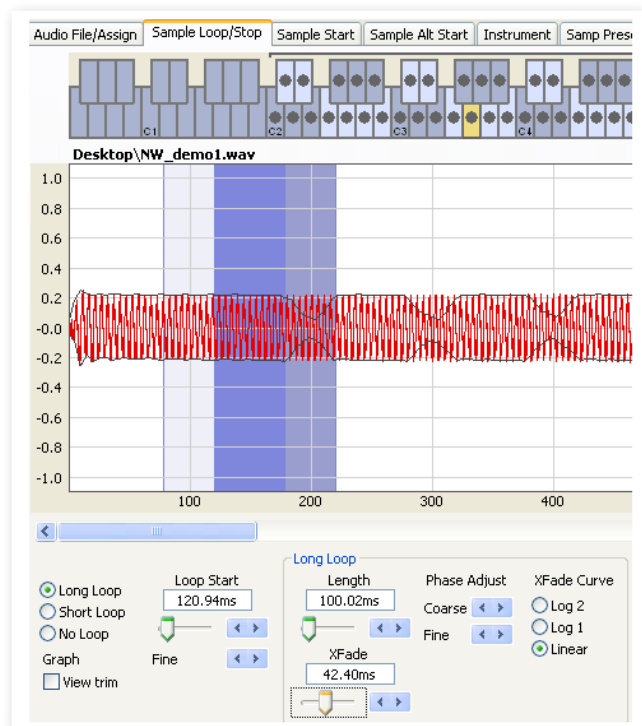
Deassign

This deactivates the assignment of the sample that is in focus.

Deassign All

Clicking on this button will permanently de-assign the mapping of the focused sample, and also all the other samples that originates from the same audio file. Use this function with care, to quickly start with a clean slate with a previously mapped audio file.

Sample Loop/Stop Tab

This tab contain the functions that will assist you in finding a loop for the sample that is currently in focus, as indicated by the yellow color in the Keyboard Grid. As soon as an audio file or a selection from an audio file is assigned as a sample, loop markers will automatically be created by the Nord Sample Editor.

A loop in a sample consists of two positional markers in the audio, the loop start and the loop end markers. Visualize the playback of a sample as a horizontal journey from the start of the waveform at the extreme left, towards the end at the right.

Somewhere along the line you will pass the loop start marker, making a mental note of its location. You continue to travel towards the end of the audio file but when you reach the loop end marker, you immediately go back to the loop start marker and resume the path towards the end. And then you hit the loop end marker again, go back to the loop start, and so on.

Creating a perfect, seamless loop can sometimes be a bit difficult. Sometimes the audio at the loop start is very different compared to the audio at the loop end marker, which will produce audible and perhaps unwanted artifacts in the sound.

In order to minimize certain loop artifacts, a crossfade function can be used. This uses audio that is before the loop start marker, and mixes this with audio that is before the loop end marker when the loop is playing back.

A crossfade has usually several parameters to set the length of the crossfade, and to adjust the taper of how these two sound bites will blend into each other during playback. This can help to smooth things out and create a better sounding loop.

⚠ *Any audio data after the loop end point will be automatically discarded by the Nord Sample Editor when you create the Sample Instrument from the Project.*

Waveform graph colors

The waveform graph presents the loop by showing certain areas in different colors. The position of the loop start marker is at the left edge of the blue area. The position of the loop end marker is at the right end of the darker blue area.
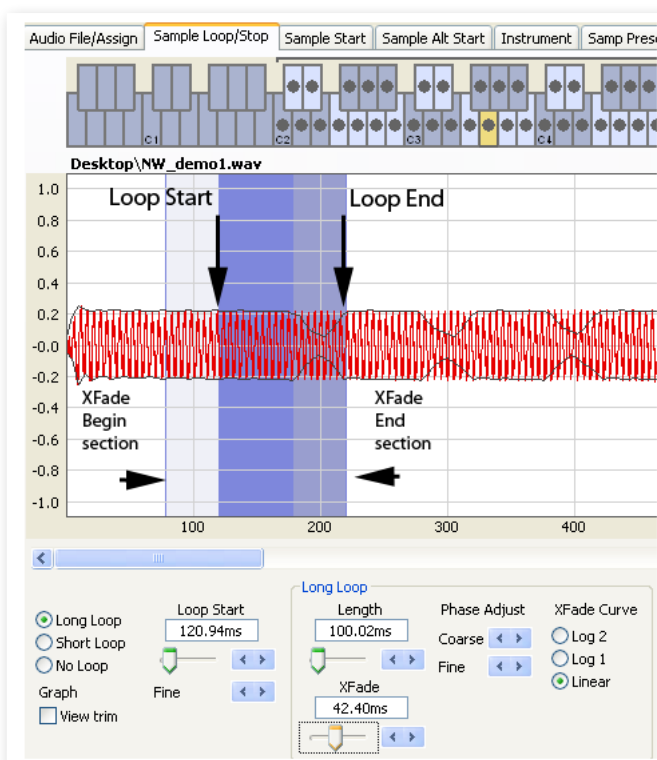
A crossfade's first section is indicated with the light blue area that is before the loop start, to the left of the blue area. The crossfade's end section is the darkest area immediately to the left of the loop end marker. As these settings are changed by you, the indication in the graph will change as well.

You can set the position of the loop start marker by clicking anywhere in the graph. If you right-click to the right of the loop start marker, you can set a new loop end marker – and change the actual loop length.

View Trim

The graph in the Sample Loop/Stop tab can be augmented with a more detailed display of the waveform at the loop start and the loop end markers. This is activated by checking the View Trim box at the lower, left corner of the Editor window.
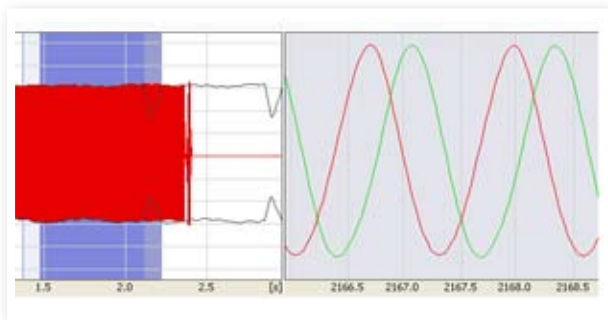
The red waveform shows the audio immediately before and at the loop end marker. The green waveform is the audio at, and immediately after the loop start marker. If these two waveforms meet at the same level, chances are good that this will indicate a loop without any clicks in it.

If a crossfade is used, the two waveforms will be superimposed on top of each other, like the illustration above. This provides a nice visual confirmation of what happens if you fine-tune the length.

☀ *Start with the crossfade set to a small value and see how these two waveforms are presented. When the two colored peaks and valleys are in phase with each other, chances are good that you have a pretty good loop. Any changes you do can always be monitored in real time if you activate the playback.*

Loop Options

There are three available loop options: Long Loop which is the default loop that is applied to a sample when it is assigned to a zone, Short Loop which creates a loop with a single waveform period and finally the No Loop, which gives you an opportunity to set an end marker to the sample.

Loop Start

You can enter a loop start position expressed in seconds in the value box, confirming this by pressing enter, using the slider or fine-tune the position with the increment/decrement buttons. Clicking in the graph will also position the loop start marker.

Long Loop

This section contains the settings for the Long Loop parameters.

Length

You can enter a loop length expressed in seconds in the value box, confirming this by pressing enter, using the slider or set the length with the increment/decrement buttons, in a coarse- or a fine-tune fashion.

Right-clicking in the graph will position the loop end marker, which together with the position of the loop start marker sets the loop length. Make sure that you right-click to the right of the loop start, it is not possible to position the loop end before the loop start marker.

Xfade

You can enter a crossfade length expressed in seconds in the value box, confirming this by pressing enter or by using the slider. Any changes you do will be immediately heard if you are playing back the sample and also presented in the waveform graph. To disable the crossfade, set the crossfade length to 0.

Xfade Curve

There are three available curves for the crossfade: Log1, Log2, and Linear. These are used to compensate for any amplitude changes that might occur in a crossfade as a result of cancellations when harmonics are out of phase with each other.

Short Loop

When using the Short Loop option, the loop length is set to a single waveform period. As the length of a single period is relative to the pitch of the sample, you can use an algorithm that analyzes the pitch of the sample, or use a length correlating to the pitch of the sample's Root Key.

Loop Length based on

These are the two alternatives on how to determine what constitutes as a single period in the sample. If a short loop produces a different pitch than the actual sample, you may need to try the Root Key option.
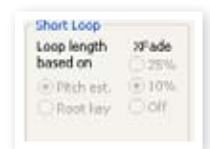
The Pitch Estimate is the default, but there may be occasions when this is unsuitable. If a sample has strong harmonics (that are stronger than the fundamental), the Root Key option may be better suited.

Xfade

The short loop also has provisions for using a crossfade, with a selection of fixed lengths: 25% or 10% of the loop length. Set this to Off if no crossfade should be used.

No Loop

This provides you with the option to set a marker where the sample will end. You can also set a fade out time.

Stop

You can enter the position of where the sample will end expressed in seconds in the value box, confirming this by pressing enter or by using the slider. You can also click in the graph to set the sample end marker when this loop option is selected.

Fade Out

Enter the Fade Out time expressed in seconds in the value box, confirming this by pressing enter or by using the slider. This is the time in seconds leading up to the sample end during which the amplitude will gradually fade out.

Apply on All

The loop settings that you have made can be applied to all other samples in the project. In order to compensate for any artifacts that might occur when you e.g. play a chord, as a result of several loops with identical settings, you have the option to apply a variation to the loop length.
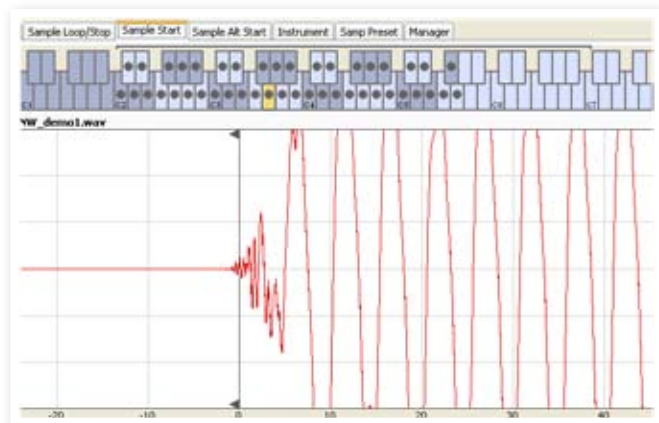
Loop Length Variation

Set the variation to the loop length to all the individual samples loops, expressed as a percentage. Enter the value in the box, confirm this by pressing enter or use the slider.

Apply Loop

Click this button to apply the variation setting to all of the loops in the current project.

Sample Start Tab

When the Sample Start tab is opened, the waveform graph will zoom in to give you a better view of what is happening at the very beginning of the sample. As soon as a sample is assigned by the Nord Sample Editor, a Start point will be automatically set. This will be indicated in the Start tab by the marker.

Start

Enter the start position in the sample expressed in seconds in the value box, confirming this by pressing enter or by using the slider. You can also set a start point by clicking in the waveform.

Use the zoom controls if you need to back out of the view, or get closer to the actual waveform representation.

Sample Alt Start Tab

This tab allows you to set the alternate start marker of the sample in the same fashion as the "normal" sample start. This alternate start point will be activated when you select the Skip Samp Attack function on the Nord Wave panel.

ℹ️ *The alternate sample start functionality is not available in a Nord Electro 3*

Instrument Tab

This is where you can change individual settings to all the samples that are mapped in the current Project. You can adjust the amplitude with the gain controls, tune the samples and apply a couple of powerful functions that will assist you with the final mapping of the samples. The familiar Keyboard Grid is here to assist you with a clear overview of how the samples are mapped across the keyboard range.

Sample Gain grid

All the individual samples will be presented here, as zones or slices that correspond to the map settings that are presented in the Keyboard Grid. The sample in focus will be indicated in yellow, the other samples in a alternating pattern of blue and gray to provide you with an easy-to-use overview.

The zones can be changed by clicking and dragging on the zone boundaries in the grid, grab the upper limit of a zone and move it to a new key.

ℹ️ *One zone's Upper Key cannot be pushed on top of or above another zone's Root Key.*

The amplitude of any individual sample is indicated with the black horizontal marker in each slice. With the controls below this grid, you can adjust the global gain of the entire Sample Instrument or an individual gain for every sample. This can be used to increase or attenuate the overall loudness of the Sample Instrument.

Reset All

Click on this to reset all the samples to their original amplitude, as they were when they were added to the Project.

Normalize All

This allows you to set all the samples to the 0 dB amplitude in the grid. This represents the maximum amplitude in the audio file, in relation to the bit depth of the audio. There is however headroom available in the Nord Sample Editor and the Nord units that allows you to increase the amplitude beyond this level if you need.
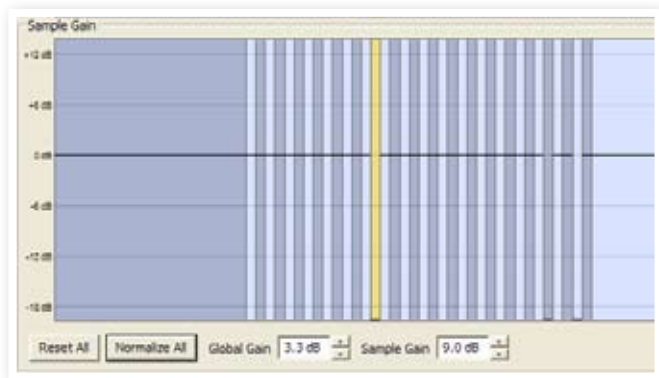
Global Gain

This can set a global increase or attenuation of the amplitude of the entire Sample Instrument. Any individual amplitude differences between the samples will not be altered. Set the value expressed in dB:s in the value box, confirming this by pressing enter, or with the increment/decrement buttons.

Range: -9.0 to + 9.0 dB

Sample Gain

This allows you to change the amplitude on each individual sample. The amplitude after a gain change will be indicated with the horizontal line in the Grid. Set the value expressed in dB:s in the value box, confirming this by pressing enter, or with the increment/decrement buttons.

Range: -9.0 to + 9.0 dB

Keyboard Gain graph

This graph will reflect any changes that you make with the Keyboard Gain controls. These settings will affect the entire Sample Instrument, and can be used to apply various adjustments that will change the amplitude across the range of the keyboard. If for example the lower range in the Sample Instrument is too loud, you can apply an attenuation that begins at a chosen octave. The sample in focus will be indicated as a yellow slice.

Reset All

This will reset any settings that you have made using the octave gain controls.

Octave gain controls

Allows you to apply a gain change to a range, which will start at the preset keys C1, C2, C3 etc.

C4 represents the middle C on the Nord Sample Editor, when the Octave Shift control is set to 0. Set the value expressed in dB:s in the value box, confirming this by pressing enter, or with the increment/decrement buttons.

Ranges: -9.0 to + 9.0 dB

Detune

You can change the overall tuning of the samples, either on a global scale or for any individual samples. This provides you with the means to fix any problems with samples that are out of tune, or to adjust an entire Sample Instrument. The unit is in cents, 100 cent is the range between two semitones.

Reset All

This will reset any changes that you have made using the Detune controls.

Global Detune

Sets the overall tuning of the Sample Instrument. Enter the value expressed in cents in the value box, confirming this by pressing enter, or with the increment/decrement buttons.

Range: -50 to +50 cents

Sample Detune

This allows you to detune the sample in focus in the Sample Instrument. Set the value expressed in cents in the value box, confirming this by pressing enter, or with the increment/decrement buttons. Each and every sample in the Project can be de-tuned.

Range: -50 to +50 cents

Sample Zone

These controls makes it very easy to change the focused sample's Root Key and Upper Key, in order to edit the assignment. The focused sample will be highlighted in yellow, and you can quickly select focus by clicking on the keys in the Keyboard grid or by scrolling through the samples using the horizontal arrow keys on the computer keyboard.

Root Key

Sets a new Root Key for the focused sample. There can

only be one sample assigned to each Root Key, the value will automatically skip to the next available note.

Range: F0 to C8
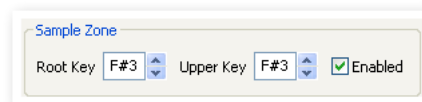
Upper Key

Sets a new Upper Key for the focused sample. The available range may be limited by samples that occupy a Root Key higher up on the keyboard. The Upper Key can not be a key that is located lower than the Root Key on the keyboard.

Range: F0 to C8

Enabled

This allows you to disable and re-enable the focused sample.

Transpose

Use the buttons to transpose the entire Sample Instrument in semi tone steps.

Auto Map

This function can be used to quickly enable and disable samples at certain intervals in order to reduce the amount of memory used by the Sample Instrument. This is a great way to quickly experiment with the Sample Instrument without having to delete and/or re-assign samples.

Interval

Set the interval or range between the samples that will be kept enabled. The end result will depend on how the original ranges are mapped. Samples will not be moved from one key to another, any gaps across the keyboard range will be filled by any adjacent samples. A setting of 0 will disable all the samples.

Range: 0 to 48 semi tones

Map

Map the samples according to the Interval setting.

Play Mode

This allows you to choose if a sample should be pitched according to the standard 12 tone interval when you play the keys it has been assigned to, or to play back at its original pitch, regardless of what key you play.

If you e.g. have some drum samples that span several keys, they could be set to Unpitched if you want them to play at the same, original pitch.
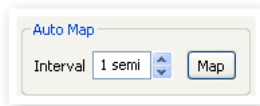
Samp Preset Tab
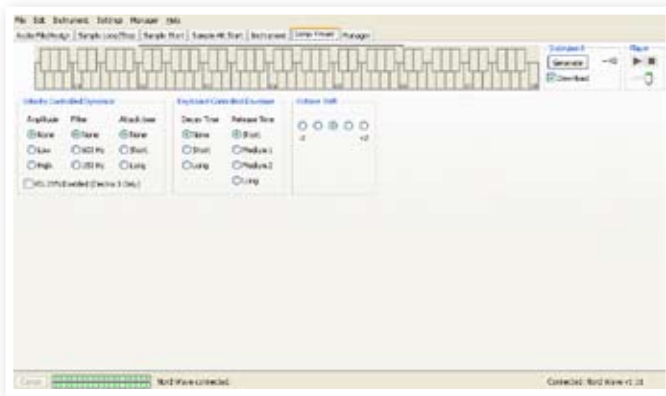
This tab allows you to set some functions to be applied to the Sample Instrument. Some of these functions will also determine the automatically activated settings of the Samp Env functions, for the Sample Instrument.

Velocity Controlled Dynamics

The functions in this area determines how a Sample Instrument should respond to velocity. This functionality is achieved by using the Morph.

Amplitude

This allows you to determine if the amplitude of the Sample Instrument should respond to keyboard velocity.

Range: None, Low, High

Filter

This allows you to determine if a keyboard velocity controlled low pass filter should be applied to the Sample Instrument. This allows you to make the sound brighter, when you play with a higher velocity.

Range: None, 600Hz, 150Hz

Attack Time

This controls if a velocity controlled attack time should be applied to the Sample Instrument. Higher velocities will shorten the attack time.

Range: None, Short, Long

Vel Dyn Enabled

Check this box if you wish to have the velocity sensitivity turned on in the Nord Electro 3 as the default setting when the Sample Instrument is selected. This function is not available in a Nord Wave.

Keyboard Controlled Amplifier Envelope

Decay Time

This can apply an amplitude decay to a sound, in order to e.g. have a amplitude decay on a looped sound.

Range: None, Short, Long

Release Time

This sets the release time that will be set when the sample is selected.

Range: Short, Medium 1. Medium 2, Long

Octave Shift

This sets the octave shift that will be set when the sample is selected.

Manager Tab

This is where you find the function of the Nord Sample Editor to manage the content of the Sample Instrument memory. If no Nord unit is connected to the computer, the memory locations will be grayed out.

⚠ *The actions that take place in the Manager tab will affect the memories in the unit. The Nord Sample Editor is online with the Nord unit at all times, so any changes that you perform in the Editor will immediately be echoed in the Nord Wave or Electro 3. If you e.g. delete a Sample Instrument from the list in the Nord Sample Editor, that same Sample Instrument will also be deleted from the Nord unit's memory, without any warnings or confirmation dialogs.*

Manager Toolbar

The icons on the Tool bar gives you instant access to three functions.

Organize

When this option is active, the list will show all the available locations in the memory and not only the occupied ones. This will for instance make it easier to drag a file to a specific free location in the middle of the list. If this is unchecked, only the occupied locations will be shown.

Sound Up

This will upload a selected Sample Instrument to the computer hard drive. It will be saved as a .nsmp file.

Sound Down

This allows you to choose a file on the hard drive, to be downloaded to the next available free location in the Nord unit.

Delete

This will delete the selected Sample Instrument from the Nord unit's memory.

Sample list

The Flash memory's size depends on the Nord unit, and it is allocated dynamically. You can have one Sample Instrument, that contains one sample that is using up all the memory capacity, or you can have 50 Sample Instruments with several samples each, as long as the combined sizes of these are kept within the memory's limit.

When you generate a Sample Instrument from a Project in the Nord Sample Editor, and download this to the Nord unit this Sample Instrument will be saved at the first available location in the Flash memory.

If the locations are occupied one after the other in a consecutive manner, it will then appear at the end of the list in the Manager tab. If there is an empty location in the middle of the list, it will be saved to this location.

The Sample Instrument list may be ordered by location, alphanumerical by name, according to sizes, or versions by clicking on the appropriate heading.

Right-click

If you right-click on a Sample Instrument in the list, you will get the following options:

Upload – This will upload the Sample Instrument to the computer hard drive. It will be saved as a .nsmp file.

Just as any other computer file on your hard drive, this .nsmp file may be renamed, emailed, copied, moved, lost or even stored in a safe location if an evil computer crash suddenly decides to take your hard drive for ride.

⚠ *If you want to rearrange the order of the Sample Instruments, there are a few things to consider. A Program in the Nord unit that uses a Sample Instrument does not know what the sound of the sample is. The Program is only referring to a Sample Instrument location number.*

Download – This is only available if you right-click on an empty location that does not contain a sound. This allows you to choose a file on the hard drive, to be downloaded to the location in the Nord unit.

Delete – This will delete the Sample Instrument from the Nord unit's memory. Any Program in the unit that used that particular Sample Instrument will probably sound very different, since it will be missing an important component.

⚠ *A flashing number in the display on the panel indicates that the Sample Instrument location that the current Program tried to use is not available in the Flash memory.*

List headlines

Loc - location

The Sample Instruments in the list are numbered; these numbers correspond to what you select with the Type selector in the Nord unit.

Name

The Sample Instrument gets its name from the name of the Project that gave birth to it. If a Project has not been saved – being nameless that is - and you generate a Sample Instrument, it will get the default name: Untitled.

If a Sample Instrument is uploaded to the computer hard drive, the resulting .nsmp file name will be same as the SI name. Change the file name, and the SI name is also changed when that file is downloaded to the Nord unit.

⚠ *Two Sample Instruments in the Nord unit cannot have the exact same name. If you happen to generate two Sample Instruments without e.g. having saved the Projects, then the second Sample Instrument called Untitled will overwrite the first one that had that same name. If you try to drag an .nsmp file from the hard drive to the list and it has the same name as a SI in the list, that operation will not be allowed.*

Size

Indicates the size of the Sample Instrument. This may be useful if you are short on memory and wants to know if a particular SI occupies a certain amount of space in the Flash memory.

Ver

This indicates a version number of the .nsmp file format.

Footer Memory Indicator

This will give you a numerical and a visual indication of how the Flash memory space is being used. Red indicates the spaced used by the samples, green is the space that is free to use for new Sample Instruments.
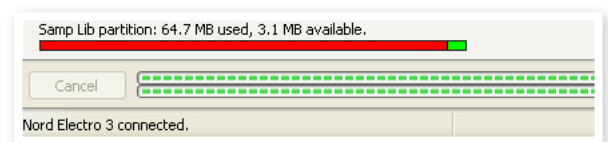
File Types and Names

Files associated with the Nord Sample Editor and the Nord units use the following extensions:

.nwiproj – Nord Sample Editor Project file

This is a file containing the Project settings. Audio files are not included in this file - any changes to the original audio files will affect you project. This file type will be created when you save a Project.

These files will be needed if you want to change any settings in a particular Sample Instrument at a later stage, so save often and keep copies in a safe location.

.nsmp - Nord Sample Instrument file

This is a file containing the cropped and encoded audio and the Project settings for one Sample Instrument. This file type will be created and saved to the hard drive when you generate a Sample Instrument from the Instrument menu (or with the Generate button in the Editor window). You can also create .nsmp files when you upload Sample Instruments from the Nord unit in the Manager tab in the Editor.

Use this file type to share Sampled Instruments with other Nord users. The .nsmp file can not be opened or edited; it can only be down- or uploaded to and from a Nord Sample compatible unit. To edit any content or setting in a Sample Instrument you must go back to the original Nord Sample Editor Project file (.nwiproj), do the edits there and then re-generate the Sample Instrument.

INDEX