

**NEXOE™**  
AUDIO SOLUTIONS

# RESAMPLER 1.01



**Publisher**

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**Part**



# 1 Welcome to the Resampler™ World!



## *Playing VST Instruments onstage - Let the Dream come true!*

Thanks for choosing Resampler™, a Resampling Application for VST/VSTi instruments as well as external hardware synthesizers. Resampler™ is a product of [NEXO E™ Audio Solutions Germany](#). It is a stand-alone application for creating a collection of wave files and the related sampler program data that radically simplifies the import of VST sounds into Live and Studio Samplers, especially Roland® Fantom® workstations (in combination with Fantom YASE™).

The Resampler™ makes the dream playing VST-instruments onstage without PC hardware come true.



[ASIO®](#) and [VST®](#) are registered trademarks of the Steinberg Media Technologies GmbH, Germany.

## *The Features at a glance*

### ▣ **Stand-Alone ASIO and VST Instrument Host**

- Microsoft® Windows® XP or Vista (32bit) application
- Live Play Mode, you can pre-listen what you will record
- Fully compatible with Microsoft® Windows® ASIO- and MIDI-drivers

### ▣ **Fully integrated graphical interface**

- Real Hardware design
- VST Mixer
- MIDI Automation (with graphical Key Range Editor, Velocity Range Editor and Sample Length Editor)
- Recorder Section

### ▣ **Quick start enabled**

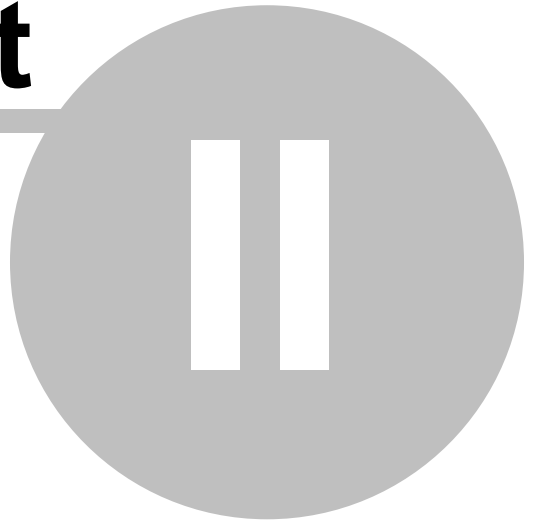
- 3 Templates for MIDI-Automation with different complexities, accessible with one click, fully customizable
- Quick Start Tutorials
- Simple Function Buttons

### ▣ **Comprehensive Patch Creation Algorithms**

- 4 VST-instruments can be mixed and recorded simultaneously, with routing to 2 additional VST-effects
- Creation of complex Sound patches within few minutes
- Creation of [Fantom YASE™](#) compatible Patches

**Part**

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## 2 Safety Instructions



### **Read this manual carefully before using the Resampler™**

The Resampler™ has a lot of functions even if the user interface seems to be quite simple. The full power of the software you can only use with the profound knowledge of the features as well as the keyboard and mouse commands.



### **Make Backups of all data before using the Resampler™**

If you are not really familiar with the use of this software and/or to avoid unexpected results please make backups of your existing data before using the software.



### **Run the Resampler™ on a computer with enough power and appropriate operating system**

[Here](#)<sup>[14]</sup> you find suggestions for the right Hard- and Software. Make sure that you have installed a Sound-Card with an ASIO® Driver.



### **Do not use the Resampler™ as a live performance system onstage!**

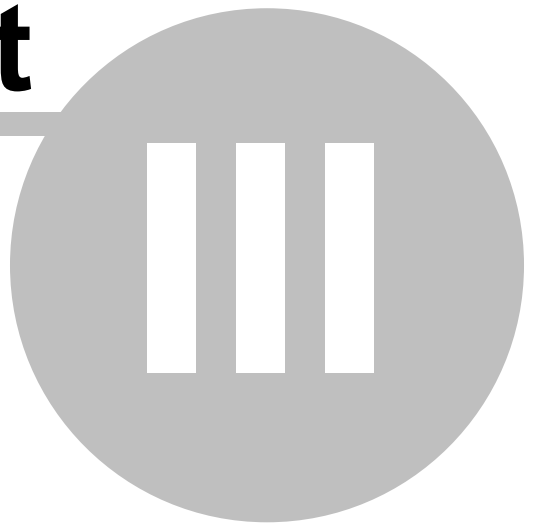
Even if it is theoretically possible to use the Resampler™ onstage as an ASIO® Host for VST® Instruments we do not recommend it. The live performance needs a secure hardware and software system, a Windows® or a Macintosh® PC is not such a hardware - even if it has enough power.

### **See also:**

[Hard- and Software Requirements](#)<sup>[14]</sup>  
[Restrictions, Limitations](#)<sup>[15]</sup>

**Part**

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## 3 Introduction

The content of the complete manual was created for the printed version (\*.pdf) as well as for the help file (\*.chm) in conjunction with Resampler™. The [quick start](#)<sup>[28]</sup> tutorial section is interactive if you use the help file version (\*.chm).

The topics in this section provide some basic information about Resampler™, what it is for and what you can do with it.

### *How to get started*

- Study this [Introduction](#)<sup>[10]</sup> and [The User Interface](#)<sup>[19]</sup> sections for an introduction to the program.
- Then work through the [Quick Start Tutorials](#)<sup>[28]</sup> to familiarize yourself with using Resampler™.

### 3.1 Why Resampler™?

VST instruments make the life in the studio more and more easy. You copy your session data to a memory stick instead using heavy hardware synthesizers. Since years VST's can provide better sound quality and flexibility. But what about playing these sounds onstage?

Even in our days it is a risk to use a Laptop or other PC-Hardware onstage, regardless of the operating system, because of its lack of safety. That's why the most of professional keyboarders prefer using hardware synthesizers and samplers instead of PC's for the live performance.

The question: How to put the (VST) studio sound into the hardware sampler? The answer: With the NEXOE™ Resampler™!



#### **Save time**

Resampler™ helps you to record sounds tone by tone at different velocities. It can create the tone assignments for a patch (Fantom YASE™ format) automatically. That dramatically reduces the time required for creating such a setup, it can be measured in minutes or hours instead of days.



#### **Save money**

Time is money - as faster you can translate your sound sets as more time you have for the music itself. There is no further need of buying the newest hardware - if you are able to include the newest sound sets into your own gear. With the aid of Resampler™ - no problem.



#### **Sound engineering can be fun**


Don't believe it? Give it a try with Resampler™...

## 3.2 Mode Of Operation


Resampler™ is a software designed to bring sounds of VST-instruments into your hardware sampler, esp. into Roland® Fantom® workstations (in combination with Fantom YASE™ - Yet Another Sample Editor for Roland® Fantom® workstations). It creates a collection of Microsoft® Wave-Files and is able to save the complete sound in the Patch format of Fantom YASE™. The sounds can be looped and normalized automatically during the record procedure.

Figuratively the NEXOETM Resampler™ is a Robot-like Keyboard Player engine, playing a collection of single tones, and also automatically starts and stops the Recording of the just played tone. Which tones it has to play at which velocities you define at the [MIDI Rack](#)<sup>[21]</sup>. Which instruments will be played at what (mixing) volume you select at the [VST Mixer](#)<sup>[24]</sup>. You define the [Output Format](#)<sup>[13]</sup> and start (and stop) the whole Recording Session at the [Recorder Rack](#)<sup>[23]</sup>.

If you want to understand the technology behind the application it is necessary to become familiar with the re-sampling engine of Resampler™. This is a Digital Audio Workstation (DAW) and acts as a 32bit ASIO® Host for the VST® instruments.

 Please bear in mind that the NEXOETM Resampler™ only supports VST® instruments of the Revision 2.

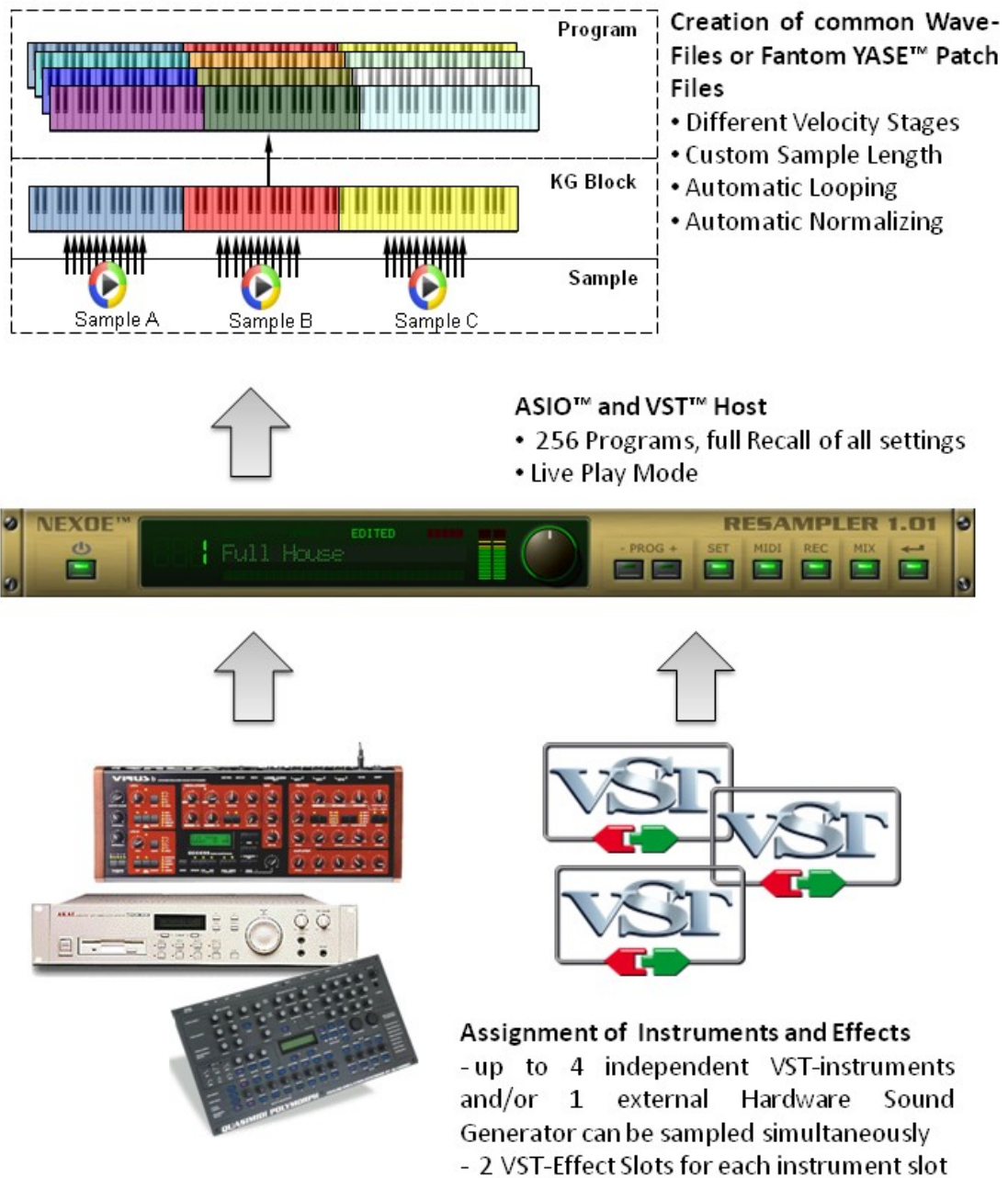
Resampling normally needs a lot of software tools, background knowledge of sampling technologies, and it is a complex work-flow. But with Resampler™ it is as simple as playing a key on a keyboard. All the tools you need are at your fingertips in a single intuitive environment, and the program handles all the complex, technical aspects of the process for you. Instead of wasting countless hours "programming" your sound patches you can focus all your energy on actually creating sounds and checking them out, so that all your working time is productive time and of course - fun.

 If you want to get started with Resampler™ right away go to the [Quick Start Tutorials](#)<sup>[28]</sup>.

### ***Intuitive working environment***

Resampler™'s working environment gives you all the editing features of a modern studio software, including graphical editors and the look & feel of the real hardware for complex parameters.

## Software Overview



### Resampler™ - Overview

You can choose up to 4 VST-instruments for the Resampling procedure, and up to 2 VST-plugins as insert-effects. Instead of a VST-instrument you can combine one VST channel with an external hardware synthesizer, too.


The software sends several MIDI events to the channels in order to simulate playing the predefined keys, each at predefined velocities. It automatically starts (and stops) the record procedure to create the related sample files. You can choose whether you want to get the single wave files or the complete patch in the patch format of Fantom YASE™.

### ***User-friendliness combined with power user features***

The intuitive environment handles all the complexities of sound conversion for you, letting you concentrate on the music itself. Getting under the hood you see an absolutely reliable sample converter and the most comprehensive sample mapping algorithm ever. That means - In combination with Fantom YASE™ you get an unbeatable pair of tools for sound production!

## **3.3 Output Formats**

### **3.3.1 Microsoft® Windows® Wave-File Format**


If you [choose](#)  this format NEXOETM ResamplerTM saves the single sample files as WAV files with the following specification

- 44,100 Hz
- 2 Channels (Stereo)
- 16 bit, linear PWM

The files will be organized in subfolders, for each velocity (i.e. "VELO 071"). The File Header includes information of Loop Points as well as the Root Note (INST chunk). The sample file name includes the actual velocity and the key name (i.e. "071\_C#2.wav").

### **3.3.2 Fantom YASE™ Patch Format**

The NEXOETM ResamplerTM was made in order to simplify the playing of VST instruments onstage. That's why we wanted to develop an application for the simplest and quickest way to import a complete sound set into a real hardware: The Roland® Fantom® workstations.

If you [choose](#)  this format NEXOETM ResamplerTM saves one file what contains all sample data as well as program data in the Fantom YASE™ Generic Patch Format (\*.PRG), the included samples have the following specification

- 44,100 Hz
- 2 Channels (Stereo)
- 16 bit, linear PWM

 You need an installed Fantom YASE™ Rev. 2.002 up, in order to import NEXOETM Resampler™ PRG files.

Detailed information which will be saved:

- Sample Data
- Velocity Ranges
- Key Ranges
- Loop Points

- Root Notes.

The Roland® Fantom® workstations GAIN is set to +6dB. Samples are collected to sample mappings (Multi-Samples).

More information of Fantom YASE™, and how to import the created Patch into the Roland® Fantom® workstations you find [here...](#)



## 3.4 Hard- and Software Requirements

### *Hardware Requirements (Minimum)*

- Single 86x Core CPU 1,4GHz (Intel or AMD)
- VGA Graphics Interface with at least 256 MB RAM
- 512 MB installed RAM
- Sound Card with ASIO® Driver, connected to a Stereo Speaker System or Headphones
- MIDI interface (recommended for rehearsal listening), connected to a MIDI Keyboard


### *Supported Operating Systems*


- Microsoft® Windows® XP, SP3 (32bit)
- Microsoft® Windows® Vista (32bit)

 Please [switch OFF the UAC](#)  (User Account Control) if you intend to install NEXOETM ResamplerTM at Microsoft® Windows® Vista. More information you get at the [Microsoft Technet page](#).

### *Driver Requirements*

- ASIO® Driver
- MIDI Driver

 The NEXOETM ResamplerTM needs an active ASIO® driver. Otherwise you cannot use the application in a appropriate manner. If you do not have an ASIO driver installed because you do not have such a hardware we recommend this [ASIO® Driver Emulation](#) (w/o engagement).

 We'd like to get you committed to become familiar what an ASIO® driver is for, and why it became an industrial standard for studio sound cards instead of DirectX® or other technologies.

**See also:**


[Safety instructions](#) 

## 3.5 Restrictions, Limitations

### *NEXOETM ResamplerTM as a Live VST® Host*

ResamplerTM was made to resample complex sounds in order to use them in a hardware (or software-) sampler. Even if it works properly we do not recommend to use the application onstage as a live VST Host.

The live performance needs secure digital hardware (and software). Imagine a great show - your fans are climaxed - and while you play your brilliant solo the sound hangs or the PC crashes with the famous blue screen... To go ahead it needs minutes of booting time, ... Indeed - It would be a disaster!

 The Personal Computer is not a secure system for the stage, regardless which operating system you use.



### *Sharing of Files created with NEXOETM ResamplerTM*

Due to License Rules you must have installed every single VST® instrument which you want to import via Fantom YASE™. NEXOETM ResamplerTM writes information of all used VST@s into the created patch file. Fantom YASE™ checks whether these instruments are onboard while importing the patch. That means the PC which have the VST instruments installed should be the PC where your NEXOETM ResamplerTM as well as Fantom YASE™ is installed, too.


### *Supported VST Instrument Revision*

Please consider that the NEXOETM ResamplerTM 1 only supports VST instruments of Rev. 2.

#### **See also:**

[Safety Instructions](#)   
[License](#) 

## 3.6 How to buy ResamplerTM

You can buy ResamplerTM directly online worldwide with all three major credit cards. As soon as your transaction is completed you will be able to unlock the program and start working right away. Share-it delivers a register key via e-mail or download. Here you find [how to register](#)  the application with the aid of this key.

#### **Direct order link:**

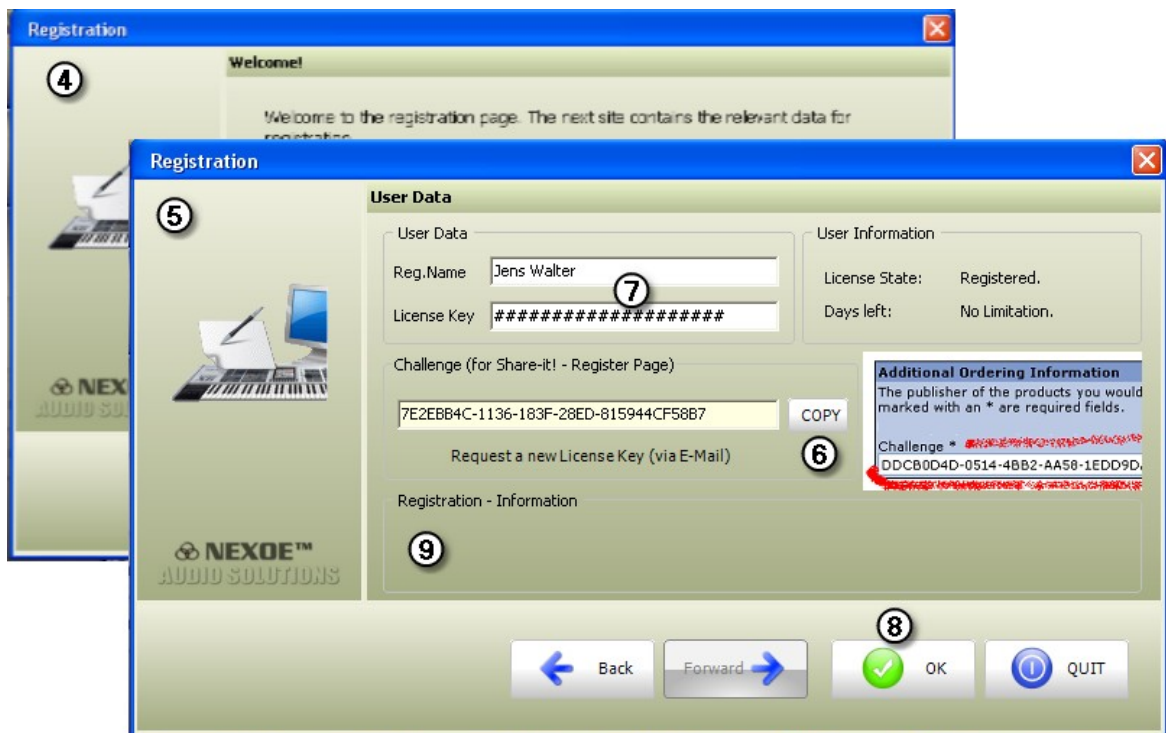
 <http://www.shareit.com/Resampler>



### 3.7 How to register Resampler™



Click the Application Name (1), the About Screen (2) appears. Click the License Link (3).



The Register Wizard (4) appears. Click the NEXT button. You see the Register Page (5). Click (6) to get the Challenge ID copied to the clipboard. This ID needs you to enter at the [share-it! Ordering Page](#), if you follow the "BUY NOW" link. If the Register Procedure is successful you get your License Key for the Register Name you entered there, enter your name and the license key (7).



**The Registration Name must be the given name and the family name as used when you bought the license at share-it.**

Please consider the use of capital and small initial letters, too.

Click "OK" (8) to finish the registration! Immediately you get the information (9) if the registration was successful.

**See also:**

[How to buy](#) 

### 3.8 How to update Resampler™



**The update procedure requires an internet access and a common internet browser.**

We frequently offer free as well as commercial updates. We recommend that you visit us [here](#) at least once a month to check whether a new version is available.



**You only can update your application with setups of an equal main version for free.**

This means that i.e. Resampler™ version 1 can only be updated with a setup of revision 1 for free. If you purchased an older main version you need an update key for the actual version 1. If you are not sure make backups of your old setup files.

Please download the latest version of the software by clicking the link "setup.zip", save this file, unpack the "setup.exe". Uninstall the older version via "Start → Control Panel → Software". Choose NEXOETM Resampler™ from the list, click "uninstall". Install the newer one by executing the "setup.exe", follow the instructions of the setup procedure.

**Part**

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**IV**

## 4 The User Interface

### 4.1 The Main Rack

This is the main control window for the application. Here you can switch the Sound Program as well as the further Racks.



The button (1) finishes the NEXO E™ Resampler™ application. The display (2) contains the Sound Program Number, the Sound Program Name, several status and/or error information and a loudness indicator.

The wheel (4) pre-selects a program. To finish a selection you need to click the ENTER button (10). The PROG +/- buttons (5) also select the previous/next program.

The buttons (6...9) switch the related Racks ON/OFF.

You store changes to a program with the ENTER button (10). If changes need to be saved the button lights up, and the display (2) shows the "EDITED" message.



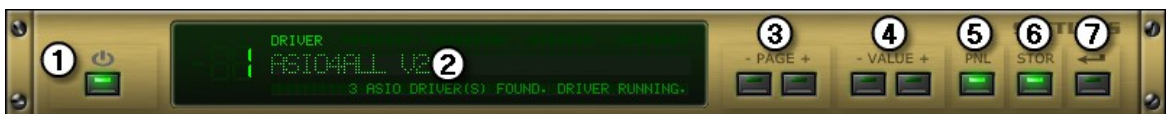
A right-click into the display (11) opens a pull-down menu. Here you can also choose the Sound Program, you can edit the actual Sound Program Name as well as initialize the complete program.

#### **⚠ Program-related changes...**

... like VST-instruments, mixer settings, automation settings a.s.o. can only be saved if a program is loaded. You can check this: The Program Number in the display (2) shows a value of "1" or above.

### 4.2 The Settings Rack

The Settings Rack contains driver settings for Audio and MIDI with the related Input/Output assignments.



The button (1) switches the rack OFF. The display (2) contains the current settings

information. Here you also can see if the [ASIO<sup>14</sup>®](#) [Driver<sup>14</sup>](#) is active: The last row contains the message "DRIVER RUNNING".

The PAGE buttons (3) select the driver pages DRIVER → AUDIO IN → AUDIO OUT → MIDI IN → MIDI OUT and reverse. With the VALUE buttons (4) you can set the related driver value. Save the settings with the ENTER button (7). Now the several pages will be explained:

### **Driver**

The DRIVER page selects the ASIO® driver. This is the basic setting for the "AUDIO IN" as well as the "AUDIO OUT" page. If this page is active and an ASIO® driver is selected, the button PNL (5) lights up. Open the ASIO® Control Panel with this button.

### **AUDIO IN**

Selects the Input channel pair (Stereo) of the current ASIO® driver. This setting depends on your ASIO® Hardware (Sound-Card). If you do not use external Sounds (i.e. external Synthesizer Hardware) for the Sampling Session you can leave it to the default "INPUT CHANNELS MUTED".

### **AUDIO OUT**


Selects the Output channel pair (Stereo) of the current ASIO® driver. This setting depends on your ASIO® Hardware (Sound-Card). The default value is the first stereo output channel pair of the ASIO® hardware.

### **MIDI IN**

Selects the Input MIDI device (and channel). This setting depends on your MIDI Hardware (MIDI-Interface).

### **MIDI OUT**

Selects the Output MIDI device (and channel). This setting depends on your MIDI Hardware (MIDI-Interface).

 If the MIDI output contains an existing channel the Rack routes internal generated MIDI events as well as the MIDI-In signal to the MIDI-Out channel (MIDI-Through).

### **The STOR button (6)**

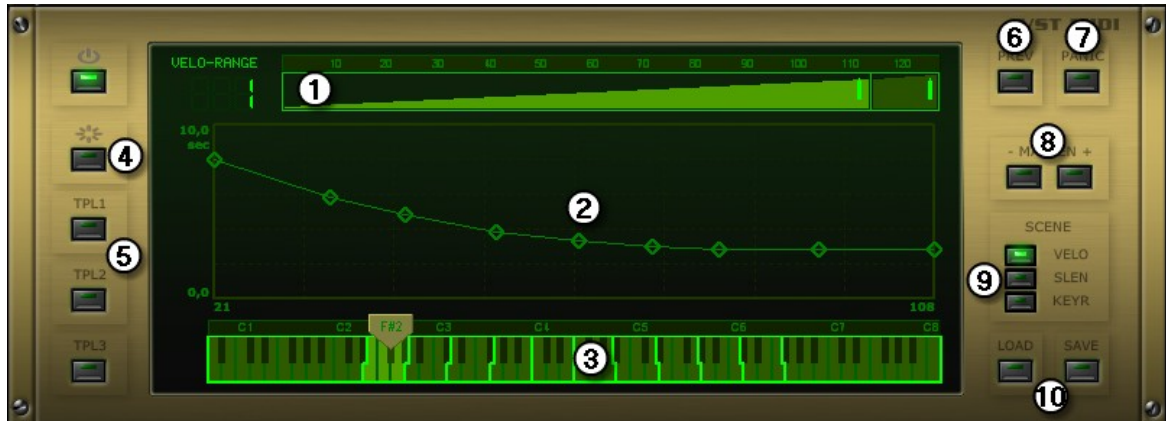
Selects whether all Driver- and User-Interface settings will be restored at the next application start or not.

**i** Normally you leave the STOR button switched ON. This means that the Driver settings as well as the user interface settings will be restored at the next NEXOETM ResamplerTM session.

## 4.3 The MIDI Rack

### 4.3.1 Overview

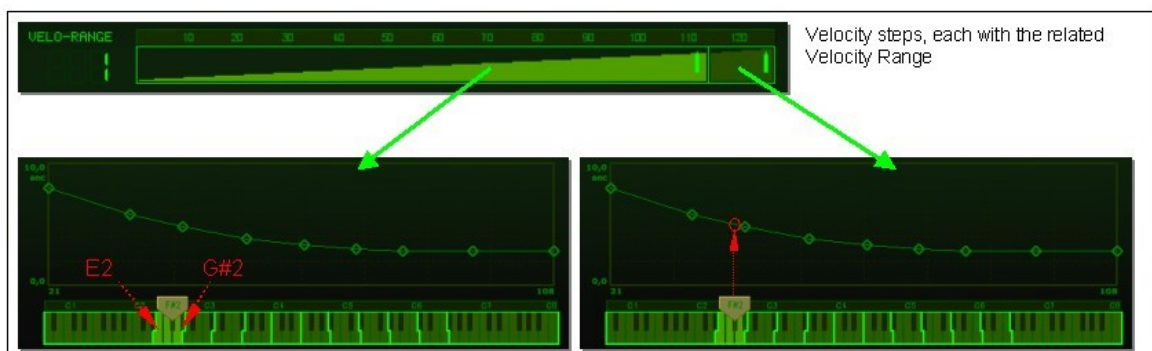
The MIDI Rack contains the note collections which need to be sampled at what velocity.



The Velocity Ranges (1) define at which velocity a collection of tones (keys) will be sampled. That's why this graphic should contain at least one range with a related velocity.

**i** If you want to see the settings for a Velocity Range (1) slide with the Mouse over the Range: All related settings appear as the graphics (2) and (3) below (1).

Each velocity (range) contains a collection of assigned samples (3), which will be recorded at this velocity. Each velocity also contains a Sample-Length Function (2). The Sample-Length Function defines a sample length for each tone of the assigned collection. The following graphics explains the functions of the interface:



The Assignment of a Collection of Keys to be sampled for each velocity step is shown, with the related Key Range (the red arrows show the related key range of the key F#2 → E2 ... G#2) and Sample-Length Function (the red arrow shows the sample length of the key F#2 → 5,0 sec). First of all create and/or Select a Velocity (via Sliding into the

Range) and then edit the Collection of Keys with their Sample Lengths.

**i** Velocity Ranges as well as Key Ranges are necessary for the automatic programming of the Fantom YASE<sup>™</sup> Patch. Normally you only need a velocity and their assigned keys to be sampled. But if you want to play the sound it is necessary to define in which velocity range / key range the sample is to be played.

**i** If you are familiar with sampling of sounds you know that lower tones need a longer sample length than higher ones at your keyboard. That's why we implemented the so-called Sample-Length Function. With this function you can customize the sample lengths very quick (without to "program" this length for every single tone). Normally it is sufficient to have not more than 4 (sampling-) points in your Sample-Length Function.

With the CLEAR button (4) you delete all settings.

With the TEMPLATE buttons (5) you can choose a template for velocity range(s) with their related key ranges.

**i** In order to simplify the programming of Velocity Ranges with their related Key Ranges we implemented the MIDI Templates TPL1...TPL3 (5). Simply click one of these buttons to choose a complete Recording Sequence for the actual sound.

The button (6) is the PREVIEW key, like a keyboard key. Once pressed it plays whether the default key C4 (60) or the key marked in the Key Range Graphic (3). If you release the button the sound stops.

The PANIC button (7) stops all MIDI Note-On-Events, and sends a Note-Off-Event to all MIDI channels. This might be helpful if the sound "hangs".

MAXLEN +/- (8) increases/decreases the maximal length of the y-axis of the Sample-Length function in steps of 10sec.

The SCENE (9) indicates what graphic is actual (selected) and can be edited. You can choose this by sliding the mouse over the appropriate graphic or click the related button. The actual settings of the selected graphic can be LOADED or SAVED (10).

### 4.3.2 Special Keyboard and Mouse Commands for Range Graphics

#### ***DOUBLE-CLICK into an empty range area***

Creates a new (velocity or key) range. The range will be aligned to the "neighbor" ranges. If you create a new velocity range a new 2-point-function of Sample-Length Function will be created, too.

#### ***CTRL + "PLUS/MINUS" or Drag Mouse***

If you want to slide a range with the graphical editor (velocity range or key range) you can do this with the mouse and/or with the keyboard. Simply slide the mouse into the range editor (to select the range). Press the key CTRL. The left corner shows the actual value of the lower limit of the range. Either use the mouse to drag the side to the

destination value or use the buttons "+/-" to adjust the value.

### **SHIFT + "PLUS/MINUS" or Drag Mouse**

Like CTRL, but changes the right instead of the left value.

### **SPACE + "PLUS/MINUS" or Drag Mouse**

If you want to change the root note or velocity slide into the range and press SPACE. The root will be highlighted, or the cursor changes to "SPLIT". Now drag with the mouse to the destination position.



#### **Keyboard and Mouse Commands...**

... take only effect if the related range is selected (please refer to [SCENE](#)<sup>22</sup>).

### **DEL Key**

Select a range and press DEL. The selected range will be deleted.

## 4.3.3 Special Keyboard and Mouse Commands for Sample-Length Graphic

### **DOUBLE-CLICK into the diagram**

Creates a new sampling point. The point will be included into the existing function.

### **CTRL + Drag Point (Move All Points)**



If you move the Mouse into the Diagram and press the CTRL key the message "(MOVE ALL)" appears. Select a Point and drag it. All points will be moved with the selected one.

### **DEL Key**

Select a sampling point and press DEL. The selected point will be deleted.

## 4.4 The Recorder Rack

The Recorder Rack controls the recording sequence.



The button (1) switches the Rack OFF. The display (2) contains the current Sample

Number, the Keyboard Tone (with its velocity and length), and several status and/or error information.

### **LOOP (3), CROSSFADE (4) Button**

NEXOE™ Resampler™ can find the optimal loop points for an (forward) loop, in order to play the sound as an endless loop. It is helpful for every acoustic instruments (except drums) as well as for the most synthetic sounds to play the sound as long as you press the key on a keyboard. Otherwise the sound would stop after the defined [Sample Length](#) [21]. Switch it on with the LOOP (3) button.


Normally it sounds stacked when the sound leaves the Loop End Point and starts with the Loop Start Point again. To avoid this we implemented an excellent automatic cross fade algorithm, switch the function on with the CRSF (4) button.

### **NORMALIZE (5) Button**

Brings all of your samples to the 0dB Level. Helpful if you expect extreme different levels in your sample collection.

### **YASE (6) Button**

The YASE Button is one of the most important switches: It selects whether to save the Sample Collection in the Patch Format of Fantom YASE™ (\*.PRG) or as Microsoft® Windows® compatible Wave-Files (\*.WAV).

 Please consider that only in the Patch Format of Fantom YASE™ your NEXOE™ Resampler™ can save all range settings as well as velocities.

### **STOP (7) Button**

Stops the Recording Sequence.

### **Pause (8) Button**

Pauses the Recording Sequence.

### **RECORD (9) Button**

Starts the Record Sequence.

## **4.5 The Mixer Rack**

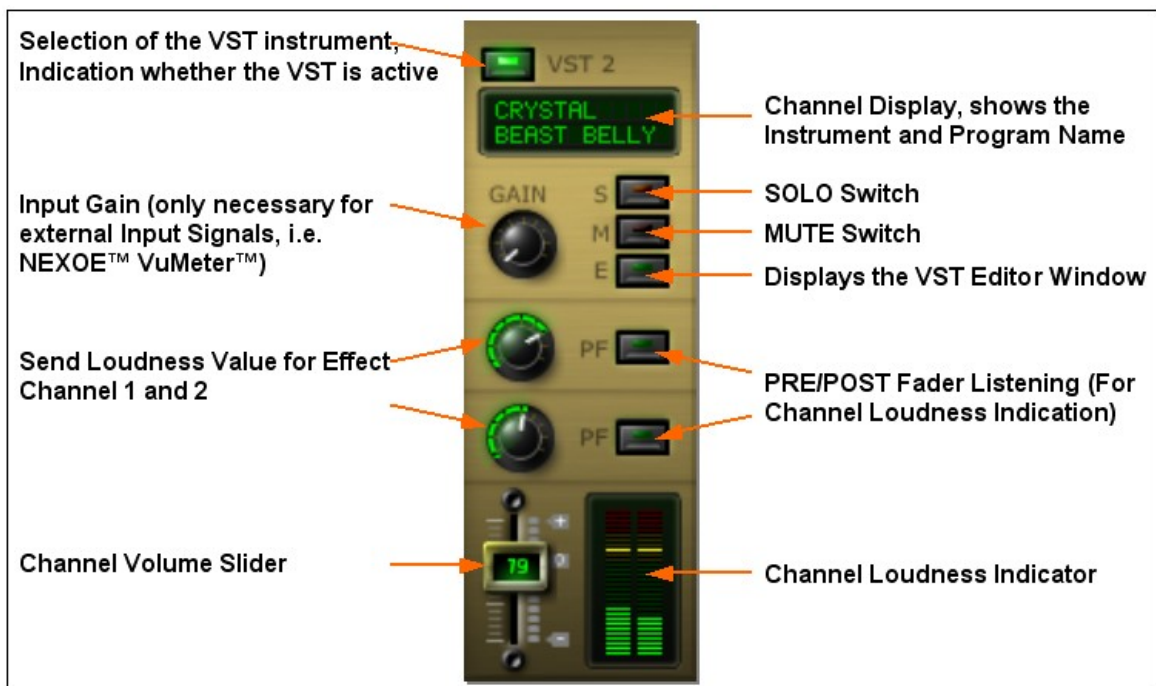
### **4.5.1 Overview**

The Mixer Rack contains all VST related settings as well as mixing volumes for instruments and effects. You can choose and play up to 4 VST instruments, each routed to up to 2 independent effects.



The button (1) switches the rack OFF. The Button CLEAR (2) deletes all settings and brings the Rack into a Mixer Default State.

The four Instrument Channels (3) contain the following controls:



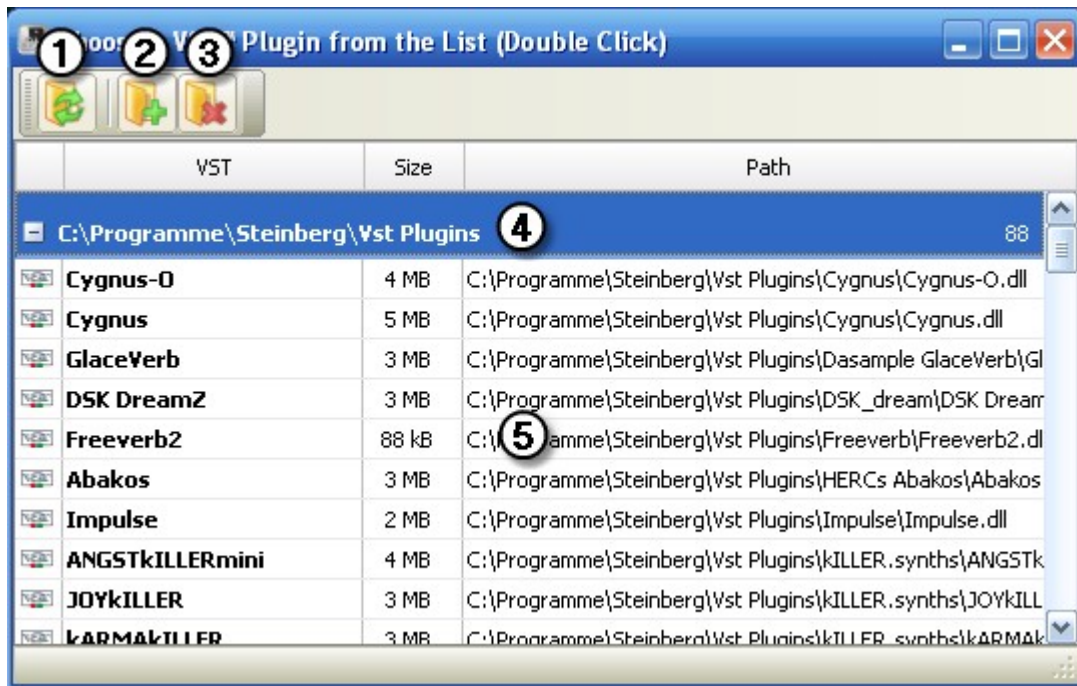
The controls of the Effect Channels (4) are comparable with the Instrument Channels.

**i** Please do not forget to set a GAIN > 0 at the Effect Channel, if you want a reasonable signal to the VST Effect.

The CLIP Button (5) lights up if the signal is distorted (>0dB). You have to set it back manually. The Master Volume Slider and the Master Loudness Indicator (6) are for the level of the final mix.

## 4.5.2 Selection of VST instruments

NEXOETM ResamplerTM opens VST instruments of predefined directories. If you click the [VST Button](#) <sup>[24]</sup> of an instrument channel or effect channel the following window appears:



The button (1) refreshes the list of directories with their VST instruments. You can add instrument folders with (2). To delete a VST Directory you select the directory (4) and click the DELETE button (3).

**i** Normally the VST Plugins are located in the directory "<PROGRAMS>\Steinberg\Vst Plugins". But you can add more directories to the list.

### **Preparation of the List**

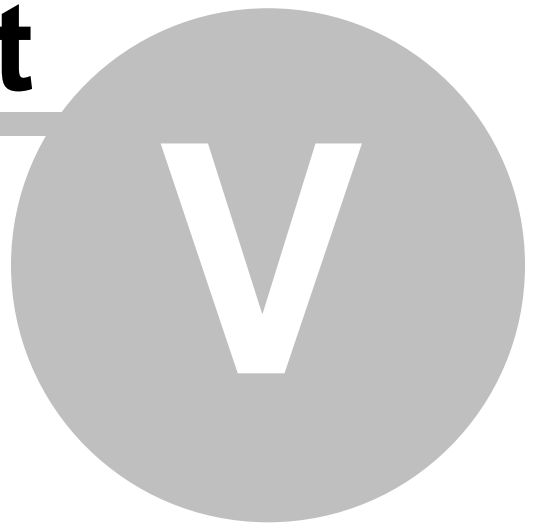
If you open the Window for the first time you get a blank list (5). Please click (2), a Folder Dialog appears. It automatically links to the default VST Folder. Choose the location where your VST instruments and effects are stored. All VST plugins of this folder (with its sub folders) will be automatically indicated and added to the list (5).

### **Selection of a VST Plugin**

Simply double-click the Plugin in the list (5) you want to assign to the channel.


**Part**

---



## 5 Quick Start Tutorials

The tutorials in this section provide a quick introduction to using Resampler™. They are intentionally kept brief so that you can actually start using the program as quickly as possible. The objective is not to teach you every single detail but to familiarize you with the basic principles and the way the program works.

 If you read the Manual via Adobe® Reader® you cannot see the buttons behind some words. It seems that something was forgotten... The Buttons you only can see (and "click") when you start the Help File in conjunction with Resampler™ via "F1". The Adobe® Reader® does not support such icons and leave the space blank.

### 5.1 Using the Application as a Live Host

This tutorial shows you how to set up the Live Play Mode of the NEXOE™ Resampler™, i.e. for using it as a Live Host for VST instruments. That is assuming you have an appropriate ASIO® Sound Card with at least one Stereo Output Channel and a MIDI Interface with at least one MIDI Input Jack.

Please note that we do [not recommend](#)<sup>15</sup> to take this setup onstage, but it might be useful for the clearer understanding of the software.

#### Preliminary Steps:

##### 1. Set up the Driver Settings

Open the Settings Rack . Select an appropriate ASIO® Driver at this page , use the VALUE +/- buttons (press ENTER to confirm the settings). Select its Output Channels (connecting them to your Headphones or Loudspeakers). The last row of the ASIO® Driver page must contain the message "DRIVER RUNNING".

Select a MIDI driver with its Input Channel . Connect this MIDI In Channel to the external Masterkeyboard (MIDI Out). If you play a key on your Masterkeyboard you should see that the "MIDI" message in the top left corner of the Main Rack display lights up.

##### 2. Select a Program

You need to select a Program first, in order to set MIDI and MIXER settings. We choose the first empty program for this issue .

#### Next Steps:

##### 3. Open the MIXER Rack

##### 4. Load your VST instrument into the first Channel

Click the first button in the top-right corner of the Channel . The [Dialog Box](#)<sup>26</sup> appears where you choose the VST instrument via Double-Click. If it contains no VST instruments yet, please add the folder to the list where your VST

instrument (\*.dll) is located . Once loaded click the Button "E" (Editor) of the channel , in order to open the VST Window. Here you can set up further VST specific parameter.

Repeat this procedure for the other VST channels if you want.

### 5. Play a Key on your Masterkeyboard

Now you should listen the sound of your VST instrument(s). Set up the mix for the whole sound.

## 5.2 Record a VST instrument

This tutorial shows you how to record a VST® instrument.

### Preliminary Steps:

#### 1. Set up the Driver Settings

Open the Settings Rack . Select an appropriate ASIO® Driver at this page , use the VALUE +/- buttons (press ENTER to confirm the settings). Select its Input / Output Channels. The last row of the ASIO® Driver page must contain the message "DRIVER RUNNING".

#### 2. Select a Program

You need to select a Program first, in order to set MIDI and MIXER settings. We choose the first empty program for this issue .

### Next Steps:

#### 3. Open the MIXER Rack

#### 4. Load your VST instrument into the first Channel

Click the first button in the top-right corner of the Channel . The [Dialog Box](#)<sup>26</sup> appears where you choose the VST instrument via Double-Click. If it contains no VST instruments yet, please add the folder to the list where your VST instrument (\*.dll) is located . Once loaded click the Button "E" (Editor) of the channel , in order to open the VST Window. Here you can set up further VST specific parameter.

#### 5. Open the MIDI Rack

#### 6. Select a Template for the MIDI Sequence.

For now we choose the simplest Template by clicking TPL1 . The graphics shows one velocity range. The arrow inside the range indicates the velocity the keys will be played with. If you slide with the mouse over this velocity range the Sample-Length Function will become visible as well as the Key Ranges. Slide over the Key Ranges: Every Range contains a "Root Note" - these notes will be the sampled keys.

#### 7. Open the RECORDER Rack and select the Recording Options.

If you want to have an endless sound (looped) choose LOOP . To make this loop [seamless](#)<sup>34</sup> choose CRSF (Cross Fade). If you want to have equal levels of the sampled sounds select NORM (Normalize).

The output data format is very important. If you want to have each sample as a common Wave File leave the Button YASE off . Assuming that you have installed Fantom YASE™ and you want to import the resampled sound into your Roland® Fantom® workstations choose as output format the Fantom YASE™ Generic Patch Format

## 8. Start the Recording Session


The Dialog Box appears where you choose the output folder or the output file. The Recording Session starts afterwards immediately.

### See also:

[Record an external Keyboard](#)<sup>30</sup>

## 5.3 Record an external Keyboard

This tutorial shows you how to record a external keyboard. That is assuming you have an appropriate ASIO® Sound Card with at least one Stereo Input Channel and a MIDI Interface with at least one MIDI Output Jack.

 The NEXOE™ Resampler™ sends the MIDI events via MIDI channel 1. Please make sure that your Keyboard receives external MIDI events at this channel (Rx Channel = 1).

### Preliminary Steps:

#### 1. Set up the Driver Settings and connect your Keyboard (Audio and MIDI)

Open the Settings Rack . Select an appropriate ASIO® Driver at this page , use the VALUE +/- buttons (press ENTER to confirm the settings). Select its Input / Output Channels. The last row of the ASIO® Driver page must contain the message "DRIVER RUNNING". Connect the Stereo Output of the Keyboard to the selected Input Channel Pair of your Sound Card.

Select a MIDI driver with its Output Channel . Connect this MIDI Out Channel to the external Keyboard (MIDI In).

#### 2. Select a Program

You need to select a Program first, in order to set MIDI and MIXER settings. We choose the first empty program for this issue .

### Next Steps:

#### 3. Open the MIXER Rack

#### 4. Load the NEXOE™ VuMeter™ into the first VST Channel

Click the first button in the top-right corner of the Channel . The [Dialog Box](#)<sup>[26]</sup> appears where you choose the VuMeter™ via Double-Click. If your list does not contain this Plugin yet, please add the application folder of the NEXOETM Resampler™ to the list .

The VuMeter™ is a VST Plugin in order to route an external audio signal (stereo) to the NEXOETM Resampler™. It will be delivered with your application. If you open the VST Editor Window and you play the Keyboard you should see the level gauge indicating the audio signal from the device (only if you open the GAIN of the Channel, i.e. the value = 100 ).

#### **5. Open the MIDI Rack**

#### **6. Select a Template for the MIDI Sequence.**

For now we choose the simplest Template by clicking TPL1 . The graphics shows one velocity range. The arrow inside the range indicates the velocity the keys will be played with. If you slide with the mouse over this velocity range the Sample-Length Function will become visible as well as the Key Ranges. Slide over the Key Ranges: Every Range contains a "Root Note" - these notes will be the sampled keys.

#### **7. Open the RECORDER Rack and select the Recording Options.**

If you want to have an endless sound (looped) choose LOOP . To make this loop [seamless](#)<sup>[34]</sup> choose CRSF (Cross Fade). If you want to have equal levels of the sampled sounds select NORM (Normalize).

The output data format is very important. If you want to have each sample as a common Wave File leave the Button YASE off . Assuming that you have installed Fantom YASE™ and you want to import the resampled sound into your Roland® Fantom® workstations choose as output format the Fantom YASE™ Generic Patch Format

#### **8. Start the Recording Session**

The Dialog Box appears where you choose the output folder or the output file. The Recording Session starts afterwards immediately.

#### **See also:**

[Record a VST instrument](#)<sup>[29]</sup>

**Part**

---

**VI**

## 6 Frequently Asked Questions

This section covers some problems that are frequently encountered by users of Resampler™.

### 6.1 Resampler™ as a VST Live Host



***Is it possible to use NEXOETM ResamplerTM as a VST Live Host onstage?***



Yes this is possible, but we do [not recommend](#)<sup>15</sup> it.

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### 6.2 What file format is used for Recording Session? (COPY)



***What file format is used for the Recording Session?***



It depends on the [Button YASE](#)<sup>24</sup>, you can choose either single Wave-Files (\*.wav) or a complete Program File in the Fantom YASE™ Generic Patch File Format. The samples have the following specification:

- 44,100 Hz
- 2 Channels (Stereo)
- 16 bit, linear PWM

If you want to know more about the file format specification, look [here](#)<sup>13</sup>.

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### 6.3 What is the root note of a wave?



***What is the root note of a wave?***



Every wave should have a root note where the sample is taken from (i.e. you sample a piano sound, here the key C#4). If you also assign this wave file to the key C#4 of your keyboard, everything is fine. But what if you assign it to another key? Or you want to assign this wave to more than one keys (the typical situation)?

The normal behaviour of the keyboard is to pitch the wave up or down (half-tone-steps, starting from the root note). In order to let the device know what tone is the "base tone" (where no pitching is necessary) you setup the root note for this wave.


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## 6.4 Crossfading - What 's that?



### *Crossfading - What 's that?*



Cross fade is a "blend-in" function for loop start and/or loop end to prevent artefacts and noises while playing the loop, it makes the loop [seamless](#) . Normally you have to setup a lot of parameters for a cross fade. Resampler™ uses a complex analyzing algorithm in the background to assign the appropriate parameters for a convenient cross fading.


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## 6.5 What is a seamless loop?



### *What is a seamless loop?*



A seamless loop means that you do not hear any artefacts or noises when playing the wave and the play cursor enters the loop or it jumps from loop end to loop start again. This requires: (a) The same or approximately the same amplitude at loop start and loop end. (b) An equal or approximately equal trend of the last wave periods before loop start and loop end. The best result you get if you at first search for the optimal loop points and then cross fade the loop. NEXOE™ Resampler™ does this automatically if you switch the related [buttons](#)  ON.

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## 6.6 What is a multisample?



### *What is a multisample?*



It is an invention of Roland Corp. Japan... A multisample is a mapping of several samples - or let's say - an assignment of samples for the whole key range of the Fantom® device. It's main purpose is to collect samples with the same parameters (velocity range, filters, tunings, ...). The parameters you set once for each multisample - at the tone layer stage. This means - one multisample (or two - for the left and right channel) for one tone layer.

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## 6.7 What is a patch?



### *What is a patch?*



The term appears to be an invention of Roland Corp. Japan, too... A patch is a parameter set for the program stage of the Fantom® device. So please don't be confused if sometimes the patch is called program and vice versa. It is the same. We think that in the past several instrument manufacturers patented even terms like "program" or "patch" in conjunction with their products. The use of "patch" is quite unique, it seems to be a "Roland-term".

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## 6.8 How to move the Rack on my Desktop?



### *I want to move the Rack(s) on the Desktop, how can I do that?*



Click the "surface" of the Main Rack (Left Mouse Click) and drag it. This setting will be restored if you switch the [Button STOR](#)  on.

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## 6.9 How to switch the UAC ON/OFF



### *How can I disable the User Account Control (UAC) feature on my Windows® Vista® Computer?*



Microsoft® Windows® Vista® has the built-in ability to automatically reduce the potential of security breaches in the system. It does that by automatically enabling a feature called User Account Control™ (or UAC for short). The UAC forces users that are part of the local administrators group to run like they were regular users with no administrative privileges.

For the installation purpose you can (temporarily) disable UAC:

1. Launch MSCONFIG by from the Run menu.
2. Click on the Tools tab. Scroll down till you find "Disable UAC" . Click on that line.
3. Press the Launch button.
4. A CMD window will open. When the command is done, you can close the window.

5. Close MSCONFIG. You need to reboot the computer for changes to apply.

You can re-enable UAC by selecting the "Enable UAC" line and then clicking on the Launch button.

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**Part**

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 <http://www.nexoe.de>

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