

© MASCHINE



Manual



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1 Introduction

1.1 Welcome to MASCHINE!

Thank you for buying MASCHINE!

MASCHINE is a groove production studio that implements the familiar working style of classical groove boxes along with the advantages of a computer based system. MASCHINE is ideal for making music live, as well as in the studio. It's the hands-on aspect of a dedicated instrument, the MASCHINE hardware controller, united with the advanced editing features of the MASCHINE software.

Creating beats is often not very intuitive with a computer, but using the MASCHINE hardware controller to do it makes it easy and fun. You can tap in freely with the pads or use Note Repeat to jam along. Alternatively, build your beats using the Step Sequencer just as in classic drum machines.

Patterns can be intuitively combined and rearranged on the fly to form larger ideas. You can try out several different versions of a song without ever having to stop the music.

Since you can integrate it into any sequencer that supports VST, Audio Units, or RTAS plugins, you can reap the benefits in almost any software setup, or use it as a standalone application. You can sample your own material, slice loops and rearrange them easily.

However, MASCHINE is a lot more than an ordinary groovebox or sampler: it comes with an inspiring 6-gigabyte library, containing over 250 kits and 14,000 samples, and a sophisticated, yet easy to use tag-based Browser to give you instant access to the sounds you are looking for.

What's more, MASCHINE provides lots of options for manipulating your sounds via internal effects and other sound-shaping possibilities. You can also control external MIDI hardware and 3rd-party software with the MASCHINE hardware controller, while customizing the functions of the pads, knobs and buttons according to your needs utilizing the included Controller Editor application. We hope you enjoy this fantastic instrument as much as we do. Now let's get going!

—The MASCHINE team at Native Instruments.

1.1.1 Manual Conventions

This section introduces you to the signage and text highlighting used in this manual. This manual uses particular formatting to point out special facts and to warn you of potential issues. The icons introducing these notes let you see what kind of information is to be expected:



Whenever this exclamation mark icon appears, you should read the corresponding note carefully and follow the instructions and hints given there if applicable.



This light bulb icon indicates that a note contains useful extra information. This information may often help you to solve a task more efficiently, but does not necessarily apply to the set-up or operating system you are using; however, it's always worth a look.

Furthermore, the following formatting is used:

- Text appearing in (drop-down) menus (such as *Open...*, *Save as...* etc.) and paths to locations on your hard drive or other storage devices is printed in *italics*.
 - Text appearing elsewhere (labels of buttons, controls, text next to checkboxes etc.) is printed in *blue*. Whenever you see this formatting applied, you will find the same text appearing somewhere on the screen.
 - Text appearing on labels of the MASCHINE hardware controller is printed in *orange*. Whenever you see this formatting applied, you will find the same text on the controller.
 - Important names and concepts are printed in **bold**.
 - References to keys on your computer's keyboard you'll find put in square brackets (e.g., "Press [Shift] + [Return]").
- Single instructions are introduced by this play button type arrow.
- Results of actions are introduced by this smaller arrow.

1.1.2 Naming Conventions

Throughout the documentation we will refer to **MASCHINE** as the hardware controller and **MASCHINE software** as the software installed on your computer.

The term '**effects**' will often be abbreviated as '**FX**' when referring to elements in the MASCHINE software and hardware. These terms have the same meaning.

Unlabeled Buttons and Knobs

The buttons and knobs above and below the displays on your MASCHINE controller do not have labels (all other elements on the controller do). For better reference, we applied a special formatting here: throughout the document, the elements are capitalized and numbered, so the buttons are written Button (1-8), while the knobs are written Knob (1-8). E.g., whenever you see an instruction such as “Press Button 2 to open the **EDIT** page,” you’ll know it’s the second button from the left above the displays.

1.2 MASCHINE Documentation

MASCHINE provides you with many information sources. The main sources are meant to be read in the following sequence:

- MASCHINE Setup Guide
- MASCHINE Getting Started Guide and online video tutorials
- MASCHINE Reference Manual (this document)
- MASCHINE Hardware Control Reference

Hereafter is a quick description of each of these documentation sources.



The Setup Guide is available in printed form and on the DVD in the product box. The whole documentation set is also available in PDF format and located within the MASCHINE installation folder on your hard drive. You can also access these documents from the application’s [Help](#) menu.

MASCHINE Setup Guide

A printed Setup Guide is included in the product box. It will guide you through the software and hardware installation of MASCHINE, from the very beginning to the first sound coming through your speakers. This should be your first stop in learning MASCHINE.

First read the Setup Guide. Then proceed with this MASCHINE Getting Started Guide to get more familiar with MASCHINE.

MASCHINE Getting Started Guide

After reading the Setup Guide and following its instructions, your MASCHINE should be up and running. The next step is to read this MASCHINE Getting Started Guide. The MASCHINE Getting Started Guide first gives you an overview of MASCHINE and a practical approach to creating a project.

MASCHINE Reference Manual

The MASCHINE Reference Manual provides you with a detailed reference of your MASCHINE software along with extra information (solving common issues, specifications, etc.).

MASCHINE Hardware Control Reference

The MASCHINE Hardware Control Reference provides an overview of a MASCHINE project, the quick access options performed using the MASCHINE hardware controller, and lots of keyboard shortcuts.

Video Tutorials

The Native Instruments website provides you with a lot of video tutorials that give you a hands-on approach to many sides of the MASCHINE workflow. To see them, point your favorite browser to following URL:

<http://native-instruments.com/maschinemedia>

Controller Editor Reference Manual

Besides using your MASCHINE hardware controller together with its dedicated MASCHINE software, you can also use it as a powerful and highly versatile MIDI controller to pilot any other MIDI-capable application or device. This is made possible by the Controller Editor software, a little application that allows you to precisely define all MIDI assignments for your MASCHINE controller. The Controller Editor should have been installed during the MASCHINE installation procedure. For more info on this, please refer to the Controller Editor Reference Manual available as a PDF file in the Documentation subfolder of the Controller Editor installation folder on your hard disk.

2 Basic Concepts

This chapter will reintroduce you to MASCHINE's main elements and terminology and explain how they relate to one another. You will also learn how to set up your audio interface and how to connect MIDI devices.



Before reading this chapter it is strongly recommended that you read the MASCHINE Getting Started Guide first.

2.1 Names and concepts you should know

We will start with a list defining the most important concepts and names.

Browser

The Browser is the front end for accessing all the elements of your MASCHINE Projects: Projects, Groups, Sounds, Samples, Patterns, Instruments and FX Presets. Each of these can be stored and tagged in a way that allows you easy access to all of them. MASCHINE's Factory Library is already completely tagged, and you can also import your own Samples to the Library and tag them as well. To learn more about the Browser, please read chapter [↑3, Browser](#).

Projects

A Project contains all data needed for a Song: up to eight Groups with their Patterns, 64 Scenes and all settings, automation, FX, Routings, Sounds and Samples. It's like a snapshot of the entire state of MASCHINE. Please read the Getting Started Guide for a complete overview of the MASCHINE Project structure.

Sounds

A Sound can hold up to 4 modules which can be a Sampler, VST/AU Plug-in Instruments or FX, internal MASCHINE FX, as well as an external Input, or a MIDI Out module. Each Sound of the selected Group is mapped to one of the 16 pads on the MASCHINE hardware controller, so you can play the Sounds by pressing the pads. Refer to chapter [↑4, Sound Slots](#) for more information on Sounds.

Groups

A Group contains 16 Sound slots, each of which can hold one Sound. In addition to the effects applied to an individual Sound, a Group can have up to 4 Insert FX. These affect all the Sounds in the Group. A Group can also contain up to 64 Patterns assigned from one of the four Pattern Banks. Refer to chapter [↑5, Creating Groups](#), for more information on Groups.

Master

This is where all audio signals from each of the Groups and Sounds come together and get mixed. The Master bus can also host up to four Insert FX of its own, these effects are applied to all Groups and the Sounds within them. More information on the Master can be found in chapter [↑11.1.7, Mapping a Sample](#).

Scenes

A Scene represents a combination of different Groups with their associated Patterns. Scenes are used to chain patterns (known as Clips in the arrangement area) in order to build up a finished arrangement, or to trigger different parts of a Song while you are playing live. More information on Scenes can be found in chapter [↑10, Creating a Song using Scenes](#).

Patterns

A Pattern is a sequence that plays Sounds from the current Group. A Pattern is therefore usually linked to a Group since it is a part of the Group; however you can also save it independently from the Group. This is useful if you want to try out different drum kits with the same Pattern or different Sounds with a given melody. More information on Patterns can be found in chapter [↑6, Working with Patterns \(Hardware\)](#) and chapter [↑7, Working with Patterns \(Software\)](#).

Events

Events are the individual element that make up a pattern. In Step Editor mode these are visually represented in the MASCHINE software by rectangles. In Piano Roll mode they are represented by note information. Each event represents a musical note or a drum hit.

Modules

MASCHINE contains four Module slots on each of the three MASCHINE Project levels Sound, Group, and Master. MASCHINE modules are the MASCHINE Sampler, VST/AU Plug-in Instruments or FX, internal MASCHINE FX, as well as the external Input module and the MIDI Out module.

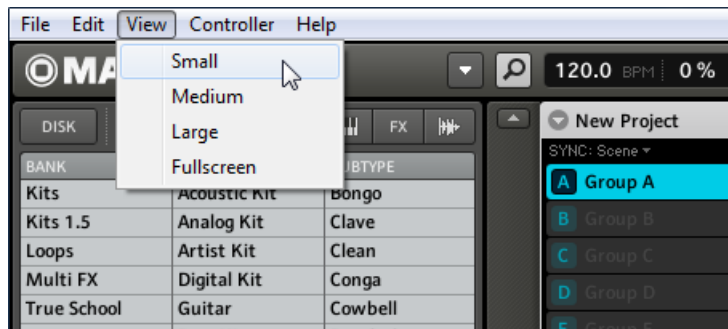
Effects (FX)

MASCHINE comes with many different effects that are called FX in MASCHINE terminology. You may also use VST/AU plug-in effects too. Up to four effects can be directly applied as insert effects to each Sound, Group or Master level. With the routing system you can also create send effects and multi-effects. Refer to chapter [18, The Effects Overview](#).

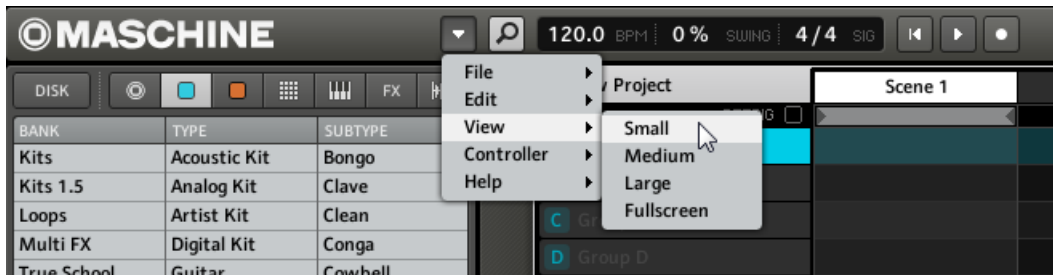
2.2 Common Operations

2.2.1 Switching Views

From the Main menu & the Plug-in menu you can select one of four different sizes to display MASCHINE's software GUI:



The View entry in the Main menu (Windows depicted).



The View entry in the Plug-in menu.

Full screen view is also available from your computer keyboard via the [F5] function key.

2.2.2 Showing and hiding the Browser

Hardware

► Press and hold **NAVIGATE**; now press Button 5 to hide the Browser.

To bring it back, press Button 5 again.



The Navigate screen on the left and right display of the MASCHINE hardware controller.

Software

► Click on the Browser button (with the magnifier symbol) in the Header to show and hide the Browser.



The Browser button in the Header.

2.2.3 Minimizing the Arranger

Hardware

Press **NAVIGATE** + Button 6 to minimize the Arranger to the currently selected Group slot and again to show all Group slots.

Software

► Click on the Minimize button (showing an arrow) on the left of the Arranger to minimize the Arranger to the currently selected Group slot and again to show all Group slots.



The Arranger in minimized view showing the Group slot in focus.

2.2.4 Hiding Parameter Pages in the Control Area

Hardware

► Press **NAVIGATE** + Button 7 to show and hide the Parameter pages in the Control area.

Software

- Click on the Minimize button (showing an arrow) to the left of the Control area to show and hide the Parameter pages in the Control area.



The Control area in full size.

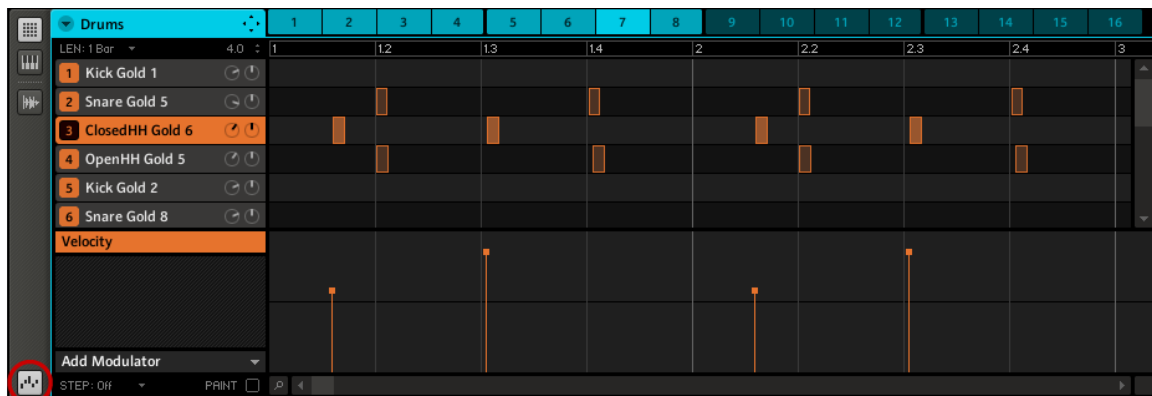
2.2.5 Hiding the Modulation Lane

Hardware

- Press **NAVIGATE** + Button 8 to show and hide the Modulation Lane.

Software

- Click on the Automation View switch on the left of the Modulation Lane to show and hide it.



The Automation View switch.

2.2.6 Navigating Parameter Pages in the Control Area

In some situations, the Control area consists of more parameters than the displays can show at once. Examples of this are the Groups' Output tab (OUT on the controller) and the Sounds' Source tab (SRC on the controller) if set to Sampler. In these cases, the number of Parameters is divided into several Parameter pages that you can easily navigate with the hardware and software.

Hardware

On the MASCHINE hardware controller you can use the Page buttons to navigate through the Parameter pages. Whenever there is more than one page, it will be shown on the right side of the right display like this:

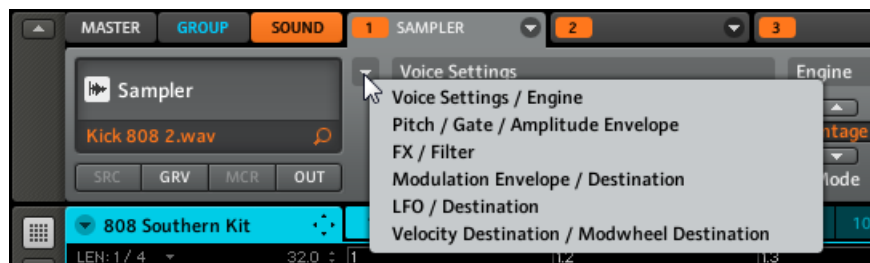


The display of available 1/6 pages in a Group Output tab.

Moreover, if there is another page available to the left or to the right of the current page, the corresponding Page button will be lit on your MASCHINE hardware controller.

Software

On the software you click the Parameter Page selector to navigate through the pages:



The Parameter Page selector in the Control area: first page of parameter settings for Module 1.

2.2.7 Undo and Redo

Undo and Redo are useful to cancel operations you have performed or to compare two versions before and after a change (find the Compare/Split functions explained in chapter [↑6.2.5, Compare/Split](#) for the hardware and [↑7.2.3, Compare/Split](#) for the software). In the MASCHINE software you can undo nearly everything you did after loading or creating your Project.



Note: If you save your Project, you will no longer be able to Undo or Redo any actions performed before saving!

Hardware

► On the MASCHINE hardware controller, perform the Undo operation by pressing **SHIFT** + pad **1**. To perform the Redo operation, press **SHIFT** + pad **2**.

Software

On the software, use the common keyboard shortcuts for the Undo and Redo functions. For Undo, press [Ctrl]+[Z] ([Cmd]+[Z] on Mac OS X). For Redo, press [Ctrl]+[Y] ([Cmd]+[Y] on Mac OS X). You can also select [Undo](#) and [Redo](#) from the [Edit](#) menu.

2.2.8 Pinning a Mode

You can pin a screen by pressing the relevant Mode button (**SCENE**, **PATTERN**, etc.) + Button 1 above the left display.

Now the screen is always pinned when you select this mode. To make it a temporary screen, press the mode button + Button 1 again. Now the screen will only show up, as long as you press the mode button.



SELECT mode can not be pinned.

2.3 Stand-alone and Plug-in Mode

You can run MASCHINE software as a stand-alone application or integrate it into your favorite Digital Audio Workstation (or DAW, in short) by loading it as a plug-in. MASCHINE software is available in the VST, Audio Unit and RTAS plug-in formats. For further information on plug-in compatibility and for a detailed description of how to use plug-ins in your host, please refer to the documentation included with your host software. If you did not install the plug-ins when installing the MASCHINE software, please refer to the printed Setup Guide or the PDF version of this document available from the MASCHINE software [Help](#) menu.

2.3.1 Differences between Stand-alone and Plug-in Mode

When you are using MASCHINE as a plug-in within a host application (i.e., sequencer software like Cubase or Pro Tools), you can open multiple MASCHINE instances. Actually, you can load as many instances of MASCHINE as your computer and your host application can handle CPU-wise. In contrast to the stand-alone application, they are always synced to the host. In plug-in mode you can also send a MIDI Program Change message from your host to switch between MASCHINE's Scenes or record automation using the Macro controls. To learn more about these, have a look at chapter [↑10, Creating a Song using Scenes](#) and [↑5.1, The Group Property Pages](#).

2.3.2 Switching Instances with the Hardware in Plug-in Mode

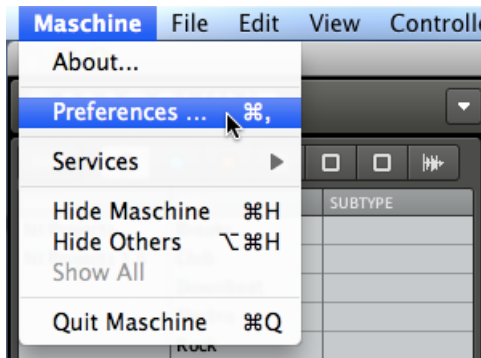
To switch from one instance to another in plug-in mode, press **SHIFT + STEP**; using Knob 5 you can now select the desired instance and load it by pressing Button 8.

2.3.3 Switching Instances with the Software in Plug-in Mode

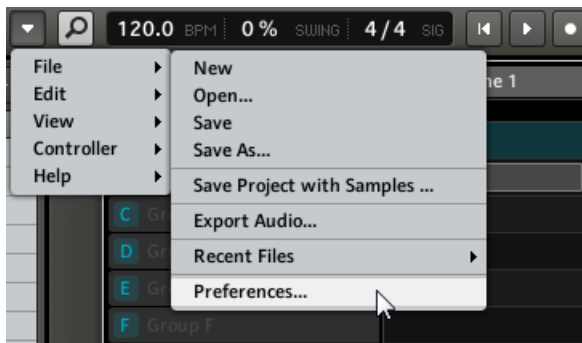
You can select the controller from an instance by clicking the Connect button in the MASCHINE header.

2.4 Preferences

You can find the Preferences dialog under *MASCHINE* in the Main menu (Mac OS X) or in the *File* menu (Windows), as well as in the *File* submenu of the Plug-in menu:

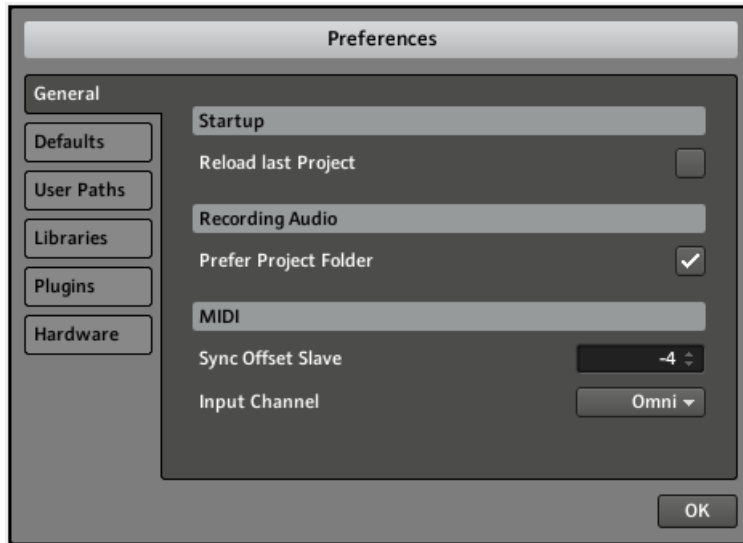


Preferences... on the Main menu (Mac OS X depicted).



Preferences... in the Plug-in menu.

2.4.1 Preferences – General Tab

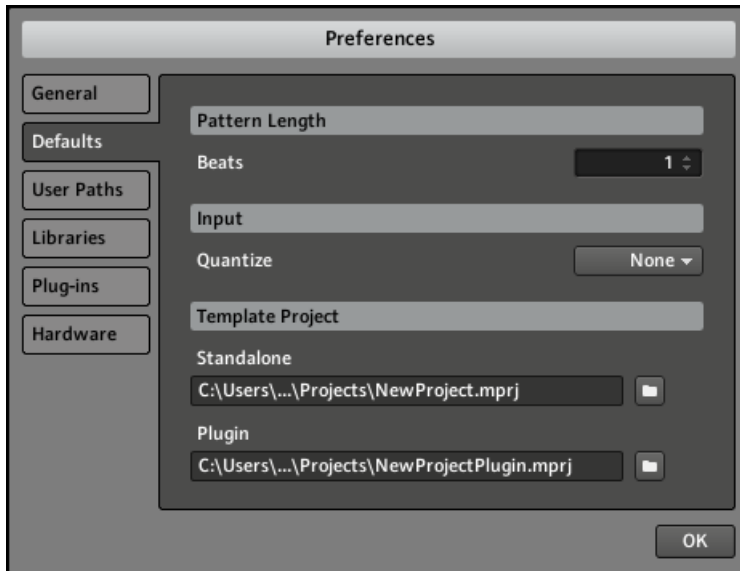


The Preferences – General tab.

| Screen Element | Description |
|---------------------------------------|--|
| Startup | |
| Reload last Project | If this option is checked, the last Project you worked on when quitting MASCHINE will be loaded as soon as you start MASCHINE again. |
| Recording Audio | |
| Prefer Project Folder | If this checkbox is marked, the Samples you record will be put in a subdirectory of the folder where your project is saved. If not, your recordings will be saved in the generic recordings folder in your standard user library path. |
| MIDI | |

| Screen Element | Description |
|-------------------|--|
| Sync Offset Slave | Depending on variables such as the speed of your CPU, your audio interface, your MIDI interface and the Latency you selected in the Audio and MIDI Settings window, you may experience a lack of synchronization between MASCHINE and the external MIDI Master. To compensate, you can adjust this Sync Offset Slave value in milliseconds. An easy way to do that is to play a 4/4 kick drum pattern or a metronome sound on both MASCHINE (see chapter ↑6.1.6, The Metronome on how to activate the Metronome) and the external MIDI Master and mix them together moving the slider until they are played at exactly the same time. As soon as you can hear a flanger-like effect, you know you are close to the correct Sync Offset Slave value. Keep on adjusting the Sync Offset Slave control until you can neither hear the flanging effect nor two separate signals. |
| Input Channel | Use this to select the MIDI channel you want MASCHINE to receive MIDI messages on. This can be used to limit MIDI input sent by the external sync master device. The <i>Omni</i> setting will allow the MASCHINE software to receive messages on all 16 channels at one. |

2.4.2 Preferences – Defaults Tab



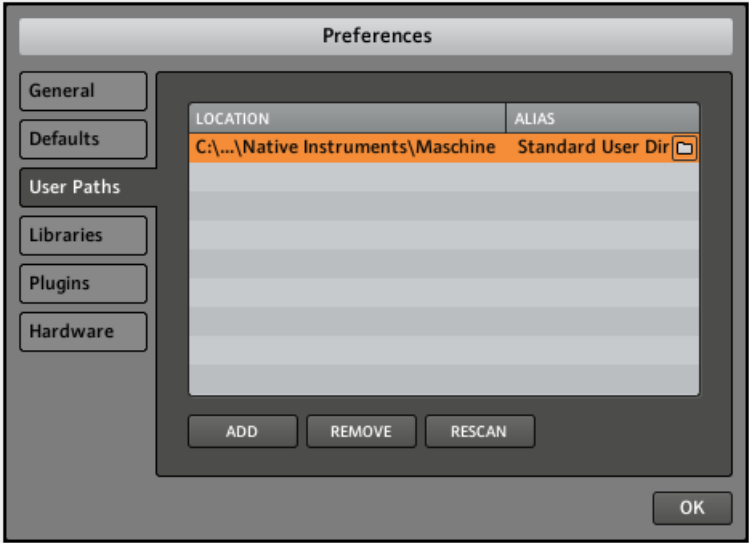
The Preferences – Defaults tab.

The [Defaults](#) tab allows you to define a few default settings that will be used for every new Project.

| Screen Element | Description |
|--------------------------|--|
| Pattern Length | |
| Beats | Here you can define the default length of new Patterns. Select a value by pressing your mouse button and dragging up or down. |
| Input | |
| Quantize | This allows you to select one of the three quantize options: <i>None</i> (no quantization), <i>Record</i> (quantization only in Record mode) or <i>Play/Rec</i> (quantization in Play and Record mode). |

| Screen Element | Description |
|------------------|--|
| Template Project | |
| Standalone | Here you can select a Project to load automatically when you start a new project. The window displays the location of the Template Project currently selected for use. Click the file icon to select the Template Project you would like MASCHINE to load when used as a standalone. Any Project file can be used as a template, this can be from the MASCHINE library or you could create a file, for example with your preferred plug-ins and FX loaded into the Module slots. |
| Plug-in | Here you can select a Project to load automatically when you start a new project within a Digital Audio Workstation. The window displays the location of the Template Project currently selected for use. Click the file icon to select the Template Project you would like MASCHINE to load when it is used as a plug-in. Any Project file can be used as a template, this can be from the MASCHINE library or you could create a file, for example with your preferred plug-ins and FX loaded into the Module slots. |

2.4.3 Preferences – User Paths Tab



The Preferences – User Paths tab.

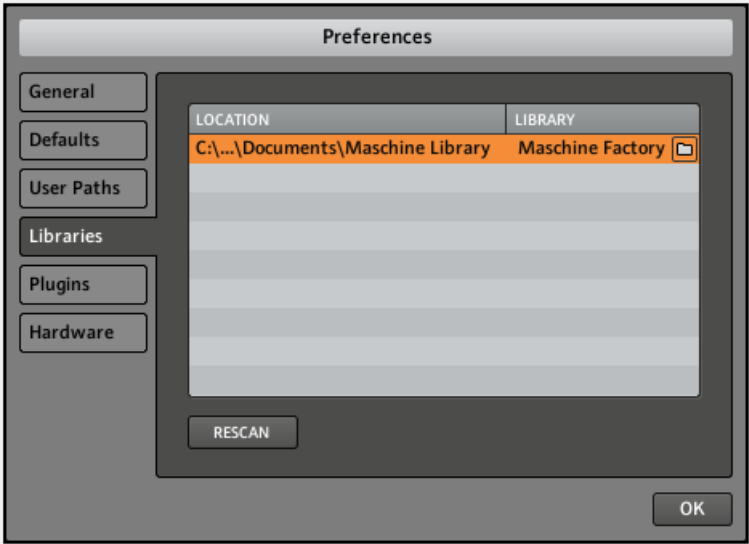
The [User Paths](#) tab shows the locations of all MASCHINE files and Samples you have added to the Library. By clicking on the folder icon to the right, you can change the path for example if you moved your sample folder to another location.



Please consult chapter [↑3, Browser](#) for more information on adding your own samples.

| Screen Element | Description |
|--------------------------|---|
| LOCATION | Shows the path of your user content. Click the icon to change the path. |
| ALIAS | ALIAS acts as a reference to the path in the LOCATION column. This is a stand-in for any folder on your computer or removable drive and provides a dynamic link to it. The path in the LOCATION column may be changed, but the ALIAS column will still provide the link therefore avoiding the possibility of missing samples. The Alias also allows you to use a Project on different computers even if the samples are stored in different locations. After adding a Location, double-click the ALIAS column to set the Alias name. The Alias of the first entry in the list, named 'standard user Directory' cannot be edited. |
| ADD | Click ADD to manually add directories to the Library; keep in mind that any MASCHINE-compatible files in those directories will not be tagged if you add them like this (see the Browser chapter for more information on importing and tagging your files). Paths to samples that you added via the import function from the Browser will also show up here. |
| REMOVE | Click REMOVE to remove directories from the Library. Files will only be removed from the MASCHINE Browser, not from your hard disk. |
| RESCAN | If you have changed the content of the selected directory (such as added or removed files), you should rescan it in order to let MASCHINE know which files have been removed and/or added so that they show up in the MASCHINE Library. |

2.4.4 Preferences – Libraries Tab



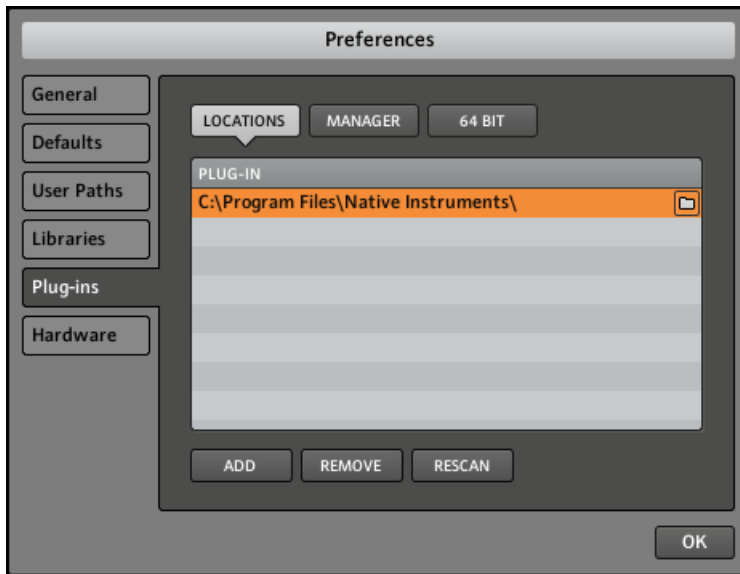
The Preferences – Libraries tab.

| Screen Element | Description |
|----------------|--|
| RESCAN | Click this button to rescan the MASCHINE Factory Library or other Libraries from Native Instruments. This is useful if you have moved the Factory Library to another hard drive or to another location on the same hard drive. |

2.4.5 Preferences – Plug-ins Tab

LOCATIONS Section

In the [LOCATIONS](#) section of the [Plug-ins](#) tab, you can manage the storage folders of all the plug-ins available. By clicking on the folder icon to the right of an entry, it is possible to change the path of each plug-in directory.



The Plug-ins tab's LOCATIONS section.

The **LOCATIONS** section also contains the following features:

| Screen Element | Description |
|----------------|--|
| ADD | Click ADD to manually add plug-in directories. |
| REMOVE | Click REMOVE to remove directories. |
| RESCAN | If you have changed the content of the selected directory (such as installed or removed plug-ins), you should rescan your plug-in directories in order to keep the list of available plug-ins up to date. RESCAN will check the integrity of your plug-ins and allow you to automatically detect plug-ins, that are added or removed, or deselect any plug-ins that are not working correctly for any reason. |

MANAGER Section

In the **MANAGER** section of the **Plug-ins** tab, you can enable or disable plug-ins, rescan plug-in directories, and set default Module presets for plug-ins.



When a plug-in is disabled, it will not appear in the Module menus. If, for example, you do not use VST plug-ins on a Mac, it could be useful to disable them so that these VSTs do not appear in the list of loadable Modules.



The Plug-ins tab's MANAGER section.

| Screen Element | Description |
|----------------|--|
| PLUG-IN | Lists all available plug-ins. This includes all enabled or disabled 32-bit plug-ins, when MASCHINE is running in 32-bit mode or otherwise all enabled or disabled 64-bit plug-ins, when MASCHINE is running in 64-bit mode. |
| DEFAULT CONFIG | You can set a default Module preset here, which will be loaded with this plug-in when you load it from the Module browser on the hardware or the Module menu of a Module slot. Use the SELECT button to set the default Module preset. The default Module preset can also be set via the Module slot menu (<i>Save As Default...</i>). If no default is set here, the parameters of this plug-in will be auto-mapped when loading it to a Module slot. |
| RESCAN | If you have changed the content of the selected directory (such as installed or removed plug-ins), you should rescan your plug-in directories in order to keep the list of available plug-ins up to date. RESCAN will check the integrity of your plug-ins and allow you to automatically detect plug-ins, that were added or removed, or deselect any plug-ins that are not working correctly for any reason. |
| CLEAR | This removes the default configuration for the selected plug-in. |

| Screen Element | Description |
|-----------------|--|
| SELECT | This allows the selection of a default configuration for the selected plug-in. |
| Scan at startup | Check this box to allow MASCHINE to automatically scan for new plug-ins on start-up. Please be aware these scans increase start-up times. If you leave this box unchecked, be sure to perform a manual scan using the RESCAN button when new plug-ins are installed or plug-ins are removed. |

64 BIT / 32 BIT Section

Displays 32-bit/64-bit plug-ins, that are identified by MASCHINE, but cannot be used in the current bit-mode.



To check which bit mode you are currently running, open the About screen from MASCHINE's [Help](#) menu and see the [Mode](#) section in the upper right.



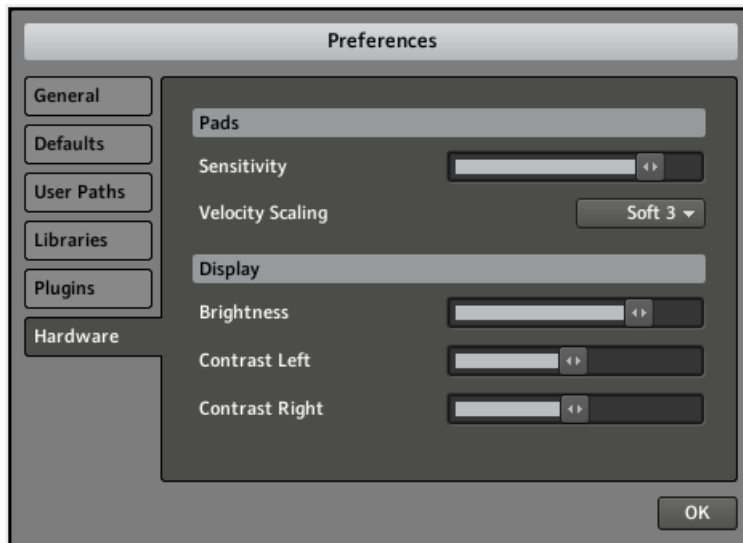
The Plugins tab's 64 BIT / 32 BIT section (depending on the MASCHINE bit mode).

| Screen Element | Description |
|----------------|---|
| PLUG-INS | The plug-ins listed here are known to MASCHINE, but cannot be used in the current bit-mode. This section is provided for information only. If MASCHINE is used in 64-bit mode, only 32-bit plug-ins will be listed here and vice versa. If you only have 32-bit or 64-bit plug-ins installed then no 64 BIT or 32 BIT tab will be shown respectively. |



If you plug a MASCHINE instance into your DAW, keep in mind that a 64-bit MASCHINE plug-in will host 64-bit plug-ins only, as well as a 32-bit instance will allow only hosting of 32-bit plug-ins.

2.4.6 Preferences – Hardware Tab



The Preferences – Hardware tab.

The **Hardware** tab enables you to customize how the pads react to your playing, and the brightness/contrast of the MASCHINE hardware controller displays.

| Screen Element | Description |
|-----------------------|---|
| Pads | |
| Sensitivity Slider | Use the Sensitivity Slider to adjust how sensitive the pads respond to your touch. This sets the minimum threshold at which MASCHINE hardware controller will register a “hit.” |
| Velocity Scaling | Velocity Scaling determines how your playing is translated into velocity values: starting from <i>Soft 3</i> (a soft touch is enough to get a big velocity value) through <i>Linear</i> to <i>Hard 3</i> (you really have to hit the pad hard to get a big velocity value). |
| Display | |
| Brightness | The Brightness Slider allows you to adjust the brightness of both Left and right displays of the MASCHINE hardware controller. |
| Contrast Left & Right | With these sliders you can adjust the contrast of the Left and right displays separately. |

Adjusting the Settings from the Hardware

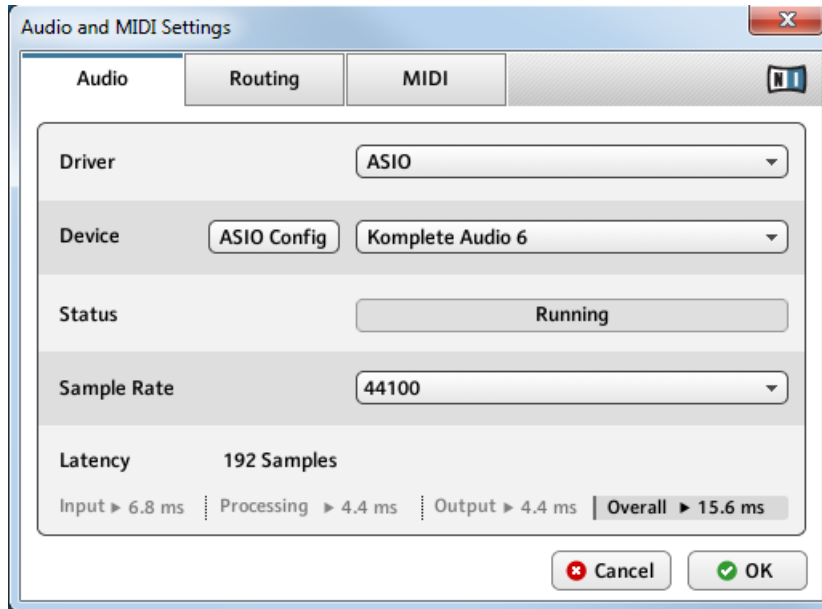
You also have access to these settings from the MASCHINE hardware controller. To do this, you first have to enter the MIDI mode by pressing **SHIFT + CONTROL**. In MIDI mode, press **SHIFT + Button 4** to show the Settings Display mode. In this mode, the left display gives you access to all of the settings described above, with the exception of the Velocity Scaling. The Knobs 1-4 allow you to adjust the Brightness, Pad Sensitivity, Contrast Left and Contrast Right, respectively.

When you’re done, press **SHIFT + CONTROL** again to quit the MIDI mode and get back to Control mode.

2.5 Audio and MIDI Settings

► To open the Audio and MIDI Settings dialog, select the *Audio and MIDI Settings...* entry from the [File](#) menu.

2.5.1 Audio Tab

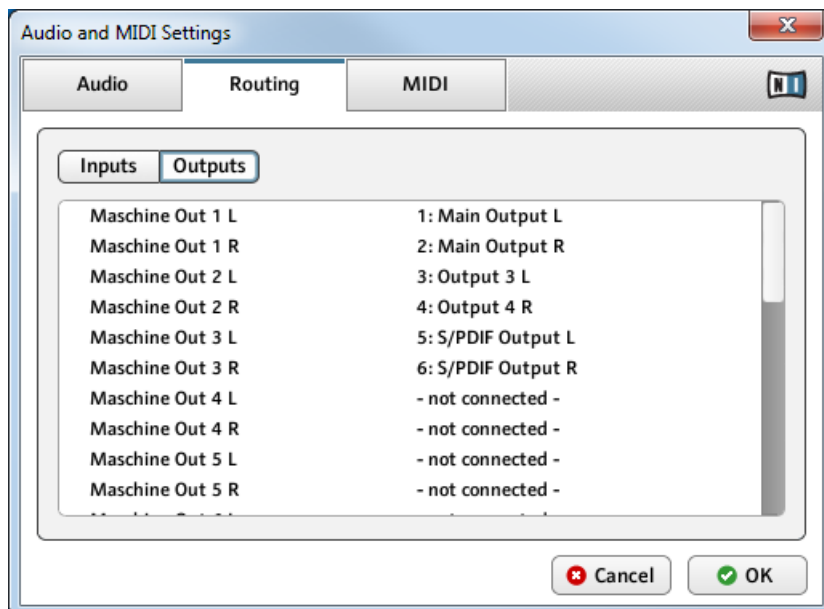


The Audio tab of the Audio and MIDI Settings dialog.

| Screen Element | Description |
|----------------|--|
| Driver | Select your audio driver here. |
| Device | This allows you to choose available devices if you have connected more than one audio interface. |
| Status | This shows you whether your audio interface is currently running. |

| Screen Element | Description |
|----------------|---|
| Sample Rate | The currently selected sample rate of your audio interface. Please restart MASCHINE after changing the sample rate. |
| Latency | <p>Mac OS X: This slider allows you to adjust the latency of your audio interface in samples. Lower values result in a more immediate playing response but are heavier on both the CPU and the audio driver, and may result in audible clicks and pops. Larger values are easier on the CPU, but introduce a larger latency (i.e., there may be a very small delay between when you hit a pad and when you actually hear it). You should therefore experiment with this setting so that it is as low as possible without overloading your CPU or introducing any audio artifacts.</p> <p>Windows: When using an ASIO driver, the Audio and MIDI Settings dialog shows an ASIO Config button instead of the Latency slider. Click this button to open the settings dialog of the selected ASIO driver.</p> |

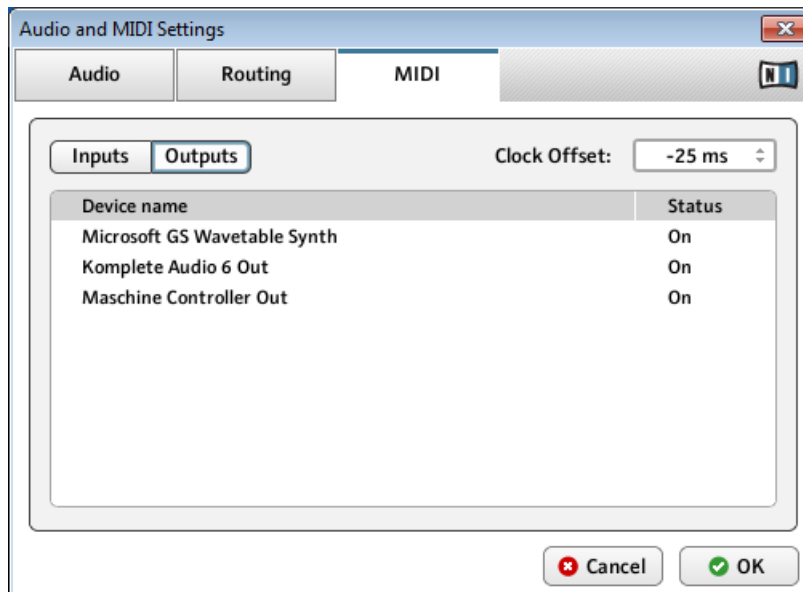
2.5.2 Routing Tab



The Routing tab of the Audio and MIDI Settings dialog.

| Screen Element | Description |
|----------------|--|
| Inputs | By clicking on this button, you can define which two inputs on your audio interface will be seen by MASCHINE. Select the Inputs of your audio interface on the right column by clicking on the fields: you will be presented with a drop-down menu with all the available Inputs. The choices made here will determine which Inputs can be used when sampling external sources, for example. |
| Outputs | By clicking on Outputs , you will be presented with a list of the eight stereo outputs from MASCHINE: in the right column, you can assign them to the outputs of your audio interface via a drop-down menu. |

2.5.3 MIDI Tab



The MIDI tab of the Audio and MIDI Settings dialog (entries may vary on your computer).

| Screen Element | Description |
|----------------|---|
| Inputs | Clicking on Inputs displays a list of all the available MIDI Inputs of your system. You can activate each Input by clicking in the Status column. |
| Outputs | Clicking on Outputs displays a list of all the available MIDI Outputs of your system. You can activate each output by clicking in the right column that displays the current status of the corresponding port. |
| Offset | <p>Use the Offset control to compensate delay that may occur during MIDI data transmission. Delayed MIDI clock data will cause external devices to respond too late, thus making your track sound out of sync.</p> <p>By adjusting the Offset value you can set an amount of latency to be compensated (in milliseconds). MASCHINE will then send MIDI clock events ahead of time as defined.</p> |

2.6 Connecting External MIDI Equipment

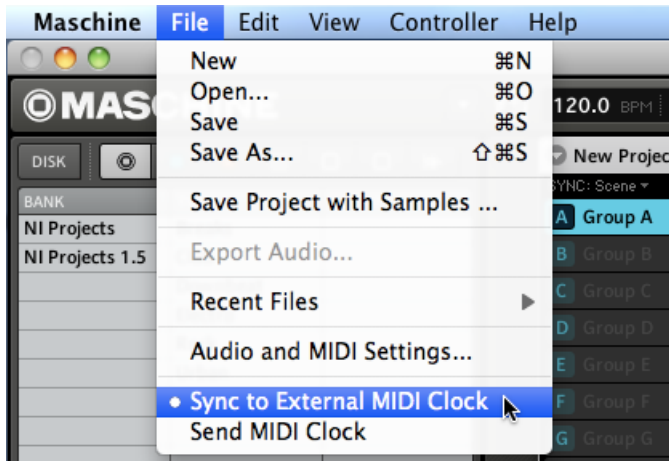


MASCHINE's rear view.

To connect your external MIDI equipment, hook it up to the MASCHINE hardware controller's MIDI In or MIDI Out socket on the rear panel. If you connect a MIDI keyboard to the MIDI In, you can directly play the currently selected Sound with it without having to set anything up. You can also switch Scenes remotely by sending MIDI program change messages to MASCHINE. More on this in chapter [↑10, Creating a Song using Scenes](#).

2.6.1 Sync to External MIDI Clock

MASCHINE can be controlled externally via MIDI Clock by any device that is capable of sending MIDI Clock. This could be hardware such as a drum machine, another groovebox or sequencer, or even another software sequencer. To enable this, select the *Sync to External MIDI Clock* entry from the **File** menu:

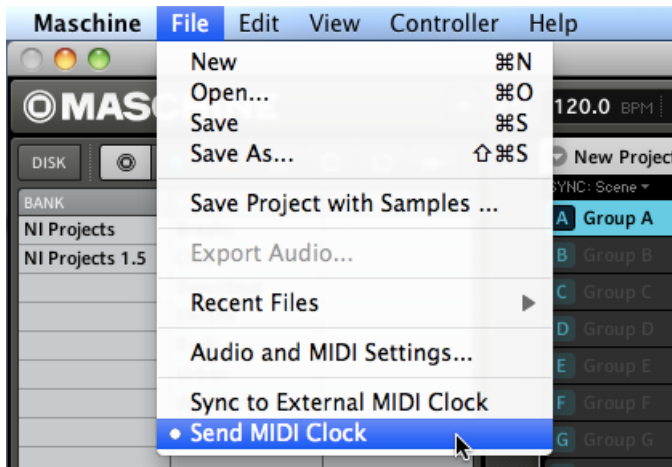


Sync to External MIDI Clock activated.

- ⚠ If you use MASCHINE as a plug-in, it is automatically synced to the host application so you don't have to activate External Sync!
- ⚠ You have to define at least one Input in the Audio and MIDI Settings' **MIDI** tab to enable External Sync.
- ⚠ If *Sync to External MIDI Clock* is checked, the play button on the MASCHINE header and on the MASCHINE hardware controller are deactivated.

2.6.2 Send MIDI Clock

MASCHINE can also send a MIDI Clock signal to any device that is capable of receiving MIDI Clock. This could be hardware such as a drum machine, another groovebox, or even another software sequencer. To enable *Send MIDI Clock*, select it from the **File** menu:



Send MIDI Clock activated.

3 Browser

The Browser is the place where you can organize and categorize all of your Samples, Sounds, Groups, Projects, Patterns, Instruments, and FX Presets. This is done by tagging them, which means categorizing them by using keywords. Given that the MASCHINE software has some advantages over the hardware in this case, such as a very big screen and a QWERTY-keyboard, we will start with the software first.

3.1 Elements of the Browser



The elements of the Browser.

(1) **Disk button:** Use the **DISK** button to switch between the Browser and access to your computer hard drives.

(2) **File Type selector:** This contains seven icons, each representing the different files types of MASCHINE. From the left to right the file types are Project, Group, Sound, Pattern, Instrument, FX, and Sample. By clicking one of them it causes only the files of the selected type to be displayed in the Search Result list.

(3) **Tag Filter:** The Tag Filter allows you to search for file types based on tags that have been applied to them. You can quickly find files based on the Bank, Type and Subtype categories.

(4) **Text search field:** Use the text search field to quickly find files based on their name or tagged attribute. Select the type of file you are looking for from the File Type Selector and enter the name or category of a file into the text search field to perform a search. Results are displayed in the search result list below.

(5) **Search result list:** The search result list ([RESULTS](#)) displays all files that match your query.

(6) **Tag Editor:** The Tag Editor allows you to edit Tags applied to files and add Tags to new files from the three available categories.

(7) **Audition Controls:** This allows you to listen to Samples, Sounds, which can be listened to in context with the rest of your Project while it is playing.

3.1.1 Disk Selector



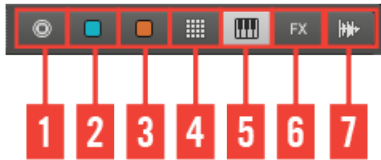
The Disk Selector button when the Browser Library is selected.



The Disk Selector button when DISK is selected.

On the Browser , you can choose whether you want to browse the Library or access your disk drives. Press the [DISK](#) button to toggle between Browser Library and hard disk content.

3.1.2 File Type Selector



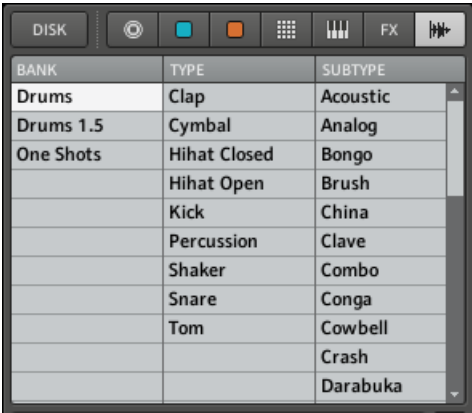
The File Type selector.

- (1) **Project:** (.mprj)
- (2) **Groups:** (.mgrp)
- (3) **Sounds:** (.msnd)
- (4) **Patterns:** (.mpat)
- (5) **Instruments:** (.mfxp)
- (6) **FX Presets:** (.mfxp)
- (7) **Samples:** (.wav, .aiff)

The File Type selector only appears by when you have selected the Library using the [DISK](#) button in the Browser Mode selector. On the File Type selector you will find 7 icons representing the different file types of MASCHINE: Projects (1), Groups (2), Sounds (3), Patterns (4), Instruments (5) FX Presets (6) and Samples (7). By clicking on one of them will cause only the files of the selected type to be displayed in the search result list ([RESULTS](#)). You may also deactivate all of them to perform your search on all file types at once.

3.1.3 Tag Filter

As with the File Type selector, the Tag Filter only shows up when you have selected the Library in the Browser Mode selector. Then it turns into the three category columns [BANK](#), [TYPE](#) and [SUBTYPE](#).



The Tag Filter with the file type Sample selected.

| Screen Element | Description |
|----------------|---|
| BANK | The BANK category is meant to define a basic structure. If you add a large library with many types of Samples, this might be the place to put its name. |
| TYPE | The TYPE category is the first in the tag hierarchy of MASCHINE, and should be used to categorize your file in a general way. |
| SUBTYPE | With the SUBTYPE , you can narrow down the description of your file even further. |

3.1.4 Text Search field



The text search field.

In the text search field you can enter your search query. The search will be performed on the file paths, the file name and the tags. If you want to search for a combination of two words (e.g. “bass” and “analog”) just enter both words in the text search field with a gap in between. As you start typing, the list of matches will start narrowing in the search result list ([RESULTS](#)). To the right of it you will find the Reset switch that resets both text search and tag search.

3.1.5 Search Result List

The search result list (**RESULTS**) shows all the files that match your query. Double-clicking one of the matches will load the respective file. Depending on what File type you have selected, the file will be loaded to different locations within MASCHINE:



The search result list showing Kicks from the MASCHINE Factory Library.

- If it is a Project it will load all associated files replacing all files currently in memory. A dialog will appear asking you if you want to save changes to the currently loaded Project. This is to prevent you from losing changes you performed on it by accidentally loading a new Project without saving the old one.
- If it is a Group, it will be loaded into the Group slot currently in focus.
- If it is a Sound, it will be loaded into the Sound slot currently in focus.
- If it is a Pattern, it will be loaded into the Pattern slot currently in focus.
- If it is an Instrument, it can be loaded into Module 1 only of the selected Sound slot and will replace the Sample, FX or Instrument currently loaded.
- If it is an FX Preset, it will be loaded into the selected Module replacing the current one.

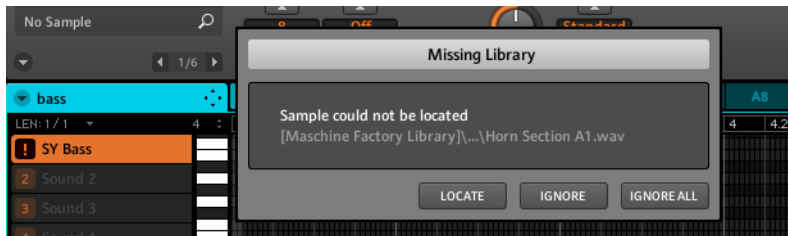
- If it is a Sample, it will be loaded into the selected Zone of the Sound in focus replacing the current one.



You can also load presets into specific Modules by dragging them from the Browser and dropping them on the desired location.

3.1.6 Locating missing Samples

If you are loading a MASCHINE Project and the referenced samples cannot be found for any reason, a dialog in which you can locate the missing samples will open.



The Missing Library dialog allows you to locate missing samples.

Sounds and Groups referencing missing samples are marked with an exclamation mark.



You can open the Missing Library dialog manually from the MASCHINE Plug-in menu. The *Purge Missing Samples* and the *Find Missing Samples...* menu entries only show up in the **File** menu when sample references cannot be resolved.

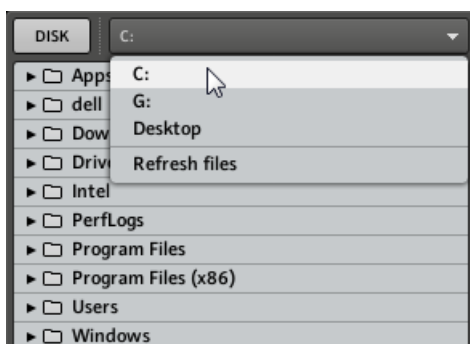


The Purge Missing Samples and the Find Missing Samples... entries in the MASCHINE plug-in's File menu.

► Select *Purge Missing Samples* to remove all Sounds with missing samples from your MASCHINE Project.

3.2 Adding your Own Samples

Apart from the huge Library, you might still want to use your own Samples. The supported file types are Wav and Aiff. To be able to find them in the Browser from the hardware, you will have to import them into the Library. Importing Samples does not mean they will be moved from the directory they currently reside in, they will only be referenced by the Browser. That's why whenever you move Samples, make sure to update the paths to their respective directories as described in chapter [↑2.4, Preferences](#). Click on **DISK** in the Browser Mode Selector and you will be presented with a list of your hard drives:



The Browser with DISK selected showing the available volumes.

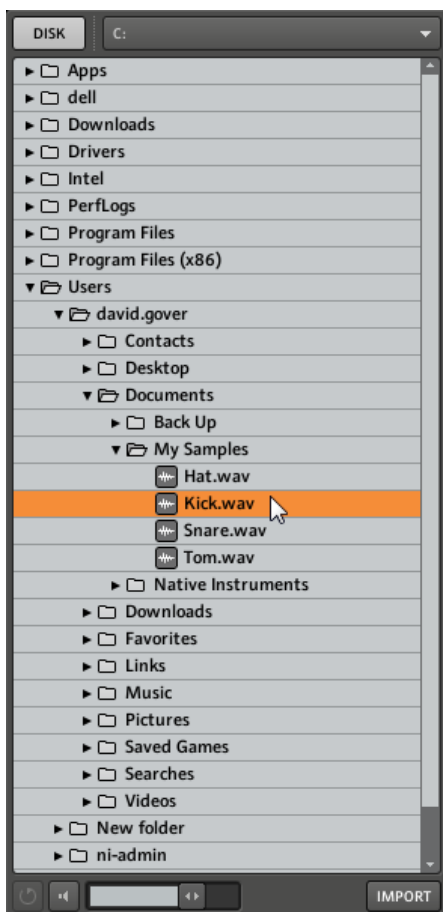
In the tree view, choose the directory that contains your Samples. You can pre-listen the Samples automatically before loading them by activating the Audition function in the lower row of the Browser:

1. Click on the Audition button (speaker symbol) to activate the Audition function.
2. Adjust the pre-listening volume by moving the volume slider to the right of the Audition button.



From left to right: Swap button, Audition button, Volume slider, Import button.

3.2.1 Importing a Sample Into the Library



Selecting a Sample on your hard drive.

After you have found your Sample, you can add it to the Library by clicking the [IMPORT](#) button. If you want to add multiple files at once, such as a folder of your favorite Samples, you can select the whole folder and tag all files at once using the same dialog as when importing single files. You can also make non-contiguous selections within a directory by clicking while holding down the [Ctrl] key (Windows) or the [Cmd] key (Mac OS X). After pressing [IMPORT](#),

you will be presented with the Tag Editor to tag the Sample(s) you are about to import to the Library. You can also apply/remove tags at any time, after they are imported. However, it may be best to tag files on import, since it will make it easier to find them later.



Please be aware there is no UNDO/REDO commands available for Tagging.

3.2.2 Tagging your Groups, Sounds, Patterns, Instruments, FX Presets, and Samples

In the three category columns of the Tag Editor (Bank, Type and Subtype), select the tags you want to apply to the Sample you are importing:



The Tag Editor with selected Tags (highlighted and check marked).

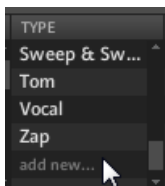


Make you are as precise as possible when tagging your files in order to be able to find what you are looking for later.

You can add as many Tags to a file as you want to by clicking on them. A checkmark will appear next to the selected Tags. To remove the Tag from the Sample, click on it again. After you have finished tagging, click the **OK** button to import the Sample to the Library and apply the selected Tags. You can cancel the Import by clicking the **Cancel** button.

Adding New Tags

You can also add your own Tags. On the bottom of each of the three category columns in the Tag Editor, there is an *add new...* entry:



Adding a new Tag in the TYPE column.

To add a new Tag, click on this entry and enter the Tag name with your computer keyboard. The new Tag will then be available in that Tag category.

Editing Tags

It's possible to edit existing Tags on the files in your Library. Click the file you want to edit and the existing Tags for that file will appear in the search result list ([RESULTS](#)). Click the [EDIT](#) button and select/deselect Tags by checking/unchecking the respective checkmarks next to them.



You may also select multiple files and add or remove tags collectively.

Deleting Tags

To delete a Tag from the Tag Editor, right-click (on Mac OS X: [Ctrl]-click) on the Tag to open the delete menu. It is possible to delete multiple Tags by selecting them in the Tag Filter and then right-click (on Mac OS X: [Ctrl]-click) on the selection to open the delete menu.



A deleted tag will be removed from all files. Once a tag is deleted it is not possible to undo it!

3.3 Quick Browse

Quick Browse is a feature that allows you to quickly recall a search query you performed to get to a given file. Let's say you have loaded a Kick Sound after browsing the Library, then loaded a Snare Sound to another Sound slot and now you realize you are not satisfied with that Kick Sound, but you heard a nice Kick Sound just before you chose the current one. Normally you would now have to try to remember the name or the Tags you used to find it, or browse all Kick Sounds (given that the MASCHINE Library already has around 700 Kick Sounds, this may take

a considerable amount of time). With Quick Browse you can restore the query with just one click. Quick Browse is available in Module 1 (for Instruments, Sounds and Samples), in Module 2-4 (for FX), in the **GROUP** tab (for Groups), in the **MASTER** tab (for Projects).

3.3.1 Using Quick Browse



The Quick Browse function in the SOUND tab.

The Quick Browse function is activated by clicking on the Magnifier Tool next to the file name. If you click on the Magnifier Tool, the search query for the currently selected file will be restored allowing you to choose other results for that query from the search result list. By using the cursor keys on your computer keyboard, you can browse through files in the search result list and they will be instantly loaded if In-Place Auditioning is activated (see below). The Browser on the MASCHINE hardware controller always restores the search query you performed to get a given file.

3.3.2 In-Place Auditioning

To activate in-place auditioning, click the Swap button in the bottom row of the Browser which will be highlighted:



Activating In-place Auditioning by clicking the Swap button.



In-place Auditioning is not only useful to look for an appropriate Sound, Group, FX or Sample, but can also be very inspiring: with a Pattern playing, browse through your Library with In-Place Auditioning activated and listen to Sounds and Samples you normally would not use in that context.

This allows you to listen to Samples, Sounds, Groups, and FX Presets which will be instantly loaded and can be listened to in context with the rest of your Project while it is playing. To deactivate this function, just click the Swap button in the bottom row of the Browser again. You will still be presented with the Search Result list if you click on the Magnifier Tool next to the file name in the respective Tab, but they will not be loaded automatically while browsing them.

3.4 The Browser on the Hardware

In contrast to the software, the Browser on the hardware can only load files that have already been added to the Library. You cannot directly access specific directories on your hard drives with the Browser using the hardware. This is why you should always tag all your Samples and import them to the Library using the software beforehand.

- To enter the Browser on the MASCHINE controller press **BROWSE**.



The Browser on the MASCHINE hardware controller displays with the SOUND tab in focus.

Filter

Dial Knob 1 to select a file type you are looking for. Depending on which of the Buttons 2-4 are selected (the picture above shows the Browser with Button 4, i.e. the Sound tab selected), Filter will allow you to select compatible file types only:

| Master | Group | Sound |
|---------|----------|------------|
| Project | Group | Sound |
| FX | Patterns | Instrument |
| | FX | FX |
| | | Sample |

| Tag Level | Description |
|-----------|---|
| BANK | The BANK category is meant to define a basic structure. Examples for the BANK category from the Factory Library are DRUMS or ONE SHOTS or FACTORY FX . |
| TYPE | The TYPE category is the first in the tag hierarchy of MASCHINE and categorizes the file in a general way. Examples for the TYPE category from the Factory Library are BRASS , ANALOG FX or KICK . |
| SUBTYPE | With the SUBTYPE , you can narrow down the description of your file even further. Examples for the SUBTYPE category are DJEMBE , GLITCH or ANALOG . |



The Browser on the hardware showing a search result list.

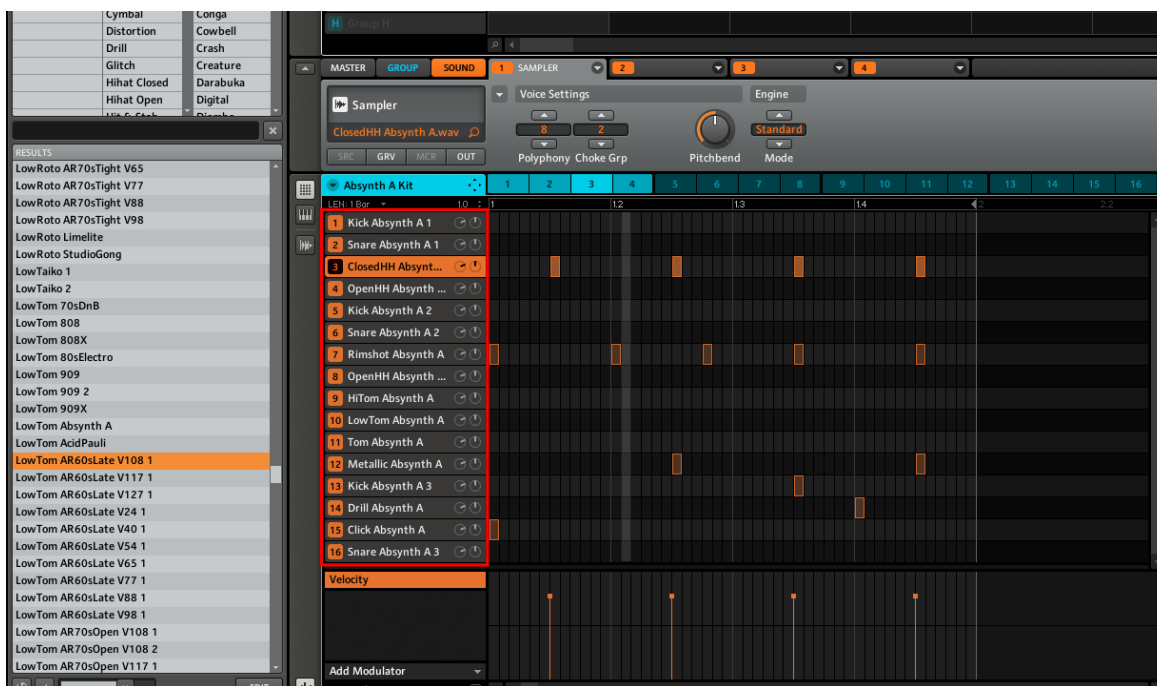


If you want to use your hardware a lot make sure to tag all the files you want to use extensively! This makes it a lot easier to access them using the hardware.

You can browse through the search result list by turning Knob 5; once you want to load a file, press Button 8. Buttons 5 and 6 allow you to directly load the next or the previous file from the search result list in order to be able to compare them easily (just like In-Place Auditioning on the software).

4 Sound Slots

A Sound can hold up to four modules which can be configured as a Sampler, VST/AU Plug-in Instrument or FX, internal MASCHINE FX, as well as an external Input, or a MIDI Out module. Each Sound of the selected Group is mapped to one of the 16 pads on the MASCHINE hardware controller, so you can play the Sounds by pressing the pads.



Sound slots in MASCHINE.

A Sound slot in MASCHINE can be configured to:

- act as a Sampler (*Sampler*)
- be a bussing point for an internal or external signal (*Input*)
- act as a MIDI Out module (*MIDI Out*)

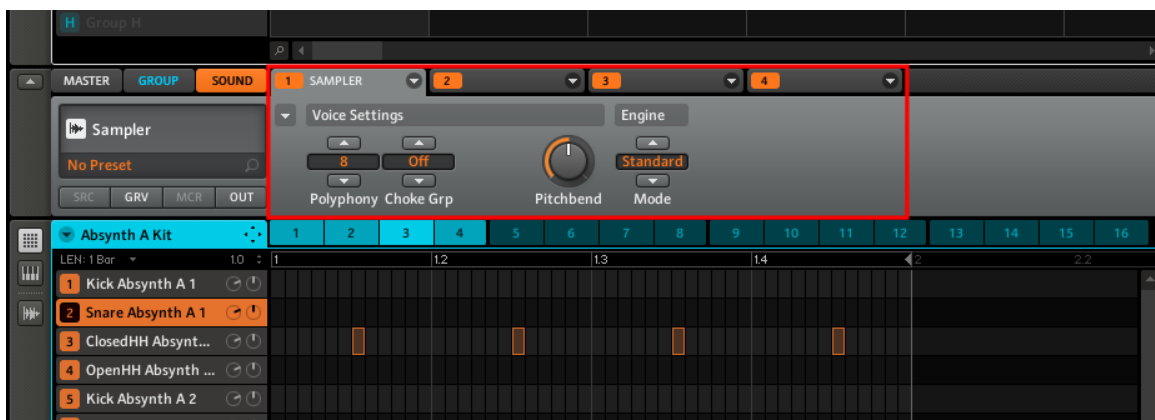
- host VST/AU instruments (*Plug-ins*)
- host internal MASCHINE effects and VST/AU effects (*FX*)

In MASCHINE terminology, the above are called **sources**.



Using a Sound slot as a Sampler, you can fill it with either one audio file (a Sample in MASCHINE terminology), or with multiple audio files mapped across the keyboard. Using it as an effect source, you could for example make it a send effect for other Sounds, or even route external audio signals through a given Sound slot.

This configuration takes place in the first Module slot (there are four available per Sound slot).



Modules 1-4 for Sound slot 2.

4.1 Defining a Sound Slot's Role

The Control area contains four Modules per Sound slot. The Modules handle the sources in the following way:

- Module 1 can host all sources (sampler, input, MIDI out, VST/AU instrument plug-ins, MASCHINE FX and VST/AU plug-in effects).
- Module 2, 3, and 4 can only host effects (MASCHINE FX and VST/AU plug-in effects).

The following list explains the available sources in more detail:

- **Sampler:** allows the selected Sound slot to play back Samples. This is the most common source type, as adding a Sample to the Sound slot will automatically set the source to Sampler. The Sampler can only be used in Module 1 of a Sound.
- **Input:** this allows the selected Sound slot to be available as a bussing point for external and internal signals. Input can only be used in Module 1 of a Sound.
- **MIDI Out:** allows you to use a Sound to send MIDI notes to your host application or your external MIDI equipment. MIDI Out can only be used in Module 1 of a Sound.
- **Plug-ins:** allows the use of external plug-ins from Native Instruments and third-party manufacturers. Plug-in Instruments can only be used in Module 1 of a Sound.
- **FX:** allows the use of internal MASCHINE effects or external plug-in effects from Native Instruments and third-party manufacturers. The Sound slot will be available as a bussing point for internal signals. Internal MASCHINE effects and Plug-in effects can be used in all four modules of a Sound.



If you use the MIDI Out Module in slot 1, slots 2-4 will not be effective.



You can sample directly to a Sound slot (read chapter [↑10.7, Triggering Scenes via MIDI](#) for more details on this), or use it to send MIDI notes (see section [↑4.10.3, MIDI Output from Sounds](#)).

4.1.1 Selecting a Source using the Hardware

To select a source on the MASCHINE hardware controller:

1. Press the *CONTROL* button to enter the Control mode.
2. Press the pad you want to load the instrument to.
3. Press Button 3 to put the focus on the Sound tab.
4. Make sure *MODULES* is activated to show Module slots 1 to 4 (Button 4).
5. Press Button 5 to select Module slot 1.
6. Press *SHIFT* + *BROWSE* to select an internal Sound source. On the left display, change the *TYPE* to *INTERNAL* using Knob 1.
7. Using Knob 2, set the *SUBTYPE* entry to *INSTRUMENT* or *FX*. The right display now shows the list of the available internal sources.
8. Turn Knob 5 to browse the available internal sources.

9. If you want to load a plug-in *INSTRUMENT* or *FX* change the *TYPE* to *PLUG-IN*.
10. Once again, using Knob 2, set the *SUBTYPE* entry to *INSTRUMENT* or *FX*. The right display now shows the list of available the available plug-in sources.
11. Turn Knob 5 to browse the available sources.
12. When you have found the instrument plug-in you want to use, press Button 8 to load it.

4.1.2 Selecting a Source using the Software

The Control area contains four Module slots on each Sound. In the software, click the Arrow in the header of Module 1:



Click on the little arrow in the header of Module 1 to choose the source to use for that Sound.

Now you will be presented with the Module menu where you can select a source as listed above.

In the following section, we will concentrate on the Sampler mode which is probably the one you will use the most.



For information on working with internal MASCHINE effects and Plug-in effects please refer to [↑9, Using FX](#).

4.2 The Sampler Parameters in Module 1

The Sampler Parameters offer various ways to further shape each of your Sounds individually. You can tune, change basic dynamics and apply effects as well as different modulation options. Not only are these parameters automatable but they were designed to be tinkered with! See chapter [↑6.1.10, Recording Automation](#) for the hardware and chapter [↑7.2.5, Recording and Editing Automation](#) for the software.



Sampler Parameters are not available for VST/AU Plug-ins.

The Sampler Parameters are organized in 6 pages:

- Page 1: [Voice Settings](#), [Pitchbend](#) and [Engine Settings](#)
- Page 2: [Pitch/Gate](#) and [Amplitude Envelope](#)
- Page 3: [FX](#) and [Filter Settings](#)
- Page 4: [Modulation Envelope](#) and [Destination](#)
- Page 5: [LFO](#) and [Destination](#)
- Page 6: [Velocity Destination](#) and [Modwheel Destination](#)

Hardware

► On your MASCHINE hardware controller, use the Page buttons to step through the various parameter pages.



On the MASCHINE controller, step through the pages by pressing the Page buttons.

Software

► In the software, use the Parameter Page selector to step through Parameter pages.



In the software, step through Parameter pages by clicking the Parameter Page selector's arrow button.

4.2.1 Page 1: Voice Settings and Engine



Sampler VOICE SETTINGS on the hardware.

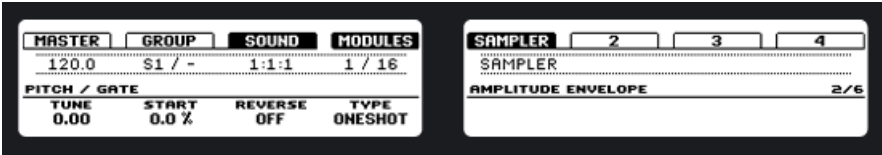


Sampler Voice Settings on the software.

| Screen Element | Description |
|-------------------------------|--|
| Voice Setting Controls | |
| Polyphony | Here you can define a voice limit for the Sound. The default value is 8, the minimum 1 and the maximum 32 voices. You can also set this to Legato. |

| Screen Element | Description |
|-----------------|---|
| Choke Group | You can choose one of the 8 Choke Groups here or leave this option set to Off. If you assign more than one Sound to the same Choke Group, they will cancel each other out. This is a behavior you can find in vintage drum machines (typically used to “choke” the open hi-hat with the closed one), but also in monophonic synthesizers that are only capable of playing one note at a time. |
| Glide | If <i>Legato</i> is selected, this allows for a portamento effect between consecutive steps. |
| Pitchbend | Here you can adjust how the Sound reacts on incoming MIDI Pitchbend messages from an external MIDI controller or your host application. For more information on how to setup your Sounds to receive MIDI, refer to section ↑4.10.1, Sound MIDI Batch Setup . |
| Engine Controls | |
| Mode | This allows you to determine the mode of the sampling engine. Available options are <i>Standard</i> and <i>Vintage</i> . |
| Model | If you choose <i>Vintage</i> in <i>Mode</i> , you can select between two Models, which emulate the sound of the MPC60 and SP1200. The sonic characteristics of these legendary Samplers are often used in Hip-Hop and similar genres of music. |
| Filter | If you choose <i>SP1200</i> (see above), you can further shape the emulation by activating a filter here. The available filters are: <i>None</i> (no filter), <i>Low</i> , <i>Lo-Mid</i> , <i>Hi-Mid</i> , and <i>High</i> . |

4.2.2 Page 2: Pitch/Gate and Amplitude Envelope



Sampler PITCH / GATE on the hardware.



Sampler Pitch / Gate on the software.

| Pitch/Gate Controls | |
|---------------------|--|
| Tune | Defines the basic pitch of your Sample: turn the knob to the right for a higher pitch and to the left for a lower pitch. |
| Start | Determines the start point of the Sample (can also be modulated with Velocity control see ↑4.2.6, Page 6: Velocity Destination and Modwheel Destination). |
| Reverse | If Reverse is activated, the Sample will be played backwards. |

Amplitude Envelope

The Amplitude Envelope allows you to tailor your Sample in terms of its loudness over time.

There are three different types of Amplitude Envelope:



Oneshot mode activated.

Oneshot: This is typical vintage drum machine behavior: the sample is played in its entirety from beginning to end with no envelope.



If **Oneshot** is activated, the following parameters will not be available!



AHD mode activated.

AHD: AHD mode disables the Sustain and Release controls, and replaces them with the Hold parameter. AHD mode is ideal for “fire and forget” behavior, whereby you would like to have the sound trigger for a certain amount of time regardless of how long you hold the pad down.



ADSR mode activated.

ADSR: Typically, the ADSR envelope is used for longer, sustained Samples that require complex dynamic control.



Unlike many other hardware devices, the pads on MASCHINE are sensitive not only to being hit, but also to being held — so using the *ADSR* envelope, you can make the pads behave like a MIDI keyboard and sustain a note only for as long as it is held down.

| Amplitude Envelope Controls | |
|-----------------------------|---|
| Attack | Attack determines how quickly the Sound reaches full volume after being triggered. |
| Hold | Hold determines how long the envelope will stay at its maximum level. |
| Decay | Decay determines how fast the envelope drops to the Sustain level in <i>ADSR</i> mode; in <i>AHD</i> -mode, it is used to adjust how fast the Sound dies down. This parameter can be modulated by Velocity. |

| Amplitude Envelope Controls | |
|-----------------------------|--|
| Sustain | Sustain determines the constant level being kept after Decay until the note ends. This can also be controlled by an external MIDI controller or keyboard using MIDI CC 64. |
| Release | Release determines how long the sound takes to fade out after the note has ended. |

4.2.3 Page 3: FX and Filter Settings



Sampler FX settings on the hardware.



Sampler FX settings on the software.

FX

This is a small selection of basic FX, not to be mixed up with the FX section covered in depth in chapter [↑8, The Effects Overview](#).

| FX Controls | |
|-------------|--|
| Comp | Basic compressor allowing you to give a Sound more density. |
| Drive | Defines the amount of saturation applied to a Sound. |
| SR | SR stands for sample rate: you can use it to lower the original sample rate in order to make the Sound more lo-fi. |
| Bits | Allows you to lower the original bit rate of the Sound, resulting in a more rough, digital sounding lo-fi effect. |

Filter Modes

The **Mode** menu in the **Filter** section gives you access to a set of different filters. Using the arrows you can choose from different filter type settings: *Off*, *HP2*, *BP2*, *LP2*, and *EQ*. Each type results in different parameters to the right of it:

| Filter Controls | |
|-----------------|--|
| LP2 | LP2 is a low-pass filter with Cutoff and Resonance . Cutoff can be modulated by Velocity, the Modulation Envelope, the LFO or the MIDI Modulation Wheel. |
| BP2 | BP2 is a band-pass filter with Cutoff . Cutoff can be modulated by Velocity, the Modulation Envelope, the LFO or the MIDI Modulation Wheel. |
| HP2 | HP2 is a high-pass filter with Cutoff and Resonance . Cutoff can be modulated by Velocity, the Modulation Envelope, the LFO or the MIDI Modulation Wheel. |
| EQ | The EQ is an equalizer with Frequency , Bandwidth and Gain . |

4.2.4 Page 4: Modulation Envelope and Destination



Sampler MODULATION ENVELOPE on the hardware.



Sampler Modulation Envelope on the software.

Modulation Envelope

The Modulation Envelope offers an envelope that shapes the modulation you apply to your Sound. Its parameters are matched to those of the Amplitude Envelope on page 2, so that you have either an ADSR (Attack, Decay, Sustain, Release) envelope or an AHD (Attack, Hold, Decay) envelope to control your modulations. If you choose Oneshot mode, only the AHD envelope (pictured) will be available for modulation.

| Modulation Envelope Controls | |
|------------------------------|--|
| Attack | The time it takes for the envelope to reach its maximum level. |
| Hold | How long the envelope will stay at its maximum level. |
| Decay | With Decay you adjust how fast the envelope drops to the sustain level in ADSR mode; in AHD-mode it is used to adjust how fast the envelope fades out. |
| Sustain | The envelope level that will be maintained as long as the note is played. |
| Release | The time for the sustain level to return to zero after the note has ended. |

Destination

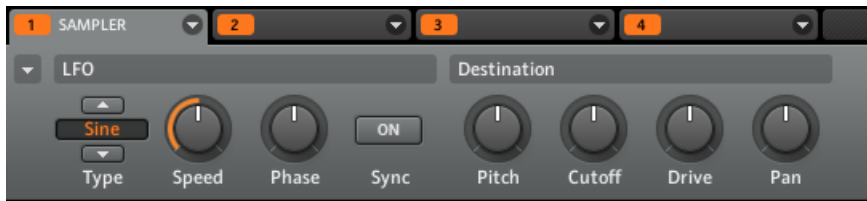
This is where you define modulation targets for the Modulation Envelope. Available targets are:

- Pitch, located on Sampler Parameter page 2
- Cutoff, located on Sampler Parameter page 3
- Drive, located on Sampler Parameter page 3
- Pan, located on Output Parameter page 1

4.2.5 Page 5: LFO and Destination



Sampler LFO on the hardware.



Sampler LFO on the software.

LFO

The LFO (Low Frequency Oscillator) is another modulation source based on waveforms with different shapes.

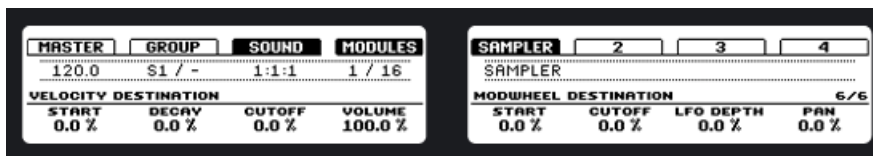
| LFO Controls | |
|--------------|---|
| Type | Here you can choose the shape of the LFO waveform. Available shapes are <i>Sine</i> , <i>Tri</i> (Triangle), <i>Rect</i> (Rectangle), <i>Saw</i> , and <i>Random</i> . |
| Speed | Controls the speed of the LFO measured in Hz (Hertz). If you choose to synchronize the Speed by activating <i>Sync</i> , it will show musical values instead. |
| Phase | Defines the initial phase of the LFO waveform, expressed as a percentage. |
| Sync | This button is used to activate synchronization of the LFO to the tempo of your Project. If enabled, the values on the <i>Speed</i> parameter will change into rhythmical values ranging from 16/1 (= one modulation cycle in 16 bars) to 1/32 (one modulation in 1/32nd note). |

Destination

This is where you define up to four modulation targets for the LFO:

- *Pitch*, located on Sampler Parameter page 2
- *Cutoff*, located on Sampler Parameter page 3
- *Drive*, located on Sampler Parameter page 3
- *Pan*, located on Output Parameter page 1

4.2.6 Page 6: Velocity Destination and Modwheel Destination



Sampler VELOCITY DESTINATION on the hardware.



Sampler Velocity Destination on the software.

Velocity Destination

| Velocity Destination Controls | |
|-------------------------------|---|
| Start | <p>This is a built-in modulation source that allows you to modulate the sample Start parameter on page 2 based on the input velocity. Positive values shift the sample start position later in time as you play harder, negative values shift it closer to the beginning of the sample as you play harder.</p> <p>Tip: a typical example for this parameter is setting it so that the initial attack transient of a snare drum is heard only at high velocity values. This makes it sound “snappier” when you play hard, and “mushier” or muted when you play softly.</p> |
| Decay | <p>This allows you to modulate the Decay parameter of the Amplitude Envelope on page 2 by using Velocity.</p> |
| Cutoff | <p>This allows you to modulate the Cutoff parameter of the Filters with filter types LP, HP, BP (on page 3).</p> |
| Volume | <p>This allows you to modulate volume, which is what Velocity normally is used for.</p> |

Modwheel Destination

| Modwheel Destination Controls | |
|-------------------------------|---|
| Start | Here you can determine how incoming MIDI Modulation Wheel data affects the Start parameter on page 2. |
| Cutoff | This allows you to modulate the Cutoff parameter of the Filters with filter types <i>LP2</i> , <i>BP2</i> , <i>HP2</i> (on page 3) using the MIDI Modulation Wheel. |
| LFO Depth | Here you can adjust the effect of the MIDI Modulation Wheel data on the LFO Depth of the LFO on page 5. |
| Pan | Another modulation target for the MIDI Modulation Wheel: the panorama position on Output Parameter page 1. |

4.3 Loading an Instrument Plug-in

To load a Plug-in Instrument we must be at the Sound level, where there are four Module slots available. Module slot 1 can host either source Modules or effect Modules. Module slots 2, 3 and 4 can host effect Modules only (of course you can put an effect Module behind a source Module and add them in series) but more on using effects in the next chapter. For now, lets load an instrument plug-in to a Sound slot:

Hardware

- 1. Press the *CONTROL* button to enter the Control mode.
- 2. Press the pad you want to load the instrument to.
- 3. Press Button 3 to put the focus on the *SOUND* tab.
- 4. Make sure *MODULES* is activated to show Module slots 1 to 4 (Button 4).

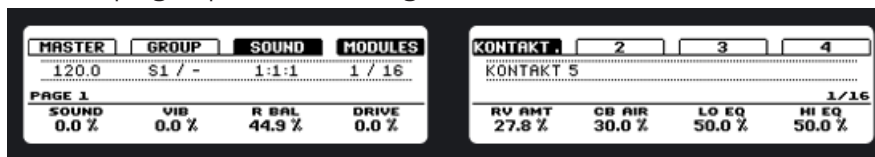


- 5. Press Button 5 to select slot 1.
- 6. Press *SHIFT* + *BROWSE* to select the sound source. On the left display, change the *TYPE* to *PLUG-IN* using Knob 1.

7. Using Knob 2, set the *SUBTYPE* entry to *INSTRUMENT*. The right display now shows the list of available instrument plug-ins.



8. Turn Knob 5 to browse the available instruments.
 9. When you have found the instrument plug-in you want to use, press Button 8 to load it.
 10. Press the *CONTROL* button to switch back to Control mode.
 11. Now you can try out the instrument plug-in by playing the pad.
 12. Edit the plug-in parameters using the Knobs 1-8.



13. Press the Page buttons to step through the Parameter pages of the plug-in.

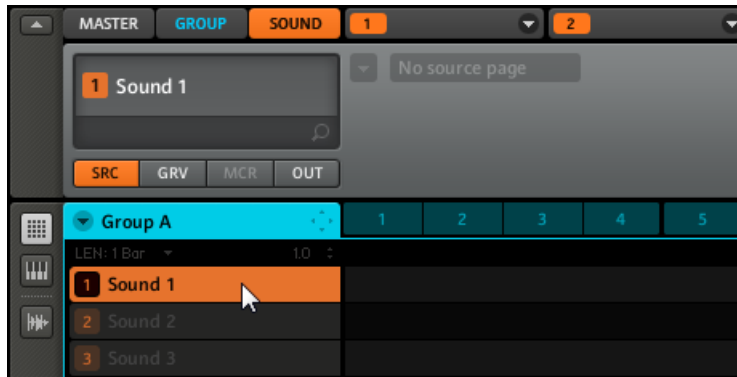


To play the instrument plug-in chromatically using the pads on the MASCHINE hardware; press *SHIFT* then press the *PAD MODE* (KEYBOARD) button to quickly toggle to Keyboard mode.

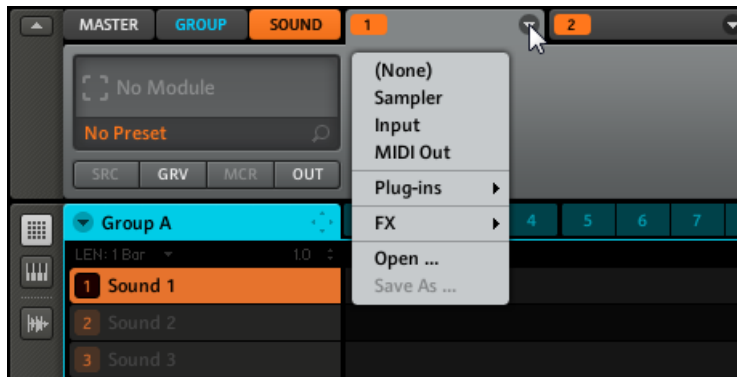
Software

1. Click on the **SOUND** tab to switch to the Sound level.

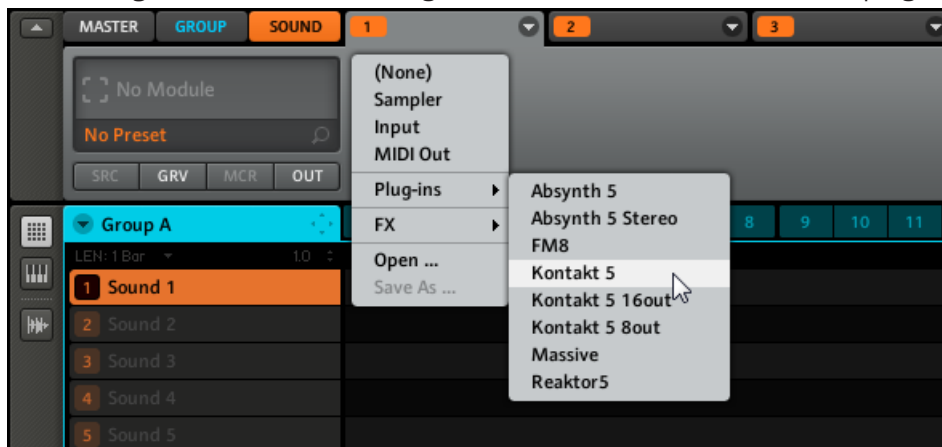
- Click on the Sound slot you want to load an instrument to.



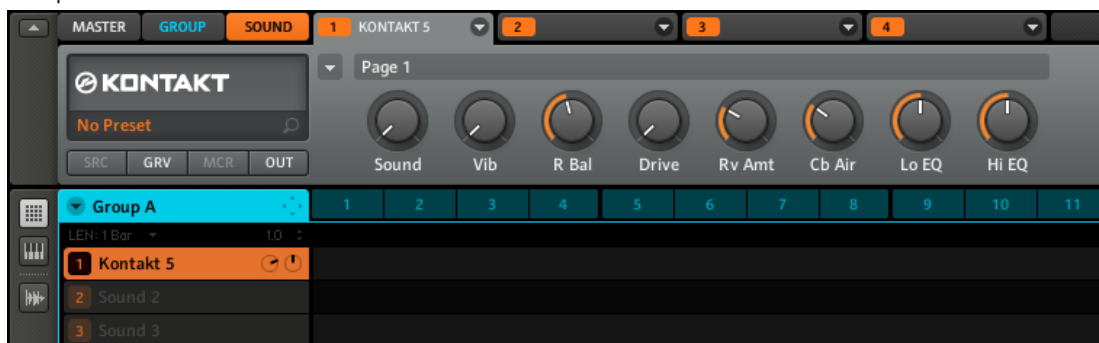
- Click on the first Module slot (only Module slot 1 can host instrument plug-ins) and click the drop-down arrow at the right end of it.



4. Select *Plug-ins* from the menu to get a list of all available instrument plug-ins.



5. As an example: let's choose the Native Instruments KONTAKT plug-in. After selecting it with the mouse, KONTAKT will be loaded, and its parameters will be displayed on the parameter area of the Module tab: Now you can try out the instrument plug-in by pressing the pad.



6. Choose different Parameter pages via the Parameter Page selector by clicking the triangle on the top left side of the Parameter area.
7. If you find a good sound setting, save it as a preset as described in section [↑4.4.2, Page 2: Pre Mix Options](#).



To play the instrument plug-in chromatically using the pads on the MASCHINE MIKRO hardware controller; press *SHIFT* then press the *PAD MODE* button to quickly toggle to Keyboard mode.

4.3.1 Opening and Closing Plug-in Windows

You can open floating windows for all plug-ins of a MASCHINE project. MASCHINE will always show the open floating windows of the selected Sound, Group or the Master at a time.

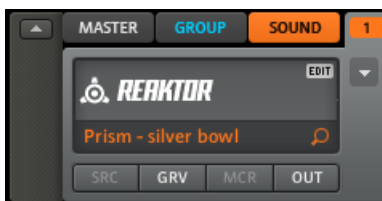


MASCHINE with GUITAR RIG and MASSIVE plug-in user interfaces opened.

You can open or close floating windows for plug-ins as described in the following.

Software

When a plug-in has been assigned to a Module slot, the plug-in icon will appear in the Quick Browse area.



An edit icon appears when the mouse cursor is placed over the REAKTOR logo.

To open a floating window for the plug-in:

1. Place your mouse cursor over the plug-in icon; an **EDIT** button appears.
2. Click the **EDIT** button to open the plug-in in a separate floating window. A second click on the **EDIT** button will close the plug-in window.

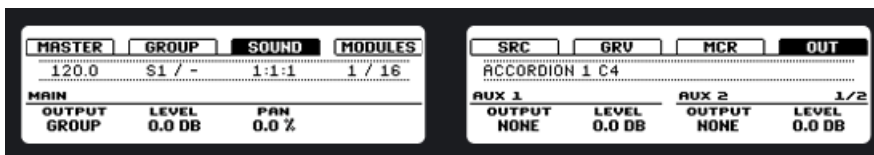


This feature is currently not available from the MASCHINE hardware controller, please use the MASCHINE software instead.

4.4 The Sampler Parameters in the Sound's Output Tab (OUT)

The Sound's Output tab allows you to route your Sound and define Aux sends. Aux sends allow you to send a definable amount of your Sound to other Groups or Sounds for further processing. Read the chapter [↑9.9, Creating a Send Effect](#) to get to know more about how to set up a classic send effect.

4.4.1 Page 1: Main, Aux 1 and Aux 2



Page 1 of 2 from the Sampler Output tab on the hardware.



Page 1 of 2 from the Sampler Output tab on the software.

Main

| Main Output Controls | |
|----------------------|--|
| Output | This is used to define where you want to send your Sound. Available options are <i>Master</i> , <i>Group</i> , any other Sound within the Project whose Source type is set to Input, the External Outputs 1-8, and <i>None</i> . |
| Level | Here you adjust the overall volume level of your Sound. |
| Pan | Defines the pan position of your Sound in the stereo field. |



If MASCHINE is running as a plug-in, the External Outputs will correspond to virtual outputs in your host. This allows you to send individual Sounds from MASCHINE to their own mixer channel within your DAW, for example.

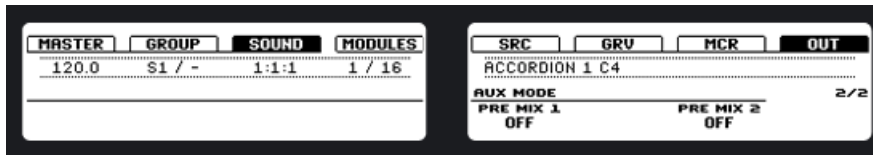
Aux 1

| Aux 1 Controls | |
|----------------|---|
| Destination | The destination for Aux 1 : available destinations are <i>Master</i> , <i>Group</i> , all Sounds with Input enabled, the External Outputs 1-16 and <i>None</i> . |
| Level | Here you adjust the level of the signal that gets sent to the Aux 1 destination. |

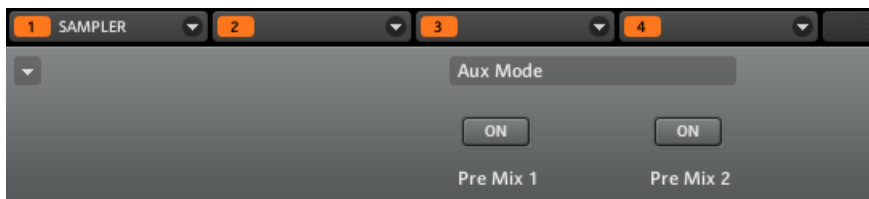
Aux 2

| Aux 2 Controls | |
|----------------|--|
| Destination | The destination for Aux 2: available destinations are Master, Group, all Sounds with Input enabled, the External Outputs 1-8 and None. |
| Level | Here you adjust the level of the signal that gets sent to the Aux 2 destination. |

4.4.2 Page 2: Pre Mix Options



Page 2 of 2 from the Sampler Output tab on the hardware.

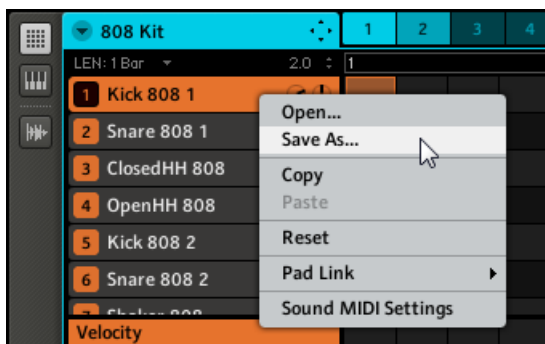


Page 2 of 2 from the Sampler Output page on the software.

| Aux Mode | Parameter Description |
|-----------|--|
| Pre Mix 1 | If this is enabled, the Sound will be fed into Aux 1 before Main Level and Pan of the Sound. |
| Pre Mix 2 | If this is enabled, the Sound will be fed into Aux 2 before Main Level and Pan of the Sound. |

4.5 Saving a Sound

To save a Sound, right-click (on Mac OS X: [Ctrl]-click) on the Sound slot in the Arranger and select *Save As...* from the drop-down menu:



Saving a Sound.

The Sound will be added to the Library and is ready to be tagged.



Saving a Sound is only available in MASCHINE software. Once a Sound is saved and tagged, it is available from the Browser for use in other Groups and Projects.

4.6 Copying and Pasting Sounds

Hardware

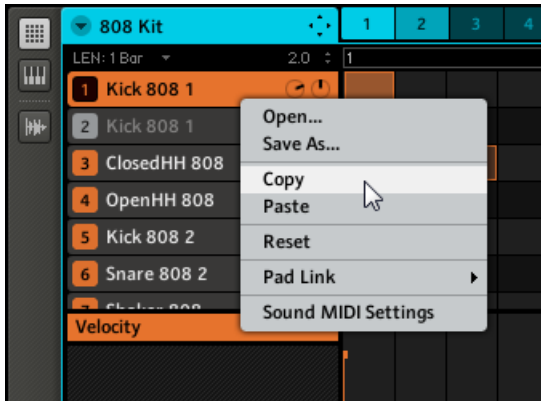
To copy a Sound from one pad to another, press **DUPLICATE**, press the pad of the Sound you want to copy, then select your target Sound slot (this can also be in another Group, in this case first hold press one of the Group buttons) by pressing its pad. All parameters of the Sound will be copied including the source's Pattern content.



To duplicate Sounds excluding the Pattern content, disable the *EVENTS* option (Button 2) on the Duplicate Screen.

Software

You can copy and paste Sounds by right-clicking (on Mac OS X: [Ctrl]-click) on the Sound slot. In the drop-down menu, choose *Copy* to copy a Sound. To paste the Sound, select an empty Sound slot by right-clicking (Mac OS X: [Ctrl]-click) on it and then select *Paste* from the drop-down menu. All parameters of the Sound will be copied except for the source's Pattern content.



Copying a Sound.

4.7 Resetting a Sound

Resetting a Sound results in removing its associated Sample(s) and FX as well as putting all Sampler Parameters back to their default value.

Hardware

- Hold **SHIFT** + **ERASE** and then touch the pad corresponding to the Sound to be reset.

Software

- To reset a Sound, right-click (on Mac OS X: [Ctrl]-click) the Sound slot and choose *Reset* from the drop-down menu.



Resetting a Sound.

4.8 Mute and Solo

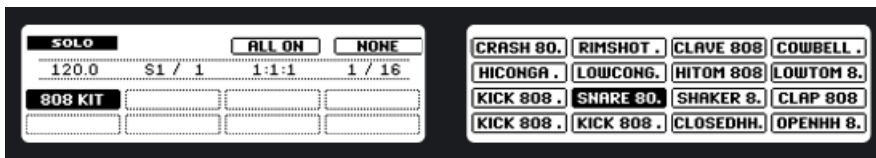
Muting is used to bypass the audio signal of either a Sound or a Group, whereas Solo is pretty much the opposite: it mutes all other Sounds and Groups, so that you can listen to the selected Sound or Group alone. The combination of both is a useful means to play live and to test different sequences together.

4.8.1 Hardware

Soloing Sounds and Groups

► Press **SOLO** and hold it: now you can solo Sounds by pressing their pads, and Groups by pressing the corresponding Group buttons.

Solo is a temporary mode, therefore you will have to hold **SOLO** to access it. If you press **SOLO** and Button 1 at the same time, the Solo function gets locked, e.g. you stay in Solo mode until you press **SOLO** again. There are two more functions in the Solo mode: **ALL ON** (press Button 3) to turn all Sounds on and **NONE** (press Button 4) to turn all Sounds of the Group currently in focus off.



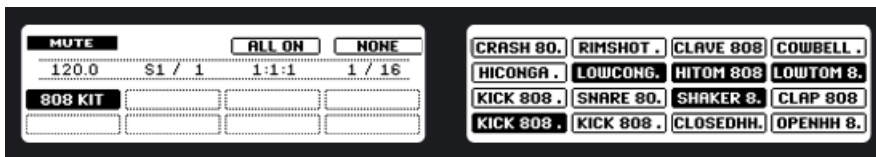
The Solo Screen on the hardware.

Muting Sounds and Groups

Mute works in the same way as the Solo mode: hold **MUTE** to mute Sounds by pressing their respective pads, and Groups by pressing the Group buttons. You can also lock the Mute function by pressing **MUTE** and Button 1 at the same time and unlock it by pressing **MUTE** again. Like in the Solo mode, there are two more functions in the Mute mode: **ALL ON** (press Button 3) to turn all Sounds on and **NONE** (press Button 4) to turn all Sounds of the Group in focus off.



Since pressing **SOLO** mutes all sounds except one, the **MUTE** button can be used to “release” Sounds that have been muted. You can use this technique to create a breakdown: Solo a given sound such as a kick drum, then build the track up again by bringing the muted sounds back in one at a time with the **MUTE** button.

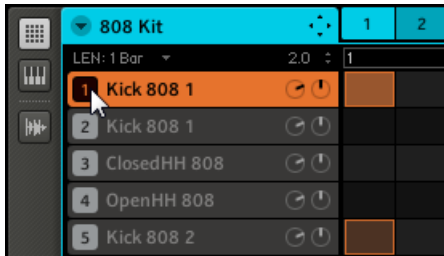


The Mute Screen on the hardware.

4.8.2 Software

Soloing a Sound

► To solo a Sound, right-click (on Mac OS X: [Ctrl]-click) on the pad icon in the Pattern Editor.

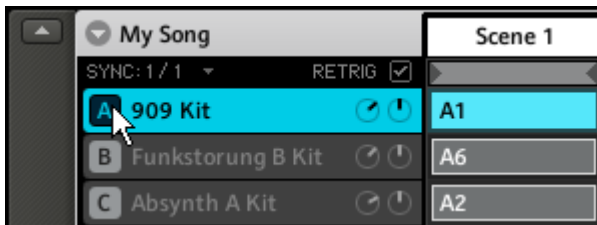


Soloing the Kick Sound.

- To unsolo a Sound, right-click (on Mac: [Ctrl]-click) on the pad icon again.

Soloing a Group

- To solo a Group, right-click (on Mac OS X: [Ctrl]-click) on the Group icon in the Arranger:

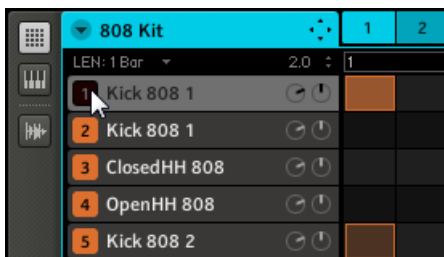


Soloing a Group.

- To unsolo a Group, right-click (on Mac OS X: [Ctrl]-click) on the Group icon again.

Muting a Sound

- To mute a Sound, click on the pad icon in the Pattern Editor.

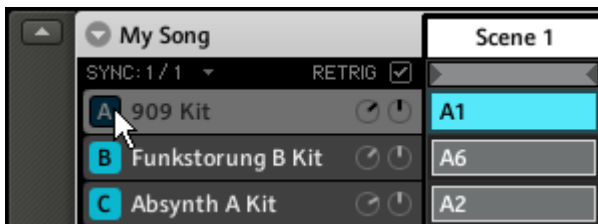


Muting a Sound.

- To unmute the Sound, click on the pad icon again.

Muting a Group

- To mute a Group, click on the Group icon in the Arranger:



Muting a Group.

- To unmute the Group, click on the Group icon again.

4.9 Loading REX Files

MASCHINE supports REX (ReCycle) files to be loaded. REX files are loops that are already sliced and mapped to MIDI notes.



Only REX2 files are currently supported.



A REX file loaded on Sound 1 in the Piano Roll/Keyboard view.

4.10 Sound MIDI Options

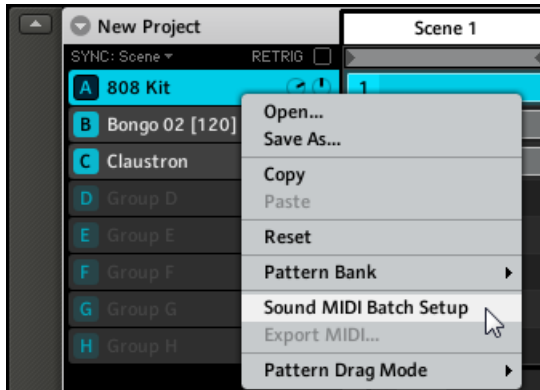
MASCHINE's Groups and Sounds can be triggered via MIDI, both globally and individually. To configure the appropriate MIDI settings, you have two functions at your disposal: Sound MIDI Batch Setup (for whole Groups) and Sound MIDI Settings (for individual Sounds). Furthermore, you can configure your Sounds' outputs for sending MIDI data.



You can also trigger your Scenes using MIDI messages. Please refer to section [↑10.7, Triggering Scenes via MIDI](#) for more info on this.

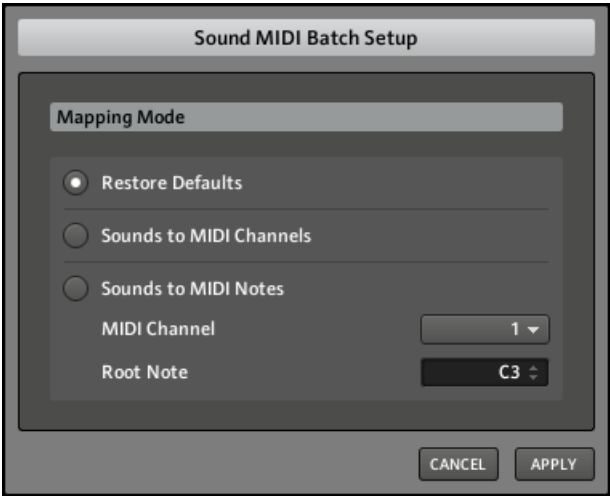
4.10.1 Sound MIDI Batch Setup

To create a MIDI setting for an entire Group, you can use the Sound MIDI Batch Setup function. Here you can set up how all Sounds of the selected Group respond to MIDI. Right-click (on Mac OS X: [Ctrl]-click) on the Group slot in the Arranger and choose *Sound MIDI Batch Setup* from the pop-up menu.



Selecting Sound MIDI Batch Setup for a Group.

Now you will be presented with the Sound MIDI Batch Setup dialog:



The Sound MIDI Batch Setup dialog.

Sound MIDI Batch Setup Options

| Mapping Mode | Mode Description |
|-------------------------|--|
| Restore Defaults | Select this radio button to restore the Sound MIDI Batch Setup to its default values. In the default state, each Sound in this Group will receive notes from all MIDI channels, as long as it is in focus. |
| Sounds to MIDI Channels | Select this radio button to have Sounds mapped to individual MIDI channels. This is useful if you want to play a Sound in a tonal way. |
| Sounds to MIDI Notes | Select this radio button to have Sounds mapped to MIDI notes, starting with the root note. This is useful for drum kits. |
| MIDI Channel | Select a MIDI channel here if you have selected the <i>Sounds to MIDI Notes</i> option. |
| Root Note | Choose a root note here if you have selected the <i>Sounds to MIDI Notes</i> option. |



This window is only meant to set settings to a group of sounds. It does not show the current settings of sounds of a group! If you want to see the current setting of a sound, see next chapter.

4.10.2 Sound MIDI Settings

You can also assign individual Sounds to MIDI. This is done in the Sound MIDI Settings. Right-click (on Mac OS X: [Ctrl]-click) on the Sound slot of a Sound and choose *Sound MIDI Settings* from the pop-up menu.



Choosing Sound MIDI Settings for a Sound.

Now you will be presented with the Sound MIDI Settings dialog:



The Sound MIDI Settings dialog.



Note: if the Sound MIDI Settings are disabled (i.e., the checkbox is unchecked), any incoming MIDI note will trigger the Sound as long as the Sound is in focus.

| Sound MIDI Settings | |
|---------------------|---|
| Status Options | |
| Enable | To enable Sound MIDI Settings, click this checkbox. |
| Input Options | |
| Channel | Choose on which MIDI Channel the Sound will receive MIDI by selecting it in the drop-down menu. |
| Low Note | Define the lowest note on which the Sound will respond to MIDI here. |
| High Note | Define the highest note on which the Sound will respond to MIDI here. |
| Destination Options | |
| Root Note | Define the root note of the selected Sound here. |



Combining the MIDI Settings for Scenes, Groups and Sounds, you can easily create your custom MIDI setup and create a keyboard split for your live-set, for example: first octave controlling the Scenes, second octave controlling your drum kit, third one for the piano sound and so forth.



The settings for Sounds have a higher priority than the Group settings, as well as the settings for Groups have a higher priority than the Scene settings.

4.10.3 MIDI Output from Sounds

You can output MIDI notes from individual Sounds allowing you to control your host application and/or external MIDI gear from MASCHINE's sequencer.

Hardware

1. Select an empty Sound slot by pressing its pad.
2. Press Button 5 to select the Source tab (SRC).
3. Press *SHIFT* + *BROWSE*. By using Buttons 5 & 6 or Knob 5 you can select either Sampler, Input or MIDI Out.
4. Select *MIDI OUT* and press Button 8 to confirm your selection.



5. Press *BROWSE* to leave this dialog and use Knob 1 to select the MIDI Channel you want the Sound to send note data to.



You will notice that the Sound was automatically renamed to "*MIDI OUT*."

Software

1. Select an empty Sound slot by clicking on it.
2. Select Module 1 and click on the arrow to open the drop-down menu.



3. Choose *MIDI Out*, then select the MIDI Channel you want the Sound to send MIDI to.



5 Creating Groups

A Group contains 16 Sound slots with all their parameters. It can have up to four Insert FX and up to 64 Patterns assigned to it, which are organized in 4 Banks. More on Patterns in chapter [↑6, Working with Patterns \(Hardware\)](#) and chapter [↑7, Working with Patterns \(Software\)](#).

5.1 The Group Property Pages

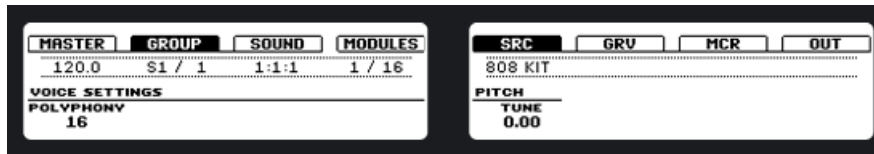
Use the Group Property pages to control the Source, Groove, Macro and Output properties.

5.1.1 Page 1: Voice Settings and Pitch

Hardware

To access the Voice settings and Pitch:

1. Press *CONTROL* to enter Control mode.
2. Press the Group button (A-H) you want to edit.
3. Press Button 2 to select *GROUP*.
4. Press Button 5 to select *SRC* (Source).

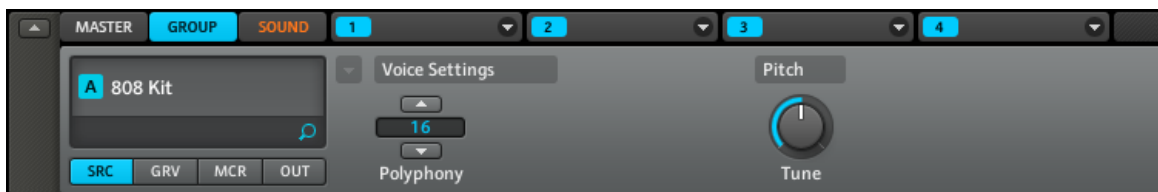


5. Turn Knob 1 to edit *POLYPHONY*.
6. Turn Knob 5 to change the *PITCH*.

Software

To access the Group Source Property page:

1. Select the [GROUP](#) level tab.
2. Click the [SRC](#) button.



The Group Source tab parameters on the software.

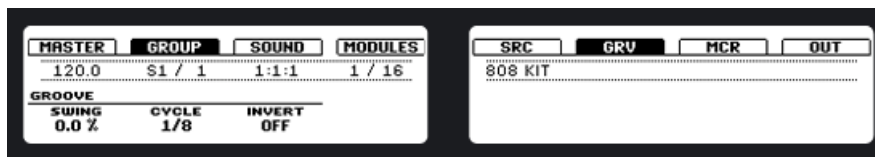
| Page Parameters | Parameter Description |
|-----------------------|---|
| Voice Settings | |
| Polyphony | Here you can define a voice limit for the Group. The default value is 16, the minimum 1 and the maximum 32 voices. |
| Pitch | |
| Tune | This parameter provides tuning for the Group as a whole: all Sounds of the Group will be tuned together. Dial it to the right to get a higher pitch and to the left to get a lower pitch. |

5.1.2 Page 2: Groove

Hardware

To edit Group Swing settings:

1. Press *CONTROL* to enter Control mode.
2. Select the Group you want to edit by pressing a Group button *A-H*.
3. Press Button 2 to select *GROUP*.
4. Press Button 5 to select *GRV* (Groove).



5. Turn Knob 1 to add *SWING*.
6. Turn Knob 2 to change *CYCLE*.
7. Turn Knob 3 to turn *INVERT* on or off.



For a quick and easy way to edit Group Swing; press a Group button, then turn the *SWING* knob.

Software

To access the Group Groove Property page:

1. Select the **GROUP** tab.
2. Click the **GRV** button.



The Group Groove page on the software.

| Page Parameters | Parameter Description |
|-----------------|--|
| Swing | |
| Swing | Groups can have an individual Swing value independent of the Global Swing and Swing settings applied to individual Sounds. Swing allows for rhythmic shifting of a Pattern to create a “shuffled” feel. This effect is also found in vintage drum machines and is often used in various genres of dance music and Hip-Hop. Increasing this parameter increases the strength of the effect. |
| Cycle | This determines on what musical resolutions the Swing is applied. The default value is 1/8. |
| Invert | This button allows you to invert the Swing function so the note position of the Swing is switched in the opposite direction. |

5.1.3 Page 3: Macro Controls

Macro controls enable you to control selected parameters using eight knobs per Group. This is useful for playing live since you can choose a set of parameters to manipulate on one screen without having to switch screens, but also allows you to automate MASCHINE parameters and third party VST/AU plug-ins using the host automation of your DAW (Digital Audio Workstation). All MASCHINE Macro Controls are visible for hosts and automation can be recorded in

your host for each MASCHINE Macro controller. Please refer to the manual of your DAW software for more information. In addition, Macro controls also allow you to control parameters through external MIDI controllers using MIDI CCs. Finally, you can record them as automation in a Pattern (for more information on that, see section [↑7.2.5, Recording and Editing Automation](#)). To assign Macro controls you must use the MASCHINE software.



The Macro controls on the software.

Assigning a Parameter to a Macro Control

The Macro controls are assigned using the MASCHINE software. Each Macro control can be assigned to one destination with the full range of the selected parameter. Macro controls are bipolar knobs with a range of -100% to +100% (0% is centre). It is possible to assign any modulatable parameters in the Group Modules (1-4) as well as any modulatable parameter on any Sound inside the Group. Choose any controllable parameter of your Group or the Sounds contained in it and right-click (on Mac OS X: [Ctrl]-click) on it:



Assigning the Tune parameter of a Sound to a Macro control.

Now choose one of the available Macro controls 1-8. After assignment is made, a blue dot shows that the parameter is assigned to a Macro control:



Tune assigned to a Macro control.

On the Macro page you will see the name of the assigned parameter now under the Macro Control.

Removing a Parameter from a Macro Control

To remove a parameter from the assigned Macro control, right-click (on Mac OS X: [Ctrl]-click) on it and select the *Remove Macro Control* entry from the pop-up menu:



Removing a parameter from a Macro control.

Assigning Macro Controls to external MIDI CCs

Just like the parameter assignment, the MIDI CC assignment is performed in the MASCHINE software. To assign a MIDI CC to a MASCHINE Macro Control, get back to the Macro page by selecting the **GROUP** tab and then clicking on the **MCR** button. Now you can right-click (on Mac OS X: [Ctrl]-click) on the Macro control and choose your MIDI CC:



Assigning MIDI CC 1 to Macro control 1.

Alternatively, you can also let MASCHINE learn the MIDI CC it is supposed to react to. Choose *MIDI Learn* from the pop-up menu and move the desired knob or fader on your connected MIDI controller:



Selecting Enter MIDI Learn in the pop-up menu.

As soon as you select *MIDI Learn*, a white dot starts to flash until the software receives an incoming MIDI CC:



The white dot next to the Macro control.

When the MIDI CC has been received, the white dot will stop flashing.

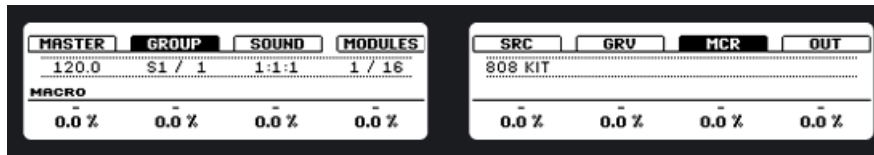


Macro Controls can also be controlled by Host Automation. Each MASCHINE Macro Control has a unique Automation ID, which is provided to your host/DAW by the MASCHINE plug-in.

5.1.4 Accessing Macro Controls from the Hardware

To access the Macro Controls:

1. Press *CONTROL* to enter Control mode.
2. Select the Group with the Macro Controls you want to access by pressing a Group button A-H.
3. Press Button 2 to select *GROUP*.
4. Press Button 7 to select *MCR* (Macro).



5. You can now change the parameters you assigned in the MASCHINE software using Knobs 1-8.

5.2 The Group's Output Parameters

5.2.1 Page 1: Routing, Volume and Pan

Software

To access the Group Output pages:

1. Select the **GROUP** level tab.
2. Click the **OUT** button to open the Group Output pages.



Page 1 of 2 from the Group's Output pages on the software.

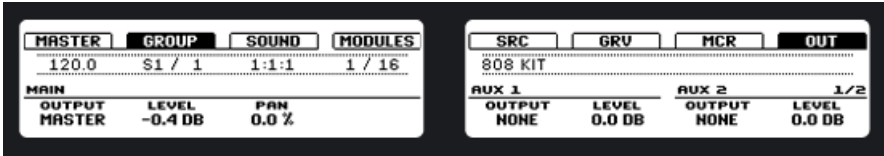
| Page Parameters | Parameter Description |
|-----------------|---|
| Main | |
| Output | This is used to define where you want to send your Group. Available options are <i>Master</i> , all Sounds with Input enabled, the External Outputs 1-8 and <i>None</i> . |
| Level | Here you adjust the volume level of your Group. |
| Pan | Defines the pan position of your Group in the stereo field. |
| Aux 1 | |
| Destination | The destination for Aux 1: available destinations are <i>Master</i> , all Sounds with Input enabled, the External Outputs 1-8 and <i>None</i> . |
| Level | Here you adjust the amount of the signal that gets sent to the Aux 1 destination. |
| Aux 2 | |

| Page Parameters | Parameter Description |
|-----------------|---|
| Destination | The destination for Aux 2: available destinations are <i>Master</i> , all Sounds with Input enabled, the External Outputs 1-8 and <i>None</i> . |
| Level | Here you adjust the amount of the signal that gets sent to the Aux 2 destination. |

Hardware

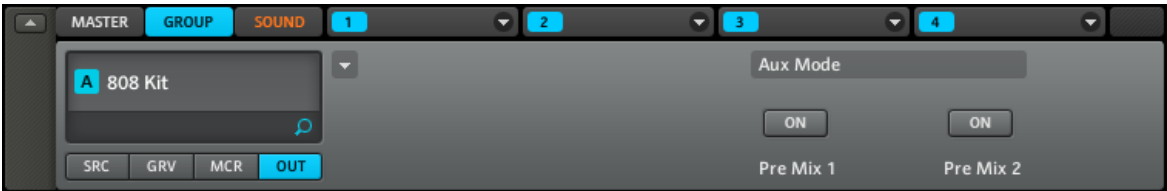
To access page 1 of the Group Output pages:

1. Press *CONTROL* to enter Control mode.
2. Select the Group with the Macro Controls you want to access by pressing a Group button *A-H*.
3. Press Button 2 to select *GROUP*.
4. Press Button 8 to select *OUT*.



5.2.2 Page 2: Aux Pre and Post Mode (Pre Mix 1 and 2)

Software



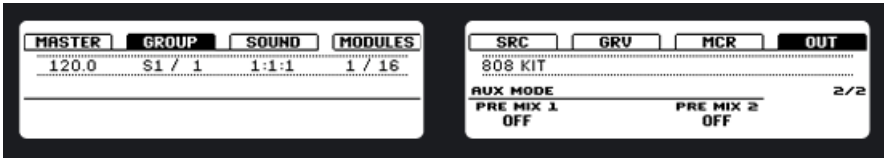
Page 2 of 2 from the Group Output pages on the software.

| Page Parameters | Parameter Description |
|-----------------|--|
| Aux 1 | |
| Pre Mix 1 | If this is enabled, the Group will be fed into Aux 1 before the volume control of the Group. |
| Aux 2 | |
| Pre Mix 2 | If this is enabled, the Group will be fed into Aux 2 before the volume control of the Group |

Hardware

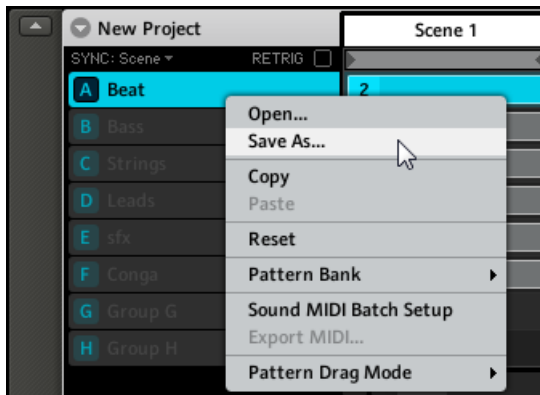
To access page 2 of the Group Output pages:

1. Press *CONTROL* to enter Control mode.
2. Select the Group with the Macro Controls you want to access by pressing a Group button *A-H*.
3. Press Button 2 to select *GROUP*.
4. Press Button 8 to select *OUT*.
5. Press the right Page button to access page 2.
6. Turn the Knob 5 to turn *PRE MIX 1* on and off.
7. Turn the Knob 7 to turn *PRE MIX 2* on and off.



5.3 Saving a Group

To save a Group, right-click (on Mac OS X: [Ctrl]-click) on the Group’s slot in the Arranger and select *Save As...* from the drop-down menu:



Saving a Group.

The Group will be added to the Library and is ready to be tagged.



Saving a Group is only available on MASCHINE software. After saving and tagging a Group it will become available in the Browser for use in other Projects.

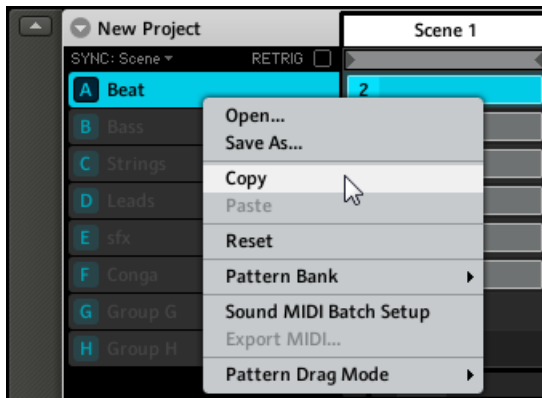
5.4 Copy and Paste Groups

Hardware

► To copy and paste a Group: hold **DUPLICATE**, press the Group button of the Group you want to copy, and then the Group button of the target Group. Select **+ EVNT** (Events) if you want to copy the Pattern events too. All parameters of the Group will be copied, including all Pattern content.

Software

You can copy and paste Groups by right-clicking (on Mac OS X: [Ctrl]-click) on the Group slot. In the drop-down menu, choose *Copy* to copy a Group. To paste a Group, select an empty Group slot by right-clicking (on Mac OS X: [Ctrl]-click) on it and select *Paste* from the drop-down menu. All parameters of the Group will be copied, including all Pattern content.



Copying a Group.

5.5 Resetting a Group

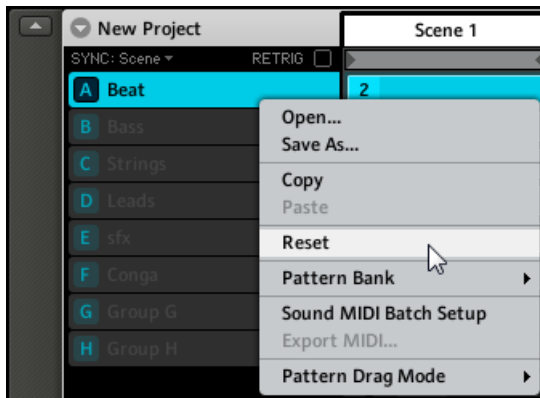
Resetting a Group means removing the associated Sounds and FX as well as putting all Group parameters back to their default value.

Hardware

- Hold **SHIFT** + **ERASE**, then press the Group button for the Group to be reset.

Software

- To reset a Group, right-click (on Mac OS X: [Ctrl]-click) the Group slot and choose *Reset* from the drop-down menu.

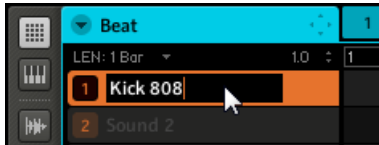


Resetting a Group.

5.6 Naming Groups & Sounds

Each Sound automatically gets the name of the Sample loaded into it; if there is no Sample, the name will be Sound 1-16 by default. Sounds are also automatically renamed if their Source tab is set to Input or MIDI Out: they're renamed to "Input 1-16" and "MIDI Out", respectively.

1. To name a Sound, double-click on its Sound slot.

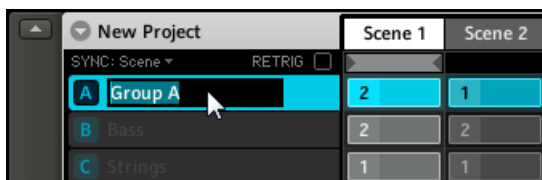


2. You can now edit the name of that Sound. Press the [Enter] key on your computer keyboard to confirm.



Some hosts will catch the [Enter] key, as it is mapped to some function of the host software. In this case, click anywhere else in the MASCHINE plug-in window to confirm the name you have entered.

Group renaming is performed accordingly: double-click on the Group slot to edit the name of the Group. To confirm, press the [Enter] key on your computer keyboard.



Renaming a Group.



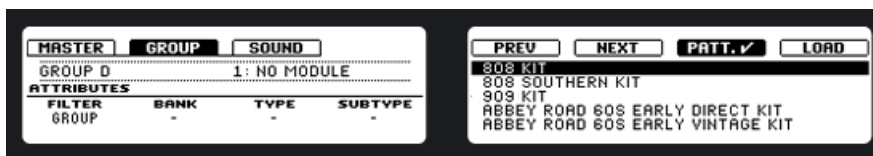
Naming is only available from within the software, but any changes will also show up on the hardware.

5.7 Loading Groups without Patterns

If you want to build a Group from scratch, you can load Groups without Patterns both on the MASCHINE hardware controller and MASCHINE software. In this case, previously loaded Patterns will not be removed, enabling you to try out a Pattern using different Sounds.

Hardware

1. On the hardware, select a Group with the Group Buttons A-H, then enter the Browser by pressing *BROWSE* and select the Group tab by pressing Button 2
2. Use Button 1 to set the file type to *GROUP* and then choose the Browser filter settings.
3. On the right display you can now select whether you want to load the Group with or without its *PATTERN* content by pressing Button 7. If Pattern is highlighted, the Pattern content will be loaded together with the Group.



A selected Group with Pattern load option activated.

Software

1. To load a Group without a Pattern, select the Group in the Browser's Search Result list.
2. Uncheck the checkmark in the bottom of the Browser.



A selected Group in the Browser with the Pattern load option unchecked.

5.8 MPC Program Import to Groups

MASCHINE allows you to import Drum program files (.PGM and .AKP) from the Akai MPC series to Groups. Supported models include the MPC4000, MPC3000, MPC2000, MPC500, MPC1000 and the MPC2500.

5.8.1 Supported Parameters from MPC Programs

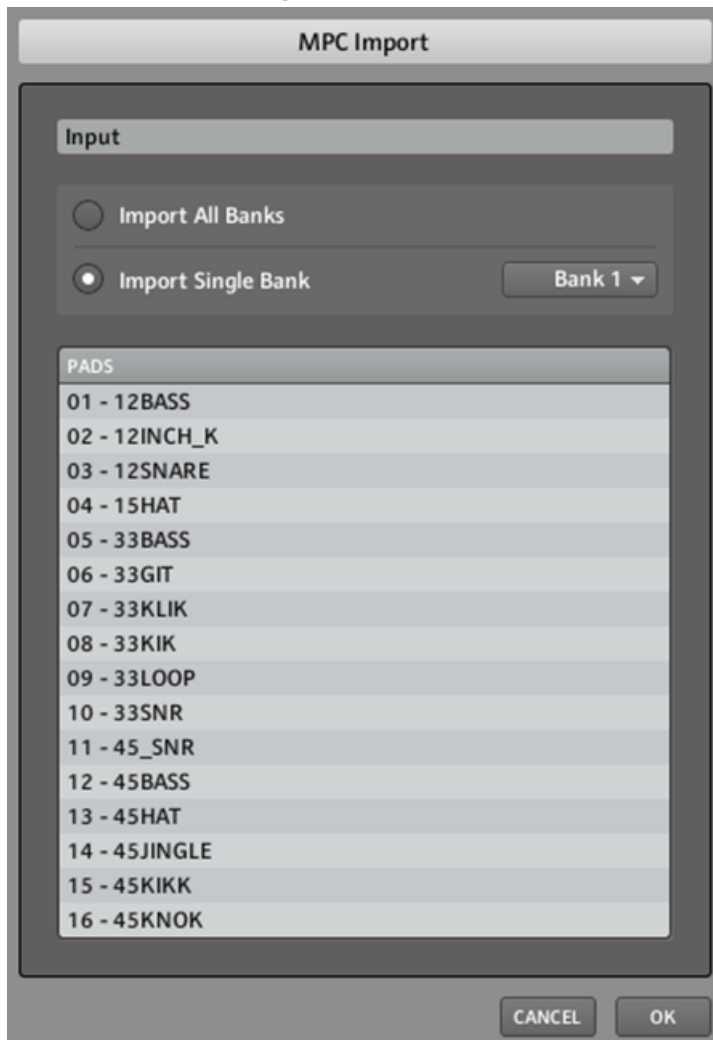
Since MASCHINE has a different approach to handling and naming parameters, please refer to this list to find out how MPC Program settings are being translated into MASCHINE settings.

| MPC Parameter | MPC500, 1000, 2500 | MPC4000 | MPC2000 (XL) | MPC3000 | MASCHINE Parameter |
|-------------------------------|-----------------------|---------|-----------------|---------|------------------------------------|
| Sample Name | x | x | x | x | Sample Name |
| Play Mode | x | x | — | — | Playback Type (ADSR, Oneshot, AHD) |
| Sample Level | x | x | — | — | Zone Level |
| Sample Pan | — | x | — | — | Zone Pan |
| Range Lower/Higher | x | x | — | — | High/Low Key |
| Tuning | x | x | x | x | Tune |
| Attack | x | x | x | x | Attack |
| Decay | x | x | x | x | Decay |
| Voice Overlap | x | — | x | x | Polyphony |
| Filter1 Type | x | — | — | — | Filter Type |
| Filter1 Frequency | x | — | x | x | Filter Cutoff |
| Filter1 Resonance | x | — | x | x | Filter Resonance |
| Filter1 Velocity to Frequency | x | — | — | — | Velocity Cutoff |
| Mixer Level | x | x | x | x | Track Level |
| Mixer Pan | x | — | x | x | Track Pan |
| Velocity to Level | x | — | — | — | Velocity to Volume |
| Mute Group | x | — | — | — | Choke Group |

5.8.2 Importing MPC Program Files

1. To import an MPC Program file, open the Browser on the MASCHINE software and enter **DISK** mode.

2. Navigate to the MPC Program you want to import and double-click it. You will be prompted with the MPC dialog:



3. In the [Input](#) section of the dialog window, select one of the import options:

| Input | Input Description |
|--------------------|--|
| Import All Banks | Here you can import all Banks of an MPC Program. Each Bank will be loaded into a separate Group. |
| Import Single Bank | If you only want to import a single Bank choose this option. Use the drop-down menu to the right to select which Bank you want to import. The list below shows you a preview of the sounds in the selected MPC Bank. |

► Click **OK** to start the import procedure.

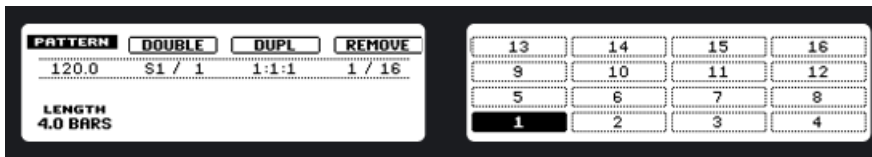
6 Working with Patterns (Hardware)

Creating a Pattern is where the fun starts, because the Sequencer really is the core of MASCHINE. It comes with an easy to use Pattern Editor and sophisticated automation possibilities.

6.1 Creating Patterns

6.1.1 Pattern Mode

The Pattern mode is where you select your Patterns, change their length, remove Patterns or double their content. Each Group can have up to 64 Patterns organized into 4 banks. To enter Pattern mode on your MASCHINE hardware controller, press **PATTERN** (lockable by pressing Button 1 at the same time).



The hardware displays in Pattern mode.

Selecting a Pattern

On the right display, you will see all available Patterns of a Pattern Bank. To select a Pattern, press the pad corresponding to the desired Pattern. To switch between the four Pattern Banks, use Button 5 (for Bank A), Button 6 (for Bank B), Button 7 (for Bank C) or Button 8 (for Bank D).

Doubling a Pattern

If you want to double your Pattern length as well as its content, you can do so by pressing Button 2 in Pattern mode. Keep in mind that doubling a Pattern twice results in a Pattern that is four times as long.

Duplicating a Pattern

To duplicate a Pattern select it by pressing its corresponding pad in Pattern mode, then press Button 3 (**DUPL**). The Pattern will be copied to the next empty Pattern slot available.

Copy and Paste a Pattern

To copy a Pattern to another Pattern slot, press **DUPLICATE** + **PATTERN**, press the pad of the Pattern you want to copy, and then the target pad for the Pattern copy.

Removing a Pattern

Pressing Button 4 removes the Pattern from the current Scene (Scenes are described in detail at chapter [↑10, Creating a Song using Scenes](#)). Note that it does not delete the Pattern!

Pattern Length

The Pattern Length can be adjusted in Pattern mode by dialing Knob 1. The units available here depend upon the setting of the **LEN** (Pattern Length) parameter in Grid mode. See chapter [↑6.1.12, Step Grid, Pattern Length Grid and Quantization](#) for further information.

6.1.2 Pad Mode

Pad mode is reached by pressing **PAD MODE**. It is a temporary mode and can therefore be locked by pressing **PAD MODE** together with Button 1. In Pad mode you make settings on the left display, and on the right display you will either see your Sounds or, if in Piano Roll/Keyboard mode, the notes. You can switch to 16 Velocities mode, then the velocity value of the pads will be shown on the right display. This page will allow you to enable Input Quantize so that your playing is immediately quantized to the current Grid value. Pad mode also allows you to select a fixed velocity value for the pads so that the selected Sounds (like drums) will play at the same volume no matter how hard you hit the pads.



The Pad mode on the hardware.

| Parameter | Parameter Description |
|-----------------------------|---|
| KEYBD (Button 2) | Pressing KEYBD (Button 2) will get you into Piano Roll/Keyboard mode. This mode is described in more detail below. |
| 16 VEL (Button 3) | Activates the 16 Velocities setting for the currently selected Sound. This allows you to play the currently selected Sound in 16 different velocity values using all pads. |
| FIXED VEL (Button 4) | Activates the Fixed Velocity setting for all pads. Note: If neither 16 VEL nor FIXED VEL are activated, the pads will be velocity sensitive, meaning they will play louder if you hit them harder. |
| LINK GRP (Knob 1) | Pad Link can be used to trigger multiple Sounds when pressing only one pad. See the Pad Link section below. |
| BASE KEY (Knob 3) | When in Piano Roll / Keyboard mode, Knob 3 determines the base key for the MIDI note mapping on the right display. The value chosen for the base key will be assigned to pad 1 ; the assignment of the other pads will be reflected accordingly. |
| VELOCITY (Knob 4) | Here you can adjust the exact Velocity value for the Fixed Velocity Setting. |



The base key can also be changed by using Buttons 5-8 in Keyboard mode: Buttons 5-6 will shift the base key in Semitones, while Buttons 7-8 will shift it in octaves. This is useful for instantly transposing the pads “by ear.”

6.1.3 Pad Link

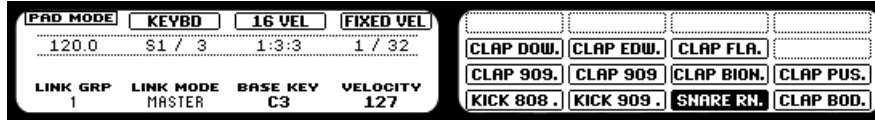
Pad Link can be used to trigger multiple Sounds when pressing only one pad. Each pad of a Group can be assigned to one of eight Pad Link groups. A pad may be set as a Master or Slave. By default, a pad is set to Master and will trigger other pads in the same Pad Link group. A pad set to Slave will only trigger the Sound on that pad, even if it is part of a Pad Link group (but be triggered by pads set to Master). You may set more than one pad as Master or Slave within the same group.

Assigning a Pad to a Pad Link Group

To assign a pad to a Pad Link group:

1. Press the Group button (*A-H*) of a Group you want to use Pad Link in.
2. Press the *PAD MODE* button.

3. Deselect *KEYBD* (Keyboard) if it is already selected, then press the pad you want to assign to a Pad Link group.
4. The name of the Sound will appear in the right display.
5. On the left display, change the Pad Link in the *LINK GRP* menu to the desired group using Knob 1.
6. Set the Pad Link Group (*LINK MODE*) to Master or Slave mode for this pad using Knob 2



7. Repeat the process to link each pad to a Pad Link group.

6.1.4 Releasing a Pad from a Pad Link Group

To release a pad from a Pad Link group:

1. Press the Group button of the pad you want to release from the Pad Link group.
2. Press the *PAD MODE* button.
3. Deselect *KEYBD* (Keyboard) if it is already selected, then press the pad with the sound you want to remove from a Pad Link group. The name of the Sound will appear in the right display.
4. On the left display, change the Pad Link to *OFF* using Knob 1.



5. Repeat the process to remove other pads from a Pad Link group.

6.1.5 Recording the Pads

You can easily record beats with the pads: press **PLAY**, then **RECORD** to enable Record mode. Now hit the pads you want to record and listen to what happens. Each hit will create an event in the Pattern editor, the event length depend on how long you hold the pad.

Recording Mode

By default, all pad hits are added as events/notes when the Pattern cycles. This is called the Overdub mode. You can easily switch to Replace mode if you press **REC** + **ERASE** at the same time. In Replace mode, already recorded notes are replaced by what you play now.

If you press **ERASE** together with a pad, while recording, all events at the currently played position are deleted (see below).



Take your time to set up the pad sensitivity and velocity scaling to your personal taste — you will have even more fun playing MASCHINE!

6.1.6 The Metronome

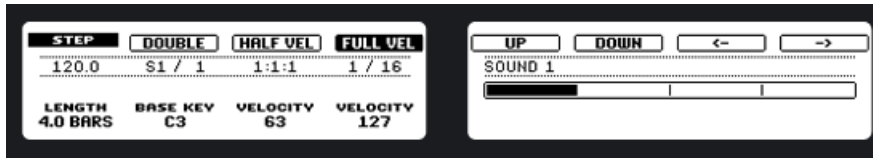
The Metronome will help you to keep time when recording in real time. To activate the Metronome, hold down **SHIFT** and press **PLAY**. To deactivate the Metronome, hold **SHIFT** and press **PLAY** again.



Recording a Pattern: press **PLAY** + **REC** and hit some pads!

6.1.7 Using the Step Sequencer

If you are familiar with classic drum machines you may want to program your Pattern using the Step Sequencer:



The Step Sequencer on the hardware displays the first bar of a four-bar pattern.

1. Press the pad with the Sound you want to record to select it and press *PLAY*.
2. Press *STEP*. Now you will see a light chasing through the pads, starting from pad 1, going up all four rows from left to right and ending at pad 16. All of this is recorded immediately, even if *REC* is not enabled.
3. Each pad now represents one step of a 16-step sequence: you can activate that step by pressing the pad once, lighting it up. If you hit it again, the step is gone.

This way it's easy to quickly put some drums together. By default the first 16 steps of a pattern will be represented on the Pads. If you want to program a longer pattern, increase the pattern length with Knob 1. You will see a bar on the right display, representing the length of the pattern. The currently selected 16 steps of the pattern are highlighted here. Use Buttons 7 and 8 to select the next or previous 16 steps of the pattern. To switch to another Sound, use Buttons 5 and 6 located above the right display, or press **SELECT** and the pad of the Sound you want to switch to.



A typical 4/4 kick line in Step Sequencer mode.

6.1.8 Using Note Repeat

Note Repeat is a really handy way to program beats: it plays the selected Sound automatically at a given quantization.



Note Repeat mode on the hardware displays.

1. While holding *NOTE REPEAT*, press the pad you want to record. The notes will now be repeatedly triggered at the selected quantization (shown on the right display).

2. With Buttons 5-8, you can select different quantization settings while playing.
3. If you want to use quantization settings other than the ones currently on display, turn Knobs 5-8 to select the desired quantization setting.



You can lock Note Repeat by pressing *NOTE REPEAT* + Button 1.

- In Note Repeat all pads will be both velocity and pressure sensitive, allowing for expressive drumrolls or dynamic basslines.
- Note Repeat is a really funky way to play percussion and drums live creating build-ups and breaks.
- Note Repeat is also interesting to use with tonal Sounds and you can access it from Piano Roll/Keyboard mode to create synthesizer-like arpeggios.

6.1.9 Using the Piano Roll/Keyboard

Select your Sound by pressing the pad it is assigned to. Now enter Pad mode by pressing **PAD MODE** and lock it by pressing Button 1.



Piano Roll/Keyboard mode on the hardware displays.

Press Button 2 to enter Piano Roll / Keyboard mode. If you hit the pads now, you will hear that they all play the same Sound, but each with a different pitch. The pitch scale is divided in semitones, starting with pad 1 as the lowest note going up to pad 16 as the highest note. To navigate to another octave use Button 7 (octave down) or Button 8 (octave up). You can also navigate the scale in semitones: use Button 5 (semitone down) and Button 6 (semitone up). Press **PLAY** then **RECORD** and start to record your melody!



Try to experiment with all kinds of Samples in the Piano Roll / Keyboard mode; some rather boring sounding Samples can be really interesting if you play them very low or very high!

If you prefer to play your melodies with a MIDI keyboard, you can connect one to the MIDI In on the back of the MASCHINE hardware controller. You can also use any USB-MIDI keyboard selected in the Audio and MIDI Settings (see chapter [↑2.5, Audio and MIDI Settings](#) to get to know how to set these up). The connected MIDI input device will always play the currently selected Sound without the need to enter Piano Roll / Keyboard mode.



The back side of the MASCHINE hardware with the MIDI In.

6.1.10 Recording Automation

One of the really cool features of MASCHINE is the ability to automate nearly all MASCHINE parameters both on the hardware and on the software in a very easy way.

► To automate a parameter with the hardware, first make sure the song is playing, then simply turn one of the 8 Knobs while holding down **AUTO WRITE**.

Your automation gets recorded now; if you want to discard it and try again, press **ERASE**, hold it and again turn the Knob you used to record automation to delete its automation. **SHIFT + pad 10 (CLR AUTOMATION)** deletes all selected Automation events (see [↑6.2.1, Selecting Notes and Events](#) on how to select events); if none are selected, all automation of the Pattern will be cleared.

Almost all Knob and Button parameters, including the Macro controls, are automatable, exceptions being:

- Limiter Threshold
- Sampler LFO Sync



Select box parameters are not automatable.

6.1.11 Recording Automation in the Step Sequencer

It is also possible to record automation in the Step Sequencer. Enter the Step Sequencer by pressing **STEP**. Press the pad representing the step you want to automate. The screens will switch to parameter view. With the Page buttons left of the displays you can select parameter pages now, with the knobs under the displays you can edit the parameters for this step. After releasing the pad, the new values are recorded for this step.



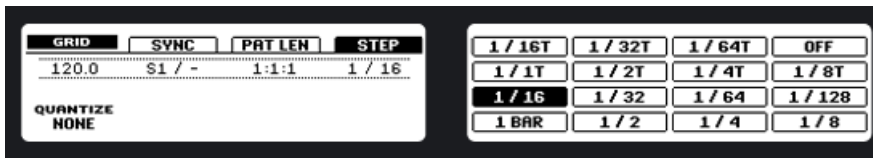
An automation value that is set for a step is valid as long as the next automation value is set in the pattern, so it might affect the steps that follow. If you want to automate only one of the steps, set the parameter of the next step back to its default value.

6.1.12 Step Grid, Pattern Length Grid and Quantization

Step Grid

The Step Grid property affects all Pattern editing actions, including quantization (“note snap to Grid”). The default setting is 1/16th, however you may use another one or disable the Step Grid completely.

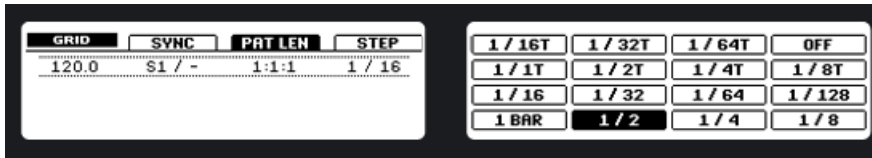
1. To change the Step Grid's quantization settings, press *GRID* followed by Button 4; the right display will show you which pad represents which Grid.



2. Select a Step Grid resolution by pressing the corresponding pad.

Pattern Length Grid

The Pattern Length Grid affects the resolutions available when holding **PATTERN** and turning Knob 1. Changing this to a value less than 1 allows you to dial in lengths on the Pattern page other than a full bar for example.



The Pattern Length Grid on the hardware.

Choose the Pattern Length Grid using the pads in a range from 1/1 (one full note) to 1/64T (1/64 th note triplet); you can also turn it off by pressing pad 16.



Try a short quantization like $\frac{1}{4}$ note and change the Pattern Length setting in Pattern mode using Button 1 to create variations of a Pattern. If you select an even higher value like 1/64th, you can create stuttering breaks and rolls.

Quantization after Recording

You can quantize your notes, no matter how you recorded them. They will be quantized according to the Step Grid selected in your Pattern. If you turn the Step Grid off, no quantization will be applied. There are two strengths of quantization: full quantization and half quantization (QUANTIZE 50%). To apply full quantization, press **SHIFT** + pad 5 (QUANTIZE). All selected notes will now be shifted in time to the next position defined by the selected Step Grid. If you want to apply only a bit of quantization to keep the groove you created by playing your notes live, press **SHIFT** + pad 6 (QUANTIZE 50%). The result will be that the notes get shifted half way to the selected Step Grid.



You can repeatedly apply *QUANTIZE 50%* until you are happy; you could for example apply it until the notes are close enough to sound tight, but loose enough to maintain their basic “feel.” If it is too quantized for you, just press **SHIFT** + pad 1 to Undo the last change.

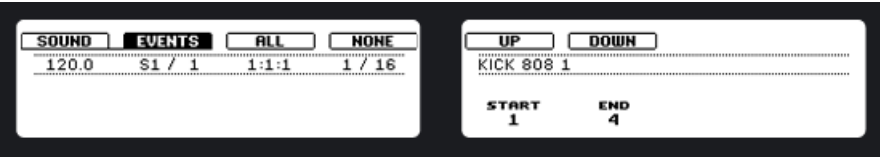
Quantization while Recording and Playing

You can also choose to have notes automatically quantized. Enter Pad mode by pressing **PAD MODE**. Using Knob 1 you can now choose when quantization should be performed: *Record* (only when recording), *Rec/Play* (when recording and when playing) or *None*, meaning no quantization will be performed. When Input Quantization is set to *Record*, the selected quantization value will automatically be applied to the Pattern on its next cycle. When it is set to *Rec/Play*, your playing is quantized in real time.

6.2 Editing Patterns

6.2.1 Selecting Notes and Events

You can select particular notes and events from your hardware. To do this, hold **SELECT** and press Button 2 (**EVENTS**). While further holding **SELECT**, you can now select notes and events of Sounds using their pads. The notes and events of every additional Sound you select using the pads will be added to the selection. If you press a pad again, the events of the Sound will be removed from the selection. Selecting specific Sounds and their events is useful because many of the operations can be applied to the selection instead of the entire Pattern.



The Select screen for notes and events on the hardware displays.

| Parameter | Parameter Description |
|-----------|---|
| ALL | Press SELECT + Button 3 (ALL) to select all events of the selected Sound. |
| NONE | Press SELECT + Button 4 (NONE) to deselect all events of the selected Sound. |
| UP / DOWN | While holding SELECT , use Buttons 5 (UP) and 6 (DOWN) to choose the Sound of which you want to select notes and events. Alternatively you can select Sounds using the pads. |
| START | While holding SELECT , using Knob 5, you can determine at which event of the currently selected Sound the selection of notes and events will start. |
| END | While holding SELECT , using Knob 6, you can determine at which event of the currently selected Sound the selection of notes and events will stop. |

6.2.2 Erase/Clear

To erase notes, press both **ERASE** and the pad containing the desired Sound while the pattern is playing. The notes will be erased only during the moment the pad is held down; you can use this to selectively erase notes at a particular place in the pattern. This might take some time getting used to, especially when the tempo is very fast, but you can always use Undo/Redo (**SHIFT** + pad **1**, **SHIFT** + pad **2**) to get back to where you were before.

SHIFT + pad **9** (**CLEAR**) will erase all selected notes and events; if nothing is selected, it will clear all notes and events of the pattern.

6.2.3 Copy/Paste

You can also copy and paste notes. To copy all selected notes, press **SHIFT** + pad **11** (**COPY**), to paste them, press **SHIFT** + pad **12** (**PASTE**). The notes will be pasted according to the Step Grid, shifted one Grid position to the right. You can also copy notes from one Pattern to another: to do this, copy the selected notes, select the Pattern you want to copy them to and then paste them.

6.2.4 Nudge

Nudge allows you to shift selected notes by the Step Grid value; press **SHIFT** + pad **7** (**< NUDGE**) to move the selected notes to the left, or **SHIFT** + pad **8** (**NUDGE >**) to move the selected notes to the right.



Setting the Step Grid to “Off” and then using Nudge will shift notes in extremely small increments. This can be used to creatively add groove to Patterns — for example, shifting the snare drum so that it is ever so slightly late, or “in the pocket” (something a funk drummer does naturally!).

6.2.5 Compare/Split

This function allows you to compare a selected pattern with its previous state, for example if you have added or edited events. This is an easy way to create variations or to compare two versions of a pattern. If you edit a pattern, the pattern is marked with an asterisk. This means

that this pattern change is temporarily saved in a buffer and can be compared with the original state via **SHIFT** + pad **3**. If you select another pattern or leave the pattern mode, the latest state of the pattern will be stored, the pattern slot will no longer show the asterisk.

To switch between the edited pattern and its original state, press **SHIFT** + pad **3** (**COMPARE**). If you want to keep both, the new version and the old version, you can copy the edited version to the next pattern by pressing **SHIFT** + pad **4** (**SPLIT**).

6.2.6 Transpose

You can transpose selected notes by semitones or octaves to match their pitch to your taste.

Transpose by semitones

To transpose the selected notes down in semitones press **SHIFT** + pad **13** (**SEMITONE -**); to transpose the selected notes up press **SHIFT** + pad **14** (**SEMITONE +**). If no events are selected, all notes in the Pattern will be affected.

Transpose by octaves

To transpose the selected notes down in octaves press **SHIFT** + pad **15** (**OCTAVE -**); to transpose the selected notes up press **SHIFT** + pad **16** (**OCTAVE +**). If no events are selected, all notes in the Pattern will be affected.



For a comprehensive list of hardware shortcuts please view the Hardware Control Reference available from the [Help](#) menu.

7 Working with Patterns (Software)

7.1 The Pattern Editor



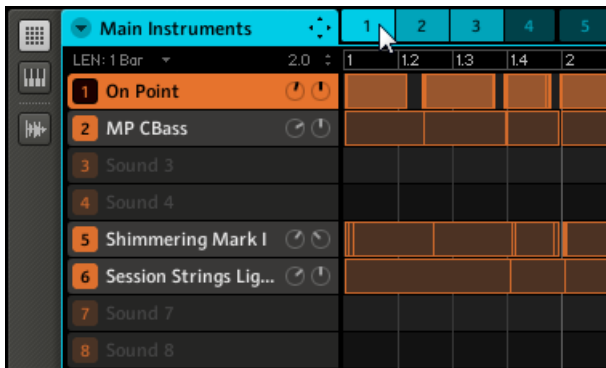
The Pattern Editor.

- (1) **Step Editor View switch:** Use this button to select the Pattern Editor view.
- (2) **Dragger icon:** The Dragger icon allows you to conveniently drag and drop audio or MIDI patterns to your desktop or host software.
- (3) **Step Editor:** Here you can see rectangular blocks known as Events from the selected Pattern slot. In Step Editor view these represent each part of your drum pattern. In Piano Roll / Keyboard view they represent musical notes. The Events can be edited using your mouse; they can be dragged to a new position, elongated, shortened or deleted. Use the Edit Control (9) to change the steps in which Events can be moved.

- (4) **Piano Roll / Keyboard View switch:** Use this button to select the Piano Roll / Keyboard view.
- (5) **Sampling View switch:** Use this button to select the Sampling view.
- (6) **Sound slots:** Sound slots 1-16 of a selected Group are listed here. Click a Sound slot to bring it into focus.
- (7) **Automation Lane:** The Automation Lane provides a visual overview of the each parameters automation
- (8) **Automation View switch:** The Automation View switch allows you to toggle the Automation Lane view on or off.
- (9) **Edit controls:** The Edit controls allow you to change the Grid of the Steps, select a new value from the drop-down Grid menu.
- (10) **Pattern Timeline:** The timeline at the top of the Arrange area displays musical time units, including bars and beats.
- (11) **Pattern slots:** Each Group has 4 Pattern Banks which can contain up to 64 Patterns known as Pattern slots. Each slot can contain many Events to make up a single Pattern. This can be a drum pattern or musical phrase. When a Pattern slot is selected it is referenced by the selected Scene, this is known as a Clip. The Clip will take the name of the Pattern number although it is possible to give the Clip a unique name. Select different Clips from Pattern slots to form an arrangement.
- (12) **Pattern Length controls:** The Pattern Length controls allow you to change the length of the pattern, select a new value from the drop-down Pattern Length menu.

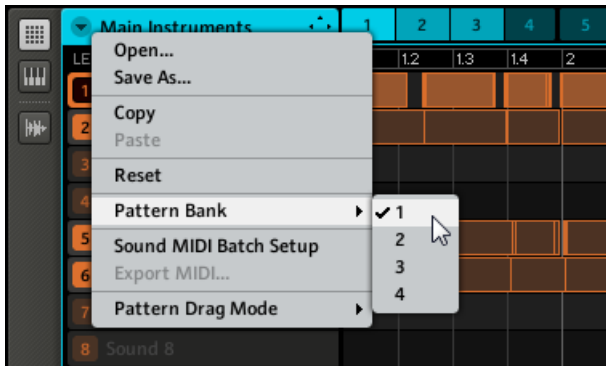
7.1.1 Selecting Patterns and Pattern Banks

To select a Pattern, click on its slot above the Step Editor:



The Step Editor with Pattern 1 selected.

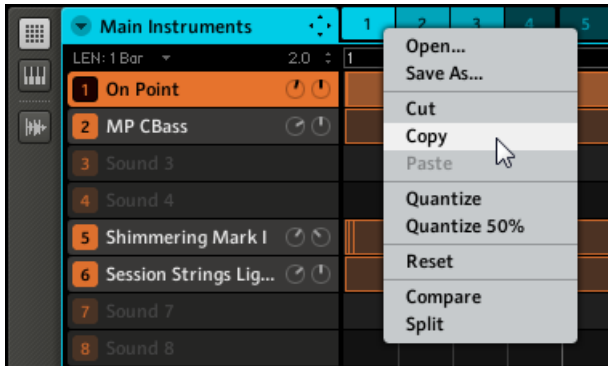
You can distinguish between different Pattern states by the brightness of the Pattern slots: the brightest slot represents the currently selected one, a little less bright (on the picture: slots 2 to 3) are the ones that have content but are not selected, the empty ones (all others starting with slot 4) being the darkest ones. To switch to another Pattern Bank, select it in the drop-down menu:



The Pattern Bank submenu.

7.1.2 Copy and Paste Patterns

To copy a Pattern, right-click (on Mac OS X: [Ctrl]-click) on its Pattern slot and choose *Copy* from the drop-down menu:



Copying a Pattern.

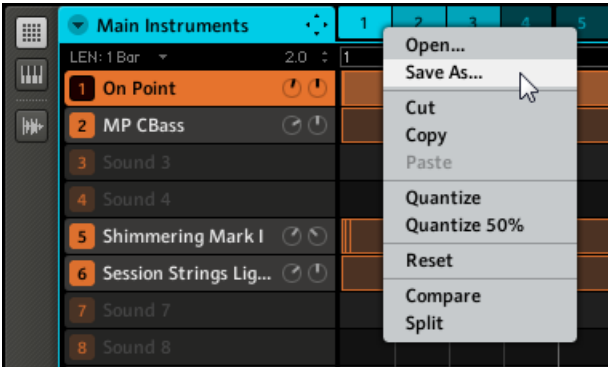
Now select an empty Pattern, right-click (on Mac OS X: [Ctrl]-click) on its Pattern slot and choose *Paste* from the drop-down menu to paste it to that Pattern.

7.1.3 Resetting Patterns

You can reset Patterns choosing *Reset* from the drop-down menu pictured above. This will erase all notes as well as any automation data and reset the Pattern Length. This is equivalent to using Clear (**SHIFT** + pad **9**) on the hardware.

7.1.4 Saving Patterns

You can save a Pattern independently from its Group. This is useful if you want to try out a Pattern with different Sounds. To save a Pattern, right-click (on Mac OS X: [Ctrl]-click) on the Pattern icon and select *Save As...* from the drop-down menu:



Saving a Pattern.

As with most saving operations, saving a Pattern is only available on MASCHINE software.

7.2 Editing Patterns

You can enter notes by double-clicking in the Grid of the Pattern Editor. They will be applied according to the selected Step Grid. To delete them, you can either double-click or right-click (on Mac OS X: [Ctrl]-click) them. In the Step Editor, the Sound in focus will change according to the row you put the note in. Selected notes turn white.

7.2.1 Mouse Actions in the Pattern Editor

The following is a list of available actions in the Pattern Editor (works in both the Step Editor and the Piano Roll / Keyboard mode):

| Action | Function |
|---|--------------------------------------|
| [Ctrl] (Mac OS X: [Alt]) + drag note(s) | Copy selected note(s) |
| Drag right note border | Change note length |
| [Shift] + Click on Note | Add note to selection |
| Drag in Grid | Multiple selection (selection frame) |
| Click in Grid | Deselect notes |

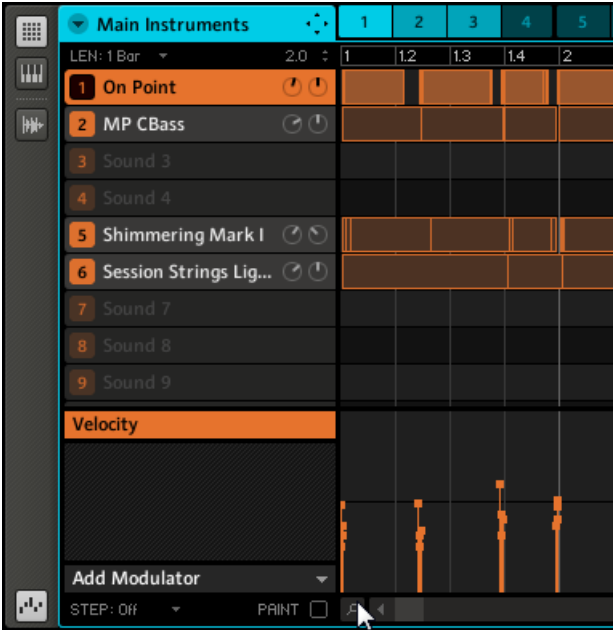
| Action | Function |
|---|-------------------------|
| Double click on note | Delete selected note(s) |
| Alt (Mac OS X: [Cmd]) + drag on note vertically | Adjust note velocity |

Switching to Paint Mode

To switch the mouse behavior to Paint mode, check the **PAINT** checkbox at the bottom of the Pattern Editor. With Paint mode enabled, the mouse works like a paint-brush tool. Clicking and holding the left mouse button down will set notes everywhere you move the cursor. The other way round, left-clicking on a note and moving the mouse cursor with the button pressed will erase all notes under the Mouse cursor.

7.2.2 The Zoom Tool

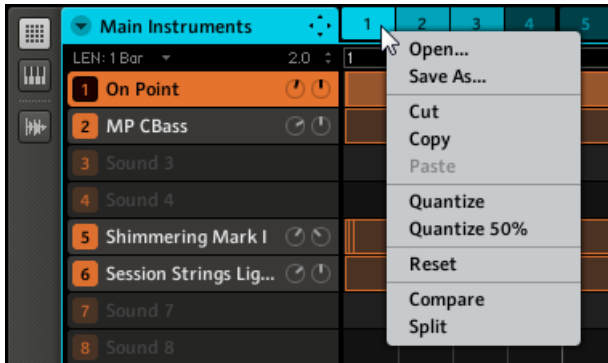
Using the Zoom Tool, you can zoom in and out in the Pattern Editor. Click on the Zoom Tool and drag upwards to zoom in and downwards to zoom out.



The Zoom Tool selected.

7.2.3 Compare/Split

Compare and Split is useful to create variations of a Pattern and to compare them. Compare and Split are accessed by right-clicking (Mac OS X: [Ctrl] + click) on the Pattern slot and choosing the appropriate entry from the drop-down menu:



Compare/Split in the drop-down menu.

Edit a given Pattern by adding some notes or automation to it, then select *Compare* from the drop-down menu to toggle between the original content and the new version you just created. If you like your new version you can copy it to the next empty Pattern by selecting *Split*.



You can see that a Pattern has been edited by way of an asterisk symbol displayed in its Pattern slot. The new state will be confirmed as soon as you select another Pattern and the asterisk will vanish.

7.2.4 The Piano Roll / Keyboard

In order to select the Sound you want to record a melody with, click on its Sound slot. Now click the Piano Roll / Keyboard view switch: the Grid that showed all Sounds of the Group now only shows the Sound you selected. By adding steps, you can choose their pitch in halfnotes depending on where you put them, the lowest note being the lowest row in the Piano Roll / Keyboard Editor.



The software view of the Piano Roll/Keyboard Editor.

7.2.5 Recording and Editing Automation

If you take a closer look at the knobs on the Parameter pages in the Control area, you will notice they have an outer ring that changes its color to light grey as soon as you hover over it with the cursor.

You can record automation by moving that ring with a left click on it and then dragging it up and down during playback. Almost all parameters are automatable, the exception being all buttons.



The outer ring of the knobs, used for automation.

To remove the automation, simply right-click (on Mac OS X: [Ctrl]-click) on that outer ring. Alternatively, you can also select individual automation points in the Automation Lane and right-click (on Mac OS X: [Ctrl]-click) on them.

To edit the automation, drag the automation points in the Automation Lane. You can select several automation points in the Automation Lane together by clicking and dragging a rectangle around them; now you can edit them by dragging them up or down. You will see that they keep their relative distance although they change their absolute values. Another way to create automation is to draw it with the mouse.



Double-clicking creates an automation event and replaces the others on this step.



The Automation Lane with the Velocity parameter in focus.



To “draw” automation, check the box labeled “Paint” at the bottom and click-drag in the Automation Lane.

7.2.6 Adding a Modulator

On the left of the Automation Lane you will see the [Add Modulator](#) drop-down menu. Clicking on it opens a list of automatable parameters for the selected Sound of the current Pattern:



The Add Modulator drop-down menu showing a list of automatable parameters.

In the Automation Lane, you can now add automation points for the selected parameter by clicking in it, even if there is no note data present. The automation points will snap to the selected Step Grid.

If you want to automate Group parameters, just click on the **GROUP** tab in the Control area to be presented with available parameters of the Group.



When you add an FX to a Module it will automatically show in the list of available parameters.

7.2.7 Step Grid, Pattern Length Grid and Quantization

Step Grid

The Step Grid determines the quantization of the notes entered in the Pattern. It ranges from 1/1 (one full note) to 1/64T (1/64th note triplet) and can also be turned off. The default value is 1/16th. Select the Step Grid by clicking the **STEP** label in the Edit controls, at the bottom left. This opens a drop-down menu:



The drop-down menu of the Step Grid.

Pattern Length Grid

In addition to the Step Grid there is the Pattern Length Grid which determines the increments in which the Pattern Length can be resized (described below). Choose the Pattern Length Grid by clicking on the **LEN** label, located in the Pattern Length controls at the top left:



Available resolutions of the Pattern Length Grid.

Now you can choose the Pattern Length Grid in a range from 1/1 (one full note) to 1/64T (1/64th note triplet); you can also turn it off.

Pattern Length

► Adjusting the Pattern Length is done by clicking on the number in the right part of the Pattern Length controls: drag it up to make the Pattern longer or drag it down to make it shorter.

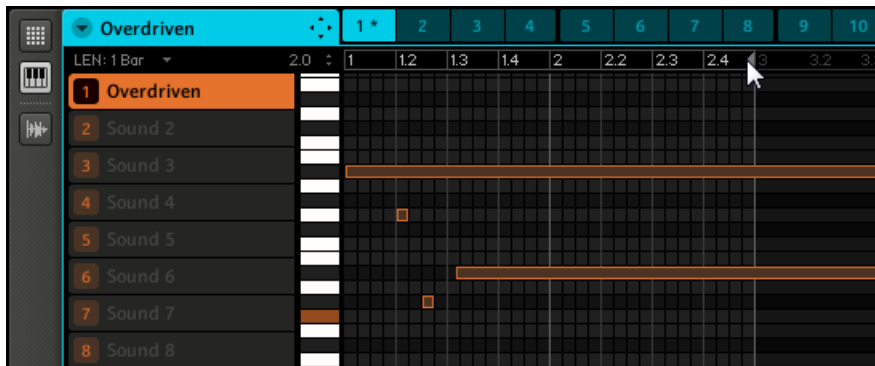


Adjusting the Pattern Length

The Pattern length depends on the Pattern Length Grid, as it will alter the Length of the Pattern in increments of the Pattern Length Grid.



You can also drag the grey arrow at the end of the Pattern to change the length of the Pattern:



Changing the Pattern length by dragging the grey arrow.

Quantization

To apply quantization after recording some notes from a connected MIDI-keyboard or after changing the Step Grid to another value, you can do so by right-clicking (on Mac OS X: [Ctrl]-click) on the Pattern icon. If notes and events are selected, the quantization will only affect the selected ones; if no note or event is selected, the whole Pattern content will be quantized.



Quantize function for the Pattern content.

Available quantization options are *Quantize* (simply quantizes the notes strictly according to the Step Grid) and *Quantize 50%* (only moves the notes half way towards the selected Step Grid). If you record notes from a MIDI keyboard or using the pads, it often happens that you create double notes where you don't want them; MASCHINE automatically detects and removes these double notes while quantizing.

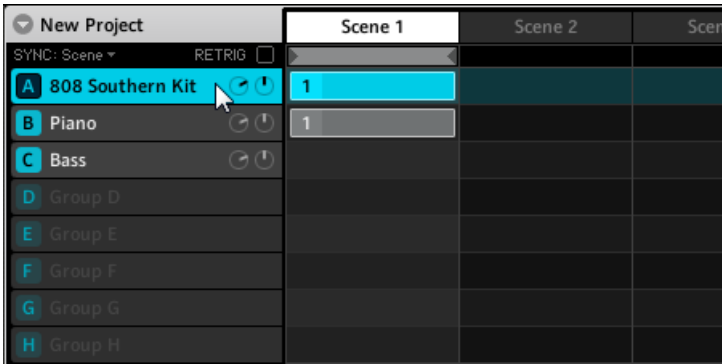
7.2.8 Pad Link

Pad Link can be used to trigger multiple Sounds when pressing only one Pad. Each pad of a Group can be assigned to one of eight Pad Link groups. A pad may be set as a Master or Slave. By default, a pad is set to Master and will trigger other pads in the same Pad Link group. A pad set to Slave will only trigger the Sound on that pad, even if it is part of a Pad Link group (but be triggered by pads set to Master). You may set more than one pad as Master or Slave within the same group.

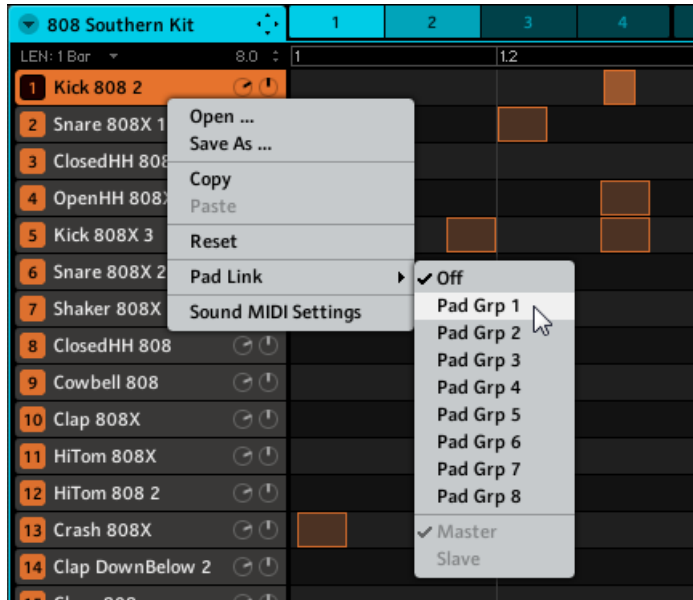
Assigning a Pad to a Pad Link Group

To assign a pad to a Pad Link group:

1. Click the Group slot (A-H) of the Group you want to apply Pad Link to.



- Right-click the desired Sound and select *Pad Link* from the menu ([Ctrl]-click on Mac OS X).

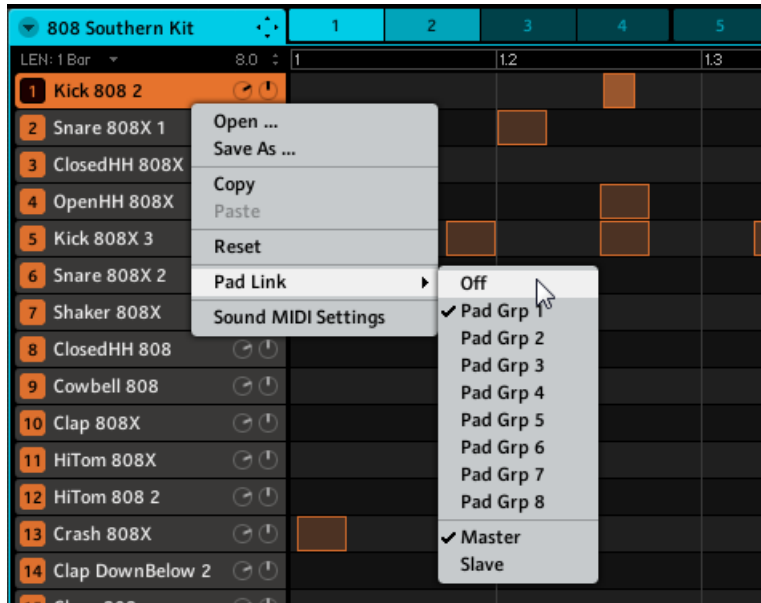


- Select the desired Pad Link group from the list.
- Repeat the process to link each pad to a group.

7.2.9 Releasing a Pad from a Pad Link Group

To release a pad from a Pad Link group:

1. Select the Sound to be removed from the Pad Link group, right-click and then select *OFF* from the *Pad Link* submenu ([Ctrl]-click on Mac OS X).



2. Repeat the process to remove each pad from a group.

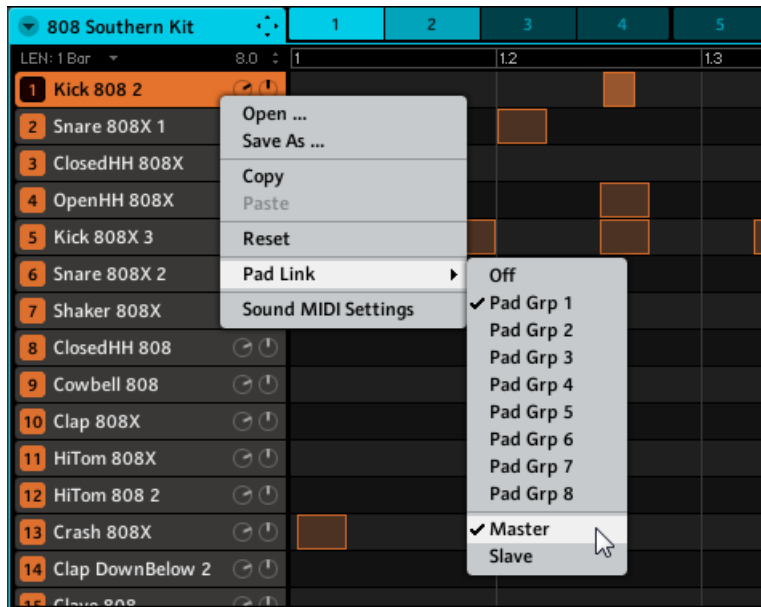
7.2.10 Setting up a Pad as Master or Slave in a Pad Link Group

By default, a Sound is automatically set to Master when added to a Pad Link group.

To set the status of a Sound from Master to Slave:

1. Select the Group containing the Sound you want to assign as Slave.
2. Select the Sound you want to assign as *Slave* and right click ([Ctrl]-click on Mac OS X).

- Click *Pad Link* on the menu. If there is a tick next to Master, then the Sound is set to *Master*. Click on *Slave* to assign it as *Slave*.



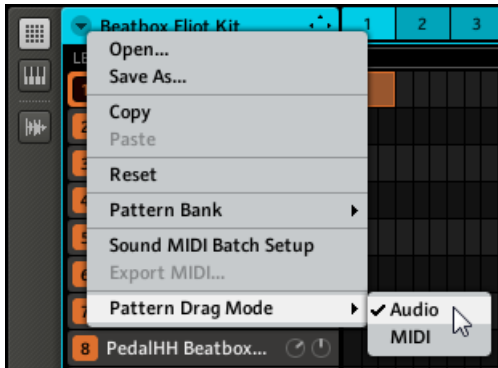
- Repeat the process to set each Sound to *Slave*.

7.2.11 Rendering Audio from Patterns using Drag and Drop

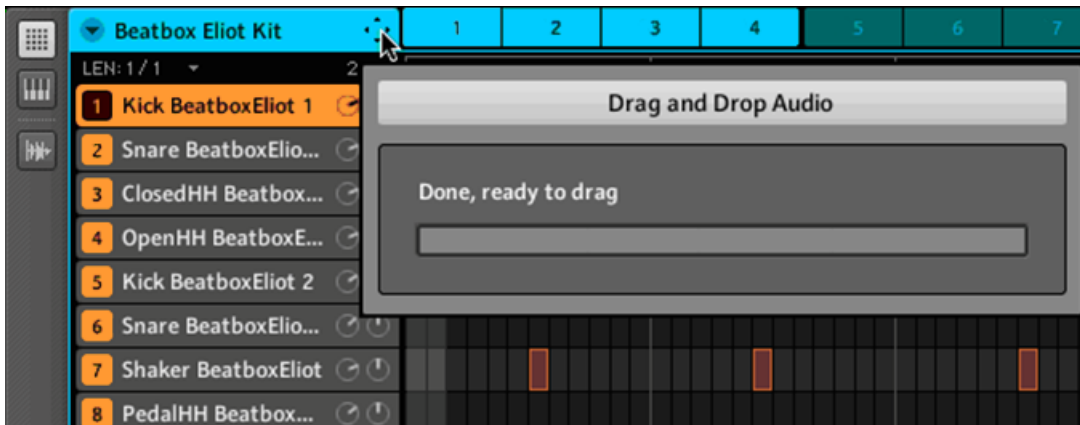
The Audio Drag and Drop function allows you to export audio from selected Patterns onto your desktop or into your host software by simply dragging the respective Group onto the target location or application. This function is only available on the software. The audio will be exported as a WAV or AIFF file according to the Options in the Export Audio Settings. To render Patterns to audio files:

- Select the Group and Pattern you want to export audio from.
- Select the Sounds you want to exclude from the exported audio file by muting them. Alternatively, include Sounds by soloing them.

- Click the Arrow on the left in the Header of the Pattern Editor. A drop-down menu will open. Choose *Audio* from the *Pattern Drag mode* submenu:



- Click and hold the Dragger Icon in the Header of the Pattern Editor. A pop-up window will inform you about the rendering status.



- As soon as rendering is finished, the Dragger Icon will display the name of the audio file you are about to drag:

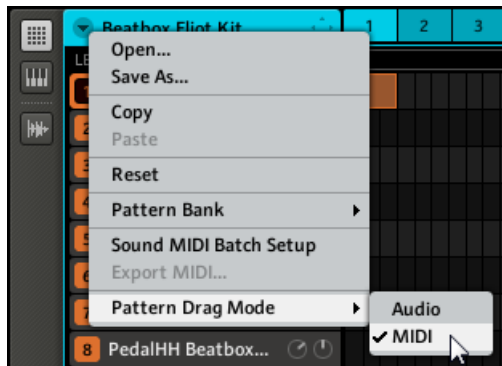


- You can now drag the exported audio to your desktop or into an audio channel of your host application.

7.2.12 Rendering MIDI from Patterns using Drag and Drop

The MIDI drag-and-drop function allows you to export MIDI files from selected Patterns onto your desktop or into your host software by simply dragging the respective Group onto the Desktop or into a MIDI channel of your host software. This is useful if you want to edit them in another application. The Patterns will be exported as MIDI files according to the Sound MIDI Batch Setup, so you need to set that up before (see chapter [↑4.10.1, Sound MIDI Batch Setup](#)). To render Patterns to MIDI files:

1. Select the Group and Pattern you want to export MIDI from.
2. Click and hold the Arrow on the left in the Header of the Pattern Editor. A drop-down menu will open. Choose *MIDI* from the *Pattern Drag Mode* submenu:

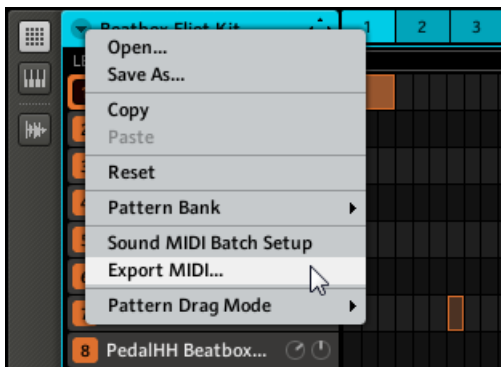


- Click and hold the Dragger Icon in the Header of the Pattern Editor. The Dragger will display the name of the MIDI file you are about to drag:



→ You can now drag the exported MIDI file to your desktop or into a MIDI channel of your host application.

Alternatively you can also use the *Export MIDI...* entry from the drop-down menu:



Choosing Export MIDI... from the drop-down menu.



For more information on MIDI Batch Setup see section [↑4.10, Sound MIDI Options](#).

8 The Effects Overview

MASCHINE provides a healthy selection of more than 20 different effects (FX) that can be quickly applied to Sounds, Groups and the Master, all as insert effects. By using MASCHINE's powerful routing system, it is also easy to setup send effects, build complex effect chains or apply an effect to an external source that is connected to your audio interface, such as an instrument, vocals or a turntable. We recommend you load a Project from the Factory Library to get to know how effects can be used.

This chapter will describe the effects and their parameters. The following chapter will explain how to apply the effects to modules within your project.

Available FX

Many types of effects are available and nearly all applications are represented. You will of course find traditional effects such as Delays, Reverbs and Distortions, as well as engineering tools such as EQs, Dynamics, and Filters. But we have also provided you with a series of unique and unusual effects such as Reflex, Ice, and Resochord.

8.1 Dynamics

8.1.1 Compressor

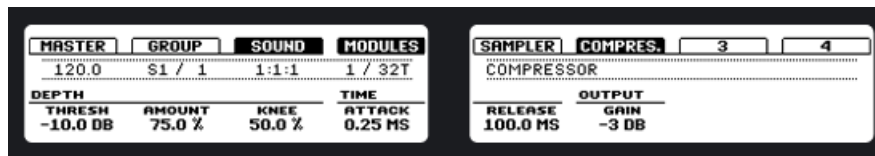
This is a classic compression effect to control the dynamic information of an audio signal. You can use the Compressor to fatten up your drums or to control signals that have a very wide dynamic range. In the Library Project “Pounder” it is used heavily on pretty much all Groups, creating a very dense sound.



The Compressor on the software.

| Screen Elements | Description |
|-----------------|---|
| Depth | |
| Thresh | This value determines the threshold at which the Compressor starts to work. |
| Amount | The amount of the Compressor effect, sometimes called Ratio in typical applications. |
| Knee | This parameter defines how the Compressor starts to work: with a low setting, the transition into compression is soft, whereas with a high setting, the Compressor abruptly starts to work once the threshold is reached. |
| Time | |
| Attack | Use Attack to adjust how fast the Compressor reacts on the incoming signal: the more you dial it to the right, the slower it will react. Longer Attack times let more transients through. |
| Release | The time the compressor will take to not compressing any more after the input signal falls below the threshold. With longer release times it takes more time to get back to normal. |
| Output | |
| Gain | Use Gain control to adjust the volume of the resulting signal; sometimes called “make-up gain” as it can be used to compensate for any reduction in the signal induced by the settings above. |

Hardware



The Compressor on the hardware.

8.1.2 Gate

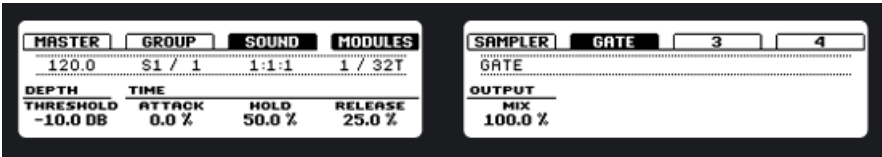
The Gate cuts any part of the input signal which falls below the input threshold. This can be used to rhythmically chop the signal and make it stutter or sound staccato.



The Gate on the software.

| Screen Element | Description |
|----------------|--|
| Depth | |
| THRESHOLD | This value determines the threshold at which the Gate starts to work. Higher values will let only the loudest parts of the signal through the Gate. |
| Time | |
| ATTACK | Use ATTACK to adjust how fast the Gate reacts to the incoming signal: the more you dial it to the right, the slower it will react, resulting in a softer transition between the gated and the not gated parts of the signal. |
| HOLD | The HOLD parameter is used to determine how long the gated signal is held; lower values will result in a more "choppy" effect. |
| RELEASE | The time the Gate will take to release the input signal after it rises above the threshold. |
| Output | |
| MIX | MIX lets you adjust the amount of the effect in relation to the dry original audio signal. |

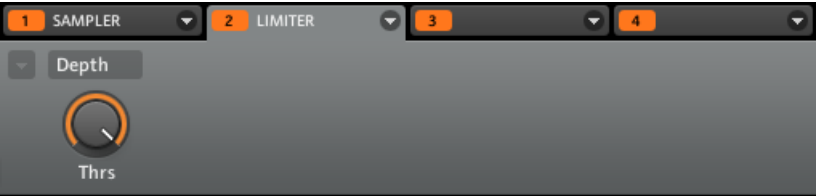
Hardware



The Gate on the hardware.

8.1.3 Limiter

The Limiter does two things: firstly it ensures that the signal level stays below 0db, thus preventing digital clipping. But it can also increase the overall perceived volume by reducing the threshold. It is recommended to place the Limiter in a Master Module slot. Note that the Limiter introduces a small latency.



The Limiter on the software.

| Screen Element | Description |
|----------------|--|
| Depth | |
| Thrs | This value determines the threshold where the Limiter kicks in. If you use it to prevent your signal from clipping, leave it at 0 dB; if you want to make your signal louder, dial the Knob to the left. |

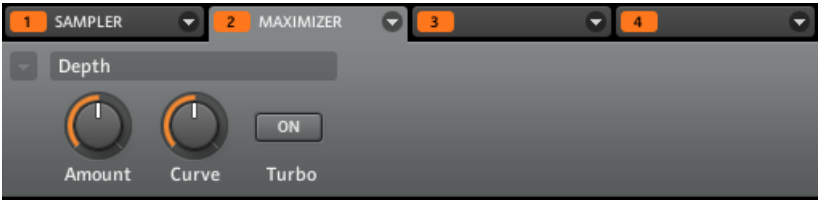
Hardware



The Limiter on the software.

8.1.4 Maximizer

The Maximizer reduces the dynamics within the sound, making the overall sound louder. It is comparable to the Limiter, but it specifically designed for increasing the perceived volume. For an example, load the Project “Be Mine” from the Library: the Maximizer is used on the Master FX here.



The Maximizer on the software.

| Screen Element | Description |
|----------------|---|
| Depth | |
| AMOUNT | This parameter is used to adjust the amount of the Maximizer effect. |
| CURVE | Controls the compression knee; higher values tend to result in faster and more aggressive gain control. |
| TURBO | Turbo intensifies the effect the Maximizer has on the signal, (causing the maximizing algorithm to be applied twice). |

Hardware



The Maximizer on the hardware.

8.2 Filtering

8.2.1 EQ

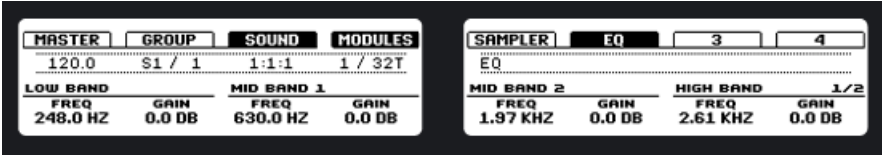
Use the EQ to boost or cut selective frequencies of the audio signal. The EQ is mainly a tool to tailor your audio signal to taste by cutting out selected frequencies or boosting others, but can also be used quite efficiently as a DJ-style cut-and-boost effect. Note that the parameters cover two pages.



Page 1 of the EQ on the software.

| Screen Element | Description |
|----------------|---|
| Page 1 | |
| Low Band | |
| Freq | Frequency selector for the Low Band. Ranges from 20 Hz to 8 kHz. |
| Gain | Gain control for the Low Band. |
| Mid Band 1 | |
| Freq | Frequency selector for the Mid Band 1. Ranges from 40 Hz to 16 kHz. |
| Gain | Gain control for the Mid Band 1. |
| Mid Band 2 | |
| Freq | Frequency selector for the Mid Band 2. Ranges from 40 Hz to 16 kHz. |
| Gain | Gain control for the Mid Band 2. |
| High Band | |
| Freq | Frequency selector for the High Band. Ranges from 50 Hz to 20 kHz. |
| Gain | Gain control for the High Band. |

Hardware



Page 1 of the EQ on the hardware.

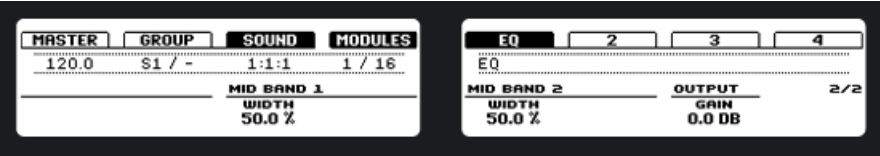
Software



Page 2 of the EQ on the software.

| Screen Element | Description |
|----------------|---|
| Page 2 | |
| Mid Band 1 | |
| Width | Bandwidth control for Mid Band 1. |
| Mid Band 2 | |
| Width | Bandwidth control for Mid Band 2. |
| Output | |
| Gain | Gain control for the filter altogether. |

Hardware



Page 2 of the EQ on the hardware.

8.2.2 Filter

Filter with selectable characteristics that can be modulated via LFO or envelope follower. There are many applications for a filter: it can be used to emulate a synthesizer more realistically or to filter out selected frequencies and create filter-sweeps.

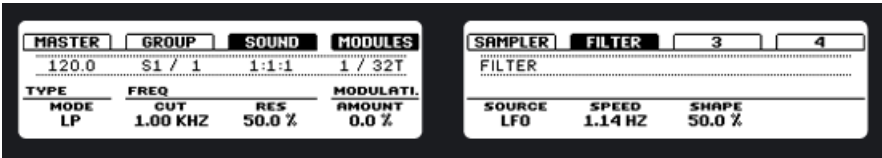


The Filter on the software.

| Screen Element | Description |
|-------------------|---|
| Type | |
| Mode | Here you can select between four different filter-types: Notch , HP (high-pass), BP (bandpass), and LP (lowpass). Depending on the filter type, the following parameters vary as indicated. |
| Freq | |
| Cut | Cut stands for Cutoff Frequency and is available with all filter-types. |
| Res | Res controls the amount of Resonance - the amount of amplification around the cutoff frequency. It is not available with filter-type Notch . |
| Modulation | |
| Amount | This defines how much the Filter gets modulated by the modulation source. This can be applied to increase or decrease the cutoff by the modulation source. |
| Source | Here you can select between three different modulation sources: <i>Envelope</i> , <i>LFO Sync</i> and <i>LFO</i> . Depending on your choice for the modulation source, the following parameters appear to the right: |
| Envelope Decay | With Decay you adjust how fast the envelope fades out. |
| Smooth | Smooths the shape of the envelope. |
| Shape | Change the shape of the envelope here. |
| LFO Sync Speed | Defines the speed of the modulation in musical values from 16/1 (once every 16 bars) up to 1/32 note. |
| Shape | Change the shape of the LFO waveform here. |
| Phase | Adjusts the start phase of the LFO. |

| Screen Element | Description |
|----------------|---|
| LFO Speed | Defines the speed of the modulation in Hz (Hertz) ranging from 0.03 Hz up to 16 Hz. |
| Shape | Change the shape of the LFO waveform here. |

Hardware



The Filter on the hardware.

8.3 Modulation

8.3.1 Chorus

The Chorus is useful to “thicken” signals and enhance or add stereo content. It is most effective on melodic sounds, but can also be used on hi-hats to make them more vivid or on a voice sample to create a doubling effect (thereby making it sound as if there were several voices). It works by splitting the audio signal up into two versions and slightly detuning one of them.



The Chorus on the software

| Screen Element | Description |
|----------------|---|
| Modulation | |
| Rate | The Rate knob defines how fast the phase (and thus the perceived pitch) of the signal is being modulated. |
| Amount | The amount of the Chorus effect. |
| Output | |
| Mix | Mix lets you adjust the amount of the effect in relation to the dry original audio signal. |

Hardware



The Chorus on the hardware.

8.3.2 Flanger

Classic Flanger with LFO and Envelope Follower modulators. The Flanger sounds a bit like the Chorus, but the difference between them is that the Flanger modulates the signal faster and is equipped with a Feedback parameter and can be synchronized to the Song Tempo.

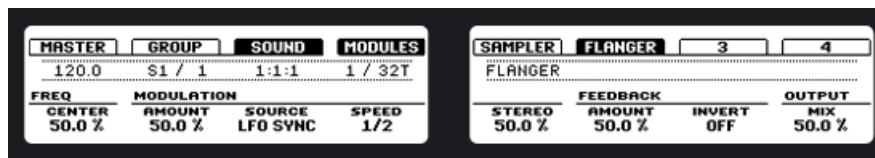


The Flanger on the software.

| Screen Element | Description |
|----------------|---|
| Freq | |
| Center | This defines the center frequency of the Flanger. |

| Screen Element | Description |
|-------------------|---|
| Modulation | |
| Amount | The amount of the Flanger effect. |
| Source | Here you can select the modulation source of the Flanger: available options are <i>Envelope</i> , <i>LFO Sync</i> and <i>LFO Speed</i> . Depending on your selection, the parameter to the right will change: |
| LFO Speed | The Speed of the LFO in a range from 0.03 Hz up to 8 Hz. |
| LFO Sync Speed | Defines the speed of the modulation in musical values from 16/1 (once every 16 bars) up to 1/16 note. |
| Envelope Shape | Change the Shape of the envelope here. |
| Stereo | This parameter widens the stereo field of the effect. |
| Feedback | |
| Amount | Adjust the amount of the Feedback here. |
| Invert | Inverts the Flanger. |
| Output | |
| Mix | Mix lets you adjust the amount of the effect in relation to the dry original audio signal. |

Hardware



The Flanger on the hardware.

8.3.3 FM

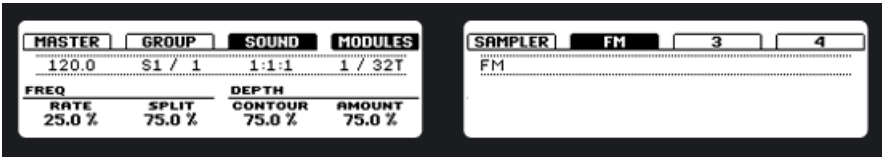
FM modulates the frequency of the audio signal based on FM synthesis. High frequency settings are useful for adding a subtle “gritty” texture to the input signal.



FM on the software.

| Screen Element | Description |
|----------------|--|
| Freq | |
| Rate | This is for adjusting the speed of the FM modulation. |
| Split | The Split control determines the extent to which the FM effect is applied to high frequencies via a crossover. Turn to the right to affect higher frequencies. It can be useful to eliminate noise artifacts caused by FM of very high signals. With high Split settings, the effect becomes more “gritty” and crackling. |
| Depth | |
| Contour | Contour determines the extent to which the input volume affects the intensity of the effect. |
| Amount | Determines the amount of the FM effect. |

Hardware



The FM on the hardware.

8.3.4 Freq Shifter

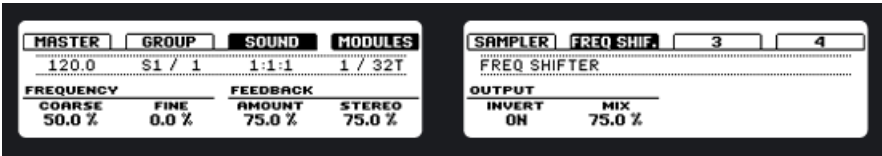
The Frequency Shifter shifts selected frequencies of the audio signal by a user-specified amount. With high frequencies it sounds like a pitch-shifter with low frequencies it sounds like a special chorus.



The Frequency Shifter on the software.

| Screen Element | Description |
|------------------|--|
| Frequency | |
| Coarse | This is used to define the basic frequency of the Freq Shifter. |
| Fine | Finetune the Frequency here. |
| Feedback | |
| Amount | Adjust the amount of Feedback introduced in the Frequency Shifter and increases the intensity of the effect. |
| Stereo | This parameter widens the stereo field of the effect. |
| Output | |
| Invert | Invert the settings of the Frequency Shifter here. |
| Mix | Mix lets you adjust the amount of the effect in relation to the dry original audio signal. |

Hardware



The Frequency Shifter on the hardware.

8.3.5 Phaser

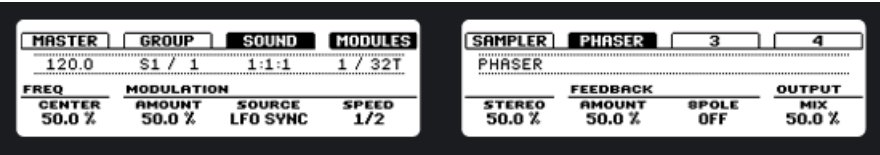
Classic Phaser with LFO and envelope-follower modulators. The Phaser splits the signal into two parts and continuously modulates the phase of one of them.



The Phaser on the software.

| Screen Element | Description |
|-------------------|--|
| Freq | |
| Center | This defines the center frequency of the Phaser. |
| Modulation | |
| Amount | The amount of modulation. |
| Source | Here you can select the modulation source of the Phaser: available options are <i>Envelope</i> , <i>LFO Sync</i> and <i>LFO</i> . Depending on your selection, the parameter to the right will change: |
| Envelope Shape | Modulate the shape of the envelope. |
| LFO Speed | The speed of the LFO in a range from 0.03 Hz up to 8 Hz. |
| LFO Sync | Defines the speed of the modulation in musical values from 16/1 (once every 16 bars) up to 1/16 note. |
| Stereo | This parameter widens the stereo field of the effect. |
| Feedback | |
| Amount | Adjust the amount of the Feedback here. |
| 8Pole | Activating this causes the Phaser to use the 8Pole mode, resulting in a more intense Phaser effect. |
| Output Mix | Mix lets you adjust the amount of the effect in relation to the dry original audio signal. |

Hardware



The Phaser on the hardware.

8.4 Spatial and Reverb

8.4.1 Ice

This is a special reverb for getting cold and metallic sound. Ice includes a bank of self-oscillating filters for interesting and colorful effects. In the “Greenhouse” – Project from the Library, you can hear how it creates deep soundscapes in the Group named “FX”.

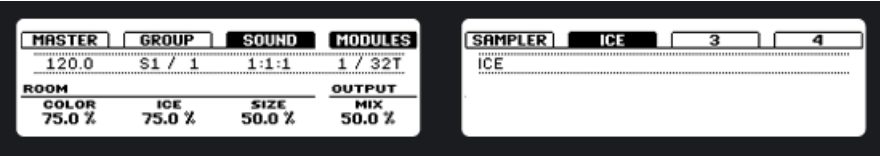


The Ice reverb on the software.

| Screen Element | Description |
|----------------|--|
| Room | |
| Color | With lower settings, the general sound is a bit more muffled. The higher the settings, the brighter it sounds. |
| Ice | The “ICE”-factor: higher values sound more metallic. This is a parameter better experienced than described! |
| Size | Adjust the size of the virtual room here. |

| Screen Element | Description |
|----------------|--|
| Output | |
| Mix | Mix lets you adjust the amount of the effect in relation to the dry original audio signal. |

Hardware



The Ice reverb on the hardware.

8.4.2 Metaverb

Like the Reverb, the Metaverb adds spacial room information. However, in contrast to the Reverb it has a much more “synthetic” sound, which is particularly suited for melodic content.

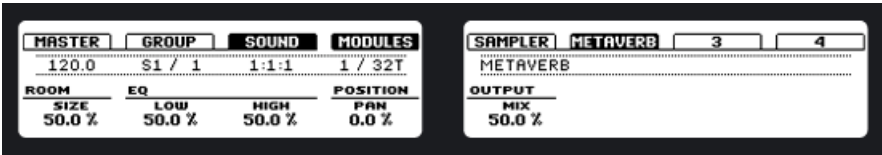


The Metaverb on the software.

| Screen Element | Description |
|----------------|--|
| Room | |
| Size | Adjust the size of the virtual room here. |
| EQ | |
| Low | Low band EQ to cut or boost bass frequencies. |
| High | High band EQ to cut or boost high frequencies. |
| Position | |

| Screen Element | Description |
|----------------|---|
| Pan | This pans the dry signal. This is useful because the dry signal can not be panned after the FX without panning the reverb itself, which is unnatural. |
| Output | |
| Mix | Mix lets you adjust the amount of the effect in relation to the dry original audio signal. |

Hardware



The Metaverb on the hardware.

8.4.3 Reflex

This is a special resonating reverb. At moderate settings the Reflex can be useful to emulate small, “tight” rooms. At more extreme settings, it can produce interesting artificial, metallic textures.



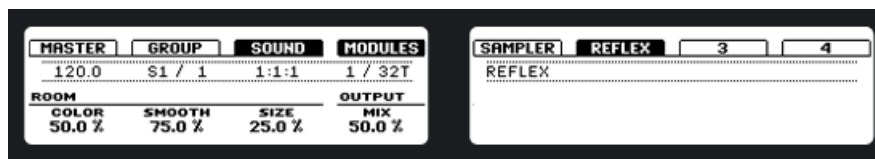
Automating the Color parameter usually yields very pleasing results.



The Reflex reverb on the software.

| Screen Element | Description |
|----------------|--|
| Room | |
| Color | At lower settings, the general sound is a bit more muffled; the higher the settings, the brighter it sounds. |
| Smooth | With this parameter, you can soften the metallic character of Reflex. |
| Size | Adjust the size of the virtual room here. |
| Output | |
| Mix | Mix lets you adjust the amount of the effect in relation to the dry original audio signal. |

Hardware



The Reflex reverb on the hardware.

8.4.4 Reverb

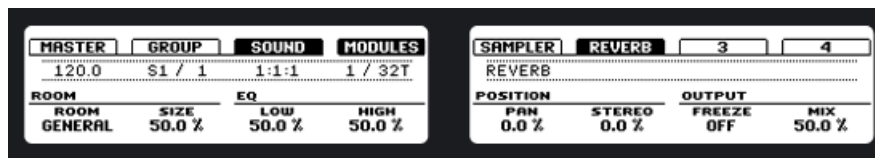
This reverb is best for most common applications. The Reverb adds room information to the signal, making it sound more spacious and natural. It is particularly suited to drum sounds, but also useful to add a more “natural” sound for all sorts of other signals.



The Reverb on the software.

| Screen Element | Description |
|-----------------|---|
| Room | |
| Room | This allows you to choose one of four basic characteristics of the Reverb: <i>Shatter</i> , <i>Guitar</i> , <i>Bright</i> and <i>General</i> . |
| Size | Adjust the size of the virtual room here. |
| Eq | |
| Low | Low band EQ to cut or boost bass frequencies. |
| High | High band EQ to cut or boost high frequencies. |
| Position | |
| Pan | This pans the dry signal. This is useful because the dry signal can not be panned after the FX without panning the reverb itself, which is unnatural. |
| Stereo | This parameter widens the stereo field of the effect. |
| Output | |
| Freeze | Freezes the Output of the Reverb, trapping its current state in a temporary buffer so that it holds indefinitely. Designed to be adjusted in real time. |
| Mix | Mix lets you adjust the amount of the effect in relation to the dry original audio signal. |

Hardware



The Reverb on the hardware.

8.5 Delay

8.5.1 Beat Delay

The Beat Delay is a delay that is specialized for creating delays that are synced to the tempo. If you wonder how this sounds, load up the “Deeper” – Project from the Library: the Beat Delay is used on all Groups here (except for the Bass) and offers a lot of rhythmic sonic possibilities.



The Beat Delay on the software.

| Screen Element | Description |
|-----------------|---|
| Delay | |
| Time | The Time parameter defines the delay in musical values from 1/32 to 16/16. |
| Offset | This parameter is used to shift the start of the delay in relation to the tempo. |
| Feedback | |
| Amount | Amount of the Feedback introduced to the Beat Delay. Higher values produce longer decays. |
| Crossover | Allows for panning the Feedback rhythmically in the stereo field. |
| Color | Defines the basic frequency of the Feedback: lower values result in a deeper sound, whereas higher values brighten the sound. |
| Split | Controls the difference in frequency between left and right channel. |
| Output | |

| Screen Element | Description |
|----------------|--|
| Stereo | This parameter widens the stereo field of the effect. |
| Mix | Mix lets you adjust the amount of the effect in relation to the dry original audio signal. |

Hardware



The Beat Delay on the hardware.

8.5.2 Grain Delay

By chopping the input into small “grains,” the Grain Delay is useful for creating ambient textures. Increase Size, Space and Density to quickly transform any sound into an evolving ambient texture. As a unique experimental effect, it is best experienced firsthand.



The Grain Delay on the software.

| Screen Element | Description |
|----------------|---|
| Grain | |
| Pitch | Determines the pitch of the grains: low values result in a deep, slowly repeating grain, high values speed up the grain, making it sound faster and higher. |
| Size | Defines the length of the grains. |
| Jitter | Introduces artifacts into the grains. |

| Screen Element | Description |
|----------------|---|
| Rev | This button if activated results in reverse playback of the grain. |
| Cloud | |
| Space | Determines the spacing between the grain clouds: the higher the value, the bigger the space between the clouds. |
| Density | Creates a more “dense” cloud: higher values create feedback-like effects. |
| Mod | The amount of modulation introduced to the grain cloud. |
| Output | |
| Mix | Mix lets you adjust the amount of the effect in relation to the dry original audio signal. |

Hardware



The Grain Delay on the hardware.

8.5.3 Grain Stretch

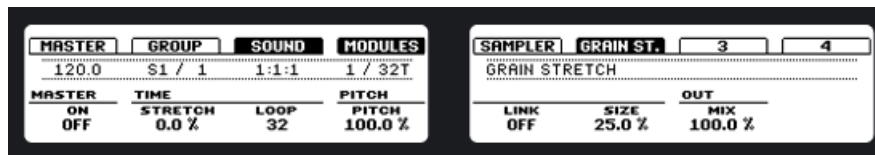
The Grain Stretch effect uses granular synthesis to manipulate the speed and pitch of the incoming signal.



The Grain Stretch on the software.

| Screen Element | Description |
|----------------|--|
| Master | |
| ON | Enables the effect. Every time this button is switched on, the Grain Stretch effect buffers incoming audio for 32 x 1/16th step. |
| Time | |
| Stretch | Defines the timestretch amount. Set to 50% for half speed. |
| Loop | Sets a loop length, in 1/16th steps. |
| Pitch | |
| Pitch | Adjust the pitch of the grains |
| Link | When on, grain size is corrected by the pitch |
| Size | Adjust the size of the grains |
| Out | |
| Mix | Mix lets you adjust the amount of the effect in relation to the dry original audio signal. |

Hardware



The Grain Stretch on the hardware.

8.5.4 Resochord

The Resochord is a bank of 6 comb filters, each of which is individually tuned according to the selected chord. The results are most effective with non-melodic content (like drums) as the Resochord will print its own harmonic content on to any input material.



The Resochord on the software.

| Screen Element | Description |
|----------------|---|
| Pitch | |
| Mode | Here you can select between the two modes of the Resochord: <i>Chord</i> and <i>String</i> . In Chord mode, the 6 combs are tuned according to various chords. In String mode, the 6 combs are centered around 1 frequency and can be spread for an intense chorus-like effect. Depending on your selection the other parameters in the Pitch area will change. |
| Spread | Spread is only available if String mode is selected. It allows you to define how big the difference in tuning is between combs. |
| Style | Style is only available if Chord mode is selected. You can select between different chord-styles such as minor or major. |
| Chord | Chord is only available if Chord mode is selected. Here you can choose from different chords to be applied to your audio signal. |
| Transpose | Transpose is only available if Chord mode is selected. It allows you to transpose the Resochord in semitones. |
| Color | |
| Brightness | This is to determine the basic sound characteristic of the Resochord: higher values will brighten the sound by adding high frequencies. |
| Feedback | Adjust the amount of the Feedback here. |
| Decay | With Decay you adjust how fast the Resochord fades out. |
| Mix | Mix lets you adjust the amount of the effect in relation to the dry original audio signal. |

Hardware



The Resochord on the hardware.

8.6 Distortion

8.6.1 Distortion

Combining overdrive, feedback and modulation, the Distortion produces a heavy distortion/fuzz effect, comparable to distortion stomp-boxes for guitars. This effect is special because of the feedback it creates.

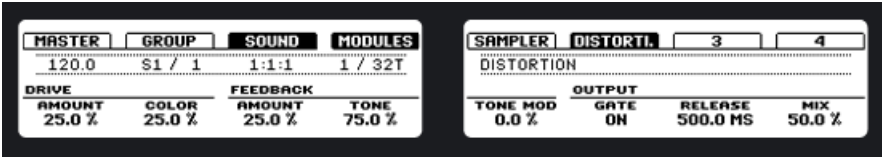


The Distortion on the software.

| Screen Element | Description |
|----------------|--|
| Drive | |
| Amount | Determines the basic amount of distortion. |
| Color | At lower settings, the general sound is a bit more muffled; the higher the settings, the brighter it sounds. |
| Feedback | |
| Amount | Adjust the amount of the Feedback here. |
| Tone | General tonal characteristic of the Feedback. |

| Screen Element | Description |
|----------------|--|
| Tone Mod | Modulation introduced in the Feedback. |
| Output | |
| Gate | The Gate button is used to cancel out feedback-loops introduced by high Feedback settings. |
| Release | This parameter determines how fast the distorted sound dies down when the Gate is enabled. |
| Mix | Mix lets you adjust the amount of the effect in relation to the dry original audio signal. |

Hardware



The Distortion on the hardware.

8.6.2 Lofi

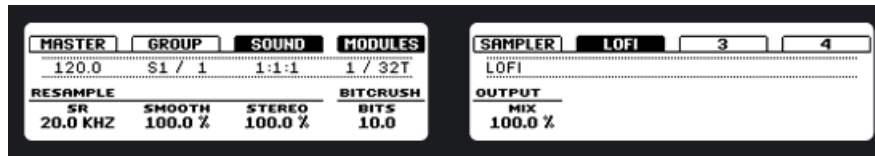
The Lofi effect reduces the bitrate and Sample rate of the audio signal for an interesting “vin-tage” effect at subtle settings, and heavy digital distortion at extreme settings.



The Lofi on the software.

| Screen Element | Description |
|-----------------|--|
| Resample | |
| SR | SR stands for Sample Rate and ranges from CD-quality (44.1 kHz) to 0.1 kHz which results in a hissy crackle. |
| Smooth | Smooth reduces the aliasing introduced by the Lofi effect. |
| Stereo | This parameter widens the stereo field of the effect. |
| Bitcrush | |
| Bits | Introduces a distortion based on bit reduction. |
| Output | |
| Mix | Mix lets you adjust the amount of the effect in relation to the dry original audio signal. |

Hardware



The Lofi on the hardware.

8.6.3 Saturator

The Saturator combines compression and saturation to increase the overall loudness and add additional harmonics. It has a subtle Amount and Contour for warming up sounds.



The Saturator on the software.

| Screen Element | Description |
|----------------|--|
| Compress | |
| Amount | This parameter lets you adjust the amount of compression performed on the audio signal. |
| Drive | |
| Amount | The amount of the distortion introduced by the Saturator. |
| Contour | The Contour control determines how closely it responds to the input volume. Higher values create a more distorted sound. |

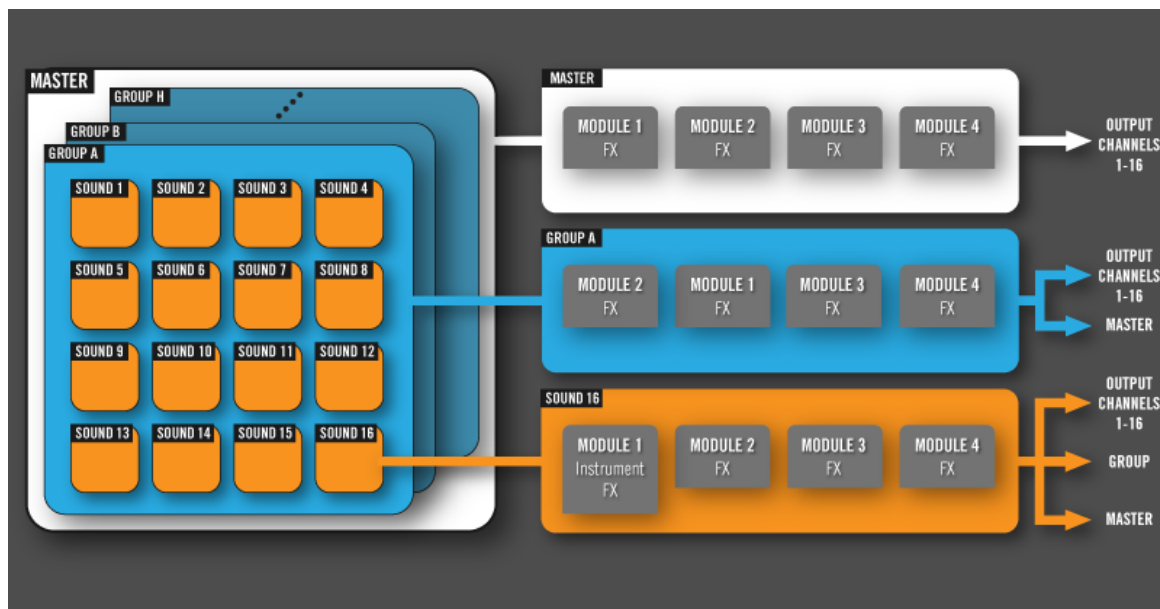
Hardware



The Saturator on the hardware.

9 Using FX

At each Project level (Sound, Group and Master) it is possible to add effects using Modules. Each Sound, Group and Master slot has four Modules. In each Module you can load an internal MASCHINE effect or VST/AU plug-in effect.



Overview of applying effects using Module slots.

9.1 Applying Effects to a Sound

There are four Module slots available at the Sound level. Using each Module slot, you can apply up to four MASCHINE effects and VST/AU plug-in effects directly to each Sound slot.



Module 1 is often used to contain a Sampler or live Input so choose one of the free Modules (2-4) to insert an effect.



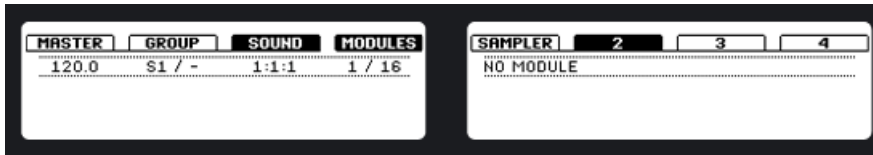
If you plug one of the internal MASCHINE effects or a plug-in effect to Module slot 1 of a Sound, you will find this effect as a bussing point in the **Output** menu of other Sound slot's **Main** control section (in the Control area). You can also route MIDI events to the effects in Module slot 1.



For information on loading a Plug-in Instrument to a Sound slot please read [4.2.6, Page 6: Velocity Destination and Modwheel Destination](#).

Hardware

1. Press the **CONTROL** button to select the Control mode.
2. Press Button 3 to put the focus on the **SOUND** tab which is selected on the left display, then hit the pad with the Sound you want to apply the effect to.
3. Press Button 4 to put the focus on the **MODULES** tab.
4. On the right display, you can now see the Modules 1-4. Select Module 2 by pressing Button 6.



5. To select an effect for Module 2, press **SHIFT + BROWSE**.
6. On the left display, use Knob 1 to set the **TYPE** to **INTERNAL** for MASCHINE FX or **PLUG-IN** for VST/AU plug-ins. The right display now shows the list of the available effects. If you want to load a VST/AU plug-in effect select **PLUG-IN**.



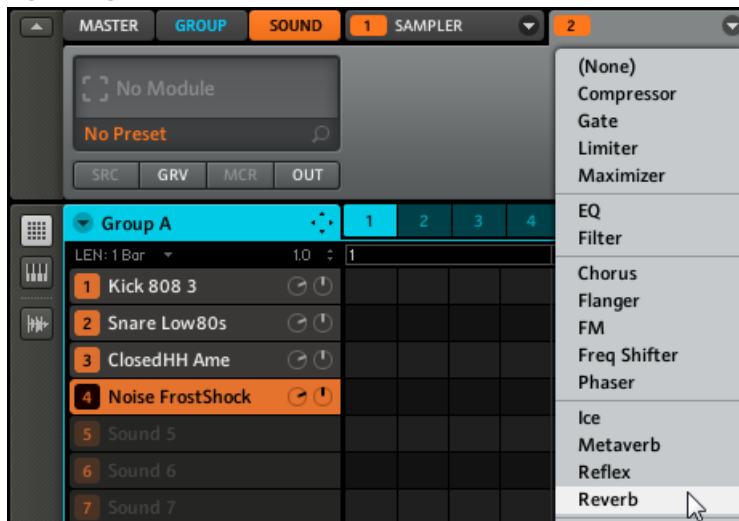
7. You can browse through the available effects by turning Knob 5. When you've found an effect you want to apply, press Button 8 to load it into Module 2. You can also use buttons 5 and 6 to step through the list and load the effect directly.
8. Switch back to Control mode by pressing the **CONTROL** mode button.
9. Now you can edit the effect using the knobs!

Software

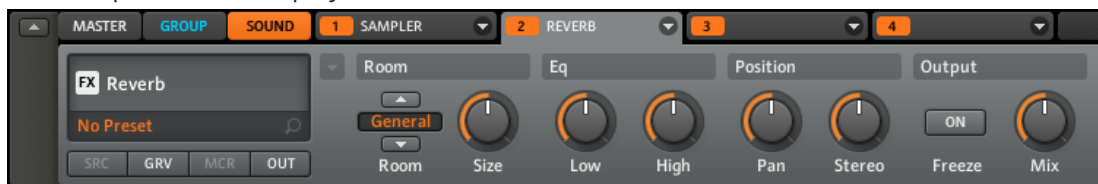
1. Click on the **SOUND** tab to select the Sound you want to apply an effect to. The actual Sound that you assign the effect to is always the one in focus; in the example underneath it's **Noise FrostShock**.



2. Select one of the Modules (in this case we select Module 2) and click the arrow to the right to get a list of all available effects:



- As an example, let's choose the **Reverb** effect. After selecting it with the mouse, you will find the parameters displayed in the Control area of Module 2:



- Now you can try out some of the parameters: turn the **Size** knob for a bigger Reverb or adjust the stereo width by using the **Stereo** knob.



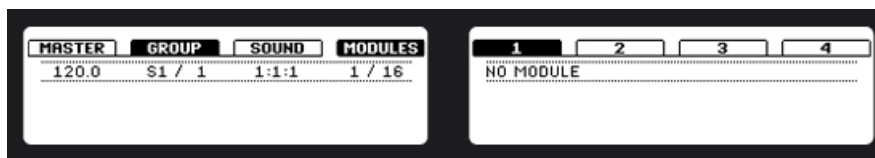
If you have VST/AU effect plug-ins installed you may also load them from the effects menu by selecting *Plug-ins* from the list.

9.2 Applying Effects to a Group

You can apply four effects directly to each Group. The effects will then be applied to all the Sounds in the Group.

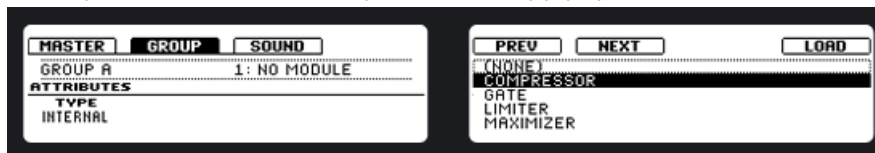
Hardware

- In Control mode, press Button 2 to put the focus on the **GROUP** tab which gets selected on the left display, then press the **GROUP** button of the Group you want to apply the effect to.
- Press Button 4 to put the focus on the **MODULES** tab.
- On the right display, you can now see the Modules 1-4. Select Module 1 by pressing Button 5.



- To select an effect for Module 1, press **SHIFT + BROWSE**. The right display now shows the list of the available effects.

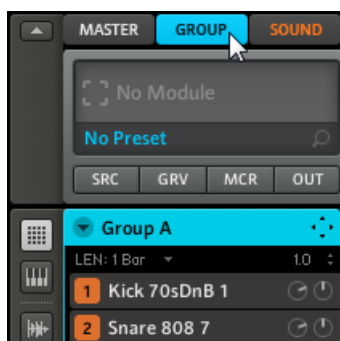
- On the left display, use Knob 1 to set the *TYPE* to *INTERNAL* for MASCHINE FX or *PLUG-IN* for VST/AU plug-ins. The right display now shows the list of the available effects. If you want to load a VST/AU plug-in effect select *PLUG-IN*.
- You can browse through them by either turning Knob 5.
- When you've found an effect you want to apply, press Button 8 to load it.



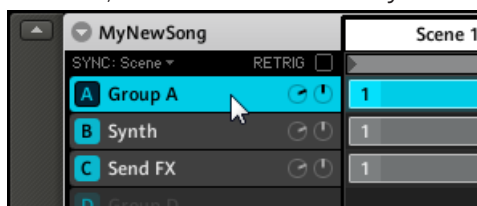
- Switch back to Control mode by pressing the *CONTROL* button.
- Now you can edit the effect parameters using the knobs!

Software

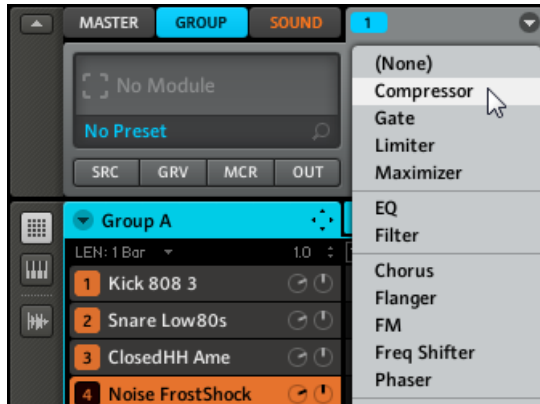
- Click on the **GROUP** tab to switch to the Group level:



- In the same way that effects applied to the Sound in focus, they get applied to the Group in focus, so make sure to have your Group in focus in the Arranger:



- Since our Group is mainly for drums, let's apply some compression by adding the *Compressor* to Module 1:



- Play around with the parameters of the Compressor to get used to it!



If you have VST/AU effect plug-ins installed you may also load them from the effects menu by selecting *Plug-ins* from the list.



If you created a nice FX setting, you can put it to further use by saving it as an FX Preset. Please read [↑9.8, Saving FX Presets](#) for more details.



If you created a nice FX setting, you can put it to further use by saving it as an FX Preset. Please read [↑9.8, Saving FX Presets](#) for more details.

9.3 Applying Effects to the Master

You can apply four effects to the Master so that all your Sounds and all your Groups together are being sent into the effect.

Hardware

- Press Button 1 to put the focus on the *MASTER* tab which gets selected on the left display.
- On the right display, you can now see Modules 1-4. Select Module 1 by pressing Button 5.

3. To select an effect for Module 1, press *SHIFT* + *BROWSE*. The right display now shows the list of the available effects.
4. On the left display, use Knob 1 to set the *TYPE* to *INTERNAL* for MASCHINE FX or *PLUG-IN* for VST/AU plug-ins. The right display now shows the list of the available effects. If you want to load a VST/AU plug-in effect select *PLUG-IN*.
5. You can browse through them by either turning Knob 5, or by using buttons 5 and 6.



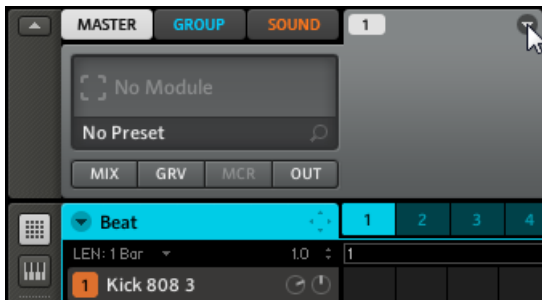
6. When you've found an effect you want to apply, press Button 8 to load it into Module 1.
7. Switch back to Control mode by pressing the *CONTROL* mode button.
8. Now you can edit the effect parameters using the knobs!

Software

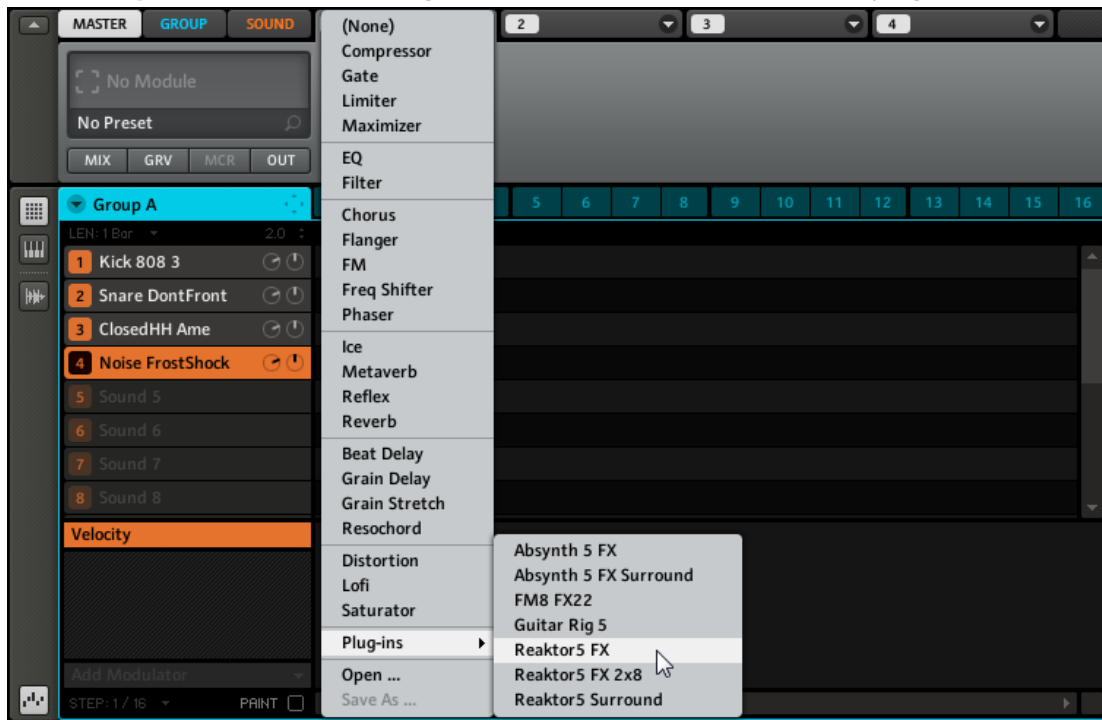
1. Click on the **MASTER** tab to switch to the Master level:



2. Select a Module slot and click the drop-down arrow on its right:



3. Select **Plug-ins** from the menu to get a list of all available effects (FX) plug-ins:



4. Choose an effect to apply to this Module slot. After selecting it with the mouse, the plug-in will be loaded, and you will find its parameters displayed on the parameter area of the Module.
5. Now you can try out the parameters of the effect plug-in.

- Choose different Parameter pages via the Page menu by clicking the triangle on the top left side of the parameter area.



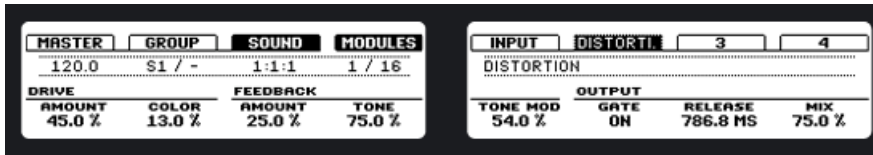
If you created a nice FX setting, you can put it to further use by saving it as an FX Preset. Please read [↑9.8, Saving FX Presets](#) for more details.

9.4 Bypassing Effects

Bypassing an effect might come in handy whenever you want to return to a dry, unaltered signal: such as after applying so much Reverb that you can't hear the dry signal anymore or to get rid of feedback while using the Delay for example.

Hardware

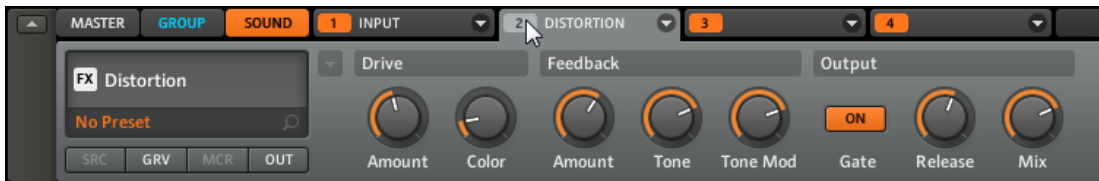
1. Depending on the tab you used the effect on, press either Button 1 (for the Master), Button 2 (for a Group + the Group button) or Button 3 (for a Sound + the Pad containing the Sound).
2. Now the right display shows the Modules containing effects. To mute one of the effects, press *SHIFT* followed by either Button 5 (for Module 1), Button 6 (for Module 2), Button 7 (for Module 3) or Button 8 (for Module 4).



3. To hear the effect, press *SHIFT* followed by the respective Button (5-8) again.

Software

1. Select the tab where you want to mute the effect (either **SOUND**, **GROUP** or **MASTER**) by clicking on it.
2. Make sure you have the right Sound (click on it on the left of the Grid) or Group (click on it on the left of the Arranger) in focus. For the Master, select the **MASTER** tab.
3. Now click on the label (orange if it is a Sound, blue if it is a Group, white if it is the Master) on the left side of the effect Modules to mute or hear the desired effect.



When bypassing effects on the Sound level be careful not to mute Module 1 as this will bypass the Sampler or Input source itself!

9.5 Automating Effects and Sampler Parameters

One of the really cool features of MASCHINE is the ability to easily automate parameters from the effect Modules and Sampler Modules.

Hardware

► To automate a parameter with the MASCHINE hardware controller, first make sure the song is playing, then simply turn one of the 8 Knobs while holding down the **AUTO WRITE** button.

→ Your automation gets recorded now.

► If you want to discard it and try again, press **ERASE**, hold it and turn the knob again to delete the Automation of this parameter.

It is also possible to record automation in the Step Sequencer.

1. Enter the Step Sequencer by pressing the *STEP* button.
2. Hold the pad representing the Step you want to automate and turn one of the knobs with the parameter you want to record Automation for.

Software

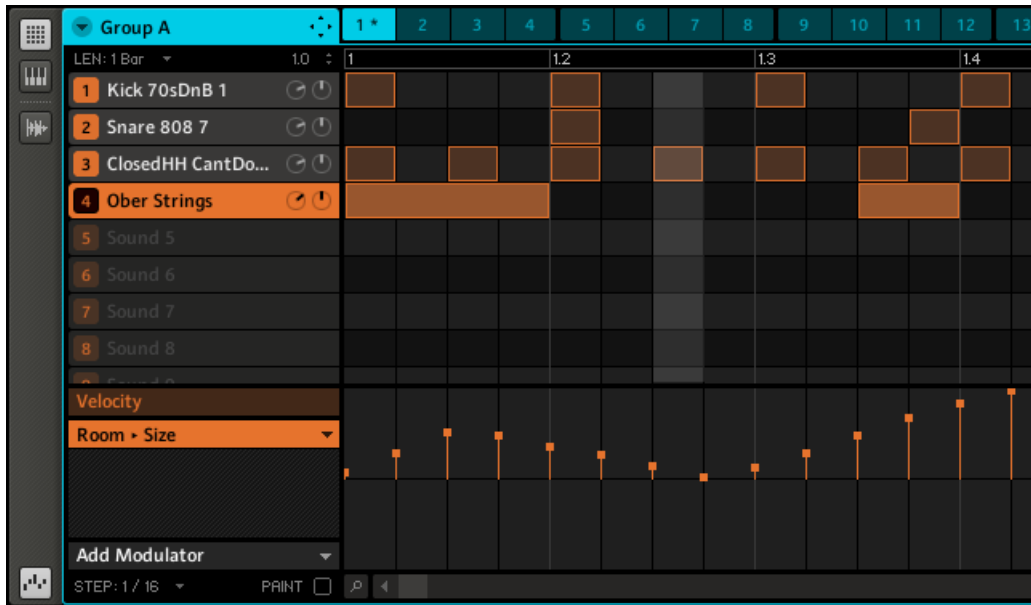
If you take a closer look at the knobs on the Parameter pages you will notice they have an outer ring.

► You can record Automation by moving that ring with a left click on it and then dragging it up and down.



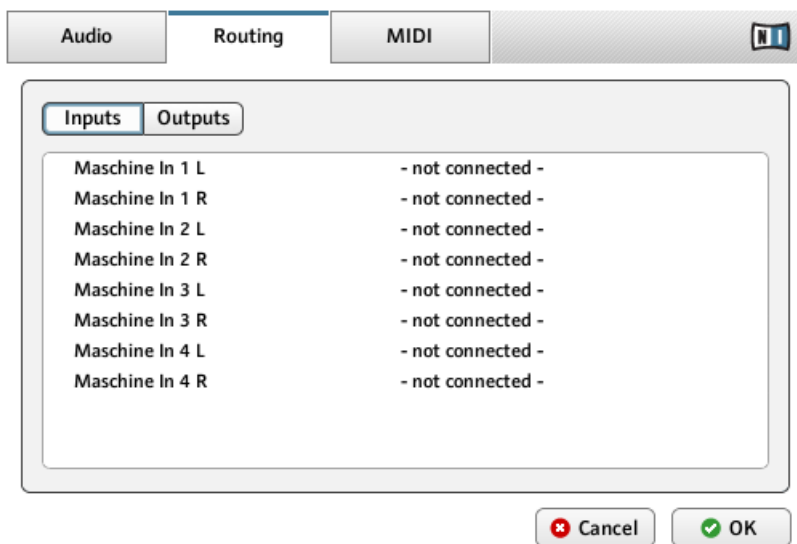
► To remove the Automation, simply right-click (on Mac: [Ctrl]+click) on that outer ring.

- To edit the automation, drag the automation points in the Automation Lane.



9.6 Applying FX to an External Instrument

Please make sure that you have connected an external audio signal source to your audio interface and that the inputs of the audio interface are activated. To do this, select the *Audio and MIDI Settings...* entry from the **File** menu, activate the desired inputs by clicking on them, then click **OK**:

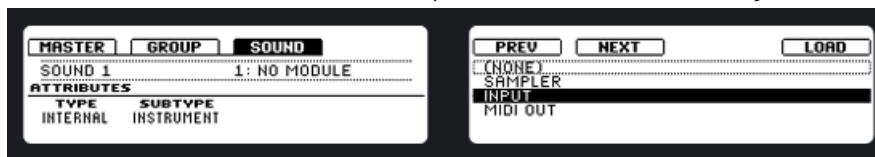


MASCHINE's Inputs configuration in the Audio and MIDI Settings dialog.

→ Audio signals coming from external sources will now be routed to MASCHINE's effects section!

Hardware

1. First choose an empty Group by selecting it with one of the *GROUP* buttons.
2. Select an empty Sound slot by pressing Button 4 and then one of the pads, let's say pad 1.
3. Press Button 5 to select *SRC* (source). After that press *SHIFT + BROWSE*.
4. By using Buttons 5 & 6 or Knob 5 you can select between (*NONE*), *SAMPLER*, *INPUT* and *MIDI OUT*. Select *INPUT* and press Button 8 to confirm your selection.

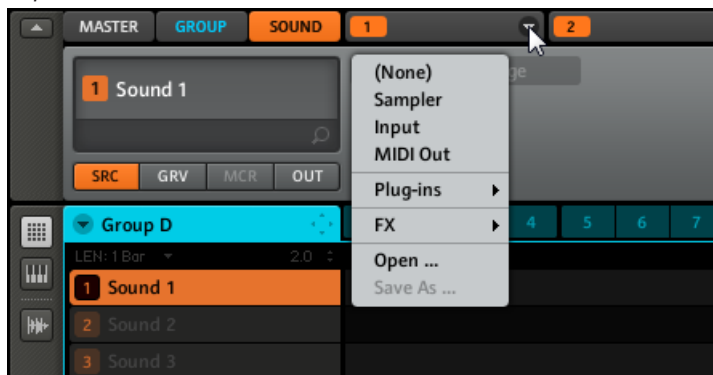


5. Switch back to Control mode by pressing the *BROWSE* button again or pressing the *CONTROL* button.

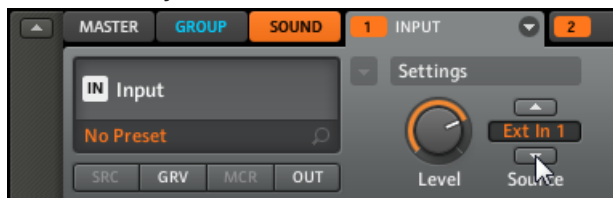
6. You now can select your external source by turning Knob 2. Then select a module slot by pressing Button 6.
7. Press *SHIFT* + *BROWSE*: now you see the list of the available effects.
8. Choose an effect and load it using Button 8. Now the external audio will be processed by the effect.

Software

1. Choose an empty Group by selecting it in the Arranger, then choose one of the Sound slots by clicking on it.
2. Select the **SOUND** tab and then click on Module 1.
3. On the right of the Module 1 tab, you will find an Arrow. Click on it and you will be presented with several options in the drop-down menu: *Sampler*, *Input* and *MIDI Out*. Select *Input*.



4. You will now see two parameters: one knob for the Level of the external input and a button that lets you select a Source. Select *Ext In 1* as the **Source**.



5. Click on the Module 2 next to the **INPUT** Module and select an effect using the effect menu from the upper right corner of the Module 2 tab.

→ Now the external audio will be processed by the effect!

9.7 Recording FX Automation

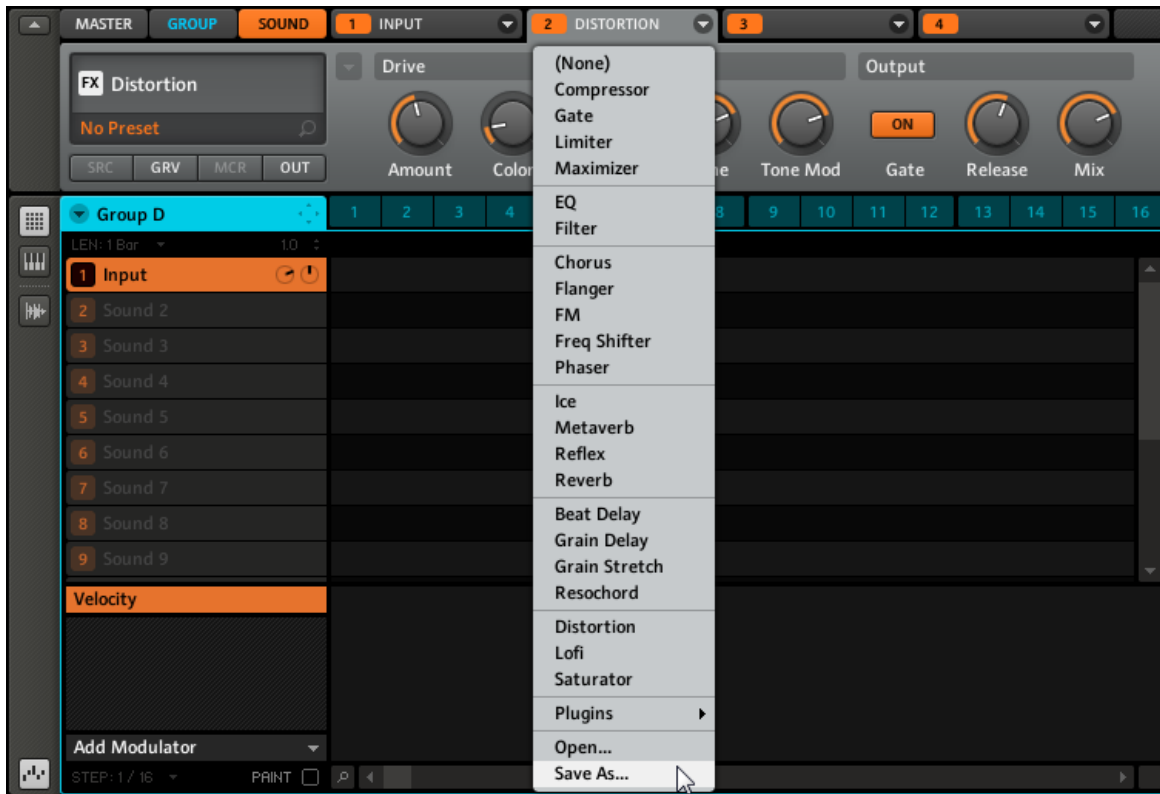
Automating FX is performed in the same way as automating one of the Sampler parameters (see chapter [↑7, Working with Patterns \(Software\)](#)).



If you don't know exactly what you can do with a certain effect, automating it using the MASCHINE hardware controller is a good way to find out!

9.8 Saving FX Presets

If you created a nice FX setting, you can put it to further use by saving it as an FX Preset. To save an FX Preset simply select the entry *Save As...* in the drop-down menu of the FX Module containing the effect you want to save.



The drop-down menu of the FX Module with the Save As... entry.



This function is only available in the MASCHINE software.



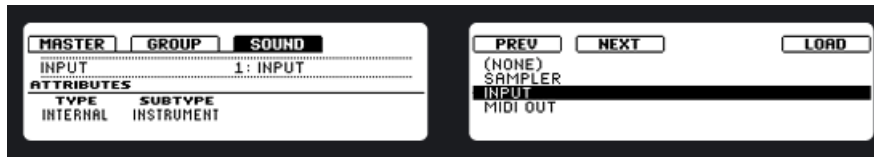
Your FX Presets are automatically included in the MASCHINE Library after saving them, so you can tag them right away!

9.9 Creating a Send Effect

Sometimes you may want to have a classic send effect, for example a reverb which can be shared by multiple sound sources. The process is similar to applying FX to an external sound source as described above. This is how to set it up.

Hardware

1. Let's send the Snare of the 909 Kit to a Reverb send effect. Load the 909 Kit by double-clicking it in the Browser and create a basic pattern.
2. Now select an empty Group with an empty Sound slot, let's say Sound 1. Select it by pressing its pad.
3. Press Button 5 to select the Source tab (*SRC*). After that press *SHIFT + BROWSE*.
4. By using Buttons 5 & 6 or Knob 5 you can select between *SAMPLER*, *INPUT* or *MIDI OUT*. Select *INPUT* and press Button 8 to confirm your selection.

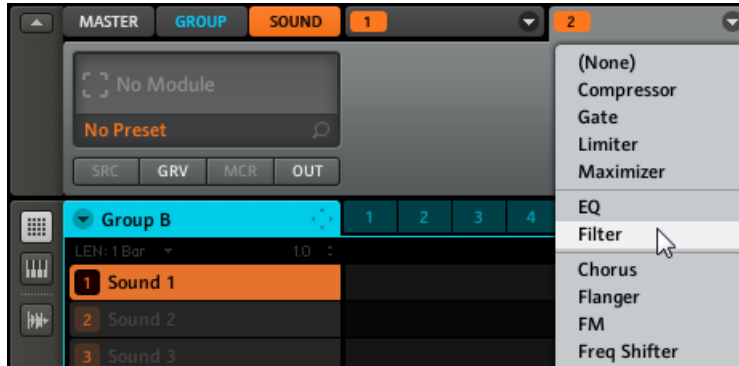


5. To select an effect slot, press the *CONTROL* button and then select Module 2 by pressing Button 6.
6. Press *SHIFT + BROWSE*: now you see the list of the available effects.
7. Select the Reverb, and load it using Button 8. Switch back to Control mode by pressing the *BROWSE* button again or pressing the *CONTROL* button.
8. Now go back to the 909 Kit Group and select the Snare Sound by pressing pad 2.
9. Go to the Output tab (*OUT*, Button 8) and turn Knob 5 to select the Aux 1 destination: select *B: INPUT 1* from the list.

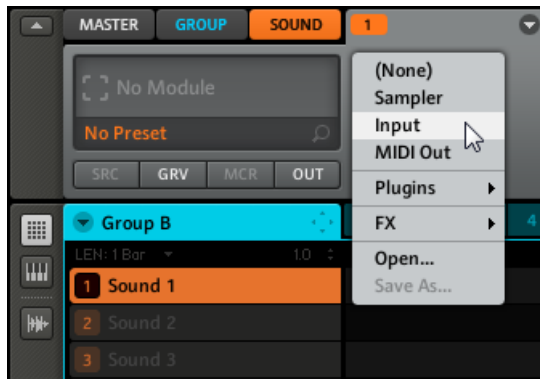
→ As you can hear, the Snare is already being sent to the effect; by turning the Aux 1 Level, you can adjust the amount of signal that gets sent into the Reverb.

Software

1. Select the first Sound slot of an empty Group. Load the Reverb into Module 2 of the Sound slot.

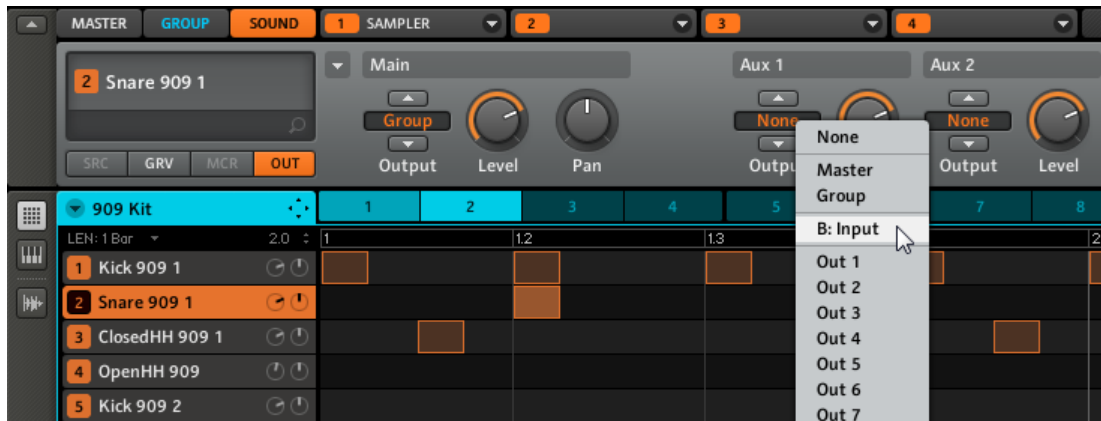


2. On Module 1, select *Input* and leave the Source at *Internal*:



3. Now select the 909 Kit Group again and click the Output tab (OUT) of the Sound [Snare 909 1](#):

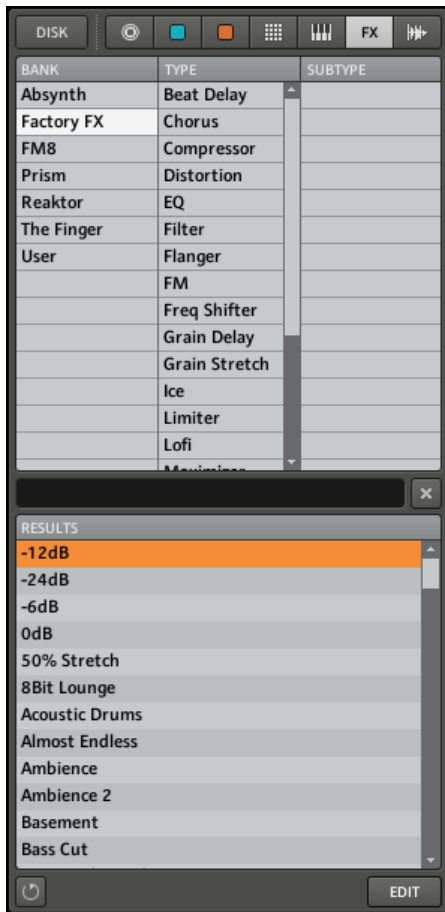
- You can see the two Aux sends, [Aux 1](#) and [Aux 2](#). In the drop-down menu of [Aux 1](#), select *B: Input 1* to send the [Snare 909 1](#) Sound to the Reverb in Sound 1:



→ When you press pad 2 (which contains the Snare 909) you will hear, the Snare is already being sent to the Reverb effect. By turning the [Aux 1 Level](#), you can adjust the amount of signal that gets sent into the Reverb. Repeat the process to add more sounds to the effect send or create another effect send using [Aux 2](#).

9.10 Creating a Multi Effect

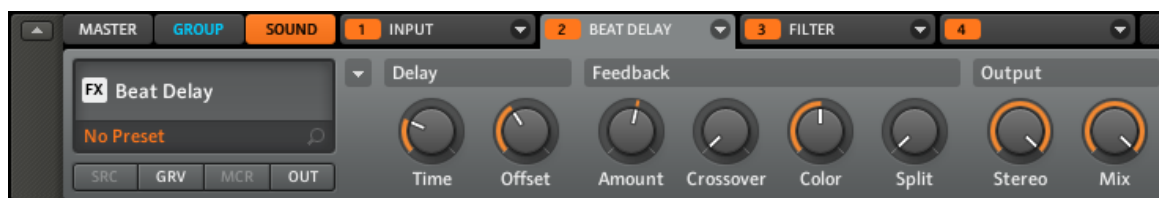
Creating a multi-effect group is basically the same thing as creating a send effect. As described in the previous chapter, you can set up four effects for every Sound in the Group, adding up to 64 effects per Group this way! This can be useful if you like a certain combination of effects for your live setup or in the studio. Although this is overkill, you can afterwards still add four more effects on the multi-effect group itself. Of course this depends on the age and processing power of your computer. However, make sure to name every Sound in this multi-effect group after the effect(s) inserted and to give it a name that allows you to recognize it as an effect; remember that you will be choosing this effect from a potentially large list in your User Bank. In the Library there are already a number of multi-effect groups tagged “Multi FX”:



The Multi FX of the Library in the Browser.

Example: The Multi FX Dual LFO Filtered Delays

The multi FX Dual LFO Filtered Delays consists of a combination of the Beat Delay with the Filter. Try out some other multi FX from the Library to get some ideas on how to set up your own multi FX! Your own presets can also include any combination of VST/AU plug-in effects you have installed for quick and easy recall from the User bank.



The multi FX Dual LFO Filtered Delays preset on the software.

10 Creating a Song using Scenes

Creating a Song on MASCHINE is easy and straightforward. The basic concept is this: a song is composed of Clips, each of which represents a Pattern from a given Group. A combination of several Clips stacked vertically is called a Scene, of which a Project can have up to 64. Scenes are useful as different parts of a Song that you can trigger independently — such as a beginning, a chorus or a break. To get you started we recommend you load a Project from the Factory Library and have a look at the Arranger:



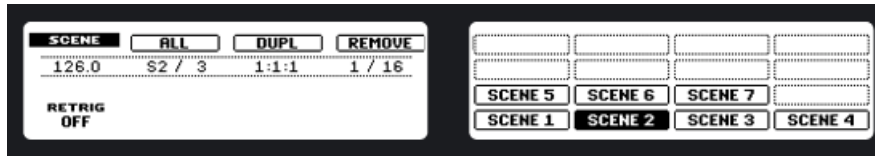
Factory Project “Deeper” in the Arranger with Scene 2 selected.

10.1 Selecting a Scene

Hardware

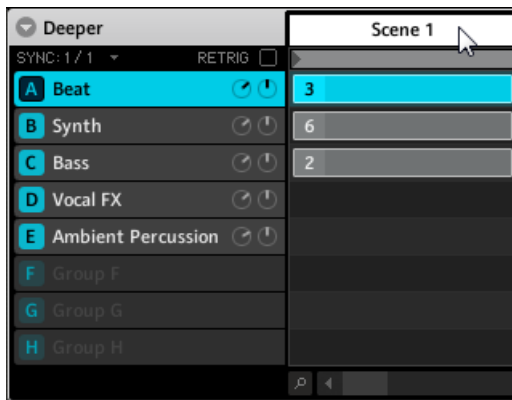
1. Enter Scene mode by holding the *SCENE* button. You can lock the Scene mode by pressing Button 1 at the same time. The right display gives you an overview of the available Scenes, with the selected Scene highlighted. The lit pads show the Scenes available for selection. If more than one pad is brightly lit, these scenes are looped.

2. Hit one of the pads to select a Scene. To get to Scenes 17 – 64, use Buttons 6, 7 and 8. The Scene will then be changed according to the Scene Sync settings (described in [↑10.3, Scene Sync](#)).



Software

- Select the Scene by clicking on the Scene slot in the Arranger. It will now be highlighted in white:



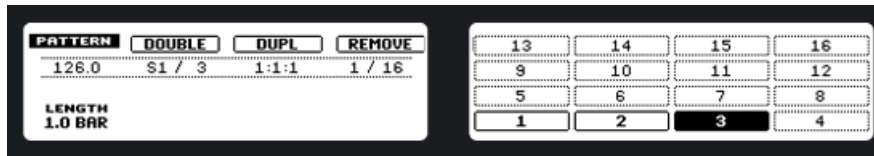
Selecting Scene 1.

10.2 Creating and deleting a Clip in the Arranger

Each Clip placed in the Clip area of the Arranger references one of the Patterns created in the Pattern Editor. Therefore, when a Pattern or any of its content is edited, all referencing Clips in the Arranger will automatically get updated accordingly. The length of a given Scene always corresponds to the longest Pattern of this Scene.

Hardware

1. Enter Pattern mode by pressing *PATTERN* and lock it by pressing Button 1 at the same time.
2. Choose your Pattern by selecting it with the pads.
3. To select the Pattern Banks A-D press Buttons 5 (Bank A) , 6 (Bank B), 7 (Bank C) or 8 (Bank D). The right display gives you an overview of the available Patterns with the selected Pattern highlighted. The selected Pattern will automatically be inserted into the selected Scene.

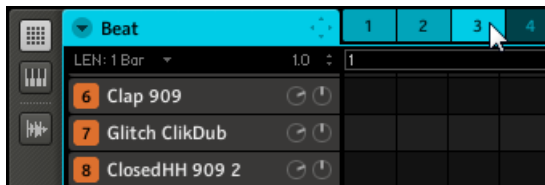


Overview of the Patterns on the right display.

- To remove a Clip from a Scene, press Button 4 labelled **REMOVE**. For further information regarding the Pattern mode, take a look at chapter [↑6, Working with Patterns \(Hardware\)](#) and [↑7, Working with Patterns \(Software\)](#).

Software

- Select the Pattern you want to use in the Scene by clicking on it in the Pattern Editor:



Selecting Pattern 3.

→ A Clip with the selected Pattern will be automatically inserted into the focused Scene column in the Arranger.



A Newly created Clip in Scene 1.

- To delete a Clip, right-click (on Mac OS X: [Ctrl]-click) it.



Double click on an empty Scene slot will create a new empty Pattern.

10.3 Scene Sync

Scene Sync allows you to quantize the Scene transitions. For example, you might not want a newly selected Scene to fire off immediately—you might want it to wait until the next bar line. The available quantization values are 1/1 (= one bar), 1/2, 1/4, 1/8, Scene and Off. If you choose Off, the Scene change will be performed immediately after you select the next Scene.

Hardware



The Scene Sync on the hardware.

- Press **GRID** + Button 2; using the pads, you can now select a Scene Sync.

| Display Element | Description |
|-----------------|---|
| RETRIG | If RETRIG is enabled (by turning Knob 1), the next Scene you select will be forced to play from the start. This is useful if you always want your Scenes to play from the beginning regardless of what's happening elsewhere in the music. If RETRIG is set to OFF , the next Scene you choose will be played according to the Scene Sync selected and at the current position of the previously selected Scene: i.e., leaving the first Scene on beat 3 will cause the new Scene to start playing on its beat 3. If you have set Scene Sync to OFF , the Scene change will happen immediately. |

Software

► In the software click on the drop-down menu above the Group slots and choose the desired quantization from the drop-down menu.



The Scene Sync on the software.

| Screen Element | Description |
|----------------|---|
| RETRIG | If RETRIG is enabled, the next Scene you select will be forced to play from the start. This is useful if you always want your Scenes to play from the beginning regardless of what's happening elsewhere in the music. If RETRIG is set to OFF , the next Scene you choose will be played according to the Scene Sync selected and at the current position of the previously selected Scene: i.e., leaving the first Scene on beat 3 will cause the new Scene to start playing on its beat 3. If you have set Scene Sync to OFF , the Scene change will happen immediately. |

The Scene Position Marker

The Scene position marker helps you to keep track of where exactly you are in the current Scene.

Software



The Scene Position Marker underneath the Scene slot.

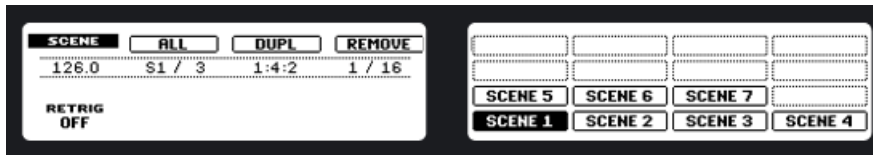
10.4 Inserting and Deleting Scenes

Hardware

1. Enter Scene mode and lock it (press *SCENE* and Button 1 at the same time).
2. Using Button 3 (*DUPL*) a duplicate of the selected Scene will be inserted.



To remove the Scene, press Button 4 (*REMOVE*).



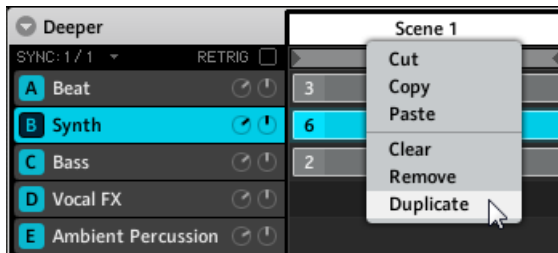
Scene view on the hardware.

Software

- Right-click ([Ctrl]-click on Mac OS X) on the Scene slot and choose *Duplicate* and a duplicate of the selected Scene will be inserted..



To remove the Scene, right-click ([Ctrl]-click on Mac OS X) on the Scene slot and choose *Remove*.



The Scene menu in the software.

10.5 Copy and Paste Scenes

Hardware

► To copy a Scene to another Scene slot, hold **DUPLICATE** and press on the pad containing the Scene you want to copy and then press the pad where you want to copy the Scene to. The copied scene replaces the scene in the target slot.

Software

1. Right-click ([Ctrl]-click on Mac OS X) on Scene slots opens the Scene menu.
2. Select *Copy* from the Scene menu of the Scene you want to copy.
3. Right-click on the target Scene slot and select *Paste* from the Scene menu.

10.6 Using the Loop Mode to combine Scenes

A single selected Scene is always looping automatically. The Loop mode allows you to select several consecutive Scenes and play them one after the other in a Loop. This is useful to check if the Scenes go well together and/or if the arrangement works, but also comes in handy in a live situation.

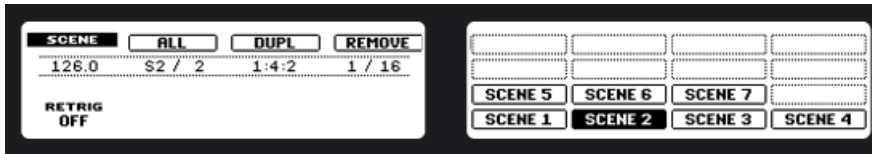
Hardware

1. Enter Scene mode by pressing the *SCENE* and lock it by pressing Button 1 at the same time. The loop range can be defined by selecting a start Scene and an end Scene.

2. Select the starting Scene by pressing the corresponding pad.
3. While holding the first pad, press the pad corresponding to the end Scene.
→ Now you will hear the first Scene and the second Scene in sequence. Any Scene in between those two will be integrated in the Loop. The looped Scenes are brightly lit.



To disable the Loop again, just select another Scene by pressing a pad in Scene mode. To include all Scenes in the Loop, press Button 2 (*ALL*).



The Scene view on the hardware: pressing Button 2 (*ALL*) creates a loop from Scene 1 to Scene 7.

Software

1. Click in the Arranger timeline below the Scene slot on the Scene you wish to define as the start Scene and drag to the right.
 2. Release the mouse button in the Scene where you want the Loop to end. The currently active Loop will be highlighted in light grey.
- Now you will hear the first Scene and the second Scene in sequence. Any Scene in between those two will be integrated in the Loop. The looped Scenes are brightly lit.



To disable the Loop, click in the Arranger Timeline. Double-click in the same area to create a Loop that ranges over all available Scenes.

| Deeper | Scene 1 | Scene 2 | Scene 3 |
|---|---------|---------|---------|
| SYND: 1 / 1 RETRIG <input type="checkbox"/> | | | |
| A Beat | 3 | 3 | 2 |
| B Synth | 6 | 2 | 1 |
| C Bass | 2 | 2 | 1 |
| D Vocal FX | | | 1 |
| E Ambient Percussion | | 1 | 1 |

A Loop containing Scenes 1, 2 and 3 in the Arranger.

10.7 Triggering Scenes via MIDI

The Scene MIDI Settings let you trigger and change Scenes using MIDI notes or MIDI Program Change messages, sent by your host to the MASCHINE plug-in or from any other MIDI device to the MASCHINE in standalone mode. To access Scene MIDI Settings:

1. Click on the arrow in the Header of the Arranger, next to the Project's name:



2. Choose *Scene MIDI Settings* from the drop-down menu to be presented with the Scene MIDI Settings dialog:



| Screen Element | Description |
|---------------------|--|
| Status Options | |
| Enable | Click this checkbox to enable the Scene MIDI Settings. |
| | |
| Input Options | |
| MIDI Note | If this radio button is checked, Scenes will be controlled by incoming MIDI notes. |
| Channel | From this drop-down menu, select the MIDI Channel the Scenes should receive MIDI notes from. |
| Root Note | This determines the MIDI note which triggers the first Scene. The following Scenes will be triggered by the following next higher MIDI notes. |
| MIDI Program Change | If this radio button is checked, Scenes will be controlled by incoming MIDI Program Change messages. Program Change 1 will trigger Scene 1, and the following Scenes will be triggered by the subsequent Program Change numbers. |
| Channel | From this drop-down menu, select the MIDI Channel the Scenes should receive MIDI Program Change messages from. |

11 Sampling and Sample Mapping

MASCHINE allows you to record internal or external audio signals using your audio interface without having to stop the sequencer. This is a useful feature if you want to record your own Samples, or rearrange Loops that you have created yourself using MASCHINE. The slicing feature (hardware: [↑11.1.2, Editing a Sample \(Hardware\)](#), software: [↑11.1.5, Editing a Sample](#)) allows you to slice Loops in order to make them playable at any tempo without changing their pitch or timing. It is also useful to extract single Samples from Loops (e.g., a snare sound from a drum loop) quickly or to rearrange Loops by editing or muting their Slices, changing the order of the Slices, applying a different quantization or adding Swing. Last but not least you can map your Samples (hardware: [↑11.1.3, Slicing a Sample \(Hardware\)](#), software: [↑11.1.7, Mapping a Sample](#)), thereby creating multi-sample Sounds with individual velocity and note ranges, volume and panning. This is useful to emulate the behavior of classic instruments and synthesizers, but also allows for a large amount of Samples in only one Sound. The files you record will be stored either in the Project folder or in the MASCHINE Library folder, depending on your settings in the Preferences (see chapter [↑2.4, Preferences](#)). Make sure to also check out the tutorial videos regarding Sampling on the Native Instruments website (<http://www.native-instruments.com>).



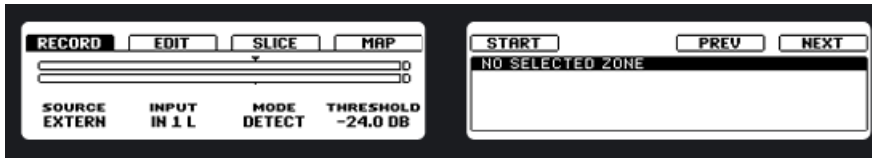
Before recording an external source please consult the documentation that came with your Soundcard for information on connecting audio devices and instruments.

11.1 Controlling Sampling from the Hardware

11.1.1 Recording a Sample (Hardware)

Choose an empty Sound slot to record into by selecting it with its pad.

Now hit **SAMPLING** to enter Sampling mode:



The Record page on the hardware displays.

| Display Element | Description |
|-----------------|--|
| SOURCE | You can select the Source by using Knob 1: it can be either set to Extern for audio signals connected to your audio interface, or Intern for audio signals from MASCHINE itself (either from another Group or from the Master Output). |
| INPUT | Using Knob 2 you can choose between the available Inputs. If EXTERN is selected, you can choose the external input of MASCHINE: IN 1 L , IN 1 R , OR IN 1 L + R . If INTERN is selected you can select from the available Groups and the Master as a source. |
| MODE | MASCHINE offers two different modes for starting the recording available via Knob 3. |
| | <p>DETECT: If DETECT is selected, you can set a certain THRESHOLD using Knob 4, and, after pressing START, the input signal level exceeding this threshold will start the recording. This is useful to record a singer or an instrumentalist, for example.</p> <p>SYNC: If SYNC is selected, you can synchronize the recording function to the sequencer, so that the recording starts in sync with the sequencer after you hit START (Button 5).</p> <p>Note: the recording will start as soon as the sequencer starts; if it is already running, the recording will start at the top of the next bar. Using Knob 4, you can choose a length for the Sample to be recorded: either 1, 2, 4, 8, or 16 bars or choose Free if you want to stop the recording yourself.</p> |
| START | START (Button 5) will start the recording. If you have selected SYNC , MASCHINE will wait for the next bar before starting to record; if you have selected Detect , the recording will start as soon as the THRESHOLD is met. CANCEL (Button 6) cancels the recording; the recorded Sample will not be saved. CANCEL is only available after the recording has been started. |
| DELETE | All Samples are stored in the recording history. Using Button 6 you can delete Samples you have recorded from the recording history. |

| Display Element | Description |
|-----------------|--|
| PREV | Hitting Button 7 allows you to select the previous Sample in case you have recorded more than one in this Sound slot. Note: to play the Sample, just hit the pad representing the Sound slot you used for sampling. |
| NEXT | Hitting Button 8 allows you to select the next Sample in case you have recorded more than one in this Sound slot. |

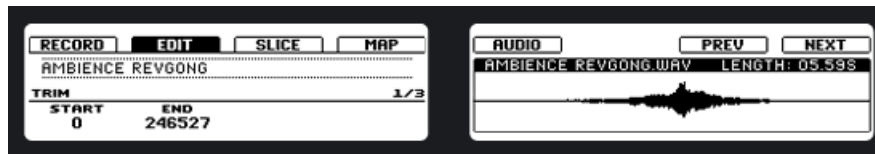


If you want to start and stop the recording manually, leave the Mode set to *DETECT*, dial the *THRESHOLD* down to *OFF* and start the recording by pressing *START* (Button 5). To stop recording, press *STOP* (Button 5).

11.1.2 Editing a Sample (Hardware)

With Button 2 you can reach the **EDIT** tab to edit the Sample. Here you can edit the start and end point of the Sample and create a Loop for it. Use Knob 5 to zoom in on the waveform of the Sample and Knob 6 to navigate through it.

Page 1



The Sample Editor on the hardware.

| Display Element | Description |
|-----------------|---|
| START | Using Knob 1 you can adjust the start point of the Sample here. |
| END | Using Knob 2 you can adjust the end point of the Sample here. |

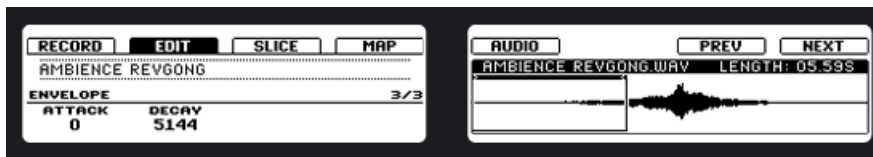
Page 2



Setting a Loop within a Sample on the hardware.

| Display Element | Description |
|-----------------|--|
| LOOP MODE | Here you can choose to either disable or enable Loop mode by dialing Knob 1. If enabled, you can see the Loop highlighted on the right display (as pictured above). The Loop will be repeated as long as the note is triggered, which can be useful to loop either a whole Sample or part of it to simulate a longer tone. |
| START | Define the start point of the Loop with Knob 2. |
| END | Defines the end point of the Loop with Knob 3. |
| CROSSFADE | CROSSFADE (Knob 4) allows you to blend a little of the material near the loop start and end points in order to get a smoother, less abrupt loop. This is particularly helpful if the loop is inducing any clicks. |

Page 3



Setting the amplitude envelope of a Sample on the hardware.

This particular amplitude envelope is mainly meant to allow you to get rid of clicks after slicing; you can either apply it to the whole Sample or to individual selected Slices.

| Display Element | Description |
|-----------------|---|
| ATTACK | The ATTACK parameter determines how quickly the Sample / Slice reaches full volume after being triggered. |
| DECAY | DECAY is used to adjust how fast the Sample / Slice dies down. |

Audio Editing

Audio editing allows you to process your Samples. Press Button 5 to enter audio editing:



Editing on the hardware.

| Display Element | Description |
|-----------------|--|
| RANGE | Using Knob 1 and Knob 2, you can select the part of the Sample that will be processed. To process the whole Sample, make sure you set the start and end point on page 1 accordingly. |
| START | Use Knob 1 to define the start point of the Sample to be processed. |
| END | Use Knob 2 to define the end point of the Sample to be processed. |

Selecting Audio Processes

Use Button 7 and 8 to access the audio function you want to use. To perform the audio function on the Sample, press Button 6 after selecting it. Available functions are:

| Display Element | Description |
|-----------------|---|
| TRUNCATE | This causes the part of the Sample that is outside of the range to be deleted. |
| NORMALIZE | This increases the volume of the selected Sample to the maximum possible value without inducing distortion. |
| REVERSE | This reverses the Sample. |
| FADE IN | This creates a Fade In to the Sample. |
| FADE OUT | This creates a Fade Out of the Sample. |
| DC FIX | This removes the DC offset which may cause audible clicks in the beginning or the end of the Sample. |
| SILENCE | This silences the selected part of the Sample. |
| CUT | This causes the part of the Sample that is inside of the range to be deleted. |

| Display Element | Description |
|-----------------|--------------------------------------|
| COPY | This copies the selected Sample. |
| PASTE | This pastes the selected Sample. |
| DUPLICATE | This duplicates the selected Sample. |

11.1.3 Slicing a Sample (Hardware)

Hit **SAMPLING** and press Button 3 to enter the **SLICE** tab. The right display will show you the waveform of the Sample with the Slices pictured as vertical lines. Depending on how you set up the Slice settings, the Slice Markers will move.



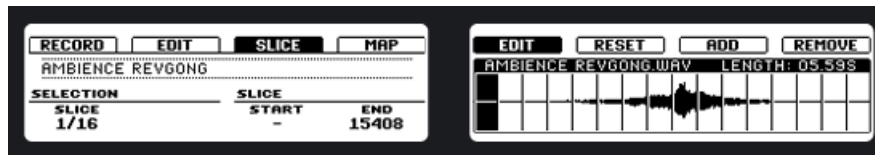
Use Knob 5 and 6 to navigate and zoom the Slices!



The SLICE tab on the hardware.

| Display Element | Description |
|-----------------|---|
| MODE | Using Knob 1, you can select either SPLIT , GRID or DETECT here. |
| SPLIT MODE | In Split mode, the Sample will be sliced into equally spread Slices. |
| SLICES | Here you can choose how many slices you want the Sample to be split into: 4, 8, 16 or 32. |
| TEMPO | Determines the tempo of the Sample: available options are AUTO and MANUAL . |
| BPM | Shows the BPM based on the Tempo settings above; if MANUAL is selected, you can dial in a BPM value using Knob 4; if AUTO is selected, you can choose from multiples of the tempo calculated by MASCHINE. |
| GRID MODE | In Grid mode, the Sample will be sliced according to musical values. |
| LENGTH | Select the musical value using Knob 2: available lengths are 4th, 8th, 16th and 32nd notes. |

| Display Element | Description |
|-----------------|--|
| TEMPO | Determines the tempo of the Sample: available options are AUTO and MANUAL . |
| BPM | Shows the BPM based on the Tempo settings above; if MANUAL is selected, you can dial in a BPM value using Knob 4; if AUTO is selected, you can choose from multiples of the Tempo calculated by MASCHINE. |
| DETECT MODE | In Detect mode, the Sample will be sliced according to its transients. |
| SENS | Sensitivity parameter for the transient recognition (Knob 2). Higher values will cause more Slices to be detected because more transients will be recognized, lower values will result in less slices. This parameter should be adjusted until all the musically significant slices are being detected in the right display. |
| TEMPO | Determines the tempo of the Sample: available options are Auto and Manual. |
| BPM | Shows the BPM based on the Tempo settings above; if Manual is selected, you can dial in a BPM value using Knob 4; if Auto is selected, you can choose from multiples of the Tempo calculated by MASCHINE. |
| EDIT | You can edit separate Slices using the Edit mode. Press Button 5 to enter Edit mode (see picture of Edit mode below). |



The EDIT mode in the SLICE tab.

| Display Element | Description |
|------------------|--|
| SELECTION | |
| SLICE | Choose the Slice you want to edit by dialing Knob 1 here; the display will show you which Slice is currently selected. You can also use the pads to select Slices starting from pad 1. |
| SLICE | |
| START | Here you can adjust the start point of a Slice using Knob 3. |

| Display Element | Description |
|-----------------|---|
| END | This lets you edit the end point of a Slice using Knob 4. |
| RESET | Reset your Slice edits using Button 6. |
| ADD | Add another Slice according to the Mode settings using Button 7. |
| REMOVE | Remove the selected Slice using Button 8. After you have performed your Slice edits, confirm them by pressing Button 5 again to return to the SLICE tab. |
| APPLY TO | APPLY TO allows you to copy the selected Loop to another Group or Sound. Press APPLY TO, then select the Group or Sound you want the Loop to be copied to. If you select a Group, the Slices will be mapped to individual Sounds and the Step Editor will open with notes for each Slice; if you choose a Sound, they will be mapped to one Sound and the Piano Roll/Keyboard Editor will open with notes for each Slice. |
| APPLY | Performs the slicing according to the settings above when you hit Button 7 and creates notes that trigger the slices in the currently selected Sound. After you hit APPLY, MASCHINE will automatically switch to Piano Roll / Keyboard mode and the loop will play back in time with the Project tempo. |

11.1.4 Mapping a Sample (Hardware)

- In Sampling mode, hit Button 4 to enter the MAP tab. Here you can create Zones consisting of Samples and their note ranges and velocity ranges. The Zones can overlap, allowing you to trigger different Samples at once or triggering different Samples depending on how hard you hit the pads.
- To switch between Zones, use Buttons 7 (PREV) and 8 (NEXT).
- To delete a Zone, press Button 5 (REMOVE).

Adding Samples to the Map

1. To add a new Sample to the map, activate the ADD option (Button 7) on the right Browser display.
 2. Select the Sample in the MASCHINE Browser.
- A new Zone will be created for the added sample.



To switch back to Sampling mode, press *SAMPLING*.

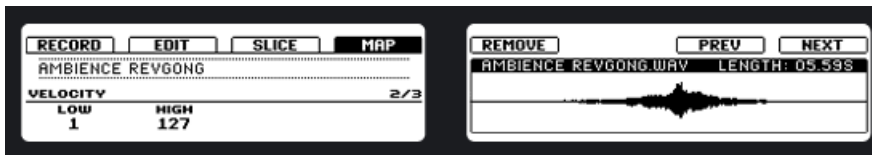
Page 1: Note Settings



The Mapping Editor displayed on the hardware.

| Display Element | Description |
|-----------------|---|
| ROOT | Here you can define a root key for the Zone. This defines the note that when played will cause the sample to play back at its original pitch. |
| LOW | Here you can define the lowest key of the selected Zone (Knob 2). |
| HIGH | Here you can define the highest key of the selected Zone (Knob 3). |

Page 2: Velocity Settings



The Velocity Range of the selected Zone displayed on the hardware.

| Display Element | Description |
|-----------------|---|
| LOW | Dial Knob 1 to define the lowest velocity for the Zone's velocity range. |
| HIGH | Dial Knob 2 to define the highest velocity for the Zone's velocity range. |

Page 3: Tune, Gain and Pan



Basic settings of the selected Zone displayed on the hardware.

| Display Element | Description |
|-----------------|--|
| TUNE | Tune control for the Zone (Knob 1). |
| GAIN | Volume level for the Zone (Knob 2). |
| PAN | Panorama position for the Zone (Knob 3). |

11.1.5 Editing a Sample

In the **EDIT** tab, you can do the following: adjust Start and End of the Sample, enable Loop mode, adjust Start and End Points of the Loop, or set a Crossfade between the End and the Start point of the Loop.



The EDIT tab on the software.

(1) Start and End of the Sample

Adjust the Start and End point by either dragging the small grey icons labeled “S” (for Start) and “E” (for End) left and right using the mouse, or by entering the [Start](#) and [End](#) points in their respective fields.

(2) Loop Settings

Here you can define a Loop by clicking on the [Loop](#) button. The Loop will be repeated as long as the note is triggered, which can be useful to loop a whole Sample or part of it in order to simulate a longer tone. The Start and End point can be edited by entering the [Start](#) and [End](#) points in their respective fields. Alternatively you can also alter the Start and End of the Loop by dragging the handles of the Loop and move the entire Loop by dragging its title bar. [Crossfade](#) allows you to define a crossfade value between the end and the start of the Loop.

(3) Info Bar

Displays the file name and the length of the currently edited Sample.

(4) Sample Editor Menu

| Screen Element | Description |
|-------------------------------|---|
| <i>Truncate</i> | This causes the part of the Sample that is outside of the range to be deleted. |
| <i>Normalize</i> | This increases the volume of the selected Sample to the maximum possible value without inducing distortion. |
| <i>Reverse</i> | This reverses the Sample. |
| <i>Fade In</i> | This creates a Fade In to the Sample. |
| <i>Fade Out</i> | This creates a Fade Out of the audio file. |
| <i>DC Fix</i> | This removes the DC offset which may cause audible clicks in the beginning or the end of the Sample. |
| <i>Silence</i> | This silences the selected part of the Sample. |
| <i>Cut</i> | This causes the part of the Sample that is inside of the range to be deleted. |
| <i>Copy</i> | This copies the selected Sample. |
| <i>Paste</i> | This pastes the selected Sample. |
| <i>Duplicate</i> | This duplicates the selected Sample. |
| <i>Remove sample from map</i> | This removes the Sample from the Sample Map. |
| <i>Open containing folder</i> | Opens the folder on your hard drive containing the Sample, providing quick access to the original file. |
| <i>Save sample as...</i> | Save a copy of the sample once it has been edited. |

(5) Timeline

Shows the length of the Sample either in bars (when Sync mode is selected) or seconds (when Detect mode is selected). When you put the mouse cursor over the timeline, the cursor turns into a small magnifying glass: drag your mouse horizontally for scrolling through the waveform and vertically to zoom in/out.

(6) Zoom Tool

Use this to zoom in and out of the Sample by click-dragging up (zoom in) and down (zoom out). You can also use the Timeline (see above).

(7) Envelope

This amplitude envelope is mainly meant to allow you to get rid of clicks after slicing; you can either apply it to the whole Sample or to individual selected Slices.

| Screen Element | Description |
|----------------|---|
| Attack | The Attack determines how quickly the Sample/Slice reaches full volume after being triggered. |
| Decay | Decay is used to adjust how fast the Sample/Slice dies down. |

11.1.6 Slicing a Sample

Slicing allows you to chop up Loops to be able to extract single Sounds (the drum sounds of a drum loop for example), but is also good for preparing a Loop to be played back at another than the original tempo without changing its pitch or timing.

Drag a Loop or any other long Sample you wish to slice from the Browser (or sample one yourself!) and drop it in an empty Sound slot. Press the Sampling button and then the [SLICE](#) tab. You can see that your Loop now has a couple of equally spread vertical lines in the waveform: this is where the Slices are going to be applied. You can select and listen to individual Slices by clicking on their waveform.



The SLICE tab on MASCHINE software.

(1) Mode and Slices Settings

| Screen Element | Description |
|----------------|---|
| Mode | Here you can select either <i>Split</i> , <i>Grid</i> or <i>Detect</i> . In Split mode, the Sample will be sliced into equally spread Slices. In Grid mode, the Sample will be sliced according to musical values. In Detect mode, the Sample will be sliced according to its transients. |
| Slices | Depending on the Mode selection you have made, you can adjust the following here: |
| | In Split mode: Choose the amount of Slices: 4, 8, 16 or 32. |

| Screen Element | Description |
|----------------|---|
| | In Grid mode: Choose the musical value : 4th, 8th,16th or 32nd notes. |
| | In Detect mode: Adjust the sensitivity of the transient detection here. Higher values will cause more Slices to be detected because more transients will be recognized, lower values will result in less slices. This parameter should be adjusted until all the musically significant slices are being detected in the waveform. |

(2) BPM Settings

| Screen Element | Description |
|----------------|---|
| Auto | If this radio button is selected, MASCHINE will calculate the tempo automatically. |
| Man | If this radio button is selected, you can enter the tempo in BPM manually. |
| BPM | If you have selected Auto , you can choose between the tempo that MASCHINE detected, or half or double of that tempo. |

(3) ADD and REMOVE

| Screen Element | Description |
|----------------|---|
| ADD | This allows you to add a Slice according to the current selection and the Mode and Slices Settings. |
| REMOVE | Here you can remove the currently selected Slice. |

(4) APPLY and Loop Dragger

| Screen Element | Description |
|----------------|---|
| APPLY | Hitting this button applies the slicing to the Sample, according to the settings defined. All Slices will be mapped to the same Sound slot the Loop has been recorded to. |

If you hit [Apply](#), the Piano Roll/Keyboard Editor will open automatically after that, and you will see a couple of notes:



The notes representing the Slices of a Loop.



Play around with the Slicing feature by removing some of these notes, quantizing or completely rearranging them!

These notes represent the Slices and trigger them in order to play the Loop with correct timing and pitch. Try changing the tempo now, and you will hear that the Loop automatically adjusts to the new tempo.

| Screen Element | Description |
|----------------|--|
| Loop Dragger | The Loop Dragger allows you to drag the Loop to another Sound or another Group. If you select a Group, the Slices will be mapped to individual Sounds and the Step Editor will open with notes for each Slice; if you choose a Sound, they will be mapped to one Sound and the Piano Roll / Keyboard Editor will open with notes for each Slice. |

(5) File Name

Displays the file name of the currently edited Sample and allows you to listen to the selected Slice by clicking on the loudspeaker icon.

(6) Dropdown Menu

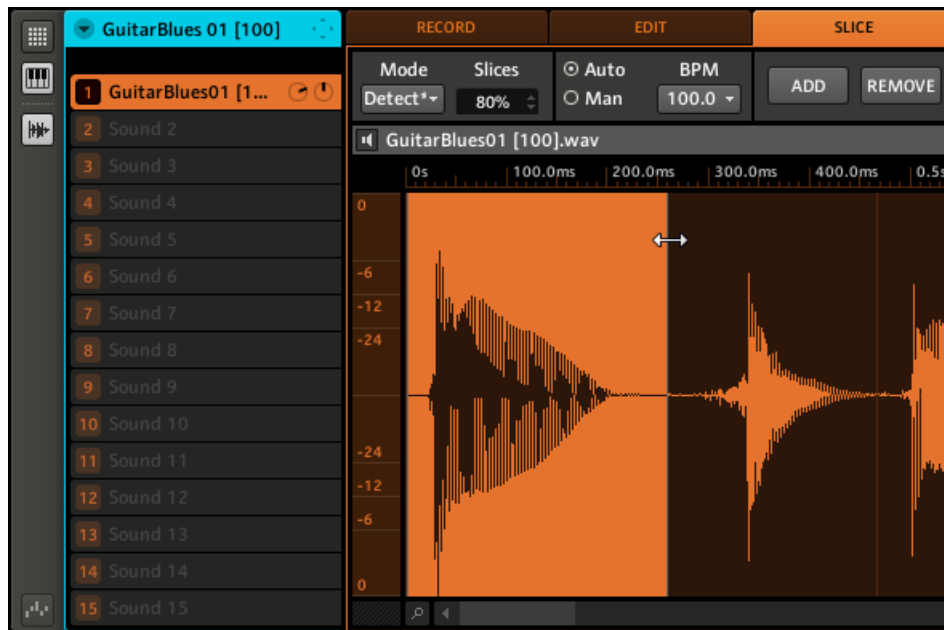
| Screen Element | Description |
|--|--|
| Remove sample from map | Allows you to remove the Sample from the Sample Map. |
| Open containing folder | Opens up the folder containing the Sample, allowing you quick access to the original file. |
| Save As | Allows you to save the Sample. |

(7) Timeline

Shows the length of the Sample in seconds. When you put the mouse cursor over the timeline, the cursor turns into a small magnifying glass: drag your mouse horizontally for scrolling through the waveform and vertically to zoom in/out (useful when editing individual Slices).

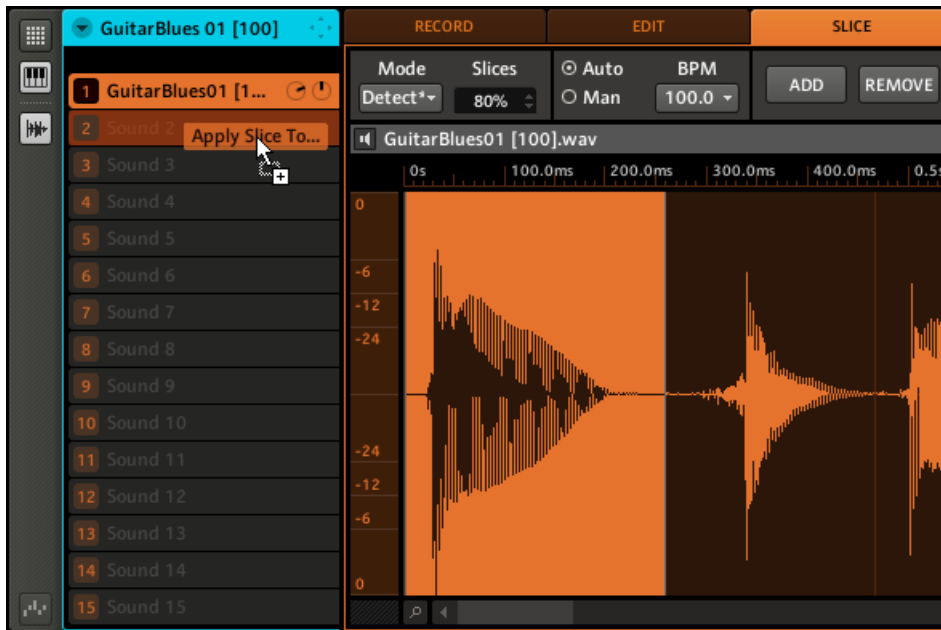
(8) Waveform Display

Here you can adjust individual Slices by dragging their borders:



Dragging the border of a Slice adjusting its end point.

To copy a Slice to another Sound, simply click and drag it:



Dragging an individual Slice to another Sound.

(9) Zoom Tool

Use this to zoom in and out of the Sample by click-dragging up (zoom in) and down (zoom out). You can also use the timeline (see above).

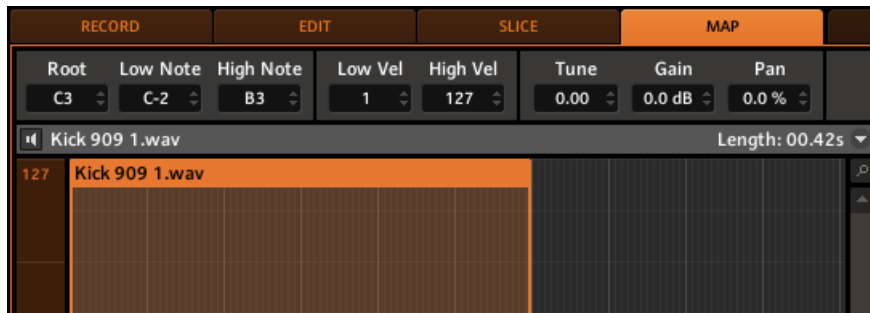
(10) Sample Pre-Listen Button

Click the Pre-Listen button (designated by the loudspeaker icon) to listen to the loaded Sample.

11.1.7 Mapping a Sample

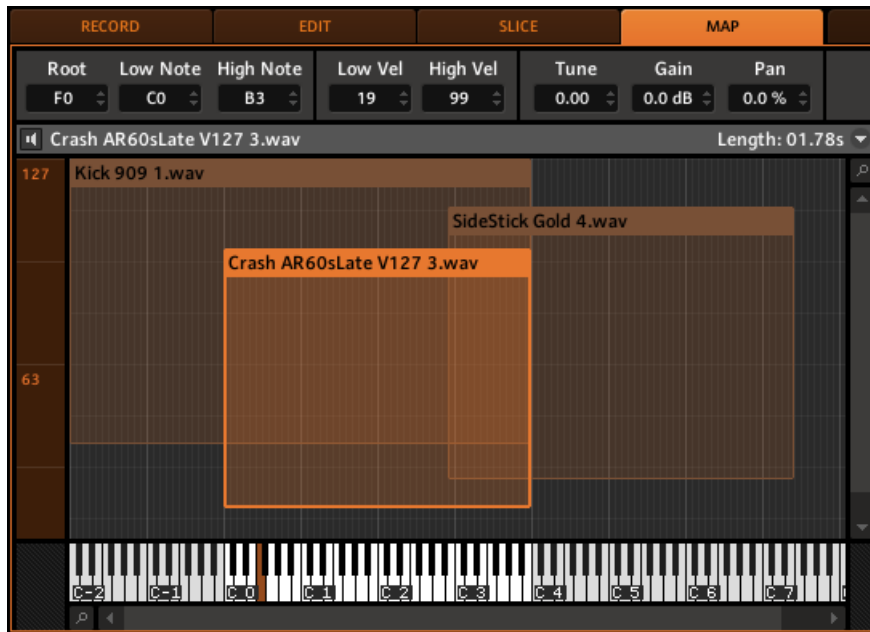
Mapping Samples is a way to create Sounds with more than one Sample across the MIDI keyboard.

1. Select an empty Sound slot, then click the Sampling view switch (designated by the waveform icon) and enter the **MAP** tab by clicking on it:



2. To add a new Sample, select one from the Browser and drag it into the mapping area. A Zone will be created; you can drag the left and the right border of the Zone with your mouse, thereby extending or minimizing it and defining a note range.
3. Drag the top or bottom border of the Zone to change the velocity switching of the Sample.
4. Now you can add another Sample or drag a Sample onto an existing Zone replacing the Sample of that Zone. The note range of several Zones can overlap, as can the velocity range. You can also set all necessary parameters for a Zone in the Control area: make sure

the Zone is selected by clicking on it first though. To listen to the Sample of a selected Zone click on the speaker icon left to its name.



You can drag several Samples to the Map at once by pressing [Ctrl] on your computer keyboard and clicking on Samples in the Browser. Drag the Sample to the Map and place them in the desired area.



To select each Sample within the Map press [Ctrl] on your computer keyboard and click each Sample.

MAP tab: Controls

| Screen Element | Description |
|----------------|--|
| Root | Select a root note in the Root field. The root note will be highlighted in brown on the Keyboard; to change it, you can also drag it to another note on the Keyboard. |
| Low Note | Set the lowest note of the Zone by entering it here. Alternatively, you can drag the left border of the Zone to the lowest note. The note range of the selected Zone will be marked on the Keyboard with a slightly lighter color. |

| Screen Element | Description |
|-------------------------------|--|
| High Note | Set the highest note of the Zone by entering it here. Alternatively, you can drag the right border of the Zone to the highest note. |
| Low Vel | This defines the lowest velocity for the Zone's velocity range. Set it by entering the value in the text field or by dragging the lower border of the Zone. |
| High Vel | This defines the highest velocity for the Zone's velocity range. Set it by entering the value in the text field or by dragging the upper border of the Zone. |
| Tune | Set the tuning of the Zone in the Tune field. |
| Gain | Set the gain of the Zone here. |
| Pan | Set the panorama position of the Zone here. |
| Horizontal Zoom Tool | Use this to zoom in and out horizontally by click-dragging up (zoom in) and down (zoom out). |
| Vertical Zoom Tool | Use this to zoom in and out vertically by click-dragging up (zoom in) and down (zoom out). |
| Drop-down Menu (to the right) | <p><i>Remove sample from map:</i> Allows you to remove the Sample from the Sample Map.</p> <p><i>Open containing folder:</i> Opens up the folder containing the Sample, allowing you quick access to the original file.</p> <p><i>Save sample as...:</i> Save a copy of the Sample to your hard drive.</p> |

12 The Master Section

The Master is the place where all signals from the Groups are being mixed together and their panorama position is set. Just like the Groups and Sounds, the Master can host up to four Insert effects.

12.1 The Master Parameter Pages

12.1.1 Mix Page 1: Master Mixer

Hardware

To access the Master Mixer Level settings:

1. Press *CONTROL* to enter Control mode.
2. Press Button 1 to select *MASTER*.
3. Press Button 5 to select *MIX*.



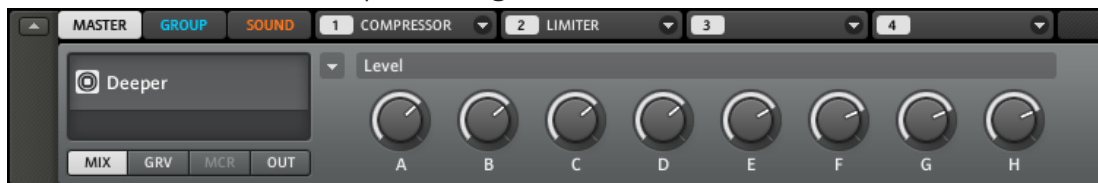
4. Turn knobs 1-8 to change the Group volume level.

Software

To access the Master Mixer Level settings:

1. Select the [MASTER](#) tab.
2. Click [MIX](#) in the Parameter Page buttons.

3. Select the *Level* from the drop-down Page Selection menu.



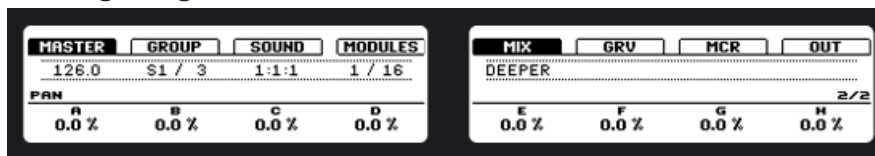
| Level | |
|-----------------|--|
| Level knobs A-H | These knobs allow you to adjust the volume level of each Group. If you adjusted it already in the Group <i>OUT</i> tab, this will be represented here. |

12.1.2 Mix Page 2: Group Panning

Hardware

To access the Master Mixer Pan settings:

1. Press *CONTROL* to enter Control mode.
2. Press Button 1 to select *MASTER*.
3. Press Button 5 to select *MIX*.
4. Press right Page button to select *PAN*.



5. Turn knobs 1-8 to change the panorama position of each Group.

Software

To access the Pan settings:

1. Select the *MASTER* tab.
2. Click *MIX* in the Parameter Page buttons.
3. Select *Pan* from the drop-down Page Selection menu.



The Group Panning on the software.

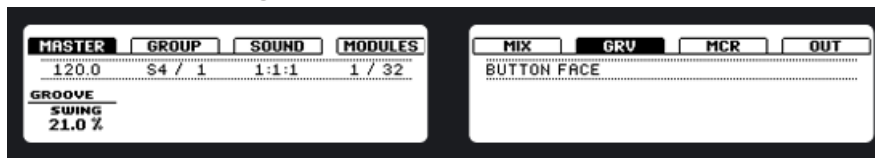
| Pan | |
|-------------------------------|--|
| Pan knobs A-H | These knobs allow you to adjust the panorama position of each Group. If you adjusted it already in the Group OUT tab, this will be represented here. |

12.1.3 Groove Swing

Hardware

To access the Groove Swing settings:

1. Press *CONTROL* to enter Control mode.
2. Press Button 1 to select *MASTER*.
3. Press Button 6 to select *GRV*.
4. Turn knob 1 to change the *SWING* value.



Alternatively, you can quickly alter the Master Swing value by simply turning the dedicated *SWING* knob. To change the value of a Group hold a Group button and turn the *SWING* knob. To change the Swing value of a Sound you can hold a Sound pad and turn the *SWING* knob.

Software

To access the Groove settings:

1. Select the [MASTER](#) tab.

- Click **GRV** in the Parameter Page buttons.



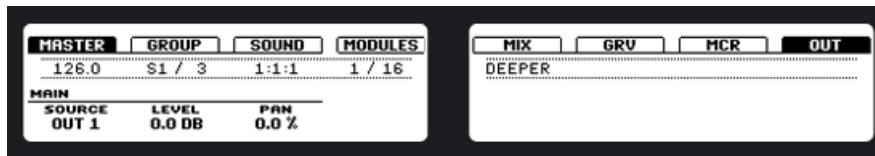
The Master Swing setting on the software.

12.1.4 The Master Output Tab (OUT)

Hardware

To access the Output settings:

- Press *CONTROL* to enter Control mode.
- Press Button 1 to select *MASTER*.
- Press Button 8 to select *OUT*.
- Turn Knob 1 to change the Master *OUTPUT* channels.
- Turn Knob 2 to change the Master *LEVEL* output.
- Turn Knob 3 to change the *PAN* of the output signal.

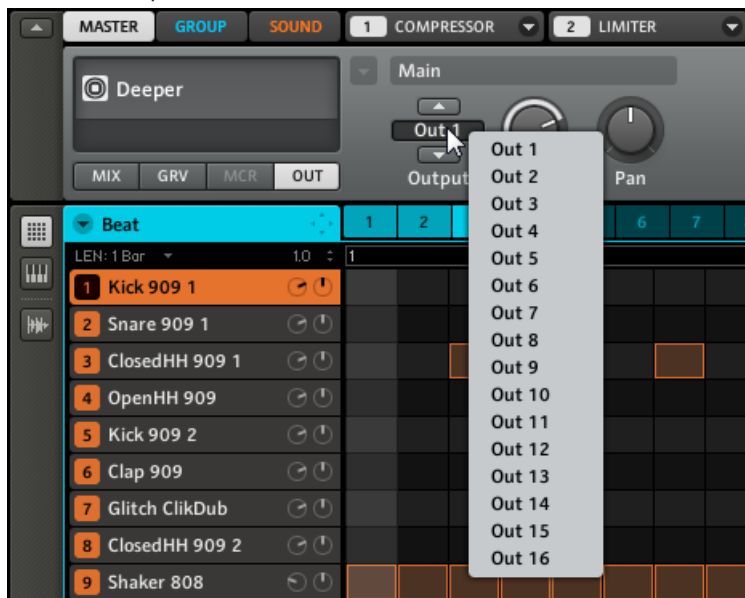


Software

To access the Output settings:

- Select the **MASTER** tab.
- Click **OUT** in the Parameter Page buttons.

- Use the drop-down menu to select a channel for the Master output.



| Screen Element | Description |
|----------------|---|
| Main | |
| Output | Here you can choose to which output you would like to send the Master Signal: available options are Out 1-16 . On the software, click on the label to open the drop-down menu allowing you to choose an output. |
| Level | This allows you to adjust the volume level of the Master output. |
| Pan | This allows you to adjust the panorama position of the Master output. |

13 Exporting Audio

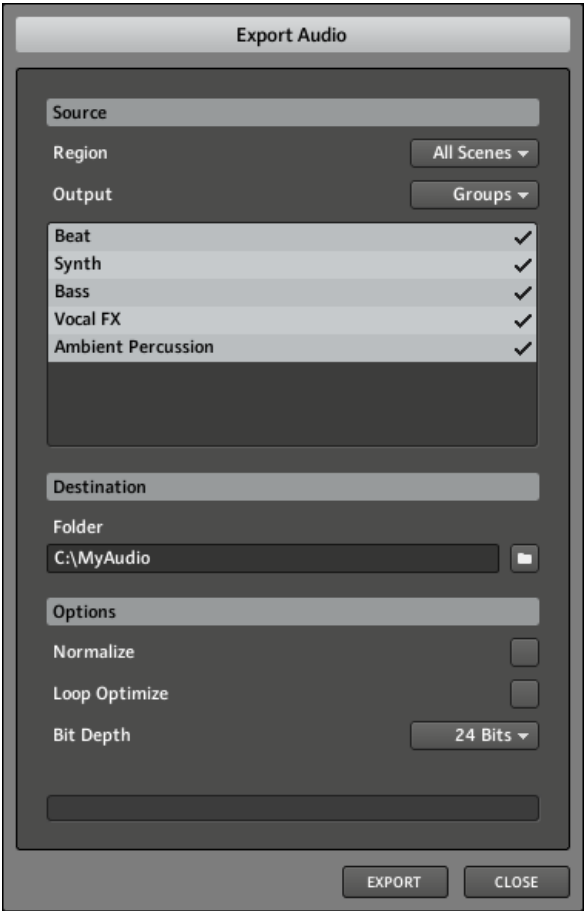
In some cases you might want to export your Groups, Sounds or complete Songs to files in order to be able to edit them further in other applications or burn a CD. The format of the exported audio files is WAV.



The Export function is only available in the software!

13.1 Export Audio

► Choose *Export Audio...* from the [File](#) menu and you will be presented with the following dialog:



The Export Audio dialog.

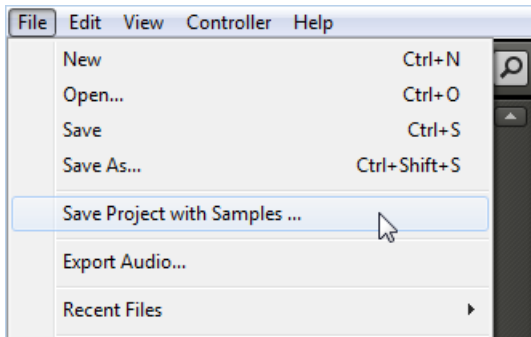
| Screen Element | Description |
|----------------|---|
| Source | |
| Region | Here you can choose a region you want to export. Available options are All Scenes (all Scenes of the Project will be exported) and Loop Range (only the Scenes in the Scene Loop will be exported). |
| Output | This is to determine what gets exported: |

| Screen Element | Description |
|--------------------|---|
| | <i>Master:</i> The Master Signal containing all Groups and Sounds and their FX in one audio file. |
| | <i>Groups:</i> All selected Groups will be exported to individual audio files. By clicking on the checkbox next to the Group names in the box below you can include and exclude Groups. |
| | <i>Sounds:</i> All selected Sounds from the Group currently in focus will be exported to individual audio files. By clicking on the checkbox next to the Sound names in the box below you can include and exclude Sounds. |
| Destination | |
| Folder | This allows you to choose a folder on your hard drive where you want to save the exported audio file. |
| Options | |
| Normalize | By checking this option, the resulting audio file will be brought to the highest possible volume level without distorting it. |
| Loop Optimize | This option allows for optimizing the resulting audio file to use as a Loop. With loop optimize, the exported sound file has the exact length of the exported region in MASCHINE, the effect tail is rendered into the beginning of the audio file. Without optimize, the exported sound file will be prolonged to keep, e.g., the effect of a reverb. |
| Bit Depth | Here you have the choice between three different bit depths: <i>8 Bit</i> (sounds kind of Lofi and was used in many vintage samplers and drummachines), <i>16 Bit</i> (this is the bit depth of CDs) and <i>24 Bit</i> (the highest available bit depth in MASCHINE, best for Mastering). |
| Export | After having selected your options, click Export to actually start exporting your audio file. |
| Close | This is used to close the Export Audio window. |

13.2 Save Project with Samples

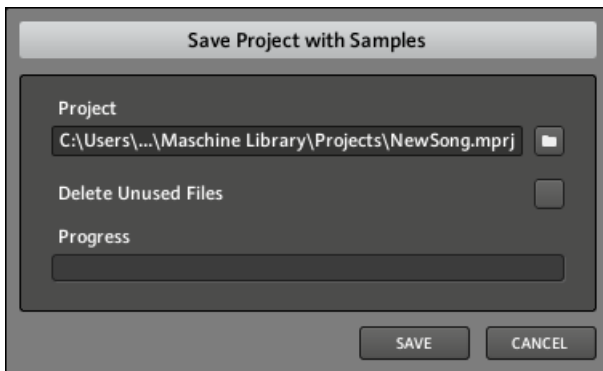
Sometimes it is useful to have the ability to save the Samples of a Project outside of the MASCHINE Library. If you want to take a Project to another studio or if you want to backup a production with all the related files, this comes in handy.

- Choose *Save Project with Samples...* from the [File](#) menu:



Choosing Save Project with Samples... from the File menu.

You will be presented with the Save Project with Samples dialog:



The Save Project with Samples dialog.

| Screen Element | Description |
|-------------------------------------|---|
| Project | You can choose a folder to save the files to clicking on the folder icon. |
| Delete Unused Files | This checkbox allows you to delete unused files, thereby minimizing the amount of audio data. |
| Progress | Shows the level of progress MASCHINE has made deleting unused files. |

14 Appendix: Tips for playing Live

Since MASCHINE is a very hands-on tool for producing music as well as for performing live, we figured we would gather some tips for you to get you started playing live. If you are used to playing live, you may not need them, but maybe you will find some new ideas to integrate in your set.

14.1 Preparations

14.1.1 Focus on the Hardware

In a live situation it is not very comfortable or intuitive to look back and forth from your laptop screen running the MASCHINE software to the MASCHINE hardware controller.

14.1.2 Customize the Pads of the Hardware

Take your time to setup the pad sensitivity and velocity scaling to your personal taste (see section [↑2.4.6, Preferences – Hardware Tab](#), to learn how to do that) — you will have even more fun playing MASCHINE.

14.1.3 Check your CPU Power before Playing

Some things can be very embarrassing, for example if you are on stage and your computer starts to have the hiccups because it cannot handle the amount of effects anymore. Although the MASCHINE software is programmed very efficiently, this might happen if your computer is quite old. So before you get on stage, give your live set a thorough performance check by first playing it at home.

14.1.4 Name your Groups, Sounds and Scenes

Naming your Groups, Sounds and Scenes gives you a better overview of exactly what you are doing, especially if you focus on playing with the MASCHINE hardware controller. It might not be something that is very interesting, but it certainly pays off in a hectic live situation to have a quick overview.

14.1.5 Consider using a Limiter on your Master

This sounds rather conservative, but if you want to avoid digital distortion caused by an overload of your soundcard, this is a useful safety measure. On the other hand you might experience a somewhat squashed and dull sound if you overuse the Limiter by feeding a lot of loud signals to it. Try it out and see what works best for you!

14.1.6 Hook up your other Gear and sync it with MIDI Clock

If you have other gear such as a drum machine, a synthesizer or another sequencer that is able to send MIDI Clock, hook it up to the MASCHINE hardware controller's MIDI In and activate *Sync to External MIDI Clock* from MASCHINE's [File](#) menu so that they can play together in sync. MASCHINE can also receive MIDI Clock via an internal MIDI port, so you can synchronize it with a MIDI Master. Furthermore, you can let MASCHINE send the MIDI Clock signal (see section [↑2.5.3, MIDI Tab](#) for more info on these). Make sure to also setup your Sync Off-set Slave correctly (see chapter [↑2.4.1, Preferences – General Tab](#)) so that all your machines and MASCHINE are tightly synchronized.

14.1.7 Improvise

It is nice if a live set is working out exactly the way you planned it, but sometimes, this can get boring for you as well as for the audience. Something unexpected or even plain mistakes can be the key for inspiring tracks and performances as well as just jamming around with your Sounds and Samples.

14.2 Basic Techniques

14.2.1 Use Mute & Solo

Mute and Solo are a good way to build up a live set especially on the MASCHINE hardware controller as you can mute and solo Groups and Sounds at the same time.

By locking the Mute and Solo function, you have both hands free to mute or solo Sounds and Groups. Since pressing **SOLO** mutes all sounds except one, the **MUTE** button can be used to “release” sounds that have been muted. You can use this technique to create a breakdown: Solo a given sound such as a kick drum, then build the track up again by bringing the muted sounds back in one at a time with the **MUTE** button.

14.2.2 Use Scene Mode and Scene Sync

Scene mode is useful to trigger different parts of an arrangement by switching Scenes. By using a short value for the Scene Sync, you can quickly combine Scenes and create new variations.

14.2.3 Create Variations of your Drums in the Step Sequencer

You can easily create interesting drums by adding or removing steps in the Step Sequencer. Breaks and build-ups like snare rolls or a double-tempo hihat can be created on the fly.

14.2.4 Use Note Repeat

Note Repeat is a very useful tool for playing live: use it to add some additional drums, drop in some effect sounds, play a bassline or a melody. Note Repeat is also interesting to use with tonal Sounds and you can access it from Piano Roll / Keyboard mode to create synthesizer-like arpeggios.

14.2.5 Set up your own Multi FX Groups and automate them

You can setup multi FX Groups containing all the effects you want to use in a live set. You can find several multi FX in the Library (check the Browser Bank for multi FX) to give you an idea of what works for you. To be able to quickly change and modulate the FX settings, you can set automation for the multi FX as Patterns from within the MASCHINE software. By using Patterns for the multi FX Group you could for example trigger a filter-sweep or a wild modulated Beat Delay.

14.3 Special Tricks

14.3.1 Changing Pattern Length for variation

Try a short quantization like a $\frac{1}{4}$ note in the Pattern Length Grid and change the Pattern Length in Pattern mode (see chapter [↑6.1.12, Step Grid, Pattern Length Grid and Quantization](#)) using Button 1 to create variations of a Pattern. If you select an even higher value like $\frac{1}{64}$ th you can create stuttering breaks and rolls.

14.3.2 Using the Loop Mode to cycle through Samples

You can use the Loop mode to cycle through Samples, creating glitches and stuttering breaks or interesting soundscapes. Just enter the **EDIT** tab in Sampling mode, enable Loop mode and play with the Knobs for the start and end point of the Loop. Use the **SHIFT** button to change the values in smaller increments.

14.3.3 Load long Audio Files and play with the Start Point

As you know you can adjust the start of a Sound in the Sampler Parameter pages. If you load a long audio file, you can create interesting variations by tweaking the start. Note: this technique requires that you choose either AHD or ADSR as the Amplitude Envelope.

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