MANUAL



MASCHINE STUDIO

NATIVE INSTRUMENTS

THE FUTURE OF SOUND

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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, AU, or AAX plug-ins, you can reap the benefits in almost any software setup, or use it as a stand-alone 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 7-gigabyte library, 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 Where to Start?

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

1. **MASCHINE Setup Guide**
2. **MASCHINE Getting Started** and online **video tutorials**
3. **MASCHINE Manual** (this document)



The whole documentation set is available in PDF format and located within the MASCHINE installation folder on your hard disk. You can also access these documents from the Help menu in the Application Menu Bar or from the *Help* submenu in the MASCHINE menu.



Please check the Service Center or the Native Instruments website regularly for up-to-date and localized versions of these documents. You can start the Service Center by selecting *Launch Service Center* from the Help menu in the Application Menu Bar or from the *Help* submenu in the MASCHINE menu.

Additional documentation sources provide you with details on more specific topics:

- **MASCHINE Hardware Control Reference**
- **Controller Editor Manual**

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

Your First Stop: the Setup Guide

The Setup Guide will guide you through the software and hardware installation of MASCHINE, from the very beginning to the first sound coming through your speakers.

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

MASCHINE Getting Started

After reading the Setup Guide and following its instructions, your MASCHINE should be up and running. The next step is to read the MASCHINE Getting Started. This gives you a practical approach to MASCHINE via a set of tutorials covering easy and more advanced tasks in order to help you familiarize yourself with MASCHINE.

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.

MASCHINE Manual

This MASCHINE Manual provides you with a comprehensive description of all MASCHINE software and hardware features.

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.

Controller Editor 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 information on this, please refer to the Controller Editor Manual available as a PDF file in the Documentation subfolder of the Controller Editor installation folder on your hard disk.

Other Online Resources

If you are experiencing problems related to your Native Instruments product that the supplied documentation does not cover, there are several ways of getting help:

- Knowledge Base
- User Forum
- Technical Support
- Registration Support

You will find more information on these in chapter ↑16, Troubleshooting – Getting Help.

1.2 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:

This document uses particular formatting to point out special facts and to warn you of potential issues. The icons introducing the following notes let you see what kind of information can be expected:



The speech bubble icon indicates a useful tip that may often help you to solve a task more efficiently.



The exclamation mark icon highlights important information that is essential for the given context.



The red cross icon warns you of serious issues and potential risks that require your full attention.

Furthermore, the following formatting is used:

- Text appearing in (drop-down) menus (such as *Open...*, *Save as...* etc.) in the software and paths to locations on your hard disk or other storage devices is printed in *italics*.
- Text appearing elsewhere (labels of buttons, controls, text next to checkboxes etc.) in the software is printed in blue. Whenever you see this formatting applied, you will find the same text appearing somewhere on the screen.

- Text appearing on the displays of the controller is printed in light grey. Whenever you see this formatting applied, you will find the same text on a controller display.
- Text appearing on labels of the 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] + [Enter]").

▶ Single instructions are introduced by this play button type arrow.

→ Results of actions are introduced by this smaller arrow.

Naming Convention

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

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

Button Combinations and Shortcuts on Your Controller

Most instructions will use the "+" sign to indicate buttons (or buttons and pads) that must be pressed **simultaneously**, starting with the button indicated first. E.g., an instruction such as:

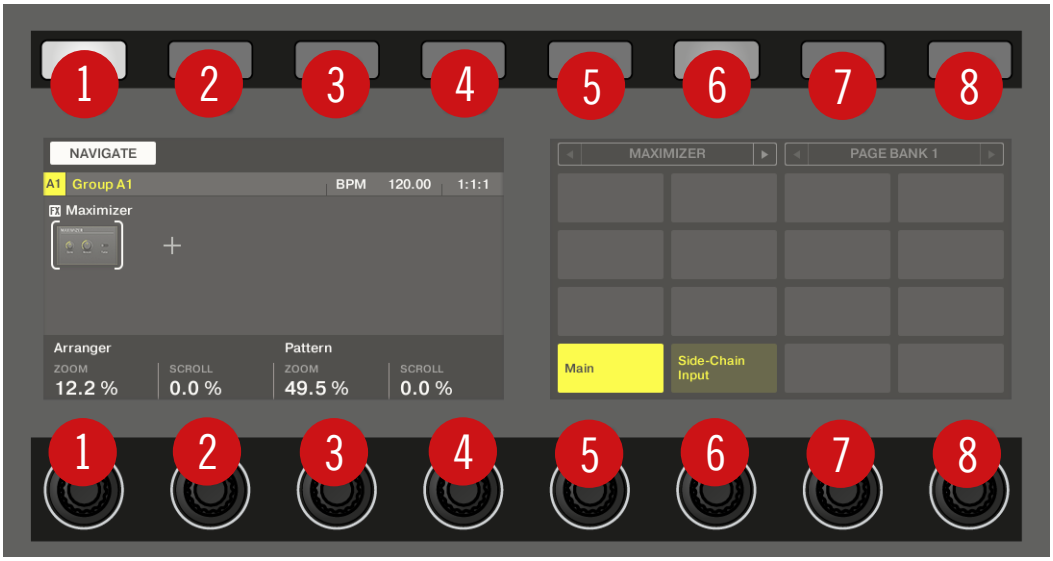
"Press SHIFT + PLAY"

means:

1. Press and hold SHIFT.
2. While holding SHIFT, press PLAY and release it.
3. Release SHIFT.

Unlabeled Buttons on the Controller

The buttons and knobs above and below the displays on your MASCHINE controller do not have labels.



The unlabeled buttons and knobs on the MASCHINE STUDIO controller.

For better reference, we applied a special formatting here: throughout the document, the elements are capitalized and numbered, so the buttons above the displays are written Button 1 to Button 8, while the knobs under the displays are written Knob 1 to Knob 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.

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 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, instruments and effect presets, and Samples. 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, as well as factory libraries of any Native Instruments products installed on your computer. You can also import your own files to the Library and tag them as well. To learn more about the Browser, please read chapter ↑3, Browser.

Project

A Project contains all data needed for a song: Groups with their Patterns, all Scenes and all settings, modulation, effects, routings, Sounds and Samples. It's like a snapshot of the entire state of MASCHINE. Please read the MASCHINE Getting Started for a complete overview of the MASCHINE Project structure.

Sound

Sounds are the building blocks of all sound content in MASCHINE. A Sound is made up of any number of Plug-ins. Each Sound of the selected Group is mapped to one of the 16 pads on the hardware controller, so you can play the Sounds by pressing the pads. Refer to chapter ↑4, Managing Sounds, Groups, and Your Project for more information on Sounds.

Group

A Group contains 16 Sound slots. In addition to the Effect Plug-ins applied to each individual Sound, a Group can have its own insert effect. These affect all the Sounds in the Group. A Group can also contain any number of Patterns (grouped into banks of 16 Patterns each). Refer to chapter ↑4, Managing Sounds, Groups, and Your Project 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 channel can also host any number of insert effects 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 ↑4, Managing Sounds, Groups, and Your Project.

Pattern

A Pattern is a sequence that plays Sounds from a Group. It belongs to that Group and will be saved together with the Group. In every Scene you can choose for each Group which of its Patterns has to be played. More information on Patterns can be found in chapter ↑7, Working with Patterns.

Scene

A Scene is a combination of Clips for your different Groups. Each Clip references a specific Pattern of a Group. In a Scene you can create one Clip for each Group. Scenes are located in the Arranger. They can be used to build up a finished arrangement or to trigger different parts of a song during a live performance. Refer to chapter ↑13, Creating a Song Using Scenes for more information on Scenes.

Event

Events are the individual drum hits or notes that make up a Pattern. In the Pattern Editor, events are visually represented by rectangles in the Event area. Depending on the current view in the Pattern Editor, you can see events for all Sounds slots (Group view) or for the selected Sound slot only (Keyboard view). Events are described in more detail in chapter ↑7, Working with Patterns.

Plug-in

Each Sound, each Group, and the Master can hold any number of Plug-ins. Plug-ins can be instruments or effects, and they can be internal (included with MASCHINE), from other Native Instruments products (instruments or effects), or external (third-party VST/AU plug-ins). Instrument and Effect Plug-ins can be loaded in the first Plug-in slot of Sounds. The other Plug-in slots of Sounds, as well as the Plug-in slots of Groups and of the Master can hold Effect Plug-ins only. At each level (Sound, Group, and Master), Plug-ins process the audio in series, according to the order in which they are stacked up. Refer to chapter ↑6, Working with Plug-ins.

Effect

MASCHINE comes with many different effects in the form of Internal Plug-ins. You may also use Native Instruments or third-party VST/AU effect plug-ins. Each Sound, each Group, and the Master can hold any number of effects that will be applied as insert effects. The flexible routing system also allows you to create send effects, multi-effects, and side-chains. For more details on using effects in MASCHINE, refer to chapter ↑11, Using Effects. You will find an exhaustive description of all internal effects included in MASCHINE in chapter ↑12, Effect Reference.



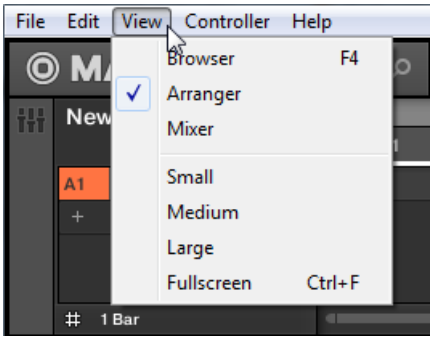
Please refer to chapter ↑18, Glossary at the end of this Manual for more definitions!

2.2 Adjusting the MASCHINE User Interface

The MASCHINE software user interface is very flexible. You can choose what to display and what not, allowing you to focus on your workflow. This section shows you how to adjust the MASCHINE GUI to suit your needs.

2.2.1 Adjusting the Size of the Interface

From the View menu in the Application Menu Bar and from the View submenu in the MASCHINE menu you can select one of four different sizes to display MASCHINE's software GUI:



The View menu in the Application Menu Bar (Windows depicted).



The View submenu in the MASCHINE menu.

Full screen view is also available from your computer keyboard via [Ctrl]+[F] (Mac OS X: [Cmd]+[F]).

2.2.2 Showing/Hiding the Browser

► Click the Browser button (with the magnifier symbol) in the Header to show and hide the Browser. You can also select *Browser* from the View menu in the Application Menu Bar or from the *View* submenu in the MASCHINE menu.



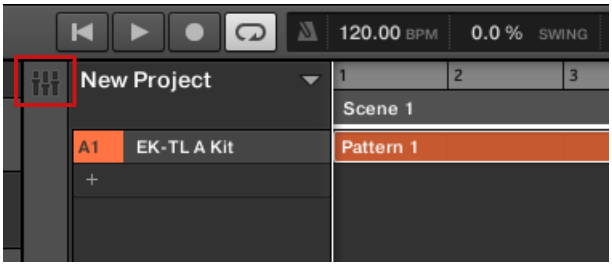
The Browser button in the Header.



You can also show/hide the Browser from your computer keyboard via the [F4] function key.

2.2.3 Switching between Arrange View and Mix View

► Click the Mix View button at the top left of the Arranger to switch between the Arrange view and the Mix view. You can also select *Arranger* or *Mixer* from the View menu in the Application Menu Bar or from the *View* submenu in the MASCHINE menu.



The Mix View button.



You can also switch between Arrange view and Mix view from your computer keyboard via the [Tab] key.

Switching between Arrange View and Mix View on Your Controller

► Press SHIFT + NAVIGATE to switch between the Arrange view and the Mix view.

2.2.4 Minimizing the Mixer

When MASCHINE is in Mix view, you can minimize/maximize the Mixer in the top part of the MASCHINE window:

► Click the arrow button at the bottom left of the Mixer to show and hide the channel details in the Mixer.

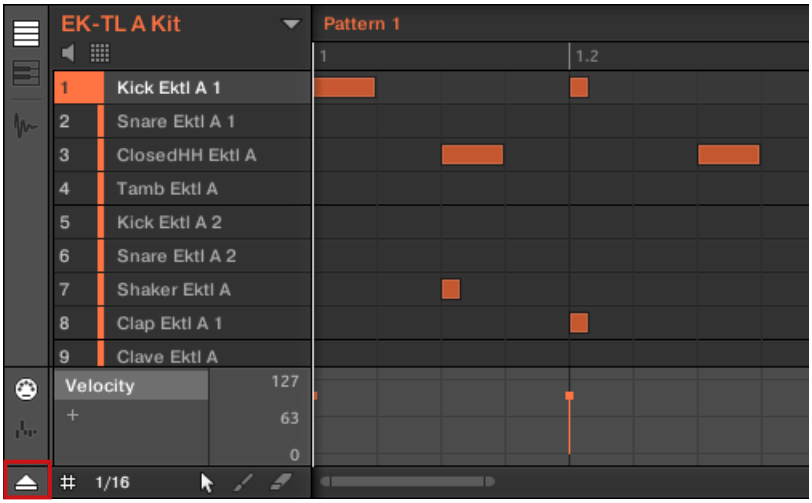


Minimizing/maximizing the Mixer.

2.2.5 Showing/Hiding the Control Lane

When MASCHINE is in Arrange view, you can show/hide the Control Lane under the Pattern Editor:

► Click the arrow button on the bottom left of the Pattern Editor to show and hide the Control Lane.



Click the arrow button at the bottom left of the Pattern Editor to show/hide the Control Lane.

2.3 Common Operations

This sections introduces a few very common operations in MASCHINE you will encounter in numerous situations.

2.3.1 Setting the Focus on a Group or a Sound

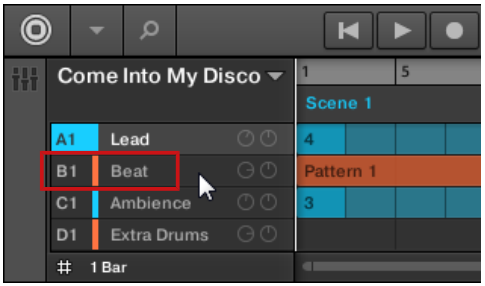
To display the content and parameters of a particular Sound or Group, you first need to put it in focus.

Setting the focus on a Sound or Group is slightly different than selecting it: The focus defines what will be displayed, whereas the selection defines what will be affected by your edits. Note that a focused Sound/Group is always selected. The distinction is of importance because you can select multiple Sounds or Groups to apply your edits to all of them at once! See section ↑4.1.3, Selecting Multiple Sounds or Groups for more on this.

We show here how to put Sounds and Groups in focus when the MASCHINE software is in Arrange view (default view). For instructions on putting Sounds and Groups in focus in Mix view, please refer to chapter ↑9.2.3, Selecting Channel Strips.

Setting the Focus on a Group

► To put a Group in focus, click this Group in the Group List of the Arranger:



→ The focused Group is highlighted. The Pattern Editor displays the Sounds and Patterns of that Group.



The focused Group is highlighted and the Pattern Editor show its content.

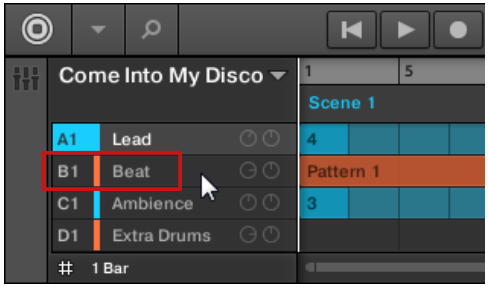
If the desired Group does not appear in the Group List, use the scroll bar at the right end of the Arranger or turn your mouse wheel while hovering the Arranger to display any hidden Groups. You can also extend the Arranger by dragging its lower right corner vertically with the mouse.

You can also select multiple Groups at once to apply changes to all of them. See section ↑4.1.3, Selecting Multiple Sounds or Groups for more information.

Setting the Focus on a Sound

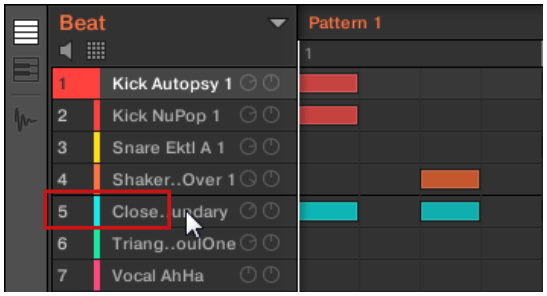
To put a Sound in focus:

1. Set the focus to the Group containing the desired Sound by clicking it in the Group List on the left of the Arranger (see above).

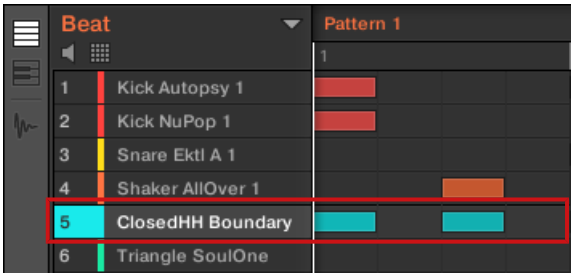


   The focused Group is highlighted. The Pattern Editor displays the Sounds and Patterns of that Group.

2. Click the desired Sound slot in the Sound List of the Pattern Editor:



→ The focused Sound slot is highlighted.



The focused Sound slot is highlighted.



If the desired Sound does not appear in the Sound List, use the scroll bar at the right end of the Pattern Editor or turn your mouse wheel while hovering the Pattern Editor to display any hidden Sounds.



You can also select multiple Sounds at once to apply changes to all of them. See section ↑4.1.3, Selecting Multiple Sounds or Groups for more information.

Setting the Focus on a Group using the Hardware

1. If necessary, press SHIFT + the desired Group button A–H to switch to the Group bank containing the desired Group.
2. Press the desired Group button A–H.

→ The corresponding Group is now in focus.



Once the Group is focused you can use Button 1–3 above the left display to quickly switch between the Master, the focused Group and the last focused Sound in that Group! See section ↑2.3.2, Switching Between the Master, Group, and Sound Level for more information.

Setting the Focus on a Sound using the Hardware

1. If you want to set the focus on a Sound located in another Group, first set the focus on its Group as described above.
2. Press SELECT + the pad of the desired Sound (or simply press its pad if pads are in Group mode).

→ The corresponding Sound is now in focus.

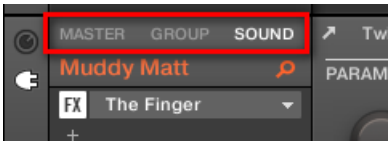
Once the Sound is focused you can use Button 1–3 above the left display to quickly switch between the Master, the containing Group and the focused Sound! See section ↑2.3.2, Switching Between the Master, Group, and Sound Level for more information.



You can also select multiple Sounds at once to apply changes to all of them. See section ↑4.1.3, Selecting Multiple Sounds or Groups for more information.

2.3.2 Switching Between the Master, Group, and Sound Level

At any time you can quickly switch the Control area between the parameters of the Master, the focused Group, and the focused Sound.



Click the desired tab to switch the display of the Control area.

► Click the MASTER, GROUP or SOUND tab in the top left corner of the Control area to display the Plug-in parameters or Channel properties of the Master, the focused Group or the focused Sound, respectively.

→ The selected tab lights up. The name of your Project, the focused Group or the focused Sound appears under the MASTER, GROUP, and SOUND tabs (the Muddy Matt Sound in the picture above), and the rest of the Control area displays the Plug-in parameters and Channel properties of the Master, the focused Group or the focused Sound, respectively.

Switching Between the Master, Group, and Sound Level using the Controller

On your controller:

1. Press the CHANNEL or PLUG-IN button to enter Control mode.
2. Press Button 1 (MASTER), Button 2 (GROUP) or Button 3 (SOUND) above the left display to show the Plug-in parameters and Channel properties of the Master, the focused Group or the focused Sound, respectively.

→ The selected tab lights up. The name of your Project, the focused Group or the focused Sound appears on the left display (under the MASTER, GROUP, and SOUND tabs), and the displays show the Plug-in parameters and Channel properties of the Master, the focused Group or the focused Sound, respectively.

2.3.3 Navigating Channel Properties, Plug-ins, and Parameter Pages in the Control Area

We describe here how to display/edit any Plug-in parameters or Channel properties located in any Sound, Group or the Master.

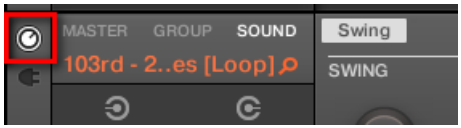
To select a particular Plug-in or a particular set of Channel properties, you first need to display the parameters of the Master, the desired Group or the desired Sound.

1. To display the parameters of a particular Group or Sound, put it in focus by clicking it in the Group List or Sound List, respectively (see section ↑2.3.1, Setting the Focus on a Group or a Sound above).
2. In the top left corner of the Control area, click the MASTER, GROUP or SOUND tab to display the parameters of the Master, the focused Group or the focused Sound, respectively.

→ The Control area now displays the Plug-in parameters and Channel properties of the desired Sound, desired Group or the Master.

Selecting Channel Properties

1. At the far left of the Control area, click the **Channel icon** (showing a little knob) to display the Channel properties:



The button lights up. The **Channel Property selector** appears in the left part of the Control area, showing a square of four buttons representing the various sets of Channel properties available for the selected Sound, Group or the Master:

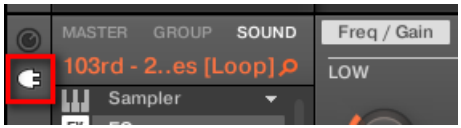


2. Click the desired button (Input, Output, Groove, or Macro) in the Channel Property selector to select that set of Channel properties.

→ The selected button is highlighted and the parameters of the selected Channel properties appear in the **Parameter area** (the right and biggest part of the Control area).

Selecting a Plug-in

1. At the far left of the Control area, click the little **Plug-in icon** to display the Plug-ins:



The icon lights up. The **Plug-in List** appears in the left part of the Control area, showing a stack of all Plug-ins loaded in the selected Sound, Group or the Master:



2. Click the desired Plug-in slot in the Plug-in List to select that Plug-in.

→ The parameters of the selected Plug-in appear in the **Parameter area** (the right and biggest part of the Control area).



If the Plug-in List only shows a "+" sign, it means that there are no Plug-ins loaded in this Sound, Group or the Master. Clicking the "+" sign allows you to load a new Plug-in: see section ↑6.1.3, Loading, Removing, and Replacing a Plug-in for more on this.

Navigating Parameter Pages

In some situations, the selected Plug-in or Channel properties provide more parameters than the display(s) of your controller and the Parameter area in the software can show at once. Examples of this are the parameters for the Groups' or Sounds' Output properties and those for the Sampler Plug-in. In these cases, the parameters are divided into several **Parameter pages** that you can easily navigate with the hardware and software.

In the software the names of the available pages are displayed at the top of the Parameter area. The name of the page currently displayed is highlighted.

► Click the desired page name at the top of the Parameter area to show the corresponding Parameter page.



The Parameter pages of the Sound's Output properties: Audio (currently displayed), Aux, and MIDI.

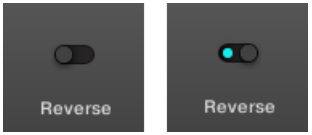
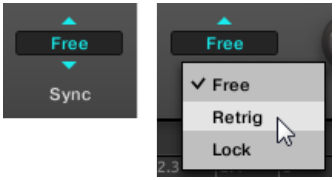
If all page names cannot be displayed at once at the top of the Parameter area, two small arrows are displayed on the left to click through the pages:



► Click the left or right arrow to access additional pages.

Adjusting the Parameters

In the Parameter area, each parameter includes a control element and a label. Following types of control elements are available:

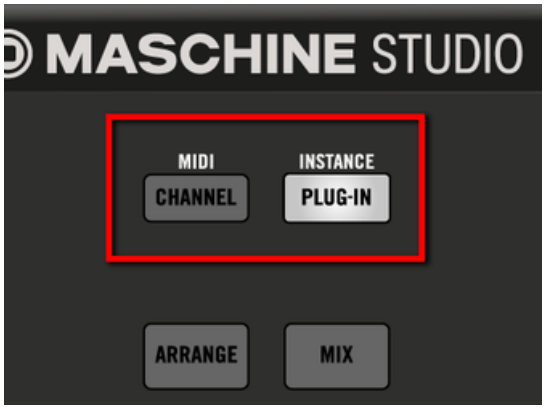
Element	Action
	**Knob**: Click the knob and drag your mouse vertically to change the parameter value. Hold [Shift] on your computer keyboard and drag your mouse to adjust the value in finer increments.
	**Button**: Click the button to switch its state. When the button is enabled, it shows a small colored LED.
	**Selector**: Click the displayed value to open the drop-down list, and click another value in the list to select it.

Navigating Channel Properties, Plug-ins, and Parameter Pages using the Controller

On the MASCHINE STUDIO controller, do the following:

1. Set the focus on the desired Sound, Group or the Master (see section ↑2.3.1, Setting the Focus on a Group or a Sound).

2. At the top left of your controller, press the CHANNEL button to display the Channel properties or the PLUG-IN button to display the Plug-in slots of the selected Sound, Group or the Master.



3. Press Button 1 (MASTER), Button 2 (GROUP) or Button 3 (SOUND) to display the Plug-ins and Channel properties of the Master, the focused Group or the focused Sound, respectively.

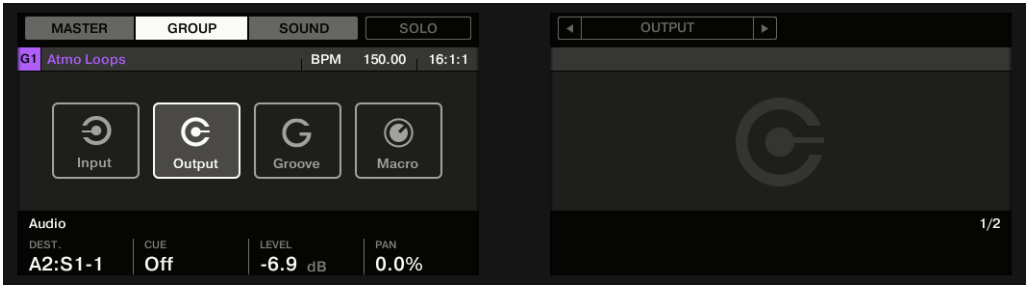
4. Press Button 5/6 to navigate the Channel properties or Plug-ins (the name of the selected Channel properties or Plug-in appears between the left and right arrows under Button 5 and 6).
   Upon your selection the parameters of the selected Channel properties or Plug-in are shown on the displays of your controller.

5. Use the **Page buttons** left of the displays to navigate through the Parameter pages of the selected Channel properties or Plug-in:



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

6. Use Knobs 1–8 under the displays to adjust the value of the parameters available on the selected page. For continuous parameters, hold SHIFT while turning the Knobs to adjust the values in finer increments.

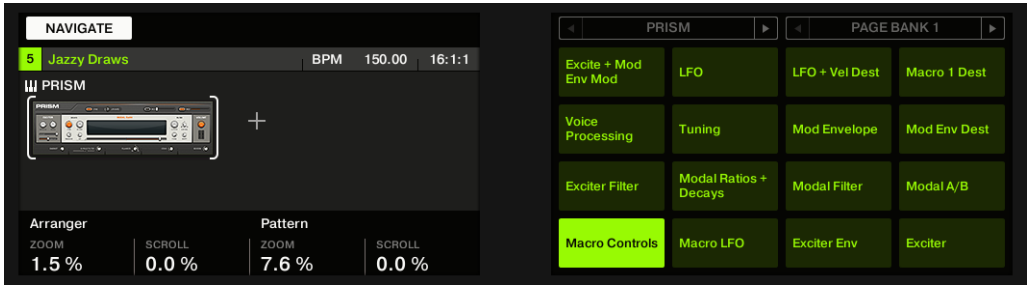


The displays showing the Audio page from the Group's OUTPUT properties.

Using the Navigate Mode

Alternatively, you can also navigate Channel properties and Plug-ins along with their Parameter pages via the **Navigate mode** of your controller:

1. Hold NAVIGATE to enter Navigate mode (or pin it by pressing NAVIGATE + Button 1).
2. Press the CHANNEL button to display the Channel properties or the PLUG-IN button to display the Plug-in slots of the selected Sound, Group or the Master.
3. Press Button 5/6 to navigate the Channel properties or Plug-ins.
   The name of the selected Channel properties or Plug-in appears between the left and right arrows under Button 5 and 6. Furthermore this Plug-in or set of Channel properties is highlighted on the left display.



4. Press the dimmed pads to select the desired Parameter pages. The names of the available Parameter pages are shown on the right display along with the corresponding pads.
   Upon your selection the corresponding pad turns fully lit and the page name is highlighted on the right display.
5. If there are more than 16 Parameter pages, press Button 7/8 to switch to the previous/next 16 pages, respectively.
6. Release NAVIGATE to get back to Control mode (or press NAVIGATE a second time if you pinned the Navigate mode).

→ The selected Parameter page now appears on the displays. Use Knobs 1–8 under the displays to adjust its parameters.

2.3.3.1 Extended Navigate Mode on Your Controller

The Navigate mode on your controller can be used to navigate the Parameter pages of Channel properties and Plug-ins and adjust the view settings of specific areas in the software interface.

▶ Press and hold NAVIGATE to enter Navigate mode. You can also pin Navigate mode by pressing NAVIGATE + Button 1 above the left display so that your controller stays in Navigate mode when you release NAVIGATE — see section ↑2.3.5, Pinning a Mode on Your Controller.

The Navigate mode now has two distinct submodes:

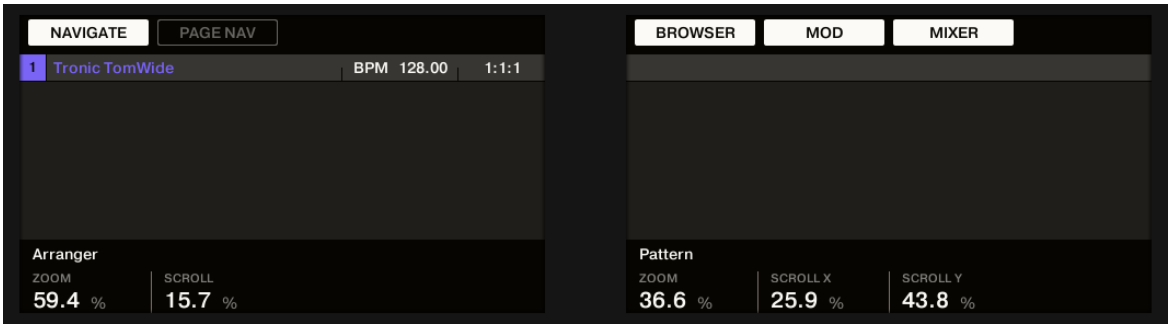
- The default **Software Navigation mode** lets you adjust the look of the software interface: You can show/hide specific elements and change zoom/scroll settings.
- The **Page Navigation mode** allows you to navigate Channel properties, Plug-ins along with their Parameter pages.

You can switch between Software Navigation and Page Navigation mode at any time:

▶ When your controller is in Navigate mode, press Button 2 (PAGE NAV) to switch between Software Navigation and Page Navigation mode.

→ When PAGE NAV is off (default setting) your controller is in Software Navigation mode. When PAGE NAV is on your controller is in Page Navigation mode.

By default, when you enter Navigate mode Button 2 (PAGE NAV) is off and your controller shows the Software Navigation mode:



The Software Navigation mode on your controller.

The Software Navigation mode allows you to customize the user interface of the MASCHINE software by showing or hiding specific parts of the interface (via Button 5–7 above the right display) and changing the zoom and scroll settings in the Arranger and the Pattern Editor (via Knob 1–2 and 5–7 or using the pads):

Action	Shortcut
Show/hide the Browser	Press Button 5 (BROWSER)
Show/hide the Control Lane	Press Button 6 (MOD)
Maximize/minimize the Mixer	Press Button 7 (MIXER)
Zoom Arranger in/out	Turn Knob 1 or press pad 14/10
Scroll Arranger left/right	Turn Knob 2 or press pad 9/11
Zoom Pattern Editor in/out	Turn Knob 5 or press pad 6/2
Scroll Pattern Editor left/right	Turn Knob 6 pr press pad 1/3
Scroll Pattern Editor up/down (Keyboard mode only)	Turn Knob 7 or press pad 8/4



These shortcuts affect the software layout in either Arrange view or Mix view (except for the Browser, which is shown/hidden in both views). Hence, depending on the current view the effect of some shortcuts might not be directly visible. Reminder: You can quickly switch the software between Arrange and Mix view by pressing SHIFT + NAVIGATE on your controller.

Using the Pads

In Software Navigation mode the pads provide a convenient way of zooming/scrolling the Arranger and the Pattern Editor:



- Fully lit pads indicate available actions.
- Dim lit pads indicate actions currently not available (e.g., scrolling left in the Pattern Editor when it is already at full left).
- Unlit pads have no function.

When your controller is in Navigate mode and Button 2 (PAGE NAV) is enabled, your controller shows the Page Navigation mode:



The Page Navigation mode on your controller.

The Page Navigation mode allows you to navigate the Parameter pages available in the Channel properties and Plug-ins of the various channels (Sounds, Groups, and Master) in your Project.

Except for the Button 2 (PAGE NAV) — which allows you to switch back to Software Navigation mode — the Page Navigation mode is strictly identical to the Navigate mode in MASCHINE 2.0. For more information, please refer to section 2.3.3 “Navigating Channel Properties, Plug-ins, and Parameter Pages in the Control Area” in the MASCHINE 2.0 Manual.

2.3.4 Undo/Redo

Undoing and re-doing your last actions can be useful to cancel operations you have performed or to compare two versions before and after a change. 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!

MASCHINE 2.0 provides two different undo/redo features, each of them being suited for specific situations:

- **Step Undo** allows you to cancel your last single action.
- **Take Undo** allows you to cancel your last group of actions.

Step Undo

Step Undo/Redo is the classic undo/redo found in most applications. It cancels or re-executes each single action you have performed.

In the software use the following keyboard shortcuts for the Step Undo and Step Redo functions:

- To cancel your last action (Step Undo), press [Ctrl]+[Shift]+[Z] ([Cmd]+ [Shift]+ [Z] on Mac OS X). To re-execute your last action (Step Redo), press [Ctrl]+ [Shift]+ [Y] ([Cmd]+ [Shift]+ [Y] on Mac OS X). You can also select *Undo Step* and *Redo Step* from the Edit menu in the Application Menu Bar or from the *Edit* submenu in the MASCHINE menu.



The commands in the Edit menu additionally shows which action will be undone/redone!

Take Undo

Suppose you have just recorded a 16th-note hi-hat beat over four bars, but then decide to cancel it. Normally you would have to cancel the 64 notes one at a time, repeatedly calling the undo function 64 times in a row. This is what Take Undo has been made for!

Take Undo/Redo is an extended undo/redo available while recording that allows you to cancel or re-execute a whole group of actions at once.

Take Undo/Redo is the default undo/redo in MASCHINE. In the software use the common keyboard shortcuts for the Undo and Redo functions:

- To cancel your last group of actions, press [Ctrl]+[Z] ([Cmd]+[Z] on Mac OS X). To re-execute your last group of actions, press [Ctrl]+[Y] ([Cmd]+[Y] on Mac OS X). You can also select *Undo* and *Redo* from the Edit menu in the Application Menu Bar or from the *Edit* submenu in the MASCHINE menu.



The commands in the Edit menu additionally shows which action will be undone/redone!

Undo/Redo on the Controller

Both Step Undo and Take Undo are also available on your controller:

► On your controller, perform the Take Undo operation by pressing UNDO. To perform the Take Redo operation, press REDO.

► On your controller, perform the Step Undo operation by pressing SHIFT + UNDO. To perform the Step Redo operation, press SHIFT + REDO.

Take Undo is available in following situations:

- Recording in Control mode
- Recording in Step mode
- Recording modulation



Outside of these three situations, Take Undo has the same effect as Step Undo (see above).

2.3.5 Pinning a Mode on Your Controller

Besides the default Control mode, your controller has various other modes of operation, which you can enter by pressing their dedicated buttons. Depending on their purpose and workflow, these controller modes are of two types:

- **Temporary modes** only stay active as long as you hold down their button on the controller. When you release the button, your controller returns to Control mode. This is for example the case with the MUTE button.
- **Permanent modes** stay active even if you release their button. To deactivate them, you must press their button a second time. This is for example the case with the BROWSE button.

But in some situations you might want to release the mode button of a temporary mode without leaving that mode, e.g., to free your hand and tweak other controls more easily. For this purpose, MASCHINE lets you pin (or "lock") temporary modes so that they behave like permanent modes.

► To pin a mode on your controller, press the relevant mode button (SCENE, PATTERN, etc.) + Button 1 above the left display.

→ Now the mode is always pinned when you select it.

► To unpin a mode (i.e. make it a temporary mode again), press its mode button + Button 1 again.

→ Now the mode will only be active as long as you hold the mode button.

Here is a list of all buttons on your controller that you can pin by pressing Button 1 simultaneously:

- All buttons in the column at the left of the pads (SCENE, PATTERN, ..., SOLO, MUTE)
- GRID button
- NOTE REPEAT button
- AUTO button: Instead of using Button 1, press SHIFT + AUTO to pin the AUTO mode. Moreover, when you leave this mode it is automatically unpinned — it will be temporary again next time you press AUTO.

2.3.6 Using Two or More Hardware Controllers

If two or more MASCHINE controllers of different types (MASCHINE STUDIO, MASCHINE MK2, MASCHINE MIKRO MK2, MASCHINE, and MASCHINE MIKRO) are connected to your computer, only one controller can be used to control the MASCHINE software at a time.



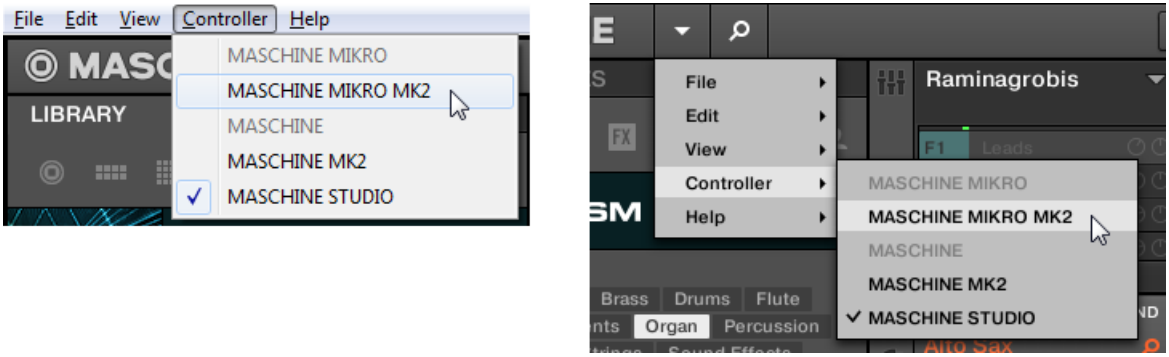
If you have more than one instance of the MASCHINE software running on your computer, you can control each instance with a different controller. See ↑2.5.3, Controlling Various Instances with Different Controllers for more information.



A controller not connected to any MASCHINE software instance can be used in MIDI mode (i.e. as a MIDI controller) at the same time as the other controller(s). See the Controller Editor Manual for more information on MIDI mode.

You can choose which controller you want to use with the MASCHINE software. This can be done both from your controller and in the software.

You can select the desired controller from the Controller menu in the Application Menu Bar or from the *Controller* submenu in the MASCHINE menu:



Click the Controller menu (left) or the Controller submenu in the MASCHINE menu (right) and select the controller you want to use (Windows depicted).

Hardware

On the controller you want to use with the MASCHINE software, do the following:

- MASCHINE STUDIO controller: Press SHIFT + PLUG-IN, turn the jog wheel to select the desired instance, and press the jog wheel or Button 8 to load it.
- MASCHINE (MK2) controller: Press SHIFT + STEP, turn Knob 5 (or press Button 5/6) to select the desired instance, and press Button 8 to load it.
- MASCHINE MIKRO (MK2) controller: Press SHIFT + F2, turn the Control encoder to select the desired instance, and press the Control encoder to load it.

2.4 Native Kontrol Standard

Native Kontrol Standard (NKS) is a software instrument format that allows third-party developers to integrate with MASCHINE and KOMPLETE KONTROL hardware and software at the same deep level as KOMPLETE Instruments.

The Native Kontrol Standard includes:

- Seamless integration into the MASCHINE and KOMPLETE KONTROL Browser for a unified browsing experience.
- Full parameter mapping for instant hands-on control.

- Support of KOMPLETE KONTROL S-SERIES features such as the Light Guide.

This means that instruments supporting NKS can be found in the MASCHINE Browser next to your KOMPLETE Instruments. All of their presets are fully tagged, so you can use filters to search for sounds from all of your NKS and KOMPLETE Instruments. When you load a preset from an NKS instrument, all of its parameters are mapped to the controls on your MASCHINE hardware in a meaningful way, just like any preset from your KOMPLETE Instruments.

NKS instruments are automatically added to your Library when you start MASCHINE for the first time after installing the instrument (except KONTAKT instruments with NKS support, see below).



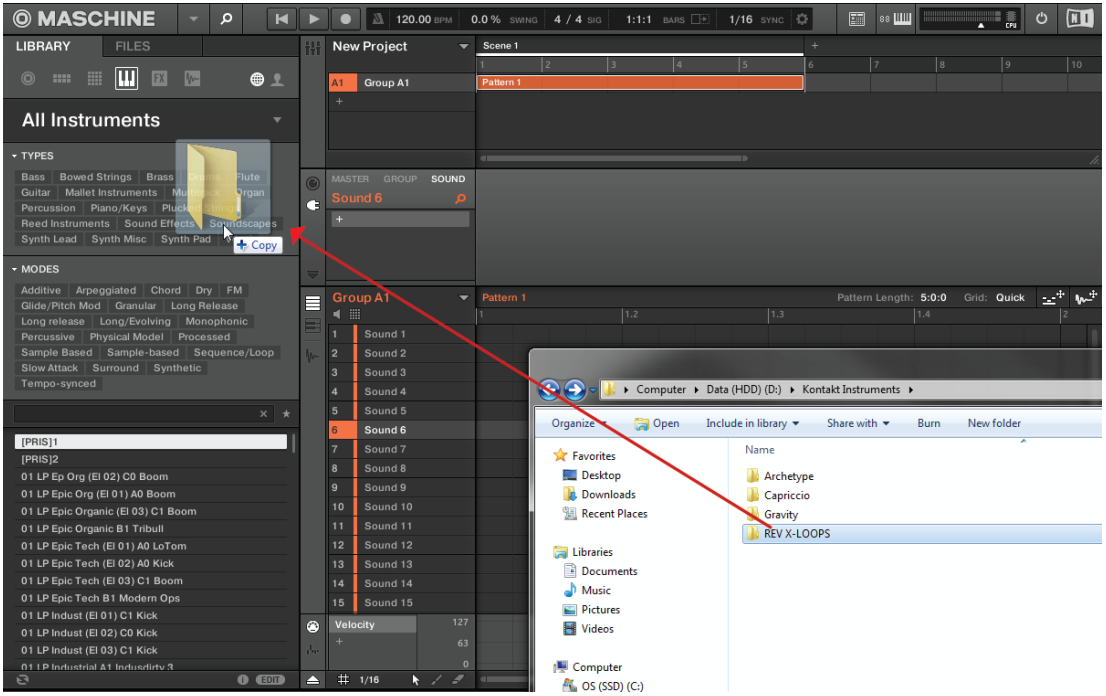
The folders containing the preset files for NKS support can be managed in the Factory pane on the Library page of the Preferences.

2.4.1 Installing KONTAKT Instruments with NKS Support

Third-party developers of KONTAKT instruments provide you with a folder that contains all instrument files, including presets and samples. Instead of running an installer, this folder needs to be stored on the hard drive and added to the KONTAKT Browser by using KONTAKT's Add Library function.

As a MASCHINE user, you can add KONTAKT instruments with NKS support to your MASCHINE Library by dragging the folder onto the MASCHINE Browser. If you are using KONTAKT, the instrument is automatically added to your KONTAKT Browser, too.

► To add a KONTAKT instrument with NKS support to your MASCHINE Library, drag the instrument folder onto the MASCHINE Browser.



→ The KONTAKT instrument is now available in the Library pane of the MASCHINE Browser.

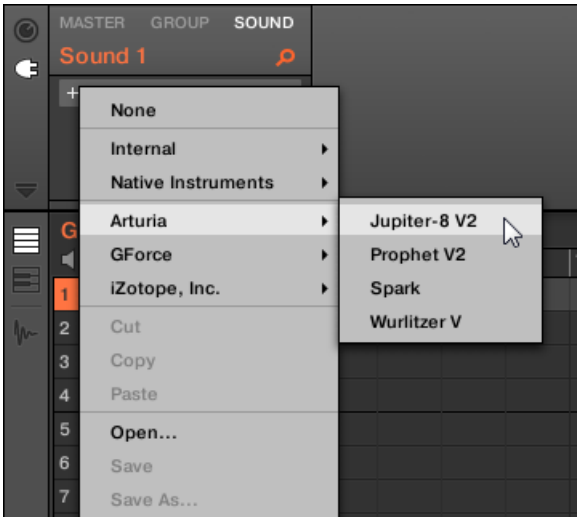
The MASCHINE Library and the KONTAKT Browser reference the instrument files contained in the folder. Do not delete or move the folder afterwards, otherwise MASCHINE and KONTAKT will not be able to access the instrument files.

2.4.2 Loading NKS and Third-party Plug-ins from the Plug-in Menu

The plug-in menu has been updated to display NKS and third-party plug-ins in submenus sorted by vendor in alphabetical order, both within the software and hardware.

The plug-in menu lists installed plug-ins in the following format:

	Instrument Plug-ins	Effect Plug-ins
Internal Plug-ins	Sampler, Drumsynths	MASCHINE internal effects
Native Instruments Plug- ins	VST/AU instrument plug-ins from Native Instruments' range of products	VST/AU effect plug-ins from Native Instruments' range of products
NKS and Third-party Plug-ins	NKS and Third-party VST/AU instrument plug-ins	Third-party VST/AU effect plug-ins



Plug-in menu displaying NKS and third-party plug-ins

For more information on using Plug-ins and accessing the plug-in menu please refer to chapter 6 "Working with Plug-ins" in the MASCHINE manual.

2.5 Stand-Alone and Plug-in Mode

You can run the 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. The MASCHINE software is available in the VST, Audio Unit, and AAX 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 Setup Guide available from the documentation folder in the MASCHINE software installation folder.

2.5.1 Differences between Stand-Alone and Plug-in Mode

Transport Functions

The most noticeable difference between the stand-alone and plug-in mode of MASCHINE relates to the interaction with MASCHINE's sequencer. Indeed, when MASCHINE is used as a plug-in within a host sequencer software (e.g., Cubase or Pro Tools), MASCHINE's sequencer is exclusively controlled by the host application: you cannot, e.g., manually start, stop or restart the playback in MASCHINE, nor modify the tempo or the time signature of your Project within the MASCHINE plug-in itself — these are synchonized to your host's own transport functions and tempo settings. As a direct consequence, when MASCHINE is used as a plug-in the Restart and Play buttons as well as the Tempo and Time Signature fields are grayed out and inactive in the MASCHINE Header. Obviously you cannot control MASCHINE's playback and tempo settings from your MASCHINE controller either.



However from your controller you can directly control the transport functions of your host application instead. See section ↑2.5.4, Controlling your Host's Transport Functions in Plug-in Mode for more information.

Audio and MIDI Handling

When MASCHINE is used in stand-alone mode, it directly communicates with your audio and MIDI interface. You can select which physical audio/MIDI ports have to be used on your interface, and configure crucial audio settings like the sample rate. All this is done via the Audio and MIDI Settings panel (for more information on this, please refer to ↑2.7, Integrating MASCHINE into Your MIDI Setup).

On the contrary, When MASCHINE is used as a plug-in within a host application, the communication with your audio and MIDI interfaces is managed by the host — the MASCHINE plug-in only communicates with the host. Native Instruments' Online Knowledge Base provides how-tos that will help you route the MASCHINE plug-in to multiple tracks/outputs in the major hosts:

- How to route MASCHINE to multiple outputs in Ableton Live: http://www.native-instruments.com/knowledge/questions/1705
- How to route MASCHINE to multiple outputs in Cubase: http://www.native-instruments.com/knowledge/questions/1707
- How to route MASCHINE to multiple outputs in Pro Tools: http://www.native-instruments.com/knowledge/questions/1709
- How to route MASCHINE to multiple outputs in Logic Pro: http://www.native-instruments.com/knowledge/questions/1711

For all details on the audio and MIDI configuration of your host application, please refer to its documentation.

Multiple Plug-in Instances

When you are using MASCHINE as a plug-in within a host application, 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 MIDI Program Change messages from your host to switch between MASCHINE's Scenes or between patches of other plug-ins loaded into MASCHINE, or record automation for MASCHINE parameters. To learn more about these, have a look at chapter ↑13.4, Triggering Scenes via MIDI (MASCHINE Plug-in Only) and ↑8.2, Using MIDI Control and Host Automation.

2.5.2 Switching Instances

When two or more instances of the MASCHINE software are running (e.g., as plug-ins on different tracks of your DAW), you must choose which instance you want to control from your hardware controller. You can do this both from your controller and in the software.

► To select your controller from a particular MASCHINE instance, click the Connect button in the MASCHINE Header of that instance.



Click the Connect button to connect the controller to that instance.

Switching Instances using the Controller

To switch from one MASCHINE instance to another:

1. Press SHIFT + PLUG-IN.
2. Turn the jog wheel to select the desired instance.
3. Press Button 4 to load that instance.



You can also use Knob 5 or Button 5 and 6 to select the desired instance, and Button 8 to load it.

2.5.3 Controlling Various Instances with Different Controllers

You can use two or more MASCHINE controllers of different types (MASCHINE STUDIO, MASCHINE MK2, MASCHINE MIKRO MK2, MASCHINE, and MASCHINE MIKRO) simultaneously with different instances of the MASCHINE software (possibly with one instance in stand-alone mode). In doing so, the following applies:

- Only one MASCHINE controller of any type can be connected to an instance at a time. You can choose which instance you want to control from each controller as described in ↑2.5.2, Switching Instances.
- When you start a new instance of the MASCHINE software, it connects to one of the MASCHINE controllers according to following precedence rules:
  - Rule 1: The MASCHINE STUDIO controller focus has priority over the MK2 controllers (MASCHINE MK2 and MASCHINE MIKRO MK2), which themselves take priority over legacy controllers (MASCHINE and MASCHINE MIKRO).
  - Rule 2: The MASCHINE controllers (legacy and MK2) have prority focus over MASCHINE MIKRO controllers (legacy and MK2).
  - Rule 1 has priority over rule 2.

2.5.4 Controlling your Host's Transport Functions in Plug-in Mode

When you are using MASCHINE as a plug-in within a host application, the Host Transport Control feature allows you to split the control elements of your controller into two groups:

- All buttons in the TRANSPORT section except REC, SHIFT, and GRID control your host application via MIDI.
- All other elements control the MASCHINE plug-in instance.

This allows you to simultaneously control the transport functions of your host and the various elements of your MASCHINE Project!

The Host Transport Control can be activated in the MIDI Template loaded in the Controller Editor. When MASCHINE is loaded as a plug-in in your host application, do the following:

1. Start the Controller Editor.
2. In the Device menu in the top left corner of the Controller Editor window, select the entry corresponding to your controller in order to edit its MIDI assignments of your MASCHINE STUDIO Controller.
3. In the Templates page on the right, click the desired MIDI Template to load it.
4. Click the Host Transport Control option under the Template List to enable/disable it.

→ From now on the buttons in the TRANSPORT section (except REC, SHIFT, and GRID) will send MIDI data as specified in the Template loaded in the Controller Editor, while all other elements will control the MASCHINE plug-in instance.

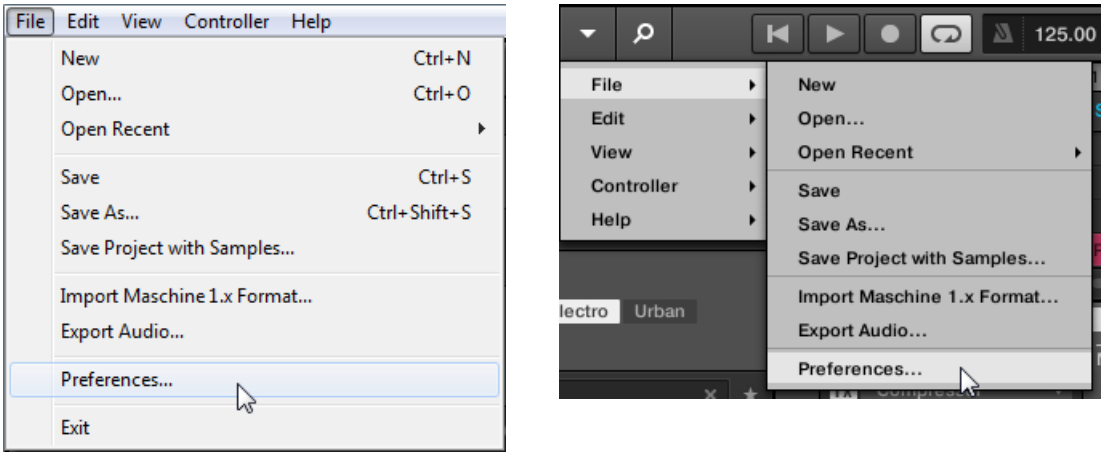


For more information on the MIDI mode, please refer to the Controller Editor Manual.

2.6 Preferences

The Preferences panel lets you specify various settings for MASCHINE.

► To open the Preferences panel, click *Preferences...* in the Maschine menu (Mac OS X) or File menu (Windows) of the Application Menu Bar, or in the *File* submenu of the MASCHINE menu:



Preferences... in the File menu of the Application Menu Bar (Windows depicted), and in the File submenu of the MASCHINE menu.

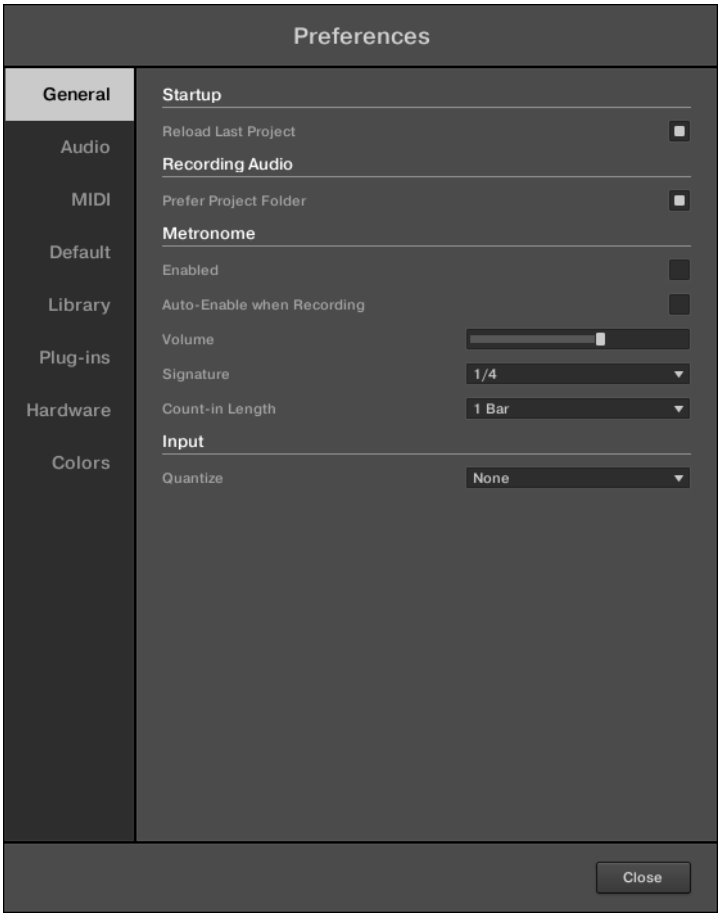
The following pages are available in the Preferences panel:

- **General**: see ↑2.6.1, Preferences – General Page.
- **Default**: see ↑2.6.4, Preferences – Default Page.
- **Library**: see ↑2.6.5, Preferences – Library Page.
- **Plug-ins**: see ↑2.6.6, Preferences – Plug-ins Page.
- **Hardware**: see ↑2.6.7, Preferences – Hardware Page.
- **Colors**: see ↑2.6.10, Preferences – Colors Page.

2.6.1 Preferences – General Page

The General page holds a few global settings.

► To display the General page click the General tab on the left of the Preferences panel.



The Preferences – General page.

Setting	Description
Startup	
Reload Last Project	If this option is checked, the last Project you worked on will automatically load the next time you start MASCHINE.
Recording Audio	

Setting	Description
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 directory (see section ↑2.6.4, Preferences – Default Page).
MIDI	
Clock Offset	Depending on variables such as the speed of your CPU, your audio interface, your MIDI interface and the Latency value you selected in the Audio and MIDI Settings panel, you may experience a lack of synchronization between MASCHINE and the external MIDI Master. To compensate, you can adjust this Clock Offset value. An easy way to do that is to play a 4/4 kick drum pattern or a metronome sound on both MASCHINE 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 value. Keep on adjusting the Sync Offset control until you can neither hear the flanging effect nor two separate signals.
Default MIDI Input Mode	MASCHINE lets you play your Sound(s) via MIDI notes, for example, from a MIDI keyboard. By default and without any configuration, incoming MIDI notes on any MIDI port and any MIDI channel will trigger the pitch of the focused Sound. In addition, you can select that a Sound receives no MIDI input, and also define the default setting for MIDI input by selecting the Default MIDI Input Mode preference. The following default MIDI input mode options are: Focus: MIDI input from any connected controller can be used to trigger the focused (selected) Sound slot. None: The selected Sound will not receive MIDI data.
Metronome	

Setting	Description
Enabled	Check this box to activate the metronome. You can also enable the metronome by clicking the Metronome button in the MASCHINE Header — see section ↑7.2.3, Using the Metronome.
Auto-Enable when Recording	Auto-Enable option automatically turns on the metronome when you start recording a Pattern. When you start recording a Pattern (typically by pressing REC on your controller), the metronome is automatically enabled. When you exit recording (e.g., by pressing the lit REC button) the metronome returns to its state before the recording (this can be on or off). The Auto-Enable option can be activated/deactivated both in the software and from your controller. The Auto-Enable option does not affect the Count-in: Even if Auto-Enable is disabled, the metronome turns on when you press SHIFT + REC to start the Count-in. For more information on the Count-in, please refer to section 7.2.4 “Recording with Count-in” in the MASCHINE 2.0 Manual.
Volume	Adjusts the volume of the metronome.
Signature	Selects the time interval between each tick of the metronome. By default the metronome indicates the beats (the quarter notes, 1/4). Here you can select another note value for the ticks.
Count-in Length	Adjusts the duration of the Count-in, i.e. how long the metronome will sound before the recording actually starts.

Setting	Description
Input	
Quantize	The Input Quantization setting can be set to one of the following modes: None: Input Quantization is disabled. Events you play or record on the pads are not quantized. Record: Input Quantization is applied only when you record the pads. Play/Rec: Input Quantization is applied both when you play on the pads and when you record them. In Play/Rec mode the quantization applied while playing is slightly different from the quantization applied while recording: When recording, all events are quantized to the closest step — possibly ahead of the event. When playing, on the other hand, events occurring in the first half of the steps are left untouched (since you cannot bring them forward in the timeline!) whereas events occurring in the second half of the steps are quantized to the next step.

2.6.1.1 Usage Data Tracking

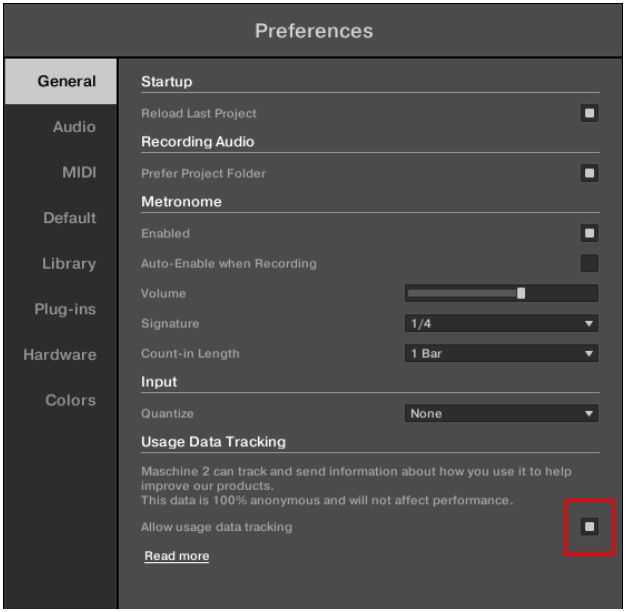
Usage Data Tracking technology enables MASCHINE to automatically track anonymous usage data that you can choose to share with us.

Usage Data Tracking can be enabled or disabled in the General page of the Preferences in the MASCHINE software. However, we encourage all users to keep Data Tracking enabled as it provides a valuable tool for understanding the performance of Native Instruments applications when they are used in real life situations. The data sent to Native Instruments is one hundred percent anonymous and will not affect performance.

For more detailed information about Usage Data Tracking, please refer to the following Knowledge Base article on the Native Instruments website:
https://support.native-instruments.com/hc/en-us/articles/209545029

To enable or disable Usage Tracking:

1. Open the General page of the Preferences by clicking *Preferences...* in the *Maschine* menu (Mac OS X) or *File* menu (Windows) of the Application Menu Bar, or in the *File* sub-menu of the MASCHINE menu.
2. Click the Allow usage data tracking checkbox to enable or disable user data tracking.



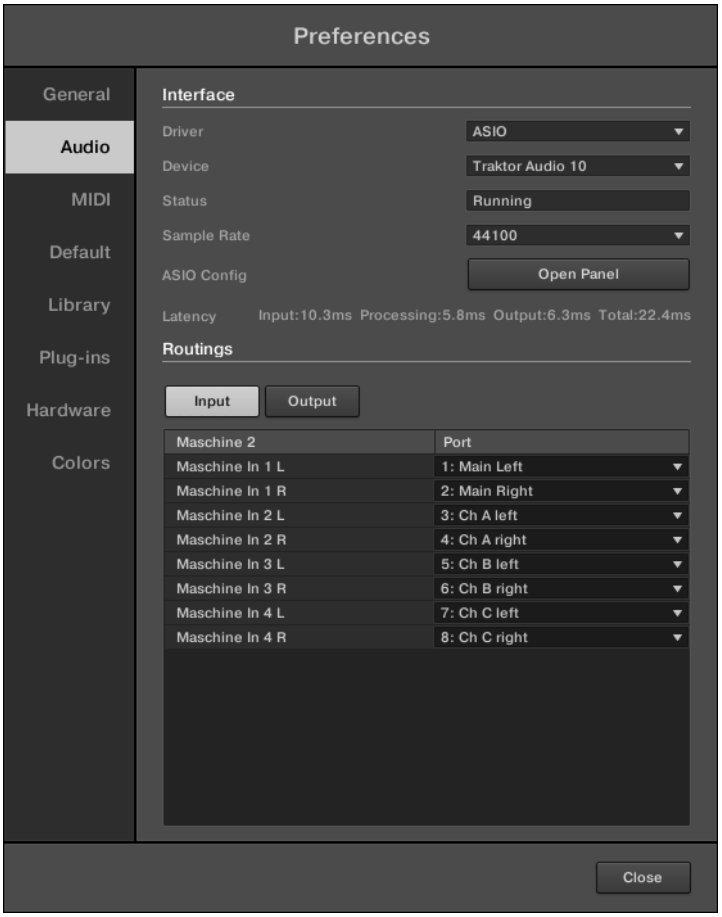
Usage Data Tracking in the MASCHINE Preferences.

2.6.2 Preferences – Audio Page

The Audio page holds settings related to your audio interface.

The Routing section allows you to configure the connections between the virtual inputs/outputs of MASCHINE and the physical inputs/outputs of your audio interface.

► To display the Audio page click the Audio tab on the left of the Preferences panel.



Preferences – Audio page.

Setting	Description
Interface	
Driver	Select your audio driver here.
Device	This allows you to choose from the available devices if you have connected more than one audio interface.

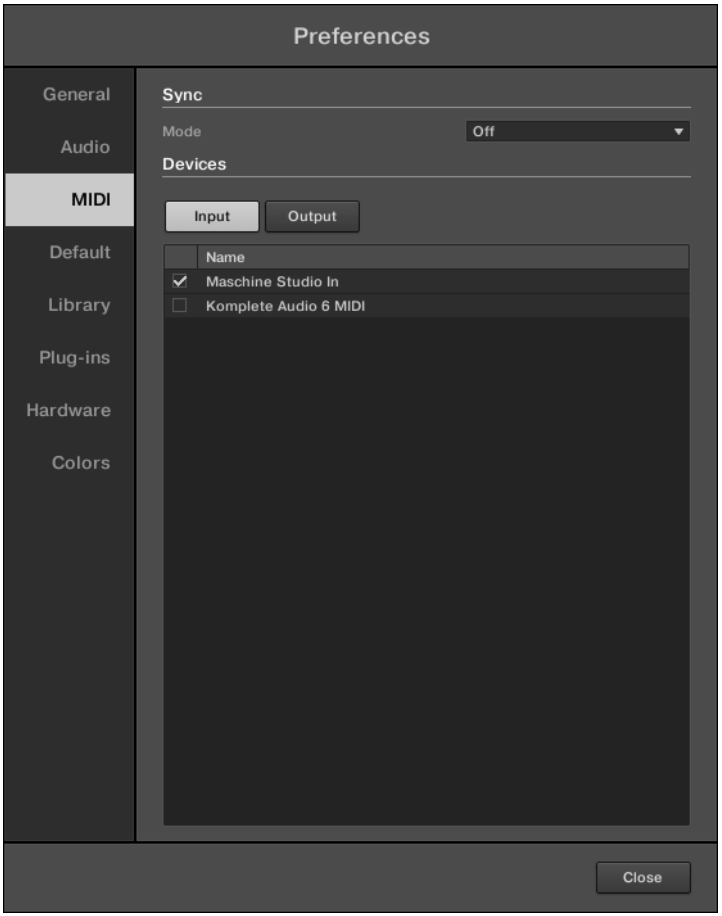
Setting	Description
Status	This shows you whether your audio interface is currently running.
Sample Rate	This displays the selected sample rate of your audio interface. Please restart MASCHINE after changing the sample rate.
ASIO Config (Windows only)	Click Open Panel to access specific controls related to your Soundcard. Please consult the documentation that came with your Soundcard for more information.
Latency	**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. **Windows:** When using an ASIO driver, the Audio and MIDI Settings panel shows an ASIO Config button instead of the Latency slider. Click this button to open the settings window of the selected ASIO driver.
Routing	

Setting	Description
Inputs	By clicking Inputs, you can define which inputs on your audio interface should be used for the four stereo inputs of MASCHINE. Select the inputs of your audio interface on the right column by clicking 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 Outputs, you will be presented with a list of the 16 stereo outputs from MASCHINE: In the right column, you can assign them to the outputs of your audio interface. Click the fields in the right column to select the desired outputs via a drop-down menu.

2.6.3 Preferences – MIDI Page

The MIDI page allows you to set up the MIDI input and output ports that you want to use with MASCHINE.

► To display the MIDI page click the MIDI tab on the left of the Preferences panel.



The Preferences – MIDI page.

Setting	Description
Sync	
Mode	Off: No MIDI sync mode is selected. Master (Send Clock): If MASCHINE is running as a stand-alone application, it 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. Slave (Receive Clock): If MASCHINE is running as a stand-alone application, it 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. Please note that the Slave (Receive Clock) option is not available when LINK is active. For more information on Link see ↑2.8, Syncing MASCHINE using Ableton Link.
Clock Offset (appears when Mode is set to *Slave*)	Use the Clock 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. By adjusting the Clock 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.
Devices	

Setting	Description
Inputs	Clicking Inputs displays a list of all the available MIDI inputs of your system. You can activate/deactivate each input by clicking the fields in the Status column, which displays the current status of the corresponding port.
Outputs	Clicking Outputs displays a list of all the available MIDI outputs of your system. You can activate/deactivate each output by clicking the fields in the Status column, which displays the current status of the corresponding port.

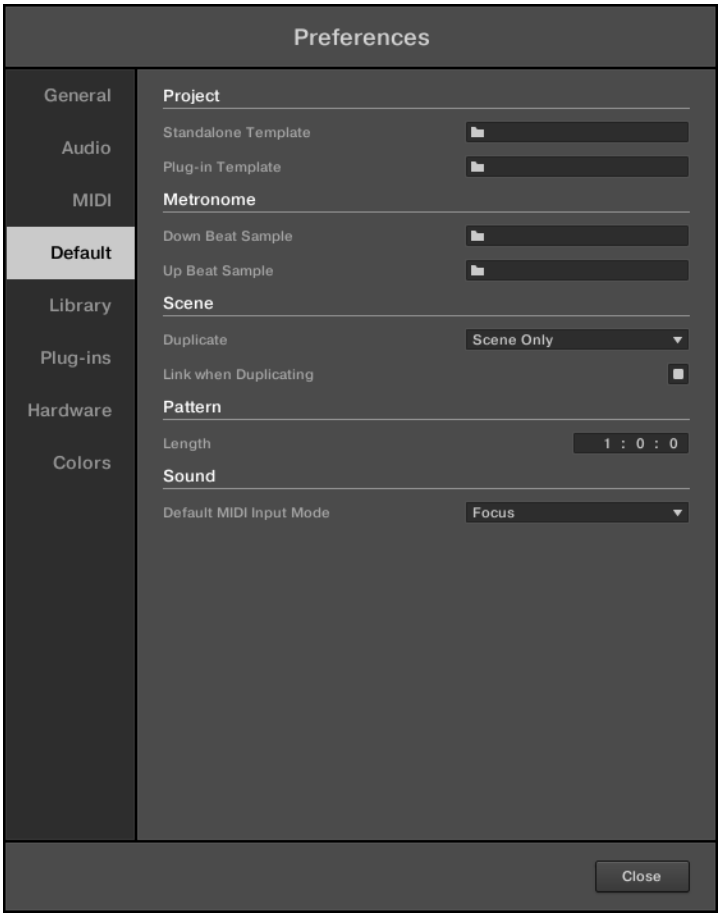


If you want MASCHINE to send other MIDI messages than MIDI Clock, in particular if you want to control other MIDI-capable devices via the notes played in MASCHINE, please refer to section ↑8.2.5, Sending MIDI from Sounds.

2.6.4 Preferences – Default Page

The Default page allows you to define a few default settings that will be used for every new Project.

► To display the Default page click the Default tab on the left of the Preferences panel.



The Preferences – Default page.

Setting	Description
Project	
Standalone	Here you can select a Project to load automatically when you start a new Project in MASCHINE used as a stand-alone application. The field displays the location of the Template Project selected for use. Click the folder icon to select another Template Project. 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 instruments and effects already loaded into the Plug-in slots. If you have already set a Template Project, click the cross icon to unset it and start new Projects from scratch instead.
Plug-in	Here you can select a Project to load automatically when MASCHINE is used as a plug-in within a Digital Audio Workstation. The field displays the location of the Template Project selected for use. Click the folder icon to select another Template Project. Any Project file can be used as a template, this can be from the MASCHINE Library or you can create a file, for example with your preferred instruments and effects loaded into the Plug-in slots. If you have already set a Template Project, click the cross icon to unset it and start new Projects from scratch instead.
Sounds	
Default MIDI Input Mode	
Metronome Settings	
Down Beat Sample and Up Beat Sample	Here you can select audio files to be used as up and down beat of the metronome, respectively. The fields display the locations of the audio files selected for use. Click the fields to select other files. Click the little crosses on the right of the fields to remove the custom audio files and use the default metronome sounds instead.
Scene	

Setting	Description
Duplicate	*Scene Only* Only the Scene is duplicated. The result is a new unlinked Scene with the same Patterns referenced.
	Scene and Patterns The Scene itself and additionally all Patterns are duplicated. The new Scene and Patterns are now completely independent from the originals.
Link when Duplicating	When enabled, the *Duplicate* command will create a linked copy of a Scene. A linked copy will automatically be updated when any instance of a linked Scene is edited. This way, you don't need to keep track of which Scene is the "original." By default this feature is disabled. Click the check box to enable Link when Duplicating.
Pattern Length	
Bars	Here you can define the default length of new Patterns. The length is measured in bars:beats:16ths. To adjust the value, click the desired number (bars, beats or 16ths) and drag your mouse vertically. See ↑7.1.6, Adjusting the Pattern Grid and the Pattern Length for more information on the Pattern Length.

2.6.5 Preferences – Library Page

The Library page allows you to edit the locations of all MASCHINE library files (both factory and user) that appear in the LIBRARY pane of the Browser.



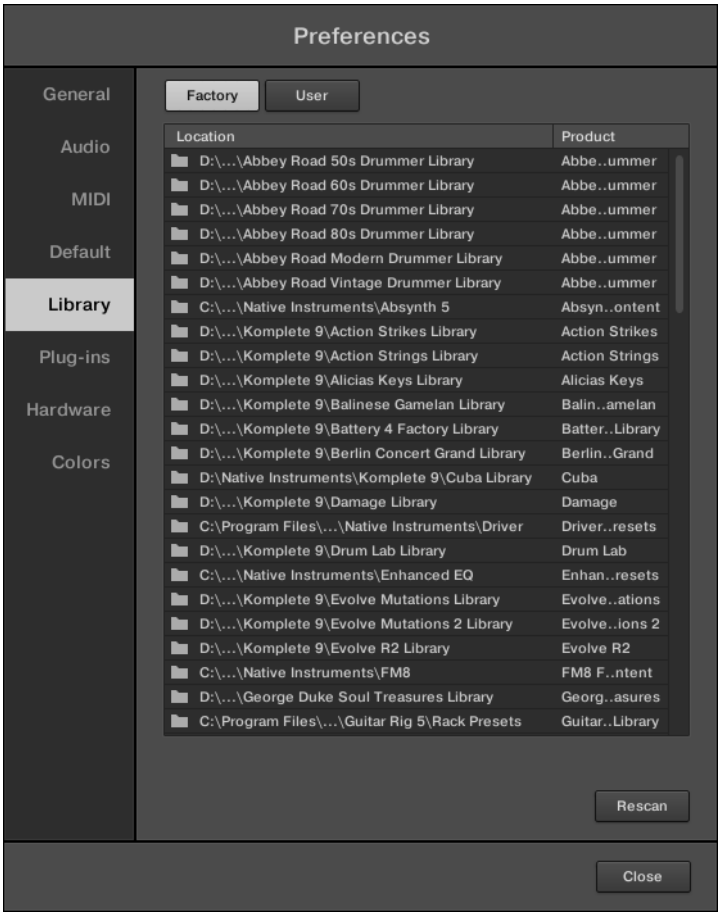
The LIBRARY pane of the Browser is described in section ↑3.2, Searching and Loading Files from the Library.

► To display the Library page click the Library tab on the left of the Preferences panel.

At the top of the page, the Factory and User buttons allow you to switch between the Factory pane and the User pane.

Factory Pane

► To display the Factory pane, click the Factory button at the top of the Library page.



The Preferences panel – the Library page's Factory pane.

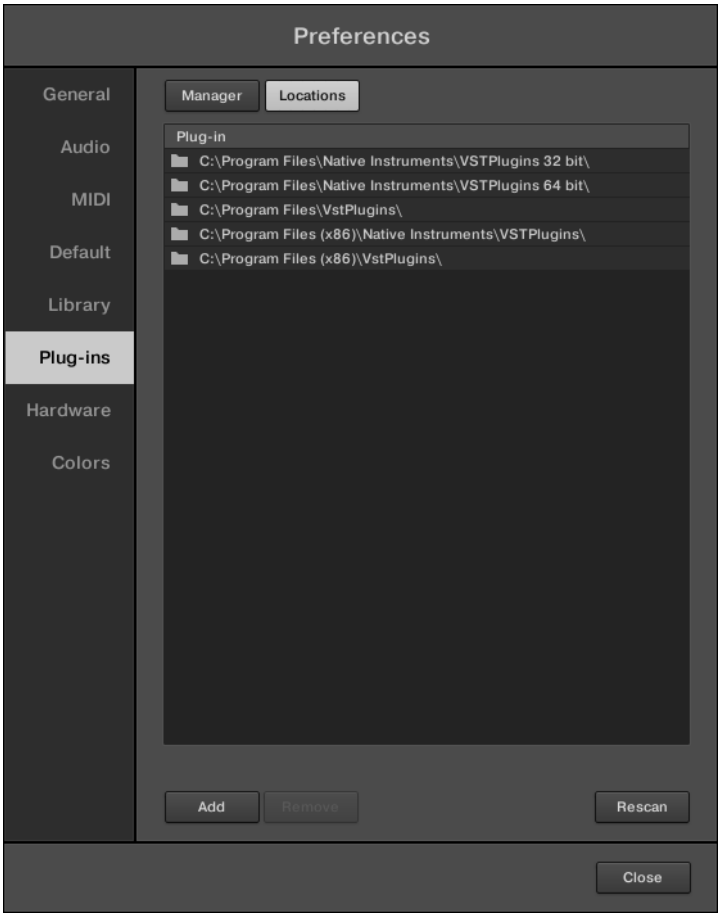
The Factory pane shows all factory libraries available. These includes the MASCHINE Factory Library, libraries imported from other NI products, as well as installed MASCHINE EXPANSIONS.

These libraries will appear in the Factory view of the Browser's Library pane.

Element	Description
Location column	Shows the path of each library. If you have moved any library to another location on your computer, click the folder icon on the left of that library and select its new path.
Product column	Shows the name of each product. These names cannot be edited.
Rescan button	If you have made any change to a library (e.g., changed its location), select it in the list and click the Rescan button to rescan that library.

User Pane

► To display the User pane, click the User button at the top of the Library page.



The Preferences panel – the Library page's User pane.

The User pane shows all user libraries currently used. These include MASCHINE's standard user directory as well as any other user directory you might have defined. These libraries will appear in the User view of the Browser's Library pane.

Element	Description
Location column	Shows the path of each library. If you have moved any library to another location on your computer, click the folder icon on the left of that library and select its new path.
Alias column	Shows the alias stored for each library. Click an alias to edit it. Defining aliases for your user folders is not mandatory, but it can be of great help when working on different computers (see description below). After adding a location (see Add below), click the field in the new row and in the Alias column to set the alias for that new location. The alias of the default user folder, Standard User Directory, cannot be edited — this is the location where all your user files will be stored by default.
Add button	Click Add to manually add directories to the user library. See below for more details.
Remove button	Click Remove to remove the selected user library. Files will only be removed from the MASCHINE Browser, not from your hard disk.
Rescan button	If you have made any change to a library (e.g., added/removed files), select it in the list and click the Rescan button to rescan that library.
Scan user content for changes at start-up checkbox	Click this checkbox to allow MASCHINE to scan for changes to the User content directory during start-up.



You can resize the Preferences panel at your convenience using the usual method on your operating system. You can also resize each column by clicking and dragging the limit between both column headers.

User Content Folder Included in MASCHINE's User Paths

Products from Native Instruments will store user-generated content in a centralized User Content folder. In MASCHINE this User Content folder is automatically added to the list of user directories in the User pane of the Library page in the Preferences panel, and as a consequence its files are available in the MASCHINE Browser.

The User Content folder can neither be renamed nor removed from the list. You can modify its path in the Location column.

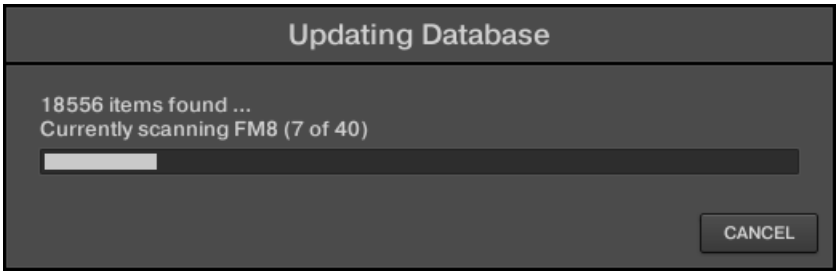
Standard User Directory Cannot Be Removed

The Standard User Directory can neither be renamed nor removed from the list in the User pane of the Library page in the Preferences panel. You can modify its path in the Location column.

Cancelling Library Rescan

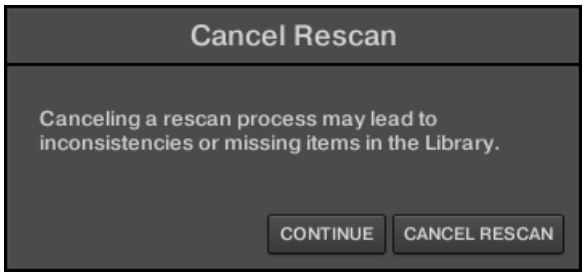
In the Library page of the Preferences panel, the Rescan button allows you to rescan the selected library (or all your libraries if none is selected) so that the MASCHINE Browser mirrors any changes you have made to the files. Clicking this Rescan button triggers the scan and an Updating Database dialog shows you the progress of the scan.

The Updating Database dialog includes a CANCEL button allowing you to interrupt the scanning process without harming the database permanently:



The Updating Database dialog now includes a Cancel button.

1. Click CANCEL in the Updating Database dialog to interrupt the scan.
   A Cancel Rescan dialog opens up asking you to confirm that you want to cancel the scan:



   The dialog warns you that cancelling the scan may lead to inconsistencies or missing items in your MASCHINE Library.

2. If you still want to cancel the scan, click CANCEL RESCAN at the bottom right, and the scan will be cancelled.

3. If you prefer instead *not* to cancel the scan, click CONTINUE or press [Esc] on your computer keyboard, and the scan will go on.

If you cancelled the scan, any inconsistencies or missing items in your MASCHINE Library will be solved by rescanning the same path(s) again (via the Rescan button mentioned above).



In opposition to the rescan process described here, you cannot cancel the import of files into the MASCHINE Library (via the FILES pane of the Browser or via the Library page of the Preferences panel) nor the process of applying changes to the file tags and properties (via the Attribute Editor in the Browser).

Using Aliases

The aliases available in the Alias column act as references to the paths shown in the Location column. When you save a Project, the saved data includes both the path and the alias for each file used in the Project. This will allow you to use a Project on different computers even if the files used in the Project (e.g., Samples) are stored in different locations on each computer: Simply define the same alias for these locations on each computer, and MASCHINE will replace the path saved on the first computer with the path set to the same alias on the second computer in order to retrieve the files on this second computer, therefore avoiding the possibility of missing Samples.

Adding Folders to the User Library

In the User pane of the Library page, you can add other folders to the user content of your MASCHINE Library. To do this:

1. Click Add at the bottom of the pane.
   A folder selection dialog opens up.
2. In the dialog, navigate to the desired folder on your computer and click OK (Choose on Mac OS X).

→ All MASCHINE-compatible files found in the selected folder are added to your user content in MASCHINE.

Furthermore, the imported files will have their attributes (product/bank/sub-bank, Type/SubType/Mode tags, as well as properties) set as follows:

- For all file types, any attributes already in the files will be retained.
- For Samples, if the product/bank/sub-bank attributes are empty, they will be set to the folders in which the Samples are located:
  - The product will be set to the name of the folder you have selected.
  - If Samples reside in a subfolder of this folder, the subfolder name will be used as bank.
  - If Samples reside in a subfolder of this subfolder, the name of the lower subfolder will be used as sub-bank.

By adding a folder to the user content of your MASCHINE Library, you make their files available in the Browser's LIBRARY pane for quick searching and loading! For more information on how to use the LIBRARY pane of the Browser, please refer to section ↑3.2, Searching and Loading Files from the Library.



Paths to folders added via the IMPORT button in the Browser's FILES pane will also show up here. The only difference between adding folders via the Add button in Preferences panel, described here, and via the IMPORT button in the FILES pane of the Browser is that the latter allows you to directly tag the files as they are imported. See section ↑3.6.5, Using the Result List for more information on how to import folders via the FILES pane.

Please note that the selected folder cannot contain, or be contained within, a folder already listed in the User or Factory pane. If MASCHINE detects such a folder as you press OK (Choose on Mac OS X) in the folder selection dialog, a Duplicate Location message appears: Click OK to return to the folder selection dialog and select another folder on your computer.

Removing Folders from the User Library

You can also remove any user folder from your Library — except the default user

2.6.6 Preferences – Plug-ins Page

The Plug-ins page allows you to manage the Native Instruments and External Plug-ins you want to use in MASCHINE.

► To display the Plug-ins page click the Plug-ins tab on the left of the Preferences panel.

At the top of the page, the Manager and Locations buttons allow you to switch between the Manager pane and the Locations pane.

Manager Pane

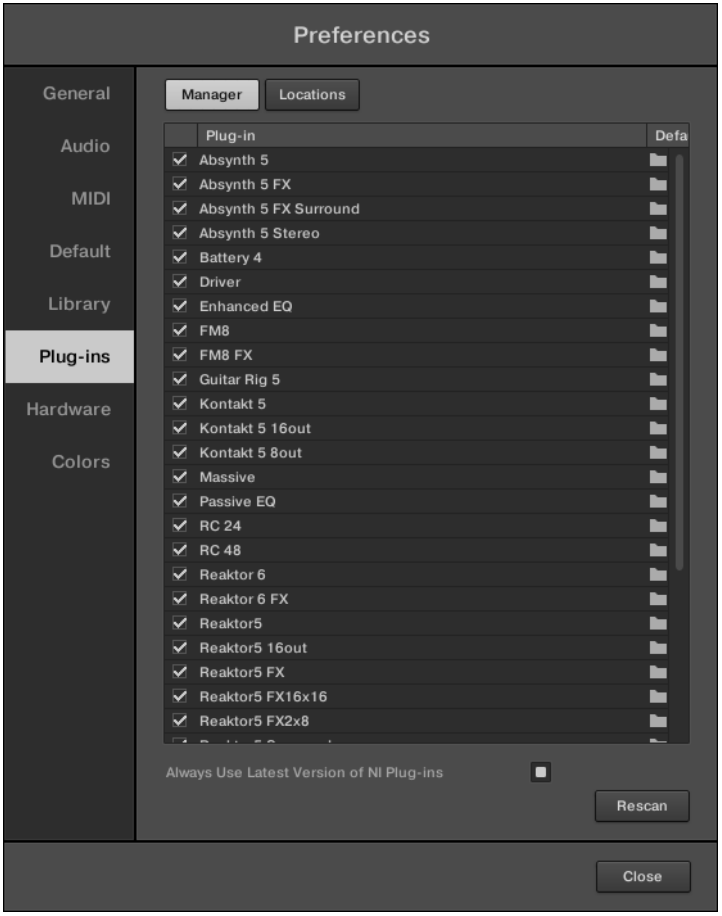
► To display the Manager pane, click the Manager button at the top of the Plug-ins page.

In the Manager pane of the Plug-ins page, you can enable/disable VST/AU plug-ins, rescan their directories, and set default presets for your Native Instruments and External Plug-ins.

When a Native Instruments or External Plug-in is disabled, it will not be available for loading (from the various Plug-in menus in the software and from the Plug-in Browser on your controller). If, for example, you do not use certain VST plug-ins in MASCHINE, it could be useful to disable them so that they do not overload the list of available Plug-ins.



For more information on Native Instruments Plug-ins, External Plug-ins, and other Plug-ins in MASCHINE, please refer to chapter ↑6, Working with Plug-ins.



The Preferences panel – the Plug-ins page's Manager pane.

Element	Description
Plug-in column	Lists all available VST/AU plug-ins from the directories specified in the Locations pane (see below). This includes all enabled or disabled 32-bit VST/AU plug-ins, when MASCHINE is running in 32-bit mode or otherwise all enabled or disabled VST/AU 64-bit plug-ins, when MASCHINE is running in 64-bit mode. On the left of each plug-in in the list, a checkbox allows you to enable/disable this plug-in in MASCHINE. When a plug-in is disabled, it will not be available for loading in MASCHINE.
Default Config column	For each plug-in you can set a default preset that will be loaded with this plug-in when you load it. Click the folder icon on the left to choose a default plug-in preset. You can also save a preset as default for the Plug-in via the *Save As Default...* entry in the Plug-in menu. If no default is set here, the parameters of this plug-in will be auto-mapped when loading it into a plug-in slot. To remove a default plug-in preset, click the little cross on the right.
Rescan button	If you have changed the content of any directory specified in the Locations pane (see below), you should rescan your plug-in directories in order to keep the list of available external plug-ins up to date. Clicking 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. Note that the scan will ignore the plug-ins that are disabled in the list above.
Always Use Latest Version of NI Plug-Ins checkbox	The option to Always Use Latest Version of NI Plug-Ins selects whether or not your Library content is always loaded with the latest version of the associated plug-in. If this option is disabled, your Library content is loaded with the lowest required version of the associated plug-in found on the computer.

Manager Pane: Use NI Audio Units Checkbox (Mac OS X Only)

On Mac OS X, the Manager pane contains an additional Use NI Audio Units checkbox. Check this box to include the Audio Units (AU) versions of your Native Instruments plug-ins in the software's Plug-in menus and in the controller's Plug-in Browser:

- If this checkbox is disabled (default setting), the AU versions of your Native Instruments plug-ins are still listed in the list above but they are disabled (checkbox unchecked): These Plug-ins won't appear in the *Native Instruments* submenu of the Plug-in menus (software) or in the Plug-in Browser (controller). Additionally, the remaining entries for Native Instruments Plug-ins (all of them VST) won't display the (VST) mention next to their name.
- If you enable the Use NI Audio Units checkbox, all Native Instruments' AU plug-ins are enabled in the list above and are available for loading in MASCHINE. In order to distinguish them from the VST versions, Plug-in entries in the *Native Instruments* submenu of the Plug-in menus and in the Plug-in Browser will display either (VST) or (AU) after their name.

You can also enable or disable Native Instruments' AU plug-ins individually in the list via the checkboxes described above — as soon as you enable one of them, the Use NI Audio Units checkbox is automatically activated.



The Use NI Audio Units checkbox relates only to AU plug-ins from Native Instruments. AU plug-ins from third-party manufacturers are not affected by this setting.

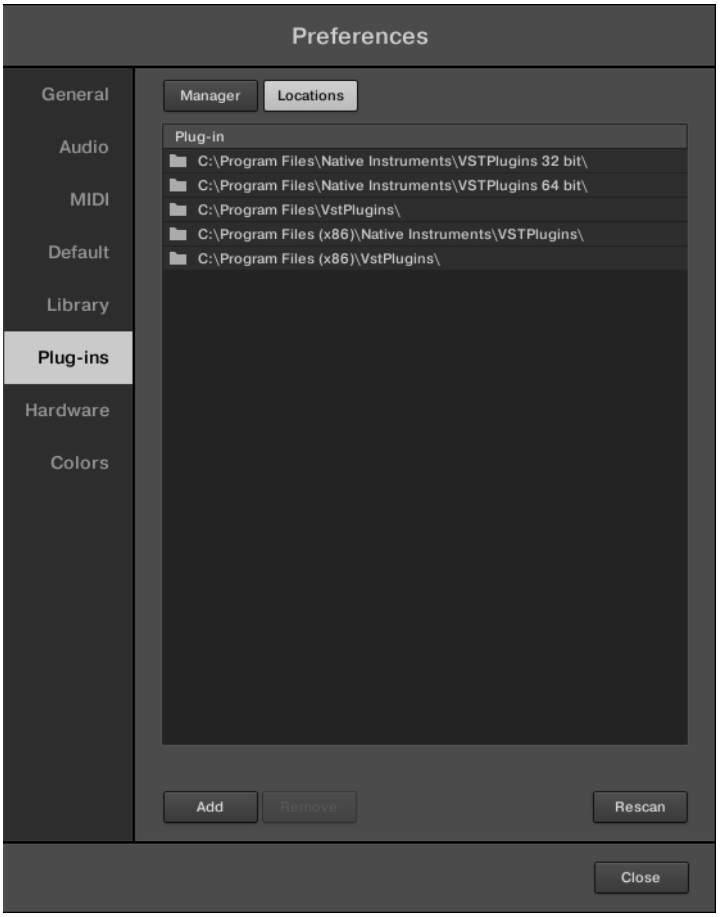


When the Use NI Audio Units checkbox is disabled or the AU version of a Native Instruments plug-in is disabled, you can still load Projects that use AU plug-ins.

Location Pane

► To display the Location pane, click the Location button at the top of the Plug-ins page.

In the Locations section of the Plug-ins page, you can manage the various plug-in directories you want to use in MASCHINE.



The Preferences panel – the Plug-ins page's Locations pane.

The Locations pane also contains the following controls:

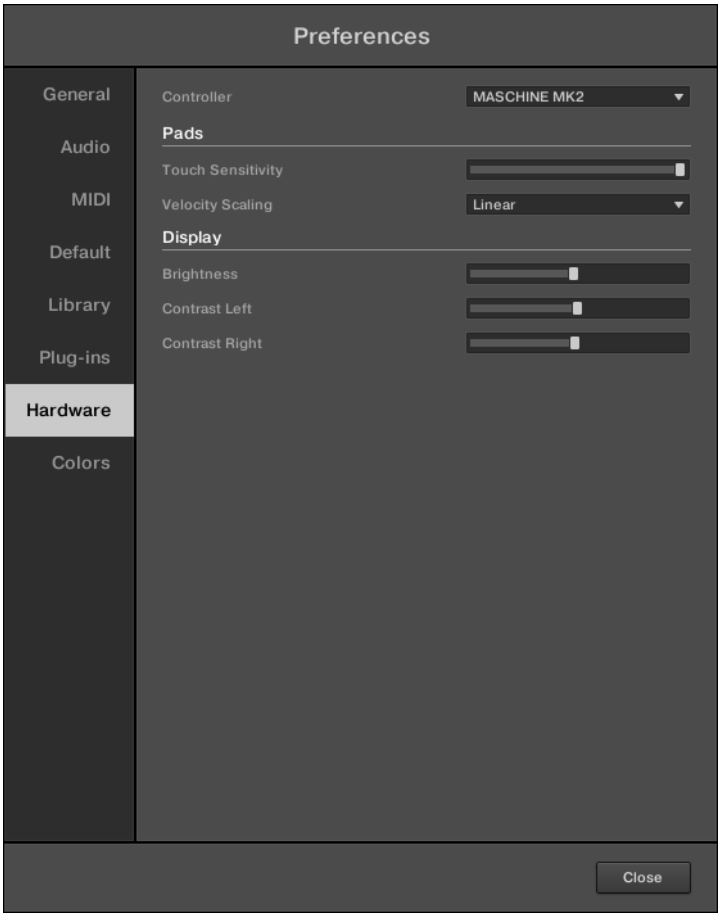
Element	Description
Plug-in column	Lists all plug-in directories used in MASCHINE. Click the folder icon on the left of an entry to change the path of that plug-in directory.
Add button	Click Add to add plug-in directories.

Element	Description
Remove button	Click Remove to remove the selected directory.
Rescan button	If you have changed the content of a 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. Clicking Rescan will check the integrity of your plug-ins and allow you to automatically detect plug-ins that are added or removed, or disable any plug-ins that are not working correctly for any reason.

2.6.7 Preferences – Hardware Page

The Hardware page enables you to customize how the pads react to your playing and to adjust the brightness of the displays.

► To display the Hardware page click the Hardware tab on the left of the Preferences panel.



The Preferences panel – Hardware page.

Setting	Description
Pads	
Sensitivity	Use the Sensitivity slider to adjust how sensitive the pads respond to your touch. This sets the minimum threshold at which the MASCHINE STUDIO controller will register a “hit.”

Setting	Description
Velocity Scaling	Velocity Scaling determines how your playing is translated into velocity values: starting from *Soft 3* (a soft touch is enough to get a big velocity value) through *Linear* to *Hard 3* (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 STUDIO controller.

Adjusting the Settings from the Hardware

You also have access to the Sensitivity and Brightness settings from your controller. To do this, you first have to enter MIDI mode:

1. Press SHIFT + CHANNEL (MIDI) to switch your controller to MIDI mode.
2. Press SHIFT + Button 3 (SETTINGS) to show the Settings Display mode.
3. Turn Knob 1 (PADSENS) to adjust the Pad Sensitivity described above.
4. Press SHIFT + Button 4 (CALIBRATION) to show the Calibration Display mode.
5. Turn Knob 4 to adjust the Brightness described above.
6. When you're done, press SHIFT + CHANNEL (MIDI) again to quit the MIDI mode and get back to MASCHINE mode.



For more information on the MIDI mode, please refer to the Controller Editor Manual.

2.6.8 Touch-Sensitive Knobs on MASCHINE STUDIO

MASCHINE 2.2 enables a powerful feature on your MASCHINE STUDIO controller: Under the displays of your controller, **Knobs 1–8 are touch-sensitive**: They can react to the slight pressure of your fingers touching them. This pressure is detected before you actually rotate the knobs or without rotating them at all!

Following sections describe the various MASCHINE contexts in which touch sensitivity comes into play.



You can adjust the touch sensitivity of Knobs 1–8 — see section ↑2.6.8.5, Adjusting the Knobs's Touch Sensitivity for more on this.

Important: Update the Controller Firmware to the Latest Version!

The touch-sensitive features will work on your MASCHINE STUDIO controller only if its firmware is in version 22 or greater.

If the MASCHINE software is running and the connected MASCHINE STUDIO controller has a firmware version lower than 22, the touch-sensitive features will not be enabled. Furthermore, in the Hardware page of the Preferences panel, the new Touch-Sensitive Knobs section won't provide any settings but instead show a message indicating how to update the firmware of your controller:



The message in the Hardware page of the Preferences panel helps you update your controller's firmware.

To update the firmware of your MASCHINE STUDIO controller, do the following:

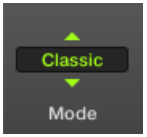
1. Connect your MASCHINE STUDIO controller to your computer and switch it on.
2. Open your favorite internet browser and open the following page of the Native Instruments website:
   http://www.native-instruments.com/en/support/downloads/
3. Click the "Drivers and other files" link and, in the "Maschine Controller" section, click the Device Updater for your operating system to download it.
4. Once the archive has been downloaded, extract it to the desired folder.
5. In the Explorer (Windows) or Finder (Mac OS X), navigate to the extracted folder and open it.

6. Within that folder, double-click the “DeviceUpdater.exe” file (Windows) or the “DeviceUpdater” file (Mac).
   The Device Updater starts up.
7. Follow the instructions of the Device Updater to complete the firmware update.

In the rest of this section, we assume that the firmware of your MASCHINE STUDIO controller is in version 22 or greater.

2.6.8.1 List Overlay for Selectors

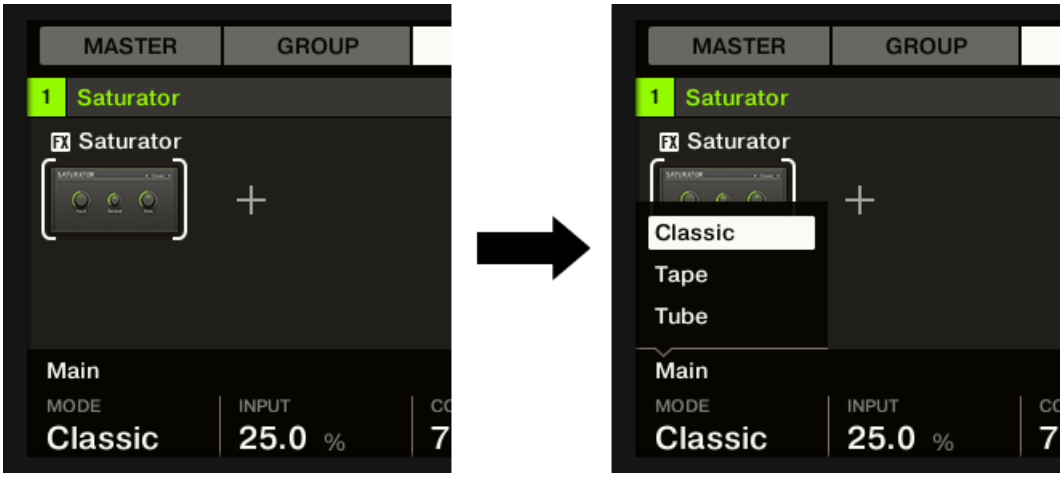
Many MASCHINE parameters are presented in the form of a selector providing a list of possible values for the parameter (e.g., the Mode parameter of the Saturator Plug-in or the Dest. parameter in the Audio page of the Sound’s/Group’s Output Channel settings).



A selector.

From your controller, you can adjust such a parameter by turning the corresponding Knob under the display of your controller.

When you touch the Knob of that parameter, a list appears above the parameter on the display of your controller. This list shows you at a glance all possible values for the parameter you are touching along with the value currently selected, making the value selection much more intuitive.



Touch the Knob under a selector (here the MODE parameter under the left display) to open a list with the values available for selection.

The list is displayed as long as you touch or turn the corresponding Knob. When you release the Knob, the list disappears after a short delay.

Only one list can be displayed at a time. If you actuate two or more Knobs that control selectors, only the list for the last-touched Knob will be shown.

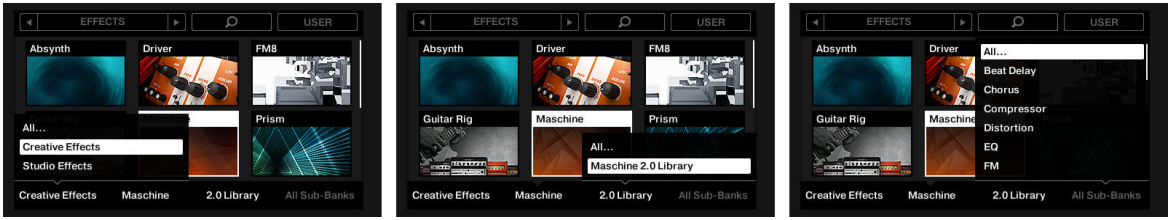
2.6.8.2 List and Tag Overlays in the Browser

When browsing your Library from the MASCHINE STUDIO controller in Browse mode, the touch-sensitive Knobs 1–8 provide you with handy browsing aids.

For general information on how to use the Browse mode of your controller to browse the MASCHINE Library, please refer to section 3.2 “Searching and Loading Files from the Library” in the MASCHINE 2.0 Manual.

List Overlays for Product Category, Bank, and Sub-Bank

As you select a product category, bank or sub-bank via Knobs 1, 3, and 4 under the left display, respectively), the corresponding list overlay appears above. These overlays are similar to those for selectors described in section ↑2.6.8.1, List Overlay for Selectors. In each list, the selected item is highlighted.



The left display, here when browsing Effects: Selecting the Creative Effects category via Knob 1 (on the left), the 2.0 Library bank via Knob 3 (in the middle), and all sub-banks via Knob 4 (on the right).

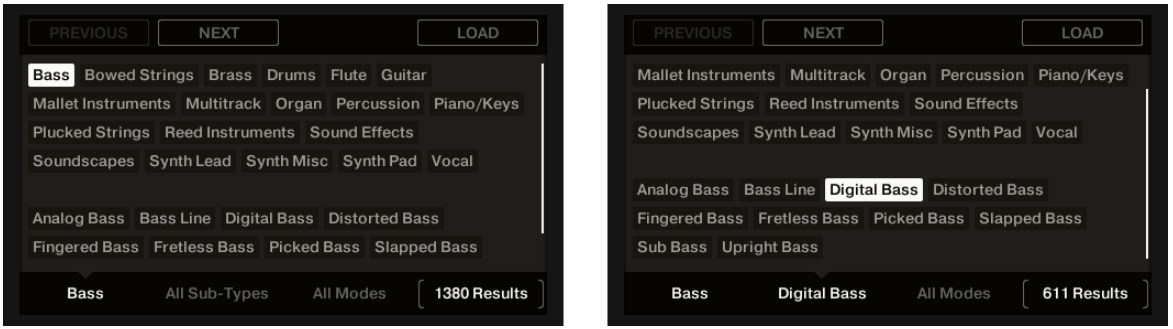
Like in the software, each of these lists includes an *All...* entry at the top allowing you to deselect any selected item. Turn the corresponding Knob at full left to select this entry.

Tag Overlays for Type, Sub-Type, and Mode

As you select a Type, Sub-Type(s), and/or Mode via Knobs 5–7 under the right display, a tag cloud appears above. This tag cloud mirrors that of the Browser in the software. It shows all tags for which items have been found in the Library. In this cloud, the selected tag is highlighted.

Like in the software, the Type and Sub-Type tags share the same tag cloud, while the Mode tag has its own cloud.

A little down-pointing arrow under the cloud indicates which tag cloud is currently displayed.



The right display, here when browsing Instruments: Selecting the Bass Type via Knob 5 (left picture) and the Digital Bass Sub-Type via Knob 6 (on the right).

Using the Jog Wheel with the List and Tag Overlays

When your MASCHINE STUDIO controller is in Browse mode, you can also make use of the jog wheel and FUNCTION buttons to navigate the Library (for all details, see the MASCHINE 2.0 Manual):

- Press the FUNCTION buttons to put the jog wheel's focus on the desired field at the bottom of the displays (the focused field is indicated by the surrounding brackets).
- Turn the jog wheel to change the value in the focused field. If the result field (last field on the right) is focused, turning the jog wheel will navigate the result list, and pressing it will load the selected item.

These functions stay valid in MASCHINE 2.2, but now the jog wheel also interacts with the list and tag overlays described above:

- When the jog wheel is focused on a field providing a list overlay (product category, bank, and sub-bank) or tag overlay (type, sub-type, and mode), pressing and holding the jog wheel opens that overlay. The overlay disappears as you release the jog wheel. If you turn the jog wheel without pressing it, no overlay will show up and the value of the focused field will be changed as in previous MASCHINE versions.
- When the jog wheel is focused on the product field (Knob 2), nothing happens when you press it.
- When the jog wheel is focused on the result field (default focus, Knob 8), turning the jog wheel closes any displayed overlay.

2.6.8.3 Touch Auto-Write Option

Modulation recording also benefits from the touch sensitivity of Knobs 1–8 via the **Touch Auto-write option**.



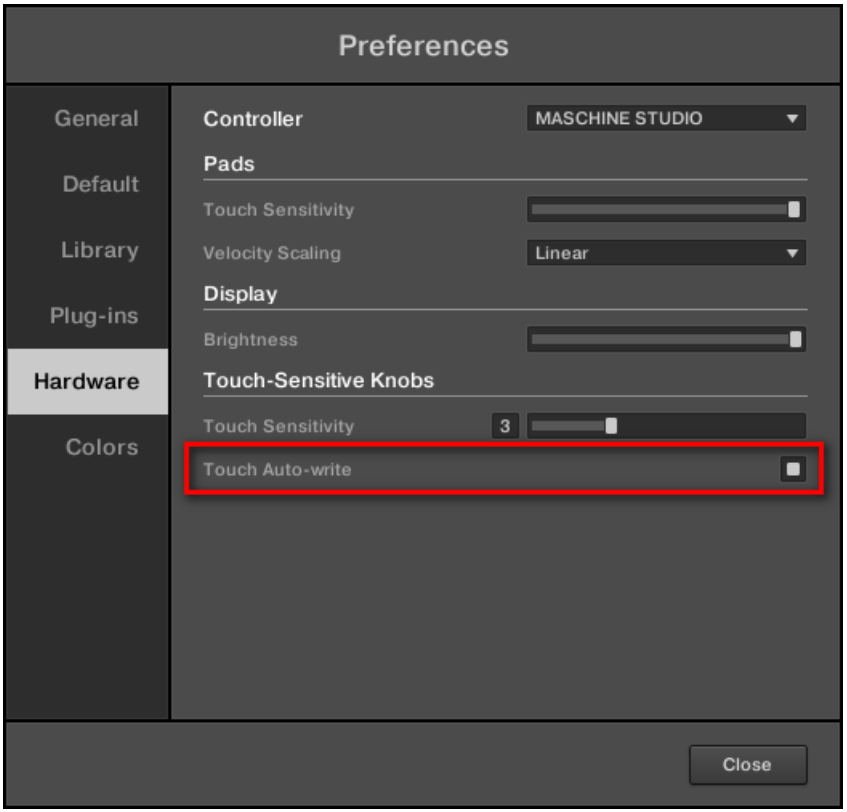
Reminder: To record modulation from your MASCHINE STUDIO controller, activate playback, switch your controller to Auto-write mode by pressing and holding AUTO (or by pressing SHIFT + AUTO, which will pin Auto-write mode), and turn the Knobs 1–8 as you see fit. For more information, please refer to section ↑7.5.2, Recording Modulation.

Enabled by default, the Touch Auto-write option allows you to record modulation events as soon as you touch Knobs 1–8, even if you don't rotate them:

- If Touch Auto-write is disabled, modulation events are recorded only when you rotate the Knobs 1–8 (as in previous MASCHINE versions).
- If Touch Auto-write is enabled, modulation events are recorded as soon as you touch the Knobs 1–8, whether you actually rotate them or not:
  - If you rotate the Knobs, the new modulation values are recorded for the corresponding parameters.
  - If you touch the Knobs but don't rotate them, the last modulation values for these parameters **keep being recorded** as new events as the playhead moves forward, thereby overwriting any existing modulation events at the playhead position. Modulation stops being recorded when you release the Knob(s).

Enabling/Disabling Touch Auto-Write

The Touch Auto-write option can be enabled or disabled in the Hardware page of the Preferences panel:



The Touch Auto-write check box in the Hardware page of the Preferences panel.

► To enable or disable the Touch Auto-write option, click the Touch Auto-write check box in the Touch-Sensitive Knobs section of the Hardware page in the Preferences panel.

To access the Touch-Sensitive Knobs section in the Hardware page, your MASCHINE STUDIO controller must be connected to your computer and controlling the MASCHINE instance. Moreover if a KOMPLETE KONTROL S-SERIES keyboard is also focused on that MASCHINE instance, make sure that your MASCHINE STUDIO controller is selected in the Controller menu at the top of the Hardware page in order to see its settings! For more information, see section ↑2.6.9, Controller Menu in the Hardware Page of the Preferences Panel.



The Touch Auto-write option is also available on the KOMPLETE KONTROL S-SERIES keyboards. See section ↑15.6, Using the Touch Strips for more information.

Example of Use

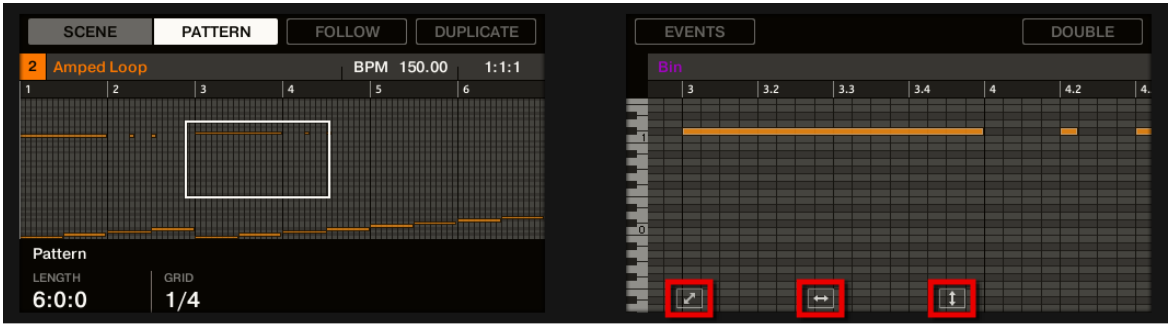
Touch Auto-write can be very handy if a parameter already has some modulation recorded in the Pattern, and you want to re-record modulation for this parameter, this time at a constant value:

- With Touch Auto-write disabled (and in previous MASCHINE versions), you have to constantly rotate the Knob to ensure that the old modulation events are actually replaced by the new ones. To simulate a new constant modulation value, you had no other choice than slightly rotate the Knob incessantly around the desired value.
- With Touch Auto-write enabled, you just need to keep a finger on the Knob: The current modulation value is recorded in new modulation events as long as you touch the Knob, automatically replacing any old modulation events at these positions.

2.6.8.4 Zoom and Scroll Overlays

Since MASCHINE 2.0, when your MASCHINE STUDIO controller is in particular modes, you can use Knob 5 and 6 to respectively zoom and scroll horizontally through the content shown in the right display. In some cases (e.g., in Keyboard mode) you can additionally use Knob 7 to scroll vertically through this content.

In MASCHINE 2.2, the zooming and scrolling functions are indicated, when available, by little icons that appear as overlays above the relevant Knobs as soon as you touch any of them. This way, in case of doubt, a simple touch on any Knob below the right display will indicate if some zooming and scrolling functions are available.

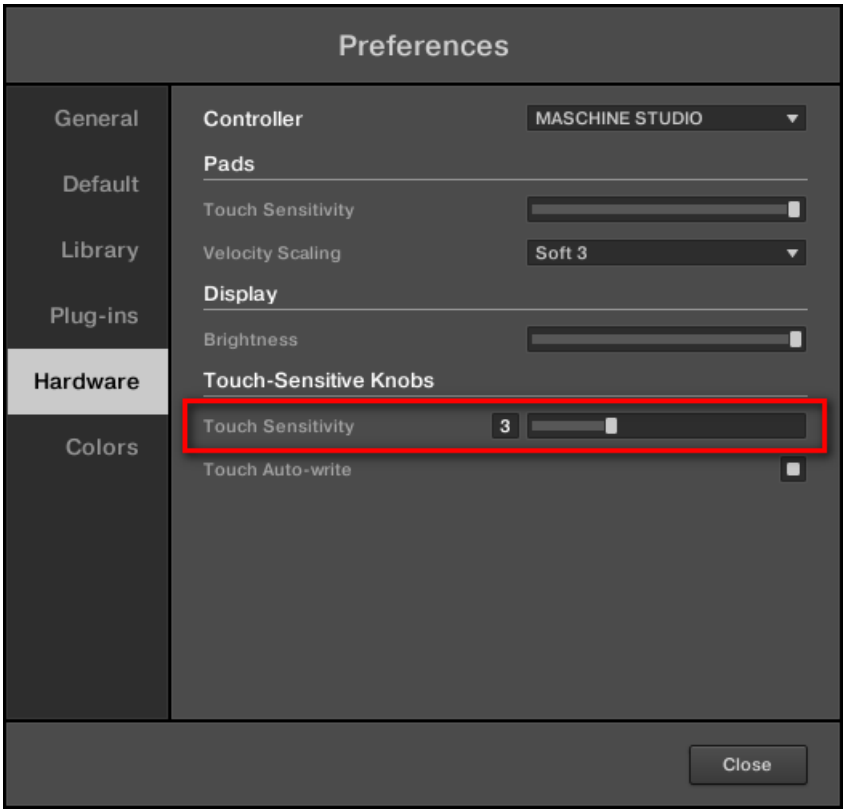


When you touch any of the Knobs 5–8, little icons appear above the Knobs used for zooming/scrolling in the display.

2.6.8.5 Adjusting the Knobs's Touch Sensitivity

You can adjust the touch sensitivity of Knobs 1–8 to your liking. Your setting will affect all the features involving touch-sensitive knobs (see previous sections).

The touch sensitivity can be adjusted via the Touch Sensitivity slider available in the Touch-Sensitive Knobs section of the Hardware page in the Preferences panel:



The Touch Sensitivity slider in the Touch-Sensitive Knobs section allows you to adjust the touch sensitivity of Knobs 1–8.

- In the Touch-Sensitive Knobs section at the bottom of the Hardware page in the Preferences panel, drag the Touch Sensitivity slider to the left to decrease the touch sensitivity of Knobs 1–8, or drag the slider to the right to increase it.



To access and modify the settings for your MASCHINE STUDIO controller, it must be currently connected to your computer and controlling the MASCHINE software, and it must be selected in the Controller menu at the top of the Hardware page. See section ↑2.6.9, Controller Menu in the Hardware Page of the Preferences Panel for more information on this.

The Touch Sensitivity values range from 1 to 8 (3 by default).

At low sensitivity values (slider to the left), you will need to apply a stronger pressure on Knobs 1–8 for MASCHINE to detect it. At high sensitivity values (slider to the right), MASCHINE will detect a softer pressure on the knobs.

The current sensitivity value is indicated by the number left of the slider. Additionally, this number provides a visual feedback that helps you quickly find the sensitivity that best fits your needs:



On the left, your touch is not detected; on the right, it is detected!

1. While looking at this sensitivity value, touch any Knob 1–8 under the controller displays. As soon as your pressure on the Knob is detected by MASCHINE, the number is highlighted.
2. Apply various pressures on the Knob and readjust the slider accordingly until you are satisfied with the sensitivity.



For example, you could set the sensitivity high enough to avoid that slight, unwanted touches on the Knobs disturb your workflow, but still low enough to give the touch features a "natural" feel — the best setting will depend on your fingers and needs!

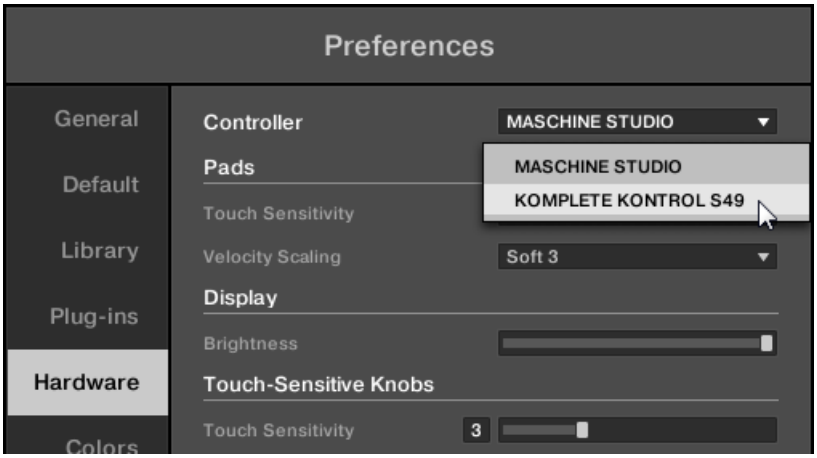


In the Hardware page of the Preferences panel, the other setting of the Touch-Sensitive Knobs section is described in section ↑2.6.8.3, Touch Auto-Write Option.

2.6.9 Controller Menu in the Hardware Page of the Preferences Panel

In previous MASCHINE versions you could have only one device focused on a particular MASCHINE instance, and the Hardware page of the Preferences panel showed the settings for that particular controller. With the integration of the KOMPLETE KONTROL S-SERIES keyboards in MASCHINE 2.2, you can have two devices simultaneously focused on a MASCHINE instance: a controller from the MASCHINE family and a KOMPLETE KONTROL S-SERIES keyboard.

For this reason, the Hardware page of the Preferences panel provides you with a **new Controller menu** at the top allowing you to select the device of which you want to see and modify the settings:



The Controller menu allows you to display the settings for the desired device.

This menu can hold up to two entries, depending on the device(s) focused on that MASCHINE instance:

- No device focused on that instance: The Controller menu is empty and all settings in the Hardware page are grayed out and inactive. To modify the settings of a device from that MASCHINE instance, the device must be connected to your computer and focused on that instance.
- One device (MASCHINE or KOMPLETE KONTROL S-SERIES) focused on that instance: The Controller menu holds only one entry for that device. This entry is always selected and you can adjust the settings for that device.
- Two devices (one controller from the MASCHINE family and one KOMPLETE KONTROL S-SERIES keyboard) focused on that instance: The Controller menu holds an entry for each focused device and you can choose which settings you want to edit.

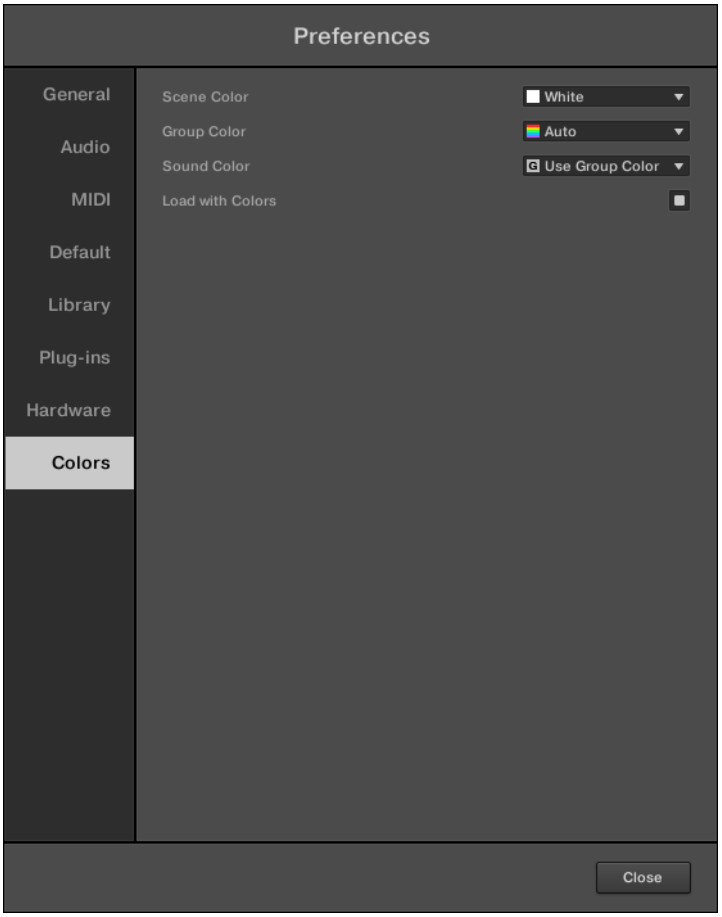
▶ When two devices are focused on the MASCHINE instance, click the Controller menu at the top of the Hardware page in the Preferences panel and select the particular device of which you want to edit the settings.

→ Upon your selection all settings underneath are updated accordingly.

2.6.10 Preferences – Colors Page

The Colors page enables you to choose default colors for your Scenes, Groups, and Sounds.

► To display the Colors page click the Colors tab on the left of the Preferences panel.



The Preferences panel – Colors page.

Setting	Description
Scene Default	Selects a default color for your Scenes. In the menu you can choose the desired color from the 16-color palette or *White* (default setting). The color selected as default is highlighted in the menu. If you select *Auto* each Scene will have a different default color.
Group Default	Selects a default color for your Groups. In the menu you can choose the desired color from the 16-color palette. The color selected as default is highlighted in the menu. If you select *Auto* (default setting) each Group will have a different default color.
Sound Default	Selects a default color for your Sounds. In the menu you can choose the desired color from the 16-color palette. The color selected as default is highlighted in the menu. If you select *Auto* each Sound will have a different default color. If you select *Use Group Color* (default setting) Sounds will by default mirror the color of the Group they belong to.
Load with Colors	Color settings are saved with your MASCHINE files (Projects, Groups, Sounds, etc.). If you uncheck Load with Colors (checked by default), the saved colors won't be used next time you load the files — the loaded files will use the default colors set in this Colors page instead.



Please note that the settings in this Colors page define *default* colors: These colors will only be used when creating a new Project, resetting a Group/Sound, or when Load with Colors is unchecked (see above). To change the color of particular objects (Sounds, Groups, Patterns, Scenes) in your Project, use the *Color* submenu in the object's context menu in the software. See ↑4.2.4, Changing the Sound's Color, ↑4.3.4, Changing the Group's Color, ↑7.7.7, Changing the Pattern's Color, and ↑13.2.7, Changing the Scene's Color for more information, respectively.



As long as an object (Scene, Sound, Group or Pattern) has the default color, this color is not attached to the object but instead to its "position" in the respective list: In particular, if you move the object to another position the default color will not follow the object — the object will instead take the default color of its new position.

2.7 Integrating MASCHINE into Your MIDI Setup

You can quickly integrate MASCHINE into your MIDI setup.

You can use MIDI in MASCHINE in various ways. Notably:

- You can synchronize a MIDI Clock signal between MASCHINE and other MIDI devices: ↑2.7.2, Sync to External MIDI Clock and↑2.7.3, Send MIDI Clock.
- If you connect a MIDI keyboard to the MIDI IN, you can directly play the focused Sound with it without having to set anything up.
- You can let particular Sounds and Groups react to incoming MIDI data and send MIDI data to the desired port. More on these in section ↑8.2, Using MIDI Control and Host Automation.
- You can also switch Scenes remotely by sending MIDI Note or MIDI Program Change messages to MASCHINE. More on this in section ↑13.4, Triggering Scenes via MIDI (MASCHINE Plug-in Only).

2.7.1 Connecting External MIDI Equipment



The MIDI sockets on the rear panel of the MASCHINE STUDIO controller.

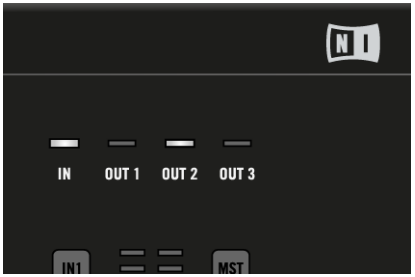
To connect your external MIDI equipment:

1. Hook it up to the MASCHINE STUDIO controller's MIDI IN or MIDI OUT 1–3 socket on the rear panel.

2. If MASCHINE is running as a stand-alone application, activate the corresponding MIDI input and/or output(s) of your MASCHINE STUDIO controller in the MIDI page of the Preferences panel (see ↑2.6.3, Preferences – MIDI Page).
3. If MASCHINE is running as a plug-in in a host application, the MIDI configuration is managed by the host (see section ↑2.5, Stand-Alone and Plug-in Mode). Please refer to your host documentation to know how to configure MIDI in your host.

MIDI Indicators

On the top panel of your controller you will find four MIDI indicators in the top right corner showing you at anytime the MIDI activity of the controller.



The MIDI indicators on the top panel of your controller.

- The IN indicator lights up when MIDI data is received on the MIDI IN socket of your controller.
- The OUT1–3 indicators light up when MIDI data is sent on the MIDI OUT 1–3 socket, respectively.

2.7.2 Sync to External MIDI Clock

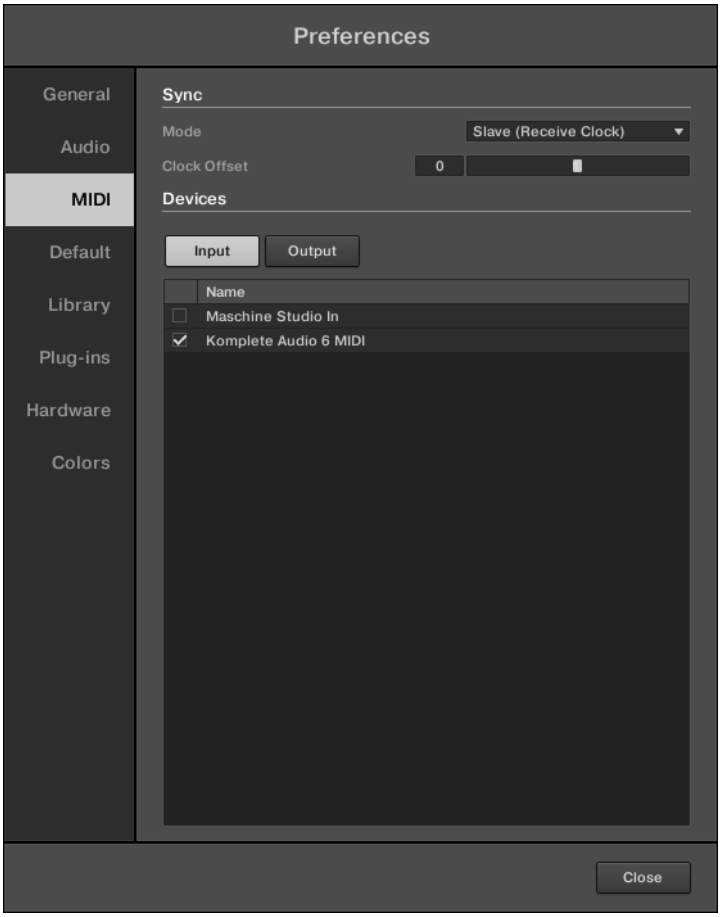
If MASCHINE is running as a stand-alone application, it can be controlled externally via MIDI Clock by any device that is capable of sending MIDI Clock. This could be hardware such as a drum machine, another groovebox or sequencer, or even another software sequencer.



If you use MASCHINE as a plug-in, it is automatically synced to the host application so you don't have to activate external MIDI sync! See section ↑2.5, Stand-Alone and Plug-in Mode for more information on using MASCHINE as a plug-in.

To configure MASCHINE to receive MIDI Clock from an external device:

1. Select *Preferences* entry from the File menu.
2. Select the MIDI page.
3. In the Sync section select *Slave (Receive Clock)* from the menu.
4. Select the Input button to see a list of connected devices.
5. Check the name of the device sending MIDI clock (the device you want MASCHINE to sync with).



The Preferences – MIDI page with Sync to External MIDI Clock activated.

You must define at least one MIDI input device in the Devices section of the MIDI page to enable MASCHINE to sync.

When *Slave (Receive Clock)* is selected, the Play button in the MASCHINE Header and the PLAY button on your controller are deactivated.



If you want to configure MASCHINE to react to other MIDI messages than MIDI Clock, in particular if you want to control MASCHINE notes and parameters via MIDI, please refer to section ↑8.2, Using MIDI Control and Host Automation, where this is described in detail.

2.7.3 Send MIDI Clock

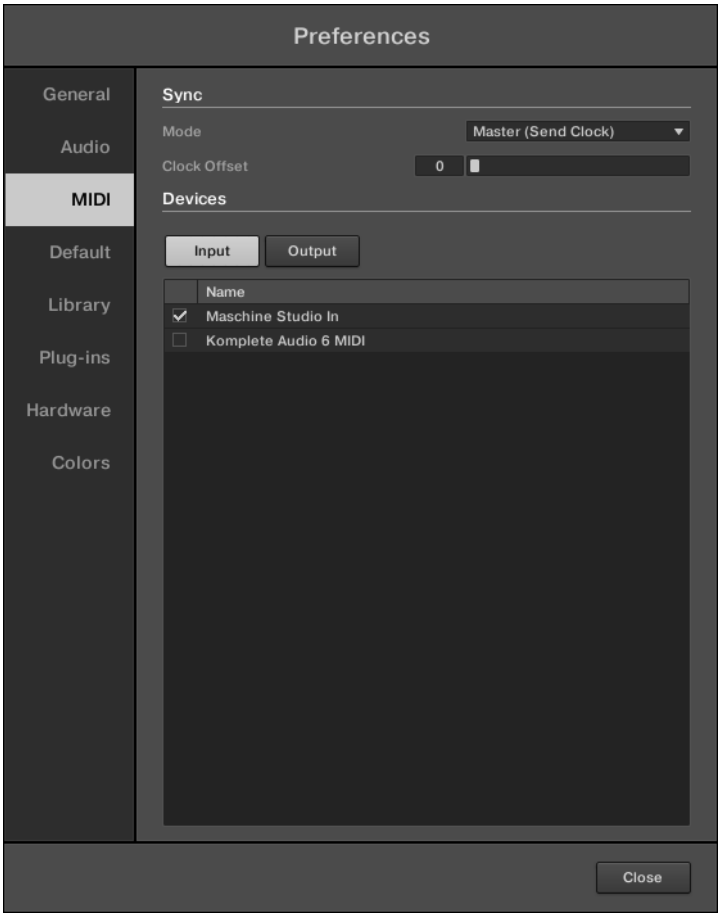
If MASCHINE is running as a stand-alone application, it can also send a MIDI Clock signal to any device that is capable of receiving MIDI Clock. This could be hardware such as a drum machine, another groovebox, or even another software sequencer.



If you use MASCHINE as a plug-in, it cannot send any MIDI Clock signal. See section ↑2.5, Stand-Alone and Plug-in Mode for more information on using MASCHINE as a plug-in.

To configure MASCHINE to receive MIDI Clock from an external device:

1. Select *Preferences* entry from the File menu.
2. Select the MIDI page.
3. In the Sync section select *Master (Send Clock)* from the menu.



Master (Send Clock) activated.

You can adjust the MIDI Clock offset in the MIDI page of the Preferences panel. See ↑2.6.3, Preferences – MIDI Page for more information.

If you want MASCHINE to send other MIDI messages than MIDI Clock, in particular if you want to control other MIDI-capable devices via the notes played in MASCHINE, please refer to section ↑8.2.5, Sending MIDI from Sounds.

2.8 Syncing MASCHINE using Ableton Link

Ableton Link is a protocol that synchronizes beat, phase and tempo of Link-enabled applications on the same computer or over a shared network. This means you can conveniently keep applications synchronized across different devices or join a group jam with others with minimal setup. Connecting applications via Link provides you with the ability to synchronize them to a shared timeline and change the tempo globally from each of the connected applications.

2.8.1 Connecting to a Network

Applications that support Ableton Link can join a Link session when connected to the same network. To enable Link within MASCHINE, simply make sure the computer running MASCHINE is connected to the same local network as the other applications you want to link to. This can either be a local network or an ad-hoc (computer-to-computer) connection.

To ensure maximum security and reliability while using Link, there are several things you may want to consider:

- For reliability, connect to the local network using a router via an Ethernet cable.
- If you do use a Wi-Fi network, be sure to use a password to prevent excluded users from joining your session.
- For the most secure and reliable connection, create a Link session via a direct connection from one computer to another using a Thunderbolt or Ethernet cable.

For more general information on setting up and using Link, please refer to the Link FAQs article located on the Ableton website:

https://help.ableton.com/hc/en-us/articles/209776125-Link-FAQs.

2.8.2 Joining and Leaving a Link Session

It is possible to join a Link session at any time by clicking the LINK button. When another Link-enabled application is connected, a moving bar within the LINK button is displayed even though MASCHINE's transport is not running. This bar represents the global phase of Link that all participating applications lock into.

After clicking the Play button, playback will resume on the downbeat once the moving bar within the LINK button is filled. The first participant to join the session sets the initial tempo, from then on any participant in the session can change the tempo in their respective application. If multiple participants change the tempo at the same time, the last tempo change will take effect.

To start or join a Link session, proceed as follows:

1. Click the LINK button located in the header.



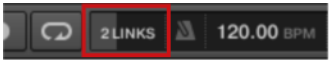
⇨ MASCHINE will either join an existing Link session or begin a new session.

2. Start MASCHINE's playback by clicking the play button.

⇨ MASCHINE's playback is now synchronized with the Link timeline.

3. To stop using Link, and leave the session, click LINK again.

While connected, the LINK button displays how many other Link-enabled applications are connected via Link. The example below indicates that there are two other applications connected.



Active Link session with two other instances connected.

When Link is active, it is not possible to synchronize MASCHINE to incoming MIDI Clock as a slave. Link will take priority. Sending MIDI Clock from MASCHINE as a master is still possible.

2.9 Using Footswitches with Your MASCHINE STUDIO Controller

Your MASCHINE STUDIO Controller provides two footswitch inputs in the form of 1/4" sockets on its rear panel.



The footswitch inputs on the rear panel of your controller.

These sockets allow you to control the transport in MASCHINE via footswitches:

- FOOTSWITCH 1: Starts/stop the playback in MASCHINE. This is equivalent to the PLAY button on your controller and the Play button in the software's Header.
- FOOTSWITCH 2: Engage/disengage recording in MASCHINE. This is equivalent to the REC button on your controller and the Record button in the software's Header.



You can use "toggle" switches (press it once to turn it on, press it again to turn it off) or "gate" switches (hold it to turn it on, release to turn it off) for either footswitch inputs as you see fit. For example, we recommend you to plug a toggle switch into the FOOTSWITCH 1 socket to control the playback, and a gate switch into the FOOTSWITCH 2 socket to momentarily engage recording as long as you hold the switch depressed!

3 Browser

The Browser is the place where you can organize and categorize all of your Projects, Groups, Sounds, Plug-in presets, and Samples. 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 Browser Basics

This section describes some general concepts about the Browser.

3.1.1 The MASCHINE Library

To organize, find, keep track of, and provide you thousands of files at any time ready for loading, MASCHINE makes use of a **Library**. The MASCHINE Library not only contains the factory content included with MASCHINE, but also any other factory content (e.g., from MASCHINE EXPANSIONS or other Native Instruments products) as well as your own user content.

To help you find the right file quickly and efficiently, the Library implements various techniques that go far beyond the classic folder structure of your operating system. For example, each file included in the Library can be described according to following aspects:

- The **file type**: Project, Group, Sound, etc.
- The **content type** of the file, i.e. whether it originates from a product's factory library or if it was created by a user.
- The **product** which the files comes from — this can include, e.g., a hierarchical structure with a product category, a particular product, and possibly a bank and sub-bank of this product.
- A variable amount of **tags** used to describe various characteristics of the file, for example, the type of effect, the sonic character, the context in which it is used — in a word, anything that might help you find the file.



Note that the Library is the only other way to display and access your files: You could also navigate to the same files in your file system. The (substantial) difference lies in the fact that the Library organizes your files in a *musically relevant* way.

Which Files are Included in the MASCHINE Library?

The files included in the MASCHINE Library are all MASCHINE-relevant files found in the folders whose paths are listed in the Library page of the Preferences panel. For more information on how to manage these library folders, please refer to ↑2.6.4, Preferences – Default Page.

3.1.2 Browsing the Library vs. Browsing Your Hard Disks

The **Browser** is your interface to the MASCHINE Library. It provides all necessary tools to search for the files you require — and suggest other files you might not have thought of. Beside this, the Browser also allows you to navigate your file system in a classic way. Both are described in the next section.

The Browser provides two operation modes, each of them providing its own tools:

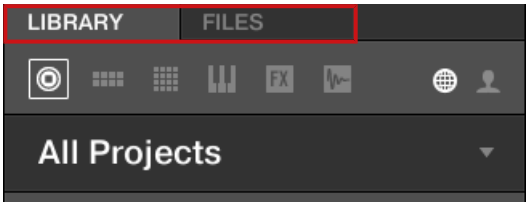
- The LIBRARY pane allows you to browse the MASCHINE Library. This is the preferred way to search for files meeting particular musical requirements. This pane also allows you to tag your own files to your liking.
- The FILES pane allows you to browse your hard disks by using the hierarchical folder structure of your operating system. For example you can use it to navigate files that have not been imported into the MASCHINE Library — and you can import them from there!



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

Switching Between LIBRARY and FILES Pane

► To show the LIBRARY pane or the FILES pane of the Browser, click the corresponding tab at the top of the Browser.



Click the desired tab to show the corresponding pane of the Browser.

The LIBRARY pane is described in section ↑3.2, Searching and Loading Files from the Library, and the FILES tab is described in section ↑3.6, Loading and Importing Files from Your File System.

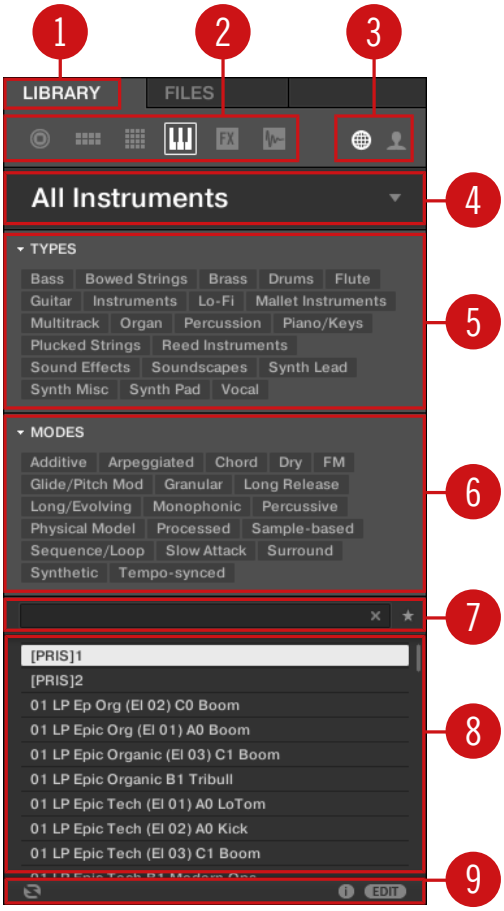
3.2 Searching and Loading Files from the Library

The Browser's LIBRARY pane allows you to search for any file in the MASCHINE Library.

► To display the LIBRARY pane, click the LIBRARY tab in the top left corner of the Browser.

3.2.1 Overview of the LIBRARY Pane

The LIBRARY pane contains following elements:



The elements of the LIBRARY pane.

(**1**) **LIBRARY tab**: Click the LIBRARY tab to open the LIBRARY pane described here.

(**2**) **File Type selector**: This contains six icons, each representing the different files types of MASCHINE. From the left to right the file types are Project, Group, Sound, Instrument preset, Effect preset, and Sample. By clicking one of them it causes only the files of the selected type to be displayed in the Result list (**8**). See section ↑3.2.4, Selecting a File Type.

(**3**) **Content selector**: Click the NI icon (on the left) to select factory content or the User icon (on the right) to select user content instead. Only the files of the content selected here will be displayed in the Result list (**8**). See section ↑3.2.5, Choosing Between Factory and User Content.

(**4**) **Product selector**: Click to open a drop-down menu where you can select a particular product, product category, and sometimes the bank and sub-bank of the selected product. Again, only the files matching your selection will be displayed in the Result list (**8**). See section ↑3.2.3, Selecting a Product Category, a Product, a Bank, and a Sub-Bank.

(**5**) **TYPES filter**: allows you to search for files based on Type and Sub-Type tags that have been applied to them. See section ↑3.2.6, Selecting Type and Mode Tags.

(**6**) **MODES filter** (Instrument/Effect presets only): allows you to search for files based on Mode tags that have been applied to them. See section ↑3.2.6, Selecting Type and Mode Tags.

(**7**) **Search field**: Enter any character string into the Search field to limit the search results to the files containing this string. See section ↑3.2.7, Performing a Text Search.

(**8**) **Result list**: The Result list displays all files that match your query, as specified via the various tools above. See section ↑3.2.8, Loading a File from the Result List.

(**9**) **Control bar**: At the bottom of the Browser, the Control bar provides a few useful tools when browsing the MASCHINE Library, some of them depending on your selection in the File Type selector (**2**):

- For all file types except Project, click the **Autoload button** at the far left of the Control bar to automatically load the selected file in order to hear it in context with the rest of your Project while it is playing. See section ↑3.3.1, Loading the Selected Files Automatically.
- For Samples, enable the **Prehear button** and adjust the volume fader next to it in order to pre-listen to the selected Samples directly from the Browser in order to make a quick selection. See section ↑3.3.2, Pre-Listening to Your Samples.
- For Groups, enable the Load Patterns checkbox to load the Group's Patterns together with the Group. See section ↑3.3.3, Loading Groups with their Patterns.
- For all files, click the **Information button** (showing a little "i") near the EDIT button to display more information on the selected file(s). See section ↑3.3.4, Displaying File Information.

- For all files, click the EDIT button at the far right of the bar to open the **Attribute Editor** and modify the tags and properties assigned to the selected file(s). See section ↑3.5, Editing the Files' Tags and Properties.

Overview of the Search Workflow in the LIBRARY Pane

When searching for files via the LIBRARY pane, you can progressively refine your search by following this typical top-to-bottom workflow.

The first two steps are mandatory:

1. Choose a file type in the File Type selector (**2**).
2. Select between factory content and user content in the Content selector (**3**).

The next steps are optional. They can be useful to further refine your search and limit the number of search results to a reasonable amount:

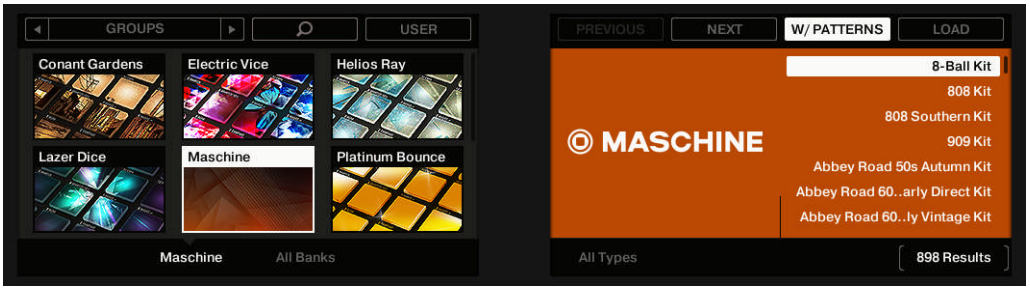
1. Choose a product category or a product in the Product selector (**4**). If you have selected a product you can further choose a particular bank and sub-bank of this product, if any.
2. Select tags in the TYPES filter (**5**) — and the MODES filter (**6**) for Instrument and Effect presets — describing what you are looking for.

At any time in the procedure described above, you can use the Search field (**7**) to quickly perform a text search among the entries in the Result list (**8**).

The above steps are described in detail in the following sections.

3.2.1.1 Browsing the Library on the MASCHINE STUDIO Controller

► Press BROWSE to enter or leave the Browser.



The Browser on your controller.

On the displays of your controller, the Browser is organized as follows:

- The left display allows you to narrow your search by selecting the file type, the content type (factory or user files), as well as a product category, a product, a bank, and a sub-bank.
- The right display allows to further refine your search by selecting the desired Type (and possibly Mode) tags. It also shows you the corresponding result list. Turn the jog wheel or Knob 8 to select any entry from the list, and press the jog wheel or Button 8 (LOAD) to load it.

The above steps are described in detail in the following sections. In addition, on your controller you will find most of the browsing aids available in the software, as described in section ↑3.3, Additional Browsing Tools.



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

Browsing Your Library Using the Jog Wheel and the FUNCTION Buttons

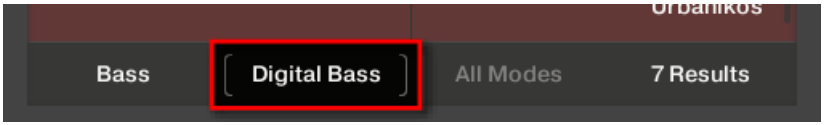
As usual on your controller, each parameter visible at the bottom of either display can be adjusted by the Knob directly underneath. This is also true in Browse mode, as you will see in the next sections.

However the Browse mode additionally provides an alternate, unified method for adjusting any field appearing at the bottom of the displays: using the jog wheel and the two FUNCTION buttons below.



The jog wheel and the FUNCTION buttons in Browse mode.

1. Press the Left/Right FUNCTION buttons to select the field you want to control from the jog wheel.
   The selected field is indicated by thin brackets:



2. Turn the jog wheel to change the value in the selected field.

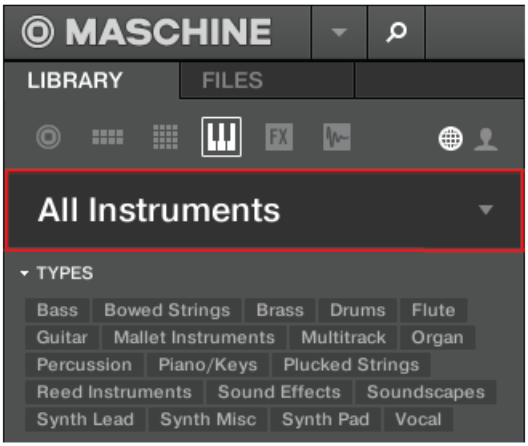
→ This way you can control the product selection (left display), the tag filter (right display), as well as the result list with the scrolling comfort of the jog wheel.

By default the jog wheel controls the result list — the rightmost parameter at the bottom of the right display.

3.2.2 Selecting or Loading a Product and Selecting a Bank from the Browser

The Product selector allows you to limit your search to a certain product category, a particular product, or a specific bank of the product. You can also load a product along with its default preset file directly from the Product selector (see below).

By default there is no particular selection in the Product selector; it reads All Instruments:

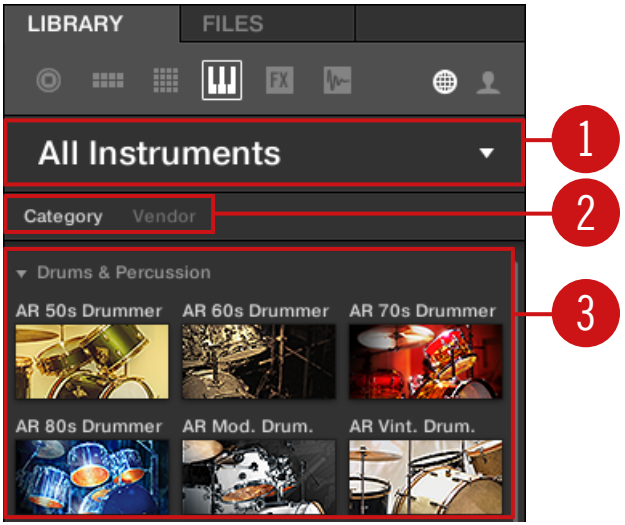


The closed Product selector header.

Selecting a Product Category

▶ Click on the Product selector header to open it.

→ The Product selector opens up, showing you all products available in your MASCHINE Library.



The opened Product selector.

(**1**) **Product selector header**: The header shows the selected product—if there is no selection it shows a generic label (All Instruments). Click on the header to close the Product selector.

(**2**) **Category/Vendor** selector: Allows you to sort the Product list by Category or by Vendor.

(**3**) **Product list**: Shows all products that are available in your MASCHINE Library.

If Category is selected in the **Category/Vendor selector**, the Product list is sorted by the following categories:

- Drums & Percussion
- Sampled Instruments
- Synthesizers
- Other

If Vendor is selected in the Category / Vendor selector, the Product list is sorted by the names of the manufacturers.

► To select a product and show only the preset files associated with it, click on the product in the list.

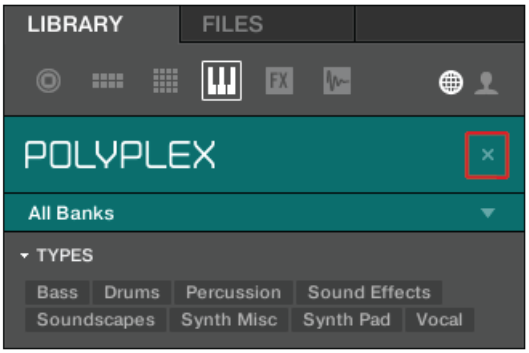
→ Upon your selection, the Product selector automatically closes, the product name and icon appear in the header, and the tag filter and results list below will be filtered accordingly.



Products are shown in the Product selector only if the Library contains files for them. If a particular product does not show up, make sure that you have installed the latest updates using Service Center.

Resetting the Product Selection

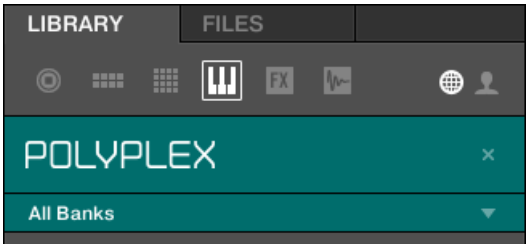
► To reset the selection made in the Product selector, click the little cross at the right of the product name:



→ The product selection is cancelled. The Product selector displays the generic label **All Instruments**. The tag filter and the results list under the Product selector now include files for all products.

Selecting a Bank

When you select specific products in the Product list (see description above), an additional **Bank menu** appears under the closed Product selector:

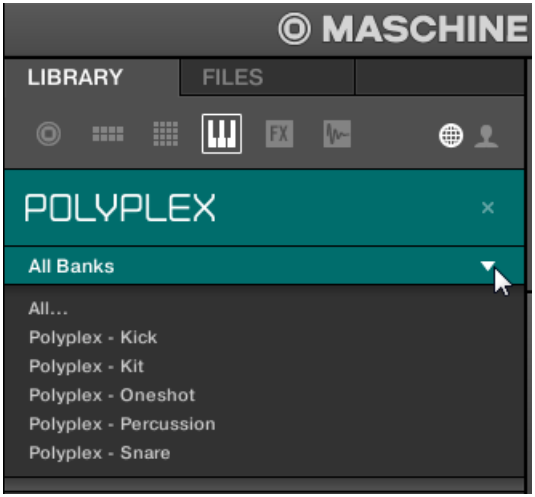


The Bank menu showing All Banks for POLYPLEX

The Bank menu allows you to select a particular bank of files for the selected product (POLYPLEX in the picture above).

Banks can be additional Libraries (for example MASSIVE Expansions), different versions of the original Factory Library (for example FM7 Legacy and FM8 Factory Library), or any other content categorization specific to a particular product (for example different sets of drum sounds for POLYPLEX, as shown above).

► To select a particular bank for the selected product, click the Bank menu under the product icon and choose a bank from the available entries.



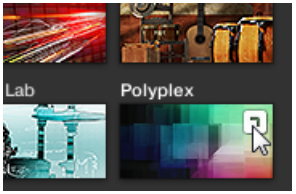
→ Upon your selection the Bank menu closes and displays the selected bank. The tag filter and results list underneath further narrow their content accordingly.

► As with the product selection, you can remove the selected bank by clicking the little cross next to the bank name in the closed menu.

Loading a Product from the Product Selector

If you wish to not only filter the results list by selecting a product, but also load the product along with its default preset file, you can do so directly from the Product selector.

► To load a product with its default preset file, place the mouse over the product entry in the Product selector and click on the arrow symbol that appears in the upper right corner of the product entry.



→ The product and the first preset from the results list for this product are loaded, and the result list only displays preset files only associated with this product.

3.2.2.1 Browsing by Product Category Using MASCHINE STUDIO

The MASCHINE Browser can filter your search by product category.

To filter products by Category in the Browser using MASCHINE STUDIO:

1. Press BROWSE to show the Browser.
2. Press Button 2 to select a product.

⇨ The Browser will now display instrument or effect plug-in presets only depending on your choice.

3. Press and hold SHIFT to access the filters for CATEGORIES / VENDORS.
4. Press Button 1 to select CATEGORIES if you want to browse by product Category.
5. Turn Knob 1 to select a category from the All Categories list.
6. Turn Knob 2 to filter your selection further by choosing a particular product.

⇨ After selecting a category and product the list of available presets appear on the right-hand display.

7. Turn Knob 8 to select a preset.
8. Press Button 8 to load the selected preset.

3.2.2.2 Browsing by Product Vendor Using MASCHINE STUDIO

The MASCHINE Browser can filter your search by product vendor.

To filter products by Vendor in the Browser using MASCHINE STUDIO:

1. Press BROWSE to show the Browser.
2. Press Button 2 to select a product.

⇨ The Browser will now display instrument or effect plug-in presets only depending on your choice.

3. Press and hold SHIFT to access the filters for CATEGORIES / VENDORS.
4. Press Button 2 to select VENDORS if you want to browse by Vendors.
5. Turn Knob 1 to select a vendor from the All Vendors list.
6. Turn Knob 2 to filter your selection further by choosing a particular product.

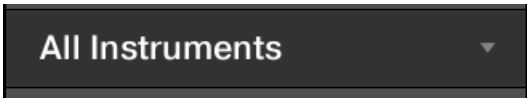
⇨ After selecting a vendor and product the list of available presets appear on the right-hand display.

7. Turn Knob 8 to select a preset.
8. Press Button 8 to load a preset.

3.2.3 Selecting a Product Category, a Product, a Bank, and a Sub-Bank

The Product selector allows you to limit your search to a certain product category, a particular product, a specific bank of the product, or even a sub-bank in this bank.

By default there is no particular selection in the Product selector: It reads All Projects, All Groups, All Sounds, All Instruments, All Effects or All Samples according to the type of file selected in the File Type selector above (see section ↑3.2.4, Selecting a File Type):

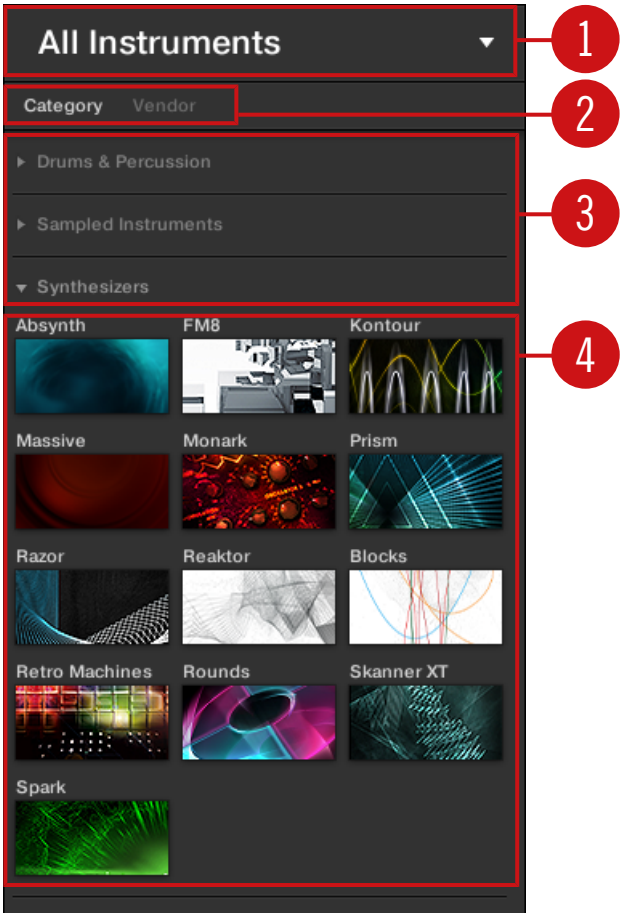


The closed Product selector without any Instrument selected.

Selecting a Product or a Product Category

► Click the Product selector to open it.

→ The Product selector opens up and shows you the following:



The opened Product selector (for Instrument presets).

(**1**) **Product selector header**: The header shows the product or the selected product category — if there is no selection it shows a generic label (All Instruments in the picture above) corresponding to the type of file selected in the File Type selector above. Click the header to close the Product selector.

(**2**) **Product Category filter**: Shows the categories of the products that have files available in the MASCHINE Library. Click a category of a product to select/deselect it. Selecting a category limits the number of products shown in the Product list below (**3**). Only one category can be

selected at a time. You can also select a category and close the Product selector by clicking its header (**1**) again: The header (**1**) will display the category that you have just selected, and the TYPES filter (and MODES filter, if present) along with the Result list will be filtered by that category.

(**3**) **Product list**: Shows the products for which files are available in the MASCHINE Library. Click the desired product in the list. Upon your selection the Product selector automatically closes, the product name and icon appear in the header, and the tag filter and Result list below will be filtered accordingly.



The closed Product selector with an Instrument selected.

Product categories and products are shown in the Product selector only if the MASCHINE Library contains files for them. For example, if a Native Instruments effect from the KOMPLETE family is installed on your computer but you haven't saved any user presets for it in MASCHINE yet, its product icon will not be available in the Product selector when the user content is selected in the Content selector. Similarly, if you haven't updated a particular Native Instruments effect/instrument, the icon for that product might not be available in the Product selector when the factory content is selected in the Content selector — to prevent this, make sure that all your Native Instruments products are up to date.

Resetting the Product Selection

► To reset the selection made in the Product selector, click the little cross at the right of the product name:



→ The product selection is cancelled. The Product selector displays the generic label corresponding to the selected file type (Project, Group, Sound, Instrument preset, Effect preset or Sample). The tag filter and the Result list under the Product selector now include files for all products.

Selecting a Bank and a Sub-Bank

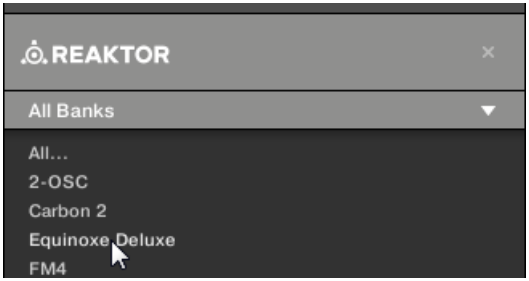
When you select specific products in the Product list (see description above), an additional **Bank menu** appears under the closed Product selector:



The Bank menu showing All Banks for REAKTOR Effects.

This Bank menu allows you to select a particular bank of files for the selected product (MASCHINE in the picture above).

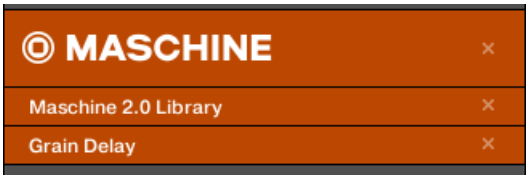
► To select a particular bank for the selected product, click the Bank menu under the product icon and choose a bank from the available entries.



→ Upon your selection the Bank menu closes and displays the selected bank. The tag filter and Result list underneath further narrow their content accordingly.

Banks can be, e.g., additional libraries (e.g., MASSIVE EXPANSIONS), different versions of the original Factory Library (e.g., FM7 Legacy and FM8 Factory Library), or any other content categorization specific to a particular product.

Similarly, some banks are split into several sub-banks. In that case a Sub-Bank menu appears under the Bank menu and allows you to select a particular sub-bank. For example, in the picture below the Grain Delay sub-bank of the Maschine 2.0 Library bank is selected for the MASCHINE Effect presets:



The Grain Delay sub-bank in the Maschine 2.0 Library bank.

As with the product above, you can remove the selected bank and sub-bank by clicking the little cross at the right of the bank or sub-bank name in the closed menu.

Products and Banks for User Content

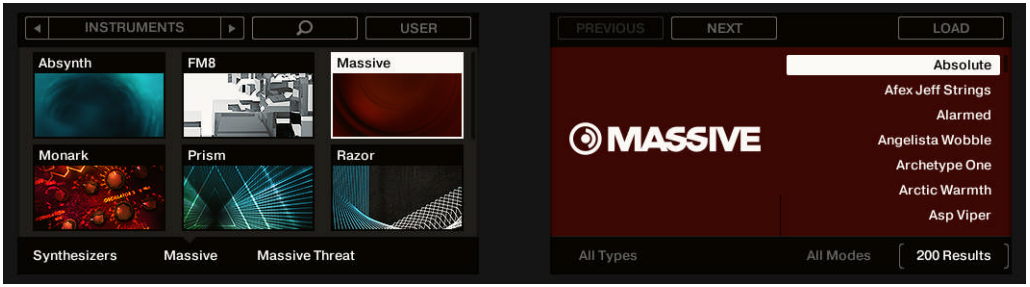
When you save your own MASCHINE files, they are automatically assigned to products, banks, and sub-banks as follows:

- When you save Projects, Groups or Sounds, they are automatically set to the Maschine product.
- When you save Instrument or Effect presets:
  - Presets for Internal Plug-ins: The product is set to Maschine, while the bank is set to the particular Internal Plug-in for which the preset has been saved (e.g., Sampler, Kick, Flanger, etc.).
  - Presets for Native Instruments Plug-ins: The product is set to the particular Native Instruments effect or instrument. The bank and sub-bank will vary with each Native Instruments product.
  - Presets for External Plug-ins: The product is set to the manufacturer of the VST/AU plug-in, and the bank is set to the particular VST/AU plug-in for which the preset has been saved. The sub-bank is left empty. In addition, the preset is assigned to the External Plug-ins product category.

3.2.3.1 Selecting a Product Category, a Product, a Bank, and a Sub-Bank on the Controller

On your controller in Browse mode:

► Turn Knob 1–4 under the left display to select a product category (if any), a particular product, a bank of that product (if any), and a sub-bank in that bank (if any), respectively. Turn a Knob at full left to remove any particular selection at this level (i.e. to select all items at this level).



Selecting a product category, a product, a bank, and a sub-bank on your controller.

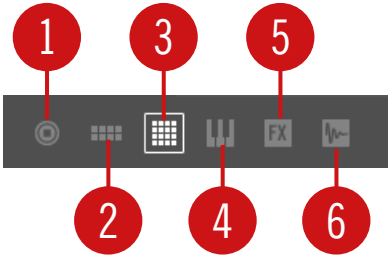
Additionally the left display shows you the name and icon of all products corresponding to the selected product category (Knob 1). The selected product (Knob 2) is highlighted.

If there are more than six products available, a scroll bar appears on the right of the left display. The display automatically scrolls to show the selected product. You can also use the Page buttons to just see the other products available:

► Press the Page buttons to scroll the products in the left display without changing the selection.

3.2.4 Selecting a File Type

The File Type selector shows six icons representing the different file types of MASCHINE:



The File Type selector.

(**1**) **Project**: (.mxprj)

(**2**) **Groups**: (.mxgrp)

(**3**) **Sounds**: (.mxsnd)

(**4**) **Instrument Plug-in presets**: (.mxinst)

(**5**) **Effect Plug-in presets**: (.mxfx)

(**6**) **Samples**: (.wav, .aiff)

► Click the desired icon in the File Type selector to display only the files of that type in the Result list.

→ The selected icon is highlighted and the files are filtered accordingly.

Selecting a File Type on the Hardware

On your controller in Browse mode:

► At the top left of the left display, press Button 1 or 2 to select the desired file type: PROJECTS, GROUPS, SOUNDS, INSTRUMENTS, EFFECTS, or SAMPLES.

3.2.5 Choosing Between Factory and User Content

The Content selector shows two icons representing the factory content on the left, and the user content on the right:



The Content selector.

► Click the NI icon to search the factory content, or click the User icon to search the user content.

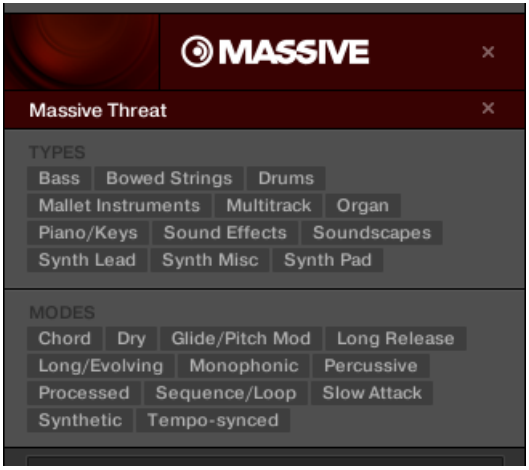
Choosing the Factory or User Content using the Controller

On your controller in Browse mode:

► At the top right of the left display, press Button 4 (USER) to browse the user content (button lit and USER label highlighted) or the factory content (button off and USER label not highlighted).

3.2.6 Selecting Type and Mode Tags

The tag filter that appears under the Product selector allows you to search for files according to particular characteristics, effect type, sonic character, etc.



TYPES and MODES filters for the Massive Threat bank of the MASSIVE Plug-in.

► Click the desired tags in the tag filter to select them and limit the search to the files marked with them. Click the selected tags again to deselect them and broaden the search.

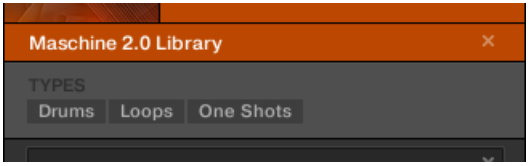
Tags for Projects, Groups, Sounds, and Samples: 3 Type Levels

For Projects, Groups, Sounds, and Samples, tags are structured into three hierarchical levels globally called Types. You can select them via the TYPES filter:

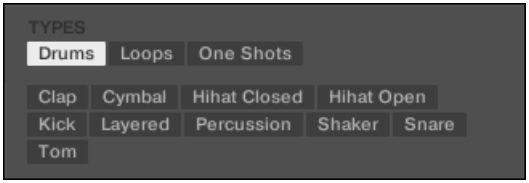
- At first the TYPES filter displays the available top-level tags only.
- As soon as you select a tag at the top level, the second level appears underneath with sub-tags of the selected tag.
- The hierarchical structure means that the sets of sub-tags are specific to each tag of the level above.

Example: Imagine that you are looking for a shaker Sample from the MASCHINE factory library:

- You have already selected the Maschine product in the Product selector, and the Maschine 2.0 Library bank of this product (for more information on this, see section ↑3.2.3, Selecting a Product Category, a Product, a Bank, and a Sub-Bank). For now the TYPES filter shows only top-level tags:



- In order to find a shaker, you first select the Drums Type from the TYPES filter.
  Upon your selection the second level of tags appears underneath:



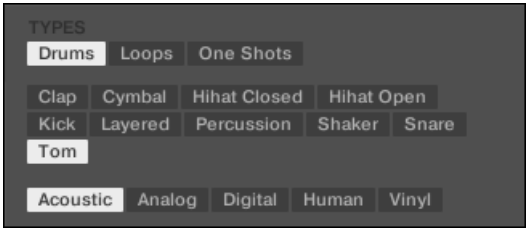
  In this second level, you select the Shaker Sub-Type.
  Now the third level appears with Sub-Types like Acoustic, Analog, etc.



By selecting any of these tags, say, Acoustic, you will narrow your search to this particular Sub-Type of shakers:



- Now imagine that you have loaded an acoustic shaker Sample and want to find a Sample for another drum instrument, e.g., a tom: You leave the Drums tag selected at the top level of the TYPES filter and directly go to the second level, where you select Tom instead of Shaker. As you select Tom, the whole set of Sub-Types underneath (third level) will be replaced with the Sub-Types of the Tom tag. However, insofar as possible your previous selection will be retained: In our example, both the Shaker and Tom tags have an Acoustic tag below them; since you had selected the Acoustic tag below the Shaker tag, the Acoustic tag below the Tom tag will be automatically selected as well.



This allows you to quickly find various Samples (even for different instruments) with similar characteristics — here, an acoustic sound.

Tags for Instrument and Effect Presets: 2 Type Levels and 1 Mode Level

For Instrument and Effect presets, tags can be of two kinds: Type or Mode. You can select them via the TYPES and MODES filter, respectively:

- The TYPES filter works as described above for all other file types, except that only two hierarchical levels are available. See above for a detailed description.
- The MODES filter provides an additional level that is independent from the Type levels:
  - In general, Mode tags will rather refer to technical terms (e.g., Arpeggiated, Percussive, Synthetic, etc.).
  - The MODES filter is always displayed. You can start your search with the MODES filter before (or even without) using the TYPES filter.
  - However, the list of tags available in the MODES filter will vary depending on the tags selected in the TYPES filter. If no file contains both the Type and Mode tags that you have selected, the Type tags will prevail and the Mode tags will be deselected.



If you don't select any tag in the TYPES or the MODES filter, the Result list will include all files satisfying any of their tags.

Selecting Multiple Tags from the Same Level

In both TYPES and MODES filter you can select **multiple tags** from the same level:

► Hold [Shift] on your computer keyboard and click two tags at a particular level to select these tags and all tags in-between.

► Hold [Ctrl] ([Cmd] on Mac OS X) on your computer keyboard and click any number of tags at a particular level to select these particular tags.

→ The Result list will include all files satisfying at least one of the selected tags.

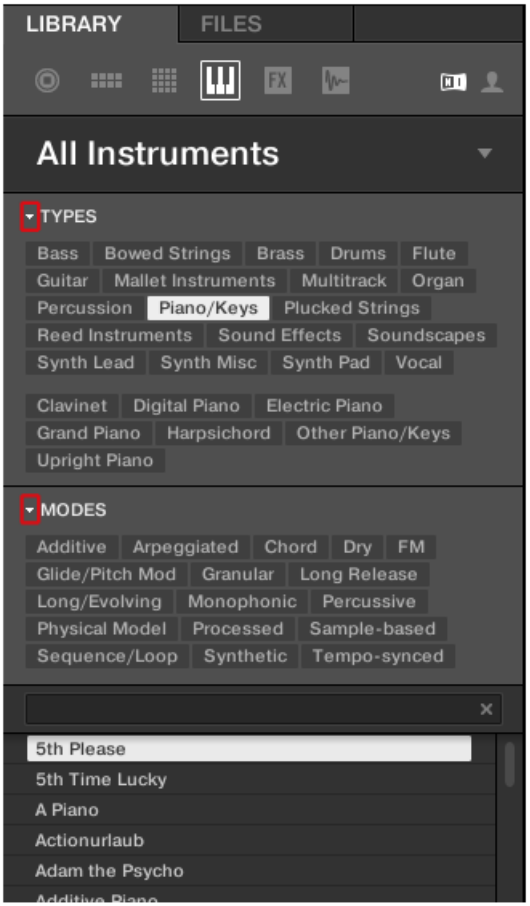
Opening and Collapsing the Attributes Sections

The Attributes sections (TYPES and MODES) in the Browser Library can be collapsed to make more room for the results list on smaller display resolutions.

To collapse the Attributes sections:

► Click the small triangle located to the left of the Attributes (TYPES or MODES).

→ The Attribute sections will collapse results will be shown depending on the amount of space available. Click the triangle again to reopen the sections.

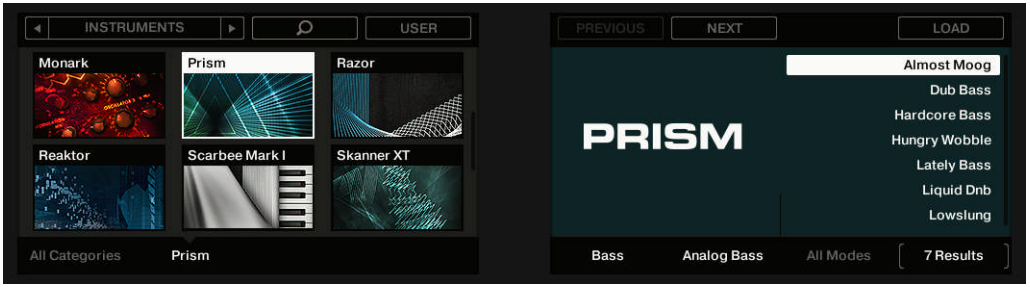


Highlighted triangle next to the Attributes (TYPES and MODES).

3.2.6.1 Selecting Type and Mode Tags on the MASCHINE STUDIO Controller

On your controller in Browse mode:

► Turn Knob 5–7 under the right display to select tags at the three levels of the tag filter. Turn a Knob at full left to remove any particular selection at this level (i.e. to select all items at this level).



Selecting Type and Mode tags on your controller (here for Instrument presets).

- When browsing Projects, Groups, Sounds or Samples, Knob 5–7 allow you to select Type tags in the three hierarchical levels.
- When browsing Instrument or Effect presets (as in the picture above), Knob 5 and 6 allow you to select a Type and a Sub-Type, respectively; Knob 7 allows you to select a Mode.

3.2.7 Performing a Text Search

In the Search field you can enter your search query.



The Search field.

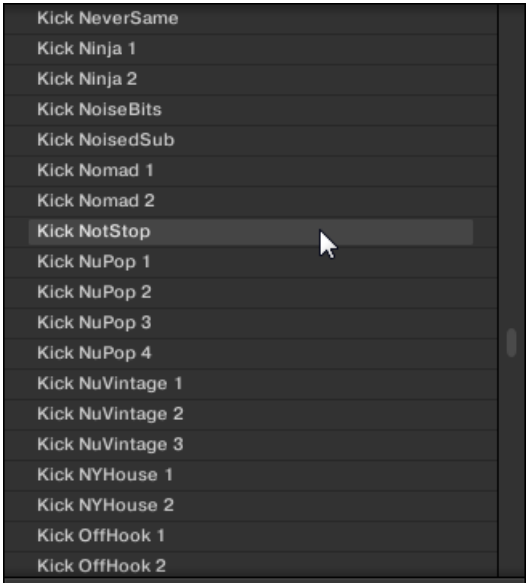
► Click in the Search field and type the desired text to limit the results to files containing this text.

The search will be performed on the file paths, the file names, the products/banks/sub-banks, the tags, and the properties directly as you type. If you want to search for a combination of two words (e.g. “bass” and “analog”) just enter both words in the Search field with a space in between. As you start typing, the list of matches will start narrowing in the Result list below.

On the right of the Search field, click the **Reset button** (showing a little cross) to reset both text search and tag search. The Product selection is not affected.

3.2.8 Loading a File from the Result List

The Result list shows all the files that match your query:



The Result list showing kicks from the MASCHINE Library.

If the list is too long to fit in the display, use your mouse wheel or drag the scroll bar on the right to show the remaining items.

The Result list allows you to:

- Select the desired file(s).
- Load the selected file(s) into your Project (or load another Project).
- Delete the selected file(s) from your hard disk and from the Library.
- Navigate to the selected file(s) in your operating system.
- See, and possibly edit, the attributes of the selected file(s) by clicking the EDIT button at the bottom right of the Browser. For more information on this, please refer to section ↑3.5, Editing the Files' Tags and Properties.

Selecting Files in the Result List

► To select a single file in the Result list, click its entry.

You can also select multiple files in the Result list in order to process them all at once.

To select adjacent files in the list, do the following:

► Hold [Shift] on your computer keyboard and click two files in the Result list to select these files and all files in-between.

To select distant files in the list, do the following:

► Hold [Ctrl] ([Cmd] on Mac OS X) and click all the files you want to select.

Loading Files via Double-Click

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:

- If it is a Project it will load all associated files replacing all files currently in memory. If your current Project contains unsaved changes a dialog will appear asking you if you want to save them. This is to prevent you from losing changes by accidentally loading a new Project without saving the old one.
- If it is a Group, it will be loaded into the Group currently in focus.
- If it is a Sound, it will be loaded into the Sound slot currently in focus.
- If it is an Instrument preset, it will be loaded into the first Plug-in slot of the Sound slot currently in focus.
- If it is an Effect preset, it will be loaded into the selected Plug-in slot.
- If it is a Sample, it will be loaded into the Sound slot currently in focus. The Sampler Plug-in will be automatically loaded in the first Plug-in slot in order to play the Sample. The Sample will spread over the entire velocity and note range.



The file loaded will replace the object previously at that position or in this slot, if any! If needed, you can undo/redo your action via the shortcuts [Ctrl] + [Z]/[Y] (Windows) or [Cmd] + [Z]/[Y] (Mac OS X).

Loading Files via Drag and Drop

Except for Projects, you can also load files from the Result list into the desired location via drag and drop. This notably has the following benefits:

- You can load the file into a Group or a Sound slot that is not currently focused, or into a Plug-in slot that is not selected.
- You can load a Sample into its own Zone in the Zone page of the Sample Editor: A new Zone will be created for that Sample. See section ↑14.5.7, Adding Samples to the Sample Map for more information.



Drag and drop of Groups and Sounds is possible only in Arrange view.

Loading Multiple Files at Once via Drag and Drop

Once you have selected multiple files from the Result list (see description above), you can drag and drop them to the relevant locations in MASCHINE. By doing this, please keep in mind the following:

- When dragging **several Groups** onto the Group List, you have following options:
  - If you drop the Groups between two existing Groups (where the insertion line appears), the dropped Groups will be inserted between these two Groups.
  - If you drop the Groups onto an existing Group, the dropped Groups will replace that Group and the following ones.
  - If you drop the Groups onto the "+" at the end of the Group List, the Groups will be appended to the existing Groups in the Group List.
- When dragging **several Sounds**, you have following options:
  - If you drop the Sounds onto an existing Group, the Sounds will be loaded in the empty Sound slots of that Group — if there are not enough empty Sound slots, the Sounds will be loaded in the first Sound slots of the Group, replacing the Sounds previously loaded in these slots.
  - If you drop the Sounds onto the "+" at the end of the Group List, the Sounds will be loaded in a new Group appended to the existing Groups.

  - If you drop the Sounds onto the Sound List, the Sounds will be loaded in adjacent Sound slots, starting from the slot onto which you dropped them.

- When dragging **several Instrument presets**, you have the same options as when dragging several Sounds (see above). Each Instrument preset will be loaded into in its own Sound, and the Sound will take the name of the preset.
- When dragging **several Effect presets**, you have following options:
  - If you drop the Effect presets onto a Group in the Group List or onto a Sound in the Sound List, they will be appended to the existing Plug-ins in the Plug-in List of that Group or Sound.
  - If you drop the Effect presets between two existing Plug-ins in the Plug-in List of any channel, they will be inserted between these two Plug-ins.
  - If you drop the Effect presets onto an existing Plug-in in the Plug-in List of any channel, they will replace that Plug-in and the following ones.
- When dragging **several Samples**, you have following options:
  - If you drop the Samples onto an existing Group, onto the "+" at the end of the Group List, or onto the Sound List, you have the same options as when dragging several Sounds (see above). Each Sample will be loaded in its own Sound with a Sampler Plug-in in the first Plug-in slot in order to play the Sample. The Sample will spread over the entire velocity and note range.
  - You can also drop the Samples onto the Zone page of the Sample Editor. In that case all Samples will be loaded in the focused Sound and a Zone will be created for each Sample. For more details, see section ↑14.5.7, Adding Samples to the Sample Map.



You cannot load multiple Projects at once.



Drag and drop of Groups and Sounds is possible only in Arrange view.

Deleting Files in the Result List

You can delete user files directly from the Result list:

1. Right-click ([Ctrl]-click on Mac OS X) the desired user file and select *Delete* from the context menu. If you want to delete several files at once, first select them as described above, and right-click ([Ctrl]-click on Mac OS X) ([Ctrl]-click on Mac OS X) any of them.
   A warning dialog opens to inform you that the file will be not only removed from the MASCHINE Library but also deleted from your hard disk.
2. Click OK to confirm the deletion (or Cancel to keep the file).

→ The file is deleted from the MASCHINE Library and from your hard disk.



When browsing factory content, the *Delete* entry is not available in the context menu.

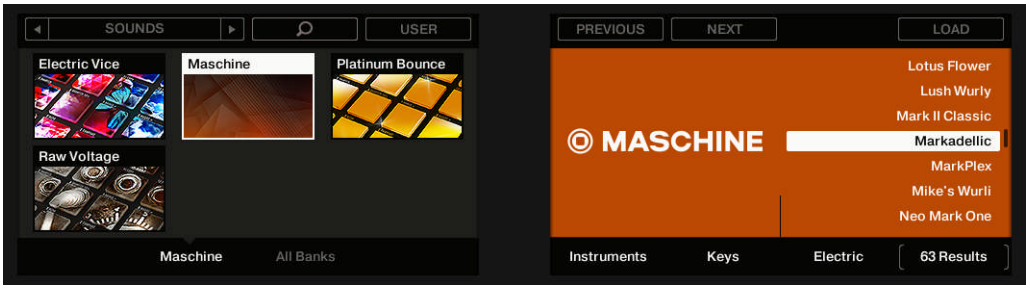
Navigating to the Files in Your Operating System

If you want to find out the location of a particular file shown in the Result list, do the following:

► Right-click ([Ctrl]-click on Mac OS X) any file shown in the Result list and select *Find in Explorer* (*Find in Finder* on Mac OS X) from the context menu to open an Explorer/Finder window pointing to the folder containing that file on your operating system.

3.2.8.1 Loading a File from the Result List on the MASCHINE STUDIO Controller

In Browse mode the right display of your controller shows you the result list that corresponds to your query. It allows you to select and load the desired file. Additionally the number of results in the current list is indicated in the lower right corner of the right display.



The right display showing a result list with the Markadellic Sound selected.



Check that the desired Group or Sound slot is focused and/or the desired Plug-in slot is selected before loading the file from the Browser to avoid loading it at the wrong place! To set the focus to a Group or a Sound slot, you can use Group buttons A–H and the pads without leaving Browse mode (see section ↑2.3.1, Setting the Focus on a Group or a Sound to know how to do it). To select a particular Plug-in slot, you will need to temporarily leave Browse mode and select the right slot (see section ↑2.3.2, Switching Between the Master, Group, and Sound Level and ↑2.3.3, Navigating Channel Properties, Plug-ins, and Parameter Pages in the Control Area for more information). In any case, don't hesitate to press UNDO/REDO to undo/redo your actions.

→ The file is loaded in the focused Group, the focused Sound, or the selected Plug-in slot (if it's an Instrument Plug-in, it will be loaded in the first Plug-in slot of the focused Sound).

If you are loading a Project, it will replace the Project currently opened. If the current Project contains unsaved changes, a message appears in the displays asking you if you wish to save them. Press Button 8 (SAVE) to confirm, Button 7 (DISCARD) to close the current Project without saving the changes, or Button 5 (CANCEL) to cancel the operation and return to the current Project.



In Browse mode, the jog wheel can control any of the parameters at the bottom of the left or right display. The parameter currently controlled is indicated by thin brackets. By default the jog wheel scrolls the result list (frame on the number of results at the far right). To switch the jog wheel to any other parameter, press the FUNCTION buttons under the jog wheel!

3.3 Additional Browsing Tools

At the bottom of the Browser, the Control bar provides various useful tools that will help you quickly find and check the files you need.



The Control bar at the bottom of the Browser.

Some of the tools are available only for specific file types. The next sections describe each of these tools.

The EDIT button (LIBRARY pane) or IMPORT button (FILES pane) at the far right of the Control bar allows you to edit the attributes of the files selected in the Result list above (in the FILES pane, these are the files being imported to the Library, whereas in the LIBRARY pane these are files already in the Library). Please refer to section ↑3.5, Editing the Files' Tags and Properties for more information!

3.3.1 Loading the Selected Files Automatically

► Click the Autoload button to enable/disable Autoload.



The Autoload button.

When Autoload is enabled, any item that you select in the Result list of the LIBRARY pane or FILES pane is automatically loaded into the focused Group or Sound slot or into the selected Plug-in slot, replacing any content currently in that location. This allows you to listen to this item in context with the rest of your Project while it is playing.

Autoload is not available when browsing Projects.

Autoload is not available when browsing Samples with Prehear enabled — see section ↑3.3.2, Pre-Listening to Your Samples.

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

Autoload using the Controller

On your controller in Browse mode:

► Press Buttons 5 (PREV) and 6 (NEXT) above the right display to directly load the next or the previous file from the result list.

Autoload is not available when browsing Projects.

Autoload is not available when browsing Samples with Prehear enabled — see section ↑3.3.2, Pre-Listening to Your Samples. When Prehear is enabled, Button 5 and 6 select the previous/next Sample in the result list without loading it automatically.

3.3.2 Pre-Listening to Your Samples

When you are browsing Samples, a Prehear button and Prehear Volume slider appear next to the Autoload button.



The Prehear controls.

► Click the Prehear button (showing a little speaker icon) to enable/disable Prehear.

When Prehear is enabled, you can directly hear Samples as you select them in the Result list of the LIBRARY pane or FILES pane.

► Drag the Prehear Volume slider next to the Prehear button to adjust the volume of the Samples you are pre-listening to.

The Prehear signal is sent to the Cue bus of MASCHINE. This allows you to pre-listen to Samples on a distinct output pair (e.g., in your headphones) without affecting MASCHINE's main output! For more information on the Cue bus, see section ↑9.2.6, Using the Cue Bus.

Prehear is particularly useful on your controller! See below for more details.

Prehear and Autoload are mutually exclusive: Only one of them can be active at a time. For more information on the Autoload feature, see section ↑3.3.1, Loading the Selected Files Automatically.

Pre-Listening to Your Samples using the Controller

When browsing Samples on your controller:

► Press SHIFT + Button 8 (PREHEAR) to enable/disable the Prehear function.

When Prehear is enabled:

- The Sample selected in the result list can be triggered from the pad of the focused Sound or from any pad without being loaded into that Sound.
- Pressing any other pad triggers its Sound without changing the focus. To set the focus to another Sound you have to press SELECT + its pad or to disable Prehear.
- Turn the jog wheel or Knob 8 to select the previous or next Sample in the result list. Upon selection this Sample is played back and the previous Sample stops playing.
- Button 5 (PREV) and 6 (NEXT) do not automatically load the Sample they select as they usually do (see section ↑3.3.1, Loading the Selected Files Automatically), but instead they play it back as well.
- To load the Sample, press the jog wheel or Button 8 (LOAD).

When you disable Prehear, the playback of any Sample still being pre-listened is stopped.



The Prehear signal is sent to the Cue bus of MASCHINE. For more information on the Cue bus, see section ↑9.2.6, Using the Cue Bus.

3.3.3 Loading Groups with their Patterns

Every Group from the factory library includes a set of Patterns that illustrate possible uses of that Group. Similarly, when you save a Group of your own to the Library for later use, all Patterns you have created for that Group will be saved with the Group.

When browsing Groups, you can choose to load each Group with or without its Patterns. This is done by clicking the Load Patterns button at the bottom of the Browser:



The Load Patterns button.

- Load Patterns button enabled: Groups will be loaded together with their Patterns. This allows you to use the Patterns you have saved with the Groups. Upon loading, all Patterns of the focused Group will be replaced, and a Clip referencing the first Pattern will be created in the selected Scene.

- Load Patterns button disabled: Groups will be loaded without their Patterns. This allows you to load another set of Sounds while keeping your current Patterns. Notably, this can be very useful to try another drum kit with your current Patterns!



The Load Patterns checkbox is available only when browsing Groups.

Loading Groups with their Patterns using the Controller

When browsing Groups on your controller:

► Press Button 7 (+ PATTERNS) to include or exclude Patterns when Groups are loaded.

→ When the option is enabled (Button 7 lit and + PATTERNS label highlighted), Groups are loaded together with their Patterns.

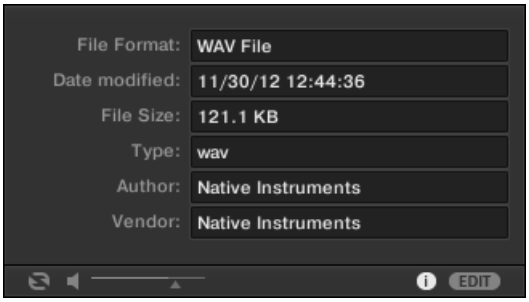
3.3.4 Displaying File Information



The Information button.

► Click the Information button (showing a little “i”) next to the EDIT button in the right part of the Control bar to display information on the file(s) selected in the Result list.

→ A box appears above with various information on the selected file(s): File Format, Date modified, File Size, Type, as well as the Author and Vendor properties, if any (see section ↑3.5, Editing the Files’ Tags and Properties).



The Information box provides various information on the selected file(s).

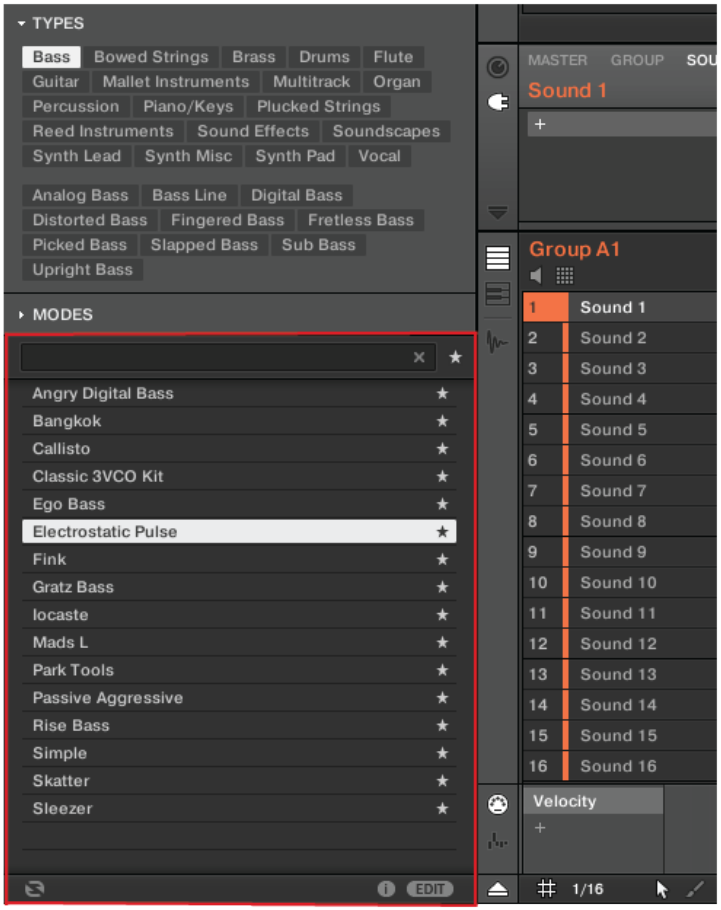
If the selected files have different characteristics, the corresponding fields in the Information box will read multi.

3.4 Using Favorites in the Browser

Favorites in the MASCHINE browser allow you to quickly view and browse your most frequently used items. This includes Projects, Groups, Sounds, Instrument presets, Effect presets, and Samples. Any of these items can be assigned as a Favorite. The Favorites serve as an additional filter in the Browser. When activated, the results list will only show items that have been assigned as a Favorite, and also match all other selected filters, including the search query entered into the search field. Favorites are available for both the factory content and the user content.

Here are some important notes regarding the use of Favorites:

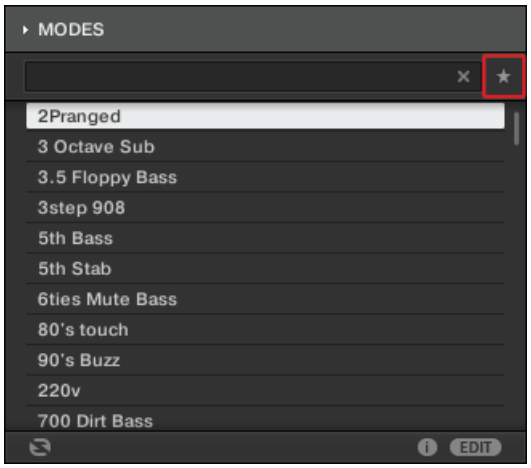
- Favorites are automatically shared across MASCHINE and KOMPLETE KONTROL browser databases on one computer.
- Favorites are independent of the file's location: if a file is moved, it retains its favorite tag.
- Favorites are persistent: If a file location is rescanned or deleted and later added again to the database, all files retain their favorite tags.



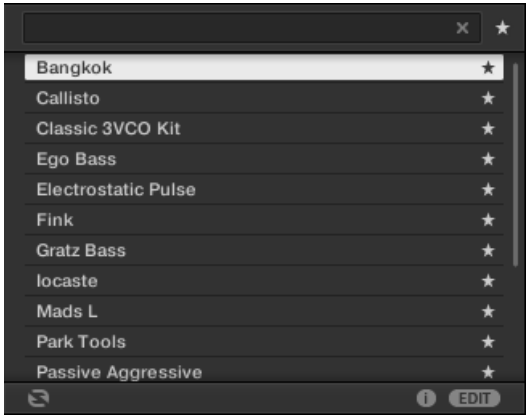
The MASCHINE Browser showing all Favorite Instruments tagged with the Type Bass.

To activate the Favorites filter:

1. Click on the Filter Favorites control next to the search field to filter the results by Favorites:



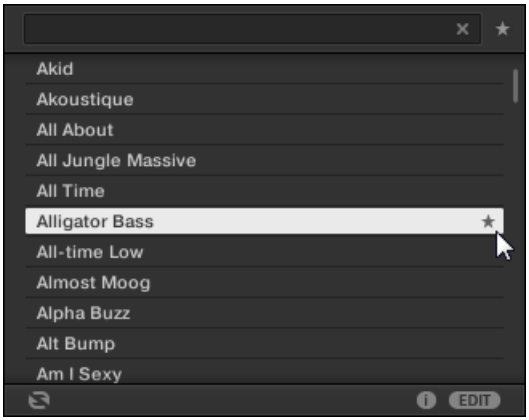
2. The Filter Favorites control is now lit and the results list shows all Favorites that match the selected search criteria:



Adding an Item to the Favorites List

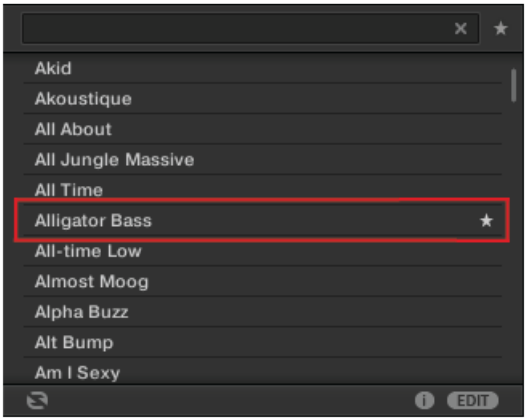
To add an item to the Favorites, follow the instructions below:

1. Place the mouse cursor over an entry in the results list to show the Set Favorite icon.



2. Click on the Set Favorite icon to add the corresponding item to the Favorites.

→ The item is added to the Favorites, indicated by the lit Set Favorite icon next to its name:





You can add any item in the results list to the Favorites, no matter if it is selected or not. The Set Favorites icon will appear as soon as you place the mouse cursor over the entry.

Removing a Preset from the Favorites List

To remove a preset from the Favorites, follow the instructions below:

1. Click on the lit Set Favorite icon to remove the corresponding item from the Favorites.



2. The item is removed from the Favorites, indicated by the hidden Set Favorite icon. The next time you select the Favorites filter, the item will not be shown in the results list.



Using Favorites with the Controller

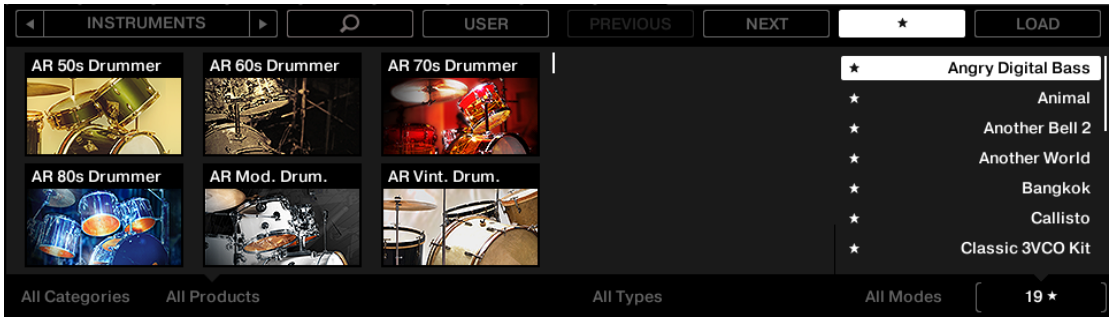
You can view and add Favorites directly using your controller. This lets you access your most frequently used items without touching the computer's mouse and keyboard.

Activating the Favorites filter

To activate the Favorites filter from your controller:

1. Press the BROWSE button.

2. Press the button 7 to activate the Favorites filter.



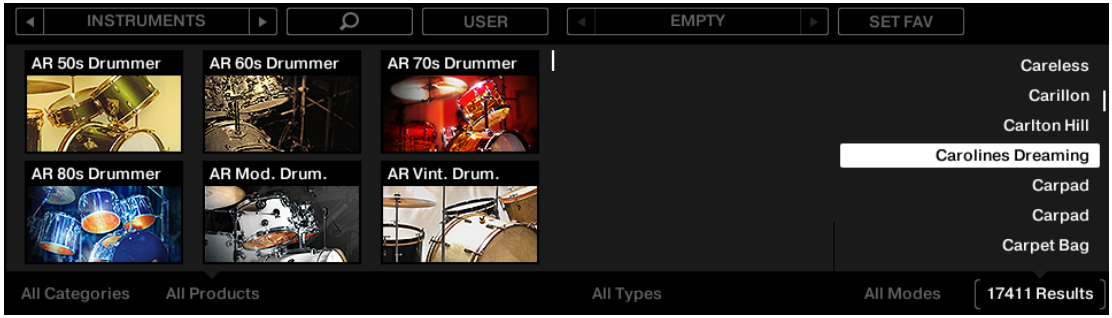
3. To filter the list of Favorites, use knobs 5 to 8.

→ The Favorites filter is now activated and the results list shows all Favorites that match the search criteria:

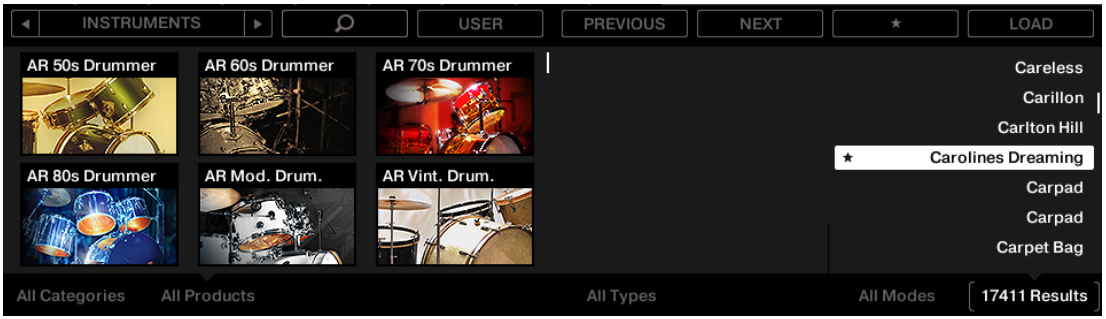
Adding an Item to the Favorites

To add an item to the Favorites using follow the instructions below:

1. Press the BROWSE button.
2. Press button 1 or 2 to select the type of item you want to set as a Favorite.
3. Turn the Control encoder to select the item you want to set as a Favorite.
4. Press SHIFT + Control encoder or SHIFT + button 7 to set the selected item as a Favorite.



→ The item is added to the Favorites, indicated by the Favorite icon next to its name:



Removing an Item from the Favorites

To remove an item from the Favorites use the following instructions:

1. Press the BROWSE button.
2. Turn the Control encoder to select the item you want to remove from the Favorites list.
3. Press SHIFT + Control encoder or SHIFT + button 7 to remove the selected item from the Favorites list.

→ The item is removed from the Favorites list.

3.5 Editing the Files' Tags and Properties

The Attribute Editor allows you to assign or edit tags and properties to your MASCHINE files to make it easier to find them later when browsing the MASCHINE Library in the LIBRARY pane (see section ↑3.2, Searching and Loading Files from the Library).

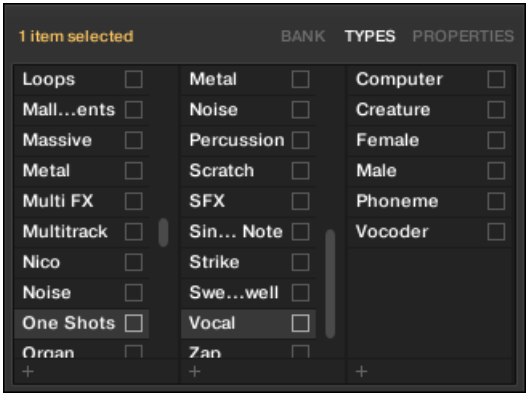
3.5.1 Attribute Editor Basics

The Attribute Editor is used in the following situations:

- At any time you can edit the tags and properties of user files already in the Library by selecting them in the Result list of the LIBRARY pane and clicking the EDIT button at the bottom right of the Browser. After you have finished editing click APPLY to apply your

changes to the selected files, or click the lit EDIT button again to cancel you changes and close the Attribute Editor. See section ↑3.2, Searching and Loading Files from the Library for more information on the LIBRARY pane.

- When importing folders to the MASCHINE Library from the Browser's FILES pane, clicking IMPORT at the bottom right of the Browser automatically opens the Attribute Editor so you can tag the files being imported. After you have finished tagging click OK to import the files to the Library and apply the selected tags, or click CANCEL to cancel the import. See section ↑3.6, Loading and Importing Files from Your File System for more information on the FILES pane.



The Attribute Editor (here showing the TYPES page).

The Attribute Editor affects the files selected in the Result list of the LIBRARY pane (see section ↑3.2.8, Loading a File from the Result List) or the files within the folders selected for import in the FILES pane (see section ↑3.6, Loading and Importing Files from Your File System).

The Attribute Editor is organized into various pages:

- In the LIBRARY pane of the Browser, all pages are available: BANK, TYPES, MODES (Instrument/Effect presets only), and PROPERTIES.
- In the FILES pane of the Browser, only the TYPES and MODES pages are available.

► Click the desired tab at the top right of the Attribute Editor to show the corresponding page.

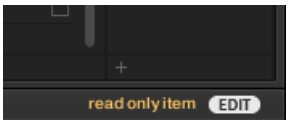


You can adjust the overall height of the Attribute Editor by dragging its upper border.

The number of items selected appears in yellow in the upper left corner of the Attribute Editor.

Displaying Attributes of Factory Files

When browsing in the LIBRARY pane, if the files selected in the Result list are factory files (i.e. files from any factory content) this will be indicated by a yellow read only item label next to the EDIT button at the bottom of the Browser:

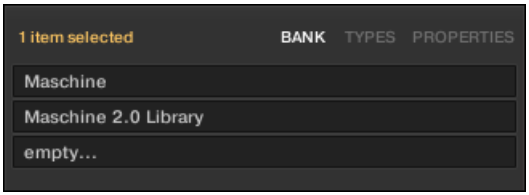


Factory files are loaded in the Attribute Editor.

The Attribute Editor will display the various attributes for these files, but you won't be able to modify them.

3.5.2 The BANK Page

The BANK page is only available when opening the Attribute Editor from the LIBRARY pane.



The BANK page of the Attribute Editor.

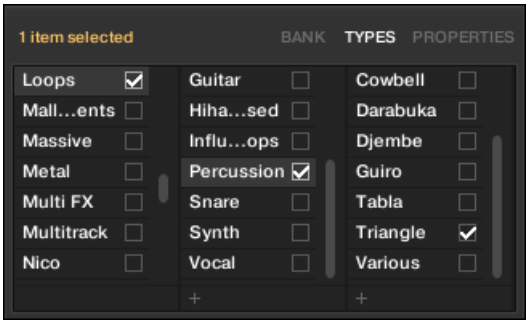
The BANK page shows you (from top to bottom) the product, bank, and sub-bank(s) of the selected file(s). If any of these attributes are not set the corresponding fields read empty….

You cannot modify the attributes shown in the BANK page — they are automatically assigned by MASCHINE.

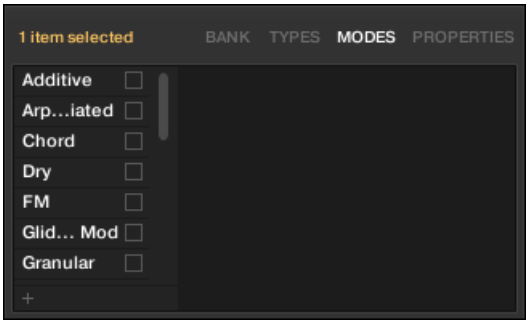
3.5.3 The TYPES and MODES Pages

The TYPES and MODES pages display and let you modify the tags assigned to the file(s) selected in the Result list above.

- The TYPES page is available for all file types when opening the Attribute Editor both from the LIBRARY pane and the FILES pane. It shows three columns (for Projects, Groups, Sounds, and Samples) or two columns (for Instrument and Effect presets) according to the hierarchical levels of the Type tags (see section ↑3.2.6, Selecting Type and Mode Tags):

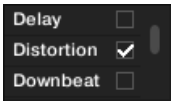


- The MODES page is available when opening the Attribute Editor from the LIBRARY pane to edit the tags of Instrument and Effect presets. When opening the Attribute Editor from the FILES pane to import new files, the MODES page is always available, however it will be taken into account only if Instrument or Effect presets are imported. The MODES page shows only one column:

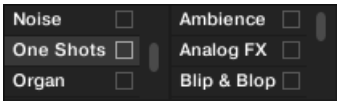


Displaying Tags

- In both TYPES and MODES pages, tags assigned to the selected files are marked with a check mark right of their name:



- In the TYPES page, click the name of a tag to select it and display its Sub-Types in the next column to the right. In each column only one tag can be selected. The selected tag is highlighted:



Assigning Tags

► Click the empty check box right of the desired tag name to assign this tag to the selected files.

→ A check mark appears in the check box.

Additionally, when you check a tag on the TYPES page:

- If another column is available on the right the tag you check is automatically selected and its Sub-Types appear in the next column (if any), allowing you to directly refine your description by checking the desired Sub-Types in this next column.
- If you check a Sub-Type tag whose parent tag was not checked in the previous column on the left, this parent tag will be automatically checked as well.



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

Unassigning Tags

► Click the check mark right of the desired tag to unassign this tag from the selected files.

→ The check mark disappears.

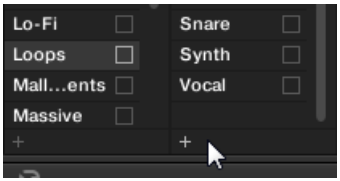


In the TYPES page, if you uncheck a tag for which some Sub-Type tags were selected in the columns on the right, these will automatically unassigned as you unassign their parent tag.

Creating New Tags

You can also create your own tags both in the TYPES and MODES pages:

- To create a new tag in any column, click the "+" symbol at the bottom of the column, enter the desired tag name with your computer keyboard and press [Enter] to confirm.



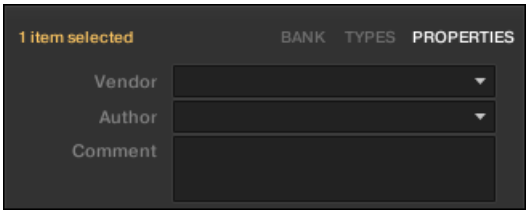
Adding a new Sub-Type for the Loops Type.

Deleting Tags

Tags in the TYPES and MODES pages cannot be deleted manually. However, if a tag is not assigned to any file anymore, it will be automatically removed from its column.

3.5.4 The PROPERTIES Page

The PROPERTIES page is only available when opening the Attribute Editor from the LIBRARY pane.



The PROPERTIES page of the Attribute Editor.

The PROPERTIES page displays three additional attributes of the selected files:

- Vendor: Use this field to indicate the manufacturer of the selected files. Click the down-pointing arrow on the right to quickly select any Vendor attribute already in use in other files of the Library.
- Author: Use this field to indicate the author of the selected files. Click the down-pointing arrow on the right to quickly select any Author attribute already in use in other files of the Library.
- Comment: Use this field to add any other information about the selected files.



As with the other pages of the Attribute Editor, the fields in the PROPERTIES page can be modified only if you have selected user files in the Result list. The attributes of factory files cannot be edited.

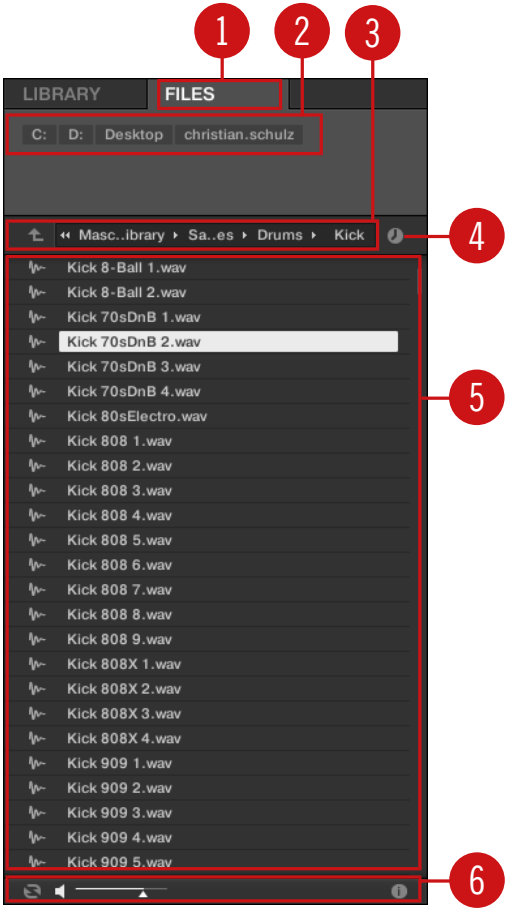
3.6 Loading and Importing Files from Your File System

The Browser's FILES pane allows you to browse your file system and import the desired folders to your MASCHINE Library.

► To display the FILES pane, click the FILES tab in the top left corner of the Browser.

3.6.1 Overview of the FILES Pane

The FILES pane contains following elements:



The elements of the FILES pane.

(**1**) **FILES tab**: Click the FILES tab to open the FILES pane described here.

(**2**) **Favorite bar**: Displays all your Favorites. Click any Favorite to directly jump to that particular path and display its content in the Result list (**5**). See section ↑3.6.2, Using Favorites.

(**3**) **Location bar**: Displays the selected path. The Location bar provides various tools to quickly navigate your file system. See section ↑3.6.3, Using the Location Bar.

(**4**) **Recent Locations button**: Click this button to see a list of the last visited locations and quickly jump any of them. See section ↑3.6.4, Navigating to Recent Locations.

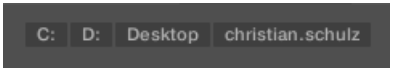
(**5**) **Result list**: The Result list displays the content (files and folders) of the folder loaded in the Location bar (**3**). Only MASCHINE-compatible files are displayed. See section ↑3.6.5, Using the Result List.

(**6**) **Control bar**: At the bottom of the Browser, the Control bar provides a few useful tools when browsing your file system, some of them depending on the type of the files selected in the Result list:

- For all file types except Project, click the **Autoload button** at the far left of the Control bar to automatically load the selected file in order to hear it in context with the rest of your Project while it is playing. See section ↑3.3.1, Loading the Selected Files Automatically.
- For Samples, enable the **Prehear button** and adjust the volume fader next to it in order to pre-listen to the selected Samples directly from the Browser in order to make a quick selection. See section ↑3.3.2, Pre-Listening to Your Samples.
- For Groups, enable the Load Patterns checkbox to load the Group's Patterns together with the Group. See section ↑3.3.3, Loading Groups with their Patterns.
- For all files, click the **Information button** (showing a little "i") near the EDIT button to display more information on the selected file(s). See section ↑3.3.4, Displaying File Information.
- When a folder is selected, click the IMPORT button at the far right of the bar to import the selected folder to the MASCHINE Library. Clicking the IMPORT button will open the **Attribute Editor** so you can assign tags to the selected files about to be imported. See section ↑3.5, Editing the Files' Tags and Properties.

3.6.2 Using Favorites

Located at the top of the FILES pane, the Favorite bar displays all your Favorites.



The Favorite bar, at the top of the FILES pane.

Favorites are shortcuts to specific locations in your file system.

► Click any Favorite in the Favorite bar to jump to that location.

→ The selected location is loaded in the Location bar and its content appears in the Result list.

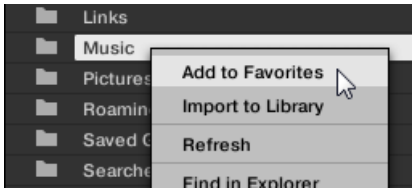
Favorites can be useful if you often return to the same location while browsing your file system in the FILES pane: Save this location as a Favorite, and at any time you will be only one click away from that location!

The default Favorites are the roots of each of your hard disks, your desktop folder, and your user folder.

Adding and Removing Favorites

You can add your own Favorites to the Favorite bar. This is done in the Result list:

1. Navigate to the parent folder containing the folder you want to use as Favorite, so that this folder appears in the Result list.
2. In the Result list, right-click ([Ctrl]-click on Mac OS X) the desired folder and select *Add to Favorites* from the context menu.

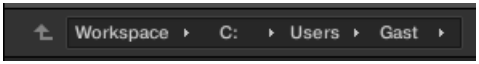


You can also remove any Favorite from the Favorite bar:

► To remove a Favorite, right-click it ([Ctrl]-click it on Mac OS X) in the Favorite bar and select *Remove from Favorites*.

3.6.3 Using the Location Bar

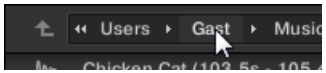
The Location bar shows and lets you modify the selected path. At any time the Result list will display the content of the path shown here.



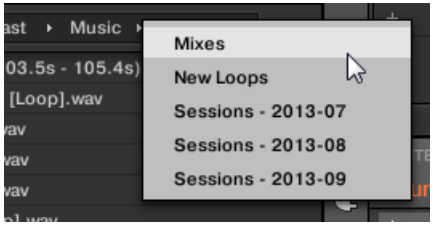
The Location bar.

The Location bar provides following tools:

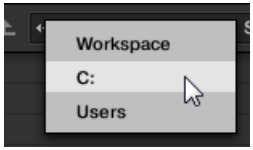
- **Up arrow**: Click the Up arrow on the left to go one level up in your file system.
- **Selected path**: Within the path displayed, you can:
  - Click any **folder name** to jump to that folder:



  - Click any **right-pointing arrow** after a folder name to open a list of its subfolders, and select any entry in the list to jump to that folder:

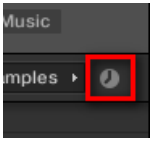


  - If all the levels cannot be displayed in the path, click the double left-pointing arrow left of the path to display the remaining upper levels (up to the Workspace, representing the highest level in your file system), and select any entry in the list to jump to that location:



3.6.4 Navigating to Recent Locations

The Recent Locations button shows a clock icon at the right of the Location bar:



The Recent Location button.

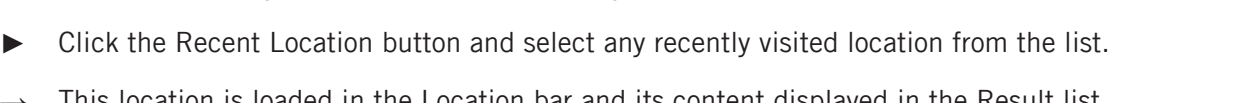
The last 10 locations you have visited are stored by MASCHINE and available here:

► Click the Recent Location button and select any recently visited location from the list.

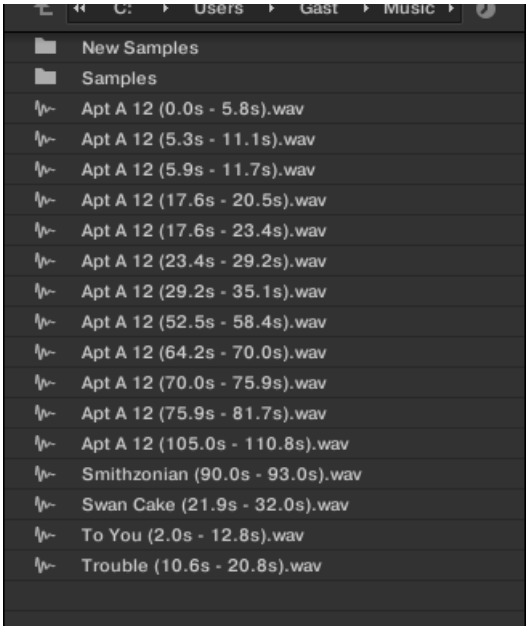
→ This location is loaded in the Location bar and its content displayed in the Result list.

3.6.5 Using the Result List

The Result list of the FILES pane shows the files and folders found in the path loaded in the Location bar above (see section ↑3.6.3, Using the Location Bar).



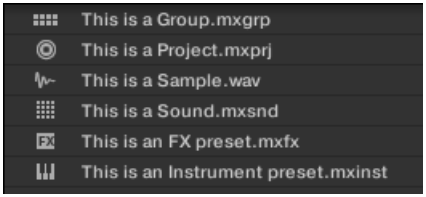
Only MASCHINE-compatible files are shown in the Result list.



The Result list of the FILES pane.

If the list is too long to fit in the display, use your mouse wheel or drag the scroll bar on the right to show the remaining items.

In front of each file, an icon indicates the type of the file:



Icons for various file types.

Navigating Your File System in the Result List

You can further browse your file system in the Result list by opening any of the displayed folder:

► Double-click a folder to display its content.

To return to the previous folder or to select any folder outside the folder currently displayed, use the various tools located above the Result list:

- Favorites: ↑3.6.2, Using Favorites.
- Location bar: ↑3.6.3, Using the Location Bar.
- Recent Locations button: ↑3.6.4, Navigating to Recent Locations.

Selecting Files and Folders in the Result List

► To select a single file or folder in the Result list, click its entry.

You can also select multiple files and folders in the Result list in order to process them all at once.

To select adjacent files in the list, do the following:

► Hold [Shift] on your computer keyboard and click two files in the Result list to select these files and all files in-between.

To select distant files in the list, do the following:

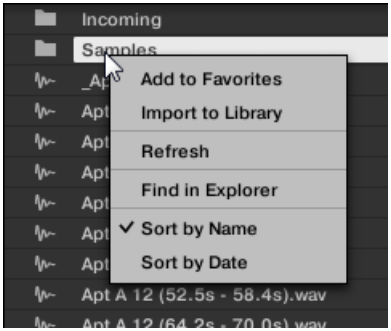
► Hold [Ctrl] ([Cmd] on Mac OS X) and click all the files you want to select.

Loading Files from the Result List

You can load files from the Result list using the same methods as in the Result list of the LIBRARY pane: via double-click or via drag-and-drop. For all details, please refer to section ↑3.2.8, Loading a File from the Result List.

Additional Features in the Result List

- ► Right-click ([Ctrl]-click on Mac OS X) any entry in the Result list to open a context menu with additional commands.



The context menu in the Result list of the FILES pane (Windows depicted).

Following commands are available:

Command	Description
Add to Favorites (folders only)	Adds the selected folder to your Favorites. See section ↑3.6.2, Using Favorites for more information.
Import to Library (folders only)	Imports the selected folder(s) into the Library. See section ↑3.6.5, Using the Result List for more information.
Refresh	Refreshes the display of the list, in case items have been modified in that folder.
Find in Exporer / Find in Finder	Opens an Explorer/Finder window pointing to the selected folder.

Command	Description
Sort by Name	Sorts the Result list according to the item names.
Sort by Date	Sorts the Result list according to the item dates.

3.6.6 Importing Files to the MASCHINE Library

Apart from the huge MASCHINE factory library, you might want to use your own samples or any MASCHINE files you received from other users. As described previously, you can load them directly from the FILES pane. If this can come in handy, e.g., to quickly check received files in a MASCHINE context, it can get tedious when using the files on a regular basis. Furthermore, you won't be able to find and load them from your controller nor from the LIBRARY pane (see section ↑3.2, Searching and Loading Files from the Library).

For this you will have to import the files into the Library first. Importing files 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 files, make sure to update the paths to their respective directories in the Library page of the Preferences panel, as described in section ↑2.6.4, Preferences – Default Page.



This section describes how to import files into the MASCHINE Library. When working on a Project, you can also save individual objects (Project, Groups, Sounds, Plug-in presets, or Samples) of the Project to the Library for later use. This will be described in each object-specific section, later in this manual.



MASCHINE supports WAVE (.wav) and AIFF (.aiff) sample formats at a sample rate of 44.1 kHz or greater and a bit depth of 16 bits, 24 bits or 32 bits float.

The FILES pane allows you to import whole folders. All MASCHINE-compatible files found in the selected folder(s) will be imported.

To import a folder, do the following:

1. Click the FILES tab at the top of the Browser to open the FILES pane.
2. In the FILES pane, navigate to the folder containing the folder you want to import. To do this, use the various tools described in the previous sections.

3. Select the desired folder as described above.
4. Click the IMPORT button at the bottom right of the Browser.
   You will be presented with the Attribute Editor.
5. In the Attribute Editor, tag the files you are about to import to the Library as described in section ↑3.5, Editing the Files' Tags and Properties.
6. When you are done, click OK at the bottom right of the Browser to import the files to the Library.

→ All MASCHINE-compatible files found in the selected folder(s) are imported to your Library. They are added as user content (User icon selected in the Content selector of the LIBRARY pane, see section ↑3.2.5, Choosing Between Factory and User Content). Furthermore, the paths of the imported folders are added to the list of user libraries in the User pane of the Library page in the Preferences panel — see section ↑2.6.4, Preferences – Default Page for more information on this.



If the folder(s) you are importing contain different types of files (e.g., Samples, Sounds, and Groups), the various imported files will be available by selecting the corresponding types in the File Type selector (see section ↑3.2.4, Selecting a File Type).



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.

Other Attributes Set During Import

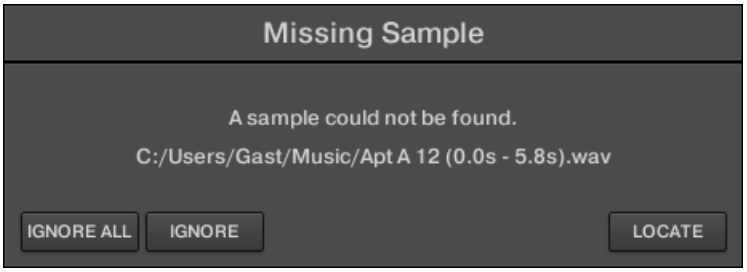
In addition to the Type (and possibly) Mode tags that you can manually assign to the files being imported (see above), other attributes are automatically set as follows:

- For all file types, any attributes already assigned to the files will be retained.
- For Samples, if the product/bank/sub-bank attributes are empty, they will be set to the folders in which the Samples are located:
  - The product will be set to the name of the folder you have selected.
  - If Samples reside in a subfolder of this folder, the subfolder name will be used as bank.

- If Samples reside in a subfolder of this subfolder, the name of the lower subfolder will be used as sub-bank.

3.7 Locating Missing Samples

If you are loading a MASCHINE Project and one or more referenced Sample(s) cannot be found for any reason, a dialog in which you can locate the missing Samples will appear.



The Missing Sample dialog allows you to locate missing Samples.

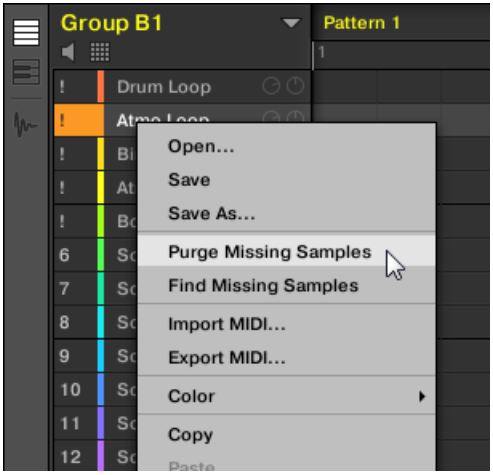
Sounds referencing missing Samples are marked with an exclamation mark. Additionally, their Groups are also marked with an exclamation mark when selected.

The Missing Sample dialog shows you which Sample cannot be found. Three buttons at the bottom of the dialog let you choose between following actions:

- IGNORE: Click this button to continue loading your Project without locating the missing Sample. You will be able to locate it at a later time (see below).
- IGNORE ALL: Click this button to ignore the missing Sample as well as all other missing Samples, if any. You will be able to locate them at a later time (see below).
- LOCATE: Clicking this button opens a Locate selection dialog in which you can manually locate the missing Sample. Navigate to the desired Sample in your file system and click Open. Consequently, your Project uses the newly selected Sample in place of the missing one. If other Samples are missing, MASCHINE tries to trace their path starting from the path you just indicated.

Locating or Purging Missing Samples at a Later Time

When Sample references cannot be resolved, two additional *Purge Missing Samples* and *Find Missing Samples* appear in the context menu of the affected Sound(s) in the Sound List.



The Purge Missing Samples and the Find Missing Samples entries in the context menu of a Sound whose Sample is missing.

- Select *Purge Missing Samples* from the Sound slot's context menu to remove the missing Sample(s) from that Sound.
- Select *Find Missing Samples* from the Sound slot's context menu to open the Missing Sample dialog again and locate missing Samples for that Sound.

The same commands also appear in the context menu of the parent Group in the Group List, as well as in the in the *File* submenu of the MASCHINE menu (in the MASCHINE Header):

- In the context menu of the parent Group, these commands will affect all Sounds with missing Samples in that Group.
- In the *File* submenu of the MASCHINE menu, these commands will affect all Sounds with missing Samples in your Project.

3.8 Using Quick Browse

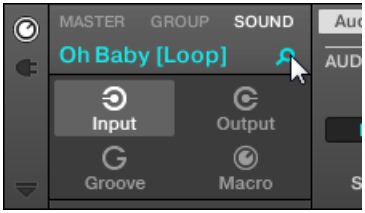
Quick Browse is a feature that allows you to quickly recall a search query you performed to get to a given file. Let's say you have loaded a kick Sample after browsing the Library, then loaded a snare Sample to another Sound slot and now you realize you are not satisfied with that kick Sample, but you heard a nice kick Sample 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 Samples (given that the MASCHINE Library already has several hundreds of kick Samples, this may take a considerable amount of time). With Quick Browse you can restore the query with just one click.

Quick Browse is available for Samples, Plug-ins presets (Instruments and Effects), Sounds, Groups. Depending on the type of file you are looking for, the Quick Browse function is activated by clicking the magnifying glass in either of the following locations:

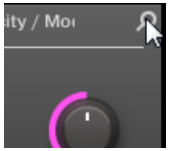
- **Quick Browse for Projects, Groups and Sounds**: Click the magnifying glass right of the colored file name appearing in the upper left part of the Control area to recall the search query that was used for that file. That file will be:
  - The focused Group if the GROUP tab is selected above:



  - The focused Sound if the SOUND tab is selected above:



- **Quick Browse for Instrument/Effect presets and for Samples**: Click the magnifying glass in the upper right corner of the Control area to recall the search query that was used for the Plug-in in the selected slot:
  - If a Sampler Plug-in is selected, it will recall the search query used for the Sample loaded in that Sampler. If several Samples are loaded in the Sampler, it will recall the search query for the Sample in the selected Zone in the Zone List.



  - If any other Instrument or Effect Plug-in is selected, it will recall the search query used for the Plug-in preset loaded in that Plug-in (the preset name appears next to the magnifying glass):



Upon your click on the magnifying glass, the search query for the corresponding file will be restored in the LIBRARY or FILES pane of the Browser (depending on which of both panes was used to find the file). The file will be shown in the Result list — if necessary, the list will be scrolled to display the file. You can then choose other results for that query from the Result list.



The Quick Browse function is also available from your controller! See below for more information.

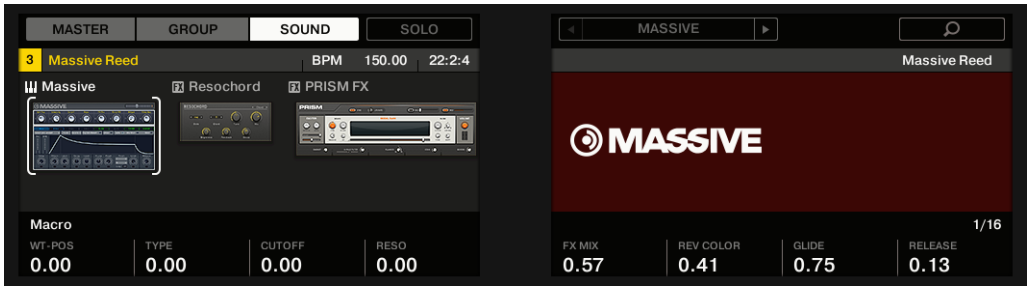
If No Search Query Was Used for a File…

If a file of your Project wasn't loaded via a search in the Browser, obviously there is no search query to be retrieved! Nevertheless, Quick Browse will try various techniques to find out where the file "comes from." For example, if you have loaded a file via drag and drop from your desktop or any other location on your computer, Quick Browse will display the FILES pane pointing to that location.

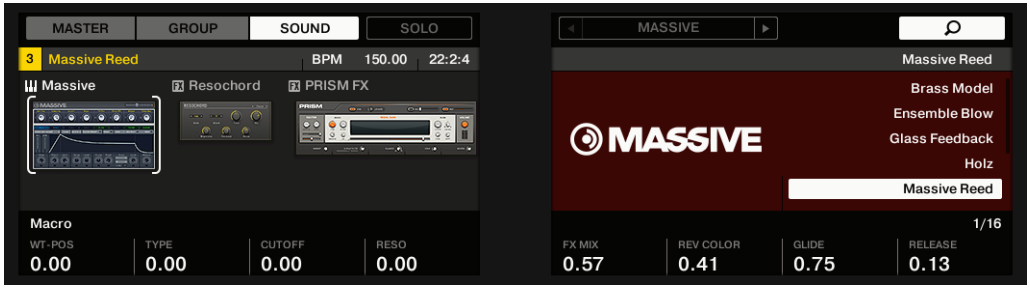
Quick Browse from Control Mode on the Controller

From your controller you can easily access Quick Browse for Samples and Plug-in presets directly from Control mode:

1. Press PLUG-IN to enter Control mode and access your Plug-ins.
2. Navigate to the channel (Master, Group or Sound) hosting the Plug-in for which you want to recall the search query — see section ↑2.3.1, Setting the Focus on a Group or a Sound and ↑2.3.2, Switching Between the Master, Group, and Sound Level.
3. In this channel, select the desired Plug-in (for a Sample, select the Sampler Plug-in in which it is loaded) — see section ↑2.3.3, Navigating Channel Properties, Plug-ins, and Parameter Pages in the Control Area.



4. Press Button 8 (showing a magnifying glass).
   Button 8 and the magnifying glass light on. The result list that was used to find this file directly appears in the right part of the right display:



   Furthermore, at the bottom right of your controller the jog wheel's ring and the BROWSE indicator light on as well, indicating that the jog wheel is ready for browsing!

5. Turn the jog wheel to select the desired Plug-in preset or Sample from the list, and press the jog wheel to load it.

→ The selected file replaces the previous file in your Project.

Quick Browse from Browse Mode on the Controller

You can also access Quick Browse from the Browser on your controller. This notably allows you to perform Quick Browse on Sounds and Groups as well:

1. Press PLUG-IN to enter Control mode.
2. If you want to trigger Quick Browse for a Group or a Sound, set the focus to this Group or Sound — see section ↑2.3.1, Setting the Focus on a Group or a Sound.
3. If you want to trigger Quick Browse for a Sample or a Plug-in preset, additionally select the desired Plug-in (for a Sample, select the Sampler Plug-in in which it is loaded) — see section ↑2.3.2, Switching Between the Master, Group, and Sound Level and ↑2.3.3, Navigating Channel Properties, Plug-ins, and Parameter Pages in the Control Area.

Once you have focused/selected the desired file, switch your controller to Browse mode to continue:

1. Press BROWSE to enter the Browser.
2. Press Button 1 and 2 to select the file type corresponding to the file you have focused/selected above.
3. Press Button 3 (showing a magnifying glass) to trigger the Quick Browse function.
   The Browser automatically recalls the search query used when you loaded that file.
4. Turn the jog wheel or Knob 8 to select the desired Plug-in preset or Sample from the list, and press the jog wheel or Button 8 (LOAD) to load it.

→ The selected file replaces the previous file in your Project.

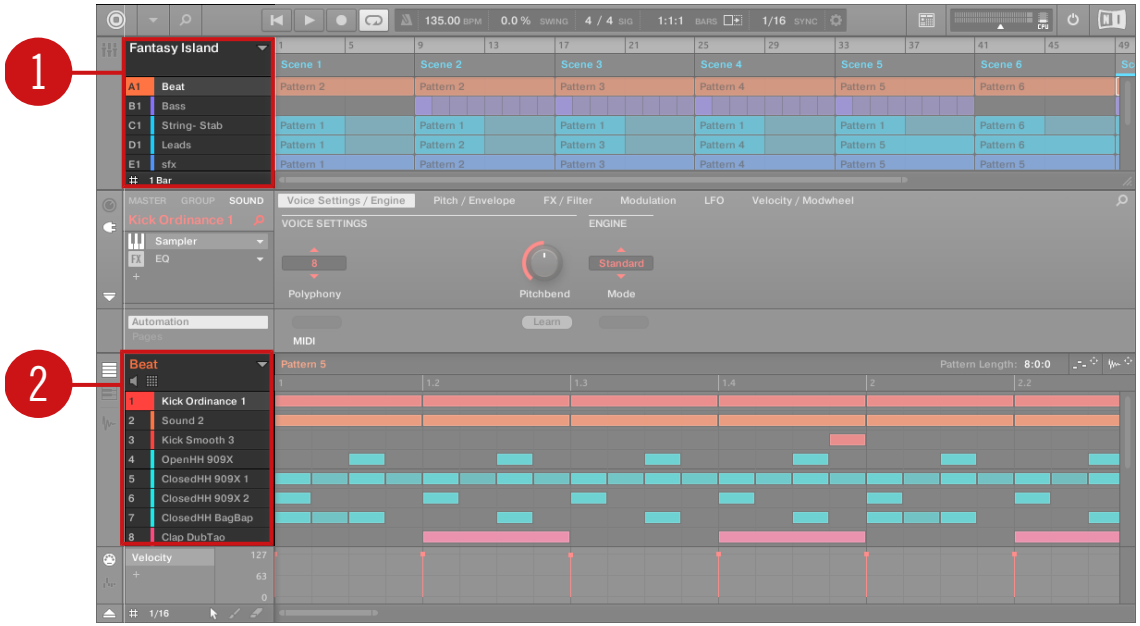
4 Managing Sounds, Groups, and Your Project

This chapter explains how to handle the various objects that structure any MASCHINE Project: Sounds, Groups, and the Master.

4.1 Overview of the Sounds, Groups, and Master

In a MASCHINE Project, objects are organized into three hierarchic levels, from the lowest to the highest:

- **Sounds** are played by the pads. They are loaded into Sound slots. In the software, in Arrange view Sound slots are displayed in the column at the left of the Pattern Editor: the **Sound List** (**1**). Each Sound of the selected Group is by default mapped to one of the 16 pads on the MASCHINE hardware controller, so you can play all Sounds of a Group by pressing the pads. Sounds are made up of any number of Plug-ins that process the audio in series. Sounds are the only objects in MASCHINE that can accept Instrument Plug-ins — these go in the Sounds' first Plug-in slot. The type of the Plug-in (Instrument or Effect) loaded in this first Plug-in slot will define the Sound's role (audio source or bussing point, respectively). For more information on Plug-ins and how they define the Sound's role, please refer to section ↑6.1, Plug-in Overview.
- **Groups** contain 16 Sound slots each with all their parameters. The 16 pads on your controller can play one entire Group at a time. In the software, in Arrange view Group are displayed in the column at the left of the Arranger: the **Group List** (**2**). A MASCHINE Project can have any number of Groups, which are organized in banks of eight Groups each. Each Group can have any number of insert effects, which will globally apply to all Sounds contained in that Group, as well as any number of Patterns organized in banks of 16 Patterns each. More on Patterns in chapter ↑7, Working with Patterns.
- The **Master** is the place where all signals from the Groups are being mixed together. Just like the Groups and Sounds, the Master can host any number of insert effects.



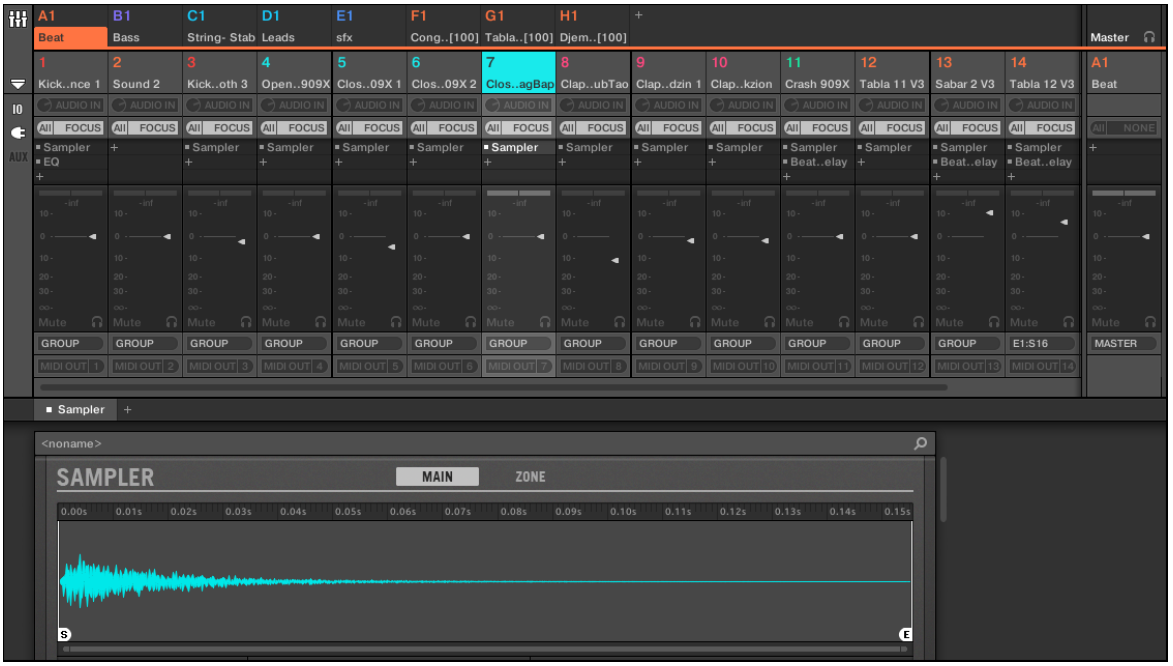
The Sound List (1) and the Group List (2) in the Arrange view of the software.

4.1.1 The Sound, Group, and Master Channels

From a routing point of view, each Sound, each Group, and the Master represents a distinct **channel** in MASCHINE. The channels of the 16 Sounds in a Group are mixed together and sent to the Group channel, where their sum will be processed by the Group's Plug-ins, if any. Similarly, the channels of all Groups in your Project are mixed together and sent to the Master channel, where their sum will be processed by the Master's Plug-ins, if any. The resulting signal is sent to MASCHINE's outputs.

Each channel provides various set of Channel properties that adjust the input, output, groove, and Macro Control settings for that particular Sound, Group, or for the Master, independently of the Plug-ins it contains. Please refer to chapter ↑8, Audio Routing, Remote Control, and Macro Controls and section ↑5.4.3, Groove for more details on these.

When the software is in Mix view, Sounds, Groups, and the Master are represented by channel strips in the Mixer. This view provides you with an intuitive control on both the audio and MIDI routings of any Sound, Group, and the Master. Please refer to section ↑9.2, The Mixer for more information.



The Mixer displaying the channel strips for all Sounds in a Group.

4.1.2 Similarities and Differences in Handling Sounds and Groups

Sounds and Groups are handled in very similar ways — see section ↑4.2, Managing Sounds and ↑4.3, Managing Groups below for all details. We list here the main differences between both:

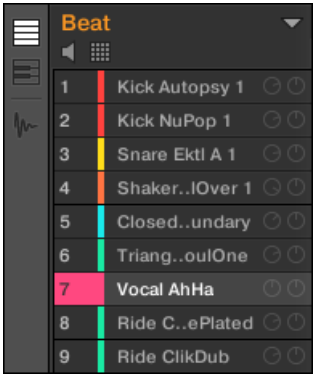
- In each Group you always have a **fixed number of Sound slots** — namely 16. Some of these Sound slots might be empty, and you can have gaps in your slots (i.e. some empty Sound slots between other slots containing Sounds), depending on how you prefer to play your Sounds from your pads. You cannot create Sound slots, but instead you can load/unload Sounds to/from the 16 existing Sound slots in each Group.
- In your Project you can have **any number of Groups**. You can create, fill up, and delete Groups as you see fit. If you delete a Group, all following Groups are shifted up in the Group List to fill the gap. If you use more than eight Groups, another Group bank is automatically created.

4.1.3 Selecting Multiple Sounds or Groups

In MASCHINE **you can select multiple Sounds or multiple Groups at once**. This notably allows you to change a parameter value for all selected Sounds/Groups at a time!

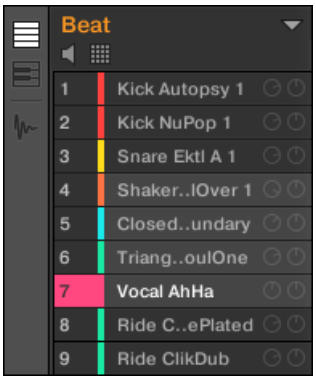
To achieve this, MASCHINE distinguishes the "focus" from the "selection":

- The **focus** determines what is displayed in the Control area and on your controller. For example, by clicking a Sound in the Sound List you are putting the focus on that Sound, and the Control area and your controller will display its parameters (Channel properties, Plug-ins, etc.). For the focus, the following rule applies:
  At each level (Sound and Group) there is always one object, and only one, in focus.
  The focused object is highlighted in the Sound/Group List, and the background of its leading letter and/or number has the color of the object itself.



The Sound Vocal AhHa is focused (and selected).

- The **selection**, on the other hand, determines what will be affected by your actions (e.g., adjusting a parameter). For example, the focused Sound (i.e. the one you clicked in the Sound List) is implicitly selected — nothing special here: This just means that the Sound whose parameters are currently displayed will be indeed affected by the changes you do on these parameters. But you can select additional objects on top of the focused object, thereby extending your selection. Selected objects are highlighted in the Sound/Group List but their leading letter and/or number stays gray.



Other Sounds were added to the selection (but they are not focused).

More precisely, if a Group or a Sound is currently focused, you can additionally select other Groups or Sounds, respectively. These will be also affected by your edits on the focused Group or Sound.



You cannot select Sounds and Groups simultaneously.

Each Group remembers its own Sound selection and focus.

When setting the focus to a new Sound or Group, following rules apply:

- If you set the focus to a Sound or Group which is not selected, both the focus and the selection are moved to this new Sound or Group.

- If you set the focus to a Sound or Group which is already included in the current selection, the focus is moved to this new Sound or Group but the selection is preserved. This notably allows you to check the parameters of any selected Sound or Group while keeping the ability to modify parameters for the entire selection.

What Is Affected by the Multiple Selection, and How?

When multiple Sounds or multiple Groups are selected, any change in the following settings of the focused Sound/Group will be mirrored in the other selected Sounds/Groups, respectively:

- **Channel properties**: Parameter adjustments apply to all selected Sounds/Groups for any parameter in any set of Channel properties. See chapter ↑8, Audio Routing, Remote Control, and Macro Controls for more information on the Channel properties.
- **Plug-ins**: Parameter adjustments apply to all selected Sounds/Groups that have the same Plug-in loaded in the same Plug-in slot. See chapter ↑6, Working with Plug-ins for more information on Plug-ins.
- **Pad view**: Base key, Choke group, and Link group settings apply to all selected Sounds. See section ↑5.1, Adjusting Your Pads for more information on these settings.
- You can **move** multiple Sound slots or multiple Groups at once. See section ↑4.2.7, Moving Sounds and ↑4.3.7, Moving Groups for more information.
- You can **reset** multiple Sound slots and **delete** multiple Groups at once. See section ↑4.2.8, Resetting Sound Slots and ↑4.3.8, Deleting Groups for more information.



The adjustments made in the Assignment area are never mirrored in any other selected Sound/Group.

Furthermore, the exact influence on the equivalent parameter in the affected Sounds/Groups depends on the type of parameter:

- Continuous parameters (knob): the values in all selected Sounds/Groups are incremented/decremented by the same amount as the value in the focused Sound/Group. Values are clipped when they reach their range limit.
- Discrete parameter (button or selector): the values in all selected Sounds/Groups are set to the value of the focused Sound/Group.

Selecting Multiple Sounds/Groups in the Software

To select multiple Sounds or multiple Groups in the MASCHINE software, simply use the common keyboard shortcuts of your operating system: in the Sound List or the Pad view for Sounds, and in the Group List for Groups. Following actions are available:

Action	Function
Selecting Objects (Sounds or Groups)	
Click unselected object	Selects the object and sets the focus to it.
Click selected object	Sets the focus to this object while retaining the selection.
[Ctrl]-click ([Cmd]-click on Mac OS X) unselected object	Adds the object to the selection.
[Ctrl]-click ([Cmd]-click on Mac OS X) selected object	Deselects the object — except for the focused object, which cannot be deselected.
[Shift]-click object	Selects all objects between the focused one and the [Shift]-clicked one.
[Ctrl] + [A] ([Cmd] + [A] on Mac OS X) if some objects are not selected	Selects all objects in the list.
[Ctrl] + [A] ([Cmd] + [A] on Mac OS X) if all objects are selected in the list	Deselect all objects except the focused one, which cannot be deselected.

The shortcuts mentioned in the table above are valid in following areas of the MASCHINE window:

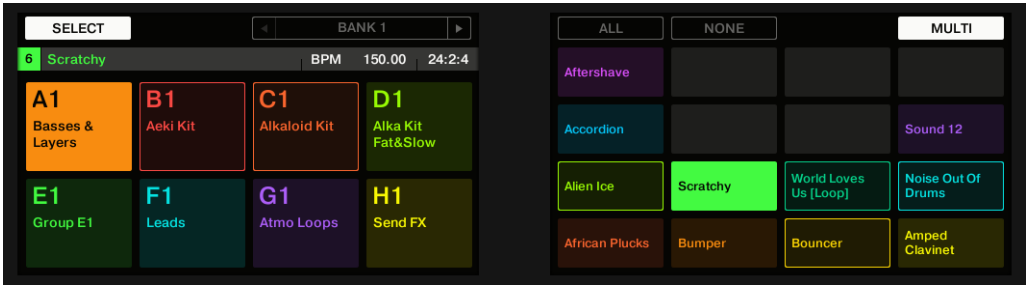
- To select multiple Groups, use these shortcuts in the Group List.
- To select multiple Sounds, use these shortcuts in the Sound List or in the Pad view (see section ↑5.1.1, The Pad View in the Software).

Selecting Multiple Sounds/Groups on the Controller

On your controller, you can select multiple Sounds or Groups via the Select mode:

► Press and hold SELECT to enter Select mode. You can also press SELECT + Button 1 to pin this mode and make it permanent.

→ You are ready to select more than one Sound or Group.



Selecting Sounds and Groups via the Select mode.

You have following selection tools at your disposal:

Selection Tool	Description
Pads	Press any pad to set the focus to that particular Sound slot. The pad lights up to indicate that the Sound slot is focused (and selected). Unlit pads indicate unselected, empty Sound slots, and half-lit pads indicate unselected Sounds. The selection behavior depends on the state of the MULTI option (Button 8, see below).
Group buttons A–H	Press any Group button to set the focus to that particular Group in the current Group bank. The button lights up to indicate that the Group is focused (and selected). Unlit Group buttons cannot be pressed (they don't correspond to any existing Group), and half-lit Group buttons indicate unselected Groups. The selection behavior depends on the state of the MULTI option (Button 8, see below).
Button 3/4 (PREV/ NEXT)	Selects the previous/next Group bank, respectively.
Button 5 (ALL)	Selects all Sounds in the current Group without changing the focus.

Selection Tool	Description
Button 6 (NONE)	Deselects all Sounds in the current Group except the focused Sound.
Button 8 (MULTI)	Enables/disables the multiple selection mode. Toggling this option does nothing to the current focus nor selection but changes the behavior of the selection process — see below.

The MULTI option (Button 8) switches between single and multiple selection:

- When MULTI is disabled (Button 8 off):
  - Pressing the Group button / pad of an **unselected** Group/Sound sets the focus to that Group/Sound and clears the current Group/Sound selection (only the focused Group/Sound is then selected). The Group button / pad lights up.
  - Pressing the Group button / pad of a **selected** Group/Sound only sets the focus to that Group/Sound without changing the current Group/Sound selection. The Group button / pad stays fully lit.
- When MULTI is enabled (Button 8 on):
  - Pressing the Group button / pad of an **unselected** Group/Sound adds it to the current Group/Sound selection without changing the current focus. The Group button / pad lights up.
  - Pressing the Group button / pad of a **selected** Group/Sound unselects it unless it is the focused Group/Sound. The Group button turns half lit; the pad turns half lit (if it contains a Sound) or off (if it is empty).

4.2 Managing Sounds

This section describes the global editing functions available for Sounds and Sound slots.

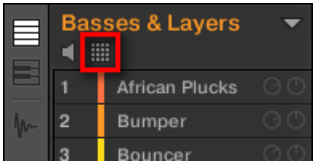
Sounds: Sound List or Pad View

With the exception of naming Sound slots, all procedures described in the following sections are available both in the Sound List and in the Pad view. The **Pad view** is an alternative representation of your Sound slots that puts emphasis on their relationship with the pads on your controller.



The Pad view.

The Pad view can be shown by activating the Pad View button above the Sound List:



The Pad View button.

▶ Click the Pad View button to show or hide the Pad view.

→ The Pad view replaces the Sound List on the left of the Pattern Editor.

In the Pad view, each cell represents a pad on your controller and corresponds to a Sound slot in the current Group. You can select Sound slots in either the Sound List or the Pad view as you see fit, both selections are strictly equivalent.



In addition to the Sound management features described in the following sections, the Pad view provides extra settings affecting the behavior of your pads. See section ↑5.1, Adjusting Your Pads for more information.

4.2.1 Loading Sounds

You can load a readymade Sound from the Browser or from your operating system. The Sound can be included in the MASCHINE Library or any EXPANSION PACK but it can also be a Sound you have created yourself and saved for later use.

You have many methods at your disposal to load a Sound:

- **Drag and drop**: Select the desired Sound in the Browser or in your operating system and drag it onto the desired Sound slot in the Sound List (or the corresponding cell of the pad grid in Pad view, see above) to load it in that Sound slot. Any Sound previously loaded in that slot will be replaced.
- **Double-click**: Double-click the Sound in the Browser or the Sound file in your operating system to replace the focused Sound in the Sound List.
- **Context menu**: Right-click ([Ctrl]-click on Mac OS X) the desired Sound slot in the Sound List or the corresponding cell of the pad grid in Pad view, and select *Open...* in the context menu. In the Load Sound dialog that opens, navigate to the desired Sound file on your computer and click Open to load it. The loaded Sound will replace the current Sound loaded in that slot.



You can also recall the search query that was used to find the Sound currently loaded in the focused Sound slot. See section ↑3.8, Using Quick Browse for more information.



In your operating system, Sound files have the extension ".mxsnd" (MASCHINE 2) or ".msnd" (MASCHINE 1.x).



Please refer to chapter ↑3, Browser for more information on the Browser.

Loading Sounds on Your Controller

On your controller, use the Browser to load Sounds:

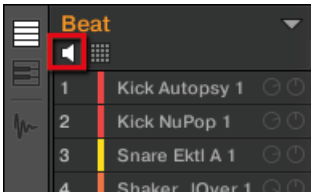
- You can browse your MASCHINE Library for the desired Sound. For more information on how to do this, please refer to section ↑3.2, Searching and Loading Files from the Library.

- Alternatively you can recall the search query that was used to find the Sound currently loaded in the focused Sound slot. See section ↑3.8, Using Quick Browse for more information.

4.2.2 Pre-listening to Sounds

You can pre-listen to the Sounds of the focused Group as you set the focus on them in the software. To do this:

► Click the speaker button above the Sound List (or the Pad view) to enable/disable Sound pre-listening in the focused Group:



→ When the speaker button is enabled, each time you set the focus on a Sound by clicking it in the Sound List or in Pad view, this Sound will be played back. This is useful as quick reminder of the various Sounds loaded in the Group.

Sounds cannot be moved within the Sound List when Pre-listen (speaker button) is switched on.

Pre-listening to Sounds on the Controller

On your controller, pre-listening to Sounds actually is the default behavior: In Control mode, when you press a pad you both trigger its Sound and bring it into focus at once. Hence, you don't need to enable anything, pre-listening to Sounds in the focused Group is working out of the box.

Setting the Focus on Sounds without Triggering Them

You can also set the focus on any Sound in the current Group without triggering it. This comes in handy if you are in a live situation and don't want to trigger every single Sound you select. To do this, use the Select mode:

1. Press SELECT + the pad containing the desired Sound.

→ The Sound is focused without being triggered.

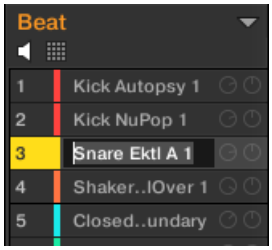
4.2.3 Renaming Sound Slots

By default, Sound slots are named Sound 1–16. If you load a Sound, a Plug-in preset or a Sample (e.g., from the Browser) into the Sound slot, the Sound slot takes the Sound's, preset's or Sample's name.

You can also rename Sound slots manually. Naming is only available from within the software, but any changes will also show up on your controller.

To rename a Sound slot:

1. Double-click the name of the desired Sound slot or right-click ([Ctrl]-click on Mac OS X) the Sound slot and select *Rename* from the context menu.
   The Sound slot's name is now highlighted and editable.



2. Modify the name of the Sound slot via your computer keyboard. Press [Enter] on your computer keyboard to confirm.

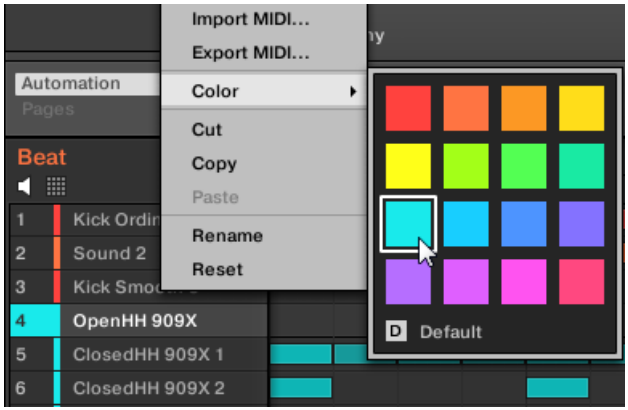


If you use MASCHINE as a plug-in, some hosts will utilize the [Enter] key, as it is mapped to some function of the host software. In this case, click anywhere else in the MASCHINE plug-in window to confirm the name you have entered.

4.2.4 Changing the Sound's Color

You can change the color of each individual Sound in the software. To do this:

1. Right-click ([Ctrl]-click on Mac OS X) the desired Sound slot in the Sound List or in the Pad view and select *Color* from the context menu.
   A Color Palette appears. In the Palette, the current color of the Sound is highlighted.



2. Select the desired color in the Palette. You can also choose to set the Sound back to the default color corresponding to its position in the list by selecting *Default* in the Color Palette.

→ The pads of the MASCHINE STUDIO, MASCHINE MK2, and MASCHINE MIKRO MK2 controllers mirror the Sound colors you have selected.

Editing Multiple Sounds

You can apply the following commands to multiple selections of Sounds:

- **Sounds**:
  - Changing the selected Sounds' color.
  - Cutting, copying, and pasting the selected Sounds.
  - Resetting the selected Sounds.

These commands are available in the Sounds' context menu.

Notes on Changing the Color of Multiple Sounds

When opening the Color Palette (in order to set a new color setting for the selected Sounds):

- If the selected Sounds have the same color setting (a particular color or the default color), this color is highlighted in the Color Palette.
- If the selected Sounds have different color settings, no setting is highlighted in the Color Palette.

When you select a new color setting from the Color Palette it is applied to all selected Sounds.



By default Sounds inherit the color of their Group. But you can choose another default color for Sounds in *Preferences > Colors > Sound Default*. See section ↑2.6.10, Preferences – Colors Page for more information.



Once you have set a custom color for a Sound as described above, the Sound will retain its color when you move it in the Sound List, and the color will be stored with the Sound when you save the Sound for later use. Note that you can select the same color as the one used by default: In that case the color (even unchanged) will be considered as a custom color and will follow the Sound as you move it.

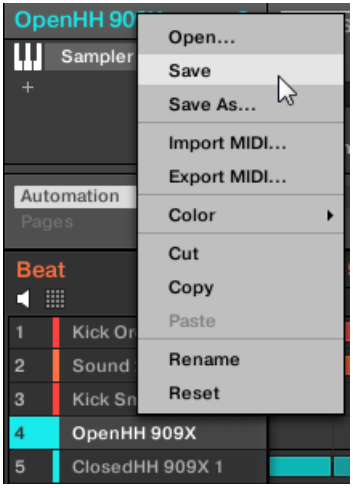
4.2.5 Saving Sounds

You can save your Sounds as individual files (extension ".mxsnd"). This can be only done in the software.

Saving Your Modifications into the Original Sound File

If you have made changes to a Sound loaded in your Project, you can save your modifications as follows:

► Right-click (on Mac OS X: [Ctrl]-click) the Sound slot in the Sound List or in the Pad view and select *Save* from the context menu:



→ Your modifications are saved to the Sound file.



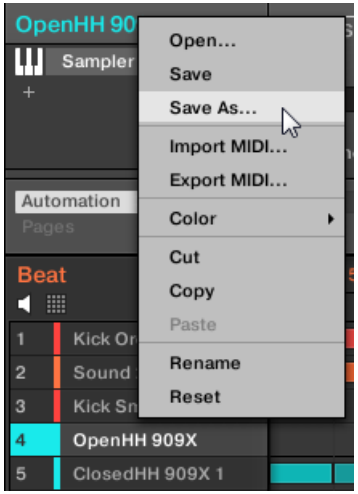
Even if you don't save a Sound individually, its current settings will still be saved with your Project. But once a Sound is saved and tagged, it is available in the Browser for use in other Groups and Projects.

You cannot save changes to factory files — these files are read-only. If you run the *Save* command on a factory file, it automatically turns into the *Save As...* command: a Save Sound dialog opens and lets you save your modified Sound to your user library. See next paragraph for more details. The same happens with Sounds you have built from scratch.

Saving Your Modified Sound as a New Sound

If you want to save modifications you have made on a Sound originating from a factory library, or if you don't want to overwrite the original Sound with your modified version, or if there is no original version of your Sound (i.e. you built it from scratch), you can save it as a new Sound file:

1. Right-click (on Mac OS X: [Ctrl]-click) the Sound slot in the Sound List or in the Pad view and select *Save As…* from the context menu:



A Save Sound dialog appears. By default, the Sound file inherits the name of its Sound slot and it will be saved in your Standard User Directory (as defined in *Preferences* > *Library* > *User*, see section ↑2.6.4, Preferences – Default Page for more information).

1. If you wish, choose another path and/or type another name with your computer keyboard.
2. Press [Enter] to confirm and close the Save Sound dialog.

→ Your Sound is now saved.

The Sound will be added to the user library and is ready to be tagged in the Browser — see section ↑3.5, Editing the Files' Tags and Properties for more information on this.



Even if you don't save a Sound individually, its current settings will still be saved with your Project. But once a Sound is saved and tagged, it is available in the Browser for use in other Groups and Projects.

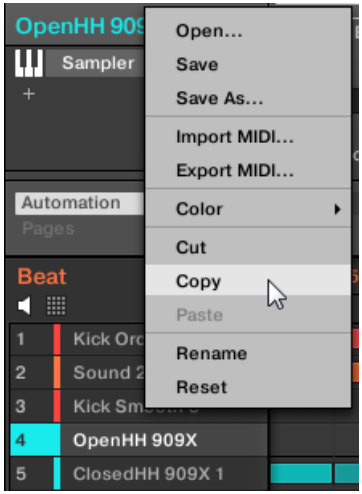
4.2.6 Copying and Pasting Sounds

You can copy and paste Sounds across Sound slots (and thereby across pads) and Groups in your Project.

In the software, Sounds are copied without their note content in the Pattern. To include the note content in the copying operation, use DUPLICATE on your controller (see below)!

To copy and paste Sounds in the software:

1. Right-click (on Mac OS X: [Ctrl]-click) the Sound slot (in the Sound List or in the Pad view) containing the Sound you want to copy.
2. In the context menu, choose *Copy* to copy the Sound.



3. To paste the Sound, right-click (Mac OS X: [Ctrl]-click) another Sound slot (this can also be in another Group, in this case first click the desired Group in the Group List of the Arranger) and select *Paste* from the context menu.

→ All parameters of the Sound will be copied except for the source's Pattern content. The Sound previously loaded in that Sound slot will be replaced.

Cutting, Copying, and Pasting Logic for Multiple Sounds

The **cutting procedure** for multiple Sounds and Groups is as follows:

- When you cut a selection of Sounds, they are placed into the clipboard and removed from the Sound List. Their Sound slots are reset to their default state.

The **copying procedure** for multiple Sounds is as follows:

When you copy a selection of Sounds, they are both placed into the clipboard and kept in the Sound List.

The **pasting procedure** for multiple Sounds is as follows:

- When you paste a selection of Sounds onto a Sound slot, the pasted Sounds replace the current Sound in that slot and in the following slots — if the last Sound slot is reached, the remaining copied Sounds won't be pasted at all. Note that this is not affected by any multiple selection you might have made when pasting. **Example**: If you paste the Sounds 1, 2, 4, and 7 onto the Sound slot 14, the duplicates of the Sounds 1, 2, and 4 will replace any existing Sounds in the Sound slots 14, 15, and 16, respectively, while the Sound 7 won't be pasted at all.



If you want to copy a Sound more than once, just keep on choosing *Paste* from the context menu on other Sound slots: the source Sound stays in the clipboard, ready for the next use!

When you copy/paste Sounds in the software, the entire content of the copied Sound(s) is pasted, including their events. Notably, pasting a Sound into a Sound slot of a different Group will create the needed Patterns if they do not exist, and replace the events for that Sound slot in an existing Patterns.



In the sentence above, "existing Patterns" means the Patterns with the same IDs (i.e. the same position in the Pattern List) as in the source Group. **Example**: If the source Sound contains events in Pattern 1, 2, and 3 of its Group and you paste that Sound into another Group that only has Pattern 1 and 4, Pattern 2 and 3 will be automatically created to host the events of the pasted Sound.



To copy/paste Sounds and Groups from your controller you can press and hold the DUPLICATE button to enter Duplicate mode. In Duplicate mode, Button 2 (+EVNT) lets you decide whether events (for Sounds) and Clips (for Groups) should also be copied.

Duplicating Sounds on Your Controller

On your controller in Control mode, do the following to copy a Sound from one pad to another:

1. Press and hold DUPLICATE.

2. If you want to duplicate a Sound including its Pattern content, enable the + EVNT option (Button 2).
3. Press the pad of the Sound you want to copy.
   The pad of the Sound starts blinking.
4. Press the pad of the target Sound slot (this can also be in another Group, in this case first press the desired Group button).

→ All parameters of the Sound will be copied (including the Pattern content for that Sound if you have enabled the + EVNT option). The copied Sound will replace any Sound previously loaded in the target slot.

You will notice that once you have pasted the Sound, the target pad starts blinking itself, indicating that it is ready to be pasted again to additional Sound slots: Therefore, to duplicate a Sound more than once, once you have pressed the source pad you just have to press all the desired target pads in a row.



Instead of holding DUPLICATE, you can also pin the Duplicate mode by pressing DUPLICATE + Button 1. You can then release DUPLICATE: Your controller will stay in Duplicate mode until you press DUPLICATE again. See section ↑2.3.5, Pinning a Mode on Your Controller for more information.

4.2.7 Moving Sounds

You can reorder Sounds via drag-and-drop in the software. It can be helpful to organize your Sounds more conveniently. Notably, this allows you to move your Sounds to other pads, and create a Group that is easier to play from the pads.

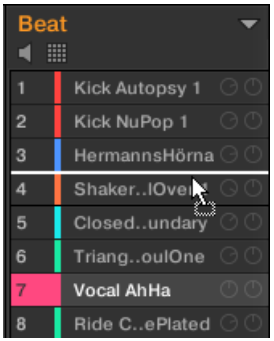


You can select multiple Sounds to move them all at once! See ↑4.1.3, Selecting Multiple Sounds or Groups for more information.

To move one or more Sounds:

1. Click and hold the desired Sound slot(s) in the Sound List or in the Pad view.

2. While holding the mouse button, drag your mouse toward the desired location in the Sound List or in the Pad view.
   As the mouse cursor moves an insertion line appears at the potential places where you can drop the Sound slot(s).



3. When the insertion line appears at the desired location in the Sound List or in the Pad view, release the mouse button.

→ Each Sound takes its new place in the Group. On your controller, the Sounds will be triggered by the pads whose numbers appear left of the Sound slots in the Sound List or on the cells in the Pad view.

You can also drag Sounds to another Group in the Group List of the Arranger: The Sounds will be inserted in the first empty Sound slots of that Group, and that Group will automatically get the focus. However, in that case the Pattern content of the Sounds won't be moved.



Sounds cannot be moved within the Sound List when Pre-listen (speaker button) is switched on.



If you drag the Sound(s) to the "+" at the end of the Group List, a new Group is automatically created and your Sound(s) will be moved to the first Sound slot(s) of that Group.

4.2.8 Resetting Sound Slots

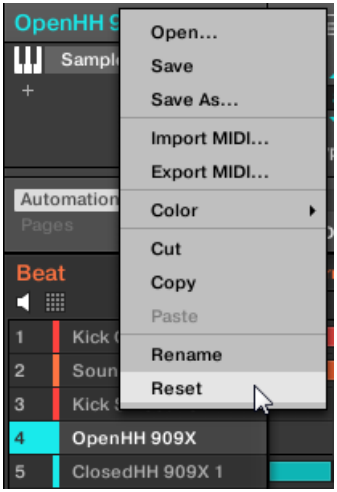
Resetting a Sound slot will remove the Sound it contains and put all its settings (Channel properties, name, color…) back to their default values.



You can select multiple Sound slots to reset them all at once! See ↑4.1.3, Selecting Multiple Sounds or Groups for more information.

- To reset a Sound slot, select it in the Sound List or in the Pad view and press [Del] on your computer keyboard, or right-click (on Mac OS X: [Ctrl]-click) the Sound slot and choose *Reset* from the context menu.

→ The content of the Sound slot is removed and the Sound slot is reset to its default settings and name.



Resetting a Sound slot.

Resetting a Sound Slot on Your Controller

- To reset a Sound slot, hold SHIFT + ERASE and then touch the pad corresponding to the Sound slot to be reset.

→ The Sound is removed from the pad and the pad turns off.

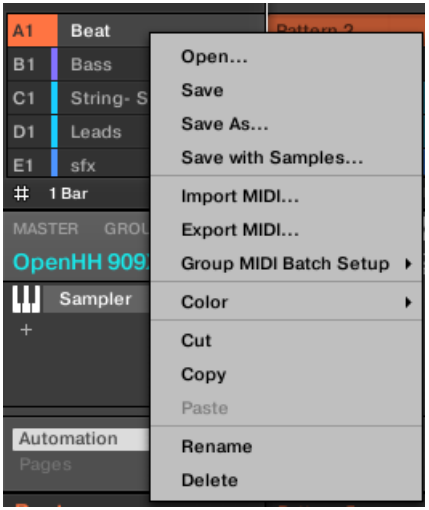
4.3 Managing Groups

This section describes the global editing functions available for Groups.

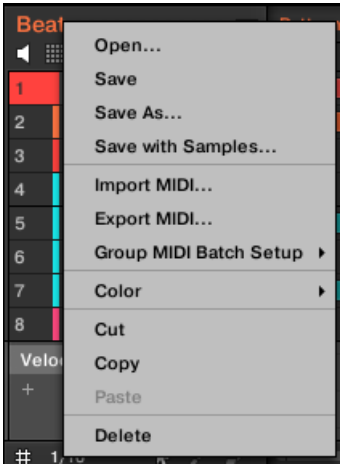
Group Menu

Many of the functions described in the following sections are available in the following two **context menus**:

- The context menu of the Groups in the Group List, opened via a right-click ([Ctrl]-click on Mac OS X) on the desired Group:



- The context menu of the focused Group in the Pattern Editor, opened via a right-click ([Ctrl]-click on Mac OS X) on the Group name in the top left corner of the Pattern Editor:

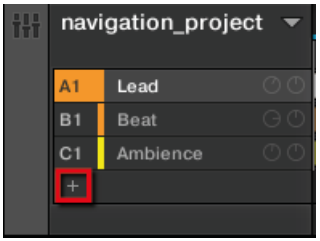


Both context menus are equivalent: Use either menu as you see fit.

4.3.1 Creating Groups

Creating a Group will add a new empty Group at the end of the Group List. You can then fill this Group with the Sounds of your choice.

► To create a Group, click the "+" at the end of the Group List.



→ A new empty Group is created at the end of the Group List with the default name and color.

Creating Groups on Your Controller

On your controller, existing Groups are indicated by the lit Group buttons A–H:

- The focused Group is indicated by the fully lit Group button.
- The other Groups of your Project are indicated by half-lit Group buttons, each Group button showing the color of the corresponding Group.
- In the last Group bank the last half-lit Group button is white: It doesn't correspond to any existing Group, but instead allows you to create another Group in your Project.

To create a new Group:

1. Hold SHIFT and press the last lit Group button to select the last Group bank.
2. Release SHIFT.
3. Press the dimmed white Group button after all other lit Group buttons.

→ A new empty Group is created after the existing Groups with the default name and color.



If the last Group bank already contains eight Groups, pressing SHIFT + the last lit Group button at the first step will directly create a new empty Group in a new Group bank!

Creating Groups via the Select Mode

You can also use the Select mode to create Groups from your controller:

1. Press and hold SELECT to enter Select mode. You can also pin the Select mode by pressing SELECT + Button 1: You can then release SELECT: Your controller will stay in Select mode until you press SELECT again. See section ↑2.3.5, Pinning a Mode on Your Controller for more information.
2. Check that Button 2 (EVENTS) is disabled. If necessary, press it to disable it.
3. Press Button 4 (NEXT) repeatedly to navigate to the last Group bank.
4. Press the Group button corresponding to the "+" label on the left display to create a new empty Group.



Using the Select mode allows you to access more than eitht Group banks!

Automatic Group Bank Management

In MASCHINE Group banks are managed automatically, so that you don't have to create or delete them manually. Group are always adjacent in the Group List: you cannot have any gap in the Group List — nor in any Group bank. When you create a new Group, the following happens:

- As long as the last Group bank contains less than eight Groups, the new Group is created in that bank.
- If the last bank already contains eight Groups, a new Group bank is automatically created after the existing bank(s) and the new Group is created in that new bank.

4.3.2 Loading Groups

You can load a readymade Group from the Browser or from your operating system. The Group can be included in the MASCHINE Library or any EXPANSION PACK but it can also be a Group you have created yourself and saved for later use.

You have many methods at your disposal to load a Group:

- **Drag and drop**: Select the desired Group in the Browser or Group file in your operating system and drag it onto the Group List:
  - Drag it onto an existing Group to replace this Group in the Group List.
  - Drag it between two Groups to insert it between both.
  - Drag onto the "+" at the end of the Group List to append it to the existing Groups.
- **Double-click**: Double-click the Group in the Browser or the Group file in your operating system to replace the focused Group in the Group List.
- **Context menu**: Right-click ([Ctrl]-click on Mac OS X) the desired Group in the Group List or the Group name in the top left corner of the Pattern Editor and select *Open...* in the context menu. In the Load Group dialog that opens, navigate to the desired Group file on your computer and click Open to load it. The loaded Group will replace the current Group in the Group List.



You can also recall the search query that was used to find the Group currently loaded in the focused Group slot. See section ↑3.8, Using Quick Browse for more information.

In your operating system, Group files have the extension ".mxgrp" (MASCHINE 2) or ".mgrp" (MASCHINE 1.x).

Please refer to chapter ↑3, Browser for more information on the Browser.

Loading Groups on Your Controller

On your controller, use the Browser to load Groups:

- You can browse your MASCHINE Library for the desired Group. For more information on how to do this, please refer to section ↑3.2, Searching and Loading Files from the Library.
- Alternatively you can recall the search query that was used to find the Group currently loaded in the focused Sound slot. See section ↑3.8, Using Quick Browse for more information.

4.3.3 Renaming Groups

By default, new Groups are named Group Ax–Hx, "x" indicating the bank number (Group A1–H1, Group A2–H2, etc.).

You can rename Groups as you see fit. Naming is only available from within the software, but any changes will also show up on your controller.

Group renaming is performed like Sound renaming:

1. Double-click the name of the desired Group in the Group List or right-click ([Ctrl]-click on Mac OS X) the Group and select *Rename* from the context menu.
   The Group name is now highlighted and editable.



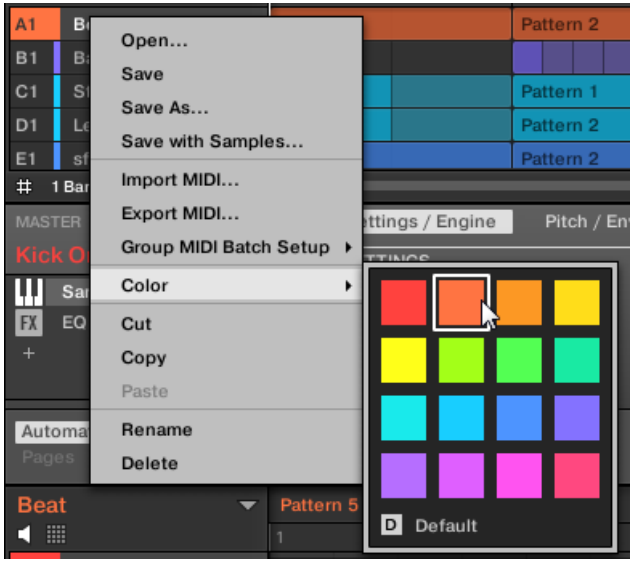
2. Modify the name of the Group. Press [Enter] on your computer keyboard to confirm.

If you use MASCHINE as a plug-in, some hosts will utilize 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.

4.3.4 Changing the Group's Color

You can change the color of each individual Group in the software. To do this:

1. Right-click ([Ctrl]-click on Mac OS X) the desired Group in the Group List or the Group name in the top left corner of the Pattern Editor and select *Color* from the context menu. A Color Palette appears. In the Palette, the current color of the Group is highlighted.



2. Select the desired color in the Palette. You can also choose to set the Group back to the default color corresponding to its position in the list by selecting *Default* in the Color Palette.

→ The Group buttons of the MASCHINE STUDIO and MASCHINE MK2 controllers, and the pads of the MASCHINE MIKRO MK2 controller (when you hold the GROUP button) mirror the Group colors you have selected.

By default each Group has a different color. But you can choose a common default color for Groups in *Preferences* > *Colors* > *Group Default*. See section ↑2.6.10, Preferences – Colors Page for more information.

Once you have set a custom color for a Group as described above, the Group will retain its color when you move it in the Group List, and the color will be stored with the Group when you save the Group for later use. Note that you can select the same color as the one used by default: In that case the color (even unchanged) will be considered as a custom color and will follow the Group as you move it.

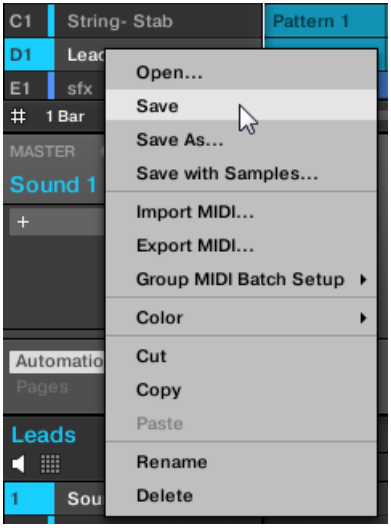
4.3.5 Saving Groups

You can save your Groups as individual files (extension ".mxgrp"). This can be only done in the software.

Saving Your Modifications into the Original Group File

If you have made changes to a Group loaded in your Project, you can save your modifications as follows:

► Right-click (on Mac OS X: [Ctrl]-click) the Group in the Group List or the Group name in the top left corner of the Pattern Editor and select *Save* from the context menu:



→ Your modifications are saved to the Sound file.



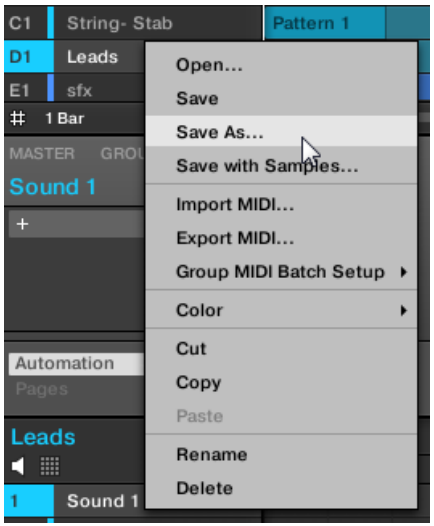
Even if you don't save a Group individually, its current settings will still be saved with your Project. But once a Group is saved and tagged, it is available in the Browser for use in other Projects.

You cannot save changes to factory files — these files are read-only. If you run the *Save* command on a factory file, it automatically turns into the *Save As...* command: a Save Group dialog opens and lets you save your modified Group to your user library. See next paragraph for more details. The same happens with Groups you have built from scratch.

Saving Your Modified Group as a New Group

If you want to save modifications you have made on a Group originating from a factory library, or if you don't want to overwrite the original Group with your modified version, or if there is no original version of your Group (i.e. you built it from scratch), you can save it as a new Group file:

1. Right-click (on Mac OS X: [Ctrl]-click) the Group in the Group List or the Group name in the top left corner of the Pattern Editor and select *Save As...* from the context menu:



   A Save Group dialog appears. By default, the Group file will be saved in your Standard User Directory (as defined in *Preferences* > *Library* > *User*, see section ↑2.6.4, Preferences – Default Page for more information).

2. If you wish, choose another path and/or type another name with your computer keyboard.
3. Press [Enter] to confirm and close the Save Group dialog.

→ Your Group is now saved.

The Group will be added to the Library and is ready to be tagged in the Browser — see section ↑3.5, Editing the Files' Tags and Properties for more information on this.



You can also save a Group together with all the Samples used in this Group. This can be useful to use a drum kit on another computer or share it with other users. See section ↑4.4.1, Saving a Group with its Samples for more information.

4.3.6 Copying and Pasting Groups

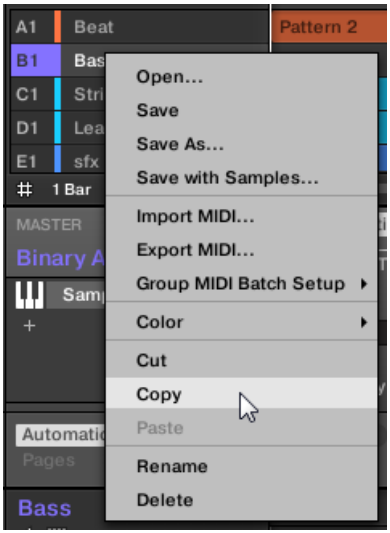
You can copy and paste Groups in your Project.



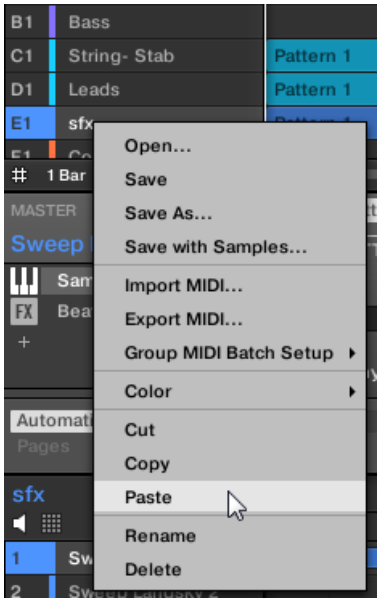
In the software, Groups are copied without their Clips in the Arranger. To include the Clips in the copying operation, use DUPLICATE on your controller (see below)!

To copy and paste Groups in the software:

1. Right-click (on Mac OS X: [Ctrl]-click) the Group you want to copy in the Group List or the Group name in the top left corner of the Pattern Editor.
2. In the context menu, choose *Copy* to copy the Group.



3. Right-click (Mac OS X: [Ctrl]-click) any Group in the Group List and select *Paste* from the context menu to replace that Group with the copied one. If you want to paste the Group without affecting the existing Groups, first click the "+" under the last Group to create a new empty Group and paste the Group there.



→ All parameters of the Group will be copied except for its Clips (its Patterns, though, will be copied as well). The Group previously in that position in the Group List will be replaced.

Cutting, Copying, and Pasting Logic for Multiple Groups

The **cutting procedure** for multiple Sounds and Groups is as follows:

- When you cut a selection of Groups, they are placed into the clipboard and removed from the Group List. All following Groups in the list are shifted up to fill the gap.

The **copying procedure** for multiple Groups is as follows:

When you copy a selection of Groups, they are both placed into the clipboard and kept in the Group List.

The **pasting procedure** for multiple Groups is as follows:

- When you paste a selection of Groups onto an existing Group, the pasted Groups replace that Group and the following Groups. **Example**: If you paste the Groups A1 and B1 onto the Group E2, the duplicates of A1 and B1 will replace the Groups E2 and F2, respectively (if, say, F2 didn't exist it is automatically created).



If you want to duplicate a Group more than once, just keep on choosing *Paste* from the context menu on other Groups: the source Group stays in the clipboard, ready for the next use!

When you copy/paste Sounds or Groups in the software, the entire content of the copied Sound(s) or Group(s) is pasted, including their events and Clips. Notably, pasting a Sound into a Sound slot of a different Group will create the needed Patterns if they do not exist, and replace the events for that Sound slot in an existing Patterns.



In the sentence above, "existing Patterns" means the Patterns with the same IDs (i.e. the same position in the Pattern List) as in the source Group. **Example**: If the source Sound contains events in Pattern 1, 2, and 3 of its Group and you paste that Sound into another Group that only has Pattern 1 and 4, Pattern 2 and 3 will be automatically created to host the events of the pasted Sound.



To copy/paste Sounds and Groups from your controller you can press and hold the DUPLICATE button to enter Duplicate mode. In Duplicate mode, Button 2 (+EVNT) lets you decide whether events (for Sounds) and Clips (for Groups) should also be copied.

Duplicating Groups on Your Controller

On your controller in Control mode, do the following to copy a Group from one Group button to another:

1. Press and hold DUPLICATE.
2. If you want to duplicate a Group including its Patterns and Clips, enable the + EVNT option (Button 2).
3. Press the Group button of the Group you want to copy.
   The Group button starts blinking.

4. Press the Group button of your target Group (this can also be in another Group bank, in this case first press Button 3/4 to select the Group bank). If you want to paste the Group without affecting the existing Groups, press the dim white Group button after the last colored Group button to create the new Group and automatically paste the copied Group there.

→ All parameters of the Group (all included Sounds, Group effects, Group's Channel properties) will be copied (including its Patterns and Clips in the Arranger if you have enabled the + EVNT option). The copied Group will replace the Group previously at that position in the Group List.

You will notice that once you have pasted the Group, the target Group button starts blinking itself, indicating that it is ready to be pasted again: Therefore, to duplicate a Group more than once, once you have pressed the source Group button you just have to press all the desired target Group buttons in a row.



Instead of holding DUPLICATE, you can also pin the Duplicate mode by pressing DUPLICATE + Button 1. You can then release DUPLICATE: Your controller will stay in Duplicate mode until you press DUPLICATE again. See section ↑2.3.5, Pinning a Mode on Your Controller for more information.

4.3.7 Moving Groups

You can reorder Groups via drag-and-drop in the software. It can be helpful to organize your Groups more conveniently.

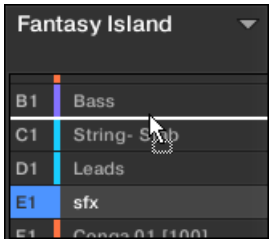


You can select multiple Groups to move them all at once! See ↑4.1.3, Selecting Multiple Sounds or Groups for more information.

Moving Groups is performed like moving Sounds:

1. Click and hold the Group.

2. While holding the mouse button, drag your mouse vertically toward the desired location in the Group List.
   As the mouse cursor moves, an insertion line appears at the potential places where you can drop the Group.



3. When the insertion line appears at the desired location, release the mouse button.

→ The Group takes its new place in the Group List. Of course, this new place is also mirrored on your controller.

4.3.8 Deleting Groups

Deleting a Group will remove it from the Group List.



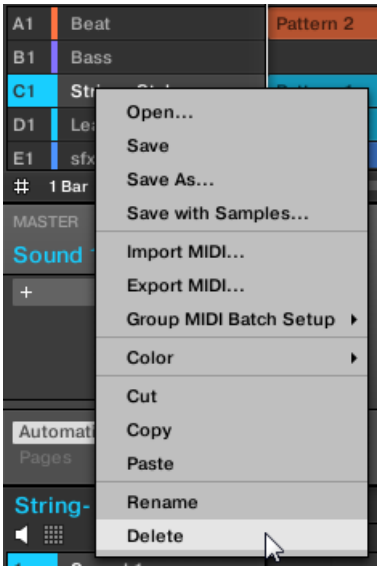
It is not possible to have a project without any Groups; attempting to delete the last remaining Group in a project will simply reset the Group to the default values.



You can select multiple Groups to delete them all at once! See ↑4.1.3, Selecting Multiple Sounds or Groups for more information.

► To delete a Group, select it in the Group List and press [Del] on your computer keyboard. You can also right-click (on Mac OS X: [Ctrl]-click) the Group in the Group List or the Group name in the top left corner of the Pattern Editor and choose *Delete* from the context menu.

→ The Group is removed. All following Group are shifted up in the Group List to fill the gap. If the last Group bank is empty after the Groups have been shifted, the bank is deleted.



Deleting a Group.

Deleting a Group on Your Controller

On your controller in Control mode, do the following to delete a Group:

- ► To delete a Group, hold SHIFT + ERASE and press the Group button of the Group you want to delete.

→ The Group is removed. All following Groups are shifted left to fill the gap.

4.4 Exporting MASCHINE Objects and Audio

This section describes how to save single Groups or whole Projects for use in another MASCHINE installation, and how to export audio from various sources in your Project.



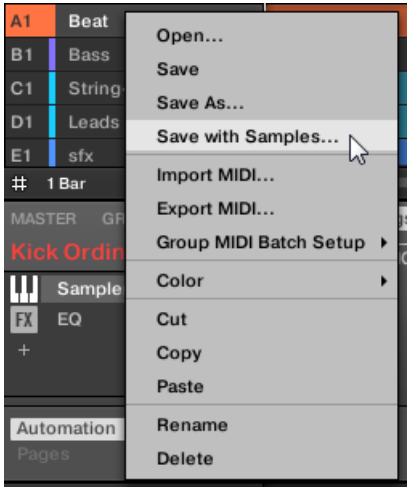
You can also export your Patterns as audio or MIDI files via drag and drop. This is described in section ↑7.8.1, Exporting Audio from Patterns and ↑7.8.2, Exporting MIDI from Patterns, respectively.

4.4.1 Saving a Group with its Samples

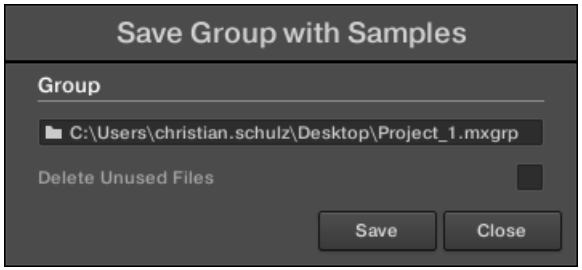
Sometimes it is useful to have the ability to save a Group with its Samples outside of the MASCHINE Library. If you want to take a Group to another studio or if you want to backup or share a custom drum kit with all the related files, this comes in handy.

To save a Group with its Samples:

1. Right-click (on Mac OS X: [Ctrl]-click) the Group in the Group List left of the Arranger and select *Save with Samples...* from the context menu:



   You will be presented with the Save Group with Samples panel:



2. In this panel, adjust the settings (see table below) and click Save to confirm or Close to cancel the operation.

Controls	Description
Group	Displays the name and location of the Group file to be created. The Samples will be put in a folder with the same name in the same location. By default, the Group file inherits the name of the Group in the Project and it will be saved in the "Groups" subfolder of your Standard User Directory (as defined in *Preferences* > *Library* > *User*, see section ↑2.6.4, Preferences – Default Page for more information). Click the folder icon on the right to choose another name and/or path.
Delete Unused Files	Enable this checkbox to delete unused files, thereby minimizing the amount of audio data to be exported.



This command is also available from the Group menu opened by right-clicking ([Ctrl]-clicking on Mac OS X)) the Group name above the Sound List, in the top left corner of the Pattern Editor.

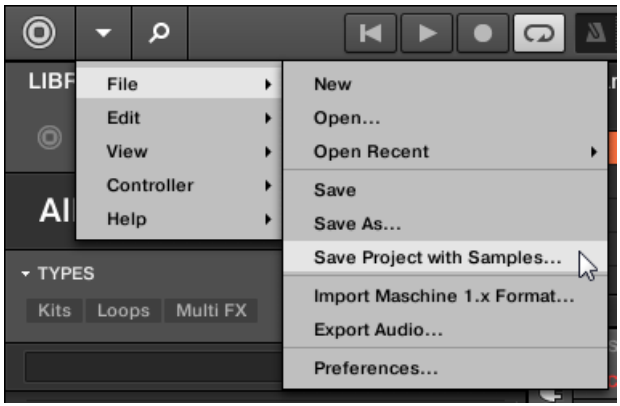


You can also save your whole Project with its Samples. See section ↑4.4.2, Saving a Project with its Samples.

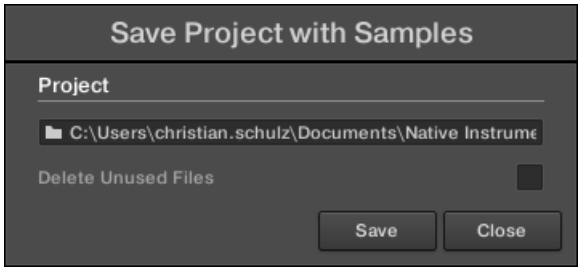
4.4.2 Saving a Project with its Samples

Sometimes it is useful to have the ability to save all Samples used in your 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.

1. Choose *Save Project with Samples...* from the File menu or the *File* submenu in the MASCHINE menu:



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



2. In this panel, adjust the settings (see table below) and click Save to confirm or Close to cancel the operation.

Element	Description
Project	Displays the name and location of the Project file to be created. The Samples will be put in a folder with the same name in the same location. By default, the Project file inherits the name of the Project and it will be saved in the "Projects" subfolder of your Standard User Directory (as defined in *Preferences > Library > User*, see section ↑2.6.4, Preferences – Default Page for more information). Click the folder icon on the right to select another name and/or path.
Delete Unused Files	Enable this checkbox to delete unused files, thereby minimizing the amount of audio data to be exported.



You can also save single Groups with their Samples. See ↑4.4.1, Saving a Group with its Samples.

4.4.3 Exporting Audio

In some cases you might want to render your Groups, Sounds or your complete Project as audio files in order to edit them further in other applications or burn a CD. Audio can be exported in WAV or AIFF format. This function is only available in the software.

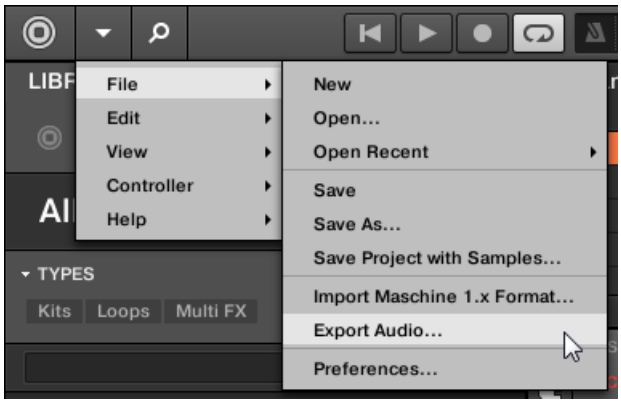


You can also export the audio of particular Patterns via drag and drop. The audio will be exported according to the settings described here, except for the exported region, the particular Sound/Group exported, and the name of the exported audio file. See section ↑7.8.1, Exporting Audio from Patterns for more information.

The exported region is based on the current Loop Range. The exact length of the exported audio file depends on the Loop Optimize setting in the Options page of the Export Audio panel (see description below).

1. Set the Loop Range to the region that you want to export — see section ↑13.3.1, Selecting a Loop Range to know how to do this.

2. Choose *Export Audio...* from the File menu or from the *File* submenu in the MASCHINE menu.



   You will be presented with the Export Audio panel (see picture below).

3. In the Export page of the Export Audio panel, select the source(s) and the destination (see description below).

4. If you wish, click the Options tab at the top and adjust the export options in the Options page that appears (see description below).

5. At the bottom of the panel, click Export to start the export process, or Close to cancel the operation and close the panel without exporting anything.

Export Audio Panel – Export Page

The Export page of the Export Audio panel allows you to choose the source(s) to be exported and the destination of the exported audio file(s).



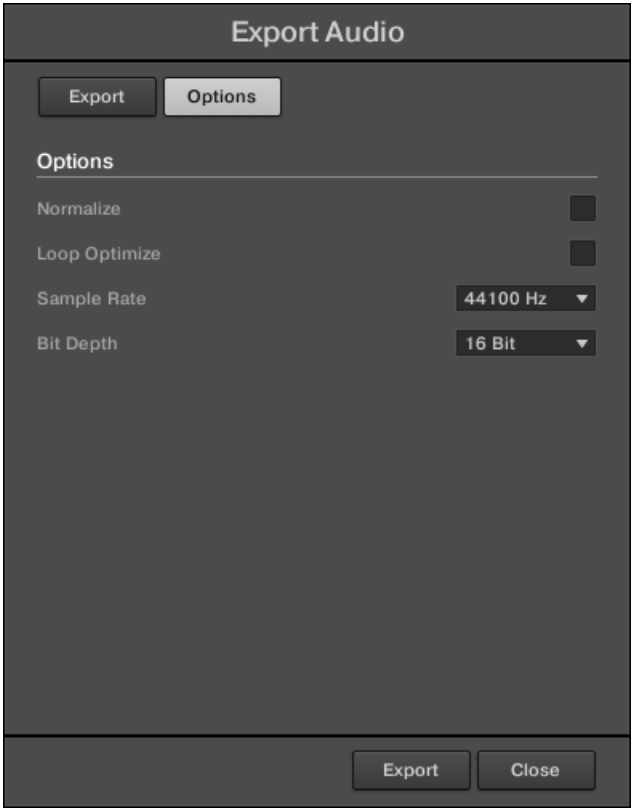
The Export page of the Export Audio panel.

Following parameters are available:

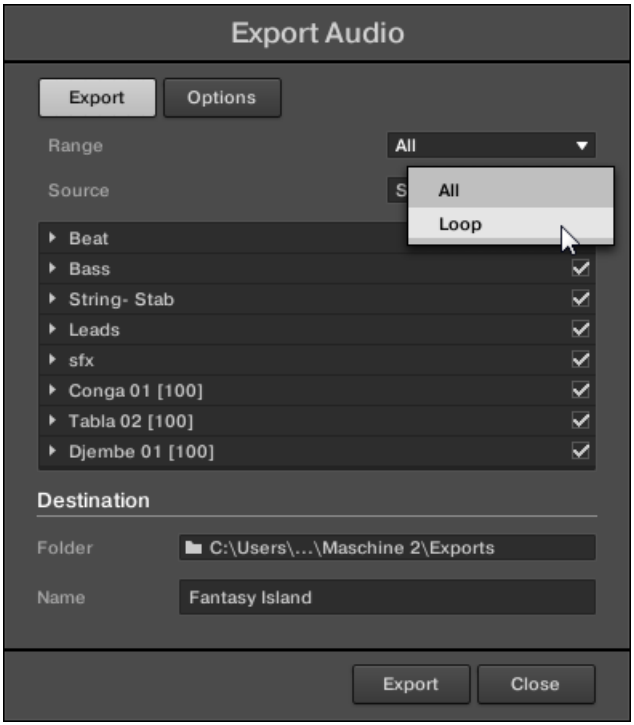
Element	Description
Source	
Output menu and Output list underneath	Selects what will be exported. The content of the Output list under the menu depends on your selection in the menu: *Master Output*: Select this to export the Master output signal (including all Groups and Sounds and their effects) to one audio file. The Output list underneath contains only one entry: Master Output. This entry is checked and grayed out (you cannot uncheck it). *Group Outputs*: Select this to export the output signals of specific Groups to individual audio files. The Output list underneath shows all Groups available for exporting. Empty Groups (i.e. Groups containing only empty Sound slots) are not listed. Click the check boxes of the desired entries in the list to include/exclude the corresponding Groups. Only Groups with a check mark will be exported. *Sound Outputs*: Select this to export the output signals of specific Sounds to individual audio files. When this entry is selected, the Output list underneath shows all Sounds available for exporting. Empty Sound slots are not listed. The entries are organized as a tree with Groups at the root and Sounds within each Group. By default all Groups are collapsed and all Groups and Sounds are checked. Click the little arrow left of a Group to show/hide its Sounds. Click the check boxes of the desired entries in the list to include/exclude the corresponding Sounds. Only Sounds with a check mark will be exported. The check box of Group entries allow to check/uncheck all Sounds of the Group at once. If some of the Sounds only are checked in a Group, the Group is "dimmed checked."
Destination	
Folder	Displays the folder on your hard disk where the exported audio file(s) will be saved. To change the destination folder, click the field and select the desired folder in the navigation dialog that opens.

Export Audio Panel – Options Page

The Options page of the Export Audio panel allows you to adjust various settings for the export process.



The Options page of the Export Audio panel.



The Export page of the Export Audio panel.

Following parameters are available:

Element	Description
Options	
Normalize	If this option is checked, the resulting audio file(s) will be normalized, i.e. the exported audio will be brought to the highest possible level without clipping (0 dBFS).

Element	Description
Loop Optimize	Optimizes the exported audio file for use as a loop: If Loop Optimize is disabled, the exported audio file will be prolonged to keep, e.g., the tail of a reverb. The end of the exported audio will always correspond to a bar division. If Loop Optimize is enabled, the exported audio file will have the exact range of the Loop Range. Any effect tail will be rendered into the beginning of the audio file. Additionally the file metadata will include the loop's tempo (in BPM) and length (in bars).
Split By Scene	This option exports the audio within the loop braces. If that loop spans multiple Scenes, individual audio files for each Scene within the selected area will be created. Please note, if you only select one Scene and export, you will not gain any advantage by using this feature.
Type	Select the audio format you require: uncompressed WAV and AIFF formats are available. The audio format type selected here also affects audio exported using the Audio Dragger icon available in the Pattern Editor.
Sample Rate	Selects from five different sample rates for the exported audio file(s): *44100 Hz* (this is the sample rate of the audio CD format), *48000 Hz*, *88200 Hz*, *96000 Hz*, and *192000 Hz*.
Bit Depth	Selects from three different bit depths (or bit resolutions) for the exported audio file(s): *16 Bit* is the bit depth of the audio CD format. *24 Bit* is well suited for mastering. *32 Bit float* is the bit depth used internally by MASCHINE's audio processing engine. Choose this setting if you plan to further process the exported audio using other high-end digital audio devices or applications that support this bit depth — using this setting will allow greater headroom. However note that the exported files will be significantly larger.

Names of the Exported Audio Files

The exported audio files are named according to following rules:

- If *Master Output* is selected in the Output menu the audio file will be named as follows: **[Project name] - [BPM].wav/aiff**
- If *Group Outputs* is selected in the Output menu the audio files will be named as follows: **[Project name] - [Group order number] [Group index (letter + number)] [Group name] - [BPM].wav/aiff**
  The Group order number is a two-digit number indicating the "order of appearance" of the Group in the Group List. This ensures that an alphabetical listing of the exported files will reflect the structure of your Project.
- If *Sound Outputs* is selected in the Output menu the audio files will be named as follows: **[Project name] - [Sound name] - [BPM].wav/aiff**



In addition, if the name of the file about to be exported is already used in the destination folder, a hyphen followed by an index number is added to the name (e.g., " - 1," " - 2," " - 3,") to avoid any file being overwritten.

4.5 Importing Third-Party File Formats

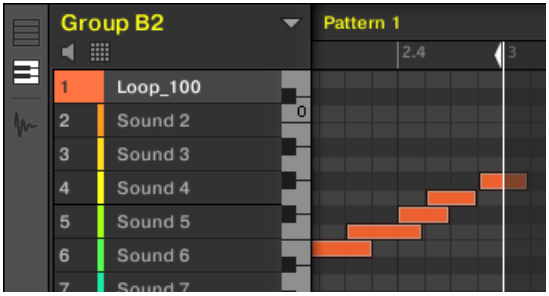
4.5.1 Loading REX Files into Sound Slots

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.

→ The Samples are loaded into the Sound slot. A new Pattern is created in that Group and directly loaded in the Pattern Editor (switch the Pattern Editor to Keyboard view to better see the Pattern — see section ↑7.1.5, Group View and Keyboard View). This Pattern contains the sequence data of the REX file. For each REX file you import a Pattern will be created and added.



A REX file loaded in the first Sound slot.

4.5.2 Importing MPC Programs 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.

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.

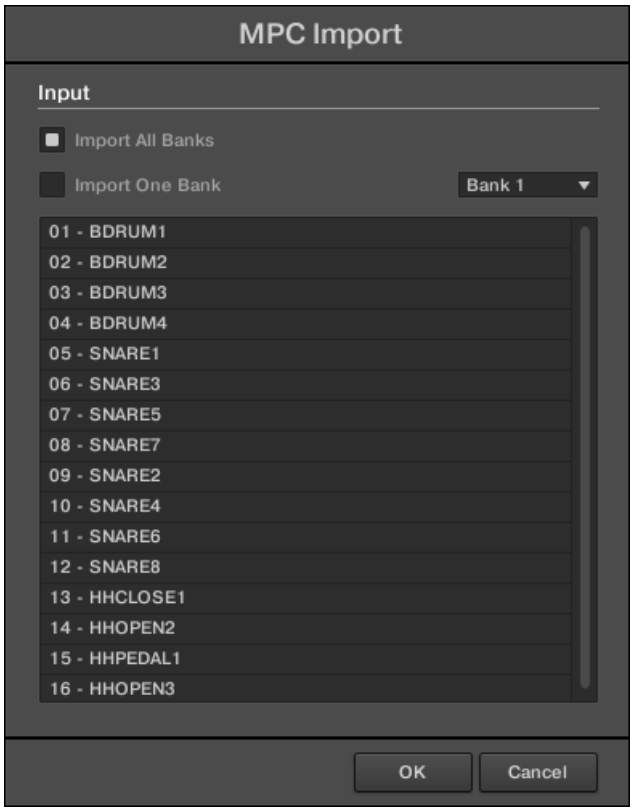
MPC Parameter	MPC500, 1000, 2500	MPC4000	MPC2000 (XL)	MPC3000	MASCHINE Parameter
Sample Name	x	x	x	x	Sample Name
Play Mode	x	x	–	–	Playback Type (ADSR, One-shot, AHD)
Sample Level	x	x	–	–	Zone Level
Sample Pan	–	x	–	–	Zone Pan

MPC Parameter	MPC500, 1000, 2500	MPC4000	MPC2000 (XL)	MPC3000	MASCHINE Parameter
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

Importing MPC Program Files

1. To import an MPC Program file, open the Browser in the MASCHINE software and click the FILES tab.

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



3. In the Input section of the panel, select one of the import options (see table below).
4. Click OK to start the import procedure (or Cancel to close the panel without importing anything).

Control	Description
Import All Banks	Select this to import all Banks of the MPC Program file. Each Bank will be loaded into a separate Group.
Import One Bank	Select this if you only want to import a single Bank. 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.

5 Playing on Your Controller

This chapter describes the numerous features available in MASCHINE to adjust and enhance your playing, both during live performances and when recording Patterns.

5.1 Adjusting Your Pads

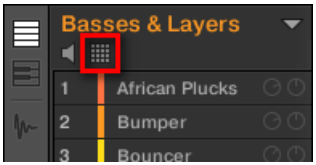
MASCHINE provides you with numerous features to finely tailor the way the pads of your controller react to your playing:

- Choose a **pad mode** that best fit your playing needs: ↑5.1.1, The Pad View in the Software.
- Adjust the **base key** to set the pitch of the notes played by your pads: ↑5.1.3, Adjusting the Base Key.
- Set **Choke groups** to selectively cancel Sounds when other Sounds are triggered: ↑5.1.4, Using Choke Groups.
- Create **Link groups** to trigger several Sounds by pressing only one pad: ↑5.1.5, Using Link Groups.

Most of the settings for your pads are available both in the software via the Pad view (see ↑5.1.1, The Pad View in the Software), and on your controller via the Pad Mode (see section ↑5.1.2, Choosing a Pad Mode).

5.1.1 The Pad View in the Software

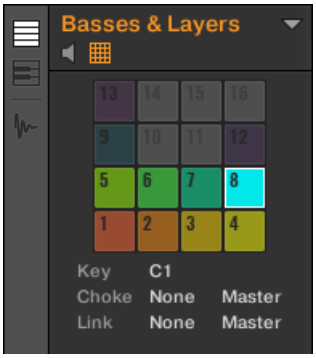
In the software the settings for your pads are available in the **Pad view**, which is enabled via the Pad View button above the Sound List in the Pattern Editor:



The Pad View button.

► Click the Pad View button to show or hide the Pad view.

When the Pad View button is enabled, the Pad view replaces the Sound List below:



The Pad view replaces the Sound List.

At the top of the Pad view, the **grid of pads** gives you access to all Sound slots of the current Group. The focused pad is fully lit; other pads containing a Sound are dim lit; pads without any Sound are off. The following actions are available in the grid:

- Click any pad to select the corresponding Sound slot. Upon selection the parameters underneath as well as the Control area above are updated accordingly.
- Drag and drop a pad to move it to another location in the grid. This is strictly equivalent to moving Sound slots in the Sound List (see section ↑4.2.7, Moving Sounds).
- Right-click ([Ctrl]-click on Mac OS X) any pad to open the same context menu as in the Sound List — the management commands available in this menu are described in section ↑4.2, Managing Sounds.



You can select multiple pads in the grid of pads as you can in the Sound List, and adjust parameters in the Pad view and in the Control area for all of them simultaneously. For more information on multiple selection, see section ↑4.1.3, Selecting Multiple Sounds or Groups.

Under the grid of pads, you find following parameters:

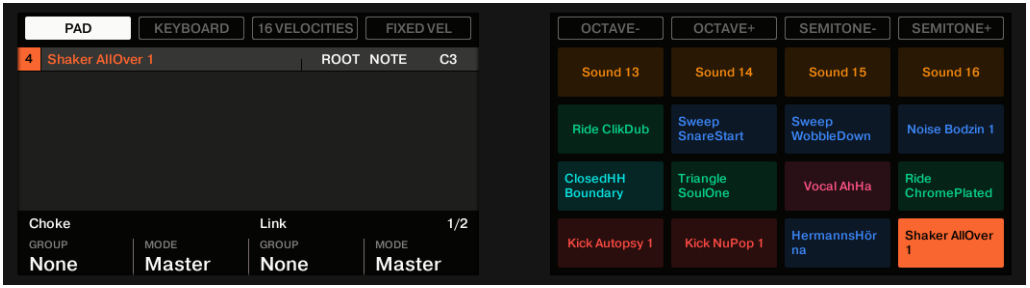
Parameter	Description
Key	Adjusts the base key for the selected pad. See section ↑5.1.3, Adjusting the Base Key below.
Choke	Configures the Choke Group for the selected pad. See section ↑5.1.4, Using Choke Groups below.
Link	Configures Pad Link for the selected pad. See section ↑5.1.5, Using Link Groups below.

5.1.2 Choosing a Pad Mode

By default, your pads play all Sounds of the selected Group — we call this **Group mode**. Furthermore they are velocity sensitive, meaning they will play louder if you hit them harder. You can change this behavior and choose another pad mode in order to adapt your pads to various situations.

Changing the behavior of the pads using Pad Mode:

- ► To enter Pad Mode, press and hold PAD MODE. You can also press PAD MODE + Button 1 to pin this mode and make it permanent.



The Pad Mode on the controller.

If your controller is in Group mode (default mode) the right display shows the name and color of the Sound played by each pad.

The Pad Mode provides two Parameter pages for Knob 1–4 under the left display. As usual, use the Page buttons at the left of the displays to select a Parameter page.

Parameter	Description
KEYBOARD (Button 2)	Activates/deactivates **Keyboard mode**. In this mode your pads play notes of the focused Sound at 16 different pitches. This is well suited for melodic instruments. The right display indicates the pitches played by each pad (all are shown in the color of the focused Sound). See the next paragraph for a detailed description of this mode. Please note that Keyboard mode is not compatible with 16 Velocities mode (see below).
16 VELOCITIES (Button 3)	Activates/deactivates **16 Velocities mode**. In this mode your pads play the same note of the focused Sound but with 16 different velocity values. This can be useful to play or program complex drum fills. The right display indicates the velocity values for each pad (all are shown in the color of the focused Sound). The pitch of the played note is defined by the base key (see section ↑5.1.3, Adjusting the Base Key). Please note that 16 Velocities mode is not compatible with Keyboard mode (see above) nor the Fixed Velocity option (see below).
FIXED VEL (Button 4)	Activates/deactivates the **Fixed Velocity** option. This option is available when your pads are in Group mode (default mode) or Keyboard mode. With this option enabled, your pads play at the same volume no matter how hard you hit the pads. Obviously, this option is not compatible with the 16 Velocities mode described above: hence, their buttons are mutually exclusive.
OCT-, OCT+, SEMI-, and SEMI+ (Button 5–8)	Adjust the base key for the selected pad. See section ↑5.1.3, Adjusting the Base Key below.
Page 1	
CHOKE section (Knob 1 and 2)	Configures the Choke group for the selected pad. See section ↑5.1.4, Using Choke Groups for more information.
LINK section (Knob 3 and 4)	Configures the Link group for the selected pad. See section ↑5.1.5, Using Link Groups for more information.

Parameter	Description
Page 2	
FIX VEL (Knob 1)	Here you can adjust the exact velocity value used in the Fixed Velocity mode (see above).

Using the Keyboard Mode

1. Select a Sound by pressing the pad it is assigned to.
2. Now enter Pad Mode by holding PAD MODE and lock it by pressing Button 1 (you can then release PAD MODE).
3. Press Button 2 to enter Keyboard mode.

→ If you hit the pads now, you will hear that they all play the same Sound, but each with a different pitch. When you leave Pad Mode, the PAD MODE button stays dim lit to indicate that Keyboard mode is active.

Alternatively, you can use the following shortcut:

► In any mode, press SHIFT + PAD MODE to quickly switch your pads between Keyboard mode and Group mode.

The pitch scale is divided in semitones, starting with pad 1 as the lowest pitch going up to pad 16 as the highest pitch. The current scale is indicated on the right display:



Keyboard mode selected on the controller displays in Pad Mode.

Activating Keyboard mode on your controller automatically switches the Pattern Editor to Keyboard view in the software, and inversely.

To shift the scale in octaves use Button 5 (octave down) or Button 6 (octave up). You can also shift the scale in semitones: use Button 7 (semitone down) and Button 8 (semitone up). Of course all these settings stay active when you press PAD MODE again to leave Pad Mode.



Try to experiment with all kinds of Samples in the 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 socket on the back of your controller. You can also use any USB-MIDI keyboard selected in the MIDI page of the Preferences panel (see ↑2.6.3, Preferences – MIDI Page). By default the connected MIDI input device will always play the selected Sound without the need to enter Keyboard mode.



The rear side of the MASCHINE hardware with the MIDI IN and OUT sockets.

5.1.3 Adjusting the Base Key

In Group mode, the **base key** defines the key (or pitch) at which the selected Sound will be played when its pad is pressed. In Keyboard mode, it defines the key played by pad 1 on your controller; pads 2–16 will then play keys from [base key + 1 semitone] up to [base key + 15 semitones].



The base key also affects the pitch of events created via the step sequencer. See section ↑7.3.1, Step Mode Basics for more information on this.



Adjusting the base key only affects the notes played by the pads of your controller. It does not affect the notes recorded in your Patterns! To adjust the key of notes in Patterns, please refer to section ↑7.4, Editing Events.



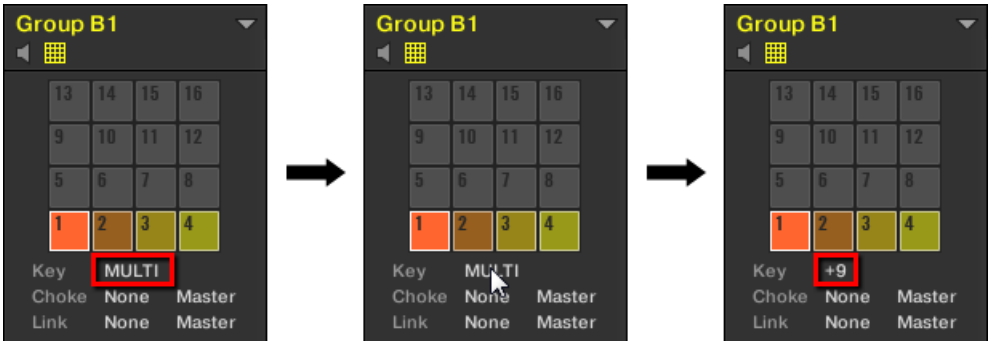
You can select multiple pads and quickly change the base key for all of them at once! See section ↑4.1.3, Selecting Multiple Sounds or Groups to know how to do this.

By default the base key of every Sound slot is C3 (i.e. middle C in the MASCHINE convention). To change the base key of the selected pad(s) / Sound slot(s) in the software:

1. Click the Pad View button above the Sound List in the Pattern Editor to show the Pad view for the focused Group.
2. Click the Key value and drag your mouse vertically, or double-click it, enter a new value on your computer keyboard, and press [Enter] to confirm.

Adjusting the Key Parameter for Multiple Sounds with different Key Values

► Click and drag the MULTI label next to Key to transpose the base key of all selected Sounds. While dragging, the field displays a +/-x value indicating the transposition that will apply to all Sounds as you release the mouse button.



Sound slots 1 to 4 are selected. If they have different Key values, a MULTI label appears (left). When you drag it (middle), a transpose value appears (right) that will be applied to all selected Sounds when you will release the mouse button.

This is also true when adjusting the parameter from your controller.

To change the base key of the selected pad(s) / Sound slot(s) on your controller:

1. Hold the PAD MODE button to enter Pad Mode (or press PAD MODE + Button 1 to pin it). On the right display, the key indicated for pad 1 (in the bottom left corner) is the current base key.

2. Press Button 5 (OCT-) / 6 (OCT+) to adjust the base key by octaves, or Button 7 (SEMI-) / 8 (SEMI+) to adjust the base key by semitones.
   The new values are indicated for all pads on the right display.
3. Release PAD MODE (or press it again if you pinned the mode).

5.1.4 Using Choke Groups

When your pads are in Group mode, **Choke groups** allow you to build sets of "mutually exclusive" pads: A Choke group lets you force each newly triggered Sound to cancel out all other Sounds still playing — in other terms, these Sounds would never play together, the newer Sound automatically "killing" the audio of the older one. 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.

Within a Group, each pad can be assigned to one of eight Choke groups. When you assign a pad to a Choke group, the pad may be set as a Master or Slave in the Choke group:

- If the pad is set to **Master** (default setting) it will kill the Sounds of other pads in the same Choke group.
- If the pad is set to **Slave** it won't kill any other pad of the Choke group — but be killed by pads set to Master within the same group.

You may set more than one pad as Master or Slave within the same group.



Choke groups affect not only the notes you play on the pads and the notes triggered by the Patterns, but also the MIDI notes controlling your Sounds.



You can select multiple Sounds and quickly assign them all to a particular Choke group at once!

To assign the selected Sound slot(s) to a Choke group and set its/their Choke mode (Master or Slave), do the following:

1. Click the Pad View button above the Sound List in the Pattern Editor to show the Pad view for the focused Group.

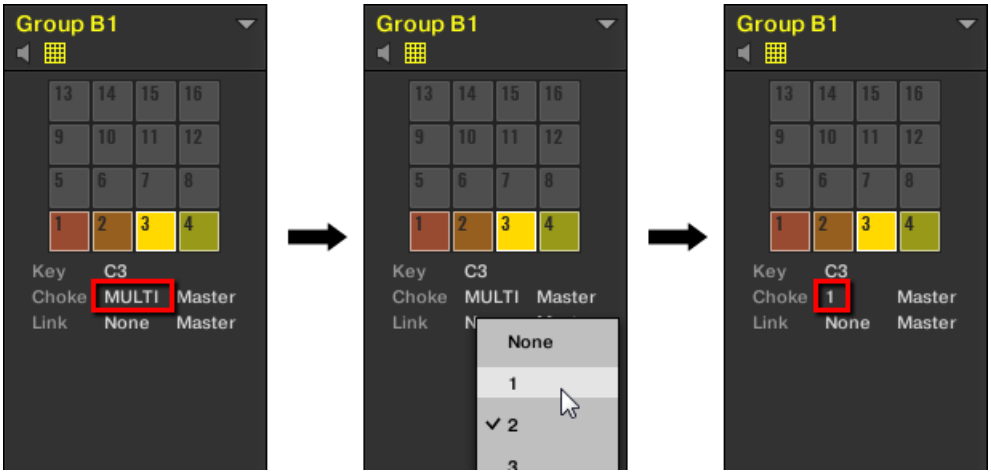
2. In the Choke section click the Group value and select the desired group *1–8* from the list or choose *None* (default setting) to remove the Sound from its current Choke group.
3. In the same Choke section click the Mode value (Master or Slave) to switch the Sound between Master (default setting) and Slave mode.
4. Repeat the steps above to assign other pads to the same Choke group.



The Hi-hat is an ideal candidate for making use of Choke groups! See ↑10.4.3, Hi-hat – Memory for more details!

Adjusting the Choke Multiple Sounds with different Choke Values

- Click the MULTI label next to Choke and select the desired value from the list to set all selected Sounds to that same Choke group. This also applies to the Master/Slave setting next to it.



Sound slots 1 to 4 are selected. If they have different Choke values, a MULTI label appears (left). When you click it and select a new Choke from the list (middle), this new group is applied to all selected Sounds.

This is also true when adjusting the parameter from your controller.

To assign the selected pad(s) / Sound slot(s) to a Choke group and set its/their Choke mode on your controller:

1. Hold the PAD MODE button to enter Pad Mode (or press PAD MODE + Button 1 to pin it).
2. If necessary, press the Page Left button to switch to the first Parameter page of the Pad Mode.
3. Turn Knob 1 (CHOKE GROUP) to select the desired Choke group 1–8 for that pad or choose NONE (default setting) to remove the pad from its current Choke group.
4. Turn Knob 2 (CHOKE MODE) to select the Choke mode from MASTER (default setting) or SLAVE for that pad.
5. Release PAD MODE (or press it again if you pinned the mode).

5.1.5 Using Link Groups

When your pads are in Group mode, **Link groups** allow you to link pads with each other: this can be used to trigger multiple Sounds when pressing only one pad. Each pad of a Group can be assigned to one of eight Link groups. A pad may be set as a Master or Slave in the Link group:

- If the pad is set to **Master** (default setting) it will trigger other pads in the same Link group.
- If the pad is set to **Slave** it will only trigger its own Sound, even if it is part of a Link group — but be triggered by pads set to Master within the same group.

You may set more than one pad as Master or Slave within the same group.



Link groups affect not only the notes you play on the pads and the notes triggered by the Patterns, but also the MIDI notes controlling your Sounds.



Link groups are a "live" feature: They only affect the note *triggers*. In Record mode, Link groups don't affect the notes recorded in your Patterns — in other terms notes won't be recorded for the linked pads! Notably, this allow you to modify your Link group assignments after recording. If you want to copy the notes from a Sound to another Sound in Patterns, please refer to section ↑7.4, Editing Events.



You can select multiple Sound slots and quickly assign them all to a particular Link group at once!

To assign the selected Sound(s) to a Link group and set its/their Link mode (Master or Slave), do the following:

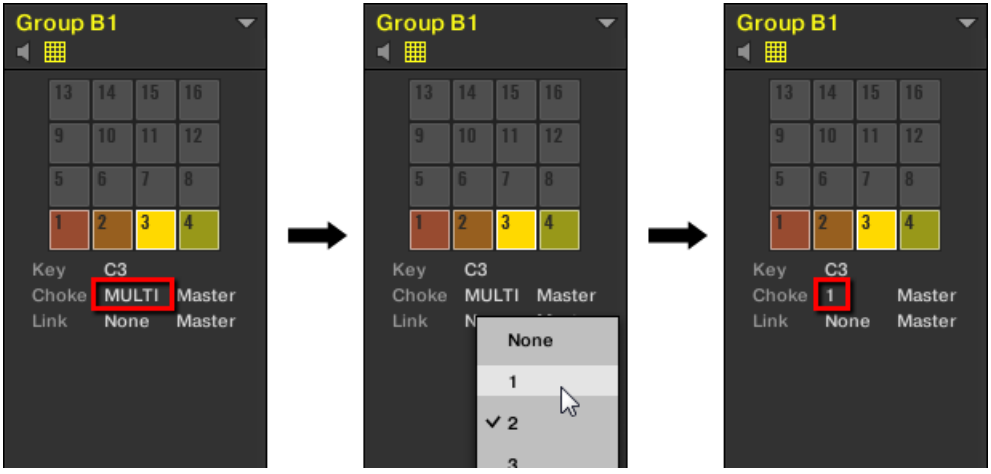
1. Click the Pad View button above the Sound List in the Pattern Editor to show the Pad view for the focused Group.
2. In the Link section click the Group value and select the desired group *1–8* from the list or choose *None* (default setting) to remove the Sound from its current Link group.
3. In the same Link section click the Mode value (Master or Slave) to switch the Sound between Master (default setting) and Slave mode.



A Link group makes sense only if more than one pad/Sound are assigned to it!

Adjusting the Link Parameter for Multiple Sounds with different Link Values

► Click the MULTI label next to Link and select the desired value from the list to set all selected Sounds to that same Link group. This also applies to the Master/Slave setting next to it.



Sound slots 1 to 4 are selected. If they have different Choke values, a MULTI label appears (left). When you click it and select a new Choke or Link group from the list (middle), this new group is applied to all selected Sounds.

This is also true when adjusting the parameter from your controller.

To assign the selected pad(s) / Sound slot(s) to a Link group and set its/their Link mode on your controller:

1. Hold the PAD MODE button to enter Pad Mode (or press PAD MODE + Button 1 to pin it).
2. If necessary, press the Page Left button to switch to the first Parameter page of the Pad Mode.
3. Turn Knob 3 (LINK GROUP) to select the desired Link group 1–8 for that pad or choose NONE (default setting) to remove the pad from its current Link group.
4. Turn Knob 4 (LINK MODE) to select the Link mode from MASTER (default setting) or SLAVE for that pad.
5. Release PAD MODE (or press it again if you pinned the mode).

5.2 Adjusting the Key, Choke, and Link Parameters for Multiple Sounds

In the software, if you select multiple Sounds with different Key, Choke and/or Link values, the corresponding parameters in Pad view now display MULTI. On your controller in Pad Mode, the corresponding parameters now display (MULTI).

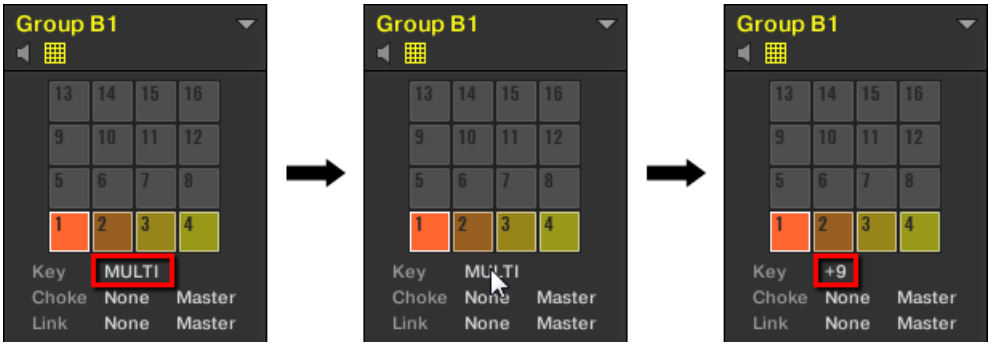
Moreover, you can adjust these parameters for the selected Sounds as described below.



For general information on the Pad view of the software, the Pad Mode on your controller, and the Key, Choke, and Link parameters, please refer to section 5.1 “Adjusting Your Pads” in the MASCHINE 2.0 Manual.

Adjusting the Key Parameter for Multiple Sounds with different Key Values

- Click and drag the MULTI label next to Key to transpose the base key of all selected Sounds. While dragging, the field displays a +/-x value indicating the transposition that will apply to all Sounds as you release the mouse button.

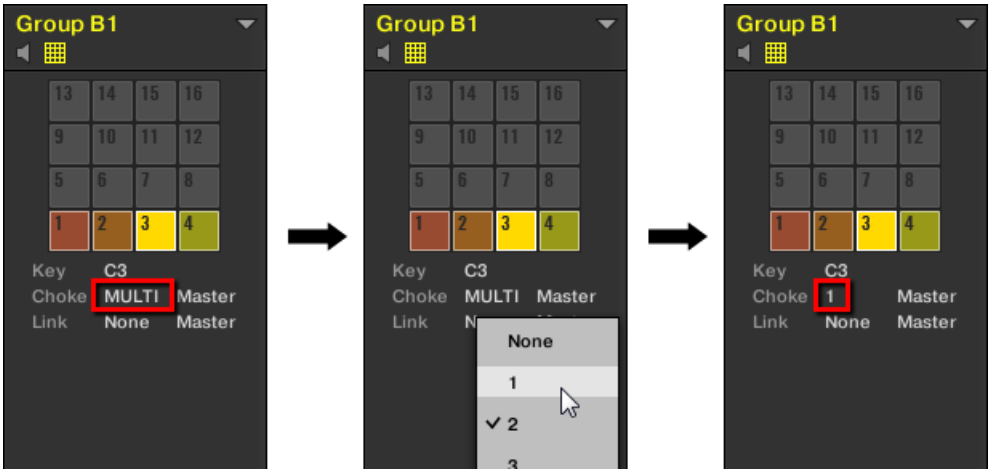


Sound slots 1 to 4 are selected. If they have different Key values, a MULTI label appears (left). When you drag it (middle), a transpose value appears (right) that will be applied to all selected Sounds when you will release the mouse button.

This is also true when adjusting the parameter from your controller.

Adjusting the Choke or Link Parameter for Multiple Sounds with different Choke or Link Values

- Click the MULTI label next to Choke or Link and select the desired value from the list to set all selected Sounds to that same Choke or Link group, respectively. This also applies to the Master/Slave setting next to it.



Sound slots 1 to 4 are selected. If they have different Choke values, a MULTI label appears (left). When you click it and select a new Choke or Link group from the list (middle), this new group is applied to all selected Sounds.

This is also true when adjusting the parameter from your controller.

5.3 Adjusting the Base Key

In Group mode, the **base key** defines the key (or pitch) at which the selected Sound will be played when its pad is pressed. In Keyboard mode, it defines the key played by pad 1 on your controller; pads 2–16 will then play keys from [base key + 1 semitone] up to [base key + 15 semitones].



The base key also affects the pitch of events created via the step sequencer. See section ↑7.3.1, Step Mode Basics for more information on this.



Adjusting the base key only affects the notes played by the pads of your controller. It does not affect the notes recorded in your Patterns! To adjust the key of notes in Patterns, please refer to section ↑4.1.3, Selecting Multiple Sounds or Groups.



You can select multiple pads and quickly change the base key for all of them at once! See section ↑7.4, Editing Events to know how to do this.

Adjusting the Base Key in the Software

By default the base key of every Sound slot is C3 (i.e. middle C in the MASCHINE convention). To change the base key of the selected pad(s) / Sound slot(s) in the software:

1. Click the Pad View button above the Sound List in the Pattern Editor to show the Pad view for the focused Group.
2. Click the Key value and drag your mouse vertically, or double-click it, enter a new value on your computer keyboard, and press [Enter] to confirm.

Adjusting the Base Key on Your Controller

To change the base key of the selected pad(s) / Sound slot(s) on your controller:

1. Hold the PAD MODE button to enter Pad Mode (or press PAD MODE + Button 1 to pin it). On the right display, the key indicated for pad 1 (in the bottom left corner) is the current base key.

2. Press Button 5 (OCT-) / 6 (OCT+) to adjust the base key by octaves, or Button 7 (SEMI-) / 8 (SEMI+) to adjust the base key by semitones.
   The new values are indicated for all pads on the right display.
3. Release PAD MODE (or press it again if you pinned the mode).

5.4 Playing Tools

On top of the various pad settings described in the previous section (see ↑5.1, Adjusting Your Pads), MASCHINE also offers you a series of intuitive playing tools particularly useful when playing live:

- **Mute** and **Solo** allow you to selectively mute and solo Sounds and Groups: ↑5.4.1, Mute and Solo.
- **Choke All Notes** allow you to cut all playing audio: ↑5.4.2, Choke All Notes.
- **Groove** allows you to give a shuffling flair to individual Sounds/Groups or to your entire Project: ↑5.4.3, Groove.
- **Hardware Shortcuts** give you a quick access to the most important parameters of each channel (Sound, Group, and Master): ↑5.4.4, Level, Tempo, Tune, and Groove Shortcuts on Your Controller.

5.4.1 Mute and Solo

Muting is used to silence a Sound or a Group, whereas Solo is pretty much the opposite: Soloing a Sound or a Group mutes all other Sounds in that Group or all other Groups, respectively, 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.

When used on Sounds, the Solo only applies to the current Group: The Sounds in other Groups won't be affected.



We describe here how to mute/solo Groups and Sounds in the Arrange view of the software, but you can also do this from Mix view via the Mute button available in each channel strip of the Mixer! See section ↑9.2.5, Adjusting Settings in the Channel Strips for more information.

Audio Mute vs. Event Mute

At the Group level, the Mute function is an **audio mute**: The whole audio output of the muted Group will be bypassed. At the Sound level, the Mute function is by default a **trigger mute**: the Pattern content (the events) for the muted Sound will not be triggered — but any audio remaining from past events for this Sound will still be audible until it fades away. You can change this behavior by enabling the Audio Mute button in the Audio page of the Sound's Output properties (see section ↑8.1.2, Configuring the Main Output of Sounds and Groups) as well as in Solo and Mute mode on your controller: Activating the audio mute for Sounds will ensure that not only the events are muted, but any remaining audio as well.

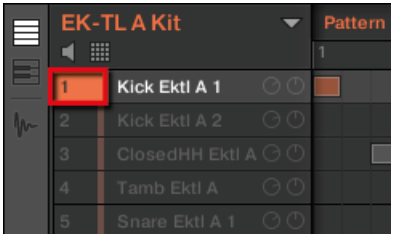


To momentarily mute all audio from all Sounds and Groups at once, please refer to section ↑5.4.2, Choke All Notes.

Mute and Solo in the Software

Soloing a Sound

- To solo a Sound, right-click (on Mac OS X: [Ctrl]-click) the number on the left side of the Sound slot in the Pattern Editor.

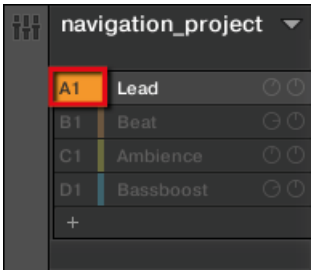


Soloing the first kick Sound.

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

Soloing a Group

- To solo a Group, right-click (on Mac OS X: [Ctrl]-click) the Group index (letter + number) on the left side of the Group in the Arranger:

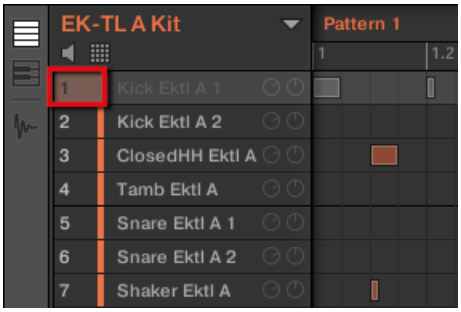


Soloing a Group.

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

Muting a Sound

► To mute a Sound, click the number on the left side of the Sound slot in the Pattern Editor.



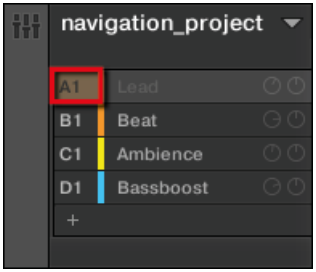
Muting a Sound.

► To unmute the Sound, click the number again.

By default, the Mute on Sounds is an event mute: events for muted Sounds are not triggered, but the audio coming from previous events might still be audible (reverb tail, etc.). You can also activate audio mute for Sounds to mute both events and audio — see the beginning of this section for more information.

Muting a Group

► To mute a Group, click the Group index (letter + number) on the left side of the Group in the Arranger:



Muting a Group.

► To unmute the Group, click the Group index again.

Your MASCHINE STUDIO controller provides an additional shortcut for the Solo function directly available in Control mode:

► In Control mode, press Button 4 (SOLO) to solo the focused Sound or Group.

Pressing Button 4 (SOLO) again will unsolo the Sound/Group.

This shortcut can be useful to quickly isolate the audio of the channel you are currently working on without switching to another mode on your controller.

5.4.2 Choke All Notes

The Choke All Notes feature allows you to kill any note or event currently playing in your Project. This affects the audio coming from all Plug-ins (Internal, Native Instruments, and External).

Choke All Notes is only available on your controller:

► Press SHIFT + MUTE to choke all playing notes.

Choke All Notes can be useful in various situations:

- as a creative tool in a live performance, e.g. to create stutter beaks,

- as a workflow aid, to stop long one-shot Samples that still continue playing after you have stopped the sequencer,
- as a first panic button, if you are not sure where in your Project a particular sound is coming from, and you want to get rid of it.



Contrary to the Mute function, Choke All Notes is not turning any Group/Sound into another state. Instead, all audio voices currently playing are instantaneously killed. The killed voices cannot be reactivated and are freed up for subsequent notes according to the polyphony setting. Voices triggered by subsequent notes will play normally.

5.4.3 Groove

The groove controls the rhythmic relationship between events in the selected channel (Sound, Group or Master). By shifting some of the events, you can e.g. give a shuffling, ternary touch to your Patterns.

The groove can be adjusted for each channel individually via its **Groove properties**.

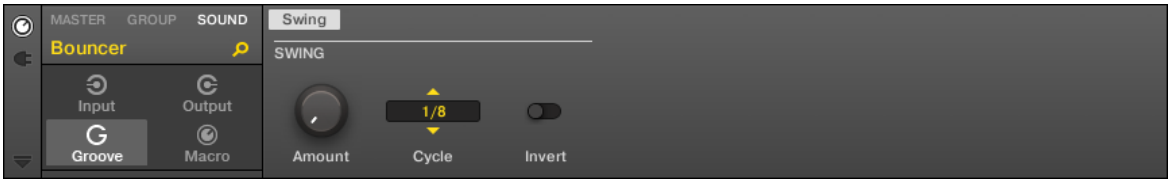
A groove configured for a channel affects all its contained channels:

- At the Sound level, the Groove properties settings of a Sound affect that single Sound.
- At the Group level, the Groove properties settings of a Group affect all Sounds of the Group. The Group's swing is added to the groove set for each individual Sound via its own Groove properties.
- At the Master level, the Groove properties affect all Sounds of all Groups. The Master's swing is added to the groove set for each individual Group and Sound via their own Groove properties.

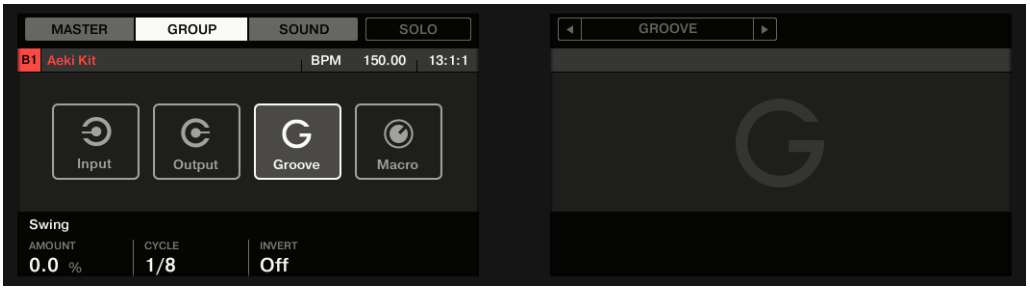
The Groove properties have a single Parameter page: **Swing**.



Please refer to section ↑2.3.3, Navigating Channel Properties, Plug-ins, and Parameter Pages in the Control Area to know how to display and navigate sets of Channel properties.



The Groove properties for a Sound in the software.



The Groove properties for a Sound on the controller.

Controls	Description
SWING Section	
Amount	Adjusts the amount of swing, i.e. the amount by which some events are shifted. At 0 % events are not shifted. Raise the Amount value to increase the strength of the swing.
Cycle	Determines on what musical resolution the groove is applied. This directly affects which events will be shifted. Values are measured in fractions of a whole note.
Invert	Allows you to invert the groove so that instead of being delayed in the Pattern events will be triggered ahead of time.

How Groove Affects the Rhythm: An Example

Take a simple, regular one-bar rhythm with a hit on each eighth note. We set the Cycle parameter to *1/2*, which is one half note, that is two beats.

The following picture shows you how this rhythm would *sound* with the following settings:

- Top: Amount at 0.0 % (no groove).
- Middle: Amount at 100.0 % and Invert off.
- Bottom: Amount at 100.0 % and Invert enabled.



This is how the same regular rhythm would be heard with various groove settings.

The picture above only illustrates how the groove function affects the *sound* — adjusting the Groove properties will not effectively move events in the Patterns displayed in the Pattern Editor!

5.4.4 Level, Tempo, Tune, and Groove Shortcuts on Your Controller

Your controller provides extra shortcuts for various important parameters. Most of these parameters are already available in the Channel properties of the Sounds, Groups, and Master. The shortcuts detailed here give you an additional quick access to them — especially useful during live performance.

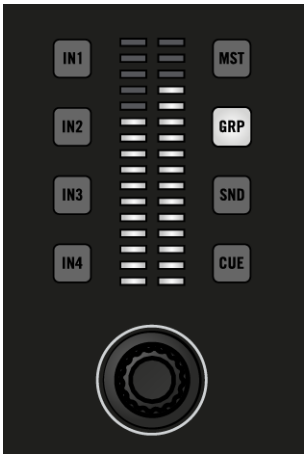
Your MASCHINE STUDIO controller provides various sets of shortcuts:

- You can quickly alter the output level of the Master (for both the main and cue outputs) or any Sound/Group via the Master section of the controller.
- You can also quickly alter the output level, the tune, and the groove of any Group or Sound via the Quick Edit functions available in the EDIT section of the controller.

- Finally you can quickly adjust the tempo of your Project via the TAP button.

Level Shortcuts in the Master Section

The Master section of your controller allows you to quickly adjust various level values in your Project.



The Master section of your controller, here with the GRP button active.

1. To change the output level of the Master (i.e. the overall output level of MASCHINE), press MST and turn the Level knob.
2. To change the output level of the Cue bus, press CUE and turn the Level knob.
3. To change the output level of a Group, press its Group button (first navigate to its Group bank if necessary), press GRP in the Master section, and turn the Level knob.
4. To change the output level of an individual Sound, press its pad (or press SELECT + its pad if pads are in Keyboard mode), press SND in the Master section, and turn the Level knob.

→ The adjusted value shortly appears on the left display. The level meter in the Master section always displays the level corresponding to the selected button on the right.



Hold SHIFT while turning the Master encoder to adjust the value in finer increments.

These shortcuts control the LEVEL parameter of the Audio and Cue section in the Audio page of the Master's Output properties as well as the LEVEL parameter of the Audio section in the Audio page of the Group's and Sound's Output properties, respectively. See section ↑8.1.4, Configuring the Master and Cue Outputs of MASCHINE and ↑8.1.2, Configuring the Main Output of Sounds and Groups for a detailed description of these properties.

In the software you can also adjust the output level of the Master via the Master Volume slider in the right part of the Header:



The Master Volume slider in the software's Header.

To reset the output level of the Master to 0 dB, double-click the Master Volume slider.

Level, Tune, and Groove Shortcuts via the Quick Edit functions

In the EDIT section of your controller you can use **Quick Edit functions** to quickly adjust the output level, the tune, and the groove of your individual Groups and Sounds.



The EDIT section of your controller, here with the TUNE function active.

1. If you want to adjust the level, tune and/or swing values for a Sound, hold its pad (or hold SELECT + its pad if the pads are in Keyboard mode). In Keyboard mode you can also press SELECT + the pad of the desired Sound, then hold any pad (i.e. any pitch of that Sound).
2. If you want to adjust the level, tune and/or swing values for a Group, hold its Group button (first navigate to its Group bank if necessary).
3. While holding the pad or Group button, use the Left/Right FUNCTION buttons at the bottom of the EDIT section to select the desired function (TUNE, SWING or VOLUME lit under the jog wheel), and turn the jog wheel to adjust the corresponding value.



Press and turn the jog wheel (or hold SHIFT while you turn it) to adjust the value in finer increments.

The following parameters are affected:

- When VOLUME is selected (lit), the shortcut controls the LEVEL parameter in the Audio page of the Output properties for the selected Group or Sound. See section ↑8.1.2, Configuring the Main Output of Sounds and Groups for a detailed description of these Channel properties.
- When SWING is selected (lit), the shortcut controls the AMOUNT parameter in the Swing page of the Groove properties for the selected Group or Sound. See section ↑5.4.3, Groove for a detailed description of these Channel properties.
- When TUNE is selected (lit), the shortcut works only with Sounds containing a Sampler or a Drumsynth Plug-in. The shortcut controls the TUNE parameter of the Pitch / Gate section in the Pitch / Envelope page of the Sampler, and the TUNE parameter of the Main section in the Main page of any Drumsynth. If you hold a Group button, the shortcut will affect all Sounds of the Group that contain a Sampler or Drumsynth Plug-in. For more details on the TUNE parameter, please refer to section ↑6.2.1, Page 1: Voice Settings / Engine for the Sampler and section ↑10.1.5, Pitch Range, Tuning, and MIDI Notes for the Drumsynths.

Tempo Shortcut

You can quickly define the tempo of your Project via the TAP button in the PERFORMANCE section of the controller:

► Repeatedly tap the TAP button to set the desired tempo.

You can also use the TAP button to adjust the current tempo:

► Hold TAP and turn the jog wheel to quickly adjust the tempo of your Project.



Press and turn the jog wheel (or hold SHIFT while you turn it) to adjust the value in finer increments.

These shortcuts control the Tempo parameter of MASCHINE. In the software this parameter is available in the Header:



The Tempo parameter in the software's Header.

5.5 Performance Features

The Performance features of MASCHINE are inspired by similar features available in KOMPLETE KONTROL and on the KOMPLETE KONTROL S-SERIES keyboards. This tight integration offers a familiar and seamless workflow.

5.5.1 Overview of the Perform Features

The Perform features include the following engines:

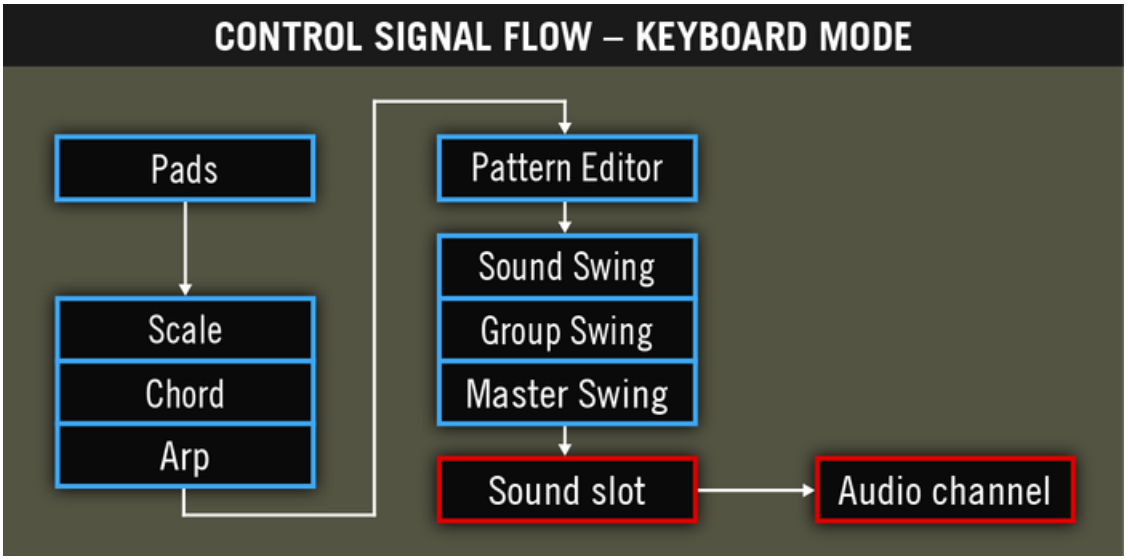
- The **Scale and Chords engine** allows you to assign the pads to notes within specific scales, and to play chords according to the selected scale by hitting single pads.
- The **Arp engine** allows you to create arpeggios based on the pads you press or the chord currently triggered.

Designed to enrich the melodic content of your Projects, these engines are available when your pads are in **Keyboard mode**. Furthermore, they are designed to be used live and, as such, they are available only from your hardware controller (like Note Repeat).

When your pads are in Group mode, you can use the Note Repeat engine, Choke groups, and Link groups as in previous MASCHINE versions.

The Control Signal Flow—Pads in Keyboard Mode

The following diagram illustrates MASCHINE s signal flow between your hits on the pads in Keyboard mode and the resulting sounds:



The signal flow including the new Perform features (Scale, Chord, and Arp) when your pads are in Keyboard mode.

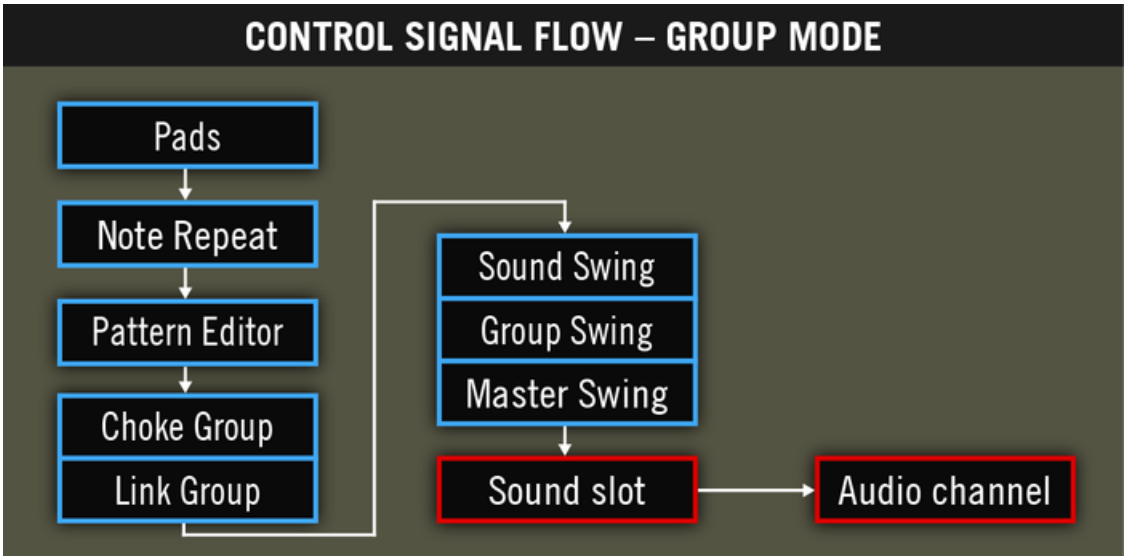
In this picture, blue cells represent modules sending "control" signals, i.e. triggering messages (e.g., the note messages sent by the pads as you press them), whereas red cells represent modules sending audio signals (e.g., the sounds produced by the Instrument loaded in the Sound slot as it receives the aforementioned note messages).

In this diagram you will notice the following:

- The Scale and Chord modules can feed the Arp module, the Scale module can also affect the Chord module, as we will see later.
- The notes played on your pads are first sent to the Perform features (Scale, Chord, and Arp engines), which send the resulting notes to the Pattern Editor. In other terms, you can record the generated scales, chords or arpeggiated notes into your Patterns. However, the Perform features do not process the content of your Patterns.

The Control Signal Flow—Pads in Group Mode

The following diagram illustrates signal flow between your hits on the pads in Group mode and the resulting sounds:



The signal flow including the Perform features (Note Repeat, Choke Group, and Link Group) when your pads are in Group mode.

In this picture you will notice the following:

- Note Repeat takes the place of the Scale, Chord, and Arp modules between the live input on the pads and the Pattern Editor. In other terms, Note Repeat won't process your Patterns but you can record its output into a Pattern.
- The Choke Group and Link Group modules affect both your hits on the pads *and* the content of your Patterns, but their result cannot be recorded into Patterns.

5.5.2 Selecting a Scale and Creating Chords

MASCHINE comes equipped with a vast amount of scales and chords that you can select and use to play your Sounds. This opens up possibilities to play an instrument such as a piano according to, e.g., the minor pentatonic scale without hitting a "false" pad (note) on your controller, or to play chords that always fit by hitting single pads.



The Scale and Chord engine is available only when your pads are in Keyboard mode.

This section provides a hands-on introduction to the use of scales and chords from your controller. The corresponding parameters will be described in detail in section ↑5.5.3, Scale and Chord Parameters.

Let's choose a particular scale, say, minor pentatonic. On your controller, do the following:

1. Switch the focus to a Sound slot containing a polyphonic instrument, or load one into the desired Sound slot.
2. Hold the PAD MODE button to enter Pad Mode (or press PAD MODE + Button 1 to pin it).
3. Press Button 2 (KEYBOARD) to enable Keyboard mode.
4. Check that the first page of parameters are selected (1/2 displayed at the bottom right of the left display), if it's not the case press the dimmed left Page button to select it.
5. Turn Knob 1 (Scale TYPE) to select Minor Pentatonic.



→ Hit a few pads: They trigger only notes from the selected scale. The right display shows the particular note played by each pad. Furthermore the root note (C3 by default) and its octaves are highlighted and the corresponding pads on your controller are fully lit.

Now let's start the scale on D3 instead of C3:

▶ Press Button 8 (SEMITONE+) twice.

→ Hit a few pads: They trigger the notes from the minor pentatonic scale based on D. Furthermore all your pads were shifted two semitones up so that pad 1 still triggers the root note of the selected scale.

Now we want the pads to trigger chords instead of single notes. First we want chords based on the minor pentatonic scale currently selected:

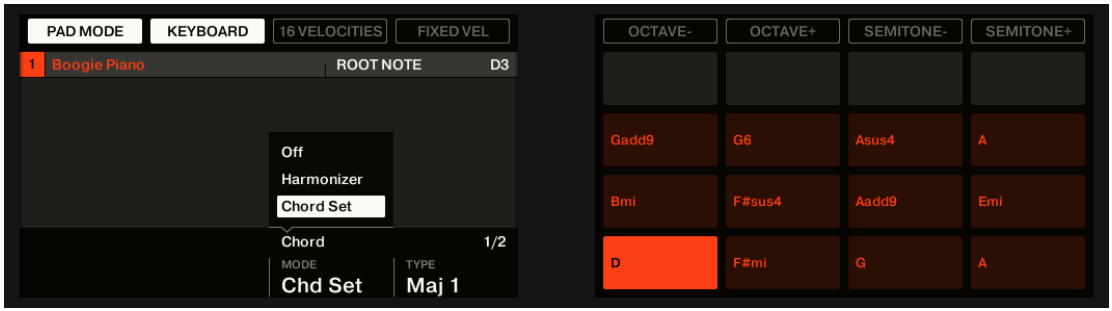
1. Turn Knob 3 (Chord MODE) to select Harmonizer.
2. Turn Knob 4 (Chord TYPE) to select 1-3.



→ Hit a few pads: Each pad triggers a chord containing the pad's original note (the "1" in 1-3) and the note two pads above (the "3" in 1-3). No matter which pads you hit, all chords use notes within the scale we have specified (the minor pentatonic scale based on D).

Finally, let's try the other chord mode available:

1. Turn Knob 3 (Chord MODE) to select Chord Set.



→ In the left display the Scale TYPE parameter (Knob 1) disappears and the Chord TYPE parameter (Knob 4) offers other entries. The light from the pads on the top row of your controller go off and the pads are disabled. The other 12 pads trigger various chords indicated in the right display. You can switch to another set of 12 chords by turning Knob 4 (Chord TYPE). These chords are not bound to the minor pentatonic scale anymore, however they are still based on the selected root note (indicated in the top right of the left display).

The last selected Scale is automatically assigned when a new Group is created.

5.5.3 Scale and Chord Parameters

This section describes the Scale and Chord engine and its parameters, and provides a list of all scales and chords available on your controller.

General Notes on Scales and Chords

- The Scale and Chord parameters are the same for all Sound slots in a particular Group, you can have different Scale and Chord parameters for each Group. The Scale and Chord parameters of each Group are saved with the Project. However, when you save a Group the Scale and Chord parameters are *not* saved with the Group.
- The Scale and Chord engine processes live input from the pads of your controller only. Input from third-party MIDI controllers and data recorded in the Pattern Editor are not processed by the Scale and Chord engine.

KOMPLETE KONTROL S-SERIES owners: Input from your KOMPLETE KONTROL S-SERIES keyboard can also be processed by the Scale and Chord engine. This is described in section ↑15.5, Using the Perform Features.

- The output of the Scale and Chord engine is recorded into the Pattern Editor.
- The Scale and Chord parameters cannot be modulated nor automated in MASCHINE.
- Of course, if a Sound slot contains a KOMPLETE instrument providing control notes (e.g., key switches) on particular keys, these notes will not be triggered by the Scale and Chord engine.

Available Scales

The Scale engine is controlled via two parameters:

- **Root Note** (C3 by default): Defines both the root note of the scale and the particular key triggered by pad 1. As a direct consequence, pad 1 always triggers the root note of the selected scale.

The Root Note parameter replaces the Base Key parameter found in the Keyboard mode of previous MASCHINE versions and still available in Group mode. Although the Root Note is edited in the same way as the Base Key on your controller, keep in mind that both are independent of each other. Compared to the Base Key, the Root Note additionally defines the starting note of the selected scale. Furthermore, like all Scale and Chord parameters, the Root Note is common to all Sound slots in the Group, whereas the Base Key is set for each Sound slot independently.

- **Scale Type** (Chromatic by default): Selects the scale pattern whose notes will be mapped onto the pads of your controller: The Root Note is on pad 1, the 2nd note of the selected Scale Type is on pad 2, etc. Once all notes are mapped, the next pad triggers the root note in the next octave. The Root Note and its octaves are indicated by fully lit pads, while other pads are dimmed.

Following scale types are available:

Scale Type	Degrees (1 = Root Note)											
Chromatic (default)	**1**	**#1**	**2**	**#2**	**3**	**4**	**#4**	**5**	**#5**	**6**	**#6**	**7**
Major	**1**	**2**	**3**	**4**	**5**	**6**	**7**					
Minor	**1**	**2**	**♭3**	**4**	**5**	**♭6**	**♭7**					
Harmonic Minor	**1**	**2**	**♭3**	**4**	**5**	**♭6**	**7**					
Major Pentatonic	**1**	**2**	**3**	**5**	**6**							
Minor Pentatonic	**1**	**♭3**	**4**	**5**	**♭7**							
Blues	**1**	**♭3**	**4**	**#4**	**5**	**♭7**						
Japanese	**1**	**2**	**♭3**	**5**	**♭6**							
Freygish	**1**	**♭2**	**3**	**4**	**5**	**♭6**	**♭7**					
Gypsy	**1**	**2**	**♭3**	**#4**	**5**	**♭6**	**7**					
Flamenco	**1**	**♭2**	**3**	**4**	**5**	**♭6**	**7**					
Altered	**1**	**♭2**	**♭3**	**♭4**	**♭5**	**♭6**	**♭7**					
Whole Tone	**1**	**2**	**3**	**#4**	**#5**	**#6**						

Scale Type	Degrees (1 = Root Note)											
Half-Whole Diminished	**1**	**♭2**	**#2**	**3**	**#4**	**5**	**6**	**♭7**				
Whole-Half Diminished	**1**	**2**	**♭3**	**#3**	**#4**	**#5**	**6**	**7**				

By default, the Chromatic scale is selected — in other terms, by default your pads play every semitone as in previous MASCHINE versions, however the last selected Scale is automatically assigned when a new Group is created.



The Scale Type parameter is not available if the Chord Mode parameter is set to Chord Set — see below for more information.

Available Chords

The Chord engine can automatically generate chords depending on the pad you hit and possibly the selected scale. The Chord engine is controlled via two parameters:

- **Chord Mode** (Off by default): Selects from three different modes for generating chords:
  - **Off**: No chords will be generated. Only the notes corresponding to the pads that you hit will be played.
  - **Harmonizer**: Generates chords based on the pads you hit and using notes from the selected scale, as specified by the Root Note and Scale Type parameters (see above). Use the Chord Type parameter to choose the particular notes to be used in the chord (see below). As the chord is triggered, pads of all included notes flash.
  - **Chord Set**: This special mode maps a set of chords onto the first 12 pads of your controller. These chords are not bound to any scale type, they are only affected by the selected Root Note. Use the Chord Type parameter to choose a particular set of chords to be mapped onto the pads (see below). In this mode, only the pad you actuate flashes.
- **Chord Type**: Selects which chords will be mapped to your pads. The available chord types depend on the selected Chord Mode and Scale Type:
  - If Chord Mode is set to Harmonizer, the Chord Type parameter offers different chords depending on whether Scale Type is set to Chromatic or to any other scale. All available chords are listed in the tables below.

- If Chord Mode is set to Chord Set, the Chord Type parameter provides 16 different sets of 12 chords each (8 major sets and 8 minor sets): Major 1, Major 2, …, Major 8, and Minor 1, Minor 2, …, Minor 8. The 12 chords are mapped onto the first 12 pads. Pads 13–16 are disabled.

When Chord Mode is set to **Harmonizer** and Scale Type is set to **Chromatic**, since this scale includes all semitones the chords can use any of them. Chord Type offers following chords:

Chord Type	Semitones Added above Played Note
Octave	12
Perfect 4	5
Perfect 5	7
Major	4 and 7
Minor	3 and 7
Suspended 4	5 and 7
Major 7	4, 7, and 11
Minor 7	3, 7, and 10
Dominant 7	4, 7, and 10
Dominant 9	4, 7, 10, and 14
Minor 7♭5	3, 6, and 10
Diminished 7	3, 6, and 9
Augmented	4 and 8
Quartal	5, 10, and 15
Trichord	5 and 11

When Chord Mode is set to **Harmonizer** and Scale Type is set to **any other scale than Chromatic**, the chords are bound to the particular notes included in the specified scale. Chord Type offers following chords:

Chord Type	Notes Added to Played Note
Octave	Octave
1-3	3rd
1-5	5th
1-3-5	3rd and 5th
1-4-5	4th and 5th
1-3-5-7	3rd, 5th, and 7th
1-4-7	4th and 7th

Scales and Chords: Visual Feedback on the Pads

When scales and/or chords are enabled, the LEDs of the pads keep you informed at any time on the current scale and chord configuration. The default lighting behavior of your pads is modified by the Scale and Chord engine as follows:

When **Chord Mode** is set to **Off** or **Harmonizer**, pads of root notes are fully lit:

Type of Pad (for Selected Scale)	LED in Default State	LED when Pad Triggered
Root notes	Fully lit	Flash
Other pads	Dimly lit	Flash

Note that if Chord Mode is set to Harmonizer, pads triggered as part of the chord will also flash.

When **Chord Mode** is set to **Chord Set**, pad 1 is fully lit:

Type of Pad	LED in Default State	LED when Pad Triggered
Pad 1	Fully lit	Flash
Pads 2–12	Dimly lit	Flash
Pads 13–16	Off (pad inactive)	

Enharmonic Spelling of the Root Note

On your controller, depending on the Scale Type, Chord Mode, and Chord Type you have selected, the enharmonic spelling of the Root Note will vary in order to optimize the spelling of the entire scale / chord set:

Condition	Enharmonic Spelling											
Scale Type is set to Chromatic	**All Keys**	**C**	**C#**	**D**	**D#**	**E**	**F**	**F#**	**G**	**G#**	**A**	**A#**
Scale Type is *not* set to Chromatic	**C**	**C#**	**D**	**E♭**	**E**	**F**	**F#**	**G**	**A♭**	**A**	**B♭**	**B**
Chord Mode is set to Chord Set and Chord Type is set to Major 1-8	**C**	**D♭**	**D**	**E♭**	**E**	**F**	**F#**	**G**	**A♭**	**A**	**B♭**	**B**
Chord Mode is set to Chord Set and Chord Type is set to Minor 1-8	**C**	**C#**	**D**	**D#**	**E**	**F**	**F#**	**G**	**G#**	**A**	**B♭**	**B**

Erasing Notes

When **erasing notes** from your controller, the notes effectively deleted vary with the Chord Mode currently selected:

- If Chord Mode is set to Off, the notes with the pitch corresponding to the pressed pad are deleted.
- If Chord Mode is set to Harmonizer, only the notes with the pitch of the pressed pad are deleted. The other notes in the triggered chord are *not* deleted.
- If Chord Mode is set to Chord Set, no notes are deleted, in other words erasing is disabled.

5.5.4 Creating Arpeggios and Repeated Notes

MASCHINE includes a flexible and versatile **Arp engine**, an arpeggiator that effectively lets you play your Sounds in note sequences. The arpeggios are created according to both the pads you hold and the chords configured with the Scale and Chord engine (see section ↑5.5.2, Selecting a Scale and Creating Chords).



If you have enabled chords, you can even press more than one pad to include the notes of all corresponding chords into your arpeggio!

Like the Scale and Chord engine, the Arp engine is **dedicated to Keyboard mode**.

The Arp engine can be seen as a melodic extension of the Note Repeat: Actually, Arp replaces and extends Note Repeat in Keyboard mode. Instead of playing repeated notes at a constant pitch you can play sequences of notes at different pitches.

Arp and Note Repeat have similar modes on your controller: Depending on whether your pads are in Group mode or Keyboard mode, pressing NOTE REPEAT on your controller will switch to Note Repeat mode or Arp mode, respectively. Arp mode simply adds a few parameters to those found in Note Repeat mode.

General Notes on the Note Repeat and Arp Engine

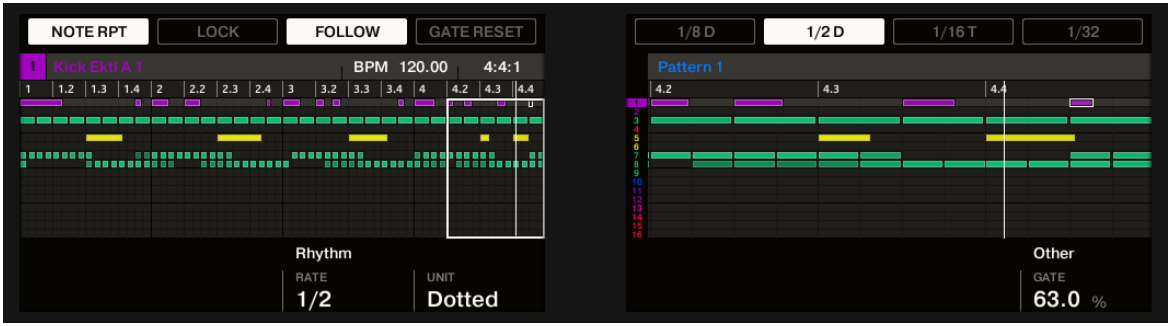
- The Note Repeat / Arp parameters are the same for all Sound slots in all Groups of your Project. These parameters are saved with the Project.
- The Note Repeat / Arp engine processes live input from the pads of your controller only. Input from third-party MIDI controllers and data recorded in the Pattern Editor are not processed by the Scale and Chord engine.
- The Note Repeat / Arp engine detects and makes use of any changes in the pressure you apply on each single pad you hold (Polyphonic Aftertouch). This allows you to generate arpeggios and repeated notes with varying velocities!
- The output of the Note Repeat / Arp engine is recorded into the Pattern Editor.
- The Note Repeat / Arp parameters cannot be modulated nor automated in MASCHINE.

- You can use Note Repeat and Arp even if the transport is not running: In this case the Note Repeat / Arp engine will use its own central clock. This clock will be reset as soon as you start the playback.

KOMPLETE KONTROL S-SERIES owners: The central clock is shared by all connected devices, so that e.g. repeated notes triggered from your MASCHINE controller and arpeggios triggered from your KOMPLETE KONTROL S-SERIES keyboard will be synchronized even if the transport is not running.

Pads in Group mode: Note Repeat

If your pads are in Group mode, pressing NOTE REPEAT will switch your controller to Note Repeat mode.



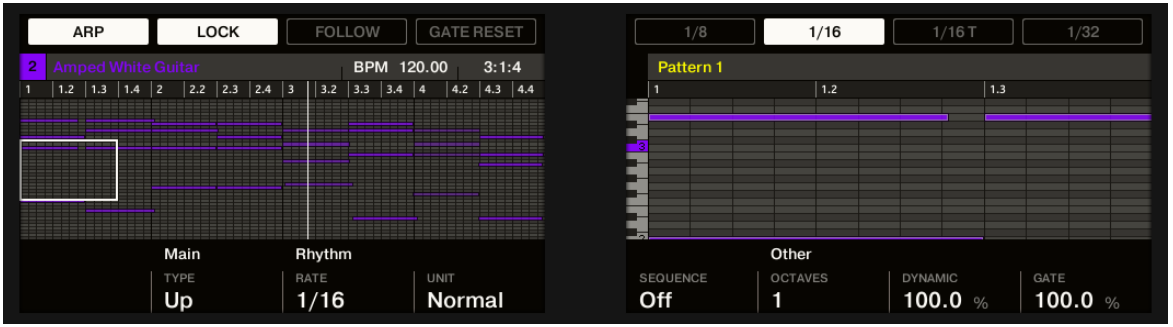
The Note Repeat mode on your controller.

Even if Note Repeat is locked, it won't be applied to your pads when your controller is displaying the SLICE page of Sampling mode.

Note Repeat mode seamlessly switches to Arp mode as soon as you switch your pads from Group mode to Keyboard mode (see below): All current values (including the LOCK state) are retained.

Pads in Keyboard mode: Arp

If your pads are in Keyboard mode, pressing NOTE REPEAT switches your controller to Arp mode:



The Arp mode on your controller.

In Arp mode you can customize the way the notes of the played chord will be arpeggiated by adjusting following settings:

Element	Description
LOCK (Button 2)	Keeps the Arp feature enabled even when you leave Arp mode. For example, this can be useful to adjust the chord settings, switch to another Pattern, adjust Plug-in parameters, etc., while keeping arpeggios running. If Arp is locked, when you switch to another controller mode the NOTE REPEAT button stays dimly lit to remind you that Arp is on. You can also use the shortcut SHIFT + NOTE REPEAT at any time to enable/disable LOCK.
FOLLOW (Button 3)	The right display follows the playhead as it travels through your arrangement. This mirrors the FOLLOW option available in Arrange mode as well as the Follow function in the MASCHINE software. For more information please refer to the MASCHINE 2.0 Manual.
Button 5–8	Selects between four different presets, even during playing. Each preset can store particular values for the TYPE; RATE, UNIT, SEQUENCE, and OCTAVES parameters at the bottom of the displays (see below). The rate currently assigned to each button is indicated below on the display along with the UNIT value ("T" for triplet values or "D" for dotted values). The selected preset is highlighted.

Element	Description
TYPE (Knob 2)	Sets the sequential order of the arpeggiated notes. You can choose from following settings: Up starts from the root note and plays the notes up through the chord. Down plays the notes the other way around. Up & Down plays the notes in both directions alternatively. Order Played plays the notes in the order you pressed down the corresponding pads on your controller. If you have configured chords, the arpeggio will first play all notes of the chord triggered by the first pad you pressed, then all notes of the chord triggered by the second pad you pressed, etc. Chord plays all notes of the chord together repeatedly.
RATE (Knob 3)	Adjusts the note length, hence the rate of the arpeggio. Available values are 1 BAR and a series of note values going from 1/2 (half note) until 1/128 (a hundred twenty-eighth note).
UNIT (Knob 4)	Selects from three variations of the original note length defined by the RATE parameter: NORMAL plays the original note length (default setting), TRIPLET plays triplets of the original note length (faster, three notes in the duration of two original notes), and DOTTED plays dotted versions of the original note length (slower, two notes in the duration of three original notes). Under Button 5–8, triplet values are indicated by a "T" and dotted values by a "D" next to the note value.
SEQUENCE (Knob 5)	Allows you to add interesting rhythms to your arpeggiated notes. Select one of eight different sequences and apply it to the arpeggio you are playing. Select Off to use the default regular sequence.
OCTAVES (Knob 6)	Adjusts the spread of the arpeggiated sequence. You can choose to play back your sequence within the octave of the pads you pressed on your controller only, or you can select up to eight octaves and let the notes of your chord (or the single note of your pad) be played back in as many octaves.

Element	Description
DYNAMIC (Knob 7)	Amplifies or reduces the velocity derived from the pressure you apply on each single pad you hold (Polyphonic Aftertouch). Available values range from 1% to 200%. This setting applies globally to all rate presets.
GATE (Knob 8)	Adjusts the ratio between the duration of the notes and the duration of the silences between them, measured as a percentage of the note value set by RATE (see above). Available values range from 0% to 200%: At low values the notes are very short. At 50% notes and silences are equal. At 100% (midcourse) each note last exactly until the next note is triggered. At higher values notes overlap (provided that the selected Sound is polyphonic). This setting applies globally to all rate presets.
GATE RESET (Button 4)	(same functionality as in previous MASCHINE versions) Press this button at any time to reset the GATE parameter to its default value 100%.



Arp mode seamlessly switches to Note Repeat mode as soon as you switch your pads from Keyboard mode to Group mode (see above): All current values (including the LOCK state) are retained.



To reproduce a Note Repeat using Arp mode, set TYPE to CHORD, SEQUENCE to Off, and OCTAVES to 1. To repeat single notes, additionally make sure that chords are disabled (in Pad Mode, check that Chord MODE is set to Off).

5.5.5 Swing Also Applied to Note Repeat / Arp Output

The Swing engines (at the Master, Group, and Sound level) process notes coming **from the Pattern Editor and from the Arp engine** (pads in Keyboard mode) **or Note Repeat engine** (pads in Group mode). In other terms, the swing is applied not only to your Patterns but also to any live sequence generated by the Arp or Note Repeat engine.



The applied swing is not recorded in the Pattern Editor. For an overview of the signal flow starting from your pads, have a look at the diagrams in section ↑5.5.1, Overview of the Perform Features.

For example, when you play live beats on top of a running Pattern, you can use Note Repeat without destroying the Pattern's groove: the repeated notes will be processed using the same swing parameters as the playing Pattern.



When the playback is not running, the swing is still applied to the output of Arp (Keyboard mode) or Note Repeat (Group mode). If you press PLAY on your controller, the playback starts immediately and the swing cycle is reset.

5.6 Creating Parameter Snapshots using Lock

Lock allows you to create up to sixty-four snapshots spread across four banks of sixteen pads providing a total of up to sixty-four snapshots. Each snapshot contains every modulatable parameter in your project, including your Solo and Mute settings. Once created, you can use Extended Lock to switch between these instantly, or morph between them synchronized to the tempo of your Project. Lock snapshots are a powerful tool for extensive modulations, but also very useful to compare mixes, or to switch up snapshots during a live performance.

The Lock button is used to create and recall a single snapshot, and when used in addition with Extended Lock, snapshots can be managed; allowing you to update them, clear unwanted snapshots, and organize them exactly the way you want.

5.6.1 Creating a Lock Snapshot

Use the Lock button to capture, update or recall a single Lock snapshot.



When a snapshot is created it also updates the snapshot in focus within Extended Lock. For more information on Extended Lock please read ↑5.6.2, Using Extended Lock.

To create a Lock snapshot:

1. Press the CHANNEL or PLUG-IN button.

2. Press Button 4 LOCK to take a snapshot.

⇨ The LOCK button becomes highlighted to indicate a single snapshot has been taken. You are now free to change parameters or Mute and Solo settings, safe in the knowledge you can recall your snapshot.

3. Press Button 4 LOCK to recall the snapshot.

→ The Lock snapshot is recalled and LOCK ceases to be highlighted. You can access your snapshot in Extended Lock mode. For more information on Extended Lock read ↑5.6.2, Using Extended Lock. If you find better settings press the LOCK button again to update the snapshot.

▶ Press SHIFT + ALL (SAVE) to save your Project.

5.6.2 Using Extended Lock

Extended Lock presents an overview of all your Lock snapshots. Here you can recall, update, or clear your snapshots. You can also set options for morphing between snapshots.

To enter Lock view:

1. Press the CHANNEL or PLUG-IN button.
2. Press SHIFT + Button 4 (EXT LOCK).

→ The pads change to provide an overview of all your Lock snapshots. The dimly-lit click-pads represent your stored snapshots. The brightly lit Pad represents the selected snapshot.

5.6.3 Updating a Lock Snapshot

If you have created a Lock snapshot but find better settings you can update the Lock snapshot. There are two ways to achieve this, you can use the Lock option or Update option directly within Extended Lock. Please note, both methods will overwrite the selected in Extended Lock mode.

To update a stored Lock snapshot:

1. Press the CHANNEL or PLUG-IN button.

2. Press SHIFT + Button 4 EXT LOCK.
3. Select the pad containing the snapshot you want to update. If necessary, press Button 7 or 8 to access a Lock snapshot from another bank.

⇨ The selected snapshot will illuminate to indicate it is in focus.

4. Press Button 4 (EXT LOCK) to exit Extended Lock.
5. Adjust the settings on your controller until you are ready to update the snapshot. You can use button 5 and 6 to switch between Channel parameters and Plug-in parameters.
6. Press SHIFT + Button 4 EXT LOCK to return to Extended Lock view.
7. Press button 5 UPDATE to update your snapshot.

⇨ The selected snapshot is updated.

Repeat the process to update other Lock snapshots.

5.6.4 Recalling a Lock Snapshot

Within Extended Lock you can recall a stored Lock snapshot.

To recall a Lock snapshot:

1. Press the CHANNEL or PLUG-IN button.
2. Press SHIFT + Button 4 EXT LOCK.
3. Select the snapshot you want to update from the pads. If necessary, press Button 7 or 8 to access a Lock snapshot from another bank.

The snapshot is recalled and parameters return to their stored setting. You can also morph between settings using the settings in the on-screen overlay.

5.6.5 Morphing Between Lock Snapshots

When switching between two stored snapshots you can set MASCHINE to morph between them, adding movement and interest to a song. Within Extended Lock you can switch on morphing, and set the morph sync and timing parameters.

To morph between your Lock snapshots:

1. Press the CHANNEL or PLUG-IN button.

2. Press SHIFT + Button 4 EXT LOCK.
3. Turn knob 1 to turn the MORPH setting on.
4. Adjust the Morph mode and time to your requirements. A description of each mode is described in the table below.

→ As you switch between your snapshots a controlled transition from one to another at the selected time rate can be heard.

Element	Description
MORPHING	
MORPH	Select to switch morphing ON or OFF mode.
MODE	TRAVEL will morph the selected snapshots without syncing to the grid. The morph will begin instantly instead of waiting until the next bar begins. The duration of the morph is set using the TIME parameter. TARGET will morph in sync to the downbeat when set to *Bar*, or to the selected Grid value.
TIME/GRID	In TRAVEL mode the duration of the morph will last for the amount of Bars set here. In TARGET mode the duration of the morph is set according to the Grid value set here.

5.6.6 Deleting a Lock Snapshot

Within Extended Lock you can delete a stored Lock snapshot.

To delete a Lock snapshot:

1. Press the CHANNEL or PLUG-IN button.
2. Press SHIFT + Button 4 EXT LOCK.
3. Press the pad containing the snapshot you want to delete. If necessary, press Button 7 or 8 to access a Lock snapshot from another bank.

4. Press button 6 DELETE to delete a snapshot.
5. Press the pad containing the snapshot you want to clear.

The snapshot is cleared.

5.6.7 Triggering Lock Snapshots via MIDI

If MASCHINE is running as a plug-in in a host environment, you can trigger and change Lock snapshots using MIDI Note or MIDI Program Change messages sent from your host to the MASCHINE plug-in.

When this feature is enabled, MIDI notes messages, or Program Change messages are linked to MASCHINE's Lock snapshots, whether they contain a snapshot or not:

Matrix Click-Pad/Snapshot	MIDI Note Number	Program Change Number
1	0 (C-2)	1
2	1 (C#-2)	2
3	2 (D-2)	3
…	…	…
64	63 (D#3)	64

The primary use case for triggering Lock snapshots via MIDI is when using MASCHINE in plug-in mode. However, it is also possible using an external MIDI device such as a keyboard to trigger a snapshot.



MIDI Note numbers: Host applications use various conventions to name MIDI notes. For example, in MASCHINE, MIDI note number 0 is referred to as C-2 and MIDI note number 60 (middle C) as C3. Please refer to the documentation of your host to find out which convention is used.



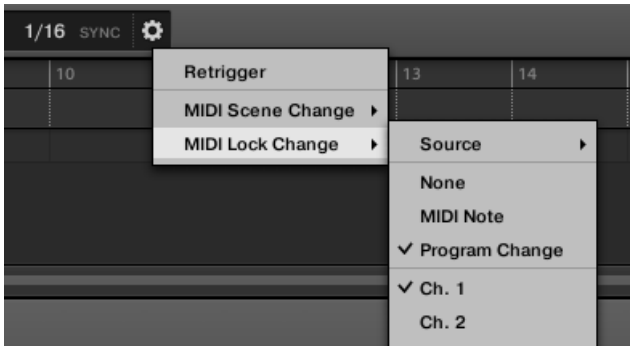
Program Change numbers: Some host applications send Program Change numbers in the range [0–127] instead of [1–128]. In that case, the PC number 0 will trigger snapshot slot 1, PC 1 will trigger snapshot slot 2, etc. Please refer to the documentation of your host to know in which range it sends Program Change numbers.

Enabling the MIDI Lock Change

To enable or disable the MIDI Lock Change feature, do the following:

1. In the MASCHINE Header, click the cog wheel icon.

⇨ This opens the following menu:



⇨ Click MIDI Lock Change from the menu.

2. In the submenu that opens, select MIDI Note to trigger your Lock snapshots via MIDI notes, Program Change to trigger your Lock snapshots via MIDI Program Change messages, or None (default setting) to disable MIDI Lock Change completely.
3. If necessary, reopen the same submenu and select the MIDI channel the Lock Changes should receive MIDI messages from (channel 1 by default).



MIDI Scene change has priority over Lock change. If you select the same MIDI Source and Channel for Lock and Scene changes, only Scenes will be triggered by the corresponding events coming from the MIDI source. Corresponding Lock snapshots will not be recalled.

For more information on triggering Lock snapshots using your DAW (Digital Audio Workstation), please check the Knowledge Base on the Native Instruments website.

6 Working with Plug-ins

Plug-ins are the building blocks of all sound in MASCHINE. They can be used at all three levels of the MASCHINE audio routing system: in Sounds, in Groups, and in the Master.



In MASCHINE versions prior to 2.0, Internal Plug-ins were called Modules.

This chapter includes various general or specific Plug-in topics:

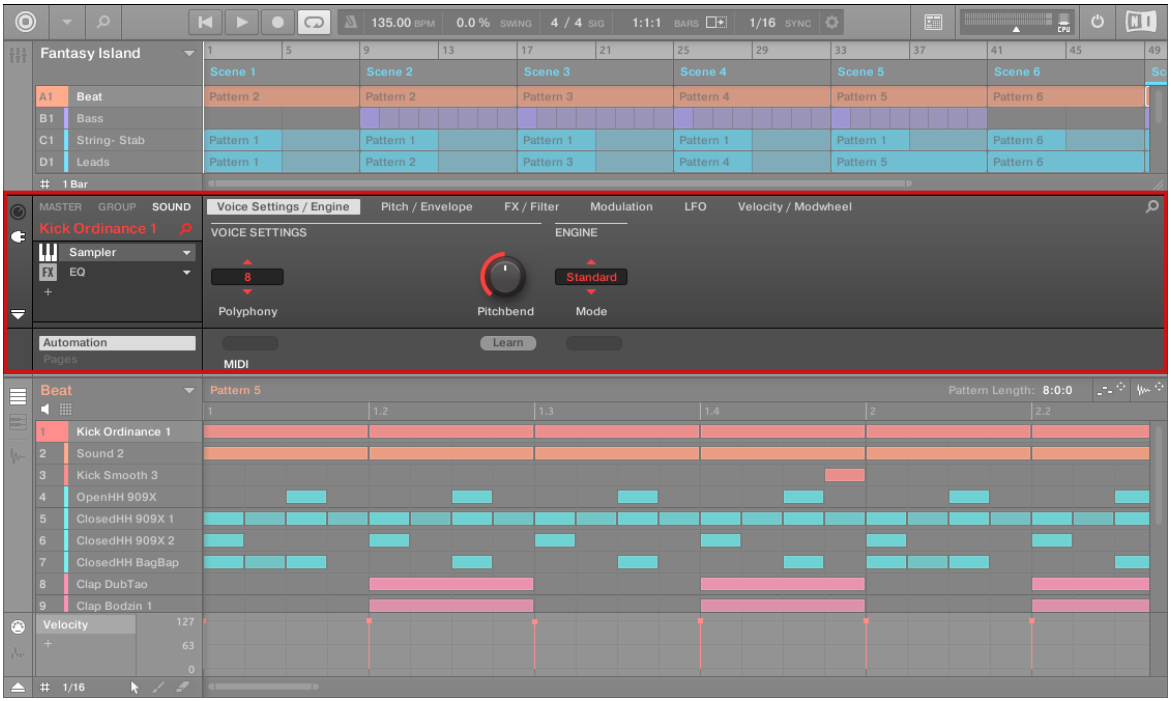
- An overview of Plug-ins and how to handle them (↑6.1, Plug-in Overview).
- An exhaustive description of an essential Internal Instrument Plug-in in charge of playing back all sample content in MASCHINE: the Sampler (↑6.2, The Sampler Plug-in).
- Specific information on Native Instruments and External Plug-ins (↑6.3, Using Native Instruments and External Plug-ins).

6.1 Plug-in Overview

This section describes Plug-ins in general: where you can find them, how you can adjust their settings, and how you can manage them.

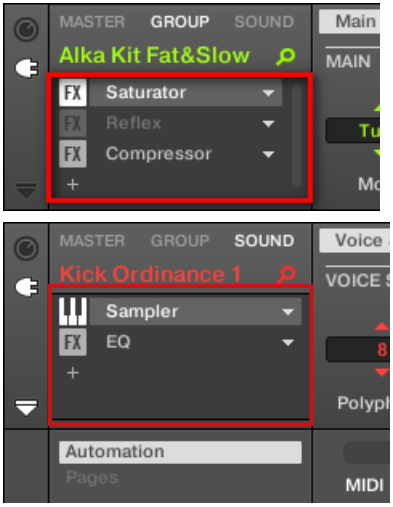
6.1.1 Plug-in Basics

In Arrange view, the content and settings of the focused Sound/Group or the Master are displayed in the **Control area** (in the middle of the software window):

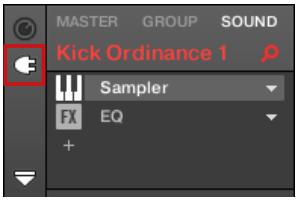


The Control area displaying the content of the Sound Kick Ordinance of the selected Sound slot 1.

Sounds, Groups, and the Master can each hold any number of Plug-ins. These are stacked up in the **Plug-in List**, on the left of the Control area.



► To show the Plug-in List, click the little **Plug-in icon** at the far left of the Control area:



In the Plug-in List, the processing order is always from top to bottom.

In addition to Plug-ins, each Sound, each Group, and the Master also provide a set of global settings called Channel properties. These are described in section ↑5.4.3, Groove and in chapter ↑8, Audio Routing, Remote Control, and Macro Controls.

Different Types of Plug-ins

Plug-ins can be of different types:

	Instrument Plug-ins	Effect Plug-ins
Internal Plug-ins	Sampler, Drumsynths	MASCHINE internal effects
Native Instruments Plug-ins	VST/AU instrument plug-ins from Native Instruments' range of products	VST/AU effect plug-ins from Native Instruments' range of products
External Plug-ins	Third-party VST/AU instrument plug-ins	Third-party VST/AU effect plug-ins

- **Instruments**: These Plug-ins generate sound. Instrument Plug-ins can only be loaded in the first Plug-in slot of Sounds. Following Plug-ins are available:
  - **Sampler**: Included with MASCHINE, the Sampler Plug-in allows the selected Sound to play back Samples. This is the most common sound source, as adding a Sample to the Sound slot will automatically load the Sampler in the first Plug-in slot of the Sound. See ↑6.2, The Sampler Plug-in for more details.
  - **Drumsynths**: Included with MASCHINE, these Plug-ins are mini-synths specialized in generating drum sounds. See chapter ↑10, Using the Drumsynths for more details.
  - **Native Instruments**: You can use all Native Instruments KOMPLETE instruments installed on your computer as VST/AU plug-ins (e.g., MASSIVE, which is included with MASCHINE). Products from Native Instruments are tightly integrated in MASCHINE.
  - **External**: You can also use VST/AU instrument plug-ins from any third-party manufacturers.
- **Effects**: These Plug-ins modify the audio coming from the previous Plug-in slot (or from the incoming audio if the Effect is loaded in the first Plug-in slot of a Sound). Effect Plug-ins can be loaded in any Plug-in slot. Following Plug-ins are available:
  - **Internal Effects**: These are the Effect Plug-ins included with MASCHINE. To read every details about each of the MASCHINE internal effects, and how to use them, please refer to chapter ↑8, Audio Routing, Remote Control, and Macro Controls and ↑12, Effect Reference.
  - **Native Instruments**: You can use all Native Instruments KOMPLETE effects installed on your computer as VST/AU plug-ins. Products from Native Instruments are tightly integrated in MASCHINE.

- **External**: You can also use VST/AU effect plug-ins from any third-party manufacturers.

What to Load, and Where

The type of Plug-in that you can load depends on the selected level (Sound, Group or Master) and slot:

- Effect Plug-ins (both internal and external) can be loaded in all Plug-in slots at all levels (Sound, Group, Master).
- Instrument Plug-ins (both internal and external) can only be loaded in the first Plug-in slot of Sounds.

6.1.2 First Plug-in Slot of Sounds: Choosing the Sound's Role

The Plug-in loaded in the **first Plug-in slot of a Sound** will determine the general role of this Sound:

- If the first Plug-in slot holds an **Instrument Plug-in** (Sampler, Drumsynth, Native Instruments or External Instrument, see above), the Sound will generate its own audio.
- If the first Plug-in slot holds an **Effect Plug-in** (Internal, Native Instruments or External), the Sound will be available as bussing point for other signals (from within MASCHINE, and possibly from the outside world). This notably allows you to build up send effects or to apply effects to external audio. See section ↑11.3.1, Step 1: Set Up a Sound or Group as Send Effect for more information.



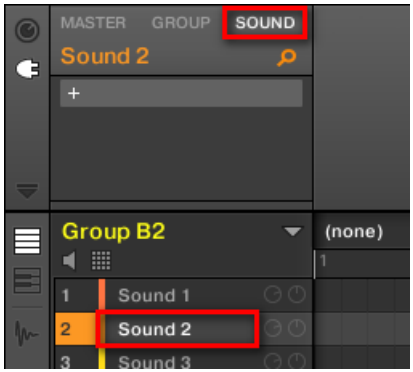
You can also sample directly to a Sound slot. This will automatically load a Sampler in its first Plug-in slot. Read chapter ↑12, Effect Reference for more details on this.

6.1.3 Loading, Removing, and Replacing a Plug-in

The procedure to load a Plug-in with its default settings is common to all levels (Sound, Group, and Master) and all Plug-in types (Internal, Native Instruments, and External, as well as Instrument and Effect):

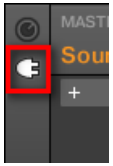
1. Set the focus to the Sound, Group or the Master where you want to load the Plug-in (see section ↑2.3.1, Setting the Focus on a Group or a Sound). In the picture below we click an empty Sound slot in the Sound List of the Pattern Editor and click the SOUND tab in

the Control area above.

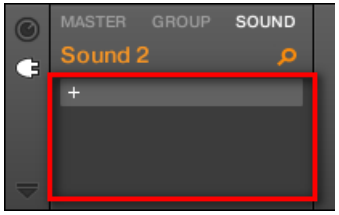


The Control area will now show the content (Channel properties or Plug-ins) of the Sound we have just selected.

2. At the far left of the Control area, click the little plug icon to display the Plug-ins.



This displays the Plug-in List on the left of the Control area:



The Plug-in List is still empty, because we selected an empty Sound slot. The only visible element in the list is a "+" icon at the top left.

3. Click the slot with the "+" icon at the top of the Plug-in List.
   This opens the **Plug-in menu** where you can select the desired Plug-in for loading (see below for a detailed description of the entries contained in the Plug-in menu).



→ Upon your selection the selected Plug-in sits at the top of the Plug-in List, in the first Plug-in slot of the Sound (in our example). In addition, some Native Instruments and External Plug-ins will automatically open in a floating window (see section ↑6.3.1, Opening/Closing Plug-in Windows for more on this).

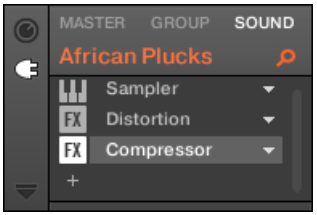
You will notice that the "+" sign has moved to the next slot. Clicking it would allow you to load a Plug-in into the next Plug-in slot of that Sound, and so on.



Instead of using the Plug-in menu to load a Plug-in with its default settings, you can also use the Browser to load a particular preset for a Plug-in. In particular, this can come in handy to insert a new Plug-in between two existing Plug-ins of the Plug-in List. Please refer to chapter ↑3.2, Searching and Loading Files from the Library for more information.

Removing and Replacing a Plug-in

Once you have loaded a Plug-in into a Plug-in slot, the slot shows the name of the loaded Plug-in, preceded by an icon describing the type of Plug-in (Instrument or Effect), and followed by a down-pointing arrow:



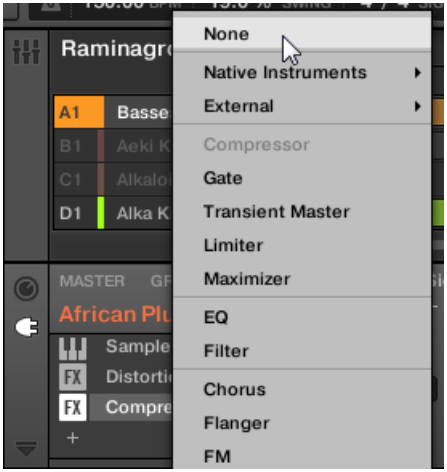
A few Plug-ins loaded.

This down-pointing arrow lets you open the Plug-in menu for slots already hosting a Plug-in.

- In the Plug-in List, click the down-pointing arrow at the right of a Plug-in name to open the Plug-in menu for that slot. You can also right-click ([Ctrl]-click on Mac OS X) the Plug-in name in the slot.

This will notably allow you to **remove the loaded Plug-in** from the slot:

- To remove the Plug-in currently loaded in a slot, open its Plug-in menu and select *None* at the top of the menu.



→ The Plug-in is unloaded from the slot. All following Plug-ins are shifted one slot upwards to fill the gap.

Furthermore, the Plug-in menu also allows you to **replace the loaded Plug-in** with another one:

► To replace the Plug-in currently loaded in a slot, open its Plug-in menu and select another Plug-in in the menu.

→ The original Plug-in is replaced with the newly selected one. The rest of the Plug-in List stays untouched.



You can also recall the search query that was used to find the Plug-in preset currently loaded in the Plug-in slot (see section ↑3.8, Using Quick Browse for more information).

Content of the Plug-in Menu

The entries in the Plug-in menu differ according to the Plug-in slot from which you are calling the menu:

- The **first Plug-in slots of Sounds** accepts both Instrument and Effect Plug-ins. The entries available in their Plug-in menu are listed in the following table.
- All **other Plug-in slots** at the Sound, Group, and Master level only accept Effect Plug-ins. Therefore, their Plug-in menus and submenus provide the same entries except all entries for Instrument Plug-ins.

The Plug-in menus can have following entries, from top to bottom:

Plug-in Menu Entry	Description
Plug-ins	
Presets submenu (only when a Native Instruments or External Plug-in is loaded)	Lists all VST/AU presets made available to MASCHINE by the VST/AU plug-in. This allows you to use your favorite presets of the VST/AU plug-in directly inside MASCHINE. See section ↑6.3.4, Using VST/AU Plug-in Presets for more information.
None	Select *None* to remove the Plug-in currently loaded (see previous paragraph).

Plug-in Menu Entry	Description
Native Instruments submenu	Lists available Native Instruments' Instruments (first Plug-in slot of Sounds only) and Effects. For products working both as Instrument and Effect, the Effect Plug-in name is followed by the mention *FX*. If necessary each entry is followed by the plug-in type between brackets: *(VST)* or *(AU)*. See section ↑6.2.6, Page 6: Velocity / Modwheel for more information.
External submenu	Lists the available External Plug-ins, i.e. the available VST/AU instrument (first Plug-in slot of Sounds only) and effect plug-ins from third-party manufacturers. Each entry is followed by the plug-in type between brackets: *(VST)* or *(AU)*. See section ↑6.2.6, Page 6: Velocity / Modwheel for more information.
Sampler (first Plug-in slot of Sounds only)	The Sampler is the Internal Instrument Plug-in used to play back all Samples in MASCHINE — this essential Plug-in will be described in details in section ↑6.2, The Sampler Plug-in.
Drumsynth submenu (first Plug-in slot of Sounds only)	Lists the available Drumsynths: *Kick*, *Snare*, *Hi-hat*, *Tom*, and *Percussion*. Included with MASCHINE, these Instrument Plug-ins are synths specialized in generating drum sounds — for all details please refer to chapter ↑10, Using the Drumsynths.
All MASCHINE Internal Effects	Effect Plug-ins included with MASCHINE. Their entries are split into various categories (dynamics, filtering, modulation, reverb, etc.). See chapter ↑10.6.3, Percussion – Shaker for more details on their usage, and chapter ↑12, Effect Reference for an exhaustive description of each MASCHINE Internal Effect Plug-in.
Edit Commands	
Cut	Removes the Plug-in from its current slot and stores the Plug-in and all its settings to the clipboard for later use.
Copy	Copies the Plug-in and all its settings to the clipboard for later use.

Plug-in Menu Entry	Description
Paste	Loads into the current slot the Plug-in and all its settings that were cut or copied from another slot. This notably allows you to use a Plug-in in different locations (Sounds, Groups, Master) with the same settings.
Preset Management	
Open...	Allows you to open a Plug-in preset you have previously saved.
Save As...	Allows you to save the current Plug-in settings as a preset for later use. This preset will appear in the Browser.
Save As Default... (only when a Native Instruments or External Plug-in is loaded)	Allows you to save the current Plug-in settings as a default preset. This default preset will be recalled each time you load the Plug-in from the Plug-in menu.



Note that the first two submenus *Native Instruments* and *External* only show the Plug-ins that are enabled in the Plug-ins page of the Preferences panel. For more on this, see section ↑2.6.6, Preferences – Plug-ins Page.



The edit commands (*Cut*, *Copy*, and *Paste*) and preset management commands (*Open*, *Save As...*, and *Save As Default...*) available at the bottom of the Plug-in menu will be covered in section ↑6.1.7, Moving Plug-ins and ↑6.1.9, Saving and Recalling Plug-in Presets, respectively.

6.1.3.1 Browser Plug-in Slot Selection

Select a plug-in slot directly from the Browser using the SHIFT button. The SHIFT button provides temporary access to the Plug-in mode allowing you to select a plug-in slot from the Plug-in List. This can be accomplished from the Browser when loading content into all three levels of the MASCHINE audio routing system: in Sounds, in Groups, and in the Master.

To change the focus of the plug-in slot from the Browser:

1. Press the BROWSE button.
2. Press SHIFT, then press button 5 or 6 to select to a plug-in slot.

→ The focus slot can be selected from the browser.

6.1.3.2 Loading, Removing, and Replacing a Plug-in on your Controller

On the MASCHINE STUDIO controller, do the following:

1. At the top left of your controller, press the PLUG-IN button to enter Control mode and display the Plug-in slots of the selected Sound, Group or the Master.
2. Select the Sound, Group or the Master where the Plug-in is located (see section ↑2.3.1, Setting the Focus on a Group or a Sound).
3. Press Button 5/6 to navigate to the desired Plug-in.
   The name of the selected Plug-in appears in the field between the left and right arrows under Button 5 and 6. If there are no Plug-ins in the channel this will read EMPTY.

→ You are now ready to load, insert, remove or replace a Plug-in as described in the following paragraphs.

Loading a Plug-in in Place

To load a Plug-in into the selected Plug-in slot, do the following:

1. Press SHIFT + BROWSE to open the Plug-in Browser and browse the available Plug-ins.
2. On the left display, turn Knob 1 to select the TYPE from INTERNAL, NI or EXTERNAL.
   The right display shows the list of available Internal, Native Instruments or External Plug-ins, respectively.
3. If you have selected the first Plug-in slot of a Sound, turn Knob 2 to select the SUBTYPE from Instr. (Instrument) or Effect.
   If you have selected any other Plug-in slot the SUBTYPE field is not available — only Effect Plug-ins will be listed in the right display.
4. Turn the jog wheel or Knob 5 to browse the Plug-ins corresponding to your TYPE (and possibly SUBTYPE) selection.
5. When you have found the Plug-in you want to use, press the jog wheel or Button 8 (LOAD) to load it. You can also use Buttons 5 and 6 to step through the list and load each effect directly.



If the selected Plug-in slot was not empty, the previous Plug-in will be replaced with the new Plug-in!



Instead of using the Plug-in Browser, you can also use the common Browser to load a particular preset for a Plug-in (see section ↑3.2, Searching and Loading Files from the Library).

Inserting a Plug-in

To insert a Plug-in directly after the selected Plug-in slot, do the following:

1. Press SHIFT + Button 4 (INSERT).
   This automatically opens the Browser on your controller and locks the File Type to EFFECT (Button 1 and 2, normally used in the Browser to select the desired File Type, are here disabled).
2. Choose and load the desired Plug-in preset via the usual workflow in the Browser (see section ↑2.3.1, Setting the Focus on a Group or a Sound).

→ When you finally press the jog wheel or Button 8 (LOAD), your controller automatically switches back to Control mode and the new Plug-in is loaded in the next Plug-in slot. All following Plug-ins are shifted one slot downwards to make room for the new Plug-in.

Removing a Plug-in

To remove a Plug-in from its slot, do the following:

▶ Press SHIFT + Button 8 (REMOVE).

→ The Plug-in is unloaded from the slot. All following Plug-ins are shifted one slot upwards to fill the gap.



Alternatively, you can press SHIFT + BROWSE, turn the jog wheel (or Knob 5) to select (NONE) at the top of the list in the right display, and press the jog wheel or Button 8 (LOAD).

Replacing a Plug-in

► To replace a Plug-in, simply select its slot and load a new Plug-in as described above.



You can also recall the search query that was used to find the Plug-in preset currently loaded in the Plug-in slot (see section ↑3.8, Using Quick Browse for more information).

6.1.4 Adjusting the Plug-in Parameters

The procedure for adjusting the Plug-in parameters is common to all types of Plug-ins and all sets of Channel properties. It is described in section ↑2.3.3, Navigating Channel Properties, Plug-ins, and Parameter Pages in the Control Area.



Native Instruments and External Plug-ins only: You can also adjust the Plug-in parameters via the own user interface of the VST/AU plug-in. More on this in ↑6.2.6, Page 6: Velocity / Modwheel.

6.1.5 Bypassing Plug-in Slots

You can bypass (or "mute") any Plug-in slot. When a Plug-in slot is bypassed, the Plug-in it contains is temporarily removed from the signal flow and does not process the audio passing through the slot. Instead, the incoming audio is directly sent to the next Plug-in slot for further processing (or to the channel's output if you bypass its last Plug-in slot).

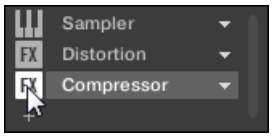
Bypassing Plug-in slots can be very useful in various situations, for example:

- Bypassing and re-enabling an effect during a live performance.
- Comparing the sound with and without an effect.
- Troubleshooting complex effect chains and routings ("Where does this strange reverb tail come from?").

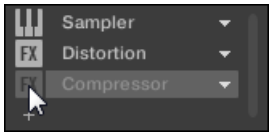
To bypass a Plug-in, do the following:

1. If you want to bypass a Plug-in of the Master, click the MASTER tab in the top left corner of the Control area.

2. If you want to bypass a Plug-in of a Group, click the desired Group on the left of the Arranger, and click the GROUP tab in the top left corner of the Control area.
3. If you want to bypass a Plug-in of a Sound, click the Group of its parent Group in the Arranger, click the desired Sound slot on the left of the Pattern Editor, and click the SOUND tab in the top left corner of the Control area.
4. In the Plug-in List, click the icon left to the Plug-in name (keys for an Instrument Plug-in, FX for an Effect Plug-in) to bypass this Plug-in.



The Plug-in does not affect the sound anymore. The icon is grayed out to indicate that this slot is now bypassed.



Use the same method to unmute the Plug-in:

► To activate the bypassed slot again, click its grayed out icon.



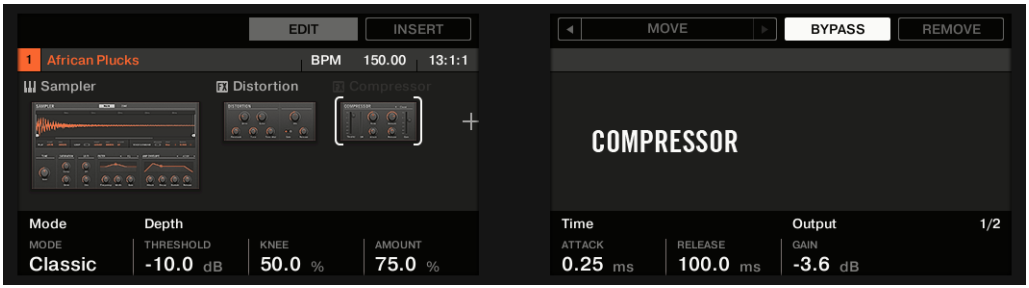
In most cases the first Plug-in slot contains an Instrument Plug-in (e.g., a Sampler). Be careful: bypassing the slot will mute the whole Sound!

Bypassing a Plug-in Slot on the Controller

1. Press the PLUG-IN button to enter Control mode and display Plug-in slots.
2. If you want to bypass a Plug-in of the Master, press Button 1 to select the MASTER tab.
3. If you want to bypass a Plug-in of a Group, press Button 2 to select the GROUP tab and press the Group button A–H corresponding to the desired Group. If necessary, first press SHIFT + the desired Group button A–H to switch to the Group bank containing that Group.

4. If you want to bypass a Plug-in of a Sound, press Button 3 to select the SOUND tab, select its parent Group as described in the previous step, and press SELECT + the pad of that Sound (or simply hit its pad if pads are in Group mode).
5. Press Button 5/6 to select the desired Plug-in slot.
   The name of the selected Plug-in appears in the field between the left and right arrows under Button 5 and 6. If there are no Plug-ins in the channel this will read EMPTY.
6. Press SHIFT + Button 7 (BYPASS) above the right display to bypass the selected Plug-in slot.

→ The Plug-in is bypassed and does not affect the sound anymore. In the left display the Plug-in icon and name are grayed out. When you hold SHIFT, Button 7 is fully lit and the BYPASS label on the right display is highlighted to indicate that this Plug-in slot is now bypassed:



Use the same method to unmute the effect:

► To unmute the effect, press SHIFT + the lit Button 7 (BYPASS).



In most cases the first Plug-in slot contains an Instrument Plug-in (e.g., a Sampler). Be careful: bypassing the slot will mute the whole Sound!

6.1.6 Using Side-Chain

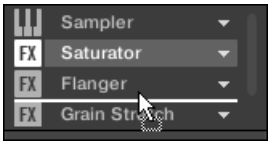
Some Plug-ins provide side-chaining. This allows you to control their influence on the audio via another audio signal sent to their secondary, side-chain input. This extra routing feature is described in details in section ↑11.1.3, Using the Side-Chain Input.

6.1.7 Moving Plug-ins

MASCHINE allows you to move Plug-ins across the Plug-in List and across Sounds and Groups.

Moving Plug-ins Within the Plug-in List

► To move a Plug-in in the Plug-in List, click its name and drag your mouse vertically. While you are holding the mouse button, an insertion line appears at the place in the Plug-in List where the Plug-in would land if dropped. Drag your mouse until the insertion line is at the desired location, then release the mouse button to drop the Plug-in onto this new location.



→ The Plug-in takes its new place between the existing Plug-ins while keeping the exact same settings. All other Plug-ins sitting between its old and new location are shifted one slot upwards/downwards to fill the gap.



Dragging Plug-ins can be very useful if you want to quickly change the effects' processing order in the channel.

Moving Plug-ins Across Sounds and Groups

Moving Plug-ins is not only possible within the same Sound but also across Sounds, across Groups, across levels (e.g., from a Sound to a Group) or across Sounds in different Groups!

To move a Plug-in to another Sound, Group or the Master, do the following:

1. Click the down-pointing arrow of the slot containing the Plug-in that you want to move.
2. In the Plug-in menu that opens, select *Cut*.
3. Select the Sound, Group or the Master where you want to move the Plug-in (see section ↑2.3.1, Setting the Focus on a Group or a Sound).
4. Click the down-pointing arrow of the target slot (the slot where you want to move the Plug-in to).

5. In the Plug-in menu that opens, select *Paste*.

→ The Plug-in with all its parameters has now been moved from its original location to its target location.

Duplicating Plug-ins Across Sounds and Groups

Instead of selecting *Cut* in the Plug-in menu of the original slot (see above), select *Copy* to duplicate the Plug-in to another slot!

Moving a Plug-in on the Controller

On your controller in Control mode, you can move a Plug-in to another slot of the same Sound, Group or the Master. To do this:

1. Select the desired Plug-in (see section ↑2.3.3, Navigating Channel Properties, Plug-ins, and Parameter Pages in the Control Area).
2. Press SHIFT + Button 5/6 to move this Plug-in to the previous/next slot, respectively.

→ The Plug-in takes its new place between the existing Plug-ins while keeping the exact same settings. All other Plug-ins sitting between its old and new location are shifted one slot upwards/downwards to fill the gap.

6.1.8 Alternative: the Plug-in Strip

You can also manipulate your Plug-ins via the Plug-in Strip in the Mix view of MASCHINE. You will find all details on this feature in section ↑9.4, The Plug-in Strip.

6.1.9 Saving and Recalling Plug-in Presets

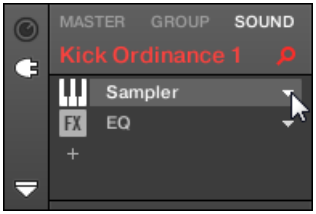
All settings and assignments of a Plug-in can be saved as Plug-in presets. Once saved, Plug-in presets can be accessed from the Browser, both in the software and from your controller (see section ↑3.2, Searching and Loading Files from the Library). This is a very quick and convenient way to recall Plug-ins with their parameters already set to specific values. In addition a Plug-in preset can be assigned as the default preset so the Plug-in opens with that preset automatically loaded.

The MASCHINE file format for Native Instruments plug-ins allows you to save a preset in the format native to the plug-in and freely exchange files between the plug-in instrument in stand-alone mode, MASCHINE, and KOMPLETE KONTROL.

To use this feature you must ensure all installed Native Instruments plug-ins are up-to-date. Please check Service Center or log-in to your Native Instruments account to find the latest updates.

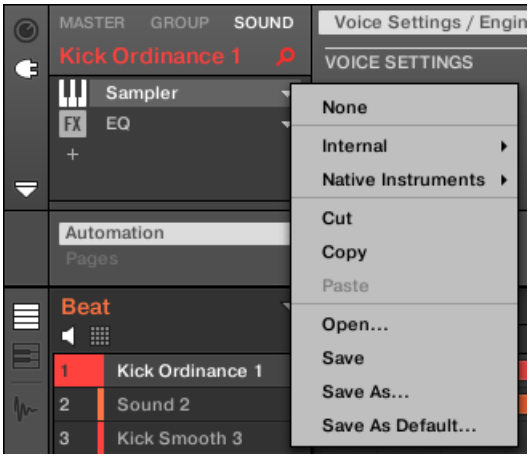
6.1.9.1 Saving Plug-in Presets

Saving Plug-in presets can only be done in the software via the Plug-in menu. To access the Plug-in menu, click the drop-down arrow on the right-hand side of the Plug-in slot in the Plug-in List:



Opening the Plug-in menu.

The commands for saving Plug-in presets are found at the bottom of the Plug-in menu.



The commands for saving and recalling Plug-in presets in the Plug-in menu.

Plug-in Menu Entry	Description
Save	Saves your changes to the preset currently loaded.
Save As...	Saves the current Plug-in settings as a new preset on your hard disk.
Save As Default...	Saves the current settings and assignments as the default preset for the Plug-in. This default preset will be loaded with this Plug-in the next time it is opened.
Remove Default Preset	Removes the default preset for the current plug-in. This menu item only appears after a preset has been saved using the *Save As Default...* menu item.

The *Save As...* and *Save As Default...* commands notably allow you to import into the MASCHINE library your user presets for Native Instruments instruments/effects as well as both factory and user presets for third-party instruments/effects! See ↑6.3.4, Using VST/AU Plug-in Presets section for more on this.

6.1.9.2 Recalling Plug-in Presets

All Plug-in presets you saved using the Plug-in menu are available in the Browser, both in the software and from your controller. You can find each Plug-in preset automatically placed in the corresponding "Instrument" or "Effect" category in the File Type selector of the Browser's LIBRARY pane. Furthermore, user presets are available when selecting the User content in the Content selector of the Browser's LIBRARY pane.



For more information on how to load Plug-in presets in the Browser, and how to assign tags to the Plug-in presets that you saved, please refer to chapter ↑3, Browser.

In addition, the MASCHINE library already provides a collection of Plug-in presets for MASCHINE Internal Plug-ins. Furthermore, any Native Instruments product installed on your computer will have its own factory library already imported into the MASCHINE Browser so that you can browse and load its presets directly from MASCHINE, ready for loading.



You can assign tags to the Plug-in presets that you saved. This is done in the Browser in the MASCHINE software. For more information, please refer to section ↑3.5, Editing the Files' Tags and Properties.



KOMPLETE products and MASCHINE EXPANSIONS have to be updated to ensure their full integration into the MASCHINE Library. To update any Native Instruments product installed on your computer, please start the Service Center.

You can also load a Plug-in preset from the Plug-in menu by selecting the *Open...* command, then navigating your file system and selecting the desired preset file (extension ".mxinst" for Instrument Plug-in presets, ".mxfx" for Effect Plug-in presets, or ".mfxp" for MASCHINE 1.x Module presets).

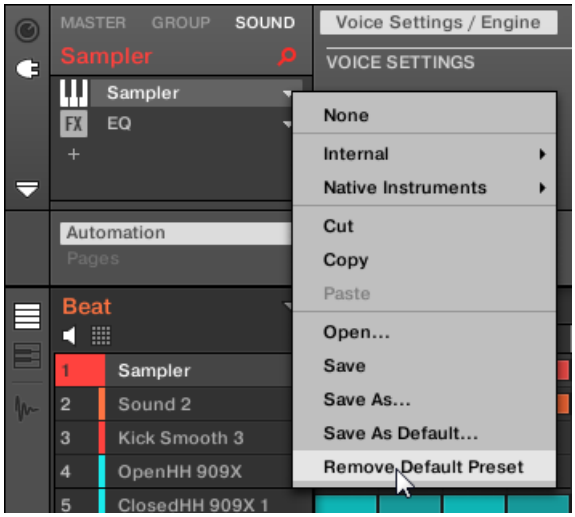
6.1.9.3 Removing a Default Plug-in Preset

For each plug-in you can set a default preset that is loaded automatically every time the plug-in is opened. If the default plug-in preset is no longer required, use the Plug-in menu to remove the saved default preset.

To remove the default preset of a plug-in using the Plug-in menu:

1. Click the Sound containing the Plug-in.

2. Click the Plug-in drop-down menu.
3. Click *Remove Default Preset* in the menu to remove the default preset.



→ The default plug-in preset is removed and the plug-in will load with its initialized settings next time it is opened.

You can also use the Plug-in Manager in the Preferences panel to gain an overview of your default plug-in presets and also remove them if required.



Removing the default preset for a plug-in is a software only feature.

6.2 The Sampler Plug-in

The Sampler Plug-in allows you to play back any Sample in MASCHINE — including all Groups, Sounds and Samples of the factory library. The Sampler comes with an extensive set of parameters that 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.



Many of these parameters can be modulated and automated! For more information, see section ↑7.5, Recording and Editing Modulation and ↑8.2.3, Controlling Parameters via MIDI and Host Automation, respectively.



In case MASCHINE cannot find the Sample(s) loaded in a Sampler Plug-in, a Missing Sample dialog will appear and help you locate the missing Sample(s) again. Please refer to section ↑3.7, Locating Missing Samples for more information.

This section describes the specific parameters found in the Sampler. For a general description of the features and characteristics of Plug-ins (including the Sampler), please refer to section ↑6.1, Plug-in Overview.



We show here the Sampler parameters as they appear in the Control area of the Arrange view. The Sampler also provides a custom panel in the Plug-in Strip of the Mix view. This panel is described in section ↑9.4.3, Panel for the Sampler.

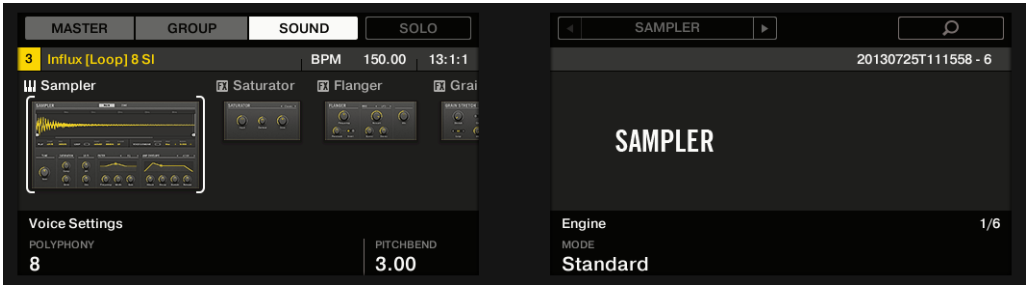
The Sampler parameters are organized in 6 pages:

- Page 1: Voice Settings / Engine: ↑6.2.1, Page 1: Voice Settings / Engine.
- Page 2: Pitch / Envelope: ↑6.2.2, Page 2: Pitch / Envelope.
- Page 3: FX / Filter: ↑6.2.3, Page 3: FX / Filter.
- Page 4: Modulation: ↑6.2.4, Page 4: Modulation.
- Page 5: LFO: ↑6.2.5, Page 5: LFO.
- Page 6: Velocity / Modwheel: ↑6.2.6, Page 6: Velocity / Modwheel.

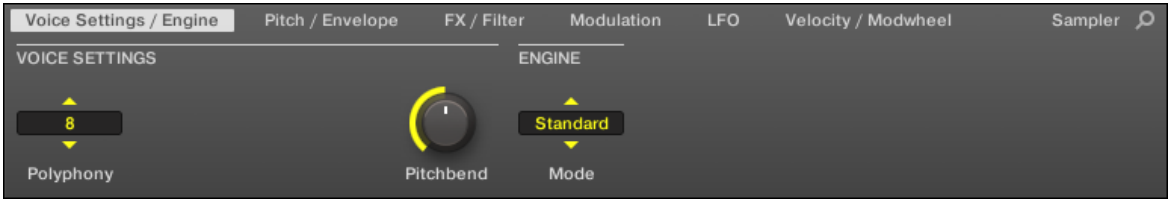
These Parameter pages can be selected for displaying/editing via the usual way as described in section ↑2.3.3, Navigating Channel Properties, Plug-ins, and Parameter Pages in the Control Area. For example:

► To display a particular Parameter page in the software, click its label at the top of the Control area.

6.2.1 Page 1: Voice Settings / Engine



Sampler parameters – page 1 of 6: VOICE SETTINGS and ENGINE on the controller.

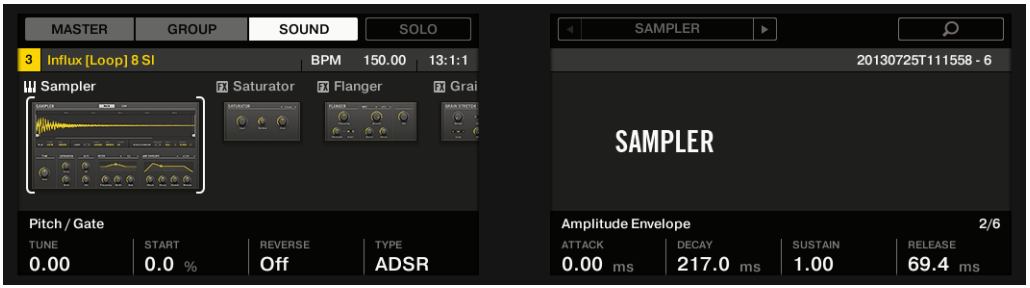


Sampler parameters – page 1 of 6: VOICE SETTINGS and ENGINE in the software.

Parameter	Description
VOICE SETTINGS	
Polyphony	Here you can define a voice limit for the Sound, that is the maximum number of voices (notes) the Sampler can play simultaneously. Once this polyphony has been reached, triggering any additional note will kill the "oldest" note still playing (i.e. the note that was triggered first). The available values are *1*, *2*, *4*, *8* (default), *16*, *32*, and *64*. You can also set this to *Legato* — in that case the polyphony is set to 1 and the Sampler performs a continuous pitch transition between consecutive notes.
Glide	If *Legato* is selected for the Polyphony parameter, this allows to adjust the duration of the transition between consecutive notes.

Parameter	Description
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 ↑8.2.1, Triggering Sounds via MIDI Notes.
ENGINE	
Mode	This allows you to select between different models for the sampling engine. Besides the default *Standard* setting, the other options *MP60* and *S1200* emulate the sound of two legendary Samplers that are often used in Hip-Hop and similar genres of music. The latter comes in various flavors offering different filtering: *S1200* (no filtering), *S1200 L* (for Low, i.e. low-pass filtering), *S1200 LM* (for Low-Mid, i.e. low-mid-pass filtering), *S1200 HM* (for High-Mid, i.e. mid-high-pass filtering), and *S1200 High* (for High, i.e. high-pass filtering).

6.2.2 Page 2: Pitch / Envelope



Sampler parameters – page 2 of 6: PITCH / GATE and AMPLITUDE ENVELOPE on the controller.

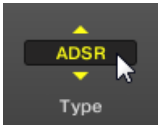


Sampler parameters – page 2 of 6: PITCH / GATE and AMPLITUDE ENVELOPE in the software.

Parameter	Description
PITCH / GATE	
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. This parameter can also be modulated by the Velocity control, see ↑6.2.5, Page 5: LFO.
Reverse	If Reverse is activated, the Sample will be played backwards.
Type	Selects from three different types of amplitude envelopes. See below for more information.

AMPLITUDE ENVELOPE

The AMPLITUDE ENVELOPE section allows you to tailor your Sample in terms of its loudness over time.



The Type selector.

The Type selector allows you to choose from three different types of amplitude envelopes. Depending on the selected type, the available parameters in the AMPLITUDE ENVELOPE section will differ (see table below):

- *One-shot*: This is typical vintage drum machine behavior: the sample is played in its entirety from beginning to end with no envelope. If *One-shot* is selected, the AMPLITUDE ENVELOPE section doesn't display any parameters.



- *AHD*: AHD mode disables the Sustain and Release controls of the ADSR envelope (see below), 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*: Typically, the ADSR envelope is used for longer, sustained Samples that require complex dynamic control.

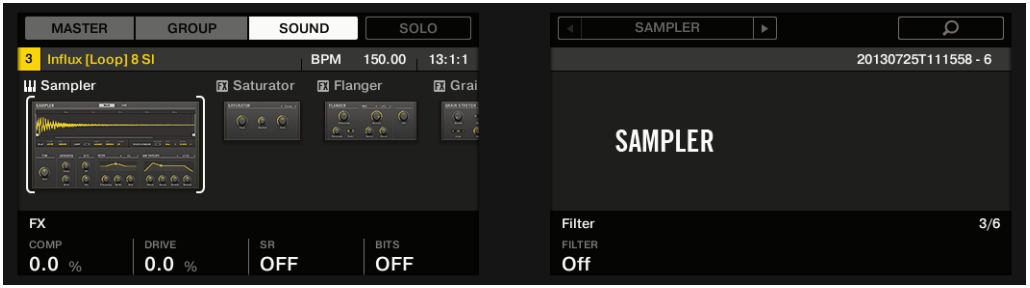




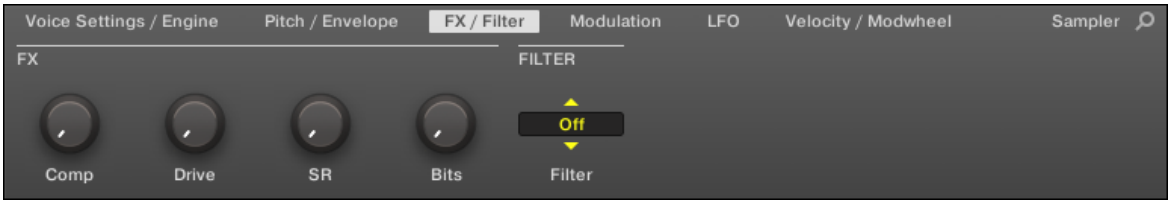
Unlike many other hardware devices, the pads on MASCHINE are sensitive not only to being hit, but also to being held — so using the ADSR envelope, you can make the pads behave like a MIDI keyboard and sustain a note only for as long as it is held down.

Parameter	Description
AMPLITUDE ENVELOPE	
Attack (AHD and ADSR)	Attack determines how quickly the Sound reaches full volume after being triggered.
Hold (AHD only)	Hold determines how long the envelope will stay at its maximum level.
Decay (AHD and ADSR)	Decay determines how fast the envelope drops to the Sustain level in ADSR mode; in AHD mode, it is used to adjust how fast the Sound dies down. This parameter can also be modulated by the Velocity control, see ↑6.2.5, Page 5: LFO.
Sustain (ADSR only)	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 the MIDI Control Change 64.
Release (ADSR only)	Release determines how long the sound takes to fade out after the note has ended.

6.2.3 Page 3: FX / Filter



Sampler parameters – page 3 of 6: FX and FILTER on the controller.



Sampler parameters – page 3 of 6: FX and FILTER in the software.

FX

This is a small selection of basic effects, not to be mixed up with the collection of Effect Plug-ins covered in depth in chapter ↑12, Effect Reference.

Parameter	Description
FX	
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 depth of the Sound, resulting in a more rough, digital sounding lo-fi effect.

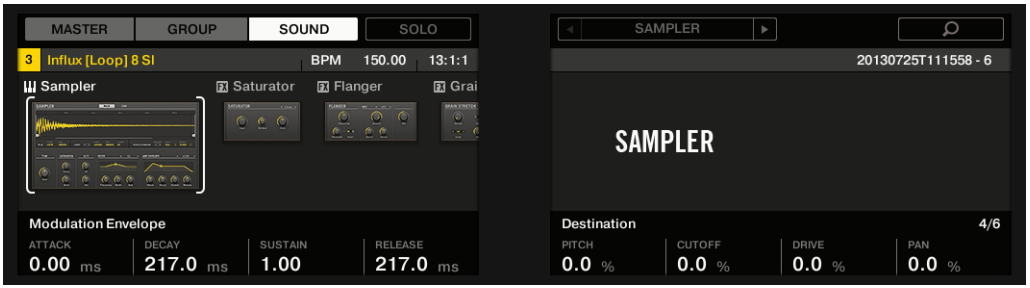
FILTER

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

Filter Modes	Description
Off	No filter.
LP2	LP2 is a low-pass filter with Cutoff and Resonance parameters. Cutoff can be modulated by Velocity, the Modulation Envelope, the LFO or the MIDI Modulation Wheel.

Filter Modes	Description
BP2	BP2 is a band-pass filter with a Cutoff parameter. 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 parameters. 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 parameters.

6.2.4 Page 4: Modulation



Sampler parameters – page 4 of 6: MODULATION ENVELOPE and DESTINATION on the controller.



Sampler parameters – page 4 of 6: MODULATION ENVELOPE and DESTINATION in the software.

MODULATION ENVELOPE

The MODULATION ENVELOPE section offers an additional envelope allowing further modification (or "modulation") of specific Sampler parameters according to the way you play on the pads. Its parameters are matched to those of the AMPLITUDE ENVELOPE section on page 2 (see ↑6.2.1, Page 1: Voice Settings / Engine), so that you have either an ADSR (Attack, Decay, Sustain, Release) envelope or an AHD (Attack, Hold, Decay) envelope to modulate your parameters. If you choose One-shot mode, only the AHD envelope (pictured) will be available for modulation.

Envelope Controls	Description
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.

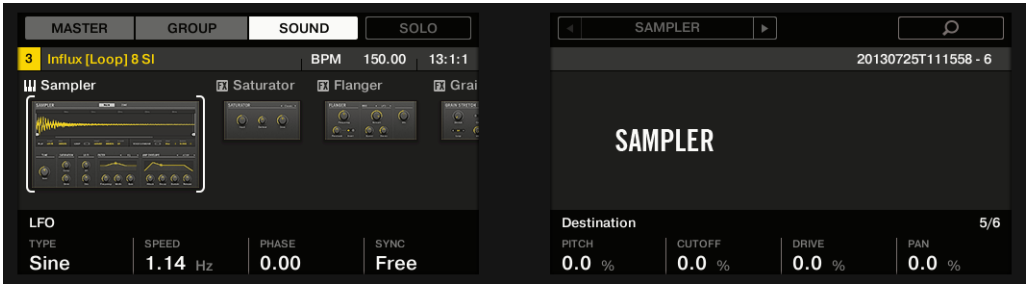
DESTINATION

This is where you define modulation targets for the modulation envelope, i.e. the parameters you want this envelope to control. The knobs adjust the amount of modulation for the following targets:

Parameter	Modulation Destination
Pitch	Tune parameter of the PITCH / GATE section on the Pitch / Envelope page (page 2).
Cutoff	Cutoff parameter of the FILTER section (with filter types *LP2*, *HP2*, *BP2* only) on the FX / Filter page (page 3).

Parameter	Modulation Destination
Drive	Drive parameter of the FX section on the FX / Filter page (page 3).
Pan	Pan parameter on the Audio page of the Sound's Output properties (see ↑8.1.2, Configuring the Main Output of Sounds and Groups for more information).

6.2.5 Page 5: LFO



Sampler parameters – page 5 of 6: LFO and DESTINATION on the controller.



Sampler parameters – page 5 of 6: LFO and DESTINATION in the software.

LFO

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

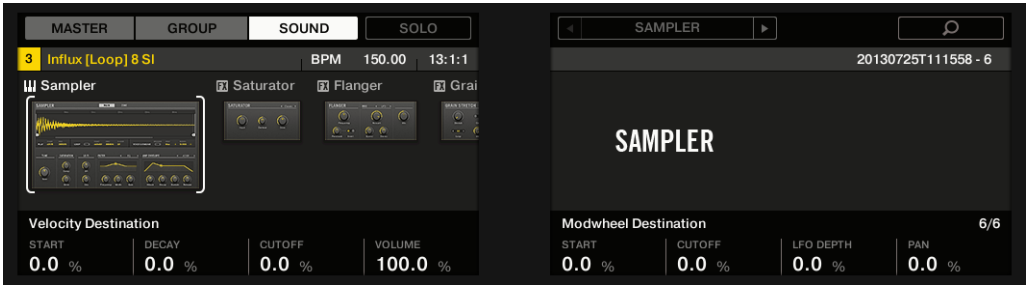
LFO Controls	Description
Type	Here you can choose the shape of the LFO waveform. Available shapes are *Sine*, *Tri* (Triangle), *Rect* (Rectangle), *Saw*, and *Random*.
Speed	Controls the rate of the LFO measured in hertz (Hz). If you choose to synchronize the Speed by activating Sync, it will show note values instead of hertz.
Phase	Defines the initial phase of the LFO waveform, from *-0.50* to *0.50*.
Sync	The Sync selector is used to synchronize the LFO with the tempo of your Project. If *Free* is selected, the LFO rate is independent of the Project tempo. If *Retrig* or *Lock* is enabled, the values of the Speed parameter will change into note values ranging from 16/1 (= one modulation cycle in 16 bars) to 1/32 (one cycle in 1/32nd note) and be synced with the Project tempo. While *Retrig* restarts the LFO at each new note (each note has another LFO phase), *Lock* keeps the LFO phase synchronized to the song position for all notes.

DESTINATION

This is where you define modulation targets for the LFO, i.e. the parameters you want this LFO to control. The knobs adjust the amount of modulation for the following targets:

Parameter	Modulation Destination
Pitch	Tune parameter of the PITCH / GATE section on the Pitch / Envelope page (page 2).
Cutoff	Cutoff parameter of the FILTER section (with filter types *LP2*, *HP2*, *BP2* only) on the FX / Filter page (page 3).
Drive	Drive parameter of the FX section on the FX / Filter page (page 3).
Pan	Pan parameter on the Audio page of the Sound's Output properties (see ↑8.1.2, Configuring the Main Output of Sounds and Groups for more information).

6.2.6 Page 6: Velocity / Modwheel



Sampler parameters – page 6 of 6: VELOCITY DESTINATION and MODWHEEL DESTINATION on the controller.



Sampler parameters – page 6 of 6: VELOCITY DESTINATION and MODWHEEL DESTINATION in the software.

VELOCITY DESTINATION

This section allows you to use the input velocity in order to modulate various parameters.

Parameter	Modulation Destination
Start	Start parameter of the PITCH / GATE section on the Pitch / Envelope page (page 2). 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. 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 "muffled" or muted when you play softly.
Decay	Decay parameter of the AMPLITUDE ENVELOPE section on the Pitch / Envelope page (page 2).
Cutoff	Cutoff parameter of the FILTER section (with filter types *LP2*, *HP2*, *BP2* only) on the FX / Filter page (page 3).
Volume	This allows you to modulate the volume, which is what velocity normally is used for.

MODWHEEL DESTINATION

Here you can determine how incoming MIDI data sent by the Modulation Wheel affects various parameters.

Parameter	Modulation Destination
Start	Start parameter of the PITCH / GATE section on the Pitch / Envelope page (page 2).
Cutoff	Cutoff parameter of the FILTER section (with filter types *LP2*, *HP2*, *BP2* only) on the FX / Filter page (page 3).
LFO Depth	Use this knob to adjust how much the Modulation Wheel affects the depth of the LFO modulation (for all targets) defined on the LFO page (page 5).
Pan	Pan parameter on the Audio page of the Sound's Output properties (see ↑8.1.2, Configuring the Main Output of Sounds and Groups for more information).

6.3 Using Native Instruments and External Plug-ins

MASCHINE allows you to load VST/AU plug-ins from Native Instruments (Native Instruments Plug-ins) or any third-party manufacturer (External Plug-ins) and to use them like the MASCHINE Internal Plug-ins.

As with Internal Plug-ins, the following rules apply for loading Native Instruments and External Plug-ins:

- An Instrument Plug-in can be loaded only in the first Plug-in slot of a Sound.
- An Effect Plug-in can be loaded in any Plug-in slot of any Sound, any Group, or of the Master.

The following sections describe additional features and tasks specific to Native Instruments and/or External Plug-ins compared to Internal Plug-ins. For all other tasks (e.g., loading, adjusting Plug-in parameters, etc.), please refer to section ↑6.1, Plug-in Overview.

6.3.1 Opening/Closing Plug-in Windows

When you load a Native Instruments or External Plug-in into a Plug-in slot, you can open a floating window containing the user interface of that Native Instruments or third-party instrument/effect.

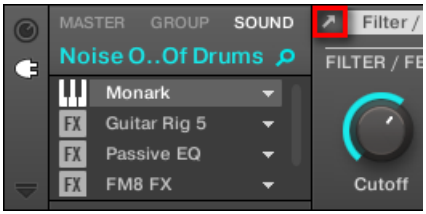


Plug-ins of Native Instruments platform products (REAKTOR, KONTAKT, GUITAR RIG) are automatically opened in floating windows when loaded from the Plug-in menu. All other Native Instruments Plug-ins as well as all External Plug-ins won't be opened in floating windows by default — however they will recall their last state: If such a Plug-in has previously been opened in its floating window, when you load a new instance of the same Plug-in it will also open in a floating window.



MASCHINE showing the user interfaces of a few Native Instruments Plug-ins (MONARK, PASSIVE EQ, GUITAR RIG, and FM8).

When a Native Instruments or External Plug-in has been loaded into a Plug-in slot, a little diagonal arrow appears left of the Parameter pages' tabs, at the top of the Control area:



The little diagonal arrow next to the Parameter pages' tabs.

- To open or close the floating window of a Native Instruments or External Plug-in, select this Plug-in and click the little diagonal arrow at the left of the Parameter pages' tabs (at the top of the Control area). You can also double-click the Plug-in name in the list.



You can also close any floating window via the common button provided by your operating system at the top left or right corner of the window.

MASCHINE will always show the open floating windows of the focused Sound, Group or Master when selected. When you set the focus to another Sound, Group or the Master, all open floating windows disappear, possibly replaced by those for Native Instruments and/or External Plug-ins loaded in the newly focused Sound/Group/Master.

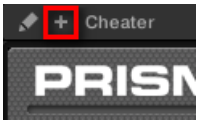


Plug-in selection is described in section ↑2.3.3, Navigating Channel Properties, Plug-ins, and Parameter Pages in the Control Area.

Native Instruments Plug-ins: Default, Additional, and Edit View

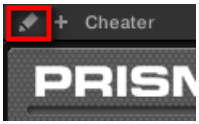
Native Instruments Plug-ins provide the following extra features in the floating window:

- **Plug-in Header**: This is the same as in the Plug-in's panel in the Plug-in Strip (software in Mix view), with an additional Edit button described below. For more information, please refer to section ↑9.4.4, Custom Panels for Native Instruments Plug-ins.
- **Default view** and **Additional view**: Each Native Instruments Plug-in can provide one or two custom views including reduced sets of controls. The Default view is available for every Native Instruments Plug-in, while the Additional view is available for specific Native Instruments Plug-ins only. If a Native Instruments Plug-in provides an Additional view, you can switch between Default and Additional view by clicking the "+" button in the Plug-in Header:

  These views are also available in the Plug-in's panel in the Plug-in Strip (Mix view in the software). For more information, please refer to section ↑9.4.4, Custom Panels for Native Instruments Plug-ins.

- **Edit view**: The Edit view shows the full user interface of the original Native Instruments product. You can show/hide the Edit view by clicking the Edit button (showing a pencil icon) in the Plug-in Header:



Opening/Closing Plug-in Windows on the Controller

On the MASCHINE STUDIO controller, to open/close a floating window for a Native Instruments or External Plug-in do the following:

1. Select the desired Native Instruments or External Plug-in (see section ↑2.3.3, Navigating Channel Properties, Plug-ins, and Parameter Pages in the Control Area).
2. Press SHIFT + Button 3 (EDIT) to open the Plug-in's user interface in a separate floating window. Press SHIFT + Button 3 again to close the floating window.

6.3.2 Using the VST/AU Plug-in Parameters

The parameters of Native Instruments and External Plug-ins offer various ways to shape each instrument/effect individually. Of course, you can adjust these parameters using the Plug-in's own user interface (see section ↑6.3.1, Opening/Closing Plug-in Windows above). But MASCHINE also allows quick and convenient access to the parameters of any Native Instruments or External Plug-in: upon loading these parameters are **auto-mapped** and organized into Parameter pages that will appear both in the software's Control area and on your controller in Control mode — exactly like Internal Plug-ins.

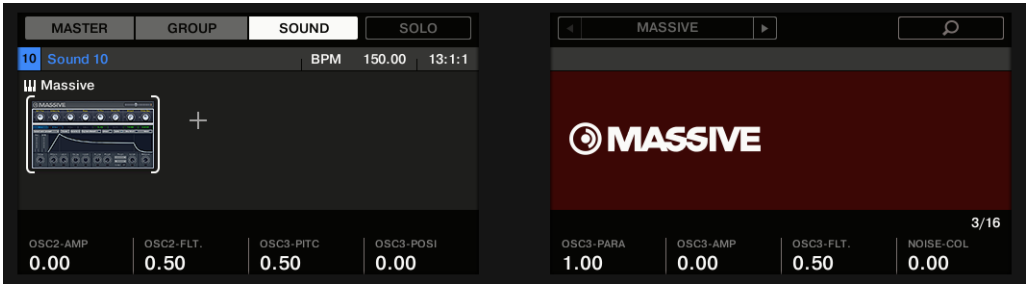
Having the Plug-in parameters on Parameter pages in MASCHINE has the following benefits:

- You can step through the Parameter pages and tweak each parameter on your controller via the usual workflow directly after loading the Native Instruments or External Plug-in (see section ↑2.3.3, Navigating Channel Properties, Plug-ins, and Parameter Pages in the Control Area).
- The Plug-in parameters can be automated the same way as any other parameters (see section ↑7.5, Recording and Editing Modulation).

- The current state of the Plug-in parameters can be saved to the Browser as a preset for total recall of the Plug-in (see section ↑6.1.9, Saving and Recalling Plug-in Presets for more on this).



An auto-mapped Parameter page of the Massive Plug-in in the software.



An auto-mapped Parameter page of the MASSIVE Plug-in on the controller.

Furthermore, for Native Instruments Plug-ins these Parameter pages group the Plug-in parameters in an intelligent way that fits the particular workflows of each Plug-in. For example in the MASSIVE Plug-in, the eight Macro Controls of MASSIVE will be grouped into a single Parameter page, the main parameters for Oscillator 1 will be grouped into another Parameter page, etc.

6.3.3 Setting Up Your Own Parameter Pages

As with any Plug-in, the parameters of a Native Instruments or External Plug-in are organized into pages. Each Plug-in can have any number of pages, each containing 8 knobs, which can be assigned to the parameters of the VST/AU instrument or effect.

Parameter pages may be assigned automatically using **auto-mapping** (see section ↑6.3.2, Using the VST/AU Plug-in Parameters above) or created individually via **Learn mode**. With Learn mode, you can create custom pages containing only the desired parameters arranged to fit your personal workflow. Moreover, you can create sections of parameters within each custom Parameter page, and define custom labels for parameters, sections, and entire Parameter pages.

Note that parameters of Native Instruments and External Plug-ins are systematically assigned to knobs (not to switches nor selectors) in MASCHINE — this is also true in the MASCHINE software.

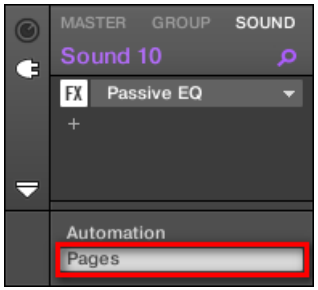
A parameter of a Native Instruments or External Plug-in can be assigned to one knob only!

To begin assigning parameters, do the following:

1. Select the Plug-in for which you want to customize parameter assignments.
2. Click the down-pointing arrow in the bottom left corner of the Control area to reveal the **Assignment area** underneath:



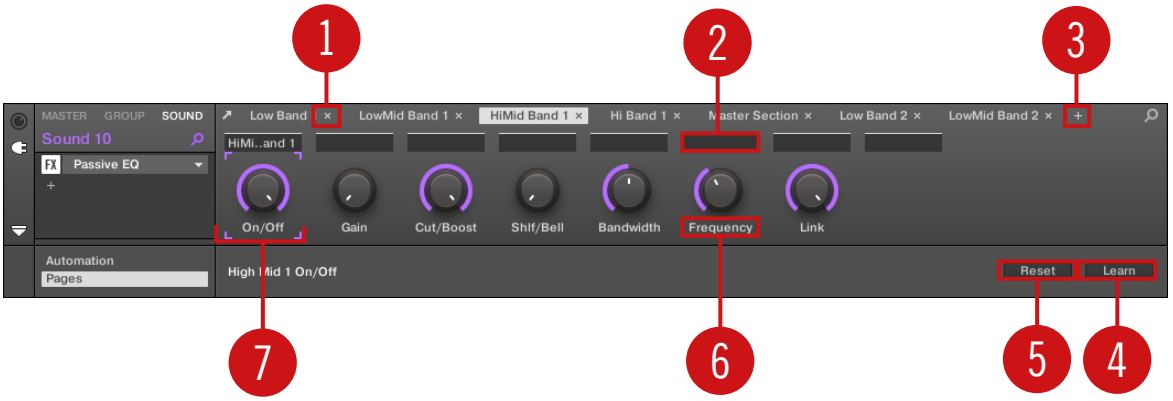
3. Click the Pages tab in the left part of the Assignment area:



→ The Pages tab lights up and the Pages pane appears on its right. You are now ready to assign parameters to the Parameter pages.

> The Pages tab can be clicked only for Native Instruments or External Plug-ins and for the Macro properties. For all other Plug-ins and Channel properties, parameters and Parameter pages are not editable, and the Pages tab is grayed out and inactive. For more information on the Macro properties and defining Macro Controls, please refer to ↑8.3, Creating Custom Sets of Parameters with the Macro Controls.

When the Pages pane of the Assignment area is open, you also notice a few changes in the Control area above:



The Control area with the Pages pane active in the Assignment area underneath.

(**1**) **Delete Page button ("x" symbol)**: Click the little "x" after a page name to delete this Parameter page.

(**2**) **Add Page button ("+" symbol)**: Click the little "+" after the last page label to append a new page. By default, pages are labeled "Page 1," "Page 2," etc. You can change page labels by defining sections within your pages via the Section Label fields (**3**) — see below.

(**3**) **Section Label fields**: These fields allow you to define sections of parameters within the displayed page. Double-click the field above the first parameter you want to include in the section, type the desired name for the section, and press [Enter] to confirm. The new section will include all following parameters until the next section starts (this can be seen only after you have closed the Assignment area). Moreover, the Parameter page will mirror the label(s) of its section(s) — if there is more than one section, the page label will mirror all of them, separated by slashes.

(**4**) **Focus frame**: Indicates the knob being assigned. Click any knob to edit its assignment.

(**5**) **Parameter Label fields**: Double-click these fields to enter custom labels for your parameters (press [Enter] to confirm). These labels will be mirrored everywhere in MASCHINE for the corresponding parameters.

(**6**) **Reset button**: Click Reset to remove the assignment for the selected knob.

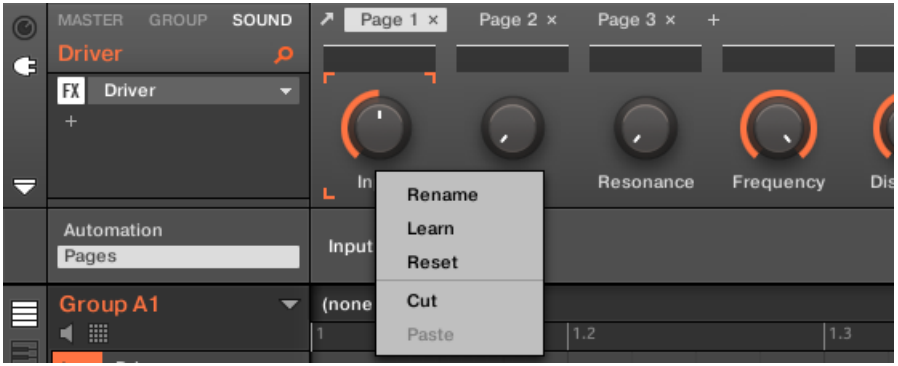
(**7**) **Learn button**: Click Learn to enter Learn mode. Learn mode is an intuitive learn process that allows you to quickly assign the desired Plug-in parameters to all eight knobs of the current Parameter page at once. When Learn mode is launched, each knob of the page is successively focused starting with the knob selected for editing — indicated by the Focus frame (**4**). The next parameter you touch in the plug-in's user interface (see section ↑6.3.1, Opening/Closing Plug-in Windows) will be assigned to the focused knob. Once a knob is assigned, the next knob to the right will become the focal point, and so on until the last knob is assigned. Once complete, Learn mode is automatically deactivated. Alternatively, at any time you can click Learn again if you want to stop assigning parameters. When Learn mode is active, you can manually change the focus of the knobs by clicking the desired knob in the Parameter area.



Once you have organized plug-in parameters into Parameter pages, you can also use MASCHINE Macro Controls to pick the most commonly used parameters, e.g., for live performances. For more information about Macro Controls, please refer to section ↑8.3, Creating Custom Sets of Parameters with the Macro Controls.

Parameter Slots - Context Menu

When the Assignment area is opened and the Pages tab is selected, a right-click on an assigned or unassigned Parameter slot's label brings up a context menu.



The parameter slots' context menu.

The context menu contains following items:

Menu Item	Description	Keyboard Shortcuts
Rename	Rename the Macro.	Ctrl + R / Cmd + R
Learn	Activates the Learn Mode.	
Reset	Reset the Macro.	
Cut	Cut the Macro to paste it in another position.	Ctrl + X / Cmd + X
Copy	Copy the Macro.	Ctrl + C / Cmd + C
Paste	Paste a cut or copied Macro to a new position. Paste is only available if an applicable Parameter is in the clipboard: Paste is only available on the same Plug-in, this Plug-in can be placed somewhere else.	Ctrl + V / Cmd + V

Pages Name - Context Menu

When the Assignment Area is opened and the Pages tab is selected, a right-click on a Page name at the top of the Parameter area opens a context menu.



The Parameter pages' context menu.

The context menu contains the following items:

Menu Item	Description	Keyboard Shortcuts
Delete	Deletes current Page with all assignments.	
Clear All	Clears all the assignments, and deletes all of the Pages.	

6.3.4 Using VST/AU Plug-in Presets

For some of your Native Instruments or third-party VST/AU plug-ins, you might already have a set of factory or user presets (or patches, programs, etc.) that you like to use. MASCHINE lets you directly load these presets and save them as Plug-in presets within MASCHINE. Saving your VST/AU presets as Plug-in presets within MASCHINE will notably allow you to access them from the MASCHINE Browser, in the software as well as from your controller!



Saving presets can be done in the MASCHINE software only.

Accessing Factory Presets of Native Instruments' Instruments/Effects

Accessing factory presets of your Native Instruments instruments and effects is straightforward: factory presets of all Native Instruments instruments/effects installed on your computer are already integrated into the MASCHINE library! You will find them directly in the Browser by selecting the corresponding file type (Instruments or Effects) in the File Type selector, then selecting the factory content by clicking the NI logo on the right, then choosing the desired NI product in the drop-down list underneath — and of course, you will find all these presets in the same locations in the Browser on your controller.

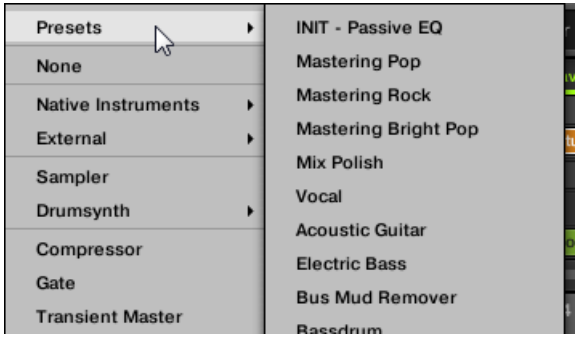


You can also add to the MASCHINE library the user presets you might have created for any Native Instruments product installed on your computer. To do this, simply add the corresponding path(s) to the list found on the User pane of the Library page in the Preferences panel. See section ↑2.6.4, Preferences – Default Page for more details.

Accessing Other VST/AU Presets

To access user presets of your Native Instruments instruments/effects as well as both factory and user presets of your third-party VST/AU plug-ins, you first need to load the corresponding Native Instruments or External Plug-in into a Plug-in slot.

1. Load the desired Native Instruments or External Plug-in into a Plug-in slot (see section ↑6.1.3, Loading, Removing, and Replacing a Plug-in).
2. Open the Plug-in menu by clicking the little arrow at the right of the Plug-in slot.
   The Plug-in menu now contains an additional *Presets* submenu located under the *Native Instruments* and *External* submenus:



This submenu provides the list of all presets that your VST/AU plug-in has made available to the host — MASCHINE in this case.

3. Select the desired preset in this submenu.

→ The preset is loaded into the Plug-in.

Each VST/AU instrument or effect might handle its presets (or patches, programs…) differently. Please refer to the plug-in documentation to find out how to reveal its presets (or a particular set of presets) to the host.



For example, in MASSIVE, ABSYNTH 5, and FM8, you need to enable the Program List and fill it up with the desired patches in order to expose these and see them appear in the *Presets* submenu of the Plug-in menus in MASCHINE.



Some VST/AU plug-ins can run both as instrument and effect plug-ins. When loading a preset for such a plug-in, check that the preset can be effectively loaded in the current Plug-in slot — in particular, take care to load presets for instruments in the first Plug-in slot of Sounds only! To avoid any mistake, one solution is to name your VST/AU presets explicitly (e.g., by adding a suffix "[FX]" to the effect presets).

MASCHINE allows you also to change the preset in your Native Instruments or third-party VST/AU plug-in via MIDI Program Change messages. For more information, see section ↑8.2.3, Controlling Parameters via MIDI and Host Automation.

Saving VST/AU Presets as MASCHINE Plug-in Presets

Once you have loaded a VST/AU preset (user preset of a Native Instruments instrument/effect or any preset of a third-party VST/AU instrument or effect) using the method described above, you can save it as a Plug-in preset in MASCHINE via the *Save As…* or *Save As Default…* commands of the Plug-in menu (see section ↑6.1.9, Saving and Recalling Plug-in Presets). Once this is done, your preset will be available as a user preset in the Instrument or Effect category of the MASCHINE Browser.

6.3.5 Multiple-Output Plug-ins and Multitimbral Plug-ins

MASCHINE allows an extended use of multiple-output Plug-ins as well as multitimbral Plug-ins.

Multiple-Output Plug-ins

Multiple-output Plug-ins are Plug-ins with more than one audio stereo output.

When a multiple-output Plug-in is loaded into a Sound, MASCHINE uses its available outputs as follows:

- The Plug-in's first output pair is inserted in the usual Plug-in signal chain: This output pair is fed into the input of the next Plug-in slot (or sent to the channel output if the Plug-in is in the last Plug-in slot).
- The Plug-in's additional outputs are made available as audio sources for other Sounds of the same Group (they appear in the Source menu in the Audio page of the Input properties for these Sounds). This can be used to build advanced routings in MASCHINE. For more information on configuring audio inputs for Sounds, please refer to section ↑8.1.1, Sending External Audio to Sounds.

Multitimbral Plug-ins

Multitimbral Plug-ins are Plug-ins that can receive MIDI on top of the host control.

When a multitimbral Plug-in is loaded into a Sound, the other Sounds of the same Group can send MIDI data to this Plug-in: The Plug-in will appear as additional port in the Dest. menu on the MIDI page of the Output properties for these Sounds. For more information on configuring MIDI output for Sounds, please refer to section ↑8.2.5, Sending MIDI from Sounds.

7 Working with Patterns

Creating a Pattern is where the fun starts, because the sequencer really is the core of MASCHINE. Both your controller and the software provide you with many powerful tools to create and edit your own beats.

This chapter is organized as follows:

- General points on Patterns and the Pattern Editor: ↑7.1, Pattern Basics.
- How to record Patterns in real time from your controller: ↑7.2, Recording Patterns in Real Time.
- How to record Patterns with the step sequencer of your controller: ↑7.3, Recording Patterns with the Step Sequencer.
- How to create and modify events/notes in your Patterns: ↑7.4, Editing Events.
- How to create and modify modulation in your Patterns: ↑7.5, Recording and Editing Modulation.
- How to create MIDI tracks in your Patterns: ↑7.6, Creating MIDI Tracks from Scratch in MASCHINE.
- How to organize your Patterns in your Project: ↑7.7, Managing Patterns.
- How to import/export MIDI to/from Patterns, and how to export audio from Patterns: ↑7.8, Importing/Exporting Audio and MIDI to/from Patterns.

7.1 Pattern Basics

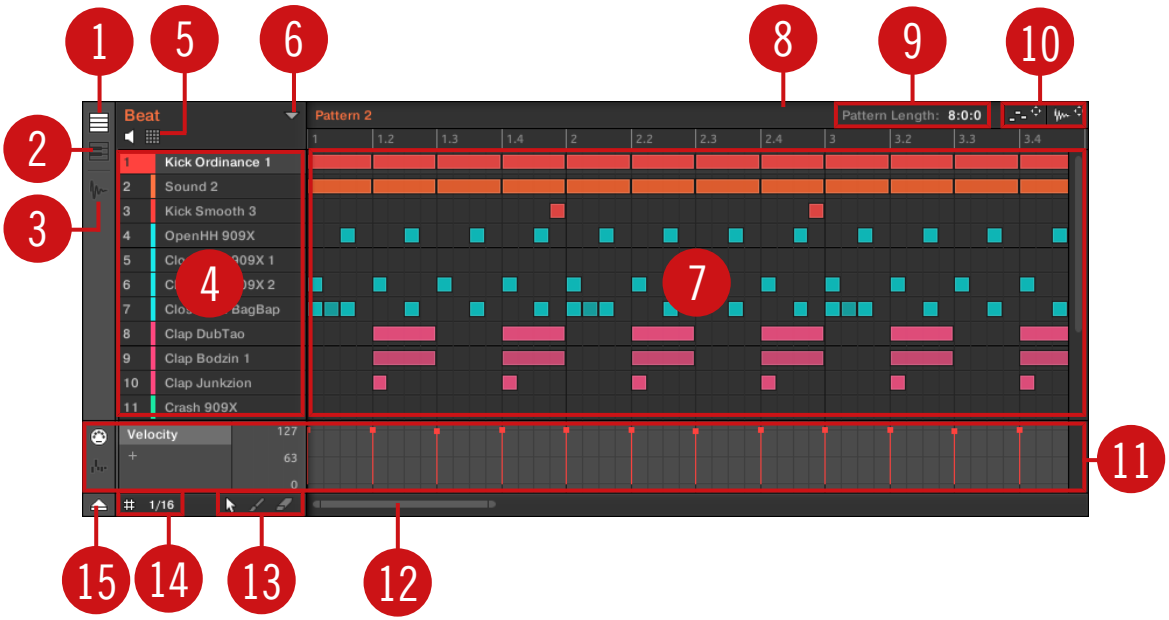
A Pattern contains the events (also called “notes”) that make up a groove or a musical phrase using the Sounds of the selected Group. It also contains the modulation data (if any) modifying the value of parameters in that Group or any of its Sounds. The Pattern belongs to that Group and is saved together with the Group. In each Group you can have an unlimited number of Patterns. Patterns are grouped into Pattern banks containing up to 16 Patterns each.

In every Scene of your Project you can choose for each Group which of its Patterns has to be played. In each Scene the Pattern you have chosen will be referenced by a Clip (more on this in chapter ↑12.6.3, Saturator).

7.1.1 Pattern Editor Overview

The Pattern Editor is the all-in-one Pattern editing tool of the MASCHINE software.

This overview of the Pattern Editor introduces you its main parts and control elements.



The Pattern Editor (Group view depicted).

(**1**) **Group View button**: Click this button to switch to Group view. See section ↑7.1.5, Group View and Keyboard View.

(**2**) **Keyboard View button**: Click this button to switch to Keyboard view. See section ↑7.1.5, Group View and Keyboard View.

(**3**) **Sample Editor button**: Click this button to switch between the Pattern Editor and the Sample Editor. The Sample Editor is covered in chapter ↑12, Effect Reference.

(**4**) **Sound List**: Sound slots 1–16 of the selected Group are listed here. In Keyboard view (**2**), click a Sound slot to display its events in the Event area (**7**).

(**5**) **Pad View button**: Click this button to switch between the Sound List (**4**) and the Pad view. The Pad view is an alternate representation of your Sound slots that focuses on the pads of your controller. In Pad view you can adjust how the Sounds should be triggered by your pads. See section ↑5.1.1, The Pad View in the Software.

(**6**) **Pattern Manager button**: Opens/closes the Pattern Manager. The Pattern Manager gives you access to various management commands for your Patterns. Notably, it allows you to select the Pattern you want to edit in the Pattern Editor and use in the current Scene of the Arranger. It also provides various Pattern management commands (see section ↑7.7.1, The Pattern Manager and Pattern Mode).

(**7**) **Event area**: Displays the content of the selected Pattern. Here you can see your recorded events as rectangular blocks. In Group view (**1**) these represent the Sounds of your Group. In Keyboard view (**2**) they represent musical notes of the selected Sound. The length of each rectangular block represents the duration of the event, and its transparency indicates the event velocity (the softer the hit, the more transparent the event). You can edit events using your mouse; you can drag them to a new position, elongate/shorten them, create and delete them using various Edit modes (**13**). The Event area also displays the Step Grid divisions, a set of regularly spaced vertical lines defining the resolution of your edits. You can make all your edits snap to the desired Step Grid via the Step Grid settings (**14**).

(**8**) **Pattern timeline**: The timeline at the top of the Event area (**7**) displays musical time units, including bars and beats. Click anywhere in the timeline to move the playhead to that position (see section ↑7.1.4, Jumping to Another Playback Position in the Pattern). Drag the white Pattern Length marker horizontally to adjust the Pattern Length (this can also be done via the Pattern Length controls (**9**), see section ↑7.1.6, Adjusting the Pattern Grid and the Pattern Length).

(**9**) **Pattern Length controls**: The Pattern Length controls allow you to choose the increment by which the length of the Pattern can be adjusted, and to adjust the length of the displayed Pattern according to that increment. See section ↑7.1.6, Adjusting the Pattern Grid and the Pattern Length.

(**10**) **MIDI and Audio Dragger**: The MIDI Dragger and the Audio Dragger allow you to conveniently drag and drop MIDI or audio from your Patterns to your desktop or host software, respectively. See section ↑7.8.1, Exporting Audio from Patterns and ↑7.8.2, Exporting MIDI from Patterns for more information.

(**11**) **Control Lane**: The Control Lane provides a visual overview and editing tools for the modulation and the MIDI/host automation of each parameter. See section ↑7.5, Recording and Editing Modulation and ↑8.2, Using MIDI Control and Host Automation for more information.

(**12**) **Horizontal zooming scroll bar**: Click the main part of the scroll bar and drag your mouse horizontally to scroll through the Event area on the horizontal axis (time), or drag it vertically to zoom in/out on this time axis. You can also click the left or right handle of the scroll bar and drag it horizontally to zoom in/out while keeping the opposite border of the display at a fixed position in the Pattern. Double-click the main part of the bar to reset the zoom and display the entire Pattern. In Keyboard view (**2**) you will find a **vertical zooming scroll bar** with similar functionality at the right of the Pattern Editor. See section ↑7.1.2, Navigating the Event Area for more information.

(**13**) **Edit Mode selector**: The Edit Mode selector lets you choose from three different modes when editing the content of the Pattern: Select, Paint, and Erase mode. See ↑7.4.1, Editing Events with the Mouse: an Overview for more information.

(**14**) **Step Grid settings**: Use the Step Grid button to enable/disable the Step Grid, and the Step Size menu to change the Step Grid resolution. See section ↑7.1.7, Adjusting the Step Grid and the Nudge Grid for more information.

(**15**) **Control Lane button**: Click the Control Lane button to show/hide the Control Lane (**11**).

7.1.1.1 Patterns on the MASCHINE STUDIO Controller

Your controller provides numerous modes to work on your Patterns:

- The Pattern Arrange mode allows you to quickly visualize the content of your Patterns and gives you access to various edit commands (see below).
- The Pattern mode allows you to select and manage your Patterns: ↑7.7, Managing Patterns.
- The Control mode (default mode of your controller) allows you to record Patterns in real time using various recording modes: ↑7.2, Recording Patterns in Real Time. It also allows you to record modulation for your Pattern: ↑7.5, Recording and Editing Modulation.

- The Step mode allows you to record Patterns (including modulation) in the step sequencer: ↑7.3, Recording Patterns with the Step Sequencer.
- The Event Select mode allows you to select the desired events: ↑7.4.3, Selecting Events/Notes.
- The Event Edit mode lets you edit the selected events: ↑7.4.4, Editing Selected Events/Notes.
- The Grid mode lets you adjust the Step Grid: ↑7.1.7, Adjusting the Step Grid and the Nudge Grid.

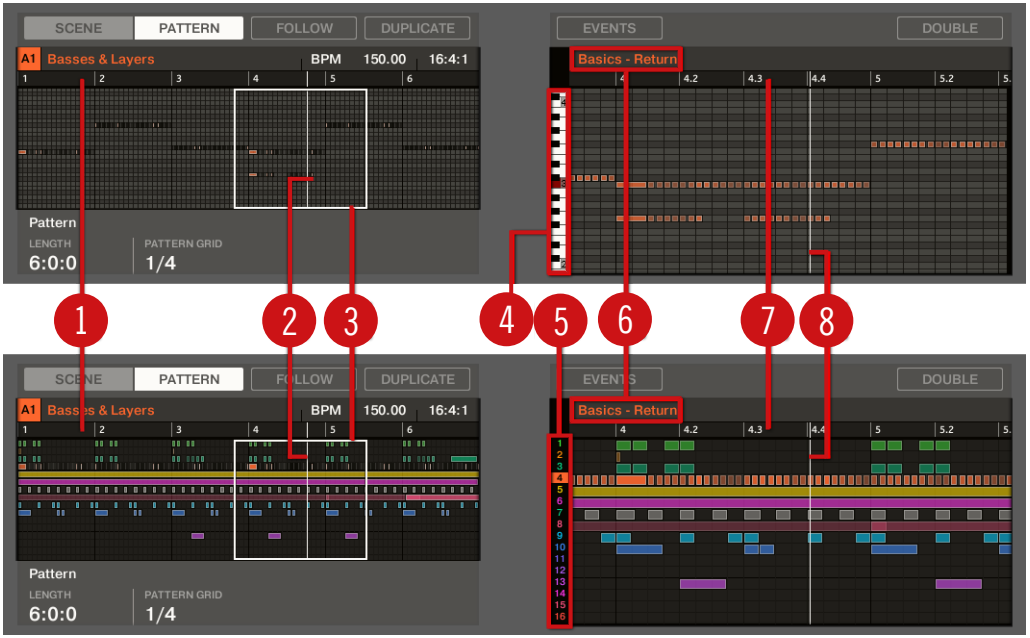
The Pattern Arrange Mode

The **Pattern Arrange mode** is a powerful tool that allows you to visually control the content of your Patterns while providing important Pattern management features.

To enter Pattern Arrange mode on your controller:

1. Press ARRANGE to enter Arrange mode.
   The ARRANGE lights up to indicate that Arrange mode is enabled.
2. Press Button 2 (PATTERN) to enter Pattern Arrange mode. You can also press ENTER under the jog wheel.

→ Button 2 lights up and the PATTERN label underneath is highlighted to indicate that the controller is in Pattern Arrange mode.



The Pattern Arrange mode in the controller displays: Keyboard view (top) and Group view (bottom).

In Pattern Arrange mode, the displays of your controller show the following:

- The **left display** provides an **overview of the whole Pattern**:
  - The display follows the Group or Keyboard view of the Pattern Editor in the software and the mode of your pads: if your pads are in Group mode the display shows all events for all Sounds in the Group; if your pads are in Keyboard mode the display shows all notes at all pitches for the focused Sound. See section ↑7.1.5, Group View and Keyboard View for more information.
  - The velocity of each event/note is indicated by its transparency. Selected events/notes are highlighted. You can also select individual events using the Page buttons (left of the displays).
  - The overview includes a timeline (**1**). A white vertical line indicates the current playback position (**2**). In addition, a frame (**3**) shows you which part of your arrangement is currently shown in the right display (see below).

  - Above the arrangement overview, you see the name of the Project, the focused Group or the focused Sound (depending on which of the MASTER, GROUP or SOUND tab is selected in the software's Control area) along with the current tempo and playback position.

- The **right display** provides a **detailed view** of a portion of your Pattern:
  - The name of the selected Pattern is indicated at the top of the display (**6**).
  - The velocity of each event/note is indicated by its transparency. If visible, selected events/notes are highlighted.
  - With the pads in Group mode, the display shows events for all Sounds in the Group. The 16 Sound slots of the Group are represented in the leftmost column by their index number (**5**). The focused Sound is highlighted.
  - With the pads in Keyboard mode, the display shows notes on two octaves for the focused Sound. On the left a piano roll (**4**) indicates the pitch of the various events. On the piano roll, each C is indicated by its octave number and the middle C (C3 in the MASCHINE convention) is colored. Additionally the pitch of any played note is highlighted. Turn Knob 7 to scroll on the pitch axis (vertical axis) from events at the lowest pitch until events at the highest pitch. If all events are within two octaves, they all appear in the display and Knob 7 is inactive.
  - Horizontally, the displayed time interval is variable: Turn Knob 5 and 6 to zoom and scroll horizontally in the right display to your liking, respectively. You can also enable Button 3 (FOLLOW) and let the right display follow the playhead as it travels through your arrangement — see section ↑7.1.3, Following the Playback Position in the Pattern for more information.
  - As in the left display, you can see a timeline (**7**) at the top and a vertical playhead indicator (**8**) across the entire display.



In Pattern Arrange mode the pads behave as in Control mode. In particular, this allows you to record Patterns while seeing them developing in the displays! See section ↑7.2, Recording Patterns in Real Time for more information on this.

Finally, the Pattern Arrange mode provides useful commands for the selected Pattern:

- Press Button 5 (EVENTS) to access Event Edit mode, which allows you to precisely adjust the selected events (see section ↑7.4.4, Editing Selected Events/Notes).

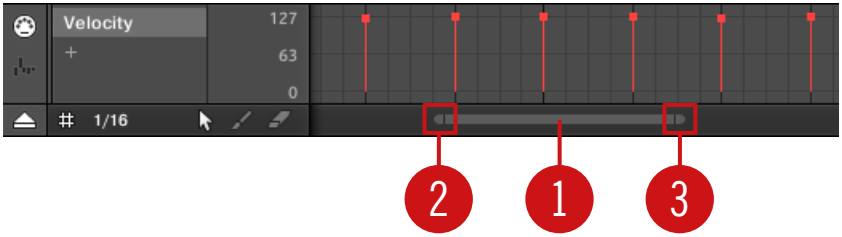
- Turn Knob 1 (LENGTH) and 2 (GRID) to adjust the Pattern Length and the Pattern Grid, respectively (see section ↑7.1.6, Adjusting the Pattern Grid and the Pattern Length).
- Press Button 4 (DUPLICATE) to duplicate the Pattern (see section ↑7.7.8, Duplicating, Copying, and Pasting Patterns).
- Press Button 8 (DOUBLE) to double the Pattern (see section ↑7.4.9, Doubling a Pattern).

7.1.2 Navigating the Event Area

The Event area in the Pattern Editor can be scrolled and zoomed in or out to fit your current needs.

Navigating the Pattern Editor Horizontally (Time)

A **zooming scroll bar** is available at the bottom of the Pattern Editor. This tool allows you to both scroll and zoom in/out horizontally in the Event area and the Control Lane on the time axis:



The zooming scroll bar at the bottom of the Pattern Editor.

Use the horizontal zooming scroll bar as follows:

- Click the **main part** (**1**) of the scroll bar and hold the mouse button, then:
  - Drag your mouse horizontally to scroll through the Event area on the time axis (common scroll bar behavior).
  - Drag your mouse vertically to zoom in or out of the Event area on the time axis. The center of the zoom operation will be exactly where you placed your mouse cursor when you clicked.

- Click the **left handle** (**2**) of the scroll bar, hold the mouse button, and drag your mouse horizontally to zoom in or out of the Event area while keeping the right border of the display at a fix positioned in the Pattern.
- Similarly, click the **right handle** (**3**) of the scroll bar, hold the mouse button, and drag your mouse horizontally to zoom in or out of the Event area while keeping the left border of the display at a fixed position in the Pattern.
- Double-click the **main part** (**1**) to reset the zoom and display the entire Pattern.



The Event area and the Control Lane (if visible) always stay in sync on the time axis. See section ↑7.5.3, Creating and Editing Modulation in the Control Lane for more information on the Control Lane.

Navigating the Pattern Editor Vertically (Sounds or Pitches)

When the Pattern Editor is in Group view, a classic scroll bar is available right of the Pattern Editor. It allows you to scroll to hidden Sound slots in case all of them don't fit in the Pattern Editor.

When the Pattern Editor is in Keyboard view, a vertical zooming scroll bar is available on the right of the Pattern Editor allowing you to both scroll and zoom in/out vertically on the pitch axis. It works in the same way as the horizontal bar described above.



For more information on the Group and Keyboard view, see section ↑7.1.5, Group View and Keyboard View.

You can also adjust the height of the Pattern Editor in order to display more/less Sound slots at once by resizing the Arranger above — see section ↑13.1.2, Navigating the Arranger.

Navigating the Event Area from the Controller

You can also control the position and zoom factor in the Event area from your controller:

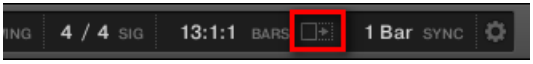
1. From Control mode, press and hold NAVIGATE to enter Navigate mode.



2. Turn Knob 3 (Pattern Zoom) to zoom in or out of the Edit area.
3. Turn Knob 4 (Pattern Scroll) to scroll through the Edit area.

7.1.3 Following the Playback Position in the Pattern

If the Event area doesn't display the entire Loop Range selected, at some point the playhead will go beyond the portion of the Pattern currently displayed and you might loose sight of the playback position. To prevent this, you can force the Event area to follow the playhead:



Activate the Follow button to keep following the playhead in the Event area.

► To follow the playhead position in the Event area during playback, click the Follow button in the MASCHINE Header.

→ The Follow button lights up in the MASCHINE Header. The Event area will now switch to the next Pattern portion (with the same zoom factor) as soon as the playhead reaches the end of the portion currently displayed. This way, you always see the Pattern portion that is being played.



The Follow function will be automatically disabled as soon as you manually scroll in the Arranger or the Pattern area (in the software or from your controller).

The Follow function affects both the Pattern Editor and the Arranger simultaneously (see section ↑13.1.3, Following the Playback Position in Your Project for more information on the Follow function in the Arranger).

Following the Playback Position on the Controller

To follow the playhead position in the Event area during playback:

1. Press ARRANGE to enter Arrange mode.
2. Press Button 3 (FOLLOW).

→ Both Button 3 and the FOLLOW label underneath light up. In the software the Event area will now switch to the next Pattern portion (with the same zoom factor) as soon as the playhead reaches the end of the portion currently displayed. This way, you always see the Pattern portion that is currently played. You can press ARRANGE again to leave Arrange mode and switch to another mode: the Follow function will stay active.



The Event area will stop following the playhead as soon as you manually scroll to another portion of the Pattern.

The Follow function simultaneously affects various displays in the software and on your controller:

- In the software the Follow function affects both the Pattern Editor and the Arranger.
- On your controller the Follow function affects the displays in Arrange mode (for both SCENE and PATTERN pages), Events mode, Step mode, and Note Repeat mode. Additionally, in Step mode the Follow function affects the pads: With Follow enabled, when the playhead has gone across all 16 steps shown by the pads on your controller, the pads switch to the next 16 steps of the Pattern, if any. See section ↑7.3, Recording Patterns with the Step Sequencer for more information on Step mode.

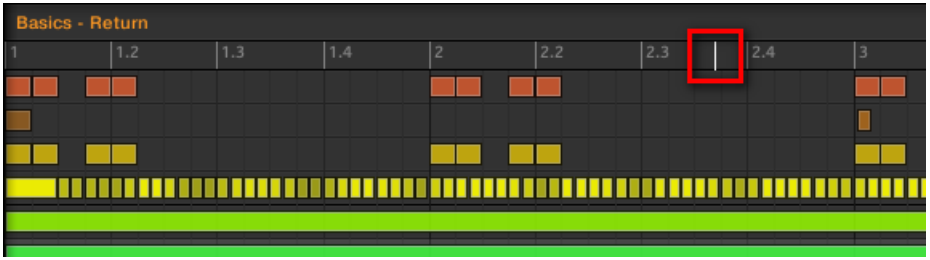


If the playback position is outside any Clip referencing the Pattern currently displayed, the Event area will not follow the playhead, even if the Follow function is active. As soon as the playhead enters any Clip referencing the selected Pattern, the Event area will follow the playhead.

7.1.4 Jumping to Another Playback Position in the Pattern

You can use the timeline above the Event area to set the playback to the desired position. For example, this can be useful to check a particular transition between events in your Pattern without waiting for the whole Loop Range to be looped.

In the timeline above the Event area, a playhead (the little white vertical line) indicates the current play position in the Pattern.



The playhead in the timeline shows you the current play position.

At any time you can jump to another position in the Pattern:

- ► Click anywhere in the timeline of the Event area to move the playhead to that position in the Pattern.

Moving the playhead to another position in the timeline of the Pattern Editor automatically moves it to the corresponding position in the Arranger. However, using the timeline of the Pattern Editor you cannot jump outside the Pattern currently displayed. To do this, use the timeline of the Arranger (see ↑13.1.4, Jumping to Another Playback Position in Your Project) or use your controller (see below).

Depending on the playback state, the following will happen:

- If playback is off, the playhead jumps to the closest step before your mouse cursor, according to the current Step Grid settings. If the Step Grid is disabled, the playhead jumps to the exact position you have clicked.

For more information on the Step Grid, see section ↑7.1.7, Adjusting the Step Grid and the Nudge Grid.

- If playback is on, the playhead jumps to the closest position near your mouse cursor that retains the current playhead position relative to the Pattern Grid division. This allows seamless jumps that don't break the rhythm of your music. If the Pattern Grid is set to Off (i.e. disabled) or Quick, the playhead position is retained relative to the current bar.



For more information on the Pattern Grid, see section ↑7.1.6, Adjusting the Pattern Grid and the Pattern Length.

Example with playback on: Assuming that your Pattern is four bars long and the Pattern Grid resolution is set to one bar, if you click around the 1.4 mark (4th beat of the 1st bar) in the timeline when the playhead reaches the 3.3 mark (3rd beat of the 3rd bar), the playhead will jump from the 3.3 to the 1.3 mark (3rd beat of the 1st bar) and continue from there.

Controlling the Playback Position in the Pattern on the Controller

You can also control the playback position from your controller via the jog wheel or the FUNCTION buttons underneath as described in section ↑13.1.4, Jumping to Another Playback Position in Your Project. As a reminder:

- ► Turn the jog wheel or press the FUNCTION buttons underneath to jump to the previous/next Pattern Grid division. Hold SHIFT while turning the jog wheel (or pressing the FUNCTION buttons) to jump to the previous/next step instead.

If playback is on, the jumps retain the playhead position relative to the grid resolution (Pattern Grid without SHIFT, Step Grid with SHIFT).



Using your controller, you can jump outside the current Pattern. For more details, please see section ↑13.1.4, Jumping to Another Playback Position in Your Project.

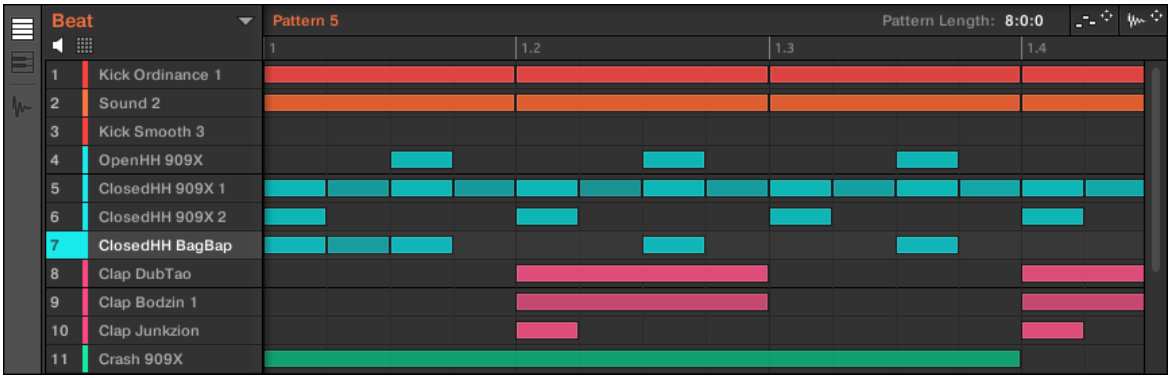
7.1.5 Group View and Keyboard View

The Pattern Editor allows you to edit the events for all 16 Sound slots of the selected Group: this is called the **Group view**.

► Click the Group View button (showing little rows) on the left of the Pattern Editor to switch it to Group view:



In Group view each row of the Event area represents a different Sound slot.



In Group view, the Pattern Editor shows the events for all Sounds in the Group.

This view is well suited for rhythmic instruments (e.g., a drum kit), since you can see and edit the events for all Sounds at once, without worrying about the pitch of the events you create or edit.

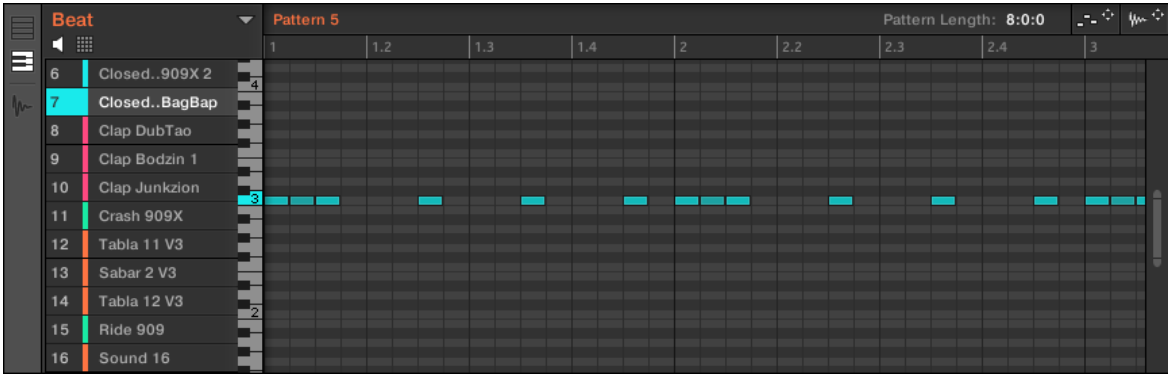
The Keyboard View

Alternatively, you can switch the Pattern Editor to **Keyboard view**:

► Click the Keyboard View button (showing a little keyboard) on the left of the Pattern Editor to switch it to Keyboard view:



→ The Event area now only shows notes for the selected Sound. By adding or editing notes, you can choose their pitch in semitones depending on where you place them on the vertical axis, the lowest note being the lowest row.



In Keyboard view, the Pattern Editor shows all notes for a particular Sound.

If you select another Sound slot in the Sound List on the left, the whole Event area will switch to the notes for that Sound.

On the left of the Event area, a vertical piano roll indicates the note corresponding to each row in the Event area. Octaves are indicated by a number on each C key: e.g., the middle C, which is noted C3 in the MASCHINE convention, will read "3." Click any note on the piano roll to trigger the selected Sound at that particular pitch.

This view is well suited for melodic instruments (e.g., a piano), since you can focus on a particular Sound, and edit notes at every pitch.

Switching Between Group and Keyboard View from Your Controller

The Group/Keyboard view in the software is always in sync with the Group/Keyboard mode of the pads on your controller: Switching between Group and Keyboard view in the software will automatically switch between Group mode and Keyboard mode on your controller (and inversely).

As a consequence, to switch the Pattern Editor between Group and Keyboard view, you simply need to switch your pads between Group and Keyboard mode:

► Press SHIFT + PAD MODE on your controller to switch the Pattern Editor between Group and Keyboard view.

See ↑5.1.1, The Pad View in the Software for more details on the various pad modes available on your controller.

7.1.6 Adjusting the Pattern Grid and the Pattern Length

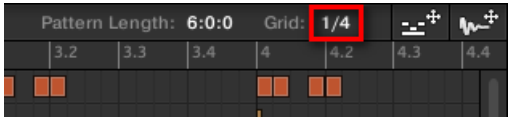
The **Pattern Grid** defines regularly spaced-out timings notably used in following situations:

- Adjusting the Pattern Length (see below).
- Moving the playback position (see ↑7.1.4, Jumping to Another Playback Position in the Pattern and ↑13.1.4, Jumping to Another Playback Position in Your Project).
- Adjusting and moving the Loop Range (see ↑13.3.1, Selecting a Loop Range).

Adjusting the Pattern Grid

To adjust the Pattern Grid:

1. To adjust the Pattern Grid resolution, click the value near the Grid: label in the Pattern Length controls and select the desired setting from the menu (see above for the available settings).



→ The divisions of the Pattern Grid now have the size you have just selected.

The following Pattern Grid resolutions are available:

- **1 Bar**, **1/2 note**, …, **1/16th note**: Each of these settings lets you adjust the Pattern Length by the specified increment.
- **Off**: The Pattern Grid is disabled. Notably, you can freely set the Pattern Length to any value or set the playback position to any location.

- **Quick** (default): With this setting, the available lengths for your Pattern are as follows: 1 bar, 2 bars, 4 bars, 8 bars, 12 bars, 16 bars, etc. (+ 4 bars each time starting from 4 bars). This handy mode allows you to quickly select from the most common Pattern Lengths. For other uses of the Pattern Grid (adjusting the playback position and the Loop Range), one-bar divisions are used instead.

Adjusting the Pattern Length

You can adjust the length of your Patterns to fit your needs. The Pattern Length is measured in bars and beats, and Patterns can be up to 256 bars long. When you create a new empty Pattern (see ↑7.7.3, Creating Patterns), the Pattern has the default length as defined in the Default page of the Preferences panel (see ↑2.6.1, Preferences – General Page).

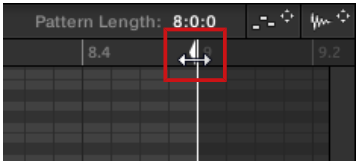
You can adjust the Pattern Length in two ways:

► To adjust the Pattern Length, click the Pattern Length: field and drag it up to make the Pattern longer or drag it down to make it shorter. You can also double-click the displayed value, enter a new value with your computer keyboard, and press [Enter] to confirm.



or

► To adjust the Pattern Length, drag the end marker of the Pattern (white arrow) in the timeline:



With either method, the available lengths will depend on the current Pattern Grid resolution (see above).

Reducing the length of a Pattern might exclude the last events from the Pattern. However these events are not deleted: They simply appear darker in the Event area and will be included back into the Pattern next time you extend it.

Events beyond the Pattern's end can be edited in the software. However, you cannot edit them from the controller. See section ↑7.4, Editing Events for more information on editing events.

Adjusting the Pattern Grid and Pattern Length on the Controller

On your controller, the length of the selected Pattern, along with the Pattern Grid resolution used to modify this length, can both be adjusted using various methods: via the Pattern mode, the Pattern Arrange mode, the Grid mode or the Record Prepare mode. Choose the method that best fits your current workflow.

Method 1: Using the Pattern mode

In Pattern mode you can adjust both the Pattern Length of the current Pattern and the Pattern Grid resolution:

1. Press and hold PATTERN to enter Pattern mode. You can also press PATTERN + Button 1 to pin Pattern mode so you can release PATTERN (see ↑2.3.5, Pinning a Mode on Your Controller).
2. Turn Knob 1 (LENGTH) to adjust the Pattern Length according to the current resolution of the Pattern Grid.
3. Turn Knob 2 (GRID) to adjust the resolution of the Pattern Grid.

Method 2: Using the Pattern Arrange mode

In Pattern mode you can adjust both the Pattern Length of the current Pattern and the Pattern Grid resolution:

1. Press ARRANGE then Button 2 (PATTERN) to enter Pattern Arrange mode.
2. Turn Knob 1 (LENGTH) to adjust the Pattern Length according to the current resolution of the Pattern Grid.
3. Turn Knob 2 (GRID) to adjust the resolution of the Pattern Grid.

Method 3: Using the Grid mode

In Grid mode you can adjust the various grids used in MASCHINE, including the Pattern Grid resolution:

1. Press and hold GRID to enter Grid mode. You can also press Button 1 to pin Grid mode so you can release GRID (see ↑2.3.5, Pinning a Mode on Your Controller).
2. Press Button 3 (PATTERN) to access the Pattern Grid settings.
   The right display will show you which pad represents which resolution:



3. Select a resolution by pressing the corresponding pad. Alternatively you can press Button 5, 6 or 8 to successively select each of the resolutions in the corresponding column.

→ The selected value is highlighted on the right display and the corresponding pad turns fully lit.

To disable the Pattern Grid, simply select the OFF value in the top right corner:

► To disable the Pattern Grid, hold GRID, press Button 3 (PATTERN), then press pad 16 (OFF).



You don't need to explicitly enable the Pattern Grid on your controller: It is enabled as soon as you select a resolution other than OFF (pad 16).

Method 4: Using the Record Prepare Mode

This extra method is very useful if you are about to start a new recording. Indeed, the Record Prepare mode (accessed by pressing the unlit REC button and holding it) is tightly integrated into the recording workflow of Control mode. For all details please refer to section ↑7.2.2, The Record Prepare Mode.

7.1.7 Adjusting the Step Grid and the Nudge Grid

The **Step Grid** defines regularly spaced-out timings (the "steps") at which your events/notes can be created, moved, etc. The Step Grid resolution corresponds to the step size, which directly affects the precision of all Pattern editing actions, including quantization (see ↑7.4.7, Quantizing Events/Notes section for more on quantization).



The Step Grid also affects the step sequencer on your controller: Increasing the Step Grid resolution (i.e. decreasing the step size) will make more steps available in your Pattern for placing events. See ↑7.4.2, Creating Events/Notes for more information on the step sequencer.

In the Pattern Editor, the Step Grid is indicated by the gray vertical lines in the Event area:



The vertical lines represent the Step Grid in the Event area.

By default the Step Grid is active and the step size is 1/16th. However you may use another step size or disable the Step Grid completely, as described below.



Depending on the current zoom factor and Step Grid resolution, if the vertical lines of the Step Grid are too close to each other they will be hidden to avoid convoluting the display. For example, this could be the case if you display 6 or 8 bars and choose a Step Grid resolution of 1/64th.



Regardless of the current Step Grid resolution, the gray lines on the beats (quarter notes) and the black lines on the bars (notes) are always visible in the Event area.

Enabling or Disabling the Step Grid

► To enable or disable the Step Grid, click the Step Grid button (showing a little grid icon) in the bottom left corner of the Pattern Editor.



The Step Grid is enabled.

Adjusting the Step Grid

The Step Grid resolution can be adjusted via the Step Size menu, showing a value next to the grid icon at the bottom left of the Pattern Editor:



The Step Size menu lets you adjust the Step Grid resolution.

► To select the step size that will apply to all your editing actions, click the value next to the grid icon at the bottom left of the Pattern Editor and choose the desired step size from the drop-down menu. Values range from *1 Bar* to *1/128* and also include triplet values. The default value is 1/16th note.

The Nudge Grid

In addition to the Step Grid described above, a secondary grid specifically controls the timings at which existing events/notes can be nudged in the Pattern: the **Nudge Grid**.

Nudging events means shifting them a small amount ahead or behind their current position. See ↑7.4.4, Editing Selected Events/Notes for more information.

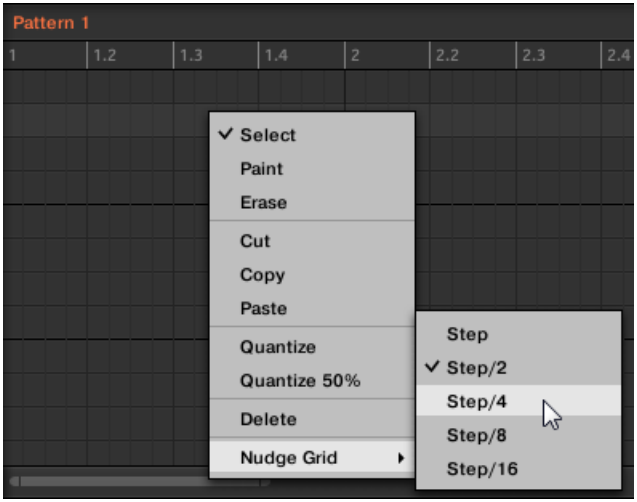
The Nudge Grid is based on the Step Grid:

- The Nudge Grid is active when the Step Grid is active. If the Step Grid is disabled, nudging events will shift them at the maximum resolution of the sequencer.
- By default, the Nudge Grid resolution is half a step, meaning that events will be nudged by half a step at a time.

- If you set the Nudge Grid resolution to a full step, the Nudge Grid will mirror the Step Grid and you can nudge events with the same resolution as when creating or quantizing events.
- You can also set the Nudge Grid resolution to a smaller fraction of the Step Grid resolution. This allows you to nudge events with even finer increments.

The Nudge Grid resolution can be adjusted in the context menu of the Event area:

► To adjust the Nudge Grid, right-click ([Ctrl]-click on Mac OS X) on the background of the Event area, select *Nudge Grid* in the menu, and choose a resolution from the values available in the submenu: *Step*, *Step/2*, *Step/4*, *Step/8*, and *Step/16*:



The Nudge Grid is not indicated in the Event area of the Pattern Editor.

Adjusting the Step Grid and the Nudge Grid on Your Controller

You can enable/disable the Step Grid and adjust the Step Grid and Nudge Grid resolution from your controller.

Enabling/Disabling and Adjusting the Step Grid

To change the Step Grid resolution:

1. Hold GRID to enter Grid mode.
2. Press Button 4 (STEP) to access the Step and Nudge Grid settings.
   The right display will show you which pad represents a resolution:



3. Select a step size by pressing the corresponding pad. Alternatively you can repeatedly press Button 5–8 to successively select each of the resolutions in the corresponding column.

→ The selected value is highlighted on the right display and the corresponding pad turns fully lit.

To disable the Step Grid, simply select the OFF value in the top right corner:

► To disable the Step Grid, hold GRID, press Button 4 (STEP), then press pad 16 (OFF).



You don't need to explicitly enable the Step Grid on your controller: It is enabled as soon as you select a step size other than OFF (pad 16).

Adjusting the Nudge Grid

To change the Nudge Grid resolution:

1. Hold GRID to enter Grid mode.
2. Press Button 4 (STEP) to access the Step and Nudge Grid settings.
3. Turn Knob 4 (NUDGE) to select the desired Nudge Grid resolution.

→ The new Nudge Grid resolution is directly in use — provided that the Step Grid is enabled (see above).

7.2 Recording Patterns in Real Time

This section describes the various ways, features, and aids available on your controller to record Patterns as you play them in real time:

- The most common method is called overdub recording. Alternatively you can use replace recording. Both are described in section ↑7.2.1, Recording Your Patterns Live.
- Right before you record a new Pattern, you can quickly enter Record Prepare mode to adjust a few important settings for your Pattern: ↑7.2.2, The Record Prepare Mode.
- At any time you can enable and customize the metronome: ↑7.2.3, Using the Metronome.
- You can also start the recording with a count-in: ↑7.2.4, Recording with Count-in.
- While recording you can let MASCHINE automatically quantize what you play on the pads: ↑7.2.5, Quantizing while Recording.

7.2.1 Recording Your Patterns Live

In Control mode your controller provides many tools to live record Patterns for the focused Group.



Take your time to set up the pad sensitivity and velocity scaling to your personal taste — you will have even more fun playing and recording with your controller! These settings can be found in *Preferences* > *Hardware* > *Pads*. See ↑2.6.6, Preferences – Plug-ins Page for more information.

Overdub Mode

Overdub mode is the most usual recording mode. In this mode all pad hits are added as events/notes, no matter if the Pattern already contains events.



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

1. Press PLAY to start the sequencer.
   The PLAY button lights up.
2. Press REC to begin recording.
   The REC button lights up.
3. 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 depends on how long you hold the pad. Your pad hits keep on being added to the existing events in the Pattern, even as the Pattern cycles.
4. When you're done, press REC again to stop recording the pads.
   The REC button turns off. The sequencer keeps playing until you press PLAY again.

Replace Mode

When recording in Replace mode the events of the selected Sound(s) are replaced by what you play.

1. Select the Sound(s) of which you want to replace events: In Group mode you can select multiple Sounds (see section ↑4.1.3, Selecting Multiple Sounds or Groups); in Keyboard mode only the focused Sound (the one played by your pads) will have its events replaced.
2. Press PLAY to start the sequencer.
   The PLAY button lights up.
3. Press ERASE + REC to begin recording in Replace mode.
   The ERASE and REC buttons light up.

4. Hit the pads you want to record.
   Each hit will create an event in the Pattern Editor, the event length depends on how long you hold the pad. Existing events for the selected Sound(s) are deleted as they are reached by the playhead.
5. When you're done, press REC again to stop recording the pads.
   The ERASE and REC buttons turn off. The sequencer keeps playing until you press PLAY again.

In order to prevent you from erasing events accidentally, in following situations Replace mode is **automatically disengaged** (ERASE turns off) and the recording continues in Overdub mode:

- When the playback loops (whether at the end of the Loop Range or at the end of your Project).
- When you stop the sequencer (by pressing the lit PLAY button).
- When you jump to another location in the Project (see section ↑7.1.4, Jumping to Another Playback Position in the Pattern).
- When you switch your controller to another mode (by pressing, e.g., SCENE, PATTERN, etc.).
- When you set the focus to another Group.

You can also **manually disengage** Replace mode and switch to Overdub mode:

► While recording in Replace mode, press the lit ERASE button to disengage Replace mode.

→ The recording goes on in Overdub mode (see description above).



You can also erase events without engaging record: If you hold ERASE together with a pad while playing (or recording), all events of that pad at the current play position are deleted (see section↑7.4.5, Deleting Events/Notes).

Where are the Events Recorded?

When you start recording the pads, the events are recorded as follows:

- If a Pattern is already selected (i.e. loaded in the Pattern Editor), the events are recorded in that Pattern. This is also true if the playhead of the Arranger currently is within an automatic repetition of the original Clip (see section ↑13.1, Arranger Basics).
- If no Pattern is selected, engaging record (in Overdub or Replace mode) automatically creates an empty Pattern with the default Pattern Length. The new Pattern is referenced by a Clip placed at the beginning of the current Scene and repeated all along the Scene.



You can adjust the default Pattern Length in the Defaults page of the Preferences panel. See section ↑2.6.1, Preferences – General Page for more information.

When you get ready to record, you can also use the Record Prepare mode on your controller to quickly create a new Pattern with the desired length and directly start the recording! See section ↑7.2.2, The Record Prepare Mode for more on this.

7.2.2 The Record Prepare Mode

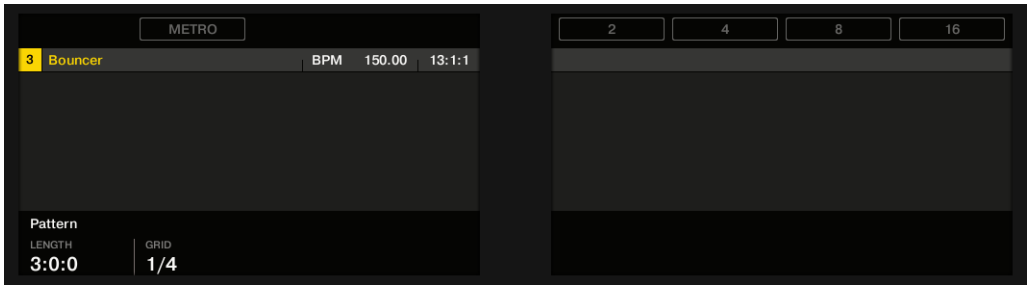
The Record Prepare mode is very useful when you are about to start a new recording. Indeed, it allows you to adjust the Pattern Length and the resolution of the Pattern Grid right before starting a recording. This way you can quickly create a new Pattern with the desired pattern length and directly start recording events in it!



You can also use the Record Prepare mode to adjust the length of an existing Pattern.

The Record Prepare Mode on Your Controller

1. With REC disabled, press and hold REC to enter Record Prepare mode.
   After a second, the following displays appear:



2. While holding REC, turn Knob 2 (GRID) to adjust the Pattern Grid resolution.
3. While holding REC, to adjust the Pattern Length for the Pattern in which you are about to record, you can turn Knob 1 (LENGTH) or press Button 5–8 to directly select from the four length presets available: 2, 4, 8, or 16 bars.
4. Release REC.

→ The Record mode is engaged (REC is lit) and the Pattern has the length you defined. Press PLAY to start the sequencer (if it's not done already) and play the pads to start recording! See section ↑7.2, Recording Patterns in Real Time for more information on recording Patterns.



In Record Prepare mode can also enable or disable the metronome via Button 2! See section ↑7.2.3, Using the Metronome for more information on the metronome.



You can also enter Record Prepare mode while starting a recording in Replace mode (see ↑7.2.1, Recording Your Patterns Live): Simply press ERASE + REC and hold REC until your controller switch to Record Prepare mode. This is also true when using the Count-in (see ↑7.2.4, Recording with Count-in).

7.2.3 Using the Metronome

The metronome will help you to keep time when recording in real time.

► Click the metronome icon in the MASCHINE Header to enable/disable the metronome:



The metronome can be heard only when the sequencer is playing!

The metronome signal is sent to the Cue bus. To know how to use the Cue bus, see section ↑9.2.6, Using the Cue Bus.

You can customize the metronome in various ways in the Preferences panel:

- You can adjust the metronome's volume and time signature in the Preferences' General page (see section ↑2.6.1, Preferences – General Page for more details).
- You can select custom sounds for the metronome's downbeats and upbeats in the Preferences' Default page (see section ↑2.6.4, Preferences – Default Page for more details).

The time signature of the metronome can be set to differ from the time signature of your Project! This can be useful to record unusual rhythms in a Pattern. Reminder: the time signature of your Project is defined in the MASCHINE Header (MASCHINE in stand-alone mode) or by your host application (MASCHINE running as a plug-in).

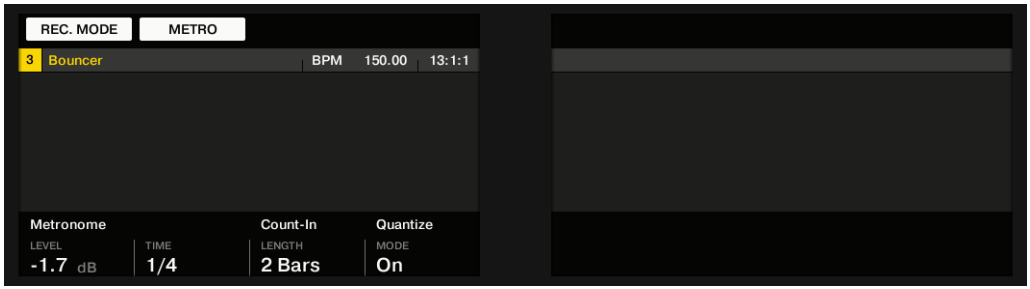
On your controller:

► Press METRO in the TRANSPORT section to activate or deactivate the metronome.

Adjusting the Metronome's Volume and Time Signature

On your controller you can adjust the volume and time signature of the metronome in the recording settings:

1. Press SHIFT + GRID to show the recording settings.



2. Turn Knob 1 (Metronome LEVEL) to adjust the metronome volume.
3. Turn Knob 2 (Metronome TIME) to select a time signature.

While adjusting the metronome settings you can enable/disable the metronome via Button 2 (METRO). This is strictly equivalent to pressing METRO as mentioned above.

7.2.4 Recording with Count-in

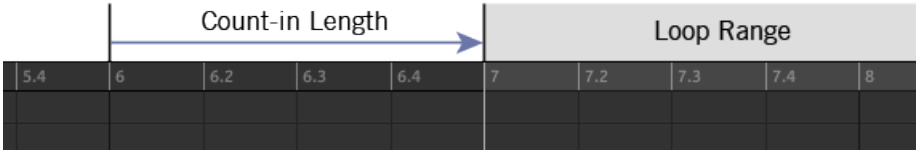
Count-in allows you to start the metronome before the sequencer and recording begins. This is very handy if you want to start recording a Pattern exactly on the downbeat.

When start recording with a Count-in, the following happens:

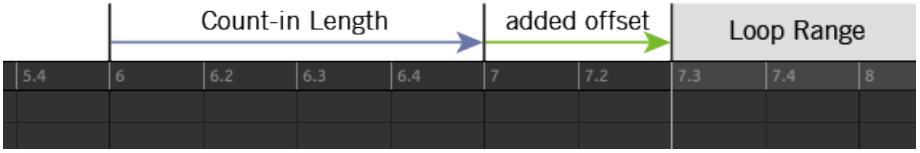
- The playhead jumps to the beginning of the Loop Range.
- You hear the metronome alone during the count-in phase (1, 2 or 4 bars).
- After the count-in phase, the recording starts in Overdub mode (see ↑7.2.1, Recording Your Patterns Live). The metronome turns off if it was off before the Count-in, otherwise it stays on.

You can adjust the metronome's volume, time signature, and downbeat/upbeat sounds. See section ↑7.2.3, Using the Metronome for more information.

If the current Loop Range does not start at the beginning of a bar (i.e. on a downbeat), the count-in phase will start with a downbeat, count the selected duration (1, 2 or 4 bars), and then add the offset between the beginning of the bar in which the beginning of the Loop Range is placed and the actual beginning of the Loop Range:



Count-in when the Loop Range starts at the beginning of a bar…



…and when the Loop Range doesn't start at the beginning of a bar.

You can also use the Count-in to start a recording in Replace mode.

Adjusting the Count-in Duration

You can choose how long the metronome should be heard before the recording actually starts. In the software this is done via the Count-in Length setting in the General page of the Preferences panel. Available values are 1 bar, 2 bars, and 4 bars. See section ↑2.6.1, Preferences – General Page for more details on the Count-in and metronome settings available in the Preferences panel.

On your controller:

- Press SHIFT + REC to start the Count-in and record in Overdub mode.

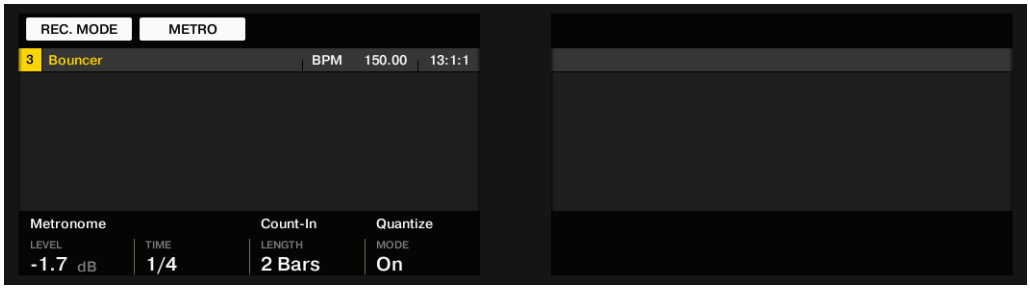
or

- Press SHIFT + ERASE + REC to start the Count-in and record in Replace mode (see section ↑7.2.1, Recording Your Patterns Live for more information on the Replace mode).

Adjusting the Count-in Duration

You can adjust the duration of the Count-in in the recording settings:

1. Press SHIFT + GRID to show the record settings.



2. Turn Knob 3 (LENGTH) to select a duration for the Count-in.

7.2.5 Quantizing while Recording

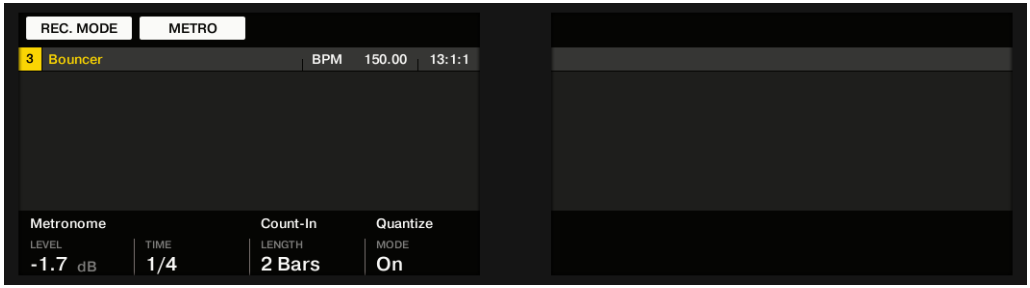
You can choose to have notes automatically quantized as you record them on the pads. This is called **Input Quantization**.



You can also quantize recorded notes at any time. See section ↑7.4.7, Quantizing Events/Notes for more information.

Using Input Quantize on Your Controller

1. Press SHIFT + GRID to show the record settings.



2. Turn Knob 4 (QUANTIZE MODE) to enable (ON) or disable (OFF) Input Quantization.

→ With Input Quantization enabled, as you are recording the pads your notes will be quantized according to the step size (i.e. Step Grid resolution) selected. If you turn the Step Grid off, no quantization will be applied. See section ↑7.1.7, Adjusting the Step Grid and the Nudge Grid for more information on the Step Grid and the step size.

7.3 Recording Patterns with the Step Sequencer

If you are familiar with classic drum machines you may want to program your Pattern using the step sequencer.

7.3.1 Step Mode Basics

On your controller the step sequencer is available via the **Step mode**. The Step mode allows you to program the steps to be played by the focused Sound in the current Group.

► Press STEP MODE in the PERFORMANCE section (in the middle left part of your controller) to switch your controller to Step mode.

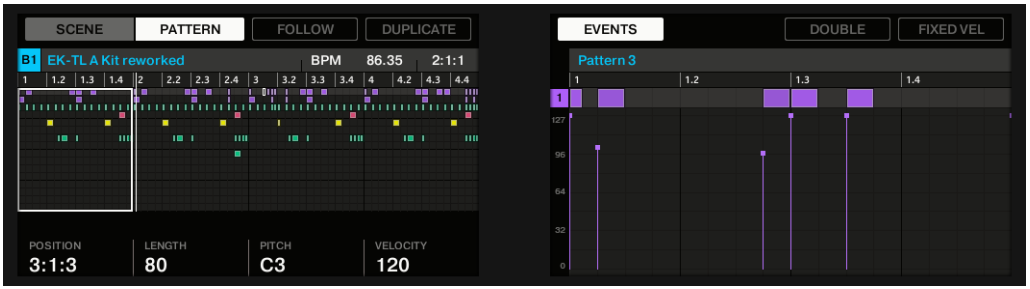
On the MASCHINE STUDIO controller, Step mode is a submode of Event Edit mode available on the PATTERN page of Arrange mode (see section ↑7.4.4, Editing Selected Events/Notes for more information on the Event Edit mode). Hence, it is very similar to the Event Edit mode.

The main difference with the Event Edit mode is that in Step mode each pad of your controller represents one step of a 16-step sequence for the focused Sound. The size of the steps depends on the current Step Grid settings. Lit pads indicate events on the corresponding steps.



For more information on the Step Grid, see section ↑7.1.7, Adjusting the Step Grid and the Nudge Grid.

The displays of your controller show the following:



The Step mode on the controller displays: the first bar of a four-bar Pattern.

The left display shows your entire Pattern, and the right display focuses on the portion of the Pattern corresponding to the steps controlled by your pads. The details shown in the displays depend on the current mode of your pads:

- If your pads are in Group mode:
  - The left display shows events for all Sounds in the Group.
  - The right display shows events for the focused Sound in one row at the top along with their velocities underneath.
- If your pads are in Keyboard mode both displays show notes for the focused Sound across the pitch scale. Depending on the pitches of the existing notes, turn Knob 7 to scroll pitches in the right display (in the left display the vertical zoom factor is automatically adjusted so that all notes appear in the display).

Recording a Sequence

1. Set the focus on the Sound you want to record by holding SELECT and pressing the pad of the desired Sound (see section ↑2.3.1, Setting the Focus on a Group or a Sound). You can also hold SHIFT and use Button 7 (UP) and Button 8 (DOWN) to select the previous or next Sound in the Group, respectively.
2. Press PLAY.
   You will see the playback position in the form of a light chasing through the pads, starting from pad 1, going up all four rows from left to right and ending at pad 16. At any time you can enable/disable PLAY as you see fit (e.g., to check how your actions affect the Pattern).

3. Press an unlit pad to create an event on that step.
   The pad lights up to indicate that there is an event on that step. The new event is one step long. The next time the playback position reaches that step the new event will be played.
4. Press a lit pad to remove that step.
   The pad turns off and the event on that step is deleted.
5. When you are done with the sequence of that Sound, repeat the previous steps to create sequences for all desired Sounds.

This way it's easy to quickly put some drums together.



A typical 4/4 line in Step mode.

In Step mode events are created with following settings:

- The event **pitch** is set to the Sound's base key. To understand how to change the base key of your Sounds, see section ↑5.1.3, Adjusting the Base Key.

- The event **velocity** is defined by how hard you hit the pads, unless you have enabled the Fixed Velocity option (see below).
- The event **length** is set to one step (hence, it depends on the current Step Grid settings).
- Obviously, the event **position** is defined by the pad you hit.

Checking Your Sequence (Right Display)

The right display of your controller provides more information on the sequence:

- Individual events/notes are represented by rectangular blocks. These always mirror the steps currently represented by your pads. In both Group and Keyboard mode, velocities are indicated by the event transparency: the more transparent the event, the softer the velocity (in Group mode velocities are additionally indicated under each event in the display).
- The playback position in the Pattern is indicated by a playhead travelling from left to right.
- The Step Grid is displayed in the background.

To switch the right display and your pads to another part of the sequence, you have two possibilities:

▶ Press Button 3 (FOLLOW) to enable/disable the Follow function.

→ When Follow is enabled, the right display and your pads automatically switch to the next 16 steps as soon as the playback position reaches the end of the portion currently displayed.



This Follow function is always synchronized with the Follow function in the software. See ↑7.1.3, Following the Playback Position in the Pattern for more information.



When you hold a particular pad (to record some modulation for this step, see Recording Modulation in Step Mode), the Follow function is temporarily disabled — it is automatically re-enabled when you release the pad. See below for more information on recording modulation in Step mode.

Otherwise you can manually switch to the previous/next steps:

▶ Turn Knob 6 to manually switch to the previous/next 16 steps both on your pads and on the right display.

If you manually switch to the previous/next 16 steps during the playback with FOLLOW enabled, FOLLOW is automatically disabled.

Unlike in Event Edit mode, Knob 5 does not adjust the zoom factor here: Indeed, since the display always represents 16 steps of the Pattern, the zoom factor is directly defined by the Step Grid resolution!

Preparing the Next Events

You can adjust the velocity of the next events that you will create by pressing the pads. The velocity of the events you create depends on the state of the Fixed Velocity option:

► Press Button 8 (FIXED VEL) to enable/disable the Fixed Velocity option.

- If Fixed Velocity is enabled, all events you create will have the velocity set by turning Knob 4 (FIX VEL).
- If Fixed Velocity is disabled, the velocity of each event will depend on how hard you hit the pad when creating the event.

The Fixed Velocity option only affects your next hits on the pads: It does not modify the velocity of existing events. To adjust the velocity of existing events, use the various methods described in section ↑7.3.2, Editing Events in Step Mode.

7.3.2 Editing Events in Step Mode

In Step mode you can quickly adjust the parameters of events on particular steps.

Editing Events in Step Mode on the Controller

You can adjust the various settings of your events via the left display:

1. Press and hold for a second the pad(s) of the step(s) you want to edit. If you want to adjust the last step you have created, you can skip this step: the last created event is automatically selected. You can also press the Page buttons left of the displays to quickly select individual steps.

2. Use Knobs 1–4 as described in the table below to edit the position, length, pitch, and velocity of the selected events:

Editing Tool	Description
Knob 1 (POSITION)	Nudges selected events, i.e. shifts selected events on the timeline according to the Nudge Grid (the events' offsets relative to the Nudge Grid are preserved). Hold SHIFT while you turn the knob to temporarily override the Nudge Grid quantization and adjust the positions in extremely small increments. See section ↑7.1.7, Adjusting the Step Grid and the Nudge Grid for more information on the Nudge Grid. If one event only is selected, its position is shown under POSITION. If several events are selected, the field shows (MULTI).
Knob 2 (LENGTH)	Moves the end of the selected events according to the Step Grid (the offset of each events' end relative to the Step Grid is preserved). Hold SHIFT while you turn the knob to temporarily override the Step Grid quantization and adjust the lengths in extremely small increments. If the events have different lengths, the length differences are retained as long as no event becomes shorter than one step. When only one event is selected, its length is shown under LENGTH. If several events are selected, the field shows (MULTI).
Knob 3 (PITCH)	Transposes the selected events by semitones. When only one event is selected, its pitch is shown under PITCH. If several events are selected, the field shows (MULTI).
Knob 4 (VELOCITY)	Adjusts the velocity of the selected events. If the events have different velocities, the velocities differences are retained as long as the limits (0 and 127) are not reached. When only one event is selected, its velocity is shown under VELOCITY. If several events are selected, the field shows (MULTI).



These parameters are the same as in Event Edit mode. See section ↑7.4.4, Editing Selected Events/Notes for more information.

Quick Edit Shortcuts for the Selected Steps

You can also quickly adjust the velocity, pitch, and position of any events via the Quick Edit shortcuts:



Use the jogwheel and the FUNCTION buttons underneath for the Quick Edit shortcuts.

1. Press and hold the pad(s) of the step(s) you want to edit.
2. To adjust the events' velocity, press the FUNCTION buttons until the VOLUME indicator lights up under the jog wheel, and turn the jog wheel.
   The adjusted value appears on the left display.
3. To adjust the events' pitch, press the FUNCTION buttons until the TUNE indicator lights up under the jog wheel, and turn the jog wheel.
   The adjusted value appears on the left display.
4. To finely adjust the events' position, press the FUNCTION buttons until the SWING indicator lights up under the jog wheel, and turn the jog wheel.
   The adjusted value appears on the left display.
5. When you are done, release the pad(s).

The event position will be adjusted independently of the current Step Grid: It is designed as a fine adjustment within the current step.

Alternatively you can use the controls in the EDIT section of your controller to edit the selected events — see section ↑7.4.4, Editing Selected Events/Notes, ↑7.4.5, Deleting Events/Notes, ↑7.4.6, Cut, Copy, and Paste Events/Notes, and ↑7.4.7, Quantizing Events/Notes for more information on the available commands.

7.4 Editing Events

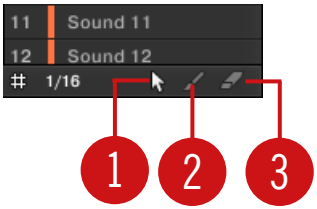
Many creation and editing commands on events/notes are available directly via mouse actions in the Event area of the Pattern Editor. They will be applied according to the selected Step Grid resolution (see ↑7.1.7, Adjusting the Step Grid and the Nudge Grid). In Group view, the Sound in focus will change according to the row you click in. Selected notes are highlighted.

Events vs. Notes

Basically events and notes are the same thing: a trigger for a Sound with a particular velocity, pitch, length, etc. If the word "note" is used when dealing with melodic instruments and "event" when dealing with drum kits, keep in mind that both words have the same meaning in the MASCHINE context.

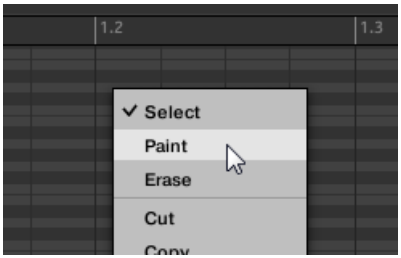
7.4.1 Editing Events with the Mouse: an Overview

In the software you can choose from three **Mouse Edit modes**. Each of them provide different mouse actions in the Event area.



The Edit Mode selector.

► To choose a Mouse Edit mode, click the desired icon in the Edit Mode selector, at the bottom left of the Pattern Editor. You can also right-click ([Ctrl]-click on Mac OS X) in the background of the Event area and select the desired mode from the context menu.



(**1**) **Select mode**: Provides an exhaustive set of actions for creating, selecting, editing, and deleting events/notes.

(**2**) **Paint mode**: Provides quick actions for creating, resizing and deleting events/notes.

(**3**) **Erase mode**: Provides an easy way to bulk delete events/notes.

Listed here are all available mouse actions from the Mouse Edit modes. For more details on specific actions, please refer to the next sections

Mouse in Select Mode

The following table is an overview of available mouse actions in Select mode (works in both Group view and Keyboard view, see ↑7.1.5, Group View and Keyboard View). All these actions are described in more details in the following sections.

Action	Function
Creating Notes (see ↑7.4.2, Creating Events/Notes for details)	
Double-click in Event area's background	Creates note
Deleting Notes (see ↑7.4.5, Deleting Events/Notes for details)	

Action	Function
Double-click note	Delete selected notes
Right-click (Mac OS X: [Ctrl]-click)	Delete selected notes
Selecting Notes (see ↑7.4.3, Selecting Events/Notes for details)	
Click unselected note	Select note
[Shift] + click unselected note	Add note to current selection
[Shift] + click selected note	Remove note from selection
Drag in Event area's background	Multiple selection (selection frame)
Click in Event area's background	Deselect all notes
Editing Selected Notes* (see ↑7.4.4, Editing Selected Events/Notes for details)	
Drag note horizontally	Moves selected notes in time according to the Step Grid.
[Ctrl] + drag note horizontally (Mac OS X: [Cmd] + drag note)	Freely moves selected notes in time (overrides the Step Grid quantization).
[Alt] + drag note	Duplicates selected notes. When you drag horizontally, the copies are moved in time according to the Step Grid.
Drag left/right note border	Moves the start/end of selected notes according to the Step Grid, thereby resizing the notes.

Action	Function
[Ctrl] + drag left/right note border (Mac OS X: [Cmd] + drag left/right border)	Freely moves the start/end of selected notes (overrides the Step Grid quantization), thereby resizing the notes.
Drag note vertically	Group view: Moves selected notes to another Sound of the Group. Keyboard view: Transposes selected notes.

* When editing, mouse actions can be performed on any of the selected notes — they will apply to all selected notes.

Mouse in Paint Mode

With Paint mode enabled, the mouse works like a paint-brush tool:

- Click in the background of the Event area and drag the mouse with the button pressed to set notes wherever you move the cursor. Notes are created only for the Sound in which you started.

The other way round:

- Click a note and move the mouse cursor with the button pressed to erase all notes under the mouse cursor. Only Notes for the selected Sound are erased.

Additionally, you can resize notes like in Select mode:

- Drag the left or right border of a note horizontally to move its start/end according to the Step Grid. Hold [Ctrl] ([Cmd] on Mac OS X) while dragging to override the quantization.

Mouse in Erase Mode

With Erase mode enabled, the mouse works like an eraser:

- Click and hold the left mouse button down to erase notes wherever you move the cursor.



Contrary to Paint mode, in Erase mode notes are always deleted, no matter if you first click a note or in the background of the Event area. Furthermore, in Erase mode notes can be deleted in several Sounds at once, independently of where you first clicked.

7.4.2 Creating Events/Notes

In the software you can create new events anywhere in the Event area using your mouse. The procedure depends on the active Mouse Edit mode (Select, Paint or Erase).

Each event is created at the beginning of the step in which your mouse cursor is located, according to the Step Grid settings. If the Step Grid is disabled, the event is created at the exact position of your mouse cursor.

In Group view you can create events at the base key for all Sounds in the Group, no matter which Sound is focused. In Keyboard view you can create events at all keys (pitches) for the focused Sound — you need to set the focus to another Sound in order to create events for that Sound.

Mouse in Select Mode

- To create a new event in Select mode, double-click at the desired location in the background of the Event area.

Mouse in Paint Mode

- To create a new event in Paint mode, simply click at the desired location. Click and hold your mouse and move the cursor horizontally to quickly create a series of events.



You cannot create events with your mouse in Erase mode.

Creating Events Beyond the Pattern's End

If you create an event beyond the end of the Pattern in the Event area, the Pattern is automatically extended to the next Pattern Grid division after the new event so that the Pattern includes this new event.



For more information on the Pattern Length and the Pattern Grid, see section ↑7.1.6, Adjusting the Pattern Grid and the Pattern Length.

Your controller offers numerous ways to create events — on your controller this is referred to as "recording Patterns." For details on this please refer to section ↑7.2, Recording Patterns in Real Time and ↑7.3, Recording Patterns with the Step Sequencer.

7.4.3 Selecting Events/Notes

MASCHINE provides you many ways to select events/notes in your Pattern. This notably allows you to precisely define which events your next edits will be applied to.

In the software you can select events with your mouse only if **Select mode** is selected in the Edit Mode selector:



Click the cursor icon on the left to select events with your mouse.

Action	Function
Selecting Events	
Click unselected event	Select event
[Shift] + click unselected event	Add event to current selection
[Shift] + click selected event	Remove event from selection
Drag in Event area's background	Multiple selection (selection frame)
Click in Event area's background	Deselect all events

Selecting All Events

You can select all events displayed in the Event area via the usual keyboard shortcut on your operating system:

- ► Click anywhere in the Event area and press [Ctrl] + [A] ([Cmd] + [A] on Mac OS X) on your computer keyboard to select all displayed events.

→ If the Pattern Editor is in Group view this will select all events for all Sounds in the Pattern. If the Pattern Editor is in Keyboard view this will select all events at all pitches for the focused Sound.

Selecting Events/Notes on the Controller

Using your controller, you can quickly select particular events from the current Pattern and in order to edit them without affecting the other events.

To select events in your Pattern:

- ▶ Hold EVENTS to enter Event Select mode — or press EVENTS + Button 1 to pin the Event Select mode.

→ The EVENTS button lights up. You can now select notes and events using various tools: the pads, Buttons 5–8, Knobs 1–4, and the Page buttons (left of the displays).

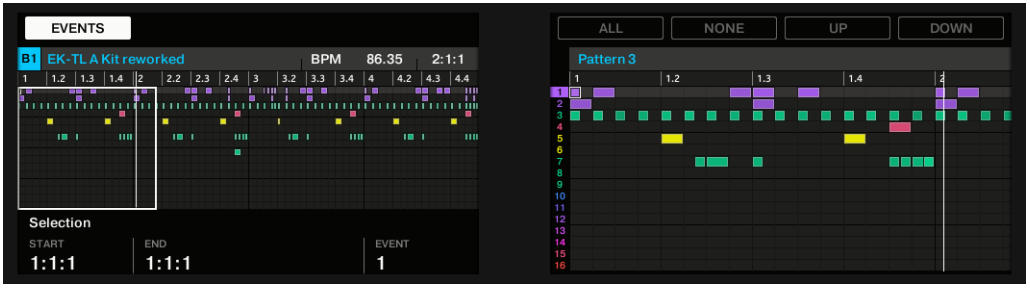
> The Event Edit mode is well suited for use with the Event Select mode! For example, while in Event Edit mode, you can quickly hold EVENTS (in the TRANSPORT section of your controller) to momentarily switch to Event Select mode, select particular events, and release EVENTS to switch back to Event Edit mode and edit the events you have just selected!

Depending on the current pad mode (Group mode or Keyboard mode, see ↑5.1.1, The Pad View in the Software), these tools will select events differently, as described in the following paragraphs.

Event Select Mode: Selecting Events (Pads in Group mode)

In Group mode (the default mode of the pads) each pad represents a specific Sound of the focused Group.

When your pads are in Group mode the Event Select mode looks as follows:



Selecting events on the controller with the pads in Group mode.

- The left display shows an overview of the events in your Pattern for all Sounds in the Group.
- The right display shows a detailed view of a portion of your Pattern with events and their velocities for the focused Sound.

You can adjust the right display as follows:

► Turn Knob 5 and 6 to zoom in/out and scroll on the time axis (horizontal axis), respectively.

You have following selection tools at your disposal:

Selection Tool	Description
Pads	**Unlit pads** indicate Sounds for which the Pattern has no events. Nothing happens when you press them. **Dimmed pads** indicate Sounds for which events can be selected: Press any dimmed pad to add all events for that Sound to the selection. The pad turns fully lit to indicate that all its events are selected. You can press any additional dimmed pad to add its events to the selection. Pressing a dimmed pad additionally switches the focus to the corresponding Sound. **Fully lit pads** indicate Sounds for which all events are selected: Press any lit pad to remove all its events from the selection (the pad turns dim lit).
Button 7/8 (ALL/ NONE)	Selects/deselects all events for all Sounds, i.e. all events in the Pattern.
Button 5/6 (UP/ DOWN)	Switch the focus to the previous/next Sound in order to add or remove some of its events to/from the selection (using Knob 1, 2, and 4, and the Page buttons, see below). The name of the selected Sound is indicated under the EVENTS label in the top left corner of the left display.
Page buttons	Drop the current selection and select the previous/next individual event for the focused Sound.

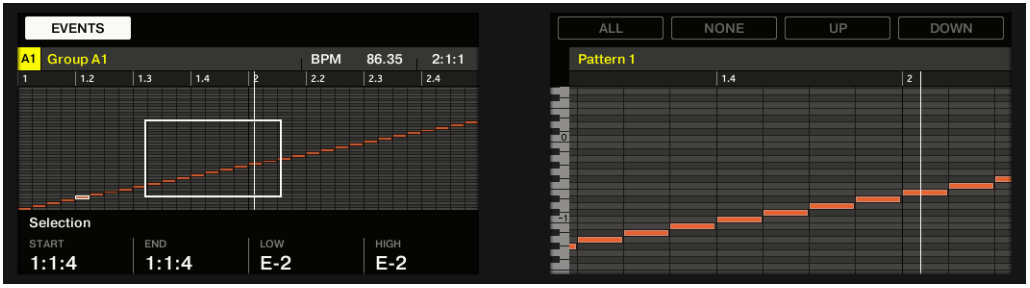
Selection Tool	Description
Knob 1/2 (START/ END)	Define the selection's start and end points in the timeline for the focused Sound. All events within this time interval are included into the selection.
Knob 4 (EVENT)	Selects individual events for the focused Sound using the events' index number (their "order of appearance" in the Pattern). If the selection contains more than one event, the EVENT field indicates (MULTI).

By combining these tools you can precisely define the selection of events you want to edit.

Event Select Mode: Selecting Notes (Pads in Keyboard mode)

In Keyboard mode each pad represents a specific pitch of the focused Sound.

When your pads are in Keyboard mode the Event Select mode looks as follows:



Selecting events on the controller with the pads in Keyboard mode.

- The left display shows an overview of the events in your Pattern for all pitches of the focused Sound.
- The right display shows a detailed view of a portion of your Pattern containing events on two octaves.

You can adjust the right display as follows:

► Turn Knob 5 and 6 to zoom in/out and scroll on the time axis (horizontal axis), respectively.

► Turn Knob 7 to scroll on the pitch axis (vertical axis) from events at the lowest pitch until events at the highest pitch. If all events are within two octaves, they all appear in the display and Knob 7 is inactive.

You have following selection tools at your disposal:

Selection Tool	Description
Pads	**Unlit pads** indicate pitches at which the Pattern has no notes. Nothing happens when you press them. **Dimmed pads** indicate pitches at which notes can be selected: Press any dimmed pad to add all notes at that pitch to the selection. The pad turns fully lit to indicate that all its notes are selected. You can press any additional dimmed pad to add its notes to the selection. **Fully lit pads** indicate pitches at which all notes are selected: Press any lit pad to remove all its notes from the selection (the pad turns dim lit).
Button 7/8 (ALL/ NONE)	Selects/deselects all notes for all pitches of the current Sound — in short all events of that Sound.
Button 5/6 (UP/ DOWN)	Switch the focus to the previous/next Sound in order to add or remove some of its notes to/from the selection. The name of the selected Sound is indicated under the EVENTS label in the top left corner of the left display.
Knob 1/2 (START/ END)	Define the selection's start and end points in the timeline for the focused Sound. All notes within this time interval and within the pitch interval defined by LOW and HIGH (see below) are included into the selection.
Knob 3/4 (LOW/ HIGH)	Define the selection's lowest and highest pitch for the focused Sound. All notes within this pitch interval and within the time interval defined by START and END (see above) are included into the selection.
Page buttons	Drop the current selection and select the previous/next individual event for the focused Sound.

By combining these tools you can precisely define the selection of notes you want to edit.

7.4.4 Editing Selected Events/Notes

Once you have selected particular events, you can edit them in various ways.

In the software you can edit events with your mouse only if **Select mode** is selected in the Edit Mode selector:



Click the cursor icon on the left to select events with your mouse.

Action	Function
Editing Selected Notes	
Drag note horizontally	Moves selected notes in time according to the Step Grid (see quantizing rules below).
[Ctrl] + drag note horizontally (Mac OS X: [Cmd] + drag note)	Freely moves selected notes in time (overrides the Step Grid quantization).
[Alt] + drag note	Duplicates selected notes. When you drag horizontally, the copies are moved in time according to the Step Grid (see quantizing rules below).
Drag left/right note border	Moves the start/end of selected notes according to the Step Grid, thereby resizing the notes (see quantizing rules below).
[Ctrl] + drag left/right note border (Mac OS X: [Cmd] + drag left/ right border)	Freely moves the start/end of selected notes (overrides the Step Grid quantization), thereby resizing the notes.
Drag note vertically	Group view: Moves selected notes to another Sound of the Group. Keyboard view: Transposes selected notes.

Action	Function
Double-click note	Deletes selected notes.
Right-click (Mac OS X: [Ctrl]-click)	Deletes selected notes.

If multiple notes are selected, mouse actions can be performed on any of the selected notes — they will apply to all selected notes.

If you perform any of the actions listed above on a note not included in the current selection, the selection is dropped and the note you are editing will be the only note affected by your edit.



MASCHINE also provides an exhaustive set of keyboard shortcuts to edit your events! For a detailed list please refer to the Hardware Control Reference document available in the Help menu of MASCHINE's Application Menu Bar and in the *Help* submenu of the MASCHINE menu.

Quantization when Editing a Single Event/Note

By default, all dragging actions on the time axis are quantized according to the Step Grid:

- When you drag a note (or its duplicate) horizontally, its original offset with the Step Grid is preserved, unless you drag the note near a grid line — in that case it will snap to the grid.
- When you resize a note by dragging its start/end border, the new start/end border will snap to the Step Grid.



To override the quantization and freely adjust the note position or size, hold [Ctrl] ([Cmd] on Mac OS X) while dragging!

Quantization when Editing Multiple Events/Notes at Once

When you drag multiple notes (or their duplicates) on the time axis or resize them according to the Step Grid, the various notes in the selection are affected as follows:

- The note you click is moved or resized according to the quantizing rule described above.

- All other notes in the selection are moved or resized by the same amount (regardless of their own quantizing rules). When resizing, if the notes have different lengths the length differences are retained as long as no event becomes shorter than one step.



For example, if you have a drum roll, a flam or any custom sequence happening right before a beat, this allows you to move the whole sequence to another beat with a perfect timing while keeping its feel untouched.

Dragging vs. Nudging

Dragging with the mouse is different from the Nudge command on your controller:

- Whereas dragging is based on the Step Grid, the Nudge command is based on the Nudge Grid (see section ↑7.1.7, Adjusting the Step Grid and the Nudge Grid).
- Whereas you can drag notes beyond the end of the Pattern, nudged notes reaching the end of the Pattern are automatically sent to the beginning of the Pattern.
- If a note is not on a Step Grid division, dragging it with Step Grid enabled will alternate between snapping to Step Grid divisions and snapping to positions that preserve its original offset with the Step Grid (see quantization rule above).

In the software the Nudge command is not available with your mouse but via a keyboard shortcut:

► Press [Alt] + the left/right cursor key on your computer keyboard to nudge the selected notes by one Nudge Grid division. If no event is selected, all events in the Pattern will be affected.

See the hardware section below for more information on the Nudge command.

Editing Selected Events/Notes on the Controller

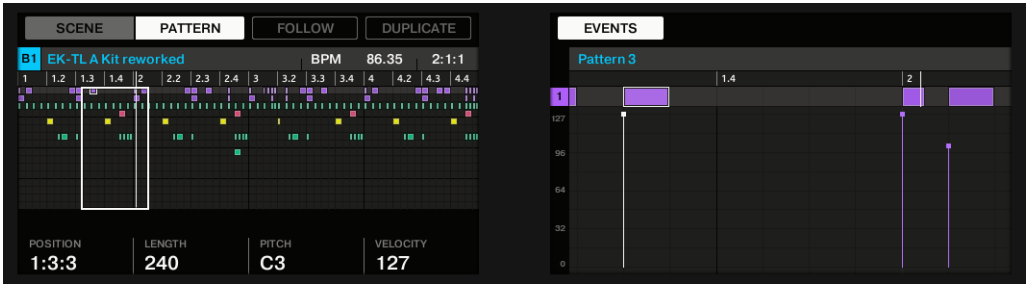
Your controller provides various features in order to edit the events you have selected.

Editing Events and Notes via the Event Edit Mode

The Event Edit mode provides you with a few essential editing functions. These functions will be applied to the current selection of events.

1. Press ARRANGE to enter Arrange mode.
   ARRANGE lights up.
2. Press Button 2 (PATTERN) to enter Pattern Arrange mode.
   Button 2 lights up and PATTERN is highlighted in the left display.
3. Press Button 5 (EVENTS) to enter Event Edit mode.
   Button 5 lights up and EVENTS is highlighted in the right display.

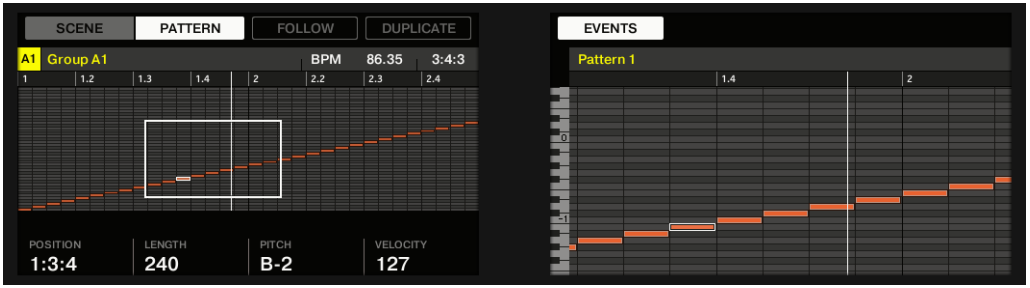
If your pads are in **Group mode** the Event Edit mode looks as follows:



The Event Edit mode on the controller with pads in Group mode.

- The left display shows an overview of the events in your Pattern for all Sounds in the Group.
- The right display shows a detailed view of a portion of your Pattern with events and their velocities for the focused Sound.

If your pads are in **Keyboard mode** the Event Edit mode looks as follows:



The Event Edit mode on the controller with pads in Keyboard mode.

- The left display shows an overview of the events in your Pattern for all pitches of the focused Sound.
- The right display shows a detailed view of a portion of your Pattern containing events on two octaves.

You can adjust the right display as follows:

► Turn Knob 5 and 6 to zoom in/out and scroll on the time axis (horizontal axis), respectively.

► If your pads are in Keyboard mode, turn Knob 7 to scroll on the pitch axis (vertical axis) from events at the lowest pitch until events at the highest pitch.



The Event Edit mode is well suited for use with the Event Select mode! For example, while in Event Edit mode, you can quickly hold EVENTS (in the TRANSPORT section of your controller) to momentarily switch to Event Select mode, select particular events, and release EVENTS to switch back to Event Edit mode and edit the events you have just selected!



The Event Edit mode additionally provides a few selection shortcuts inspired from Event Select mode: Hold SHIFT and use Button 5 and 6 to select/deselect all events displayed, and Button 7 and 8 to switch the focus to the previous/next Sound in the Group, respectively.

Under the left display Knob 1–4 provide following editing functions:

Editing Tool	Description
Knob 1 (POSITION)	Nudges selected events, i.e. shifts selected events on the timeline according to the Nudge Grid (the events' offsets relative to the Nudge Grid are preserved). Hold SHIFT while you turn the knob to temporarily override the Nudge Grid quantization and adjust the positions in extremely small increments. See section ↑7.1.7, Adjusting the Step Grid and the Nudge Grid for more information on the Nudge Grid. If one event only is selected, its position is shown under POSITION. If several events are selected, the field shows (MULTI). See also the alternate method described below.
Knob 2 (LENGTH)	Moves the end of the selected events according to the Step Grid (the offset of each event's end relative to the Step Grid is preserved). Hold SHIFT while you turn the knob to temporarily override the Step Grid quantization and adjust the lengths in extremely small increments. If the events have different lengths, the length differences are retained as long as no event becomes shorter than one step. If one event only is selected, its length is shown under LENGTH. If several events are selected, the field shows (MULTI).
Knob 3 (PITCH)	Transposes the selected events by semitones. If one event only is selected, its pitch is shown under PITCH. If several events are selected, the field shows (MULTI). See also the alternate method described below.
Knob 4 (VELOCITY)	Adjusts the velocity of the selected events. If the events have different velocities, the velocities differences are retained as long as the limits (0 and 127) are not reached. If one event only is selected, its velocity is shown under VELOCITY. If several events are selected, the field shows (MULTI).



You can also use these editing functions to quickly create variations of your Patterns during a live performance!

The following paragraphs will show you alternate editing functions available in the EDIT section of your controller. These functions also work outside Select mode.

Nudge Events and Notes

Nudging allows you to shift selected events by the Nudge Grid resolution (the events' offsets relative to the Nudge Grid are preserved).



The Nudge Grid is based on the Step Grid and allows you to define even smaller jumps than the Step Grid divisions to move your events more precisely. See section ↑7.1.7, Adjusting the Step Grid and the Nudge Grid for more details.

- Hold NUDGE (above the jog wheel) and turn the jog wheel to nudge the selected events to the left or to the right. If nothing is selected, all event/notes in the Pattern will be affected.



Press and turn the jog wheel (or hold SHIFT while you turn it) to adjust the value in finer increments.

Transpose Events and Notes

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

- To transpose the selected events in semitones hold NOTE (above the jog wheel) and turn the jog wheel. If nothing is selected, all event/notes in the Pattern will be affected.
- To transpose the selected events in octaves hold NOTE (above the jog wheel) and press and turn the jog wheel (or hold SHIFT + NOTE and turn the jog wheel). If nothing is selected, all events in the Pattern will be affected.

7.4.5 Deleting Events/Notes

In the software you can delete events in the Event area using your mouse. The procedure depends on the active Mouse Edit mode (Select, Paint or Erase).

Mouse in Select Mode

- To delete events in a Pattern, double-click or right-click (Mac OS X: [Ctrl]-click) them.

This also works on any selection of events: double-click or right-click (Mac OS X: [Ctrl]-click) any of the selected events to delete them all.

If some events are selected, you can also press [Del] or [Backspace] on your computer keyboard to delete them. See section ↑7.4.3, Selecting Events/Notes to know how to select events.

Mouse in Paint Mode

- To delete an event, simply click it. Click and hold an event and move the cursor to quickly delete series of events.

Mouse in Erase Mode

- To delete an event, simply click it. Click and hold the mouse anywhere in the Event area and move the cursor to quickly delete series of events.

Deleting Events/Notes on the Controller

Your controller provides you with several tools to delete events from the current Pattern.

Quick Deleting Events or Notes

The quickest and easiest way to delete events is the following:

- Press EVENTS + ERASE + the desired pad to delete from the Pattern all events for that Sound (if pads are in Group mode) or all notes at that pitch for the focused Sound (if pads are in Keyboard mode).



For more information on Pad modes, please refer to section ↑5.1.1, The Pad View in the Software.

As soon as you hold EVENTS + ERASE, some pads light up to indicate where there is something to delete:

- If your pads are in Group mode, the lit pads show you the Sounds for which the Pattern contains events.

- If your pads are in Keyboard mode, the lit pads show you the pitches (of the focused Sound) for which the Pattern contains events.

In other terms you don't need to press any unlit pad, since there are no events to delete there. While holding EVENTS + ERASE you can press several pads to delete their events.



If you accidentally deleted events, press UNDO (in the EDIT section) to undo it!

Deleting the Selected Events

Once you have selected particular events (see ↑7.4.3, Selecting Events/Notes for more on this), you can delete them from the Pattern:

▶ Press CLEAR (in the EDIT section) to erase the selected events. If nothing is selected, all event/notes in the Pattern will be affected.

Deleting Events while Playing

If the sequencer is currently playing, you can selectively erase events at the play position:

▶ While the Pattern is playing, hold ERASE + the desired pad to progressively delete the events for that Sound (if pads are in Group mode) or the notes at that pitch for the focused Sound (if pads are in Keyboard mode) as they are reached by the playhead.

→ As long as you hold the pad, the corresponding events are deleted as the playhead moves on.

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 press UNDO/REDO to get back to where you were before.

Deleting Events for the Entire Group at Playback Position

Using your controller you can erase events for all Sounds in the Group at the playback position.

▶ While the Pattern is playing, hold ERASE + the desired Group button A–H to progressively delete events for all Sounds in that Group as they are reached by the playhead.

Deleting Events via the Transport Functions

If the sequencer is not playing, you can erase events on either side of the playhead by manually moving the playhead:

- ► While playback is off, hold ERASE and turn the jog wheel or press the FUNCTION buttons (under the jog wheel) to jump to the previous/next step and delete all events found on the way for the selected Sound(s).

Please note the following:

- If multiple Sounds are selected, all of them will be affected. See section ↑4.1.3, Selecting Multiple Sounds or Groups for more information.
- The jumps are based on the step size, that is on the Step Grid setting. See section ↑7.1.7, Adjusting the Step Grid and the Nudge Grid for more information.
- The command has the same effect whether your pads are in Group mode or in Keyboard mode.

7.4.6 Cut, Copy, and Paste Events/Notes

You can also cut, copy and paste selected events to another location in the same Pattern or to a different pattern and for the same Sound or another one (possibly in another Group).

To cut, copy, and paste the selected events/notes in the software, do the following:

1. To cut or copy the selected events, press [Ctrl] + [X] or [Ctrl] + [C] ([Cmd] + [X] or [Cmd] + [C] on Mac OS X), respectively. You can also right-click ([Ctrl]-click on Mac OS X) in the background of the Event area and select *Cut* or *Copy* from the context menu.
   The selected events are placed in the clipboard, ready to be pasted. If you selected the *Cut* command, they are additionally removed from their original location.
2. If you want to paste the events in another Pattern, open the Pattern Manager, double-click the Pattern in which you want to paste the events (see section ↑7.7.1, The Pattern Manager and Pattern Mode for more information on the Pattern Manager).
3. Click anywhere in the Event area of the newly selected Pattern.
4. To paste the events, press [Ctrl] + [V] ([Cmd] + [V] on Mac OS X). You can also right-click ([Ctrl]-click on Mac OS X) the desired location in the background of the Event area and select *Paste* from the context menu.

→ The events will be pasted according to the rules described hereinafter. If no event is selected, all displayed events will be affected: in Keyboard view these are all events of the focused Sound; in Group view these are all events of all Sounds within the Group (see section ↑7.1.5, Group View and Keyboard View for more information on Group view and Keyboard view).



If you have copied events from multiple Sounds as the Pattern Editor was in Group view, and then switch to Keyboard view before pasting the events, only the copied events from the Sound previously focused will be pasted in the new focused Sound.

Pasting Rules

The location at which the cut or copied events will be pasted depends on the following:

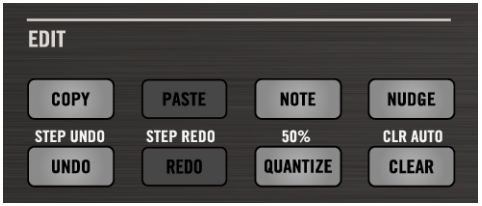
- In any case the first pasted event will be quantized to the current Step Grid, and the following pasted events will retain their time offset to this first event.
- If you paste the events via the *Paste* command from the context menu of the Event area's background:
  - The first copied event is pasted at the closest step near the mouse cursor on the time axis.
  - In Group view the events copied from the topmost Sound in the Sound List are pasted onto the focused Sound. In Keyboard view the events copied from the highest pitch are pasted at the pitch of the row in which the mouse cursor is located.
  - All copied events retain their position relative to each other, both on the time axis and on the vertical axis (Sound List in Group view, pitches in Keyboard view).
  - If some of the pasted events go beyond the Pattern's end, the Pattern is extended to the next Pattern Grid division after the last pasted event.
- If you paste the events via the shortcut on your computer keyboard **while playback is on**:
  - If you haven't changed the Sound focus, events are pasted one step after the original events.

- If you have changed the Sound focus, events are pasted at the same timings as the original events. In Group view the events copied from the topmost Sound in the Sound List are pasted onto the focused Sound, and the other events will retain their vertical position relative to these topmost events.

- If you paste the events via the shortcut on your computer keyboard **while playback is off**:
  - If you haven't changed the Sound focus or the playhead position, events are pasted one step after the original events.
  - If you haven't changed the Sound focus but changed the playhead position, events are inserted with the first event starting at the playhead position. All following events will retain their position relative to the first event.
  - If you have changed the Sound focus without changing the playhead position, events are inserted at the same timings as the original events. In Group view the events copied from the topmost Sound in the Sound List are pasted onto the focused Sound, and the other events will retain their vertical position relative to these topmost events.
  - If you have changed both the Sound focus and the playhead position (e.g., by clicking in the timeline above the Event area, see section ↑7.1.4, Jumping to Another Playback Position in the Pattern), events are inserted with the first event starting at the playhead position. In Group view the events copied from the topmost Sound in the Sound List are pasted onto the focused Sound, and all copied events retain their position relative to each other, both on the time axis and on the vertical axis (Sound List in Group view, pitches in Keyboard view).

Cut, Copy, and Paste Events/Notes on the Controller

To copy and paste selected events from your controller, use the buttons of the EDIT section above the jog wheel:



The COPY, PASTE, and CLEAR button in the EDIT section.

1. To copy the selected events, press COPY.
2. If you want to cut the selected events before pasting them, CLEAR to delete the original events.
3. To paste them, press PASTE.

→ The events will be pasted according to the same rules as when using the keyboard shortcuts in the software (see above). If no event is selected, all displayed events will be affected: in Keyboard view these are all events of the focused Sound; in Group view these are all events of all Sounds within the Group (see section ↑7.1.5, Group View and Keyboard View for more information on Group view and Keyboard view).



You can also copy events from one Pattern to another: to do this, copy the selected events, select the Pattern you want to copy them to and then paste them.

7.4.7 Quantizing Events/Notes

Quantization is the process of moving events to the closest steps. You can quantize your notes at any time, no matter how you recorded them. They will be quantized according to the step size (i.e. Step Grid resolution) selected. If you turn the Step Grid off, no quantization will be applied. See section ↑7.1.7, Adjusting the Step Grid and the Nudge Grid above for more information on the Step Grid and the step size.

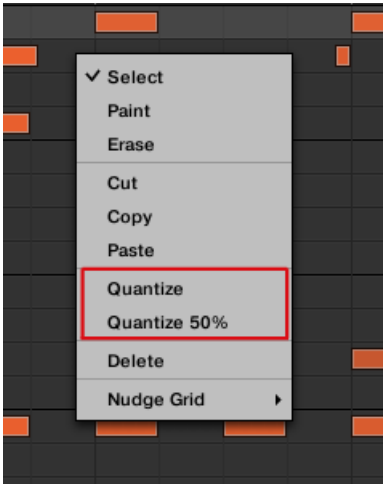
There are two strengths of quantization:

- **Full quantization**: Moves each event directly onto the closest step of the current Step Grid. This allows a perfectly regular rhythm.
- **Half quantization (50%)**: Moves each event half way toward the closest step of the current Step Grid. This allows a tighter rhythm while retaining a human feel.

In addition, if you record notes from a MIDI keyboard or using the pads, and create unwanted double notes where you don't want them; MASCHINE automatically detects and removes these double notes while quantizing.

Quantizing Events via the Pattern Editor Context Menu

Quantize and Quantize 50% is available from the Pattern Editor context menu. This menu provides the same functionality as pressing Quantize and Quantize 50% on the MASCHINE hardware.



Quantize and Quantize 50% in the Pattern Editor context menu.

To apply full or half quantization using the MASCHINE software:

1. Select the events in the Pattern Editor you want to quantize. If nothing is selected, the whole Pattern will be quantized.
2. To apply full quantization to the selected events, right-click the mouse and select Quantize from the context menu.
3. To apply only a small amount of quantization to keep the groove you created after recording your pattern, right-click the mouse and select Quantize 50% from the context menu.
4. To undo/redo Quantize use hotkeys: Ctrl+Z/Ctrl+Y (Cmd+Z/Cmd+Y on Mac).

Using Quantization on the Controller

You can quantize your notes at any time, no matter how you recorded them. They will be quantized according to the step size (i.e. Step Grid resolution) selected. If you turn the Step Grid off, no quantization will be applied. See section ↑7.1.7, Adjusting the Step Grid and the Nudge Grid for more information on the Step Grid and the step size.



You can also choose to have notes automatically quantized as you record them on the pads! See section ↑7.2.5, Quantizing while Recording for more information.

To apply full or half quantization:

1. Select the events you wish to quantize. If nothing is selected, the whole Pattern content will be quantized. See ↑7.4.3, Selecting Events/Notes to know how to select events.
2. To apply full quantization to the selected events, press QUANTIZE (in the EDIT section of your controller).
3. To apply only a bit of quantization to keep the groove you created by playing your notes live, press SHIFT + QUANTIZE.



You can repeatedly apply half quantization until you are happy; you could for example apply it until the notes are close enough to the Step Grid to sound tight, but loose enough to maintain their basic "feel." If it is too quantized for you, just press UNDO to undo the last change.

7.4.8 Quantization While Playing

Input Quantization mode allows you to quantize events also *as you play them* on the pads.

The Input Quantization settings previously available have been renamed to include the new Input Quantization mode — now Input Quantization can be set to following modes in the Preferences:

- **None**: Input Quantization is disabled. Events you play or record on the pads are not quantized.
- **Record**: Input Quantization is applied only when you record the pads.

- **Play/Rec**: Input Quantization is applied both when you play on the pads and when you record them.



In Play/Rec mode the quantization applied while playing is slightly different from the quantization applied while recording: When recording, all events are quantized to the closest step — possibly ahead of the event. When playing, on the other hand, events occurring in the first half of the steps are left untouched (since you cannot bring them forward in the timeline!) whereas events occurring in the second half of the steps are quantized to the next step.

Choosing an Input Quantization Mode

In the software the Input Quantization can be configured via the Quantize setting available in the Input section at the bottom of the General page in the Preferences panel:

► Click the Quantize menu and select the desired Input Quantization mode from the three modes available (see their description above).

Choosing an Input Quantization on Your Controller

On your controller the Input Quantization can be configured via the recording settings:

1. Press SHIFT + GRID to show the recording settings.
2. Turn Knob 5 (Quantize MODE) to select the desired Input Quantization mode from the three modes available (see their description above).

7.4.9 Doubling a Pattern

Your controller provides a useful shortcut to double the length and content of the current Pattern. In the software, you can do this for example by copying all events, putting the Playhead indicator at the end of the Pattern, and pasting the events (the Pattern Length is automatically doubled).

To double the length and content of a Pattern:

1. Hold PATTERN to enter Pattern mode.
2. Select the desired Pattern by pressing its pad.
3. Press Button 3 (DOUBLE).

→ The Pattern is doubled.



Keep in mind that doubling a Pattern twice results in a Pattern that is four times as long.



You can also double the selected Pattern in Pattern Arrange mode: press ARRANGE then Button 2 (PATTERN) to enter Pattern Arrange mode, then press Button 8 (DOUBLE) to double the selected Pattern.

7.4.10 Adding Variation to Patterns

Variation provides an abundance of inspiration and even "happy accidents" when applied to your workflow. The variation engine contains two modes:

- **Humanize**: This mode adds natural rhythmic fluctuations to programmed sequences.
- **Random**: This mode provides randomly generated patterns or variations of your beats and melodies based on customizable values.

Variation is available in both Pad mode and Keyboard mode and can be applied to a Sound. In Keyboard mode the Variation Random mode contains extra parameters that allow you to add variety to melodic content.

To access Variation mode:

1. Select the Group (A–H) containing the Sound to which you want to apply the variation.
2. Press SELECT + Sound (1–16).
3. Press SHIFT + PATTERN to access the Variation controls.
4. Press Button 1 to pin the Variation page.

The displays contain the following parameters depending on whether you are Pad mode or Keyboard mode:

Element	Description
HUMANIZE	This mode provides natural rhythmic fluctuations to your programmed sequences based on the values of the parameters of this mode.
RANDOM	This mode creates randomly generated versions of your beats and melodies based on the values of the parameters of this mode.
APPLY	Applies the current settings to the selected Sound.

Humanize Mode Parameters

Element	Description
Apply	Applies the current settings to the selected Sound.
VELOCITY RANGE	
Velocity Lo	Adjust notes with a velocity no lower than the set value.
Velocity Hi	Adjust notes with a velocity no higher than the set value.
TIME SHIFT	
Step	Set the amount of time shift per step. The value is applied to all notes and will move them randomly in both plus and minus values according to the overall percentage set here. Step can be changed from +/- 0-50% in 5% increments. Press SHIFT to change in finer increments of 1%.

Random Mode Parameters

Element	Description
PROBABILITY (Keyboard mode)	
Probability	Set the probability of how often a note is created. At 50% a note may or may not be created at each step. At 100% a note will be created at every step of pattern. Probability can be changed from 10-100% in 10% increments. Press SHIFT to change in finer increments of 1%.
NOTE RANGE (Keyboard mode)	
Note Lo	Create notes no lower than the set value.
Note Hi	Create notes no higher than the set value.
VELOCITY RANGE	
Velocity Lo	Create notes with a velocity no lower than the set value.
Velocity Hi	Create notes with a velocity no higher than the set value.
CHORDS (Keyboard mode)	
Note Count	Set the amount of notes that are available to make up a chord per step. This is also calculated in relation to Note Count set in the DISTRIBUTIONS section. The Note Count range is from 1 to 6.
NOTE LENGTH	
Steps	Set the length of a note in steps. The value ranges from 1 to 6 steps per note. Press SHIFT to change in finer increments.
TIME SHIFT	

Element	Description
Step	Set the amount of time shift per step. The value is applied to all notes and will move them randomly in both plus and minus values according to the overall percentage set here. Time shift can be changed from +/- 0-50% in 5% increments. Press SHIFT to change in finer increments of 1%.
DISTRIBUTIONS	
Note Count (Keyboard mode)	Fixed: The note count is fixed. The value set in the Note Count of the CHORDS section will take precedent here. Equal: The note count will be evenly distributed across the NOTE RANGE. Gauss: The note count is likely to be distributed to the middle section of the NOTE RANGE. ½ Gauss: The note count more is likely to be distributed to the middle and lower section of the NOTE RANGE.
Notes (Keyboard mode)	Equal: Notes will be evenly distributed across the Pattern in accordance with the Step Grid. Gauss: Notes are more is likely to be distributed to the middle part of the note range. ½ Gauss: Notes are more likely to be distributed to the middle and lower part of the Pattern in accordance with the Step Grid.
Note Length	Fixed: Notes will have the same length across the Pattern. Equal: Note lengths will be evenly distributed across the Pattern. Gauss: Note lengths in the middle part of the pattern are more likely to be shorter. ½ Gauss: Note lengths in the middle to lower part of the pattern are more likely to be shorter.

7.5 Recording and Editing Modulation

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

In MASCHINE, **modulation** means the automatic change of MASCHINE parameters from an **internal source** (e.g., manual changes recorded via Auto-write…). Value changes are:

- **Temporary**: The modified value is valid only until the end of the Clip: When the Scene is looped or when playback is restarted, the parameter value is reset to its non-modulated value.
- **Relative** (knobs only): For continuous parameters (these parameters are controlled by a rotary knob in the software), the new parameter value is defined as deviation from the actual value. Note that for selectors and buttons, modulation defines instead absolute values.

Modulation vs. Automation

Although both deal with automatic change of MASCHINE parameters, *modulation* and *automation* have to be distinguished. The following table summarizes the main differences:

	Modulation	Automation
Source of control	Internal (e.g., changes recorded via Auto-write)	External (e.g., an external MIDI sequencer or an automation track in your host)
Duration of the change	Temporary (until the end of the Clip)	Permanent
Target parameters	At the Sound and Group levels only (see below)	At all levels (Sound, Group, and Master)
Nature of the change (continuous parameters only)	Relative (defines a deviation to the non-modulated value)	Absolute (defines a new value regardless of the non-automated value)



This section describes how to use modulation in MASCHINE — for more information on using automation, please refer to section ↑8.2.3, Controlling Parameters via MIDI and Host Automation.

Please note that modulation and automation are not mutually exclusive: You can modulate a parameter in MASCHINE *and* automate it (e.g., from your host) simultaneously! As a result, the parameter value will deviate (according to the recorded modulation) from its moving value defined by the automation.



Example: Let's assume that you have recorded some modulation for the Cutoff parameter of a Filter Plug-in in order to create a filter sweep. Since modulation is defined relative to the non-modulated value, by manually adjusting the Cutoff parameter you can shift the entire sweep across frequencies. By assigning this Cutoff parameter to a MIDI control or an automation ID (see section ↑8.2.3, Controlling Parameters via MIDI and Host Automation to know how to do this) you can create a filter sweep that automatically moves across frequencies!

7.5.1 Which Parameters Are Modulatable?

All the modulatable parameters are found in Plug-ins or Channel properties (e.g., you cannot modulate the Pattern Length or the Step Grid resolution). This means that all modulatable parameters are found in a Parameter page of the Control area (when the software is in Arrange view).

In order to be modulatable, parameters of Plug-ins and Channel properties have to meet following requirements:

- The parameter must be **controlled by a knob or a button** in the software. Most parameters controlled by selectors (e.g., for selecting an operating mode or a filter type) cannot be modulated — however there are a few exceptions.
- The parameter must be at the **Group or Sound level**. Parameters at the Master level cannot be modulated.



This second rule is also true for Plug-ins: if a Plug-in is loaded at the Master level, its parameters will not be modulatable — but the same Plug-in loaded at the Group or Sound level will have its parameters modulatable.

Almost all parameters meeting these requirements can be modulated, the only exceptions being:

- Plug-ins:
  - Saturator: in Tube mode, the Bass Overload button (MAIN section) and Bypass button (EQ section).
  - Percussion (Drumsynth): in Fractal mode, the Tune Hold button in the Main page.
- Channel properties:
  - Sound's and Group's Output properties: the Cue button in the Audio page.
  - Group's Input properties: the Root Note knob in the MIDI page.



At the Sound and Group level the same parameters are both automatable and modulatable. For more information on automation please refer to section ↑8.2.3, Controlling Parameters via MIDI and Host Automation.

Also note that your Macro Controls will be modulatable if, and only if, their target parameters are themselves modulatable. For more information on Macro Controls please refer to section ↑8.3, Creating Custom Sets of Parameters with the Macro Controls.

7.5.2 Recording Modulation

In the software in Arrange view, if you take a closer look at the knobs in the Parameter pages of 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.



Drag the outer ring of the knobs to record modulation.

► To record modulation for a knob in real time, click its outer ring and then drag it up and down during playback.

→ Your movement are recorded into the Pattern and will be recalled as the playback is looped.

As soon as you create modulation for a parameter, the following happens:

- On the outer ring of the knob, the colored section (usually indicating the current parameter value) is replaced by a **little segment** indicating the modulated value. During playback this little segment follows the movement you have just recorded. The non-modulated value of the parameter is still indicated by the little white segment on the knob itself. Since modulation is defined relative to this non-modulated value, you can turn the knob to define the reference value from which the recorded modulation will deviate.
- A modulation track is created for this parameter in the Modulation pane of the Control area (at the bottom of the Pattern Editor) containing the modulation points you have just recorded. You can further edit the modulation track from there — see section ↑7.5.3, Creating and Editing Modulation in the Control Lane.

Removing Modulation

You can also use the outer ring to remove the entire modulation for the knob:

► To remove the entire modulation for a knob, simply right-click (on Mac OS X: [Ctrl]+click) its outer ring.



You can also create and edit modulation tracks directly in the Control Lane. See section ↑7.2.2, The Record Prepare Mode for more information.

To modulate a parameter with the controller:

1. First make sure the song is playing (PLAY must be lit) and your controller is in Control mode (CHANNEL or PLUG-IN must be lit, if it's not please press either of them).
2. Navigate to the parameter you want to modulate. To do this, put the focus on the desired Group or Sound (see ↑2.3.1, Setting the Focus on a Group or a Sound), navigate to the desired Plug-in or set of Channel properties, and finally to the Parameter page containing that parameter (see ↑2.3.3, Navigating Channel Properties, Plug-ins, and Parameter Pages in the Control Area).

3. Hold AUTO to enter Auto-write mode.
   At the bottom of the displays, non-modulatable parameters disappear. Among the remaining parameters (all modulatable), the value of each continuous parameter is replaced by a percentage.
4. While holding AUTO, turn the desired Knob 1–8 under the displays to adjust the deviation to the actual value as you see fit.

→ Your modulation gets recorded now. Each Knob movement is stored in your Pattern as a modulation event. It will be automatically played with your Pattern upon its next cycle.



You can pin Auto-write mode by pressing SHIFT + AUTO. This allows you to have both hands free to tweak Knobs 1–8 and record modulation for several parameters simultaneously! When you're done, press AUTO again to stop recording modulation.

If you want to discard the modulation you recorded and try again:

▶ Hold ERASE and again turn the Knob you used to record modulation to delete all modulation events for this parameter.

You can also delete all modulation events for all parameters of the channel:

▶ Press SHIFT + CLEAR (CLR AUTO) to delete all modulation for all parameters of the focused Sound or Group.



You can also record modulation from the step sequencer! See Recording Modulation in Step Mode for more information.

7.5.3 Creating and Editing Modulation in the Control Lane

You can also create, select, and edit individual modulation points in the **Modulation pane** of the **Control Lane**.

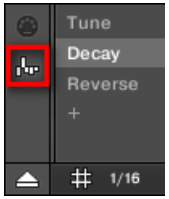
Displaying the Modulation Pane in the Control Lane

1. To see and edit modulation for parameters of a Sound, click the desired Sound in the Sound List (left of the Pattern Editor) and click the SOUND tab in the Control area.

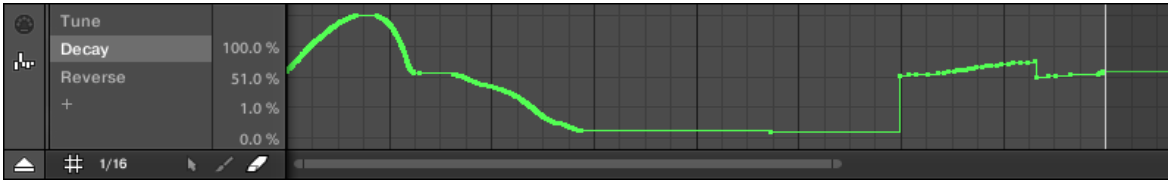
2. To see and edit modulation for parameters of a Group, click the desired Group in the Group List (left of the Arranger) and click the GROUP tab in the Control area.
3. If the Control Lane is not visible at the bottom of the Pattern Editor, click the up-pointing arrow in the bottom left corner of the Pattern Editor to show it.



4. Click the little bar icon left of the Control Lane to display the Modulation pane.



→ The Modulation pane appears.



The Modulation pane showing the modulation track for the Decay parameter (see on the left).

The Modulation pane contains following elements:

- The left part shows the **Modulator List** showing all parameters currently modulated in the focused Sound or Group. Click any entry to display the modulation track for that parameter on the right. Click the "+" symbol at the end of the list to add a modulation track for another parameter (see below). If the list is too small to display all entries at once, a vertical scroll bar appears on the right to navigate the list.
- The right and biggest part shows the **modulation track** for the particular parameter selected in the Modulator List on the left:
  - Each modulation track contains a variable number of **modulation points**, each of them defining a new value for the parameter.

- The zoom factor and scroll position of the modulation track is always synchronized to those of the Event area above.
- Left of the modulation track, a vertical scale indicates the value range for that parameter. In the modulation track you can create, edit, and delete modulation points (see below).

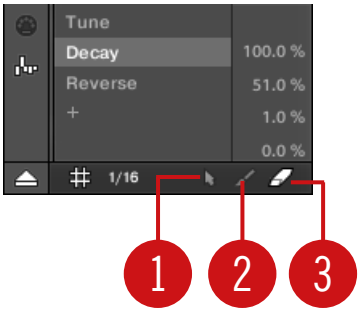
The range of the vertical value scale left of the modulation track depends on the current, non-modulated value of the selected parameter: Since modulation points set new values *relative* to the non-modulated value of the parameter, this scale allows you to see at any time the real values that will be set by the various modulation points in the track.

You can adjust the height of the Control Lane by dragging its upper border with the mouse.

As soon as some modulation is recorded for a parameter in a particular Pattern of the Group, the corresponding Modulator and modulation track **appear for all Patterns** of the Group. The track will be empty for Patterns in which you haven't recorded any modulation for this parameter yet. Similarly, if you delete this Modulator in the Modulator List and its modulation track (see below to know how) in a Pattern, it will be **deleted in all other Patterns** of the Group as well.

Editing Modulation Points

You can create, edit, and delete modulation points in the displayed modulation track with your mouse. As for the Event area above, the mouse behavior in the Control Lane will depend on the Mouse Edit mode selected in the Edit Mode selector, at the bottom left of the Pattern Editor:



The Edit Mode selector.

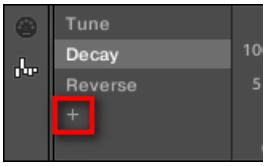
All actions in the Control Lane are quantized according to the Step Grid. For more information on the Step Grid, please refer to section ↑7.1.7, Adjusting the Step Grid and the Nudge Grid.

Mouse Edit Mode	Available Mouse Actions
(**1**) **Select mode**	To create modulation points, double-click in the Control Lane — other points on this step will be replaced. To delete a modulation point, right-click it ([Ctrl]-click it on Mac OS X). To edit an existing modulation point, drag it vertically (you can also drag the horizontal segment following the point instead). When hovering the mouse over a modulation point or the following segment, the parameter value at this point appears. The displayed value is updated as you drag your mouse vertically. You can select several modulation points in the Control Lane together by clicking and dragging a rectangle around them; now you can edit them together by dragging them up or down — they will keep their relative offsets until any of them reaches the minimum or maximum value.
(**2**) **Paint mode**	Click and drag to set modulation points wherever you move the cursor.
(**3**) **Erase mode**	Click and drag to delete modulation points wherever you move the cursor.

Adding a Modulation Track

As soon as you record modulation for a new parameter in the software or from your controller, a new modulation track is automatically created and contains your recorded movements in form of modulation points. But you can also create a new modulation track from scratch in the Control Lane. Here is how.

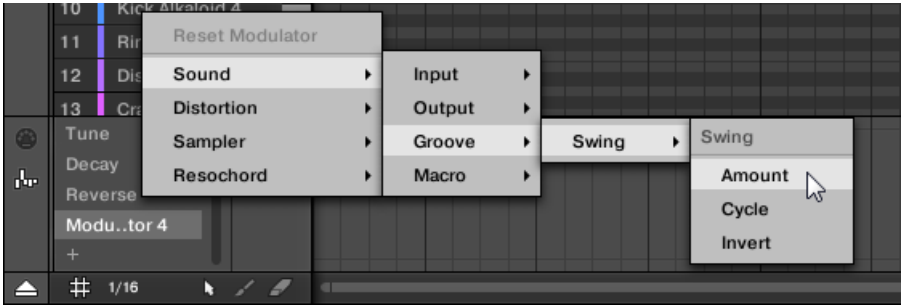
At the end of the Modulator List (in the left part of the Control Lane) you can use the "+" symbol to create a new modulation track.



Click the "+" symbol to add a new modulation track.

To create a new modulation track:

1. To create a new modulation track for a parameter of a Sound, click the desired Sound in the Sound List (left of the Pattern Editor) and click the SOUND tab in the Control area.
2. To create a new modulation track for a parameter of a Group, click the desired Group in the Group List (left of the Arranger) and click the GROUP tab in the Control area.
3. In the Modulation pane click the "+" symbol at the end of the Modulator List to create a new empty modulation track.
   A new Modulator X entry appears at the end of the list (X is an ordering number) and it is automatically selected. The corresponding modulation track is still empty. Moreover you cannot create any modulation point in the track yet, you first need to assign it to a parameter of your choice.
4. Right-click ([Ctrl]-click on Mac OS X) the Modulator X label to open a structured menu containing all modulatable parameters in that channel.
5. Navigate the structure of the menu down to the desired parameter: For a parameter located in Channel properties select *Sound > [set of Channel properties] > [Parameter page] > [parameter]*. For a parameter located in a Plug-in select *[Plug-in name] > [Parameter page] > [parameter]*.



Once you have selected a parameter in the menu the parameter name appears in place of Modulator X in the Modulator List and the modulation track on the right is editable.

→ In the modulation track you can now add and edit modulation points for the selected parameter as described above. The modulation track is added to all Patterns of the Group and you can directly create different modulation points in other Patterns for that track.

When you load a Plug-in in a channel (Sound or Group) its modulatable parameters will automatically show up in the menu of available parameters when this channel is focused.

Resetting a Modulation Track

► To reset the modulation track of a parameter, right-click ([Ctrl]-click on Mac OS X) the desired entry in the Modulator List and select *Reset Modulator* at the top of the menu.

→ All modulation points are deleted in all Patterns of the Group and you can start designing a new modulation for that parameter from scratch.

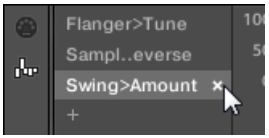
Re-Assigning a Modulation Track

► To change the parameter assignment of a modulation track, right-click ([Ctrl]-click on Mac OS X) the desired entry in the Modulator List and select another parameter from the hierarchical menu as described above.

→ Upon your selection all modulation points are deleted and the track is assigned to the new parameter. The previous parameter is not modulated anymore.

Removing a Modulation Track

► To remove a modulation track, hover its entry in the Modulator List with the mouse and click the little cross that appears on its right.



→ The modulation track and its entry in the Modulator List are removed from the Modulation pane for all Patterns. The parameter is not modulated anymore.

7.6 Creating MIDI Tracks from Scratch in MASCHINE

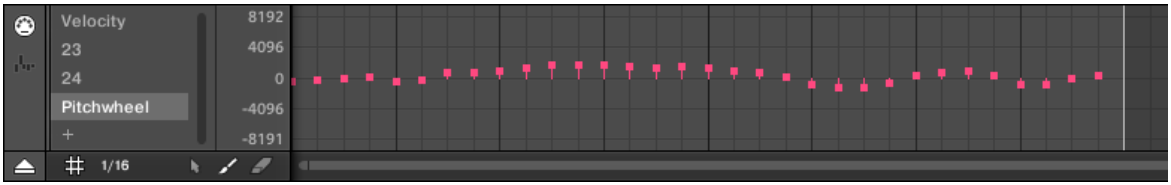
Within MASCHINE you can create MIDI tracks from scratch for any Sound of your Project. MASCHINE's MIDI automation tracks can have two purposes:

- When playback is on, the content of these tracks is sent in real time as MIDI data via the MIDI output of the Sound (if enabled). Configuring the MIDI output of Sounds is done in the MIDI page of the Sound's Output properties — see section ↑8.2.5, Sending MIDI from Sounds for more information.
- When exporting your Pattern as a MIDI file for use in another environment, MIDI automation tracks will be included in the exported MIDI file. See section ↑7.8.2, Exporting MIDI from Patterns for more information.



You cannot create MIDI tracks for Groups nor for the Master.

Creating and editing MIDI tracks is done in the **MIDI pane** of the Control Lane:



Create MIDI tracks in the MIDI pane of the Control Lane.

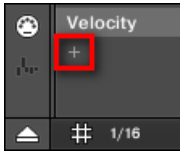
1. Click the desired Sound in the Sound List on the left of the Pattern Editor.
2. If the Control Lane is not visible at the bottom of the Pattern Editor, click the up-pointing arrow in the bottom left corner of the Pattern Editor to show it.

3. Click the MIDI socket icon left of the Control Lane to display the MIDI pane.

4. At the end of the list of MIDI controls nearby, click the "+" to add a new MIDI track.

   A new entry appears at the end of the list reading Not assigned.
5. Right-click ([Ctrl]-click on Mac OS X) this Not assigned entry and select the desired MIDI control from the context menu.
6. Add and modify events in the new MIDI track via same editing tools as for modulation tracks (see ↑7.5.3, Creating and Editing Modulation in the Control Lane).

→ You have just created a new MIDI track!

You will notice that one MIDI track is always present in the MIDI pane: the Velocity track. This track holds the velocities for all the events for the focused Sound in the Pattern. You cannot delete the Velocity track.

Removing a MIDI Track

► To remove a MIDI track, hover its entry in the list of MIDI controls on the left with the mouse and click the little cross that appears on its right.



→ The MIDI track and its entry in the list of MIDI controls are removed from the MIDI pane.

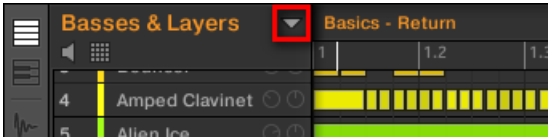
7.7 Managing Patterns

This section describes how to organize your Patterns, Pattern slots, and Pattern banks.

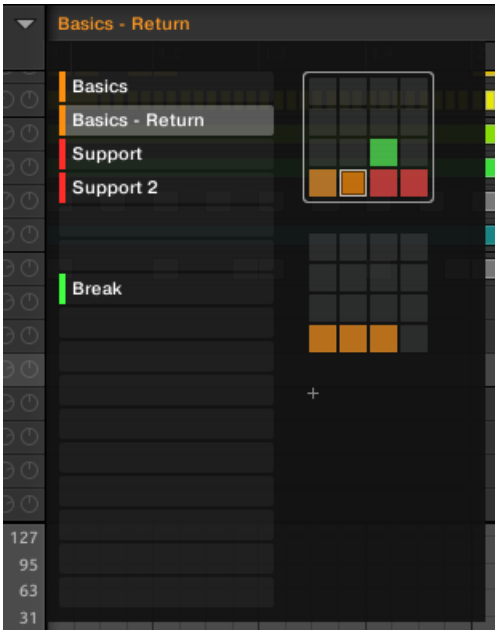
7.7.1 The Pattern Manager and Pattern Mode

In the software, all Pattern management operations are done in the **Pattern Manager**:

► To open the Pattern Manager, click the Pattern Manager button (a down-pointing arrow) at the left of the name of the selected Pattern.



→ The Pattern Manager appears underneath.



Use the Pattern Manager to manage your Patterns.

- On the left you can see the list of the 16 Pattern slots in the selected Pattern bank. Slots containing a Pattern show a colored bar on the left along with the Pattern name. The other slots contain no Pattern. The selected Pattern is highlighted (the Basics - Return Pattern in the picture above).
- On the right you can see the various Pattern banks in form of pad grids — a pad grid is a square of 4x4 cells representing the pads of your controller. In each Pattern bank the colored cells indicate Pattern slots containing a Pattern, while unlit cells indicate empty Pattern slots. The selected Pattern bank is surrounded by a white border (the first bank in the picture above). If there are too many Pattern banks to fit into the Pattern Manager's height, use the scroll wheel of your mouse to display the other banks.
- The Pattern slots on the left and the cells in the selected pad grid on the right are strictly equivalent: you can use either the slots or the corresponding cells to execute all the management commands described in the next sections.

Closing the Pattern Manager

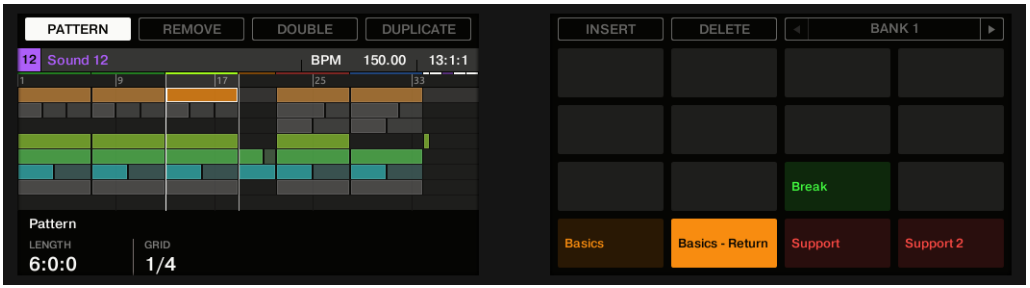
► To close the Pattern Manager, click anywhere outside it.

The Pattern Mode on Your Controller

The **Pattern mode** is where you select and manage your Patterns.

► To enter Pattern mode on your controller, press PATTERN (you can pin it by pressing Button 1 at the same time).

→ Your controller switches to Pattern mode. This is indicated by the lit PATTERN button.



The hardware displays in Pattern mode.

On the right display, you will see all available Pattern slots in the selected Pattern bank represented as a square of 4x4 cells:

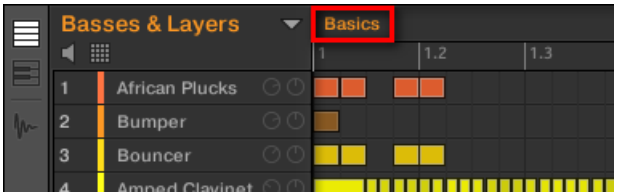
- The highlighted cell indicates the selected Pattern slot.
- Cells showing a name represent Pattern slots containing a Pattern.
- Empty cells represent empty Pattern slots.

This grid of cells corresponds to the pads on your controller:

- The fully lit pad indicates the selected Pattern slot.
- Dim lit pads indicate Pattern slots containing a Pattern.
- Unlit pads represent empty Pattern slots.

7.7.2 Selecting Patterns and Pattern Banks

In the topmost row of the Pattern Editor, you can see on the left the name of the Pattern selected:



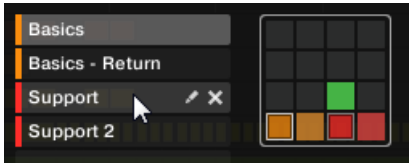
The selected Pattern is named Basics.

Selecting a Pattern:

1. Open the Pattern Manager (see ↑7.7.1, The Pattern Manager and Pattern Mode).
2. If it is not already selected, select the Pattern bank containing the desired Pattern by clicking its pad grid on the right.

   The selected Pattern bank is surrounded by a white border, and the left part of the Pattern Manager displays the Pattern slots in that bank.
3. Select the desired Pattern by clicking its name in the list on the left or by clicking its cell in the selected pad grid on the right.

→ The selected Pattern is loaded in the Pattern Editor and its events appear in the Event area. Furthermore, this Pattern is referenced by a Clip for the selected Group in the current Scene in the Arranger. This Clip replaces any previous Clip for the Group in that Scene (see chapter ↑13, Creating a Song Using Scenes for more on this).



If you want to select a Pattern already referenced by one or more Clips in the Arranger, you can click any of these Clips to select and load the referenced Pattern in the Pattern Editor. This way your arrangement won't be modified.

Selecting Patterns and Pattern Banks on Your Controller

To select a Pattern located in another Pattern bank than the one selected, you fist need to select that other Pattern bank:

▶ Press PATTERN + Button 7 or 8 to select the previous or next Pattern bank, respectively.



If the last Pattern bank is selected and not empty, pressing Button 8 will create a new, empty Pattern bank — see section ↑7.7.5, Creating and Deleting Pattern Banks for more information.

Selecting a Pattern

▶ To select a Pattern in the current Pattern bank, press PATTERN + the dim lit pad corresponding to the cell of the desired Pattern on the right display.

→ Selecting a Pattern has the following consequences:

- This Pattern is displayed in the software's Pattern Editor. You can then modify it both from your controller and in the software.
- This Pattern is referenced by a Clip for the selected Group in the current Scene. This Clip replaces any previous Clip for the Group in that Scene (see chapter ↑13, Creating a Song Using Scenes for more on this).



If you only want to quickly select another Pattern without using any from the editing commands available, we recommend you to unpin the Pattern mode so you can quickly use the shortcut PATTERN + pad to select the desired Pattern.

7.7.3 Creating Patterns

First of all, you don't need to explicitly create a new empty Pattern before filling it with events:

- If no Pattern is selected, as soon as you create an event (in the empty Event area of the software or by recording pads on your controller) a new Pattern will be created for it! See section ↑7.4.2, Creating Events/Notes for more information on creating events.
- If you double-click in a cell of the Arranger, a Clip is created referencing a new empty Pattern for the corresponding Group at that location in your arrangement (see section ↑13.1.5, Creating and Removing Clips).

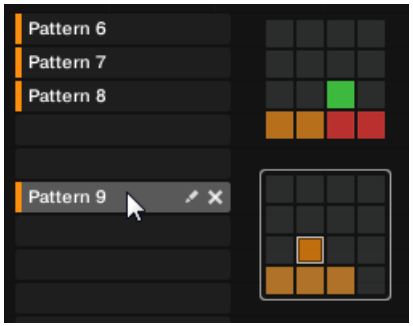
You can still manually create a new empty Pattern in the software:

1. Open the Pattern Manager (see ↑7.7.1, The Pattern Manager and Pattern Mode).
2. If it is not already selected, click the desired pad grid on the right to select the Pattern bank where you want to create a Pattern.



The selected Pattern bank is surrounded by a white border, and the left part of the Pattern Manager displays the Pattern slots in that bank.

3. Click any empty Pattern slot in the list on the left or click any dark cell in the selected pad grid on the right to create a new empty Pattern there.



→ A new empty Pattern is created in the selected Pattern slot. The new Pattern is loaded in the Pattern Editor with an empty Event area. Furthermore, this Pattern is referenced by a Clip for the selected Group in the current Scene in the Arranger. This Clip replaces any previous Clip for the Group in that Scene (see chapter ↑13, Creating a Song Using Scenes for more on this).

7.7.3.1 Creating a New Pattern on Your Controller

▶ To create a new empty Pattern in the current Pattern bank, press PATTERN + any unlit pad.

→ A new empty Pattern is created at this position in the current Pattern bank. Additionally:

- The new Pattern is selected and displayed in the software's Pattern Editor. You can then modify it both from your controller and in the software.
- The new Pattern is referenced by a Clip for the selected Group in the current Scene. This Clip replaces any previous Clip for the Group in that Scene (see chapter ↑13, Creating a Song Using Scenes for more on this).



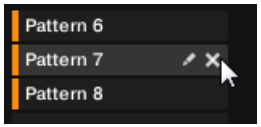
You don't need to explicitly create a new empty Pattern before filling it with events: If no Pattern is selected, as soon as you record events a new Pattern will be created for them! See section ↑7.4.2, Creating Events/Notes for more information on creating events.

7.7.4 Deleting Patterns

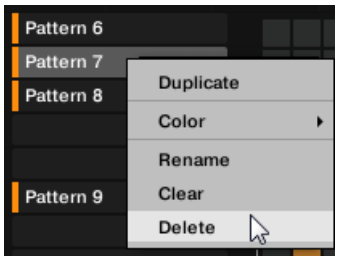
To delete a Pattern:

1. Open the Pattern Manager (see ↑7.7.1, The Pattern Manager and Pattern Mode).
2. If necessary, select the Pattern bank containing the desired Pattern by clicking its pad grid on the right.
   The selected Pattern bank is surrounded by a white border and its Patterns appear in the list on the left.

3. On the right of the Pattern slot, click the little cross icon:



You can also right-click ([Ctrl]-click on Mac OS X) the Pattern slot or the corresponding cell in the pad grid and select *Delete* from the context menu:



→ The Pattern is deleted.

If the Pattern was referenced by Clips in the Arranger, these Clips will be removed as well!

Deleting Patterns on Your Controller

To delete a Pattern on your controller:

1. Press and hold PATTERN to enter Pattern mode.
2. Press Button 7 and 8 to select the desired Pattern bank.
3. Press the pad corresponding to the Pattern you want to delete.
4. Press Button 6 (DELETE).

→ The Pattern is deleted.

Alternate Method

1. Press and hold PATTERN to enter Pattern mode.
2. Press Button 7 and 8 to select the desired Pattern bank.

3. Press ERASE + the pad corresponding to the Pattern you want to delete.

→ The Pattern is deleted.



If the desired Pattern bank is already selected (or if there is only one Pattern bank), this alternate method can be simplified as follows: Press ERASE + PATTERN + pad to delete the corresponding Pattern!



If the Pattern was referenced by Clips in the Arranger, these Clips will be removed as well!

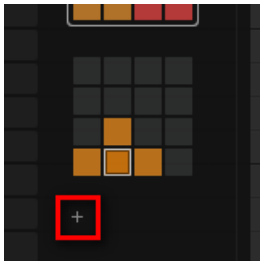
7.7.5 Creating and Deleting Pattern Banks

You can create and delete Pattern banks in order to organize your Patterns to your liking.

Creating a Pattern Bank

If the last Pattern bank contains at least one Pattern (even empty), you can create an additional Pattern bank after that last bank. To do this:

1. Open the Pattern Manager (see ↑7.7.1, The Pattern Manager and Pattern Mode).
2. Click the "+" symbol under the last pad grid on the right to create another Pattern bank.



→ A new empty Pattern bank is created and its pad grid appears in place of the "+" symbol.



If the last Pattern bank is empty, there is no "+" symbol under its pad grid and you cannot create any new Pattern bank.

Deleting a Pattern Bank

To delete a Pattern bank:

1. Open the Pattern Manager (see ↑7.7.1, The Pattern Manager and Pattern Mode).
2. Hover the pad grid of the desired Pattern bank with your mouse.
   A little cross appears at the top right of the pad grid.



3. Click the little cross to delete that Pattern bank.

→ The Pattern bank is deleted including all its Patterns, if any. The following banks are shifted up to fill the gap.

If the Patterns of the deleted Pattern bank were referenced by Clips in the Arranger, these Clips will be removed as well!

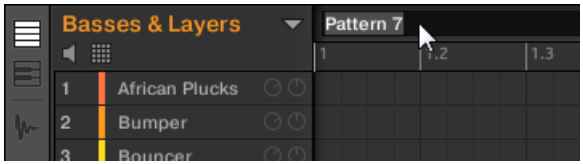
7.7.6 Naming Patterns

You can replace the Patterns' default names with custom names of your own. This can be done in the Pattern Editor, in the Pattern Manager or in the Arranger.

Renaming Patterns in the Pattern Editor

To rename the selected Pattern in the Pattern Editor:

1. Double-click the Pattern name at the top left of the Pattern Editor:



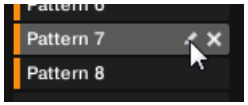
2. Type a name and press [Enter] on your computer keyboard to confirm (or press [Esc] to cancel you change).

→ The Pattern is renamed. In the Arranger, all Clips referencing this Pattern in the Arranger will mirror the new Pattern name.

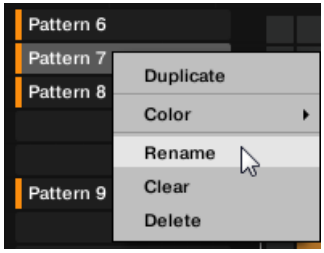
Renaming Patterns in the Pattern Manager

To rename any Pattern even if it is not selected:

1. Open the Pattern Manager (see ↑7.7.1, The Pattern Manager and Pattern Mode).
2. If necessary, select the Pattern bank containing the desired Pattern by clicking its pad grid on the right.
   The selected Pattern bank is surrounded by a white border and its Patterns appear in the list on the left.
3. On the right of the Pattern slot, click the little pen icon:



   You can also right-click ([Ctrl]-click on Mac OS X) the Pattern slot or the corresponding cell in the pad grid and select *Rename* from the context menu:



   The Pattern name gets highlighted and editable.

4. Type a name and press [Enter] on your computer keyboard to confirm (or press [Esc] to cancel you change).

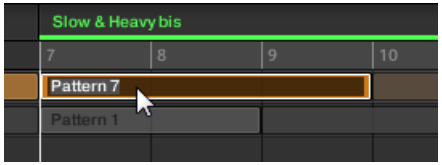
→ The Pattern is renamed. In the Arranger, all Clips referencing this Pattern will mirror the new Pattern name.

If you use MASCHINE as a plug-in, some hosts will utilize 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.

Renaming Patterns in the Arranger

You can also rename a Pattern in the Arranger via any Clip referencing this Pattern:

1. Double-click any Clip referencing the Pattern you want to name.
The Clip turns to a text field and waits for your input.



2. Type a name and press [Enter] on your computer keyboard to confirm.

→ The Pattern is renamed. All Clips referencing this Pattern will mirror the new Pattern name.

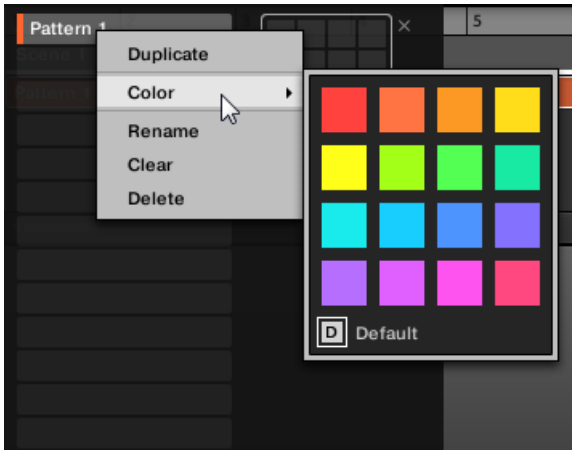
If you use MASCHINE as a plug-in, some hosts will utilize the [Enter] key, as it is mapped to some function of the host software. In this case, click anywhere else in the MASCHINE plug-in window to confirm the name you have entered.

7.7.7 Changing the Pattern's Color

By default, Patterns take the color of the Group they belong to. But you can adapt the color of each individual Pattern to your needs. To do this:

1. Open the Pattern Manager (see ↑7.7.1, The Pattern Manager and Pattern Mode).

2. If necessary, select the Pattern bank containing the desired Pattern by clicking its pad grid on the right.
   The selected Pattern bank is surrounded by a white border and its Patterns appear in the list on the left.
3. Right-click ([Ctrl]-click on Mac OS X) the desired Pattern slot or the corresponding cell in the pad grid and select *Color* from the context menu.
   A Color Palette appears. In the Palette, the current color of the Pattern is highlighted.



4. Select the desired color in the Palette. You can also choose to set the Pattern back to its default color by selecting *Default* at the bottom of the Color Palette.

→ The Pattern slot takes the new color you select. In the Arranger all Clips referencing this Pattern will also mirror the selected color.



By default Patterns inherit the color of their Group.

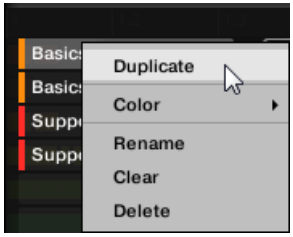
7.7.8 Duplicating, Copying, and Pasting Patterns

MASCHINE provides different ways of copying/pasting Patterns.

Duplicating a Pattern

To duplicate a Pattern:

1. Open the Pattern Manager (see ↑7.7.1, The Pattern Manager and Pattern Mode).
2. If necessary, select the Pattern bank containing the desired Pattern by clicking its pad grid on the right.
   The selected Pattern bank is surrounded by a white border and its Patterns appear in the list on the left.
3. Right-click ([Ctrl]-click on Mac OS X) the Pattern slot or the corresponding cell in the pad grid and select *Duplicate* from the context menu:



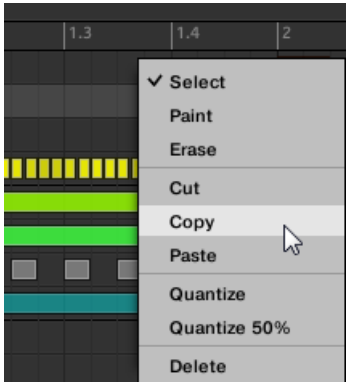
→ A Pattern copy is inserted right after the original Pattern in the Pattern bank — all following Patterns are shifted to the next slot.

Copying and Pasting a Pattern

To cut or copy the content of a Pattern and paste it in another Pattern, do the following:

1. Click the Event area's background to deselect any selected events (your mouse must be in Select mode).

2. Right-click (on Mac OS X: [Ctrl]+click) the Event area's background and choose *Copy* from the slot's context menu:



3. Select the Group in which you want to paste the Pattern's content.
4. Open the Pattern Manager, select (or create) an empty Pattern, and close the Pattern Manager again.
   The selected (or created) Pattern appears in the Pattern Editor.
5. Right-click (on Mac OS X: [Ctrl]-click) the Event area's background and choose *Paste* from the context menu to paste the Pattern.



If events are selected in the Pattern, the copy/paste operation will apply to these events only! See ↑7.7.1, The Pattern Manager and Pattern Mode for more on this.

Duplicating, Copying, and Pasting Patterns on Your Controller

While the duplicating method described above is the quickest one, you can also copy a Pattern to the Pattern slot of your choice via the DUPLICATE button of your controller:

1. Press and hold PATTERN to enter Pattern mode (you can pin it by pressing Button 1).
2. Press and hold DUPLICATE (you can also pin it by pressing Button 1).
3. Press the pad of the Pattern you want to copy.
   The pad starts flashing.
4. Press the target pad for the Pattern copy.

→ The Pattern is copied to the target pad. The target pad starts flashing and you can further copy/paste it to other slots!

This procedure has following benefits:

- You can paste the copy into the Pattern slot of your choice — empty or not. If the target Pattern slot already contains a Pattern, it will be replaced by the copied Pattern.
- You can select the target slot in another Pattern bank: After you have selected the source Pattern, switch to the desired Pattern bank using Buttons 7 and 8 before you select the target Pattern slot.
- Last but not least, this command is also available outside the Pattern mode: Simply press and hold DUPLICATE + PATTERN (instead of DUPLICATE alone in Pattern mode) before selecting the source and target slots!



Please note that the copy-paste described here affects the Pattern as a whole. You can also copy-paste particular events within the Pattern or between Patterns. See ↑7.4.4, Editing Selected Events/Notes for more on this.

See also

Editing Selected Events/Notes [→ 377]

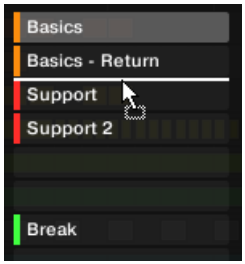
7.7.9 Moving Patterns

You can reorder Patterns via drag and drop in the software. It can be helpful to organize your Patterns more conveniently (e.g., to bring together variations of the same rhythm).

To move Patterns:

1. Open the Pattern Manager (see ↑7.7.1, The Pattern Manager and Pattern Mode).
2. If necessary, select the Pattern bank containing the desired Pattern by clicking its pad grid on the right.
   The selected Pattern bank is surrounded by a white border and its Patterns appear in the list on the left.
3. Click and hold the Pattern slot or the corresponding cell in the pad grid.

4. While holding the mouse button, drag your mouse toward the desired location.
   As the mouse cursor moves, the potential target slots are highlighted or an insertion line appears at the potential places between slots where you can drop the Pattern slot.



5. When the desired slot is highlighted or when the insertion line appears at the desired location, release the mouse button.

→ The Pattern takes its new place. If you drop the Pattern onto a slot, the current Pattern in that slot is replaced (if any). The Clips that were referencing this Pattern will reference the moved Pattern instead.

Of course, all Clips referencing the moved Patterns still reference it after the move.



You can also drag a Pattern from the pad grid onto the Pad List, and inversely!

7.7.10 Adjusting Pattern Length in Fine Increments

Patten Length can be adjusted in fine increments to create irregular pattern lengths by temporarily pressing the [Shift] button on your computer keyboard or SHIFT on the MASCHINE controller while adjusting the Pattern Length. The size of fine increments are defined using the Step Grid.

1. Press GRID and then Button 4 to access STEP.
2. Use Buttons 5 to 8 to select the required Step Grid size.
3. Press PATTERN to access the pattern page, and pin it if required by pressing Button 1.
4. Press the corresponding pad to select the pattern you want to edit.
5. Press SHIFT and turn Knob 4 LENGTH to adjust Pattern Length in fine increments.

→ Pressing SHIFT temporarily allows the Pattern Length to be adjusted in finer increments according the value of the Step Grid.

7.8 Importing/Exporting Audio and MIDI to/from Patterns

In the Pattern Editor you can quickly export MIDI and audio from Patterns and import MIDI to Patterns via drag and drop.

7.8.1 Exporting Audio from Patterns

The Audio drag-and-drop function allows you to export audio from the selected Pattern onto your desktop or into your host software by simply dragging it onto the target location or application. This function is only available in the software.

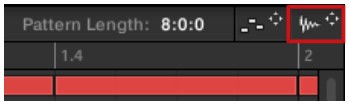
The audio will be exported as a WAV audio file and according to the current settings of the Export Audio panel (see section ↑4.4.3, Exporting Audio for more information on these settings) with following exceptions:

- The exported range will be based on the selected Pattern, regardless of the current Loop Range. Note that the Loop Optimize setting will be respected.
- The exported audio will only include the focused Group (in Group view) or the focused Sound (in Keyboard view) — in other words it will include what you see in the Event area.
- The audio file will be named as follows:
  - Export in Group view: [Group name] - [Pattern name] - [BPM].wav
  - Export in Keyboard view: [Group name] - [Pattern name] [Sound name] - [BPM].wav

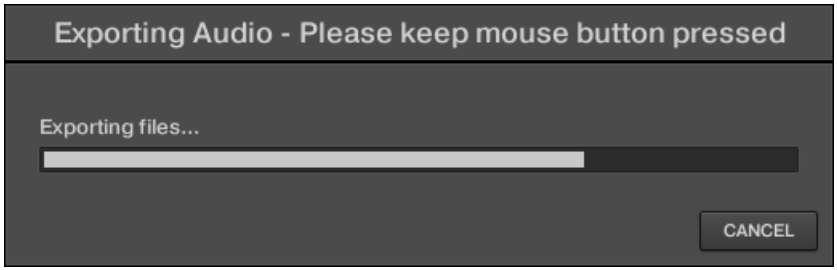
To render Patterns to audio files:

1. Select the Pattern you want to export audio from (see section ↑7.7.2, Selecting Patterns and Pattern Banks).
2. If you want to export multiple Sounds of the Group, switch the Pattern Editor to Group view, mute the Sounds you want to exclude from the exported audio file (see section ↑5.4.1, Mute and Solo), and check that the Group itself is not muted — otherwise the exported audio file will be silent!

3. If you want to export a single Sound in the Group, you can switch the Pattern Editor to Keyboard view, put the focus on the desired Sound, and check that this Sound is not muted (see section ↑5.4.1, Mute and Solo) — otherwise the exported audio file will be silent! Alternatively you can let the Pattern Editor in Group view and solo this Sound.
4. In the top right corner of the Pattern Editor, click and hold the **Audio Dragger icon**:



5. While holding the mouse button, drag the icon to start the export.
   A pop-up message will inform you about the rendering status:



   As soon as rendering is finished, the mouse cursor displays the name of the Pattern you are dragging.

→ You can now drag the exported audio file to your desktop, into an audio channel of your host application, or even to another Sound or Group in MASCHINE!



If you drop the audio file onto a Group, it will be loaded into the first empty Sound slot of this Group.

7.8.2 Exporting MIDI from Patterns

You can export MIDI files from selected Patterns. This is useful if you want to use or edit them in another application. This function is only available in the software.

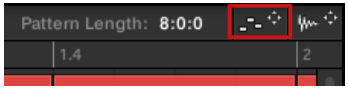
The MIDI file will be exported according to the Channel and Transpose parameters in the MIDI page of the Output properties of each exported Sound — see section ↑8.2.5, Sending MIDI from Sounds for more on these parameters.

You can export MIDI files using two methods: via drag-and-drop or via the Group/Sound context menu.

Exporting MIDI via Drag-and-Drop

You can render the selected Pattern to a MIDI file by simply dragging it onto the target location on your operating system or directly into a MIDI channel of your host software:

1. Select the Pattern you want to export MIDI from (see section ↑7.7.2, Selecting Patterns and Pattern Banks).
2. If you want to export MIDI from the entire Group, switch the Pattern Editor to Group view. If you want instead to export MIDI from the focused Sound only, switch the Pattern Editor to Keyboard view. See section ↑7.1.5, Group View and Keyboard View to know how to do this.
3. In the top right corner of the Pattern Editor, click and hold the **MIDI Dragger icon**:

   As you start dragging the icon the mouse cursor displays the name of the Pattern you are about to export:

4. Drag the icon to your desktop or onto a MIDI channel of your host application.

→ The MIDI file is exported to the selected location.

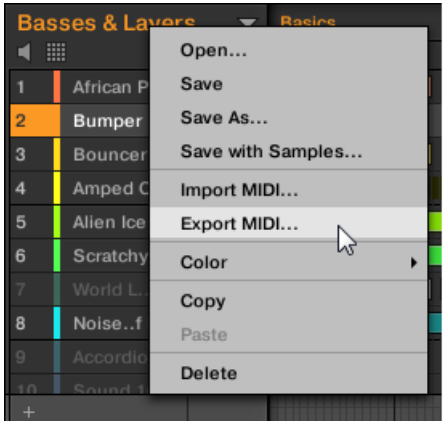


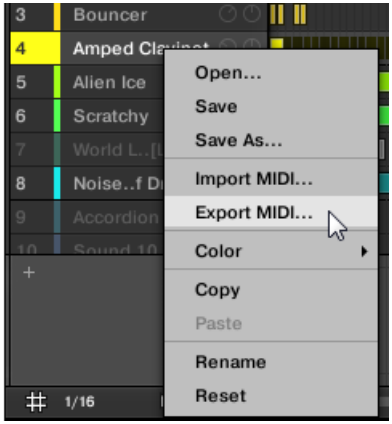
You can even drag the MIDI Dragger icon onto another Sound or Group in MASCHINE! In this case the MIDI file will be directly imported into a Pattern of the selected Group according to the rules described in section ↑7.8.3, Importing MIDI to Patterns.

Exporting MIDI via the Context Menu

You can also render the selected Pattern to a MIDI file on your hard disk using the Export MIDI… entry in the context menu of the Sound or Group:

1. Select the Pattern you want to export MIDI from (see section ↑7.7.2, Selecting Patterns and Pattern Banks).
2. To export MIDI from the entire Group, switch the Pattern Editor to Group view and right-click ([Ctrl]-click on Mac OS X) the desired Group in the Group List (left of the Arranger) to open its context menu. You can also right-click ([Ctrl]-click on Mac OS X) the Group name above the Sound List.
   To export MIDI from a particular Sound only, right-click ([Ctrl]-click on Mac OS X) the desired Sound slot in the Sound List (left of the Pattern Editor) to open its context menu.
3. Select *Export MIDI...* in the context menu (the picture below shows the context menu for a Sound).





4. In the Export MIDI dialog that opens, navigate to the desired location on your computer, type a name for the MIDI file and click Save to confirm.

→ The MIDI file is exported to the selected location.

Sounds which do not contain note events in a Group Pattern are exported as empty MIDI tracks. This way, if you are exporting multiple Patterns and some Sounds in the Group only have notes in some of these Patterns, you will get a consistent assignment of notes to MIDI tracks across all exported Patterns. Also, when you export a Pattern and then re-import it into MASCHINE, the notes will always be mapped to the correct Sounds.

7.8.3 Importing MIDI to Patterns

You can import MIDI files (extension ".mid") to Patterns. This allows you to use in MASCHINE MIDI files prepared with another application. This function is only available in the software.



Importing MIDI data into a Pattern that already contains data (note, modulation tracks, and MIDI tracks) will replace that data. As always, this can be undone both in the software or from your controller (see section ↑2.3.4, Undo/Redo).

You can import MIDI files into Groups or into individual Sounds. You can do this via three methods: via the context menu of the Group/Sound, via drag-and-drop, or via the FILES pane of the Browser. You can even import multiple MIDI files at once. The following paragraphs describe each of these situations.

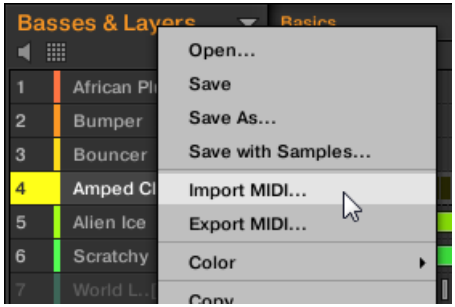
Importing a MIDI File to a Group

You can import a MIDI file to a whole Group. In particular, this allows you to import a drum beat for an entire drum kit. You can do this via the Group's context menu or via drag-and-drop.

Method 1: via the **Group's context menu**

1. In the Group List (left of the Arranger), click the Group in which you want to import the MIDI file.
   This sets the focus to that Group and displays its Patterns in the Pattern Editor underneath.
2. Select the Pattern in which you want to import the MIDI file.

3. Right-click ([Ctrl]-click on Mac OS X) the Group in the Group List and select *Import MIDI...* from the context menu.



   You can alternatively right-click ([Ctrl]-click on Mac OS X) the Group name in the header above the Sound List and select the same entry.

4. In the Import MIDI dialog that opens, navigate to the desired MIDI file on your computer and click Open to confirm.

→ The MIDI file will be imported to the selected Pattern of the Group according to the import rules described below.

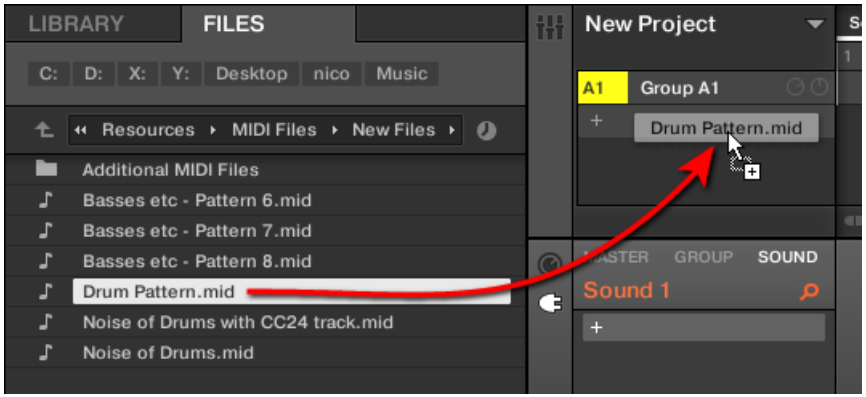
Method 2: via **drag and drop**

1. In the Group List (left of the Arranger), click the Group in which you want to import the MIDI file.
   This sets the focus to that Group and displays its Patterns in the Pattern Editor underneath.

2. Select the Pattern in which you want to import the MIDI file.

3. Navigate to the desired MIDI file in the Explorer/Finder of your operating system or in the FILES pane of the MASCHINE Browser.

4. Drag the MIDI file onto the desired Group in the Group List left of the Arranger.



→ The MIDI file will be imported to the selected Pattern of the Group according to the import rules described below.

If the Pattern Editor is in Group view, you can also drag the MIDI file directly onto the Event area to import it to the Group!

MIDI to Group – import rules: When you import a MIDI file into a Group, MASCHINE assumes that the MIDI file contains data for different instruments (e.g., a drum kit), and the import will be performed accordingly. Your MIDI file will be imported as follows:

- The imported MIDI data will replace any existing data (notes, MIDI tracks, and modulation tracks) in the selected Pattern.
- If the MIDI file contains data on a **single MIDI channel**: MIDI notes will be imported to the different Sounds of your Group according to their pitch:
  - The MIDI note data will be allocated to the various Sounds in your Group according to the Root Note parameter in the MIDI page of the Group's Input properties — see section ↑8.2.1, Triggering Sounds via MIDI Notes. This parameter defines the lowest note in the Group, which is tied to Sound slot 1.
    Example: If Root Note is set to C1 (which corresponds to MIDI note number 36 in the MASCHINE convention), all notes with MIDI note number 36 in the MIDI file will be imported to the first Sound (in Sound slot 1); all notes with MIDI note number 37 will be imported to the second Sound (in Sound slot 2); etc.

- For each Sound, MIDI notes will be imported at the default root note C3 — this ensures that the imported MIDI data will correctly trigger all MASCHINE factory kits.
- The MIDI CC data will be copied to all Sounds for which MIDI notes have been imported.

- If the MIDI file contains data on **multiple MIDI channels**, the data from the individual channels will be imported to individual Sounds:
  - If any channel from the MIDI file corresponds to the MIDI input channel of a particular Sound in your Group, the data on that channel will be imported to that Sound. The MIDI input channel of each Sound is defined by the Channel parameter in the MIDI page of the Sound's Input properties — see section ↑8.2.1, Triggering Sounds via MIDI Notes.
  - For all other channels of the MIDI file (i.e. channels that doesn't correspond to any MIDI input channel of a Sound in your Group), the data from individual channels will be imported to individual Sounds that have not received any data during the current import yet: the channel with the lowest number will be imported to the Sound with the lowest slot number, and so on.
    Example: if the MIDI file contains data on channels 2, 3, and 5, and the MIDI input channel isn't defined in any Sound of your Group, Sound slot 1 will receive the data from channel 2, Sound slot 2 from channel 3, and Sound slot 3 from channel 5.

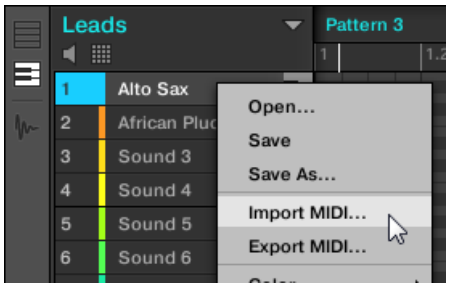
Importing a MIDI File to a Sound

You can import a MIDI file to a single Sound. For example, this can be useful to import a melodic part for a single instrument. You can do this from the Sound's context menu, via drag-and-drop, or via the FILES pane of the Browser.

Method 1: via the **Sound's context menu**

1. In the Group List (left of the Arranger), click the Group containing the Sound for which you want to import the MIDI file.
   This sets the focus to that Group and displays its Sounds and Patterns in the Pattern Editor underneath.
2. Select the Pattern in which you want to import the MIDI file.

3. Right-click ([Ctrl]-click on Mac OS X) the desired Sound in the Sound List and select *Import MIDI...* from the context menu.



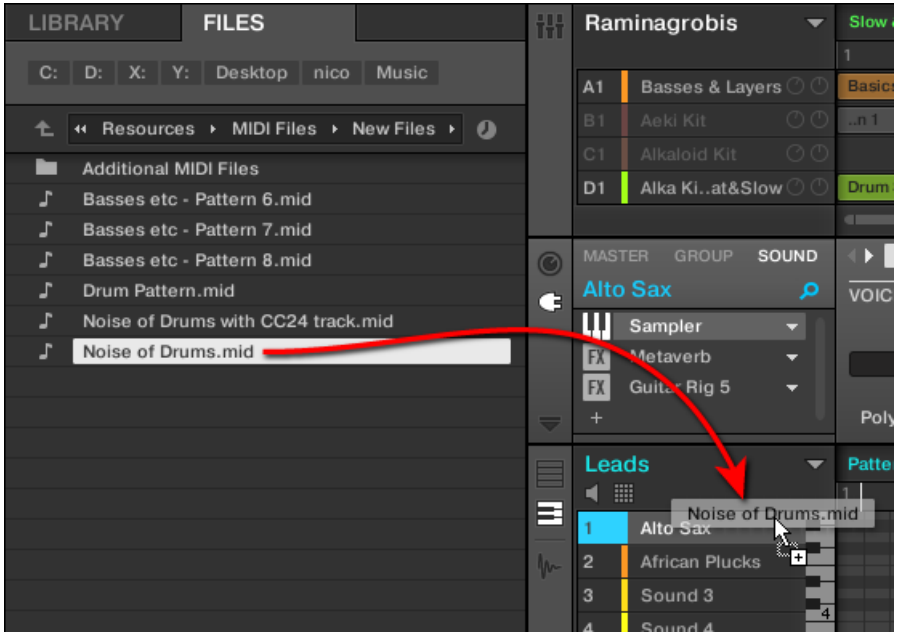
4. In the Import MIDI dialog that opens, navigate to the desired MIDI file on your computer and click Open to confirm.

→ The MIDI file will be imported to the selected Pattern for that Sound according to the import rules described below.

Method 2: via **drag and drop**

1. In the Group List (left of the Arranger), click the Group containing the Sound for which you want to import the MIDI file.
   This sets the focus to that Group and displays its Sounds and Patterns in the Pattern Editor underneath.
2. Select the Pattern in which you want to import the MIDI file.
3. Navigate to the desired MIDI file in the Explorer/Finder of your operating system or in the FILES pane of the MASCHINE Browser.

4. Drag the MIDI file onto the desired Sound in the Sound List (left of the Pattern Editor).



→ The MIDI file will be imported to the selected Pattern for that Sound according to the import rules described below.

If the Pattern Editor is in Keyboard view, you can also drag the MIDI file directly onto the Event area to import it into the focused Sound!

Method 3: using the **FILES pane of the Browser**

1. In the Group List (left of the Arranger), click the Group containing the Sound for which you want to import the MIDI file.
   This sets the focus to that Group and displays its Sounds and Patterns in the Pattern Editor underneath.
2. Select the Pattern in which you want to import the MIDI file.
3. Set the focus to the desired Sound by clicking it in the Sound List (left of the Pattern Editor).

4. Open the FILES pane of the Browser and navigate to the desired MIDI file (see section ↑3.6, Loading and Importing Files from Your File System to know how to use the FILES pane).
5. Double-click the MIDI file or click it and press [Enter] on your computer keyboard.

→ The MIDI file will be imported to the selected Pattern for the focused Sound according to the import rules described below.

MIDI to Sound – import rules: When you import a MIDI file into a Sound via its context menu, MASCHINE assumes that the MIDI file contains data for one single instrument (e.g., a bass or a lead synthesizer), and the import will be performed accordingly. Your MIDI file will be imported as follows:

- The imported MIDI data will replace any existing data (notes, MIDI tracks, and modulation tracks) for that Sound in the selected Pattern. For the other Sounds the Pattern content won't be affected.
- Any channel information in the MIDI file will be disregarded. All notes will appear in the same Pattern for that particular Sound. If the same MIDI note number and MIDI CC number are used in different channels in the MIDI file, the note and automation data will be merged. Conflicts will be resolved as follows:
  - Note duplicates: only the longest note is kept.
  - Modifiers (Mod Wheel, Pitch Bend, etc.), Velocity, and MIDI CCs: higher values are kept.

Importing Multiple MIDI Files to a Sound or a Group

You can even select multiple MIDI files and import them all to a Sound or Group at once!

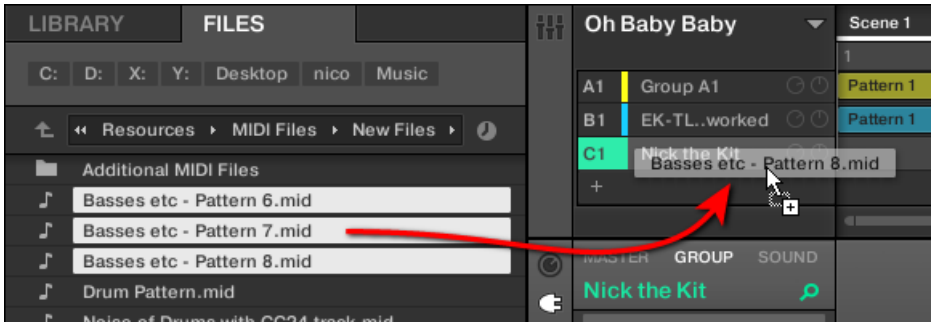
Contrary to the single-file import described above, importing multiple files doesn't replace the content of the selected Pattern — instead, for each MIDI file in the selection a new Pattern will be created.



As a consequence, when importing multiple MIDI files you don't need to select any particular Pattern beforehand.

To import **multiple MIDI files to a Group**:

1. Select multiple MIDI files in your operating system or in the FILES pane of the Browser.
2. Drag and drop the multiple selection onto the desired Group in the Group List.

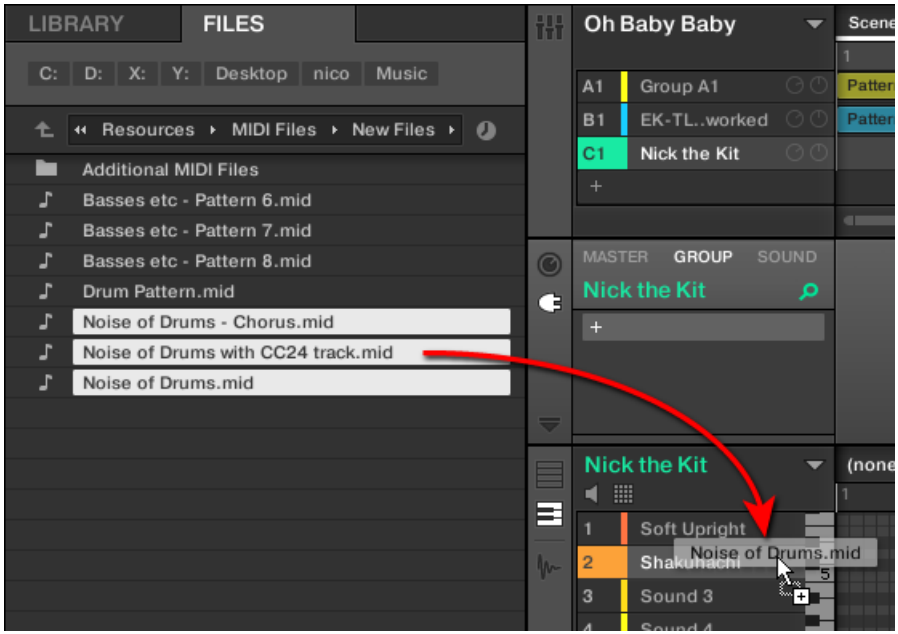


→ New Patterns will be created for that Group. Apart from this, each new Pattern receiving the data from one of the MIDI files. Apart from this, each MIDI file will be imported as a single MIDI file to that Group — see above for a detailed description.

To import **multiple MIDI files to a Sound**:

1. Select multiple MIDI files in your operating system or in the FILES pane of the Browser.

2. Drag and drop the multiple selection onto the desired Sound in the Sound List.



→ New Patterns will be created for that Sound in the Group, each new Pattern receiving the data from one of the MIDI files. Only this Sound will contain notes in these new Patterns. Apart from this, each MIDI file will be imported as a single MIDI file to that Sound — see above for a detailed description.



Alternatively, if you have selected the MIDI files in the FILES pane of the Browser, simply press [Enter] on your computer keyboard to import the multiple selection to the focused Sound!

8 Audio Routing, Remote Control, and Macro Controls

This chapter describes a few important topics and features of MASCHINE's routing and assignment system. Understanding these will be of great help in numerous MASCHINE workflows:

- We will explain how MASCHINE's audio routing works and how to take advantage of its flexibility: ↑8.1, Audio Routing in MASCHINE.
- We will describe how to route MIDI signals to and from your Sounds and Groups, and how to control MASCHINE parameters via MIDI and host automation: ↑8.2, Using MIDI Control and Host Automation.
- We will show how to use the powerful Macro Controls to greatly improve your live experience by putting the desired parameters at your fingertips: ↑8.3, Creating Custom Sets of Parameters with the Macro Controls.

The Channel Properties

Most of the features described here can be accessed via the **Channel properties**. Channel properties are global settings that apply to a particular Sound, Group, or to the Master independently of which Plug-ins are loaded in its Plug-in slots.

Channel properties are organized into four sets. Similar sets of properties are available for all channels (Sounds, Groups, and Master): **Input properties** (unavailable for the Master), **Output properties**, **Groove properties**, and **Macro properties**.

You can access Channel properties and their parameters via the same procedure as for Plug-ins, both in the software and from your controller. Please refer to section ↑2.3.3, Navigating Channel Properties, Plug-ins, and Parameter Pages in the Control Area for a detailed description.

The Input properties, Output properties, and Macro properties are covered in the following sections. For more information on the Groove properties, please refer to section ↑5.4.3, Groove.

8.1 Audio Routing in MASCHINE

MASCHINE offers a powerful audio routing system that you can finely customize to fit your specific needs.

To make it short, by default the various channels of MASCHINE are structured in a simple, hierarchical way:

- At the bottom level, each Sound has its own channel. The output of the Sound's channel is sent to its parent Group.
- At the mid-level, each Group has its own channel, which sums all channels of the included Sounds. The output of the Group's channel is sent to the Master.
- At the top level, the Master has its own channel, which sums the channels of all Groups and ends up at the main output of MASCHINE. The output of the Master's channel is sent to your amplification system (in stand-alone mode) or to your host application (in plug-in mode).

This default basic configuration can be customized in numerous ways. Using the audio settings available in the Input and Output properties at the Sound, Group, and Master level, you can build complex routings that cover a wide range of situations, as you will see in the next sections:

- Feed external audio to the input of your Sounds: ↑8.1.1, Sending External Audio to Sounds.
- Adjust the main output of your Sounds and Groups, and route it to various destinations: ↑8.1.2, Configuring the Main Output of Sounds and Groups.
- Send auxiliary outputs of your Sounds and Groups to other destinations: ↑8.1.3, Setting Up Auxiliary Outputs for Sounds and Groups.
- Choose the destination and settings for the Master output (MASCHINE's main output) as well as for the Cue bus used for pre-listening: ↑8.1.4, Configuring the Master and Cue Outputs of MASCHINE.

Mix View or Arrange View?

When it comes to adjusting audio and MIDI routings, the Mix view can sometimes be the most efficient way to do: The familiar mixing desk layout allows you to quickly find the parameters you are looking for and adjust the routing on the fly. Hence, in the following sections we describe the procedures in both Arrange view and Mix view. For more details on the Mix view, please refer to chapter ↑9, Controlling Your Mix.

You will also find useful examples of the various routings described here in chapter ↑11, Using Effects.

Configuring the Audio Routing from Your Controller

All the procedures described in the following sections make use of the Channel properties. As a consequence, they can also be done from your controller! To do this, switch your controller to Control mode and navigate to the desired Channel properties as described in section ↑2.3.3, Navigating Channel Properties, Plug-ins, and Parameter Pages in the Control Area.

8.1.1 Sending External Audio to Sounds

Each Sound can be configured to receive external audio signals. These audio signals can be coming from the following sources:

- Outside MASCHINE (from your audio interface if MASCHINE is used in stand-alone mode, or from your host if MASCHINE is used in plug-in mode).
- Additional outputs of multiple-output Plug-ins that might be loaded somewhere else in your Project.

Each Sound can use one external stereo input. The same external signal can be fed into any number of Sounds.

For example, this allows you to have any external audio signal be processed by the Plug-ins loaded in that Sound, and more generally, integrate external audio signals into the MASCHINE routing and processing system. See also section ↑11.2, Applying Effects to External Audio for an example of use and step-by-step instructions.

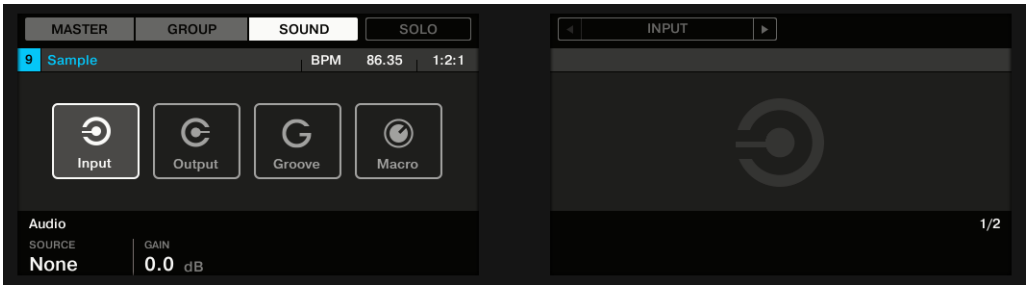
The configuration of external audio inputs for a Sound is done on the Audio page of the Sound's Input properties.

The Audio page of the Input properties is available for Sounds only.

MASCHINE 1.x owners: The Audio page of the Sound's Input properties replaces and extends the features of the Input Module available in previous MASCHINE versions.



The Audio page of the Input properties for a Sound in the software.



The AUDIO page of the Input properties for a Sound on the controller.

Please refer to section ↑2.3.3, Navigating Channel Properties, Plug-ins, and Parameter Pages in the Control Area to know how to access the Audio page of the Input properties in the software and from your controller.

Controls	Description
AUDIO Section	
Source	Selects an external audio input to be routed to the Sound. Available entries are *None* (no external input) and the four external stereo inputs *Ext. 1–4*, as well as any additional output(s) of multiple-output Plug-ins loaded in other Sounds of the same Group. Check the Routing page of the Audio and MIDI Settings panel to route the physical inputs of your audio interface to the virtual audio inputs of MASCHINE.
Gain	Adjusts the gain of the incoming signal.



If MASCHINE is running as a plug-in, the external stereo inputs *Ext. 1–4* available in the Source selector of the MAIN section will correspond to virtual inputs in your host. This allows you to send mixer channels from your DAW to individual Sounds within MASCHINE, for example. Please refer to your host documentation to know how to route signals to the virtual audio inputs of your MASCHINE plug-in.

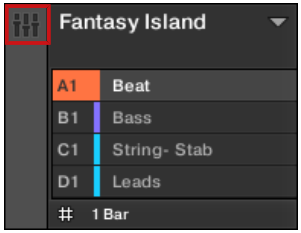


As any Parameter page of any Channel properties or Plug-in, this page is also available on your controller. To access it and change its parameters, simply use the common workflow described in ↑2.3.3, Navigating Channel Properties, Plug-ins, and Parameter Pages in the Control Area. Furthermore, you will find a step-by-step use case in ↑11.2, Applying Effects to External Audio.

Configuring External Inputs for Sounds in Mix View

You can also easily send external audio to Sounds in MASCHINE's Mixer:

1. Click the Mix View button on the left of the Arranger to switch from Arrange view to Mix view:



2. Open the extended view of the Mixer by clicking the down-pointing arrow on the left of the Mixer:



3. Check that the IO button is active on the left of the Mixer — if not, click it to enable it and display the input/output settings of each channel strip.



4. If the Mixer currently displays the Group channels, in the top row of the Mixer double-click the header of the Group containing the Sound you want to configure. If the Mixer currently displays the Sound channels, single-click the header of the desired Group.



The Mixer displays the channel strips of all Sounds in the selected Group.

5. At the top of the channel strip of the Sound you want to configure, click the first field under the Sound name and select the desired external input in the menu.



This is equivalent to setting the Source parameter described above.

6. Turn the little knob on its left to adjust the input gain.



This is equivalent to setting the Gain parameter described above.

8.1.2 Configuring the Main Output of Sounds and Groups

By default the outputs of all Sounds in a Group are sent to this Group, where they are mixed together and processed by the Plug-ins loaded in the Group, if any. Similarly, by default the outputs of all Groups are sent to the Master, where they are mixed together and processed by the Plug-ins loaded in the Master, if any.

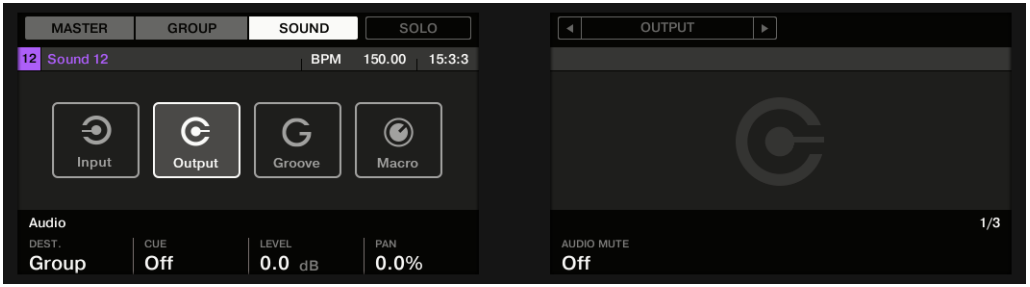
This default behavior can be customized to your liking: You can adjust the level and panoramic position of the channel output, or send it to the Cue bus for pre-listening. Furthermore, you could send individual Sounds or whole Groups to other pairs of outputs on your audio interface in order to process them separately at a later stage. The output routing configuration is done on the Audio page of the Output properties for Sounds and Groups.



We describe here the Audio page of the Output properties for Sounds and Groups only. The equivalent page for the Master will be described in section ↑8.1.4, Configuring the Master and Cue Outputs of MASCHINE.



The Audio page of the Output properties (here for a Sound) in the software.



The AUDIO page of the Output properties (here for a Sound) on the controller.



Please refer to section ↑2.3.3, Navigating Channel Properties, Plug-ins, and Parameter Pages in the Control Area to know how to access the Audio page of the Output properties in the software and from your controller.

Controls	Description
AUDIO Section	
Dest.	Selects where you want to send the main audio output of your channel. For Sounds, available options are *None* (no output), *Master*, *Group* (parent Group, default setting), any other Group or any other Sound acting as bussing point (i.e. containing an Effect Plug-in in its first Plug-in slot), as well as the 16 external stereo outputs *Ext. 1–16*. For Groups, available options are *None* (no output), *Master* (default setting), any other Group acting as bussing point (i.e. containing an Effect Plug-in in its first Plug-in slot), any Sound acting as bussing point in any other Group, as well as the 16 external stereo outputs *Ext. 1–16*. The available bussing points are labeled as described below.
Cue	When Cue is enabled, the main output of the channel is sent to the Cue bus instead of its normal target (defined in Dest., see above). For example, this is very useful to pre-listen a channel before you mix it in your performance. See also section ↑9.2.6, Using the Cue Bus for more information. Note that when Cue is enabled, the channel's Aux 1 and Aux 2 outputs are muted as well — but they are not sent to the Cue bus (see ↑8.1.3, Setting Up Auxiliary Outputs for Sounds and Groups).
Level	Adjusts the overall volume level of the channel.

Controls	Description
Pan	Defines the pan position of the channel in the stereo field.
Audio Mute (Sounds only)	If you enable Audio Mute, muting this Sound will not only bypass its events but also mute its audio output, thereby muting any audio tails from notes already played. See section ↑5.4.1, Mute and Solo for more information.



If MASCHINE is running as a plug-in, the external stereo outputs *Ext. 1–16* available in the Dest. selector of the MAIN section will correspond to virtual outputs in your host. This allows you to send individual Sounds or Groups from MASCHINE to their own mixer channels within your DAW, for example.

Labels for Bussing Points in the Dest. Selector

The various bussing points available in the Dest. selector (described in the table above) are labelled differently in the drop-down menu and in the display of the selector:

- In the drop-down menu they are labeled as follows:
  - For Groups: **[Group name]** (e.g., *Drums*).
  - For Sounds: **[Group name]: [Sound name]-[input number]** (e.g., *Drums: Kick-1*).
- In the selector display they are labeled as follows:
  - For Groups: **[Group letter+number]** (e.g., A2).
  - For Sounds: **[Group letter+number]:S[Sound number]-[input number]** (e.g., A2:S4-1 for the first input of the Sound 4 of Group A2).



On your controller the bussing points available in the DEST. parameter are labeled as in the selector display described above.

Level and Pan Shortcuts for Sounds and Group

You can quickly access the Level and Pan parameters described above via the little knobs available in the Sound List and in the Group List, at the left of the Pattern Editor and the Arranger, respectively: For each channel (Sound or Group) the left knob adjusts the level and the right knob adjusts the panoramic position.



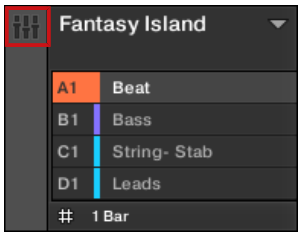
The pair of knobs for each Sound/Group allows you to quickly adjust the channel level and panoramic position.

For Sound slots, the knobs are visible only when the Pattern Editor is in Group mode. In Keyboard mode, the knobs are not visible.

Configuring the Main Outputs of Sounds and Groups in Mix View

You can also easily configure the outputs of your Sounds and Groups in MASCHINE's Mixer:

1. Click the Mix View button on the left of the Arranger to switch from Arrange view to Mix view:

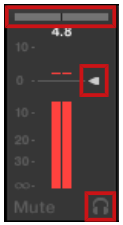


2. Open the extended view of the Mixer by clicking the down-pointing arrow on the left of the Mixer:



   Navigate to the channel of which you want to configure the output: for a Sound click the header of its parent Group (or double-click it if the Mixer currently displays the Group channel strips), and for a Group simply ensure that its channel strip is visible (double-click the Group header if the Mixer currently displays the Sound channel strips).

3. To adjust the level, panoramic position or Cue state of a channel, use the channel's fader, balance control (above the fader) or headphone button (below the fader), respectively.



   This is equivalent to setting the Level, Pan, and Cue parameters described above, respectively.

4. To select another destination for the channel's output, click the first area under the level meter, and select the desired destination in the menu.



This is equivalent to setting the Dest. parameter described above.

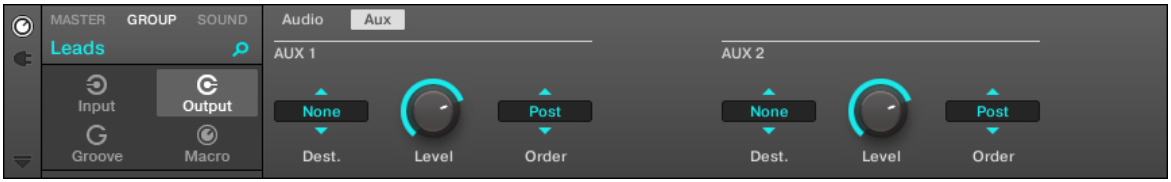
8.1.3 Setting Up Auxiliary Outputs for Sounds and Groups

Each Sound or Group of your Project provides two auxiliary outputs that you can route to additional targets. For example, you can send a definable amount of the channel's audio output to other channels for further processing. This is notably used in send effects — see section ↑11.3, Creating a Send Effect to learn how to set up a classic send effect.

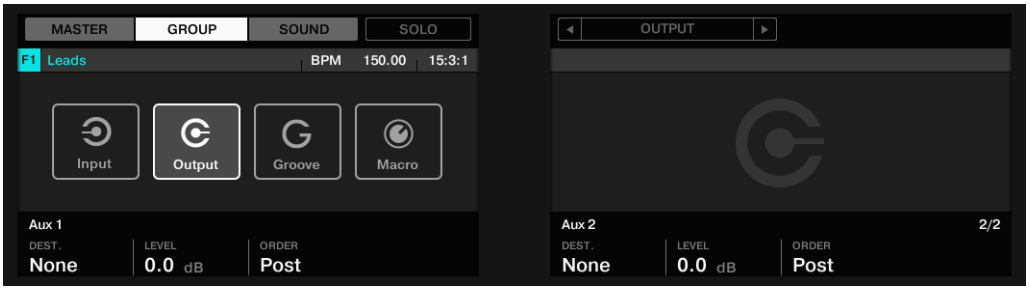
The auxiliary outputs of a Sound/Group are configured on the Aux page of the Output properties.



There is no Aux page in the Output properties of the Master.



The Aux page of the Output properties (here for a Group) in the software.



The AUX page of the Output properties (here for a Group) on the controller.

Please refer to section ↑2.3.3, Navigating Channel Properties, Plug-ins, and Parameter Pages in the Control Area to know how to access the Aux page of the Output properties in the software and from your controller.

Controls	Description
AUX 1 / AUX 2 Section	
Dest.	Selects where you want to send the Aux 1 or Aux 2 output of your channel. Available options are the same as for the Dest. selector of the Audio page (see ↑8.1.2, Configuring the Main Output of Sounds and Groups), except that for Aux 1 and Aux 2 the default destination is *None* — in other terms there are no auxiliary sends defined by default.

Controls	Description
Level	Adjusts the level of the signal sent to the Aux 1 or Aux 2 output.
Order	If Order is set to *Pre*, the channel will be fed into Aux 1 or Aux 2 *before* the Level and Pan settings of the MAIN section on the Audio page are applied. If Order is set to *Post* (default setting), the Level and Pan settings of the main output also affect the signals sent to the auxiliary outputs.

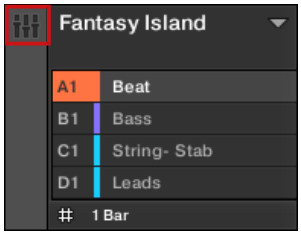


If MASCHINE is running as a plug-in, the external stereo outputs *Ext. 1–16* available in the Dest. selectors of the AUX 1 and AUX 2 section will correspond to virtual outputs in your host. This allows you to send auxiliary outputs of individual Sounds or Groups from MASCHINE to their own mixer channels within your DAW, for example.

Setting Up the Auxiliary Outputs of Sounds and Groups in Mix View

You can also easily set up auxiliary outputs for your Sounds and Groups in MASCHINE's Mixer:

1. Click the Mix View button on the left of the Arranger to switch from Arrange view to Mix view:



2. Open the extended view of the Mixer by clicking the down-pointing arrow on the left of the Mixer:
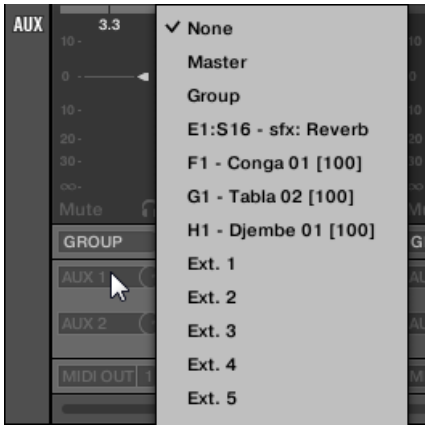


3. Check that the AUX button is active on the left of the Mixer — if not, click it to enable it and display the settings for the auxiliary outputs of each channel strip.



4. Navigate to the channel of which you want to configure an auxiliary output: for a Sound click the header of its parent Group (or double-click it if the Mixer currently displays the Group channel strips), and for a Group simply ensure that its channel strip is visible (double-click the Group header if the Mixer currently displays the Sound channel strips).

5. In the channel strip of the desired Sound or Group, click the AUX 1 or AUX 2 label (default labels) at the bottom of the strip and select the desired destination in the menu.



This is equivalent to setting the Dest. parameter described above.

6. Adjust the level for that auxiliary output via the little knob at the right of the menu.



This is equivalent to setting the Level parameter described above.

7. Set the pre/post state of the auxiliary output by clicking the Post (or Pre) label right under the menu.



This is equivalent to setting the Order parameter described above.

8.1.4 Configuring the Master and Cue Outputs of MASCHINE

All channels routed to the Master are mixed together and processed by the Plug-ins loaded in the Master, if any. The result is then sent to the Master output (that is, MASCHINE's main output).

Besides, all channels currently routed to the Cue bus for pre-listening are mixed together and sent to the Cue output.

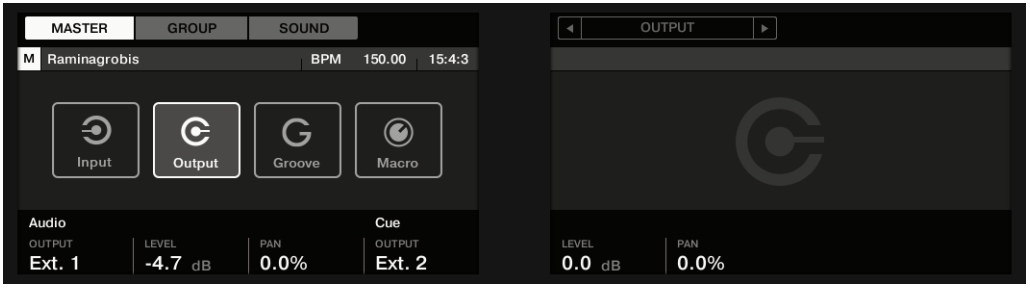


For more information on how to use the Cue bus, see section ↑9.2.6, Using the Cue Bus.

You can choose to which outputs (on your audio interface or in your host) both Master and Cue outputs should be sent, and adjust their respective levels and panoramic positions. This is done on the Audio page of the Output properties for the Master.



The Audio page of the Output properties for the Master in the software.



The AUDIO page of the Output properties for the Master on the controller.

Please refer to section ↑2.3.3, Navigating Channel Properties, Plug-ins, and Parameter Pages in the Control Area to know how to access the Audio page of the Output properties in the software and from your controller.

Controls	Description
AUDIO Section	
Output	Selects where you want to send the master output of your MASCHINE Project. Available options are the 16 external stereo outputs *Ext. 1–16*.
Level	Adjusts the overall volume level of the master output. This control is the same as the Master Volume slider in the Header, at the top right corner of MASCHINE's window.
Pan	Defines the panoramic position of the master output in the stereo field.

Controls	Description
CUE Section	
Output	Selects where you want to send the Cue bus of your MASCHINE Project. Available options are the 16 external stereo outputs *Ext. 1–16*. By selecting a different output from the one used for the main stereo output, you can effectively pre-listen on this additional output (e.g., on your headphones) any channel(s) currently sent to the Cue bus. To send a channel to the Cue bus, enable the Cue switch in the Audio page of its Output properties (see section ↑8.1.2, Configuring the Main Output of Sounds and Groups).
Level	Adjusts the level of the Cue output.
Pan	Defines the panoramic position of the Cue output in the stereo field.

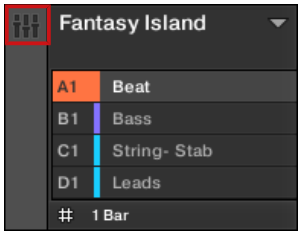
If MASCHINE is running as a plug-in, the external stereo outputs *Ext. 1–16* available in the Output selector of the MAIN and CUE sections will correspond to virtual outputs in your host.

Configuring the Master and Cue Outputs in Mix View

You can also easily configure the Master and Cue outputs of MASCHINE in the Mixer. Both share the same channel strip at the far right of the Mixer.

To display the Master/Cue channel strip, do the following:

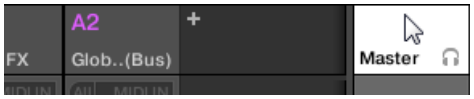
1. Click the Mix View button on the left of the Arranger to switch from Arrange view to Mix view:



2. Open the extended view of the Mixer by clicking the down-pointing arrow on the left of the Mixer:



3. Click the background of the last header in the top right corner of the Mixer.



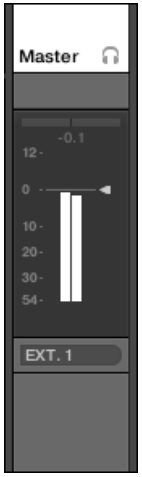
The Master/Cue channel strip appears underneath.

In this Master/Cue channel strip, do the following to configure the output of the **Master channel**:

1. Click Master in the strip's header to show the controls for the Master channel.



2. To adjust the level and panoramic position of the main output, use the channel's fader and balance control (above the fader), respectively.



This is equivalent to setting the Level or Pan parameters in the MAIN section, respectively (see above).

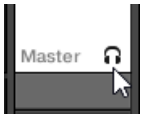
3. To select another destination for the Master output, click the first area under the level meter and select the desired destination in the menu.



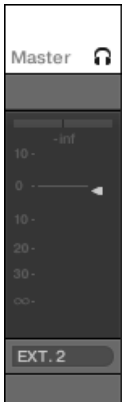
This is equivalent to setting the Output parameter in the MAIN section (see above).

In this Master/Cue channel strip, do the following to configure the output of the **Cue channel**:

1. Click the headphone icon in the strip's header to show the controls for the Cue channel.



2. To adjust the level and panoramic position of the Cue output, use the channel's fader and balance control (above the fader), respectively.



This is equivalent to setting the Level or Pan parameters in the CUE section, respectively (see above).

3. To select another destination for the Cue output, click the first area under the level meter and select the desired destination in the menu.



This is equivalent to setting the Output parameter in the MAIN section (see above).

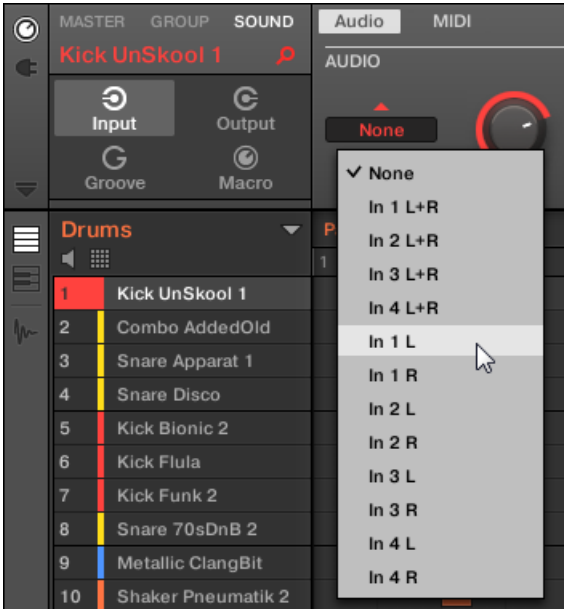
8.1.5 Mono Audio Inputs

Each Sound can be configured to receive external stereo or mono audio signals. You may use audio signals from outside MASCHINE (from your audio interface if MASCHINE is used in stand-alone mode, or from your host if MASCHINE is used in plug-in mode).

MASCHINE offers either 4 stereo inputs or 8 mono inputs, so each Sound can use one external mono or stereo input. The same external signal can be fed into any number of Sounds.

For example, this allows you to process any external audio signal using the plug-ins loaded in a Sound, and more generally, integrate external audio signals into the MASCHINE routing and processing system.

The external audio inputs for a Sound can be configured on the Audio page of the Sound's Input properties.



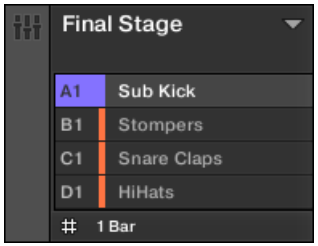
Configuring External Audio Inputs in the Input Properties.

For more information on audio routing and sending external audio to Sounds, please read chapter 8 of the MASCHINE Manual.

8.1.5.1 Configuring External Inputs for Sounds in Mix View

You can also easily send stereo or mono external audio to Sounds in MASCHINE's Mixer:

1. Click the Mix View button on the left of the Arranger to switch from Arrange view to Mix view:



2. Open the extended view of the Mixer by clicking the down-pointing arrow on the left of the Mixer:



3. Check that the IO button is active on the left of the Mixer — if not, click it to enable it and display the input/output settings of each channel strip.

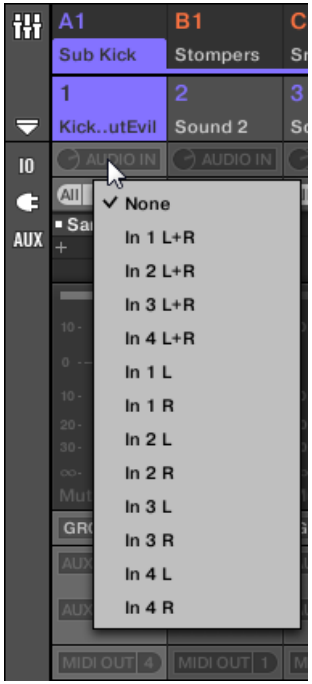


4. If the Mixer currently displays the Group channels, in the top row of the Mixer double-click the header of the Group containing the Sound you want to configure. If the Mixer currently displays the Sound channels, single-click the header of the desired Group.

⇨ The Mixer displays the channel strips of all Sounds in the selected Group.



5. At the top of the channel strip of the Sound you want to configure, click the first field under the Sound name and select the desired external input in the menu.



⇨ This is equivalent to setting the Source parameter described above.

6. Turn the little knob on its left to adjust the input gain.



8.1.5.2 Configuring External Inputs for Sounds in MASCHINE STUDIO

All input channels, including individual mono L and R channels can be found at the bottom of the input selection drop-down menus. Pressing the IN button on MASCHINE STUDIO will toggle through Stereo, Left, and Right inputs, and metering of mono inputs is shown as dual-mono.

To configure an external input for a Sound:

1. Select the Group and Sound for external sound source input.
2. Press CHANNEL.
3. Press Button 5 repeatedly to select INPUT.
4. Press Button 3 SOUND.
5. Turn Knob 1 to select the input source.



→ The list of stereo and mono inputs are available for selection.

8.2 Using MIDI Control and Host Automation

MASCHINE provides you with flexible MIDI remote control and host automation facilities that can be used in many situations.

Incoming MIDI and Host Automation

MASCHINE's Master, Groups and Sounds can be controlled via MIDI and the host (when MASCHINE is running as a plug-in), both globally and individually:

- By default, all MIDI data incoming on the enabled MIDI input port(s) will be received by the focused Sound of the focused Group. See ↑2.6.3, Preferences – MIDI Page to find information on how to enable/disable MIDI input ports in MASCHINE.
- **Triggering Sounds via MIDI notes**: By default, incoming MIDI notes will trigger the focused Sound. You can change this default behavior and map incoming MIDI notes differently in order to adapt MASCHINE to your requirements. The appropriate MIDI settings can be configured in the MIDI page of the Input properties, both for individual Sounds and for entire Groups. These are described in section ↑8.2.1, Triggering Sounds via MIDI Notes.
- **Controlling parameters via MIDI messages and host automation**: You can control parameters of Channel properties and Plug-ins in your channels (Sounds, Groups, and Master) via MIDI messages and host automation (when MASCHINE is running as a plug-in). This is described in section ↑8.2.3, Controlling Parameters via MIDI and Host Automation.
- **Switching Plug-in Patches via MIDI Program Change messages**: You can use MIDI Program Change messages to recall particular patches (or programs, presets, etc.) for Native Instruments and External Plug-ins loaded at the Sound level. This is described in section ↑8.2.4, Selecting VST/AU Plug-in Presets via MIDI Program Change.



When MASCHINE is running as a plug-in in a host, you can also trigger your Scenes using MIDI notes or MIDI Program Change messages. Please refer to section ↑13.4, Triggering Scenes via MIDI (MASCHINE Plug-in Only) for more information on this.

Outgoing MIDI

You can also **sending MIDI data from Sounds**. For example, when MASCHINE is running as a plug-in in a host environment, this allows you to record your performance on the pads as a MIDI pattern in your host application. This is described in section ↑8.2.5, Sending MIDI from Sounds.

8.2.1 Triggering Sounds via MIDI Notes

MASCHINE lets you play your Sound(s) via MIDI notes (e.g., from a MIDI keyboard).

By default and without any configuration, incoming MIDI notes on any MIDI port and any MIDI channel will trigger different pitches of the Sound slot currently focused — this can be useful to quickly test a Sound via MIDI!

To play one or more Sounds via MIDI notes independently of the Sound slot currently focused, you need to configure the MIDI input settings of your Sound(s) or of their Group, i.e. define how the Sound(s) or the Group should react to incoming MIDI notes. This is done in the MIDI page of the Sounds' or Group's Input properties.



There is no MIDI page in the Input properties of the Master.



MASCHINE 1.x owners: The MIDI page of the Input properties for Sounds and Groups replaces and extends the features of the Sound MIDI Settings and Sound MIDI Batch Setup available in previous MASCHINE versions, respectively.

When configuring these MIDI input settings, keep in mind the following:

- **MIDI input settings for a Group** affect all Sounds in the Group: Each Sound will be triggered by a different MIDI note. Typically, this allows you to quickly set up a MIDI remote control for an entire drum kit.
- **MIDI input settings for a Sound** affect this Sound only: Incoming MIDI notes will trigger different notes of this Sound. Typically, this allows you to control a melodic instrument via MIDI. More precisely, the incoming MIDI notes will be routed to the first Plug-in slot of the Sound.



If the Sound has no Plug-ins, the incoming MIDI notes will be forwarded to the Sound's MIDI output, if enabled (see section ↑8.2.5, Sending MIDI from Sounds).

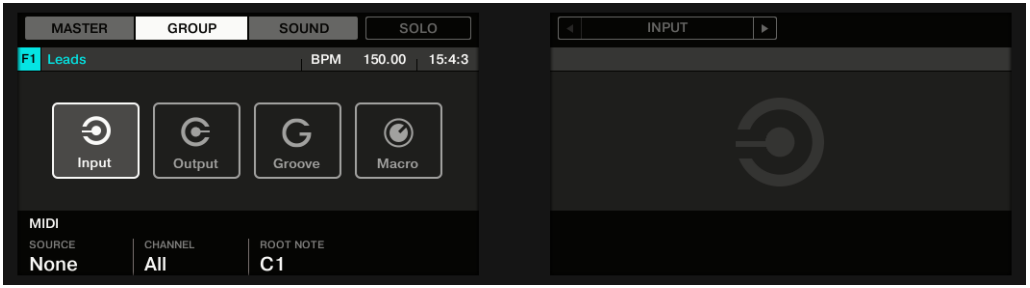
- MIDI input settings of a Sound and its parent Group are merged: For example, if you configure a Group to react to incoming notes on MIDI channel 1, and one of its Sound to react to incoming notes on MIDI channel 2, this Sound will react to one incoming note on MIDI channel 1 and all incoming notes on channel 2 (according to the two rules described above).
- The MIDI input settings described here also affect other MASCHINE features:
    - The preset selection via MIDI Program Change for Native Instruments and External Plug-ins. See section ↑8.2.4, Selecting VST/AU Plug-in Presets via MIDI Program Change for more information.

- The way MIDI files are imported to Sounds and Groups. See section ↑7.8.3, Importing MIDI to Patterns for more information.

- MIDI automation (i.e. controlling MASCHINE parameters via MIDI) is not affected by the settings described here. For more information on MIDI automation, please refer to section ↑8.2.3, Controlling Parameters via MIDI and Host Automation.



The MIDI page of the Input properties (here for a Group) in the software.



The MIDI page of the Input properties (here for a Group) on the controller.

Please refer to section ↑2.3.3, Navigating Channel Properties, Plug-ins, and Parameter Pages in the Control Area to know how to access the MIDI page of the Input properties in the software and from your controller.

The MIDI input settings for Sounds and Groups provide following parameters:

Controls	Description
MIDI Section	
Active (plug-in mode only)	Enables the MIDI note input for that Sound/Group (disabled by default). Please refer to your host documentation to know how to route MIDI signals to your MASCHINE plug-in. Note that when Active is disabled for both a Sound and its parent Group, if the Sound is focused it will receive MIDI notes sent by the host (default behavior for Sounds).
Source (stand-alone mode only)	Selects the MIDI port on which the Sound or Group will receive MIDI notes. Available entries are *None* (MIDI note input disabled, default setting), *All* (MIDI notes are received on all enabled input ports), and each enabled MIDI input port. You can enable the desired MIDI input ports of your MIDI interfaces in the MIDI page of the Audio and MIDI Settings panel (see section ↑2.6.3, Preferences – MIDI Page). Note that when *None* is selected for both a Sound and its parent Group, if the Sound is focused it will receive MIDI notes from all MIDI ports and on all MIDI channels.
Channel	Selects the MIDI channel on which the Sound or Group will receive MIDI notes. If you select *All* (default setting), the Sound or Group will receive MIDI notes from all channels. The Channel parameter of a Sound is also used when importing a multi-channel MIDI file to its Group — see section ↑7.8.3, Importing MIDI to Patterns for more on this.
Root Note (Groups only)	Defines the MIDI root note for that Group (C1 by default). The MIDI root note and the upper 15 MIDI notes (from [Root Note] until [Root Note + 15]) will trigger the root note of Sound slot 1–16, respectively. Incoming MIDI notes outside this range will be ignored by the Group. The Root Note parameter is also used when importing a single-channel MIDI file to the Group — see section ↑7.8.3, Importing MIDI to Patterns for more on this.

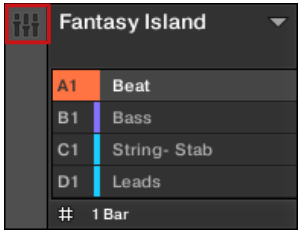
Some of these parameters also affect MIDI file import: The Channel parameter of a Sound will be used when importing a multi-channel MIDI file to its Group, while the Root Note parameter will be used when importing a single-channel MIDI file to the Group. For more information on MIDI file import please refer to section ↑7.8.3, Importing MIDI to Patterns.

If MASCHINE is running as a plug-in in a host and you have configured your Scenes to be triggered via MIDI notes, the Scene trigger has priority over any Sound trigger set to the same MIDI channel. To configure MIDI control for Scenes, please refer to section ↑13.4, Triggering Scenes via MIDI (MASCHINE Plug-in Only).

Configuring MIDI Note Input for Sounds and Groups in Mix View

You can also easily configure the MIDI note input of your Sounds and Groups in MASCHINE's Mixer:

1. Click the Mix View button on the left of the Arranger to switch from Arrange view to Mix view:



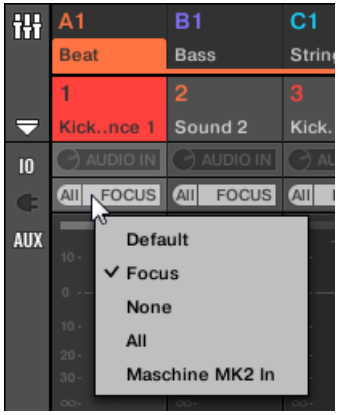
2. Open the extended view of the Mixer by clicking the down-pointing arrow on the left of the Mixer:



3. Check that the IO button is active on the left of the Mixer — if not, click it to enable it and display the input/output settings of each channel strip.



4. Above the fader area in the channel strip of the Sound or Group you want to configure, click the bigger field on the right (labeled MIDI IN by default) and select the desired MIDI port in the menu.

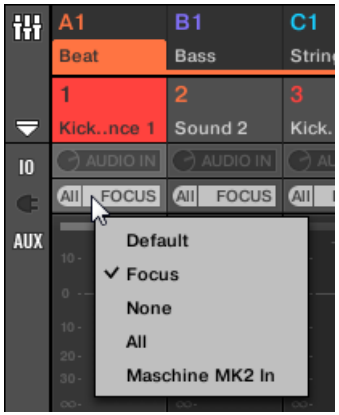


This is equivalent to setting the Source parameter described above.
If MASCHINE is running as a plug-in you see a MIDI IN button instead. Click it to enable the MIDI input from the host.



This is equivalent to enabling the Active button described above.

5. Click the little field on its left to select a MIDI channel.



This is equivalent to the Channel parameter described above.

For more information on how to trigger MASCHINE 2 sounds via MIDI Notes in a host Sequencer refer to this Knowledge Base Article: http://www.native-instruments.com/knowledge/questions/1780/.

8.2.2 Triggering Scenes via MIDI

The MASCHINE hardware SCENE mode can be configured to send out MIDI (Notes/Program Changes) which can be used to trigger scenes. When MASCHINE runs as a Plug-in this MIDI data is sent to the host application. When MASCHINE runs as a stand-alone application this MIDI data is send out to all activated MIDI output devices.

MIDI Scene Change program change messages can be used to record a Scene performance to a host application, and all recorded Scene performances can be then be saved within your DAW and sent back to MASCHINE for playback and trigger Scenes in the recorded order.

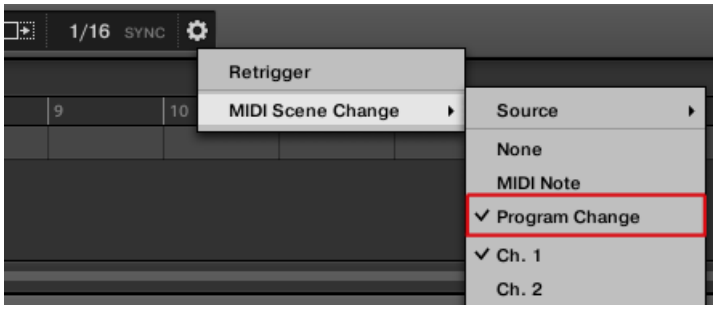
To send MIDI Scene Change messages:

1. Click the cog wheel Icon in the Header of the MASCHINE software.



2. Select MIDI Scene Change.

3. Click Program Change.



► MASCHINE will send Program Change messages when Scenes are triggered from the MASCHINE hardware SCENE page.

8.2.3 Controlling Parameters via MIDI and Host Automation

You can assign many parameters of the Channel properties and Plug-ins located in your various channels (Sounds, Groups, and Master) of your Project to MIDI messages in order to control and automate them via MIDI.

In addition, when MASCHINE is running as a plug-in, you can assign these parameters to automation IDs in order to control and automate them via host automation tracks in your host.

Configuring MIDI and host automation is possible in the software only.

In MASCHINE, **automation** means the control of MASCHINE parameters from an **external source** (MIDI or host application). Value changes are:

- **Permanent**: The new parameter value stays valid until a new value is defined (via MIDI/host or manually), even when the playback is looped or restarted.
- **Absolute**: The new parameter value is defined regardless of its current value.

Automation vs. Modulation

Although both deal with automatic change of MASCHINE parameters, *automation* and *modulation* have to be distinguished. The following table summarizes the main differences:

	Modulation	Automation
Source of control	Internal (e.g., changes recorded via Auto-write)	External (e.g., an external MIDI sequencer or an automation track in your host)
Duration of the change	Temporary (until the end of the Clip)	Permanent
Target parameters	At the Sound and Group levels only	At all levels (Sound, Group, and Master)
Nature of the change (continuous parameters only)	Relative (defines a deviation to the non-modulated value)	Absolute (defines a new value regardless of the non-automated value)

This section describes how to use automation in MASCHINE — for more information on using modulation, please refer to section ↑7.5, Recording and Editing Modulation.

Please note that modulation and automation are not mutually exclusive: You can modulate a parameter in MASCHINE *and* automate it (e.g., from your host) simultaneously! As a result, the parameter value will deviate (according to the recorded modulation) from its moving value defined by the automation.

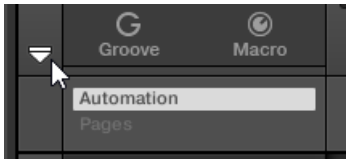
Using the Automation Pane in the Assignment Area

MIDI and host control can be configured in the **Automation pane** of the **Assignment area**:



The Automation pane of the Assignment area.

1. Click the down-pointing arrow in the bottom left corner of the Control area to reveal the **Assignment area** underneath:



2. In the left part of the Assignment area, click the Automation tab:



→ The Automation tab lights up and the Automation pane appears on its right. You are now ready to configure MIDI and host automation for the parameters in the current Parameter page.

Once the Assignment area is open, when you switch to other Parameter pages the Assignment area follows your selection: it always shows the assignments for the page currently displayed above.

MASCHINE 1.x owners: In previous MASCHINE versions MIDI/host automation was only possible via the Macro Controls. Now MIDI/host automation and Macro Controls are unrelated: MIDI/host automation can be configured directly on parameters, independently of your Macro Control assignments. Macro Controls now specifically serve as shortcuts (or "aliases") for parameters — see section ↑8.3, Creating Custom Sets of Parameters with the Macro Controls for more information.

The Automation pane holds two tabs:

- **MIDI tab**: Click the MIDI tab to assign MIDI messages to automatable parameters. You can then remote control and automate MASCHINE parameters from any MIDI-capable device or software. Possible MIDI messages are Pitch wheel, Program Change, and MIDI CC 0–127.
- **Host tab**: Click the Host tab to assign automation IDs to automatable parameters if MASCHINE is running as a plug-in. You can then remote control and automate MASCHINE parameters from your host application.

Under each automatable parameter of the current Parameter page, the Automation pane shows an **Assignment field** showing the current assignment for this parameter, if any. If the parameter has no assignment yet, the Assignment field reads Learn (MIDI tab) or Enable (Host tab). If the parameter cannot be automated, its Assignment field is grayed out and inactive (see below to know which parameters can be automated).



A MIDI CC assignment for the current Parameter page.



A few host automation assignments for the current Parameter page.

The following paragraphs describe in more details how to assign MIDI controls and host automation IDs to MASCHINE parameters.

Which MASCHINE Parameters Are Automatable?

All the automatable parameters are found in Plug-ins or Channel properties (e.g., you cannot automate the Pattern Length or the color of a Scene). In the software in Mix view, this means that all automatable parameters are found in some Parameter page of the Control area.

In order to be automatable, parameters of Plug-ins and Channel properties have to meet one single requirement:

- In order to be automatable, a parameter must be **controlled by a knob or a button** in the software — most parameters controlled by selectors (e.g., for selecting an operating mode or a filter type) cannot be automated.

Almost all parameters meeting this requirement are automatable, the only exceptions being:

- Plug-ins:
  - Saturator: in Tube mode, the Bass Overload button (MAIN section) and Bypass button (EQ section).
  - Percussion (Drumsynth): in Fractal mode, the Tune Hold button in the Main page.
- Channel properties:
  - Sound's and Group's Output properties: the Cue button in the Audio page.
  - Group's Input properties: the Root Note knob in the MIDI page.
  - Master's Groove properties: the Amount knob and Invert toggle in the Swing page.

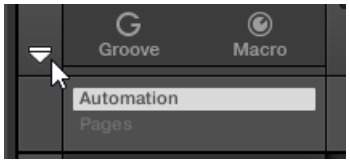


You will notice that the rules for automatable parameters are the same as for modulatable parameters except that modulatable parameters can only be found in Sounds and Groups (not in the Master). In other words, at the Sound and Group level the same parameters are both automatable and modulatable. For more information on modulation please refer to section ↑7.5, Recording and Editing Modulation.

Also note that your Macro Controls will be automatable if, and only if, the parameters they are controlling are themselves automatable. For more information on Macro Controls please refer to section ↑8.3, Creating Custom Sets of Parameters with the Macro Controls.

Assigning Host Automation IDs to Parameters (MASCHINE as Plug-in)

1. Click the down-pointing arrow in the bottom left corner of the Control area to open the Assignment area underneath.



2. On the left of the Assignment area, click the Automation tab to show the Automation pane, then in this pane click the Host tab.



3. Click the Enable label in the Assignment field under any unassigned parameter to automatically assign that parameter to the next free automation ID.



→ The Assignment field displays the automation ID for that parameter. The parameter is ready to be controlled from your host.



Removing an automation ID is also straightforward:

▶ Click the non-empty Assignment field under any assigned parameter to remove the automation ID currently assigned to that parameter.

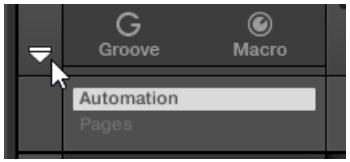
→ The previous automation ID is removed from the Assignment field and the parameter is not available anymore for host automation.

For more information on how to automate VST/AU plug-in parameters from your host, please refer to your host documentation.

Assigning MIDI Controls to Parameters

Assigning a MIDI control to a parameter in MASCHINE is done via an intuitive **Learn mode**:

1. Click the down-pointing arrow in the bottom left corner of the Control area to open the Assignment area underneath.



2. On the left of the area, click the Automation tab to show the Automation pane, then in this pane click the MIDI tab.



In this tab, the Assignment fields for automatable parameters read Learn.

3. Click Learn in the Assignment field of a parameter to enter Learn mode for that parameter.
   The Assignment field shows a blinking Learning.



4. Move the desired control element (knob, button, etc.) on your MIDI controller.

→ The Assignment field automatically displays the MIDI message type received (CC number, PC for Program Change, or PW for Pitchbend). The parameter is ready to be controlled via MIDI.

Note that the assignments you create will receive MIDI messages on all channels of all enabled MIDI ports.

For the Learn mode and the resulting MIDI control to work, MIDI must be correctly configured in MASCHINE. If MASCHINE is running as stand-alone application this is done in the MIDI page of the Preferences panel — for more details please refer to section ↑2.6.3, Preferences – MIDI Page. If MASCHINE is running as a plug-in in a host application the MIDI configuration is done in the host — see section ↑2.5, Stand-Alone and Plug-in Mode.

If there is already a MIDI assignment for the parameter, the new MIDI assignment will replace the previous one. If you change your mind and don't want to assign any new MIDI control, while Learn is blinking click the Assignment field again or press [Esc] on your computer keyboard.

You cannot assign the same MIDI control to more than one parameter in MASCHINE: If a MIDI control is already assigned to a parameter, when you assign it to another parameter its first assignment is automatically deleted.

If you want to simply remove a MIDI assignment without recording a new one, do the following:

► Right-click ([Ctrl]-click on Mac OS X) the non-empty Assignment field under a parameter and select *Unlearn* in the menu to remove the MIDI assignment for that parameter.



→ The MIDI assignment is removed from the Assignment field and the parameter is not controllable via MIDI anymore.

Of course, this procedure also works for Native Instruments and External Plug-ins loaded in MASCHINE.

8.2.4 Selecting VST/AU Plug-in Presets via MIDI Program Change

If you have a Native Instruments or third-party VST/AU plug-in loaded in a Sound, you can remotely switch presets (or patches, programs, etc.) in your plug-in via MIDI Program Change messages.

For this to work, your plug-in must expose its presets (or a particular set of presets) to the host. Each VST/AU instrument or effect might handle its presets (or patches, programs...) differently. Please refer to the plug-in documentation to know how to make its presets available to the host.



For example, in MASSIVE, ABSYNTH 5, and FM8, you need to enable the Program List and fill it up with the desired patches in order to expose these to MASCHINE and switch between them via MIDI Program Change messages.

The Native Instruments or third-party VST/AU plug-in will listen to Program Change messages according to the Source and Channel settings you have defined on the MIDI page of the Input properties for the respective Sound — this page is described in detail in section ↑8.2.1, Triggering Sounds via MIDI Notes above.

8.2.5 Sending MIDI from Sounds

Your Sounds can output MIDI notes and automation data to the outside world, allowing you to control any MIDI-capable application and/or external MIDI gear from MASCHINE's sequencer.

With its MIDI output enabled, a Sound will send:

- MIDI notes corresponding to the notes played by that Sound in the current Pattern.
- MIDI notes corresponding to your hits on the pads.
- All events of the MIDI tracks you might have created in the MIDI Automation pane of the Control Lane, at the bottom of the Pattern Editor. See section ↑7.6, Creating MIDI Tracks from Scratch in MASCHINE for more on this.

A Sound without any Plug-in loaded can still send the MIDI data listed above! Furthermore, if the Sound has no Plug-in it will forward any incoming MIDI notes to its MIDI output. To know how to configure the MIDI note input of Sounds, please refer to section ↑8.2.1, Triggering Sounds via MIDI Notes.

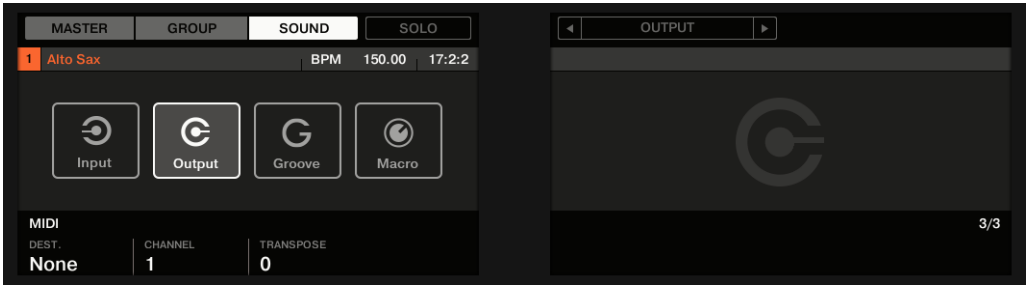
The MIDI output of Sounds is configured on the MIDI page of the Output properties for Sounds.

The MIDI page of the Output properties is available for Sounds only.

MASCHINE 1.x owners: The MIDI page of the Sound Output properties replaces and extends the features of the MIDI Out Module available in previous MASCHINE versions.



The MIDI page of the Output properties for a Sound in the software.



The MIDI page of the Output properties for a Sound on the controller.

Please refer to section ↑2.3.3, Navigating Channel Properties, Plug-ins, and Parameter Pages in the Control Area to know how to access the MIDI page of the Output properties in the software and from your controller.

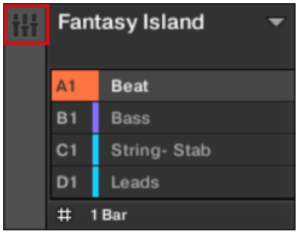
Control	Description
MIDI Section	
Dest.	Selects the MIDI port on which the Sound will send MIDI data. If MASCHINE is running in **stand-alone mode**, available entries are *None* (MIDI output disabled, default setting), every enabled MIDI output port, as well as any Sound in the same Group containing a Plug-in that can receive MIDI (multitimbral Plug-in). Check the MIDI page of the Preferences panel to enable the desired MIDI output ports on your MIDI interfaces (see ↑2.6.3, Preferences – MIDI Page). If MASCHINE is running **as a plug-in** in a host application, the entries for the enabled MIDI output ports are *None* (MIDI output disabled, default setting) and *Host*. If *Host* is selected, MASCHINE will forward the MIDI data from the Sound to the host application. This notably allows you to record what you play on the pads as MIDI files in your host — e.g., for further editing, controlling other instruments, etc.

Control	Description
Channel	Selects the MIDI channel on which the Sound will send MIDI data. By default Sound slot 1 will send MIDI data on channel 1, Sound slot 2 on channel 2, etc.
Transpose	Applies an offset to the MIDI note numbers before the notes are sent. Values range from -48 (downward transposition by 48 semitones, i.e. four octaves) to +48 (upward transposition by 48 semitones, i.e. four octaves). The default value is 0.

Configuring MIDI Output for Sounds in Mix View

You can also easily configure the MIDI output of your Sounds in MASCHINE's Mixer:

1. Click the Mix View button on the left of the Arranger to switch from Arrange view to Mix view:



2. Open the extended view of the Mixer by clicking the down-pointing arrow on the left of the Mixer:



3. Check that the IO button is active on the left of the Mixer — if not, click it to enable it and display the input/output settings of each channel strip.



4. If the Mixer currently displays the Group channels, in the top row of the Mixer double-click the header of the Group containing the Sound you want to configure. If the Mixer currently displays the Sound channels, single-click the header of the desired Group.



The Mixer displays the channel strips of all Sounds in the selected Group.

5. At the bottom of the channel strip of the Sound you want to configure, click the bigger field left and select the desired MIDI port in the menu.



This is equivalent to setting the Dest. parameter described above.

6. Click the little field on its right to select a MIDI channel.



This is equivalent to the Channel parameter described above.

8.3 Creating Custom Sets of Parameters with the Macro Controls

Macro Controls enable you to control in one same location a selection of parameters coming from different sources. Available in every channel (Sounds, Groups, and Master), Macro Controls are very useful for playing live since you can choose a set of parameters from various sources to manipulate on one screen without having to switch screens.

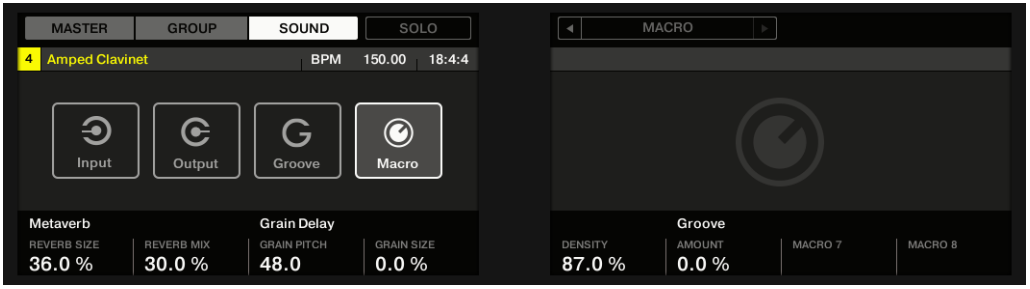


MASCHINE 1.x owners: In MASCHINE 1.x Macro Controls were additionally used to automate MASCHINE parameters via MIDI or host automation. This is not the case in MASCHINE 2.0 anymore: automation and Macro Controls now are totally independent. Now MASCHINE parameters can be directly assigned to MIDI controls or host automation IDs (as described in section ↑8.1.4, Configuring the Master and Cue Outputs of MASCHINE), while Macro Controls are plain shortcuts of the desired parameters, at all levels of MASCHINE, and without any limitation in number.

The Macro Controls are available in the **Macro properties**.



The Macro properties (here for a Sound) in the software.



The Macro properties (here for a Sound) on the controller.



Please refer to section ↑2.3.3, Navigating Channel Properties, Plug-ins, and Parameter Pages in the Control Area to know how to access the Macro properties in the software and from your controller.

8.3.1 Macro Control Overview

Each Macro Control can be assigned to one destination with the full range of the selected parameter. On the other hand, the same parameter can be the destination of more than one Macro Control.

To know which parameters you can assign to a Macro Control, consider this single rule:

A Macro Control of a channel can control any parameter located in the properties or Plug-ins of that channel or of any underlying channel. In other words:

- For Sounds: You can assign the Macro Controls of a Sound to any parameters in its properties or Plug-ins. It is also possible to assign MIDI Control Change messages, Pitchbend and Program Changes to Macro Controls in order to control external MIDI devices.
- For Groups: You can assign the Macro Controls of a Group to any parameters in its properties or Plug-ins as well as any parameters in any Sound inside the Group.
- For the Master: You can assign the Macro Controls to any parameters found in the properties or Plug-ins of any channel in your Project.



Obviously, the Macro properties (even of a different channel) are not available as targets for any Macro Control.



Linking the same parameter to more than one Macro Control can be useful in the following example: If a parameter of a Sound is particularly important, you can link it to the same knob in the Macro Controls of that Sound, of its parent Group, and of the Master. By doing this, you ensure that the parameter is always available on the same knob when you switch between the Master, Group, and Sound level (but not if you switch to another Sound or Group, of course).

Macro Control Shortcut on the Controller

On your controller, a dedicated button allows you to quickly access your Macro Controls at any time:

► Press MACRO in the PERFORMANCE section to directly switch to the Macro Controls of the focused channel (Sound, Group or Master).

8.3.2 Assigning Macro Controls

Assigning Macro Controls is done in the Pages pane of the Assignment area when the Macro properties are selected. The procedure is similar to the procedure used when assigning parameters of VST/AU plug-ins to Parameter pages in MASCHINE (see section ↑6.3.3, Setting Up Your Own Parameter Pages).

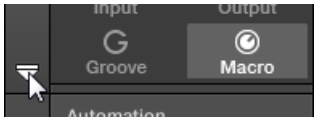


Assigning the Macro Controls is possible in the software only.

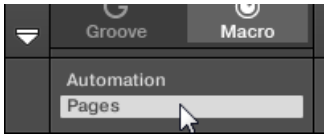
Opening the Pages Pane in the Assignment Area

First of all, you need to open the Pages pane of the Assignment area for Macro properties. To do this:

1. Select the Macro properties of the desired channel (Sound, Group, or Master) as described in section ↑2.3.3, Navigating Channel Properties, Plug-ins, and Parameter Pages in the Control Area.
2. Click the down-pointing arrow in the bottom left corner of the Control area to reveal the **Assignment area** underneath:



3. Click the Pages tab in the left part of the Assignment area:

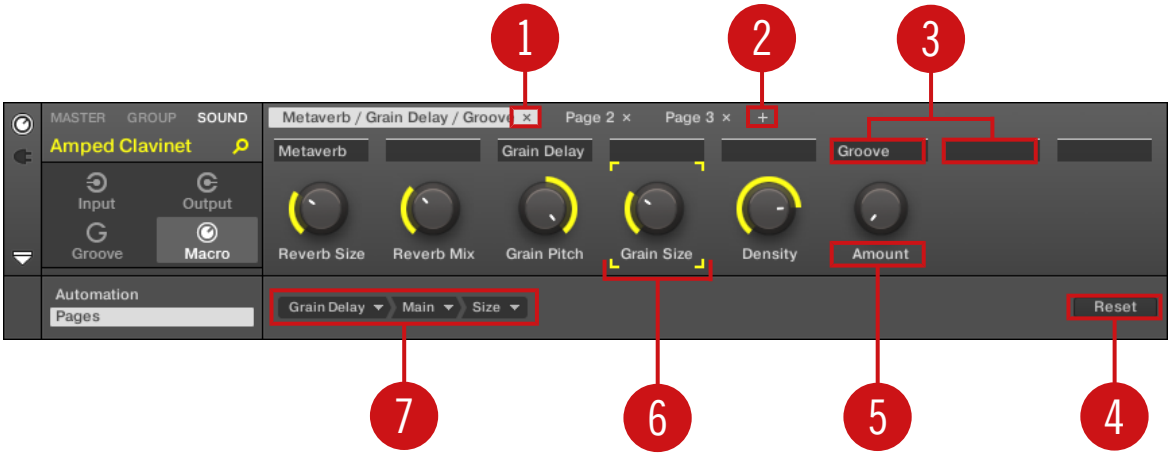


→ The Pages tab lights up and the Pages pane appears on its right. You are now ready to assign Macro Controls to parameters.

Once the Assignment area is open, when you switch to other Parameter pages the Assignment area follows your selection: it always shows the assignments for the page currently displayed above.

The Pages tab can be clicked only for Plug-ins, External MIDI device Control Change assignments, and for Macro properties. For all other Plug-ins and Channel properties, parameters and Parameter pages are not editable, and the Pages tab is grayed out and inactive. For more information on how to assign parameters of Native Instruments or External Plug-ins to Parameter pages, please refer to ↑6.3.3, Setting Up Your Own Parameter Pages.

When the Pages pane of the Assignment area is open, you also notice a few changes in the Control area above.



The Control area with Macro Properties displayed and the Pages pane active in the Assignment area underneath.

(**1**) **Delete Page button ("x" symbol)**: Click the little "x" after a page name to delete this Parameter page.

(**2**) **Add Page button ("+" symbol)**: Click the little "+" after the last page label to append a new page. By default, pages are labeled "Page 1," "Page 2," etc. You can change page labels by defining sections within your pages via the Section Label fields (**3**).

(**3**) **Section Label fields**: These fields allow you to define sections of parameters within the displayed page. Double-click the field above the first parameter you want to include in the section, type the desired name for the section, and press [Enter] to confirm. The new section will include all following parameters until the next section starts (this can be seen only after you have closed the Assignment area). Moreover, the Parameter page will mirror the label(s) of its section(s) — if there are more than one section, the page label will mirror all of them, separated by slashes.

(**4**) **Reset button**: Click Reset to remove the Macro Control assignment for the selected knob.

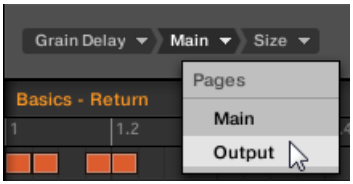
(**5**) **Parameter Label fields**: Double-click these fields to enter custom labels for your parameters (press [Enter] to confirm). These labels will be mirrored everywhere in MASCHINE for the corresponding parameters.

(**6**) **Focus frame**: Indicates the Macro Control being assigned. Click any Macro Control to display and edit its assignment in the Target selector below (**4**).

(**7**) **Target selector**: Displays and selects the target parameter of the selected Macro Control indicated by the Focus frame (**5**). This multi-level drop-down widget allows you to quickly navigate through the structure of the channel to the desired parameter. The detailed procedure is explained in the next paragraph.

Selecting a Parameter in the Target Selector

The Target selector (see picture above) allows you to choose from all available parameters for each Macro Control.



The Target selector allows you to quickly select the desired parameter.

This tool is similar to a menu containing several levels of submenus—with the notable difference that every intermediary selection stays visible for faster switching.

When assigning a new, unassigned Macro Control, do the following:

1. Click the Select menu (for now the only menu of the Target selector).
   The menu is organized into subcategories: *Settings* (listing the properties of the current channel), *Slots* (listing the Plug-ins loaded in the current channel), and possibly a third category listing the channels included at the next level: if you're editing the Macro properties of the Master you will see the *Groups* subcategory listing all Groups of your Project, and if you are editing the Macros of a Group you will see the *Sounds* subcategory listing all Sounds in that Group, and if you are editing the Macro properties of a Sound you will see the *MIDI* menu item which upon selection lists all available Control Change messages that can be assigned to a Macro Control.



The Macro Control menu item *Select* > *MIDI* lists the full range of MIDI Control Change messages from 0-127 which can be individually assigned to a Macro Control in order to control parameters on an external MIDI device. If you are unsure which MIDI Control Change message can be used to control a particular parameter, please check the documentation that came with your MIDI device for details.

2. Upon your selection in the previous menu, the menu takes the name of your selection, and another menu may appear to the right which allows you to refine your search (e.g., by listing all Parameter pages of the selected Plug-in or Channel properties). This continues until a parameter is reached and you select it.

→ Upon the selection of a parameter, the Macro Control is assigned to this parameter.

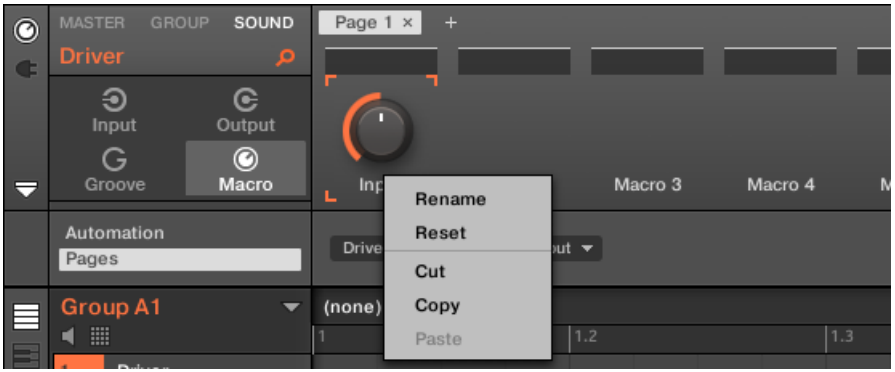
Note that the whole path to this parameter stays visible in the Target selector: this lets you modify a single selection without starting from the topmost channel and going through the entire selection process again:

► To modify a particular item in the selection shown by the Target selector, click it and select another item for that level.

→ Items on the left of the selected item (i.e. at a higher level) stay untouched, while items on its right (i.e. at a lower level) are reset.

Macro Assignment – Context Menu

When the Assignment area is opened and the Pages tab is selected, right-click on an assigned or unassigned Macro slot to access the context menu.



The Macro properties context menu.

The context menu contains following items:

Menu Item	Description	Keyboard Shortcuts
Rename	Rename the Macro.	Ctrl + R / Cmd + R
Reset	Reset the Macro.	
Cut	Cut the Macro to paste it in another position.	Ctrl + X / Cmd + X
Copy	Copy the Macro.	Ctrl + C / Cmd + C
Paste	Paste a cut or copied Macro to a new position.	Ctrl + V / Cmd + V

Assignment Area Pages – Context Menu

When the Assignment Area is opened and the Pages tab is selected, right-click on a Page opens a context menu.



The Control Area Assignment Pages context menu.

The context menu contains the following items:

Menu Item	Description	Keyboard Shortcuts
Delete	Deletes current Page with all assignments.	
Clear All	Clears all the assignments, and deletes all of the Pages.	

9 Controlling Your Mix

The default view of the MASCHINE software is the Arrange view, which contains the Arranger at the top, the Control area in the middle, and the Pattern Editor / Sampler Editor at the bottom. The Arrange view is best suited to organize your melodies and rhythms in the timeline: With it you can for example finely tailor your Patterns for each of your Groups in the Pattern Editor, and put them together as Clips in the Arranger to build a complete song.

The **Mix view** is the other main view of MASCHINE. Instead of focussing on the time-dependent aspects of your Project, it gives you quick access to the level and routing settings of all your Sounds, Groups, and the Master. In addition, it provides you with an intuitive interface for adjusting the parameters of all your Plug-ins.

The Mix view can come in handy at various stages of your work, e.g., when building custom drum kits, setting up send effects, creating advanced routings… and, last but not least, during live performances.

9.1 Mix View Basics

This section describes the basic operation of the Mix view.

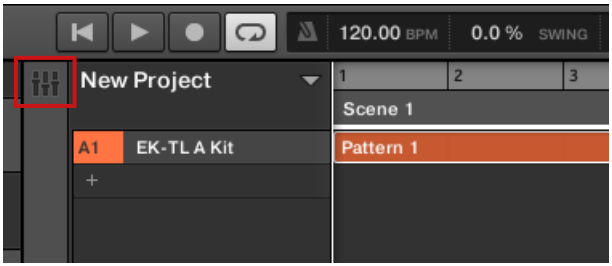
Mix View vs. Arrange View

It is important to note that the Mix view does not provide any additional settings that are not available in Arrange view. In other words, every action done in Mix view can also be done in Arrange view. The purpose of the Mix view is rather to organize the information and settings in a different way that is better suited for particular workflows, notably those involving levels and routings.

In the rest of the chapter, for each procedure in Mix view we will quickly mention the equivalent procedure in Arrange view or point to the corresponding description in this manual.

9.1.1 Switching between Arrange View and Mix View

You can switch the MASCHINE software at any time between the Arrange and Mix view:



The Mix View button.

- Click the Mix View button at the top left of the Arranger to switch between the Arrange view and the Mix view.
- Press SHIFT + NAVIGATE to switch between the Arrange view and the Mix view in the MASCHINE software.

9.1.2 Mix View Elements

When you switch the MASCHINE software to Mix view, the Arranger, the Control area, and the Pattern Editor disappear and are replaced with the following three elements:



The Mix view, with the Mixer (1) at the top, the Plug-in Chain (2) in the middle, and the Plug-in Strip (3) at the bottom.

(**1**) **Mixer**: At the top, the Mixer shows you at a glance the level and routing settings for all Sounds of the focused Group, or all Groups in your Project. You can change these settings on the fly, select or put the focus on any channel, etc. At the far right you can control the settings for the parent channel — the Group channel if the Mixer displays Sound channels, or the Master/Cue channel if the Mixer displays Group channels. See section ↑9.2, The Mixer for a detailed description.

(**2**) **Plug-in Chain**: In the middle, the Plug-in Chain lists all Plug-ins loaded in the focused channel (Sound, Group, or Master). See section ↑9.3, The Plug-in Chain for a detailed description.

(**3**) **Plug-in Strip**: At the bottom, the Plug-in Strip displays the series of Plug-ins loaded in the focused channel (Sound, Group, or Master). You can directly adjust the parameters of each Plug-in in its own interface. See section ↑9.4, The Plug-in Strip for a detailed description.

9.2 The Mixer

Sitting in the top part of the Mix view, the Mixer is ideal to quickly see and adjust the level and routing settings of different channels in one go.



The Mixer in the MASCHINE software.

The Mixer provides a classic mixing desk layout containing a certain number of **channel strips**. The particular channel strips displayed along with their precise layout depend on the following:

- Which of the Sound or Group level is selected for displaying: ↑9.2.1, Displaying Groups vs. Displaying Sounds.
- Whether the Mixer is minimized or not, and which sections are enabled for display: ↑9.2.2, Adjusting the Mixer Layout.

9.2.1 Displaying Groups vs. Displaying Sounds

The Mixer provides two display modes, allowing you to focus on the current context:

- **Group level**: The Mixer shows channel strips for all Groups of your Project.
- **Sound level**: The Mixer shows channel strips for all Sound slots in the focused Group.

Both display modes are described in the following paragraphs.

If the MASCHINE window is too small to display all channel strips, an horizontal scroll bar appears at the bottom of the Mixer to navigate to the hidden channels.



If necessary, use the scroll bar to show hidden channels.



Whether the scroll bar appears or not, the output strip at the far right of the Mixer is always visible.

Mixer Displaying the Group Level

The Mixer can display **all Groups at once**:



In this mode the desk's input strips (**1**) represent all Groups of your Project, while the output strip at the far right (**2**) represents the Master/Cue channel. At the top of the Mixer you see the headers of all your Groups and of the Master/Cue channel (**3**). The focused channel is highlighted.

Mixer Displaying the Sound Level

The Mixer can alternatively display the **Sounds slots of a particular Group**:



In this mode the desk's input strips (**1**) represent all Sounds of the focused Group, while the output strip at the far right (**2**) represents that focused Group. At the top of the Mixer you see two rows:

- The first row (**3**) contains the headers of all your Groups and of the Master/Cue channel. The header of the focused Group (or of the Master/Cue at the far right) is highlighted.
- The second row (**4**) contains the headers of the Sound slots in the focused Group. The header of the focused Sound slot (or of the parent Group at the far right) is highlighted.

Switching the Mixer Between Group and Sound Level

At any time you can switch between both display modes:

► To switch the Mixer display between all Groups of your Project and all Sound slots in a particular Group, double-click the background of any Group header at the top of the Mixer.

→ If the Mixer was displaying Sound strips beforehand, it will display all Group strips instead, and the Group you have double-clicked will be focused. If the Mixer was displaying Group strips beforehand, it will instead display all Sound strips of the Group that you have double-clicked. The last focused Sound slot in that Group will be focused again.



Make sure that you double-click in the header background and not on the number or letter+number in the top left corner of the header — instead of switching the Mixer between both views this would mute/unmute the Group channel in question!

9.2.2 Adjusting the Mixer Layout

No matter which of the Group or Sound level is currently displayed in the Mixer, you can adjust its layout as described below in order to focus on your current task.

Maximizing/Minimizing the Mixer

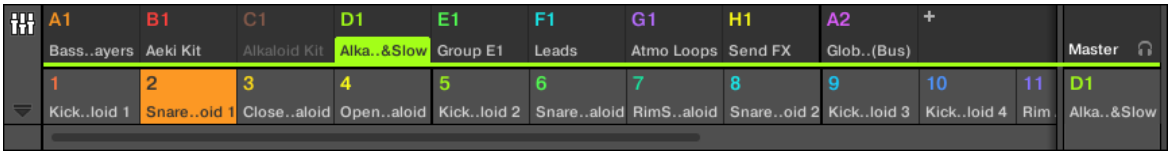
You can minimize/maximize the Mixer so that it shows only the Group and Sound headers or the entire channel strips:

▶ Click the arrow button at the bottom left of the Mixer to show and hide the channel details in the Mixer.



Minimizing/maximizing the Mixer.

When the Mixer is minimized, the channel strips are shrinked to their headers:



A channel strip in the minimized Mixer.

Showing/Hiding Particular Sections of the Strips

Both when displaying all Group channels or all Sound channels of a particular Group, the Mixer allows you to select which sections you want to show or hide in the strips currently displayed. This is done via the three buttons on the left of the Mixer, under the arrow expanding the Mixer:



Choosing what to display in the channels.

From top to bottom:

- **IO button**: Click it to show/hide the input and output settings (both MIDI and audio) in the channel strips.
- **Plug-in icon**: Click it to show/hide the Plug-in Lists in the channel strips.
- **AUX button**: Click it to show/hide the auxiliary output settings in the channel strips.



The settings for the main audio output are always visible, even if the IO button is disabled.

For a detailed description of the settings available in the channel strips, see section ↑9.2.5, Adjusting Settings in the Channel Strips below.

9.2.3 Selecting Channel Strips

Since the Mix view is just another way of displaying and accessing MASCHINE channels, selection and focus work similarly in the Mixer as in the Arrange view:

- To set the focus to a particular channel (Sound or Group), click the background of its header in the top two rows of the Mixer (upper row for Groups and the Master/Cue, lower row for Sounds, if visible) or use the usual commands on your controller (see section ↑2.3.1, Setting the Focus on a Group or a Sound). The header of the focused channel is highlighted.
- Setting the focus to a particular channel strip in the Mixer will automatically set the focus to the corresponding Sound, Group, or the Master in Arrange view, and inversely.

- When the Mixer displays the Sound strips of a Group, when you click another Group header in the top row the Mixer will stay at the Sound level and directly display to the Sound strips of this other Group.
- You can select more than one channel strip among the strips displayed. The focused strip is always selected. The multiple selection follows the same rules as in Arrange view (see section ↑4.1.3, Selecting Multiple Sounds or Groups).

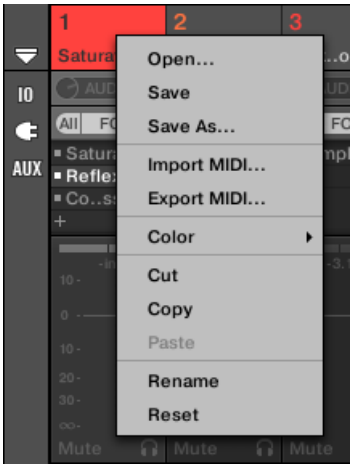


Whichever channel strip is focused, the Plug-in Strip at the bottom of the Mix view shows the Plug-ins loaded in that particular channel (see section ↑9.4, The Plug-in Strip).

9.2.4 Managing Your Channels in the Mixer

The Mixer provides the same Sound and Group management commands as the Arrange view, with similar procedures. Most of them are available via the channel's context menu:

► To open the channel's context menu, right-click ([Ctrl]-click on Mac OS X) the background of the channel header:





Opening the context menu of a channel automatically sets the focus on that channel.

The channel's context menu provides the exact same entries as in Arrange view.

Following management commands are available in the Mixer:

Management Command	Action
Renaming channels	Double-click the channel name in the header, type the desired name on your computer keyboard, and press [Enter] to confirm (or [Esc] to cancel). You can also open the channel's context menu and select *Rename*. See section ↑4.2.3, Renaming Sound Slots and ↑4.3.3, Renaming Groups.
Changing the channel's color	Open the channel's context menu and select *Color*. See section ↑4.2.4, Changing the Sound's Color and ↑4.3.4, Changing the Group's Color.
Copying/pasting channels	Open the channel's context menu and select *Copy* or *Paste*. See section ↑4.2.6, Copying and Pasting Sounds and ↑4.3.6, Copying and Pasting Groups.
Resetting Sound channels	Open the Sound channel's context menu and select *Reset*. See section ↑4.2.8, Resetting Sound Slots.
Deleting Group channels	Open the Group channel's context menu and select *Delete*. See section ↑4.3.8, Deleting Groups.
Saving channels	Open the channel's context menu and select *Save As…*. See section ↑4.2.5, Saving Sounds and ↑4.3.5, Saving Groups.



You cannot move Sounds and Groups via drag and drop in the Mixer. This is only possible in Arrange view — see section ↑4.2.7, Moving Sounds and ↑4.3.7, Moving Groups for more details.

9.2.5 Adjusting Settings in the Channel Strips

The layout of Sound and Group strips is close to that of a classical mixing desk. The signal travels from top to bottom: from the input routing settings at the top, it passes through the various Plug-ins loaded in the channel, then goes through the pan and level controls, and finally arrives to the output routing settings at the bottom.

The settings available in each channel strip mirror most of the parameters found in the Channel properties displayed in the Control area of the Arrange view, allowing you to adjust them in a more intuitive and visual way (see the list of available parameters at the end of this section).

Adjusting Settings on the Fly

The Mixer provides an interesting feature not available in Arrange view: You can quickly change the settings in any channel strip currently displayed without having to put the channel under focus beforehand: Simply click the desired setting in any of the displayed channel strips to modify it — the current selection/focus will stay untouched.

Tip: Use the Parent Channel Strip at the Far Right

In both display modes of the Mixer, the rightmost channel strip (the "output" strip of the mixing desk) represents the parent channel:

- If the Mixer currently shows all Groups, the rightmost strip represents the Master (or Cue) channel.
- If the Mixer currently shows the Sounds of the focused Group, the rightmost strip represents that Group.

In particular, at the Sound level this allows you to quickly check the level and adjust the settings of the parent Group without having to switch the Mixer display to the Group level.



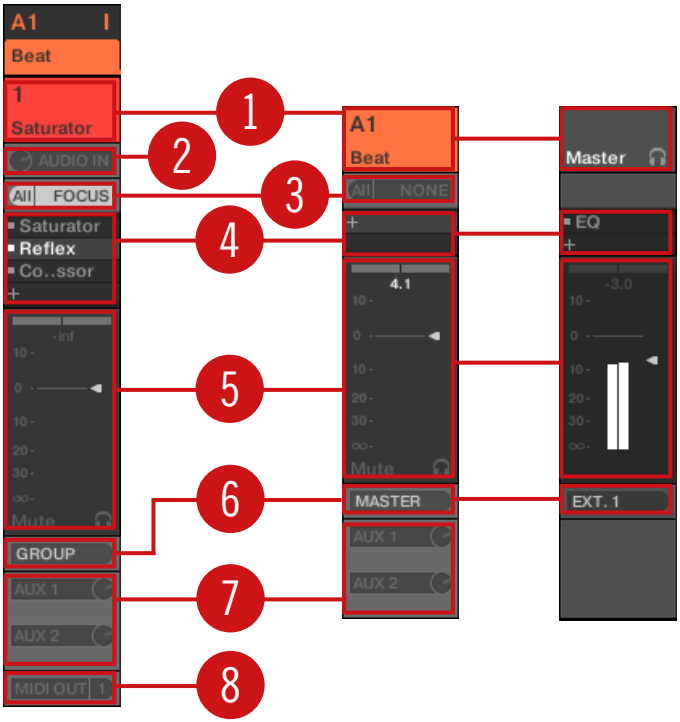
For example, if a kick drum is too loud in a drum kit, while decreasing its level you can check at the far right how your change affects the overall Group level — and you can quickly adjust this Group level if needed.

Available Settings in Sound/Group Channel Strips

We list here all the elements available in a full channel strip. For each element we indicate the basic operation and the corresponding parameter in Arrange view.



If some of the settings are not visible, check that the Mixer is not minimized and that the relevant button is enabled at the left of the Mixer — see section ↑9.2.2, Adjusting the Mixer Layout for more information.



A complete channel strip in the Mixer (Sound on the left, Group and Master on the right).

(**1**) **Header**: Displays the name and index (letter + number) of the Group or number of the Sound. Headers in the Mixer's top row are for Groups, headers in the second row (Sound level only) are for Sounds. If the rest of a channel strip is currently not visible, its header additionally shows a mini level indicator in its top right corner. Following actions are available:

- Switch the Mixer display between Sounds and Groups (see section ↑9.2.1, Displaying Groups vs. Displaying Sounds).
- Focus/select particular channels (see section ↑9.2.3, Selecting Channel Strips).
- Rename the channel: Double-click its current name, type a new name on your computer keyboard, and press [Enter] to confirm (or [Esc] to cancel). You can also use the *Rename* entry in the channel's context menu.
- Other management commands: Right-click ([Ctrl]-click on Mac OS X) the header background to open the channel's context menu (see section ↑9.2.4, Managing Your Channels in the Mixer).

(**2**) **Audio input settings** (Sound strips only): Allows you to adjust the audio input routing. Visible only if the IO button is enabled on the left of the Mixer. Click the AUDIO IN label to select an audio input, and adjust its level via the little knob on the left. These controls are equivalent to the Source and Gain parameters in the Audio page of the Sound's Input properties. See section ↑8.1.1, Sending External Audio to Sounds for more information.

(**3**) **MIDI input settings**: Allows you to adjust the MIDI input routing. Visible only if the IO button is enabled on the left of the Mixer. Click the MIDI IN label to select a MIDI input port, then select a channel via the little menu on its right. These controls are equivalent to the Source and Channel selectors in the MIDI page of the Sound's and Group's Input properties, respectively. See section ↑8.2.1, Triggering Sounds via MIDI Notes for more information.

(**4**) **Plug-in List**: Shows the Plug-ins loaded in the channel. Visible only if the Plug-in icon is enabled on the left of the Mixer. Following actions are available:

- Click the little "+" symbol to open the Plug-in menu and load a new Plug-in at the end of the list.
- Right-click (Mac OS X: [Ctrl]-click) an existing Plug-in to replace it with another Plug-in or to remove it (to do this, select *None* in the menu).
- Click a Plug-in name to select it. If this Plug-in is currently hidden in the Plug-in Strip under the Mixer, it automatically scrolls to show the interface of that Plug-in (see section ↑9.4, The Plug-in Strip).
- Click the little square left of a Plug-in to bypass it (the bypassed Plug-in is grayed out) or re-insert it in the signal chain.
- Drag and drop Plug-ins to move them across the list.

This Plug-in List is the exact equivalent of the Plug-in List in the Control area of the Arrange view. For all details, see section ↑6.1, Plug-in Overview.

(**5**) **Fader section**: Allows you to adjust the channel's level, panoramic position, Mute and Cue state. Following actions are available:

- Drag the **fader** vertically to adjust the level of the channel. This is equivalent to the Level parameter in the Audio page of the channel's Output properties (see ↑8.1.2, Configuring the Main Output of Sounds and Groups). Additionally, the **level meter** shows you at any time the level of the channel. The **peak level** value appears in gray above the level meter and fader. If this peak value exceeds zero, it turns white to indicate clipping; click the value to reset it.
- Drag the little horizontal slider at the top to adjust the **panoramic position** of the channel in the stereo field. This is equivalent to the Pan parameter in the Audio page of the channel's Output properties (see ↑8.1.2, Configuring the Main Output of Sounds and Groups).
- Click the **Mute button** to mute the channel, or right-click ([Ctrl]-click on Mac OS X) it to mute all other channels (Solo function). See section ↑5.4.1, Mute and Solo for more information.
- Click the little **headphones button** to send the channel to / remove it from the Cue bus. This is equivalent to the Cue parameter in the Audio page of the channel's Output properties. See section ↑9.2.6, Using the Cue Bus for more information.

(**6**) **Main audio output menu**: Selects the destination of the channel's main audio output. By default Sound channels are output to their parent Group, Group channels are output to the Master, and the Master is output to the first stereo pair of outputs. Click the label to select another destination. This control is equivalent to the Dest. selector in the Audio page of the Output properties for the Sounds and Groups (see ↑8.1.2, Configuring the Main Output of Sounds and Groups) and for the Master (see ↑8.1.4, Configuring the Master and Cue Outputs of MASCHINE).

(**7**) **Aux routing settings**: Allows you to adjust the routing for both auxiliary outputs. Visible only if the AUX button is enabled on the left of the Mixer. Click the AUX 1 or AUX 2 label to select a destination for this aux output, adjust its level via the little knob on the right, and choose its pre/post tapping point by clicking the Post or Pre label. These controls are equivalent to the Dest., Level, and Order parameters in the Aux page of the Sound's and Group's Output properties, respectively (see ↑8.1.3, Setting Up Auxiliary Outputs for Sounds and Groups).

(**8**) **MIDI output settings** (Sound strips only): Allows you to select a MIDI output. Visible only if the IO button is enabled on the left of the Mixer. Click the MIDI OUT label to select a MIDI output port, then select a channel via the additional menu on the right. These controls are equivalent to the Dest. and Channel selectors in the MIDI page of the Sound's Output properties (see ↑8.2.5, Sending MIDI from Sounds).



Parameter modulation is not indicated in the Mixer. As a consequence, the value of modulated parameters might change even if their control elements stay at a fixed position in the Mixer. For example, if the fader of a channel strip is fully down but the channel level is being modulated, the channel's actual level might temporarily exceed the fader position, leading to an audible signal (and visible meter activity!) although the fader is fully down. In Arrange view, on the other hand, the Control area indicates the modulation of continuous parameters via the ring around their knob. See section ↑7.5, Recording and Editing Modulation for more on modulating parameters.

Available Settings in the Master and Cue Channel Strips

The Master and the Cue channel strips are similar to the Sound/Group channel strips described above, except for the following elements (numbers refer to the picture in the previous paragraph):

- The Mute button in the Fader section (**5**) is not available.
- The audio input settings (**2**) and MIDI input settings (**3**) are not available.
- The aux routing settings (**7**) and MIDI output settings (**8**) are not available.
- There is no Plug-in List (**4**) in the Cue channel strip.

9.2.6 Using the Cue Bus

MASCHINE provides a dedicated Cue bus. This Cue bus allows you to route any channel (Sound or Group) on a separate output while leaving the main MASCHINE output untouched. For example, you can use it to prepare any Sound or Group in your headphones during a live session: first send the empty channel to the Cue bus, then load the desired Sound or Group from the Browser (or create one from scratch), add any Plug-ins, adjust any parameters in that channel, record Patterns for that Group as you see fit, and when you are ready, insert it back into your performance!

The Cue bus is also used for following features:

- Pre-listening to Samples in the Browser (see section ↑3.3.2, Pre-Listening to Your Samples).
- Metronome (see section ↑7.2.3, Using the Metronome).
- Pre-listening functions in the Sample Editor when recording (see section ↑14.2.2, Selecting the Source and the Recording Mode) or slicing Samples (see section ↑14.4, Slicing a Sample).

Sending Sound and Group Channels to the Cue Bus

► In any channel strip, click the little headphones button to send this channel to the Cue bus.

→ The headphones button lights on. The channel is not sent to its defined destination anymore but instead to the Cue bus.

To remove the channel from the Cue bus and send it back to its normal destination defined in its output settings, simply click again on the headphones button.

You can send any number of Sound and Group channels to the Cue bus simultaneously.



In Arrange view, the equivalent of the headphones button is the Cue switch found on the Audio page of the Sound's and Group's Output properties (see section ↑8.1.2, Configuring the Main Output of Sounds and Groups).



The mute and solo of channels don't apply when these channels are sent to the Cue bus: What is sent to the Cue bus is always played back via the Cue channel, regardless of the original channel being muted or not.

Adjusting the Cue Channel in the Mixer

All signals on the Cue bus arrive on the Cue channel strip. You can display the Cue channel strip in the Mixer as follows:

1. Click the header of the Master/Cue strip in the top right corner of the Mixer.



   If the Mixer was showing Sound channels, it switches to the Group level. The Master/Cue channel strip appears and is put under focus.

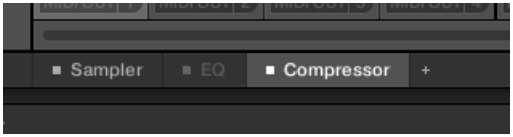
2. Click the headphone icon in the Master header.



→ The Master channel strip switches to the Cue channel strip. Here you can adjust the Cue channel's level and panoramic position, along with the destination you want to send the Cue channel to. As destination, choose for example another output pair into which you will have plugged your headphones. These settings are described in section ↑8.1.4, Configuring the Master and Cue Outputs of MASCHINE.

9.3 The Plug-in Chain

In the middle of the Mix view, right under the Mixer, you see an horizontal bar listing all Plug-ins loaded in the focused channel: the **Plug-in Chain**. In the Plug-in Chain, Plug-ins are arranged into an horizontal series, the audio travelling from left to right through each Plug-in of that channel.



A Plug-in Chain with the Compressor selected and the EQ bypassed.

Except for its horizontal layout, the Plug-in Chain has the same functionality as the Plug-in List found in the channel strips of the Mixer above — namely to organize the Plug-ins of that channel:

- Click a Plug-in name to select it. If this Plug-in is currently hidden in the Plug-in Strip underneath, it automatically scrolls to show the interface of that Plug-in.
- Click the little "+" icon at the end of the chain and select a Plug-in in the Plug-in menu to load it at the end of the chain, or right-click (Mac OS X: [Ctrl]-click) a Plug-in name to replace this Plug-in with another one. See section ↑6.1.3, Loading, Removing, and Replacing a Plug-in for more information.
- Click the little square on the left of a Plug-in name to bypass this Plug-in slot (bypassed slots are grayed out). Click the little square again to unmute the Plug-in slot and insert the Plug-in back into the processing chain. See section ↑6.1.5, Bypassing Plug-in Slots for more information.
- Right-click (Mac OS X: [Ctrl]-click) a Plug-in name and use the *Open...*, *Save As...*, and *Save As Default...* (Native Instruments and External Plug-ins only) commands to manage your Plug-in presets. See section ↑6.1.9, Saving and Recalling Plug-in Presets and ↑6.3.4, Using VST/AU Plug-in Presets for more information.



You cannot move Plug-ins within the Plug-in Chain. To do this, use for example the Plug-in List in the channels of the Mixer above (see the Plug-in List description in section ↑9.2.5, Adjusting Settings in the Channel Strips).

9.4 The Plug-in Strip

In the lower part of the MASCHINE window, the Mix view provides an intuitive representation of all Plug-ins loaded in the channel (Sound, Group, or Master) currently under focus: the **Plug-in Strip**. The Plug-in Strip shows the loaded Plug-ins as a series of **Plug-in panels**, each Plug-in having its own panel.

As in the little Plug-in Chain above, the Plug-ins are arranged into an horizontal series, the audio travelling from left to right through each Plug-in of that channel.



The Plug-in Strip of a channel, with a distinct interface for each Plug-in.

In the Plug-in Strip the Plug-in panels vary with the type of Plug-in (Internal, Native Instruments or External):

- For all types of Plug-ins, the panel shows a **Plug-in Header** at the top: ↑9.4.1, The Plug-in Header.
- **Internal Effects and Drumsynths** have their own custom panels: ↑9.4.2, Panels for Drumsynths and Internal Effects.
- The **Sampler** Plug-in has a special, extended panel: ↑9.4.3, Panel for the Sampler.
- **Native Instruments Plug-ins** provide dedicated panels inspired from the user interface of each particular Native Instruments product: ↑9.4.4, Custom Panels for Native Instruments Plug-ins.
- Native Instruments and External Plug-ins can also be **undocked** and opened in a floating window: ↑9.4.5, Undocking a Plug-in Panel (Native Instruments and External Plug-ins Only).

Navigating the Plug-in Strip

If the MASCHINE window is not wide enough for all your Plug-in panels to be displayed in the Plug-in Strip to be displayed entirely, click the name of the desired Plug-in in the Plug-in Chain above to make the Plug-in Strip scroll to its panel:



Click a Plug-in in the Plug-in Chain to display its panel in the Plug-in Strip below.

If the MASCHINE window is not wide enough for all Plug-in panels to be displayed at once, an horizontal scroll bar appears at the bottom of the Plug-in Strip to display the hidden part.



Use the horizontal scroll bar to display the other Plug-in panels.

If the MASCHINE window is not high enough for any Plug-in panel to be displayed entirely, a vertical scroll bar appears on the right of the panel to display the hidden part:



Use the vertical scroll bar to display the rest of the Plug-in.

9.4.1 The Plug-in Header

For all types of Plug-ins (Internal, Native Instruments, and External) the Plug-in panel displays a **Plug-in Header** at the top:



The Plug-in Header at the top of the Plug-in panel.

The Plug-in Header can contain following elements, from left to right:

(**1**) **Open Plug-in Window button** (Native Instruments and External Plug-ins only): Click the little arrow icon to open/close the Plug-in interface in an external window. See section ↑9.4.4, Custom Panels for Native Instruments Plug-ins for more on this.

(**2**) **Additional View button** (specific Native Instruments Plug-ins only): Some Native Instruments Plug-ins provide two different views in their panel. Click the little "+" to switch between Default view and Additional view. See section ↑9.4.4, Custom Panels for Native Instruments Plug-ins for more on this.

(**3**) **Preset name**: Shows the name of the preset currently loaded, if any.

(**4**) **Quick Browse button**: Click the magnifying glass to run the Quick Browse function and recall in the Browser the search query you performed to get to the loaded preset.

9.4.2 Panels for Drumsynths and Internal Effects

For Drumsynths and Internal Effects, the panels in the Plug-in Strip provide intuitive visual representations of the Plug-ins and their parameters.



The Plug-in panel of a Drumsynth and two Internal Effects.

As with all other Plug-ins, the panels for Drumsynths and Internal Effects show the Plug-in Header at the top. This Header contains the name of the current preset and the Quick Browse icon — see section ↑9.4.1, The Plug-in Header above for more details.

Although parameters are organized differently than in the Parameter pages of the Arrange view, the panels for Drumsynths and Internal Effects contain the exact same parameters as the Parameter pages in Arrange view.

The only exceptions are the Compressor, the Gate, and the Limiter: their panels contain an additional level meter not available in the Control area (gain reduction for the Compressor, and input level for the Gate and the Limiter).

For an exhaustive description of the parameters available in each panel, please refer to chapter ↑10, Using the Drumsynths for Drumsynths and chapter ↑12, Effect Reference for Internal Effects.



Parameter modulation is not indicated in the panel for Internal Plug-ins. As a consequence, the value of modulated parameters might change even if their control element doesn't move in the panel. See section ↑7.5, Recording and Editing Modulation for more on modulating parameters.

9.4.3 Panel for the Sampler

For the Sampler, the Plug-in Strip provides a custom panel containing a judicious mix of parameters available in the three first pages of the Control area along with parameters available in the Zone page of the Sample Editor.

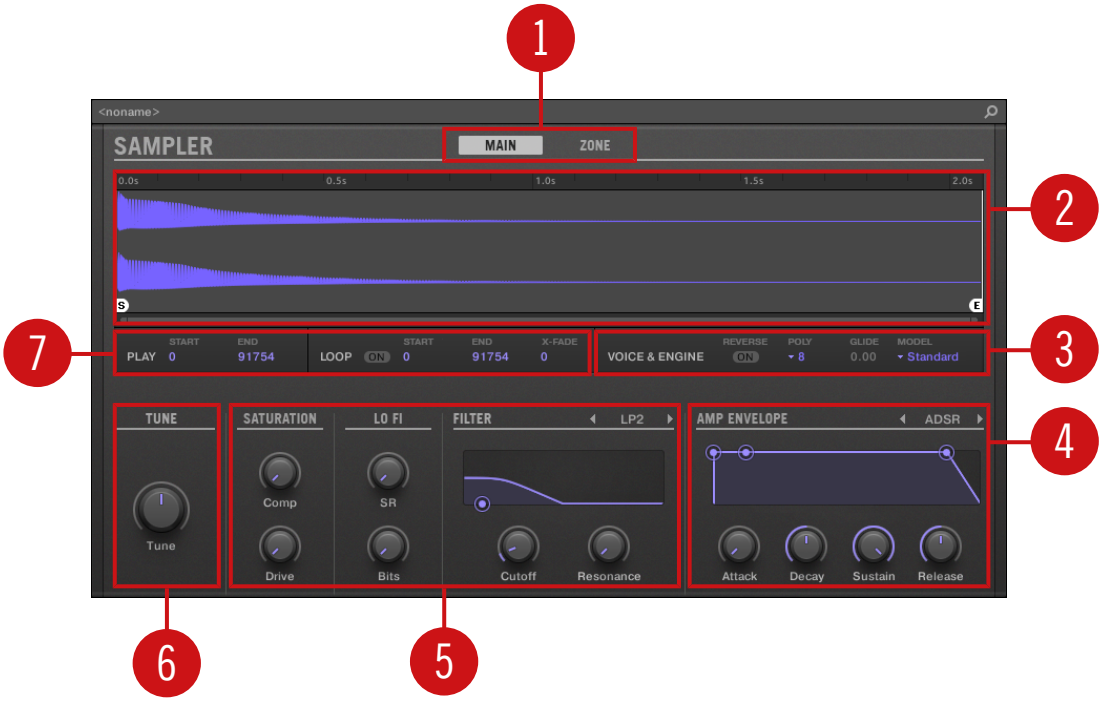
As with all other Plug-ins, the panel for the Sampler shows the Plug-in Header at the top. This Header contains the name of the current preset and the Quick Browse icon — see section ↑9.4.1, The Plug-in Header above for more details.

The Sampler panel contains two distinct panes: MAIN and ZONE. These can be displayed by clicking the MAIN and ZONE button in the Pane selector at the top of the Sampler interface, respectively.



Parameter modulation is not indicated in the panel for Internal Plug-ins. As a consequence, the value of modulated parameters might change even if their control element doesn't move in the panel. See section ↑7.5, Recording and Editing Modulation for more on modulating parameters.

Sampler – MAIN Pane



The Sampler in the Plug-in Strip.

(**1**) **Pane selector**: Click MAIN or ZONE to show the corresponding pane in the Plug-in.

(**2**) **Sample waveform**: Shows the waveform or the Sample used in the selected Zone. It provides the same features as the waveform found in the Sample view of the Zone page in the Sample Editor: Start and End markers, zooming, etc. For more details, see section ↑14, Sampling and Sample Mapping.

(**3**) **VOICE & ENGINE section**: Allows you to adjust the Polyphony, Glide, and Mode parameter from the Voice Settings / Engine page in the Control area, and the Reverse button from the Pitch/Envelope page in the Control area. For more details, see section ↑6.2.1, Page 1: Voice Settings / Engine and ↑6.2.2, Page 2: Pitch / Envelope, respectively.

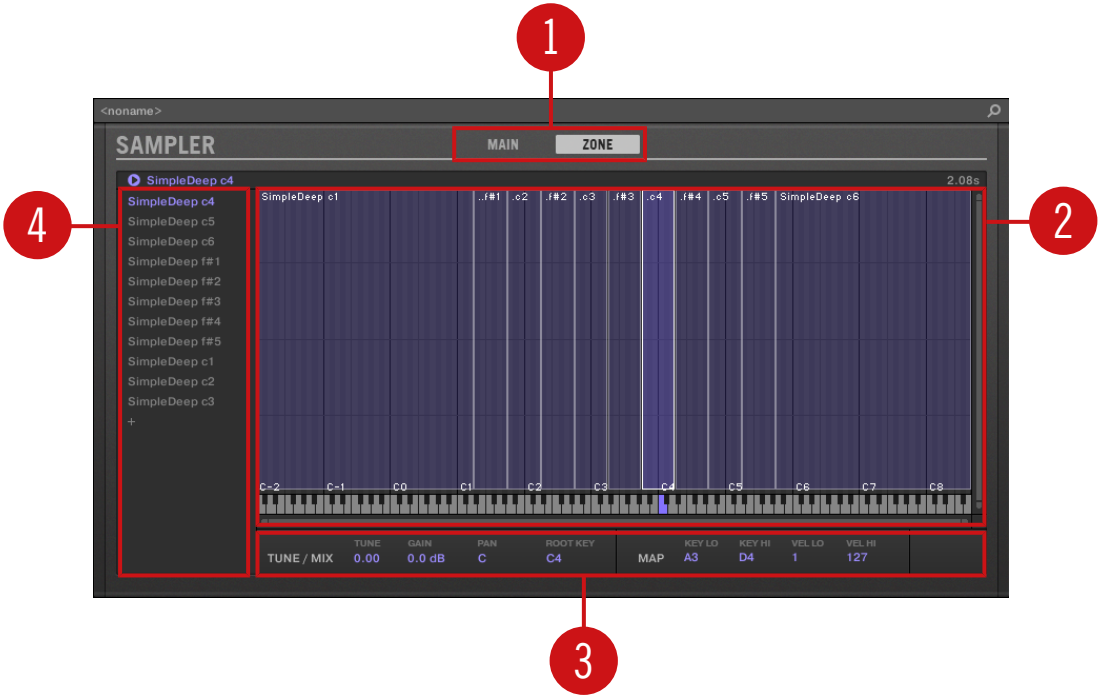
(**4**) **AMP ENVELOPE section**: Allows you to adjust the Type parameter and the envelope parameters from the Pitch/Envelope page in the Control area. For more details, see section ↑6.2.2, Page 2: Pitch / Envelope.

(**5**) **SATURATION, LO FI, and FILTER sections**: Allows you to adjust the parameters from the FX/Filter page in the Control area. For more details, see section ↑6.2.3, Page 3: FX / Filter.

(**6**) **TUNE section**: Allows you to adjust the Tune parameter from the Pitch/Envelope page in the Control area. For more details, see section ↑6.2.2, Page 2: Pitch / Envelope.

(**7**) **PLAY and LOOP sections**: Allow you to adjust the play range and loop settings of the selected zone, respectively. These provide the same parameters as the PLAY RANGE and LOOP sections found in the Zone page of the Sample Editor. For more details, see section ↑14, Sampling and Sample Mapping.

Sampler – ZONE Pane



The Sampler in the Plug-in Strip.

(**1**) **Pane selector**: Click MAIN or ZONE to show the corresponding pane in the Plug-in.

(**2**) **Sample Map**: Allows you to adjust the key and velocity ranges of your Zones. This the same as the Map view available in the Zone page of the Sample Editor. For more details, see section ↑14, Sampling and Sample Mapping.

(**3**) **TUNE / MIX and MAP sections**: Allow you to adjust the tuning and gain parameters as well as the key and velocity ranges of your Zones. These are the same as the TUNE and MAP sections from the Zone page of the Sample Editor. For more details, see section ↑14.5.6, Adjusting the Zone Settings.

(**4**) **Zone List**: Allows you to manage your Zones. This is the same as the Zone List available in the Zone page of the Sample Editor. For more details, see section ↑14, Sampling and Sample Mapping.



As with all Internal Plug-ins, parameter modulation is not indicated in the panel for the Sampler. As a consequence, the value of modulated parameters might change even if their control element doesn't move in the panel. See section ↑7.5, Recording and Editing Modulation for more on modulating parameters.

9.4.4 Custom Panels for Native Instruments Plug-ins

The panels for Native Instruments Plug-ins provide an extra feature: one or two **custom views** that group the most important parameters of the Plug-in into a clear and concise interface while retaining the overall feel and look of each Native Instruments product:

- The **Default view** is available for every Native Instruments Plug-in.
- An **Additional view**, only available for particular Native Instruments Plug-ins, provides an alternate set of controls for the Plug-in.

For example:

- ABSYNTH 5's Default view shows the main elements of the Perform window of ABSYNTH 5:



- MASSIVE's Default view shows specific parts of the Synth view (the eight Macro Controls at the top and the Modulation pages underneath):



- GUITAR RIG's Default view shows a mini Rack with a reduced version of the Global Header at the top:



As with all other Plug-ins, the panel for Native Instruments Plug-ins shows the Plug-in Header at the top containing a button for opening the Plug-in in a floating window as well as the name of the current preset and the Quick Browse icon — see section ↑9.4.1, The Plug-in Header above for more details.

For Native Instruments Plug-ins providing an Additional view, the Header also contains an **Additional View button** (a little "+" symbol) allowing to switch between Default and Additional view:



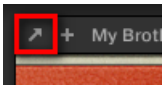
Click the little "+" in the Header to switch between Default and Additional view.

Mac OS X users: The VST plug-in of a Native Instruments product must be installed for this product's Default view (and Additional view, if any) to appear in the Plug-in Strip. If you normally use the AU version of this Native Instruments product, please check that its VST version is also installed on your computer to ensure the perfect integration of this plug-in into MASCHINE. You can show/hide the AU version of Native Instruments plug-ins in the Plug-in menu (software) and Plug-in Browser (controller) via the Use NI Audio Units checkbox in the Plug-ins page of the Preferences panel — see section ↑2.6.6, Preferences – Plug-ins Page for more information.

You can also undock any Native Instruments Plug-in and open it in a separate floating window. In the floating window you can notably switch between the Default view and the full user interface of the original Native Instruments product — see section ↑9.4.5, Undocking a Plug-in Panel (Native Instruments and External Plug-ins Only) for more information.

9.4.5 Undocking a Plug-in Panel (Native Instruments and External Plug-ins Only)

You can undock the panel of a Native Instruments or External Plug-in and open it in its own floating window by clicking the little diagonal arrow in the Plug-in Header:



Click the little diagonal arrow to open the Plug-in in a floating window.

- To undock a Native Instruments or External Plug-in and open it in its dedicated floating window, click the little diagonal arrow on the left of the Plug-in Header.

→ The Plug-in shows up in its own floating window.

When undocking Native Instruments Plug-ins, their panel in the Plug-in Strip is replaced by a thin Plug-in placeholder (see below).

Plug-ins of Native Instruments platform products (REAKTOR, KONTAKT, GUITAR RIG) are automatically opened in floating windows when loaded from the Plug-in menu.

MASCHINE will always show the open floating windows of the focused channel (Sound, Group or Master). In this channel you can have as many open floating windows as you see fit. When you set the focus to another channel, all open floating windows disappear, possibly replaced by those for Native Instruments and/or External Plug-ins loaded in the newly focused channel (Sound, Group or Master).

The Plug-in floating window is the same as in Arrange view — see section ↑6.3.1, Opening/Closing Plug-in Windows for more on this.

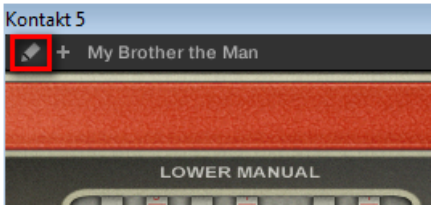
Undocking a Native Instruments Plug-in

When you open a Native Instruments Plug-in its own floating window, following things additionally happen:

- In the Plug-in Strip the Plug-in panel is replaced with a thin vertical **Plug-in placeholder** containing only the little diagonal arrow — this allows you to dock the Plug-in back into the Plug-in Strip (see below).



- The floating window also displays the Plug-in Header at the top. In addition to the Header's elements described in section ↑9.4.4, Custom Panels for Native Instruments Plug-ins, this Header contains an additional **Edit button** (showing a pencil icon) allowing you to switch to the Edit view, which shows the full interface of the original Native Instruments product:



Closing the Plug-in's Floating Window

► To dock a Native Instruments or External Plug-in back into the Plug-in Strip and close its dedicated floating window, click the little diagonal arrow in the Plug-in placeholder (Native Instruments Plug-ins) or in the header of the generic Plug-in panel (External Plug-ins) in the Plug-in Strip.



You can also close any floating window via the common button provided by your operating system at the top left or right corner of the window. The Plug-in will be inserted back into the Plug-in Strip.

9.5 Controlling Your Mix from Your Controller

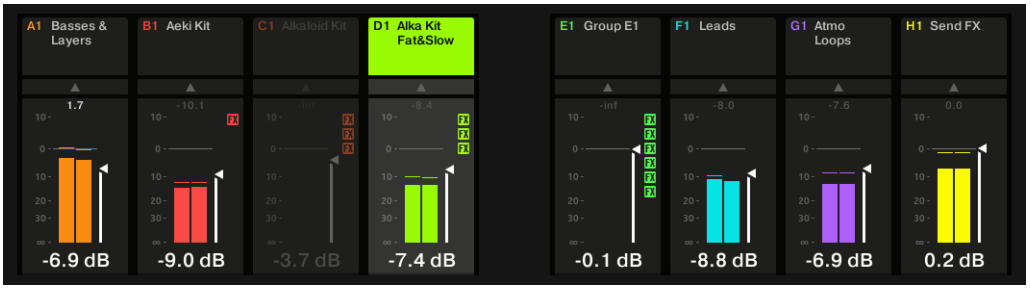
Your MASCHINE STUDIO controller provides a dedicated Mix mode. The Mix mode provides an overview of your channels via a mixing desk layout, similarly to the Mixer in the software's Mix view (see section ↑9.2, The Mixer).

> The Mix mode on your controller and the Mix view in the software are independent from each other: Switching views in the software does not switch the mode on your controller, and inversely — for example, you can use your controller in Mix mode while displaying the Arrange view in the software.

► Press MIX to enter or leave Mix mode on your controller.

When Mix mode is active, the MIX button is lit.

In Mix mode the displays show channel strips for your Sounds and Groups:



The Mix mode on your controller.

9.5.1 Navigating Your Channels in Mix Mode

Like the Mixer in the software, the Mix mode lets you choose to display channel strips at the **Group level** (i.e. all your Groups) or at the **Sound level** (i.e. all Sound slots of the Group currently focused).

At both levels channels are organized into groups of eight channels (four on each display).

► Use the Page buttons at the left of the displays to show the next/previous eight channels (Sounds: 1–8 and 9–16; Groups: A1–H1, A2–H2, etc.).

Setting the Focus on a Channel (Sound or Group)

► To put the focus on any of the displayed channels (Sounds or Groups), press the Button 1–8 above the desired strip in the displays.

→ The focused channel is highlighted.

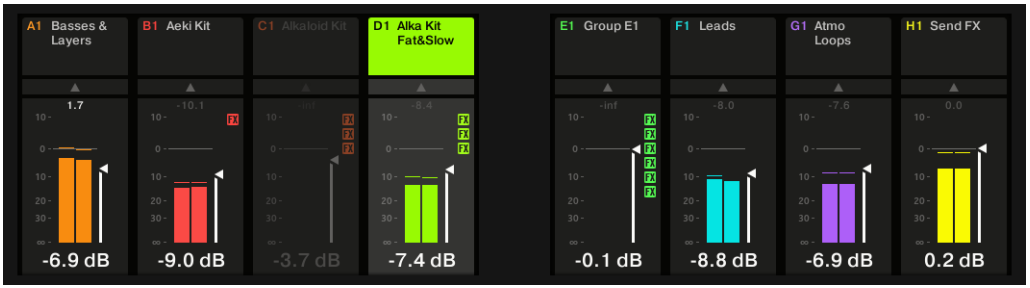
Alternatively you can focus Groups and Sounds by pressing the Group buttons and the pads as in Control mode. If you set the focus to a Sound or Group not visible on the displays, these automatically switch to the relevant set of eight channels: for example if you are viewing Sound channels 1–8 and press pad 11, the displays automatically jump to Sound channels 9–16 in order to show the Sound slot 11 you just selected.



The focus is strictly equivalent in Mix mode and in Control mode: The Sound or Group focused in Mix mode will also be focused in Control mode, and inversely.

Mix Mode – Displaying the Group Level

► To display Group channels, press BACK under the jog wheel.



The Mix mode displaying Group channels.

The channel strips on the displays represent the Groups of your Project. At the top of the displays you see the headers of all your Groups. The focused channel is highlighted.

When the Mix mode shows Group channels, the level indicator in the Master section of your controller (at the right of the displays) shows by default the Master or Cue channel (MST or CUE button lit) and you can directly adjust the Master or Cue level via the knob underneath.

Mix Mode – Displaying the Sound Level

► To display the Sound channels of the focused Group, press ENTER under the jog wheel or press the jog wheel itself.



The Mix mode displaying Sound channels of the focused Group.

The channel strips on the displays represent the Sound slots of the focused Group. At the top of the displays you see two rows:

- The first row contains the headers of your Groups. The header of the focused Group is highlighted.
- The second row contains the headers of the Sound slots in the focused Group. The header of the focused Sound slot is highlighted.

When the Mix mode shows Sound channels, the level indicator in the Master section of your controller (at the right of the displays) shows by default the channel of their parent Group (GRP button lit) and you can directly adjust its level via the knob underneath.

If you select another Group (by pressing its Group button), the displays directly switch to the Sound slots of the newly focused Group.

9.5.2 Adjusting the Level and Pan in Mix Mode

The Mix mode allows you to quickly adjust the level and panoramic position of each of your channels via Knobs 1–8. To do this:

1. If you want to adjust the level and panoramic position of Groups, switch to the Group view by pressing BACK under the jog wheel.
2. If you want to adjust the level and panoramic position of Sounds, switch to the Sound view by pressing ENTER under the jog wheel or by pressing the jog wheel itself.
3. Use the Page buttons to show the desired channels on the displays. You can also use the Group buttons and pads of your controller to directly switch to the desired channel.
4. Press the FUNCTION buttons under the jog wheel to select either the level or the panoramic position parameter.
   At the bottom of the displays, the selected parameter appears under each channel strip.
5. Turn the desired Knob(s) 1–8 to adjust the displayed parameter in the corresponding channel(s). You can also use the jog wheel to adjust that parameter for the focused channel.



As usual you can hold SHIFT while turning Knobs 1–8 (or press the jog wheel while turning it) to make finer adjustments.

In each channel strip the peak value is indicated above the level meter. This peak value is reset each time you start the playback via PLAY or RESTART on your controller, or when you click the corresponding peak value in the software's Mixer (see section ↑9.2.5, Adjusting Settings in the Channel Strips).

9.5.3 Mute and Solo in Mix Mode

When your controller is in Mix mode, pressing MUTE or SOLO doesn't switch the displays to the usual Mute or Solo mode: In addition to the usual procedure to mute or solo Groups and Sounds, you can mute or solo your channels directly in Mix mode. To do this:

- ► To mute a channel in Mix mode, press MUTE + the Button 1–8 above the desired channel(s).

► To solo a channel in Mix mode, press SOLO + the Button 1–8 above the desired channel(s).

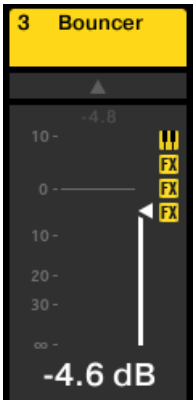
The strips of muted channels are grayed out in the displays.



Even if the displays don't switch to Mute or Solo mode, the usual procedures for muting and soloing Groups and Sounds stay valid in Mix mode. For more information on the Mute and Solo functions, please refer to section ↑5.4.1, Mute and Solo.

9.5.4 Plug-in Icons in Mix Mode

In Mix mode each channel indicates you the presence of Plug-ins by little icons arranged vertically on the right of the level meter:



A Sound channel with an Instrument Plug-in and three Effect Plug-ins.

Instrument and Effect Plug-ins are represented by different icons (these icons are similar to those in the Plug-in List of the Arrange view).



On the displays you can see up to seven Plug-in icons in each channel. Any additional Plug-in won't be shown.

10 Using the Drumsynths

Drumsynths are a powerful set of monophonic Internal Instrument Plug-ins (i.e. Instrument Plug-ins included with MASCHINE) that allow you to generate individual, fine-tuned drum sounds for your music productions. Like any other Instrument Plug-in, you can load them only in the first Plug-in slot of Sounds.

Drumsynths have been designed for extreme playability, both from the high-quality pads of your MASCHINE controller and from any velocity-sensitive MIDI keyboard. They allow you to quickly build custom drum sounds and give you full control over the characteristics of the various drums — don't hesitate to tweak them during your live performance or automate them like any other Plug-in!



See section ↑7.5, Recording and Editing Modulation for more information on automation.

In this chapter you will find:

- An overview of the Drumsynths and a presentation of their **common features**: ↑10.1, Drumsynths – General Handling.
- A detailed description of each particular Drumsynth:
  - The Kick Plug-in: ↑10.2, The Kicks.
  - The Snare Plug-in: ↑10.3, The Snares.
  - The Hi-hat Plug-in: ↑10.4, The Hi-hats.
  - The Tom Plug-in: ↑10.5, The Toms.
  - The Percussion Plug-in: ↑10.6, The Percussions.



We describe here the specific handling and parameters of the Drumsynths. For a description of the features and characteristics of Plug-ins in general (including the Drumsynths), please refer to section ↑6.1, Plug-in Overview.

10.1 Drumsynths – General Handling

This section describes the general use and features of the Drumsynths.

Managing Drumsynths

Drumsynths are MASCHINE Plug-ins and, as such, they support all usual Plug-in actions and procedures. Hence, to know how to load, remove, replace, insert, move, copy/paste Drumsynths, as well as how to adjust the Drumsynth parameters and load/save presets, please refer to section ↑6.1, Plug-in Overview, where these are described in detail.

10.1.1 Engines: Many Different Drums per Drumsynth

Each of the available Drumsynths (Kick, Snare, Hi-hat, Tom, and Percussion) actually provides many different drums: Indeed, each Drumsynth allows you to select a particular **engine** for generating the drum sound. In the same Drumsynth each engine will have its own algorithm, parameters, and sonic characteristics — it is in fact an entirely distinct drum. For example, the Kick provides eight different engines! Some engines will create acoustic drums while others will rather produce electronic sounds.

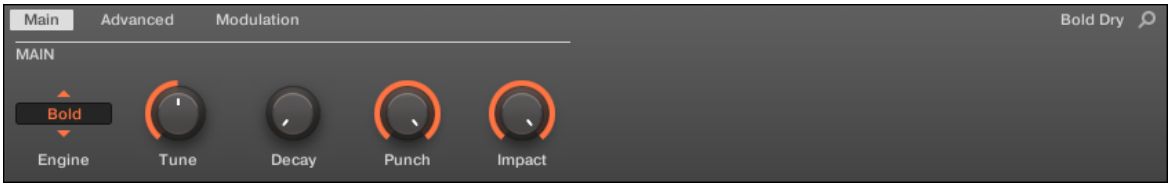
In each Drumsynth the first parameter (Engine) lets you select the engine you want to use. Most of the other parameters will depend on the selected engine.

10.1.2 Common Parameter Organization

All Drumsynths have a similar parameter organization, both in the Control area of the Arrange view and in the Plug-in Strip of the Mix view.

Common Parameter Pages in the Control Area (Arrange View)

In Arrange view, the parameters of all Drumsynths are grouped in similar ways in the Control area:



All Drumsynths share the same parameter organization in the Control area.

- Their parameters are grouped into the same three Parameter pages:
  - The **Main page** groups the most important parameters for each drum type. Here you can select the engine to be used, the tuning, the decay, etc.
  - The **Advanced page** provides access to more complex and finer adjustments to the drum sounds.
  - The **Modulation page** allows to adjust the playability of the drum by setting its velocity response.
- The Main page always starts with a **MAIN section**. The other sections on the page differ with each Drumsynth and engine.

Common Layout in the Plug-in Strip (Mix View)

In Mix view, the Plug-in panels of all Drumsynths have a similar layout in the Plug-in Strip:



All Drumsynths share the same global layout in the Plug-in Strip.

- In the top part of the panel you can adjust the Tune parameter, select the desired engine, adjust the velocity response, and adjust the Decay parameter (or the Filter parameter for the Shaker engine of the Percussion).
- In the bottom part of the panel you find the other parameters adjusting the sound of the selected engine.

For more information on the various Plug-in panels found in the Plug-in Strip, please refer to section ↑9.4, The Plug-in Strip.

10.1.3 Shared Parameters

Within each Drumsynth, some parameters are **shared** between **several engines** (e.g., the Tune parameter). Shared parameters have the advantage of **keeping their position** when you switch to another engine in the Drumsynth. This allows you to compare the sound of various engines more easily.



The ranges of some shared parameters are different across engines. For example this is the case of the Tune parameter: When switching to another engine, the tuning might not stay the same although the knob position is kept.

Determining which parameters are shared among engines is straightforward: If you find a parameter in more than one engine, it is shared between these engines.



If you switch to another Drumsynth (e.g., if you replace the Kick sitting in a Plug-in slot with a Hi-hat) parameter positions will not be kept!

10.1.4 Various Velocity Responses

Each engine of each Drumsynth has a different response to the velocity of the notes you are playing. Globally, engines can be grouped into two general categories:

- **Acoustic sounding** engines are heavily velocity-dependant: the velocity affects many characteristics of the generated sound, which allows you to play these drums very expressively.
- **Electronic sounding** engines are generally less velocity-dependent. Most of them only use velocity to modulate the output volume of the sound.

The overall velocity sensitivity for both acoustic and electronic types of engines can be adjusted on the Modulation page via the Velocity control.

10.1.5 Pitch Range, Tuning, and MIDI Notes

All Drumsynths can be played chromatically: the pitch of the sound will be affected by the notes that you play on your MIDI keyboard (or on your pads in Keyboard mode).

For all engines, the **Tune** parameter lets you define which pitch will be played when hitting the pad of that Sound (with pads in Group mode) or playing the middle C (MIDI note 60) base note.



In the MASCHINE convention the MIDI note 60 is noted C3.

The engines have different pitch ranges:

- Most engines have **limited pitch ranges**: For example, in the Snare, the Chrome engine can play pitches from MIDI note 60 to 84, while the Iron engine can play pitches from MIDI note 46 to 70. If the pitch of an incoming MIDI note falls outside the pitch range of the engine, the pitch will be bounded to that engine's allowable pitch range.
- Some engines have an **unlimited pitch range**: For example the Kick's Sub engine, the Tom's Fractal and Tronic engines, and the Percussion's Fractal engine.

In some drum engines it is impossible to set an exact tuning in MIDI notes. For them the Tune parameter is set in percents (from 0 % to 100 %).

10.2 The Kicks

The Kick Drumsynth can generate a myriad of kick sounds.



The Kick in the Control area (Main page depicted).



The Kick panel in the Plug-in Strip.

As in every Drumsynth, the engine can be selected via the Engine selector on the Main page. Each engine has a different character and set of parameters, as detailed in the following sections.

The Kick provides following engines:

- **Sub** (default): ↑10.2.1, Kick – Sub.
- **Tronic**: ↑10.2.2, Kick – Tronic.
- **Dusty**: ↑10.2.3, Kick – Dusty.
- **Rasper**: ↑10.2.5, Kick – Rasper.
- **Snappy**: ↑10.2.6, Kick – Snappy.

- **Bold**: ↑10.2.7, Kick – Bold.
- **Maple**: ↑10.2.8, Kick – Maple.
- **Push**: ↑10.2.9, Kick – Push.

For more information on engines, see ↑10.1.1, Engines: Many Different Drums per Drumsynth. For general information on the Kick and the other Drumsynths, see ↑10.1, Drumsynths – General Handling.

10.2.1 Kick – Sub

The Sub engine is the default engine of the Kick.

Based on the kick from a classic analog drum machine, the Sub kick is a clean, subby, sine-based kick drum which can be very effectively abused as a sub bass, tom or even a bleepy lead if tuned up and played chromatically on the keyboard.

The parameters described below are presented as they appear in the Control area (Arrange view). The same parameters are available in the Plug-in panel within the Plug-in Strip (Mix view). See ↑9.4, The Plug-in Strip for more information on this.

Main Page

Element	Description
MAIN Section	
Engine	Selects the engine used in the Kick Plug-in. If you change this setting, please refer to ↑10.2, The Kicks.
Tune	Adjusts the pitch of the drum played by the middle C, measured in MIDI note numbers and cents. Available values range from 31.00 to 55.00. The default value is 43.00. For more details see ↑10.1.5, Pitch Range, Tuning, and MIDI Notes.
Decay	Adjusts the duration of the sound's tail, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %).

Element	Description
Bend	Adjusts the amplitude of the pitch envelope applied throughout the sound duration (punch), measured as a percentage. Available values range from 0.0 to 100.0 % (default: 6,8 %). At zero, the sound stays at its original pitch during its entire decaying phase. As the Bend value is increased, an increasing amount of pitch envelope is applied. This means that the pitch of the drum starts at a higher value and falls to the original value as the sound decays. The greater the Bend value, the higher the starting pitch.
Time	Adjusts the decay time of the pitch envelope, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 30 %). Note that if the Time value is too long compared to the Decay value, you won't hear the entire pitch drop but only its beginning — i.e. you will hear a higher pitch than the one set by Tune.
ATTACK Section	
Mode	Selects the style of the attack: *Thin* selects a thin-sounding click, *Thick* selects a slightly rounder click with added noise, and *Noise* uses just a noise burst for a less clicky attack.
Color	Only available if *Thick* or *Noise* is selected in the Mode selector. Adjusts the color of the attack, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %). At lower values the attack is duller. Increase the Color value to get a more incisive attack.
Amount	Adjusts the level of the attack. Available values range from 0.0 % (soft attack) to 100.0 % (maximum attack). The default value is 50.0 %.

Advanced Page

For this engine the Advanced page does not contain any parameters.

Modulation Page

As with all other engines and Drumsynths, the Modulation page contains one parameter: Velocity.

Element	Description
SCALE Section	
Velocity	Adjusts the velocity response of the drum. Available values range from -100.0 % to 100.0 % (default value). At zero (mid course), the drum is played at full velocity, no matter how hard you hit the keys (or pads). From that mid position, by turning the knob to the right you increase the positive velocity response and make the drum more and more sensitive to the velocities at which you hit the keys/pads. From the mid position, turning the knob to the left as the inverse effect: the harder you hit the key/pad, the softer the resulting drum sound will be.

10.2.2 Kick – Tronic

Fat, punchy and warm, the Tronic kick is based on another classic analog kick drum which has provided the backbone to countless dance and electronic records for the past 30 years. The Tronic kick takes this classic a step further with extended parameter ranges and chromatic playability, but also adds a specially designed distortion section capable of a wide range of textures, from subtly rounded to all-out gabber assault.



The parameters described below are presented as they appear in the Control area (Arrange view). The same parameters are available in the Plug-in panel within the Plug-in Strip (Mix view). See ↑9.4, The Plug-in Strip for more information on this.

Main Page

Element	Description
MAIN Section	
Engine	Selects the engine used in the Kick Plug-in. If you change this setting, please refer to ↑10.2, The Kicks.

Element	Description
Tune	Adjusts the pitch of the drum played by the middle C, measured in MIDI note numbers and cents. Available values range from 31.00 to 55.00. The default value is 43.00. For more details see ↑10.1.5, Pitch Range, Tuning, and MIDI Notes.
Decay	Adjusts the duration of the sound's tail, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %).
Bend	Adjusts the amount of pitch envelope applied throughout the sound duration, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 6.8 %). Low values give a more gentle sound. As Bend is increased, the kick becomes more punchy; at higher values, the pitch envelope is more clearly audible as an actual pitch bend.
Impact	Adjusts the amount of attack. Available values range from 0.0 % (soft attack) to 100 % (maximum attack). The default value is 75.0 %.

Advanced Page

The Advanced page contains controls for the distortion.

Element	Description
DISTORTION Section	
Gain	Adjusts the distortion gain, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 70.0 %). Increase Gain to get a more distorted drum sound.
Tone	Adjusts the color of the distortion, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 25.0 %).

Element	Description
Bias	Adjusts the timbre of the distortion, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %). At zero, the distortion is symmetrical and introduces mostly odd harmonics. As the Bias value is increased, the distortion becomes more asymmetric and more even harmonics are introduced, resulting in a different tonality, especially at more subtle Gain settings.
Mix	Adjusts the mix between the clean and distorted signal, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %). At zero, none of the distorted drum will be heard. At 100.0 %, only the distorted drum will be heard.



Changes to the distortion parameters are only audible when the Mix parameter is set above 0 %.

Modulation Page

As with all other engines and Drumsynths, the Modulation page contains one parameter: Velocity.

Element	Description
SCALE Section	
Velocity	Adjusts the velocity response of the drum. Available values range from -100.0 % to 100.0 % (default value). At zero (mid course), the drum is played at full velocity, no matter how hard you hit the keys (or pads). From that mid position, by turning the knob to the right you increase the positive velocity response and make the drum more and more sensitive to the velocities at which you hit the keys/pads. From the mid position, turning the knob to the left as the inverse effect: the harder you hit the key/pad, the softer the resulting drum sound will be.

10.2.3 Kick – Dusty

The Dusty kick is an electronic kick with an organic feel. It's capable of broken, dusty sounds but can also open up to a thundering warehouse boom.



The parameters described below are presented as they appear in the Control area (Arrange view). The same parameters are available in the Plug-in panel within the Plug-in Strip (Mix view). See ↑9.4, The Plug-in Strip for more information on this.

Main Page

Element	Description
MAIN Section	
Engine	Selects the engine used in the Kick Plug-in. If you change this setting, please refer to ↑10.2, The Kicks.
Tune	Adjusts the pitch of the drum played by the middle C, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %). For more details see ↑10.1.5, Pitch Range, Tuning, and MIDI Notes.
Decay	Adjusts the duration of the sound's tail, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %).
Impact	Adjusts the amount of attack and click, measured as a percentage. Available values range from 0.0 % (soft attack) to 100.0 % (maximum attack). The default value is 75.0 %.
CHARACTER Section	
Filter	Adjusts the timbre of the drum, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 40.0 %). Increase the value to produce richer high frequencies.
Noise	Adjusts the amount of noise, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 10.0 %).

Advanced Page

For this engine the Advanced page does not contain any parameters.

Modulation Page

As with all other engines and Drumsynths, the Modulation page contains one parameter: Velocity.

Element	Description
SCALE Section	
Velocity	Adjusts the velocity response of the drum. Available values range from -100.0 % to 100.0 % (default value). At zero (mid course), the drum is played at full velocity, no matter how hard you hit the keys (or pads). From that mid position, by turning the knob to the right you increase the positive velocity response and make the drum more and more sensitive to the velocities at which you hit the keys/pads. From the mid position, turning the knob to the left as the inverse effect: the harder you hit the key/pad, the softer the resulting drum sound will be.

10.2.4 Kick – Grit

The Grit kick is a modern electronic kick drum to suit a wide range of styles. It's quite versatile: with a long decay it has a deep, boomy and airy tonality, but tightened up, it can thump with the best of them. At high tunings, especially with extreme "Aero Grind" and "Aero Amount" values, it becomes very gritty and bitcrushed, great for IDM and electro.



The parameters described below are presented as they appear in the Control area (Arrange view). The same parameters are available in the Plug-in panel within the Plug-in Strip (Mix view) — for more information please refer to section 9.4 "The Plug-in Strip" in the MASCHINE 2.0 Manual.

Main Page

Element	Description
MAIN Section	
Engine	Selects the engine used in the Kick Plug-in. If you change this setting, please refer to section 10.2 “The Kicks” in the MASCHINE 2.0 Manual.
Tune	Adjusts the pitch of the drum played by the middle C, measured in MIDI note numbers and cents. Available values range from 31.00 to 55.00. The default value is 43.00.
Decay	Adjusts the duration of the sound’s tail, measured as a percentage. Available values range from 0.0 to 100.0% (default: 50.0%).
Bend	Adjusts the amount of pitch envelope applied to the kick, measured as a percentage. Available values range from 0.0 to 100.0% (default: 6.8%).
Impact	Adjusts the amount of click or initial attack, measured as a percentage. Available values range from 0.0 to 100.0% (default: 75.0%).
Gate	When enabled, the decay of the drum is choked by the end of the note. When disabled, the drum plays as a one-shot sound, i.e. until the end of its tail, no matter when the note is released, although the sound duration will still depend on the Decay parameter (see above). Switching Gate on and setting the Decay parameter to a high value while playing short notes can result in a punchier, more aggressive character than simply using short Decay values with Gate off.
AERO Section	

Element	Description
Grind	Adjusts the grittiness of the "aero" component of the sound, measured as a percentage. Available values range from 0.0 to 100.0% (default: 45.0%). Low values produce a boomy reverberation. High values result in a crushed, digital "air" squashed into the drum sound. Note that this parameter will only have an effect if Amount is set to a non-zero value (see below).
Amount	Controls the amount of air or grit in the kick sound, measured as a percentage. Available values range from 0.0 to 100.0% (default: 20.0%).

Advanced Page

For this engine the Advanced page does not contain any parameters.

Modulation Page

Like with all other engines and Drumsynths, the Modulation page contains one parameter: Velocity.

Element	Description
SCALE Section	
Velocity	Adjusts the velocity response of the drum. Available values range from -100.0% to 100.0% (default value). At zero (mid course), the drum is played at full velocity, no matter how hard you hit the keys (or pads). From that mid position, by turning the knob to the right you increase the positive velocity response and make the drum more sensitive to the velocity at which you hit the keys/pads. From the mid position, turning the knob to the left as the inverse effect: the harder you hit the key/pad, the softer the resulting drum sound will be.

10.2.5 Kick – Rasper

The Rasper kick is an acoustic bass drum emulation providing a unique and organic sound that can be easily adapted into Drum'n'Bass or Dubstep productions. Its two crispness modes allow for a wide range of bass drums.



The parameters described below are presented as they appear in the Control area (Arrange view). The same parameters are available in the Plug-in panel within the Plug-in Strip (Mix view). See ↑9.4, The Plug-in Strip for more information on this.

Main Page

Element	Description
MAIN Section	
Engine	Selects the engine used in the Kick Plug-in. If you change this setting, please refer to ↑10.2, The Kicks.
Tune	Adjusts the pitch of the drum played by the middle C, measured in MIDI note numbers and cents. Available values range from 38.00 to 62.00. The default value is 50.00. For more details see ↑10.1.5, Pitch Range, Tuning, and MIDI Notes.
Decay	Adjusts the duration of the sound's tail, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %).
Punch	Simultaneously adjusts the amount of the pitch envelope and the amount of noise of the attack. Available values range from 0.0 to 100.0 % (default).
Impact	Adjusts how hard the drum is hit. Available values range from 0.0 % (softest) to 100.0 % (hardest). The default value is 75.0 %.
CRISPNESS Section	
Mode	Selects from two different crispness modes: Select *A* (default) for a tambourine-like sound, and select *B* for a snare-like sound.

Element	Description
Decay	Adjusts the duration of the crispness effect, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 34.0 %).
Amount	Adjusts the amount of crispness, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %).

Advanced Page

For this engine the Advanced page does not contain any parameters.

Modulation Page

As with all other engines and Drumsynths, the Modulation page contains one parameter: Velocity.

Element	Description
SCALE Section	
Velocity	Adjusts the velocity response of the drum. Available values range from -100.0 % to 100.0 % (default value). At zero (mid course), the drum is played at full velocity, no matter how hard you hit the keys (or pads). From that mid position, by turning the knob to the right you increase the positive velocity response and make the drum more and more sensitive to the velocities at which you hit the keys/pads. From the mid position, turning the knob to the left as the inverse effect: the harder you hit the key/pad, the softer the resulting drum sound will be.

10.2.6 Kick – Snappy

The Snappy kick is an acoustic bass drum emulation that provides control over the mic oscillation before the hit via the Snap control. It's capable of a mid-range bass drum sound that can be tweaked via the extended punch parameters.



The parameters described below are presented as they appear in the Control area (Arrange view). The same parameters are available in the Plug-in panel within the Plug-in Strip (Mix view). See ↑9.4, The Plug-in Strip for more information on this.

Element	Description
MAIN Section	
Engine	Selects the engine used in the Kick Plug-in. If you change this setting, please refer to ↑10.2, The Kicks.
Tune	Adjusts the pitch of the drum played by the middle C, measured in MIDI note numbers and cents. Available values range from 36.00 to 60.00. The default value is 48.00. For more details see ↑10.1.5, Pitch Range, Tuning, and MIDI Notes.
Decay	Adjusts the duration of the sound's tail, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %).
Snap	Emulates the air movement caused by the beater before the drum is hit. Therefore, it produces a snap in the waveform the length of which can be controlled through this parameter. Available values range from 0.0 to 100.0 % (default: 50.0 %).
Impact	Adjusts how hard the drum is hit, measured as a percentage. Available values range from 0.0 % (softest) to 100.0 % (hardest). The default value is 75.0 %.
PUNCH Section	
Mode	Selects from two different punch modes: *A* (default) and *B*.
Decay	Adjusts the duration of the punch, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %).
Amount	Adjusts the amount of punch, measured as a percentage. Available values range from 0.0 to 100.0 % (default).

Advanced Page

For this engine the Advanced page does not contain any parameters.

Modulation Page

As with all other engines and Drumsynths, the Modulation page contains one parameter: Velocity.

Element	Description
SCALE Section	
Velocity	Adjusts the velocity response of the drum. Available values range from -100.0 % to 100.0 % (default value). At zero (mid course), the drum is played at full velocity, no matter how hard you hit the keys (or pads). From that mid position, by turning the knob to the right you increase the positive velocity response and make the drum more and more sensitive to the velocities at which you hit the keys/pads. From the mid position, turning the knob to the left as the inverse effect: the harder you hit the key/pad, the softer the resulting drum sound will be.

10.2.7 Kick – Bold

The Bold kick is an acoustic bass drum emulation that provides an aggressive character and a punchy and dirty sound. It is capable of a range of sounds, from rock-like kicks to more snappy and tight sub-kicks.



The parameters described below are presented as they appear in the Control area (Arrange view). The same parameters are available in the Plug-in panel within the Plug-in Strip (Mix view). See ↑10.1.5, Pitch Range, Tuning, and MIDI Notes for more information on this.

Main Page

Element	Description
MAIN Section	
Engine	Selects the engine used in the Kick Plug-in. If you change this setting, please refer to ↑10.2, The Kicks.

Element	Description
Tune	Adjusts the pitch of the drum played by the middle C, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %). For more details see ↑10.1.5, Pitch Range, Tuning, and MIDI Notes.
Decay	Adjusts the duration of the sound's tail, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %).
Punch	Simultaneously adjusts the amplitude and decay time of the noise in the attack. Available values range from 0.0 to 100.0 % (default).
Impact	Adjusts how hard the drum is hit, measured as a percentage. Available values range from 0.0 % (softest) to 100.0 % (hardest). The default value is 75.0 %.

Advanced Page

For this engine the Advanced page does not contain any parameters.

Modulation Page

As with all other engines and Drumsynths, the Modulation page contains one parameter: Velocity.

Element	Description
SCALE Section	
Velocity	Adjusts the velocity response of the drum. Available values range from -100.0 % to 100.0 % (default value). At zero (mid course), the drum is played at full velocity, no matter how hard you hit the keys (or pads). From that mid position, by turning the knob to the right you increase the positive velocity response and make the drum more and more sensitive to the velocities at which you hit the keys/pads. From the mid position, turning the knob to the left as the inverse effect: the harder you hit the key/pad, the softer the resulting drum sound will be.

10.2.8 Kick – Maple

The Maple kick is an acoustic bass drum emulation that provides a realistic and organic sound. It is suitable for any production where a supporter kick is needed. It fits perfectly with acoustic instruments and its room parameters make it fit seamlessly into any mix.



The parameters described below are presented as they appear in the Control area (Arrange view). The same parameters are available in the Plug-in panel within the Plug-in Strip (Mix view). See ↑10.1.5, Pitch Range, Tuning, and MIDI Notes for more information on this.

Main Page

Element	Description
MAIN Section	
Engine	Selects the engine used in the Kick Plug-in. If you change this setting, please refer to ↑10.2, The Kicks.
Tune	Adjusts the pitch of the drum played by the middle C, measured in MIDI note numbers and cents. Available values range from 42.00 to 54.00. The default value is 48.00. For more details see ↑10.1.5, Pitch Range, Tuning, and MIDI Notes.
Decay	Adjusts the duration of the sound's tail, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %).
Skin Tune	Adjusts the fine-tuning of the skin of the drum, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %).
Impact	Adjusts how hard the drum is hit, measured as a percentage. Available values range from 0.0 % (softest) to 100.0 % (hardest). The default value is 75.0 %.
ROOM Section	
Mode	Selects from two different noise types that simulate the room in which the drum is played. Available modes are *A* (default) and *B*.

Element	Description
Size	Adjusts the size of the room, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %).
Amount	Adjusts the amount of room effect applied to the drum sound, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 75.0 %).

Advanced Page

For this engine the Advanced page does not contain any parameters.

Modulation Page

As with all other engines and Drumsynths, the Modulation page contains one parameter: Velocity.

Element	Description
SCALE Section	
Velocity	Adjusts the velocity response of the drum. Available values range from -100.0 % to 100.0 % (default value). At zero (mid course), the drum is played at full velocity, no matter how hard you hit the keys (or pads). From that mid position, by turning the knob to the right you increase the positive velocity response and make the drum more and more sensitive to the velocities at which you hit the keys/pads. From the mid position, turning the knob to the left as the inverse effect: the harder you hit the key/pad, the softer the resulting drum sound will be.

10.2.9 Kick – Push

The Push kick is an acoustic bass drum emulation that provides an aggressive and brazen sound. It is essential for mixes where a dirty, tight and powerful kick is required. Its versatility also allows for noisy and clicky kicks.

The parameters described below are presented as they appear in the Control area (Arrange view). The same parameters are available in the Plug-in panel within the Plug-in Strip (Mix view). See ↑9.4, The Plug-in Strip for more information on this.

Main Page

Element	Description
MAIN Section	
Engine	Selects the engine used in the Kick Plug-in. If you change this setting, please refer to ↑10.2, The Kicks.
Tune	Adjusts the pitch of the drum played by the middle C, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %). For more details see ↑10.1.5, Pitch Range, Tuning, and MIDI Notes.
Decay	Adjusts the duration of the sound's tail, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %).
Punch	Simultaneously adjusts the amount of the pitch envelope and the amount of noise of the attack. Available values range from 0.0 to 100.0 % (default).
Impact	Adjusts how hard the drum is hit. Available values range from 0.0 % (softest) to 100.0 % (hardest). The default value is 75.0 %.

Advanced Page

For this engine the Advanced page does not contain any parameters.

Modulation Page

As with all other engines and Drumsynths, the Modulation page contains one parameter: Velocity.

Element	Description
SCALE Section	
Velocity	Adjusts the velocity response of the drum. Available values range from -100.0 % to 100.0 % (default value). At zero (mid course), the drum is played at full velocity, no matter how hard you hit the keys (or pads). From that mid position, by turning the knob to the right you increase the positive velocity response and make the drum more and more sensitive to the velocities at which you hit the keys/pads. From the mid position, turning the knob to the left as the inverse effect: the harder you hit the key/pad, the softer the resulting drum sound will be.

10.3 The Snares

The Snare Drumsynth can generate a multitude of snare sounds.



The Snare in the Control area (Main page depicted).



The Snare panel in the Plug-in Strip.

As with every Drumsynth, the engine can be selected via the Engine selector on the Main page. Each engine has a different character and set of parameters, as detailed in the following sections.

The Snare provides following engines:

- **Volt** (default): ↑10.3.1, Snare – Volt
- **Bit**: ↑10.3.2, Snare – Bit
- **Pow**: ↑10.3.3, Snare – Pow
- **Sharp**: ↑10.3.4, Snare – Sharp
- **Airy**: ↑10.3.5, Snare – Airy

- **Vintage**: ↑10.3.6, Snare – Vintage
- **Chrome**: ↑10.3.7, Snare – Chrome
- **Iron**: ↑10.3.8, Snare – Iron
- **Clap**: ↑10.3.9, Snare – Clap

For more information on engines, see ↑10.1.1, Engines: Many Different Drums per Drumsynth. For general information on the Snare and the other Drumsynths, see ↑10.1, Drumsynths – General Handling.

10.3.1 Snare – Volt

The Volt engine is the default engine of the Snare.

The Volt snare is an electronic snare based on a family of analog classics.

The parameters described below are presented as they appear in the Control area (Arrange view). The same parameters are available in the Plug-in panel within the Plug-in Strip (Mix view). See ↑9.4, The Plug-in Strip for more information on this.

Main Page

Element	Description
MAIN Section	
Engine	Selects the engine used in the Snare Plug-in. If you change this setting, please refer to ↑10.3, The Snares.
Tune	Adjusts the pitch of the drum played by the middle C, measured in MIDI note numbers and cents. Available values range from 53.00 to 77.00. The default value is 65.00. For more details see ↑10.1.5, Pitch Range, Tuning, and MIDI Notes.
Decay	Adjusts the duration of the sound's tail, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %).

Element	Description
Gate	When enabled, the decay of the drum is choked by the end of the MIDI note. When disabled (default), the drum plays as a one-shot sound, i.e. until the end of its tail, no matter when the note is released.
Osc Mode	Selects the oscillator mode: If you select *Tonal* (default), the engine uses two oscillators running in parallel, the higher of which is extra sensitive to velocity for increased expressivity. If you select *Punchy*, the engine uses one oscillator with a pitch envelope.
Osc Mix	Only available if *Tonal* is selected in the Osc Mode selector (see above). Adjusts the mix between both oscillators, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %).
Punch	Only available if *Punchy* is selected in the Mode selector (see above). Adjusts the amplitude of the pitch envelope (punch), measured as a percentage. Available values range from 0.0 to 100.0 % (default: 25.0 %).
NOISE Section	
Color	Adjusts the tone of the "snare" portion of the sound, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %).
Amount	Adjusts the level of the "snare" portion of the sound, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 25.0 %).

Advanced Page

For this engine the Advanced page does not contain any parameters.

Modulation Page

As with all other engines and Drumsynths, the Modulation page contains one parameter: Velocity.

Element	Description
SCALE Section	
Velocity	Adjusts the velocity response of the drum. Available values range from -100.0 % to 100.0 % (default value). At zero (mid course), the drum is played at full velocity, no matter how hard you hit the keys (or pads). From that mid position, by turning the knob to the right you increase the positive velocity response and make the drum more and more sensitive to the velocities at which you hit the keys/pads. From the mid position, turning the knob to the left as the inverse effect: the harder you hit the key/pad, the softer the resulting drum sound will be.

10.3.2 Snare – Bit

The Bit snare is a thin, harsh, digital snare.



The parameters described below are presented as they appear in the Control area (Arrange view). The same parameters are available in the Plug-in panel within the Plug-in Strip (Mix view). See ↑9.4, The Plug-in Strip for more information on this.

Main Page

Element	Description
MAIN Section	
Engine	Selects the engine used in the Snare Plug-in. If you change this setting, please refer to ↑10.3, The Snares.
Tune	Adjusts the pitch of the drum played by the middle C, measured as a percentage. Available values range from 0.0 % to 100.0 % (default: 50.0 %). For more details see ↑10.1.5, Pitch Range, Tuning, and MIDI Notes.
Decay	Adjusts the duration of the sound's tail, measured as a percentage (default: 50.0 %).

Element	Description
Gate	When enabled, the decay of the drum is choked by the end of the MIDI note. When disabled (default), the drum plays as a one-shot sound, i.e. until the end of its tail, no matter when the note is released.
Grit	Adjusts the intensity of the bitcrushing, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 30 %).
NOISE Section	
Color	Adjusts the tone of the digital noise, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %).
Amount	Adjusts the level of the digital noise, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 25.0 %).

Advanced Page

For this engine the Advanced page does not contain any parameters.

Modulation Page

As with all other engines and Drumsynths, the Modulation page contains one parameter: Velocity.

Element	Description
SCALE Section	
Velocity	Adjusts the velocity response of the drum. Available values range from -100.0 % to 100.0 % (default value). At zero (mid course), the drum is played at full velocity, no matter how hard you hit the keys (or pads). From that mid position, by turning the knob to the right you increase the positive velocity response and make the drum more and more sensitive to the velocities at which you hit the keys/pads. From the mid position, turning the knob to the left as the inverse effect: the harder you hit the key/pad, the softer the resulting drum sound will be.

10.3.3 Snare – Pow

The Pow snare is a shot of filtered noise, useful as an electro snare, an effect or a layer in a combined snare sound.



The parameters described below are presented as they appear in the Control area (Arrange view). The same parameters are available in the Plug-in panel within the Plug-in Strip (Mix view). See ↑9.4, The Plug-in Strip for more information on this.

Main Page

Element	Description
MAIN Section	
Engine	Selects the engine used in the Snare Plug-in. If you change this setting, please refer to ↑10.3, The Snares.
Tune	Adjusts the pitch of the drum played by the middle C, measured as a percentage. Available values range from 0.0 % to 100.0 % (default: 50.0 %). For more details see ↑10.1.5, Pitch Range, Tuning, and MIDI Notes.
Decay	Adjusts the duration of the sound's tail, measured as a percentage (default: 50.0 %).
Bend	Adjusts the pitch sweep of the sound, measured as a percentage. Available values range from -100.0 % to 100.0 % (default: 0.0 %).
Focus	Adjusts the attack of the sound as well as the speed and shape of the pitch envelope, to produce a different quality of attack and sharpness. Available values range from 0.0 to 100 % (default: 50.0 %).

Advanced Page

For this engine the Advanced page does not contain any parameters.

Modulation Page

As with all other engines and Drumsynths, the Modulation page contains one parameter: Velocity.

Element	Description
SCALE Section	
Velocity	Adjusts the velocity response of the drum. Available values range from -100.0 % to 100.0 % (default value). At zero (mid course), the drum is played at full velocity, no matter how hard you hit the keys (or pads). From that mid position, by turning the knob to the right you increase the positive velocity response and make the drum more and more sensitive to the velocities at which you hit the keys/pads. From the mid position, turning the knob to the left as the inverse effect: the harder you hit the key/pad, the softer the resulting drum sound will be.

10.3.4 Snare – Sharp

The Sharp snare is an acoustic snare drum emulation inspired by the sound of 1970s disco snares.



The parameters described below are presented as they appear in the Control area (Arrange view). The same parameters are available in the Plug-in panel within the Plug-in Strip (Mix view). See ↑9.4, The Plug-in Strip for more information on this.

Main Page

Element	Description
MAIN Section	
Engine	Selects the engine used in the Snare Plug-in. If you change this setting, please refer to ↑10.3, The Snares.

Element	Description
Tune	Adjusts the pitch of the drum played by the middle C, measured as a percentage. Available values range from 0.0 % to 100.0 % (default: 50.0 %). For more details see ↑10.1.5, Pitch Range, Tuning, and MIDI Notes.
Decay	Adjusts the duration of the sound's tail, measured as a percentage. Available values range from 0.0 % to 100.0 % (default: 50.0 %).
Skin Tune	Adjusts the fine-tuning of the skin of the drum, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %).
Impact	Adjusts how hard the drum is hit, measured as a percentage. Available values range from 0.0 % (softest) to 100.0 % (hardest). The default value is 75.0 %.
Body	Adjusts the level of the snare body independently from the wires level adjusted on the Advanced page (see below). Available values range from 0.0 to 100.0 % (default: 75.0 %).
Noise	Adjusts the level and duration of the wires sound applied to the drum, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 40.0 %).

Advanced Page

For this engine the Advanced page does not contain any parameters.

Modulation Page

As with all other engines and Drumsynths, the Modulation page contains one parameter: Velocity.

Element	Description
SCALE Section	
Velocity	Adjusts the velocity response of the drum. Available values range from -100.0 % to 100.0 % (default value). At zero (mid course), the drum is played at full velocity, no matter how hard you hit the keys (or pads). From that mid position, by turning the knob to the right you increase the positive velocity response and make the drum more and more sensitive to the velocities at which you hit the keys/pads. From the mid position, turning the knob to the left as the inverse effect: the harder you hit the key/pad, the softer the resulting drum sound will be.

10.3.5 Snare – Airy

The Airy snare is an acoustic snare drum model that provides a realistic metallic snare sound. The two modes available on its Advanced page relate to different tension levels of the snare wires, which allows for a wide range of snares that will cut through very well into a mix.



The parameters described below are presented as they appear in the Control area (Arrange view). The same parameters are available in the Plug-in panel within the Plug-in Strip (Mix view). See ↑9.4, The Plug-in Strip for more information on this.

Main Page

Element	Description
MAIN Section	
Engine	Selects the engine used in the Snare Plug-in. If you change this setting, please refer to ↑10.3, The Snares.
Tune	Adjusts the pitch of the drum played by the middle C, measured in MIDI note numbers and cents. Available values range from 52.00 to 76.00. The default value is 64.00. For more details see ↑10.1.5, Pitch Range, Tuning, and MIDI Notes.

Element	Description
Decay	Adjusts the duration of the sound's tail, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %).
Skin Tune	Adjusts the fine-tuning of the skin of the drum, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %).
Impact	Adjusts how hard the drum is hit, measured as a percentage. Available values range from 0.0 % (softest) to 100 % (hardest). The default value is 75.0 %.

Advanced Page

The Advanced page contains parameters controlling the wires' sound of the drum.

Element	Description
SPECTRA Section	
Mode	Selects from two different noise types that simulate the wires of the drum. Available modes are *A* (default) and *B*.
Tune	Provides an independent tuning of the snare noise. It relates to the tension of the snare wires on a real snare drum. Available values range from 0.0 to 100.0 % (default: 50.0 %).
Decay	Adjusts the length of the sound of the snare wires, independently from the main Decay parameter on the Main page. Available values range from 0.0 % to 100.0 % (default: 40.0 %).
Amount	Adjusts the amount of snare wire sound applied to the drum, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 75.0 %).

Modulation Page

As with all other engines and Drumsynths, the Modulation page contains one parameter: Velocity.

Element	Description
SCALE Section	
Velocity	Adjusts the velocity response of the drum. Available values range from -100.0 % to 100.0 % (default value). At zero (mid course), the drum is played at full velocity, no matter how hard you hit the keys (or pads). From that mid position, by turning the knob to the right you increase the positive velocity response and make the drum more and more sensitive to the velocities at which you hit the keys/pads. From the mid position, turning the knob to the left as the inverse effect: the harder you hit the key/pad, the softer the resulting drum sound will be.

10.3.6 Snare – Vintage

The Vintage snare is an acoustic snare drum emulation that provides the sound of old, woody snares. The character of the sound comes from its broad spectrum that allows for a wide range of snares via a subtle use of the Tune parameters.



The parameters described below are presented as they appear in the Control area (Arrange view). The same parameters are available in the Plug-in panel within the Plug-in Strip (Mix view). See ↑9.4, The Plug-in Strip for more information on this.

Main Page

Element	Description
MAIN Section	
Engine	Selects the engine used in the Snare Plug-in. If you change this setting, please refer to ↑10.3, The Snares.
Tune	Adjusts the pitch of the drum played by the middle C, measured in MIDI note numbers and cents. Available values range from 61.00 to 79.00. The default value is 70.00. For more details see ↑10.1.5, Pitch Range, Tuning, and MIDI Notes.

Element	Description
Decay	Adjusts the duration of the sound's tail, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %).
Skin Tune	Adjusts the fine-tuning of the skin of the drum, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %).
Impact	Adjusts how hard the drum is hit, measured as a percentage. Available values range from 0.0 % (softest) to 100.0 % (hardest). The default value is 75.0 %.

Advanced Page

The Advanced page contains parameters controlling the wires' sound of the drum.

Element	Description
SPECTRA Section	
Mode	Selects from two different noise types that simulate the wires of the drum. Available modes are *A* (default) and *B*.
Tune	Provides an independent tuning of the snare noise. It relates to the wires tension of a real snare drum. Available values range from 0.0 to 100.0 % (default: 50.0 %).
Decay	Controls the length of the snare wire sound independently from the main Decay parameter on the Main page. Available values range from 0.0 to 100.0 % (default: 40.0 %).
Amount	Adjusts the amount of snare wire sound applied to the drum, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 75.0 %).

Modulation Page

As with all other engines and Drumsynths, the Modulation page contains one parameter: Velocity.

Element	Description
SCALE Section	
Velocity	Adjusts the velocity response of the drum. Available values range from -100.0 % to 100.0 % (default value). At zero (mid course), the drum is played at full velocity, no matter how hard you hit the keys (or pads). From that mid position, by turning the knob to the right you increase the positive velocity response and make the drum more and more sensitive to the velocities at which you hit the keys/pads. From the mid position, turning the knob to the left as the inverse effect: the harder you hit the key/pad, the softer the resulting drum sound will be.

10.3.7 Snare – Chrome

The Chrome snare is an acoustic snare drum emulation with a bright sound. The two modes available on its Advanced page relate to different snare wire characteristics: noisy and crispy.



The parameters described below are presented as they appear in the Control area (Arrange view). The same parameters are available in the Plug-in panel within the Plug-in Strip (Mix view). See ↑9.4, The Plug-in Strip for more information on this.

Main Page

Element	Description
MAIN Section	
Engine	Selects the engine used in the Snare Plug-in. If you change this setting, please refer to ↑10.3, The Snares.
Tune	Adjusts the pitch of the drum played by the middle C, measured in MIDI note numbers and cents. Available values range from 60.00 to 84.00. The default value is 72.00. For more details see ↑10.1.5, Pitch Range, Tuning, and MIDI Notes.
Decay	Adjusts the duration of the sound's tail, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %).

Element	Description
Skin Tune	Adjusts the fine-tuning of the skin of the drum, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %).
Impact	Adjusts how hard the drum is hit. Available values range from 0.0 % (softest) to 100.0 % (hardest). The default value is 75.0 %.

Advanced Page

The Advanced page contains parameters controlling the wires' sound of the drum.

Element	Description
SPECTRA Section	
Mode	Selects from two different noise types that simulate the snare wires of the drum. Available modes are *A* (default) and *B*.
Tune	Provides an independent tuning of the snare noise. It relates to the snare wire tension of a real snare drum. Available values range from 0.0 to 100.0 % (default: 50.0 %).
Decay	Controls the length of the snare wire sound independently from the main Decay parameter on the Main page. Available values range from 0.0 to 100.0 % (default: 40.0 %).
Amount	Adjusts the amount of snare wire sound applied to the drum, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 75.0 %).

Modulation Page

As with all other engines and Drumsynths, the Modulation page contains one parameter: Velocity.

Element	Description
SCALE Section	
Velocity	Adjusts the velocity response of the drum. Available values range from -100.0 % to 100.0 % (default value). At zero (mid course), the drum is played at full velocity, no matter how hard you hit the keys (or pads). From that mid position, by turning the knob to the right you increase the positive velocity response and make the drum more and more sensitive to the velocities at which you hit the keys/pads. From the mid position, turning the knob to the left as the inverse effect: the harder you hit the key/pad, the softer the resulting drum sound will be.

10.3.8 Snare – Iron

The Iron snare is an acoustic snare drum model that is capable of a metallic, bright sound. The two modes available on its Advanced page select from two different snare wire characteristics.



The parameters described below are presented as they appear in the Control area (Arrange view). The same parameters are available in the Plug-in panel within the Plug-in Strip (Mix view). See ↑9.4, The Plug-in Strip for more information on this.

Main Page

Element	Description
MAIN Section	
Engine	Selects the engine used in the Snare Plug-in. If you change this setting, please refer to ↑10.3, The Snares.
Tune	Adjusts the pitch of the drum played by the middle C, measured in MIDI note numbers and cents. Available values range from 46.00 to 70.00. The default value is 58.00. For more details see ↑10.1.5, Pitch Range, Tuning, and MIDI Notes.

Element	Description
Decay	Adjusts the duration of the sound's tail, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %).
Skin Tune	Adjusts the fine-tuning of the skin of the drum, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %).
Impact	Adjusts how hard the drum is hit, measured as a percentage. Available values range from 0.0 % (softest) to 100.0 % (hardest). The default value is 75.0 %.
Body	Adjusts the level of the snare body independently from level of the snare wires, which is adjusted on the Advanced page (see below). Available values range from 0.0 to 100.0 % (default: 75.0 %).

Advanced Page

The Advanced page contains parameters controlling the wires' sound of the drum.

Element	Description
SPECTRA Section	
Mode	Selects from two different noise types that simulate the snare wires of the drum. Available modes are *A* (default) and *B*.
Decay	Controls the length of the snare wires' sound independently from the main Decay parameter on the Main page. Available values range from 0.0 to 100.0 % (default: 40.0 %).
Amount	Adjusts the amount of snare wire sound applied to the drum, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 75.0 %).

Modulation Page

As with all other engines and Drumsynths, the Modulation page contains one parameter: Velocity.

Element	Description
SCALE Section	
Velocity	Adjusts the velocity response of the drum. Available values range from -100.0 % to 100.0 % (default value). At zero (mid course), the drum is played at full velocity, no matter how hard you hit the keys (or pads). From that mid position, by turning the knob to the right you increase the positive velocity response and make the drum more and more sensitive to the velocities at which you hit the keys/pads. From the mid position, turning the knob to the left as the inverse effect: the harder you hit the key/pad, the softer the resulting drum sound will be.

10.3.9 Snare – Clap

A stalwart of electronic music, the classic analog clap never really sounded like a group of people clapping - but that makes it all the more iconic!



The parameters described below are presented as they appear in the Control area (Arrange view). The same parameters are available in the Plug-in panel within the Plug-in Strip (Mix view). See ↑9.4, The Plug-in Strip for more information on this.

Main Page

Element	Description
MAIN Section	
Engine	Selects the engine used in the Snare Plug-in. If you change this setting, please refer to ↑10.3, The Snares.
Tune	Adjusts the pitch of the drum played by the middle C, measured as a percentage. Available values range from 0.0 % to 100.0 % (default: 50.0 %). For more details see ↑10.1.5, Pitch Range, Tuning, and MIDI Notes.

Element	Description
Decay	Adjusts the duration of the sound's tail, but also the "spread" between the individual claps, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %).
Room	Adjusts the balance between the dry sound — the claps themselves — and the synthesized room sound, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %). At high values, extra "air" is added.
Focus	Adjusts the sharpness of each clap, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %). At 0.0 % the sound is very smooth; at 100.0 % the claps are very sharp and staccato.

Advanced Page

For this engine the Advanced page does not contain any parameters.

Modulation Page

As with all other engines and Drumsynths, the Modulation page contains one parameter: Velocity.

Element	Description
SCALE Section	
Velocity	Adjusts the velocity response of the drum. Available values range from -100.0 % to 100.0 % (default value). At zero (mid course), the drum is played at full velocity, no matter how hard you hit the keys (or pads). From that mid position, by turning the knob to the right you increase the positive velocity response and make the drum more and more sensitive to the velocities at which you hit the keys/pads. From the mid position, turning the knob to the left as the inverse effect: the harder you hit the key/pad, the softer the resulting drum sound will be.

10.3.10 Snare – Breaker

The Breaker snare is an acoustic high pitched snare drum that cuts through perfectly into mixes containing heavy bass. The adjustment of the wires spectrum provides a great range of snares. It also works very well with the Rasper Kick.



The parameters described below are presented as they appear in the Control area (Arrange view). The same parameters are available in the Plug-in panel within the Plug-in Strip (Mix view). See ↑9.4, The Plug-in Strip for more information on this.

Main Page

Element	Description
MAIN Section	
Engine	Selects the engine used in the Snare plug-in. For more information on the available engines, please refer to section ↑10.3, The Snares.
Tune	Adjusts the pitch of the drum played by the middle C, measured in MIDI note numbers and cents. Available values range from 61.00 (NOTE C#3) to 85.00 (NOTE C#5). The default value is 73.00 (NOTE C#4).
Decay	Adjusts the duration of the sound's tail, measured as a percentage. Available values range from 0.0 to 100.0% (default: 50.0%).
Skin Tune	Adjusts the fine-tuning of the skin of the drum, measured as a percentage. Available values range from 0.0 to 100.0% (default: 50.0%).
Impact	Adjusts the amount of click or initial attack, measured as a percentage. Available values range from 0.0 to 100.0% (default: 75.0%).

Advanced Page

For this engine the Advanced page does not contain any parameters.

Element	Description
SPECTRA Section	
Mode	Selects from two different noise types that simulate the wires of the drum. Available modes are A (default) and B.
Tune	Provides an independent tuning of the snare noise. It relates to the tension of the snare wires on a real snare drum. Available values range from 0.0 to 100.0% (default: 50.0%).
Decay	Adjusts the length of the sound of the snare wires, independently from the main Decay parameter on the Main page. Available values range from 0.0% to 100.0% (default: 40.0%).
Amount	Adjusts the amount of snare wire sound applied to the drum, measured as a percentage. Available values range from 0.0 to 100.0% (default: 75.0%).

Modulation Page

Like with all other engines and Drumsynths, the Modulation page contains one parameter: Velocity.

Element	Description
SCALE Section	
Velocity	Adjusts the velocity response of the drum. Available values range from -100.0% to 100.0% (default value). At zero (mid course), the drum is played at full velocity, no matter how hard you hit the keys (or pads). From that mid position, by turning the knob to the right you increase the positive velocity response and make the drum more sensitive to the velocity at which you hit the keys/pads. From the mid position, turning the knob to the left as the inverse effect: the harder you hit the key/pad, the softer the resulting drum sound will be.

10.4 The Hi-hats

The Hi-hat Drumsynth can generate a variety of hi-hat sounds.



The Hi-hat in the Control area (Main page depicted).



The Hi-hat panel in the Plug-in Strip.

As in every Drumsynth, the engine can be selected via the Engine selector on the Main page. Each engine has a different character and set of parameters, as detailed in the following sections.

The Hi-hat provides following engines:

- **Silver** (default): ↑10.4.1, Hi-hat – Silver.
- **Circuit**: ↑10.4.2, Hi-hat – Circuit.
- **Memory**: ↑10.4.3, Hi-hat – Memory.

In addition, we mention how to use Choke groups with Hi-hat Plug-ins to emulate a closed vs. open hi-hat set up: ↑10.4.5, Creating a Pattern with Closed and Open Hi-hats.



For more information on engines, see ↑10.1.1, Engines: Many Different Drums per Drumsynth. For general information on the Snare and the other Drumsynths, see ↑10.1, Drumsynths – General Handling.

10.4.1 Hi-hat – Silver

The Silver engine is the default engine of the Hi-hat.

A classic analog hi-hat that can also be used as percussion or sound effect.



The parameters described below are presented as they appear in the Control area (Arrange view). The same parameters are available in the Plug-in panel within the Plug-in Strip (Mix view). See ↑9.4, The Plug-in Strip for more information on this.

Main Page

Element	Description
MAIN Section	
Engine	Selects the engine used in the Hi-hat Plug-in. If you change this setting, please refer to ↑10.4, The Hi-hats.

Element	Description
Tune	Adjusts the pitch of the cymbal played by the middle C, measured as a percentage. Available values range from 0.0 % to 100.0 % (default: 50.0 %). For more details see ↑10.1.5, Pitch Range, Tuning, and MIDI Notes.
Decay	Adjusts the duration of the sound, measured as a percentage. A short decay produces a closed hat; a long decay gives an open hi-hat or cymbal. Available values range from 0.0 to 100.0 % (default: 65.0 %).
Gate	When enabled, the decay of the cymbal is choked by the end of the note. When disabled (default), the cymbal plays as a one-shot sound, i.e. until the end of its tail, no matter when the note is released, although the sound duration will still depend on the Decay parameter (see above).
TONE Section	
Color	Adjusts the center frequency of the filter applied to the sound, measured in hertz. Available values range from 932.3 Hz to 16.7 kHz (default: 7.4 kHz). The default position gives a standard metallic analog hi-hat. Colored down, the sound is much more melodic and in the midrange, good for percussion or effects. In a way this parameter is a more effective tuning control than the Tune parameter itself. Note that the Color parameter also follows keyboard tracking (i.e. the key/pad you play) along with the Tune parameter, limited to the range of the parameter.
Saturate	Adjusts the amount of analog-style saturation applied to the sound for increased thickness, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 19.0 %).
Noise	Adusts the mix between an oscillator bank and white noise as the signal source, measured as a percentage. Available values range from 0.0 % (oscillator bank only) to 100.0 % (white noise only). The default value is 10.0 %.

Advanced Page

For this engine the Advanced page does not contain any parameters.

Modulation Page

As with all other engines and Drumsynths, the Modulation page contains one parameter: Velocity.

Element	Description
SCALE Section	
Velocity	Adjusts the velocity response of the drum. Available values range from -100.0 % to 100.0 % (default value). At zero (mid course), the drum is played at full velocity, no matter how hard you hit the keys (or pads). From that mid position, by turning the knob to the right you increase the positive velocity response and make the drum more and more sensitive to the velocities at which you hit the keys/pads. From the mid position, turning the knob to the left as the inverse effect: the harder you hit the key/pad, the softer the resulting drum sound will be.

10.4.2 Hi-hat – Circuit

Similar to the Silver hi-hat, the Circuit hi-hat uses a more complex oscillator for a more digital, robotic sound.



The parameters described below are presented as they appear in the Control area (Arrange view). The same parameters are available in the Plug-in panel within the Plug-in Strip (Mix view). See ↑9.4, The Plug-in Strip for more information on this.

Main Page

Element	Description
MAIN Section	
Engine	Selects the engine used in the Hi-hat Plug-in. If you change this setting, please refer to ↑10.4, The Hi-hats.
Tune	Adjusts the pitch of the cymbal played by the middle C, measured as a percentage. Available values range from 0.0 % to 100.0 % (default: 50.0 %). For more details see ↑10.1.5, Pitch Range, Tuning, and MIDI Notes.
Decay	Adjusts the duration of the sound, measured as a percentage. A short decay produces a closed hat; a long decay gives an open hi-hat or cymbal. Available values range from 0.0 to 100.0 % (default: 65.0 %).
Gate	When enabled, the decay of the cymbal is choked by the end of the note. When disabled (default), the cymbal plays as a one-shot sound, i.e. until the end of its tail, no matter when the note is released, although the sound duration will still depend on the Decay parameter (see above).
TONE Section	
Color	Adjusts the center frequency of the filter applied to the sound, measured in hertz. Available values range from 932.3 Hz to 16.7 kHz (default: 7.4 kHz). The default position gives a standard metallic analog hi-hat. Colored down, the sound is much more melodic and in the midrange, good for percussion or effects. In a way this parameter is a more effective tuning control than the Tune parameter itself. Note that the Color parameter also follows keyboard tracking (i.e. the key/pad you play) along with the Tune parameter, limited to the range of the parameter.
Saturate	Adjusts the amount of analog-style saturation applied to the sound for increased thickness, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 19.0 %).

Element	Description
Seed	Selects a random sequence to control the waveform produced by the oscillator. Each of the 31 seed values available produces a different set of random pitches and harmonics.
Dissonance	Affects the randomization of the oscillator, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 25.0 %). Higher values introduce more randomization, resulting in a more noisy sound. Lower values produce a more melodic, oscillator-like sound.

Advanced Page

For this engine the Advanced page does not contain any parameters.

Modulation Page

As with all other engines and Drumsynths, the Modulation page contains one parameter: Velocity.

Element	Description
SCALE Section	
Velocity	Adjusts the velocity response of the drum. Available values range from -100.0 % to 100.0 % (default value). At zero (mid course), the drum is played at full velocity, no matter how hard you hit the keys (or pads). From that mid position, by turning the knob to the right you increase the positive velocity response and make the drum more and more sensitive to the velocities at which you hit the keys/pads. From the mid position, turning the knob to the left as the inverse effect: the harder you hit the key/pad, the softer the resulting drum sound will be.

10.4.3 Hi-hat – Memory

The Memory hi-hat is similar to a typical sample-based cymbal but with a modern twist, using analyzed and reconstructed timbres rather than just a recorded sample.

The parameters described below are presented as they appear in the Control area (Arrange view). The same parameters are available in the Plug-in panel within the Plug-in Strip (Mix view). See ↑9.4, The Plug-in Strip for more information on this.

Main Page

Element	Description
MAIN Section	
Engine	Selects the engine used in the Hi-hat Plug-in. If you change this setting, please refer to ↑10.4, The Hi-hats.
Tune	Adjusts the pitch of the cymbal played by the middle C, measured as a percentage. Available values range from 0.0 % to 100.0 % (default: 50.0 %). For more details see ↑10.1.5, Pitch Range, Tuning, and MIDI Notes.
Decay	Adjusts the duration of the sound, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 65.0 %). A short decay produces a closed hat; a long decay gives an open hi-hat or cymbal.
Gate	When enabled, the decay of the cymbal is choked by the end of the note. When disabled (default), the cymbal plays as a one-shot sound, i.e. until the end of its tail, no matter when the note is released, although the sound duration will still depend on the Decay parameter (see above).
Source	Selects the sampled timbre to be used as source. Six modes are available — *A* (default), *B*, *C*, *D*, *E*, and *F* — each corresponding to a different cymbal.
TONE Section	
Color	Adjusts the frequency curve of the sound, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 71.5 %). Higher settings produce a brighter sound; lower settings produce a more boxy sound.

Element	Description
Strike	Adjusts the attack of the cymbal, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 75.0 %).
Distress	Introduces even more lo-fi grit, crushing and distortion. Available values range from 0.0 % (default) to 100.0 %.

Advanced Page

For this engine the Advanced page does not contain any parameters.

Modulation Page

As with all other engines and Drumsynths, the Modulation page contains one parameter: Velocity.

Element	Description
SCALE Section	
Velocity	Adjusts the velocity response of the drum. Available values range from -100.0 % to 100.0 % (default value). At zero (mid course), the drum is played at full velocity, no matter how hard you hit the keys (or pads). From that mid position, by turning the knob to the right you increase the positive velocity response and make the drum more and more sensitive to the velocities at which you hit the keys/pads. From the mid position, turning the knob to the left as the inverse effect: the harder you hit the key/pad, the softer the resulting drum sound will be.

10.4.4 Hi-hat – Hybrid

The Hybrid hi-hat is an acoustic emulation with a distinctive sound, crossing over from acoustic to electronic timbres. It provides authentic acoustic features such as sizzling available through the Rattle parameter, and special electronic characteristics provided by the Metallic parameter. By automating these parameters you can create great sounding hi-hat figures.

The parameters described below are presented as they appear in the Control area (Arrange view). The same parameters are available in the Plug-in panel within the Plug-in Strip (Mix view) — for more information please refer to section ↑9.4, The Plug-in Strip.

Main Page

Element	Description
MAIN Section	
Engine	Selects the engine used in the Hybrid plug-in. For more information on the available engines, please refer to section ↑10.4, The Hi-hats.
Tune	Adjusts the pitch of the cymbal played by the middle C, measured as a percentage. Available values range from 0.0% to 100.0% (default: 50.0%).
Decay	Adjusts the duration of the sound's tail, measured as a percentage. Available values range from 0.0 to 100.0% (default: 65.0%).
TONE Section	
Color	Adjusts the cutoff frequency of several low-pass filters in order to achieve the desired timbre. Available values range from 0.0 to 100% (default: 71.5%).
Metallic	Adjusts an enharmonic metallic character, measured as a percentage. Available values range from 0.0 to 100.0% (default: 0.0%).
Strike	Adjusts the amount of click or initial attack, measured as a percentage. Available values range from 0.0 to 100.0% (default: 80.0%).
Character	Adjusts a wider range of timbers from noisy to metallic, measured as a percentage. Available values range from 0.0 to 100.0% (default: 25.0%).

Advanced Page

Element	Description
HYBRID Section	
Bend	Adjusts the amount of a pitch envelope for sound design purposes. It is a bipolar control ranging from -100.0 to 100.0% (default: 0.0%)
Rattle	Adjusts the amount of sizzling from the hi-hat. It is more noticeable with long decays. Available values range from 0.0 to 100.0% (default: 50.0%).

Modulation Page

Like with all other engines and Drumsynths, the Modulation page contains one parameter: Velocity.

Element	Description
SCALE Section	
Velocity	Adjusts the velocity response of the drum. Available values range from -100.0% to 100.0% (default value). At zero (mid course), the drum is played at full velocity, no matter how hard you hit the keys (or pads). From that mid position, by turning the knob to the right you increase the positive velocity response and make the drum more sensitive to the velocity at which you hit the keys/pads. From the mid position, turning the knob to the left as the inverse effect: the harder you hit the key/pad, the softer the resulting drum sound will be.

10.4.5 Creating a Pattern with Closed and Open Hi-hats

Don't hesitate to use a few Hi-hat Plug-ins within a **Choke group**! Indeed, by loading two Hi-hat Plug-ins with different settings in two different Sounds (one for the closed hi-hat, one for the open hi-hat), then assigning both Sounds to the same Choke group, and leaving both as Master in the group, you can recreate mutually exclusive hi-hat sounds that cancel each other out

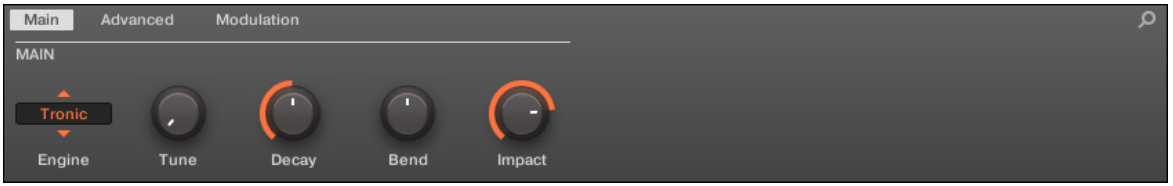
when played, like on a real drum set. By the way you are not limited to two hi-hat sounds — e.g., you could add to the same Choke group a third Sound containing a half-opened hi-hat. To know how to do this, please refer to section ↑5.1.4, Using Choke Groups where Choke groups are explained in detail.



With a single Hi-hat Plug-in, you could also recreate an open-closed hi-hat behavior by disabling Gate and modulating the Decay in your Pattern. This rather advanced task might give you even finer control over the duration of your various hi-hat sounds, and thereby help you to give your hi-hat track a "human" feel. Furthermore, since this method makes use of a single Sound you can quickly modify other parameters of your Hi-hat Plug-in — your changes will seamlessly apply to all your hi-hat variants!

10.5 The Toms

The Tom Drumsynth can generate a variety of tom sounds.



The Tom in the Control area (Main page depicted).



The Tom panel in the Plug-in Strip.

As in every Drumsynth, the engine can be selected via the Engine selector on the Main page. Each engine has a different character and set of parameters, as detailed in the following sections.

The Tom provides following engines:

- **Tronic** (default): ↑10.5.1, Tom – Tronic.
- **Fractal**: ↑10.5.2, Tom – Fractal.
- **Floor**: ↑10.5.3, Tom – Floor.

For more information on engines, see ↑10.1.1, Engines: Many Different Drums per Drumsynth. For general information on the Snare and the other Drumsynths, see ↑10.1, Drumsynths – General Handling.

10.5.1 Tom – Tronic

The Tronic engine is the default engine of the Tom.

A fat, analog-style tom with two tunable oscillators plus a tunable FM oscillator.

The parameters described below are presented as they appear in the Control area (Arrange view). The same parameters are available in the Plug-in panel within the Plug-in Strip (Mix view). See ↑9.4, The Plug-in Strip for more information on this.

Main Page

Element	Description
MAIN Section	
Engine	Selects the engine used in the Tom Plug-in. If you change this setting, please refer to ↑10.5, The Toms.
Tune	Adjusts the pitch of the drum played by the middle C, measured in MIDI note numbers and cents. Available values range from 36.00 to 60.00. The default value is 36.00. For more details see ↑10.1.5, Pitch Range, Tuning, and MIDI Notes.
Decay	Adjusts the duration of the sound's tail, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %).

Element	Description
Bend	Adjusts the pitch sweep of the sound, measured as a percentage. Available values range from -100.0 % to 100.0 % (default: 0.0 %). At zero the sound stays at its original pitch during its entire decaying phase. At higher values, the pitch bends upwards. At lower values, the pitch bends downwards.
Impact	Adjusts the amount of attack, measured as a percentage. Available values range from 0.0 % (soft attack) to 100.0 % (maximum attack). The default value is 80.0 %.

Advanced Page

The Advanced page contains parameters controlling the individual oscillators.

Element	Description
HARMONICS Section	
Interval	Adjusts the interval between the two oscillators, measured in semitones and cents. Available values range from -0.50 to 13.50 (default: 6.50). At low values the oscillators are tuned close together, giving a detuned sound which can be used for basslines.
FM Freq	Adjusts the frequency of the FM oscillator, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %).
FM Decay	Adjusts the decay of the FM oscillator, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 35.0 %). Short decays are useful to supplement the attack or impact of the tom. Long decays can be used to embellish the tone or timbre of the tom, especially when applied subtly (see FM Amount below).
FM Amount	Adjusts the amount of frequency modulation applied by the FM oscillator, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 10.0 %). At 0.0 % there is no frequency modulation so the other FM controls (FM Freq and FM Decay) have no effect.

Modulation Page

As with all other engines and Drumsynths, the Modulation page contains one parameter: Velocity.

Element	Description
SCALE Section	
Velocity	Adjusts the velocity response of the drum. Available values range from -100.0 % to 100.0 % (default value). At zero (mid course), the drum is played at full velocity, no matter how hard you hit the keys (or pads). From that mid position, by turning the knob to the right you increase the positive velocity response and make the drum more and more sensitive to the velocities at which you hit the keys/pads. From the mid position, turning the knob to the left as the inverse effect: the harder you hit the key/pad, the softer the resulting drum sound will be.

10.5.2 Tom – Fractal

The Fractal tom is a modern electronic tom with a broad sonic range from pure and analog-sounding through organic and percussive through bell-like to totally alien. It uses a tone oscillator and a feedback oscillator bank (like the one used in the Fractal engine of the Percussion, see ↑10.6.1, Percussion – Fractal), the balance between which is controlled by the Mix parameter on the Advanced page. The tone oscillator on its own produces a simple analog-style bleepy tom. The addition of the feedback oscillator bank facilitates a much wider range of sounds.



The parameters described below are presented as they appear in the Control area (Arrange view). The same parameters are available in the Plug-in panel within the Plug-in Strip (Mix view). See ↑9.4, The Plug-in Strip for more information on this.

Main Page

Element	Description
MAIN Section	
Engine	Selects the engine used in the Tom Plug-in. If you change this setting, please refer to ↑10.5, The Toms.
Tune	Adjusts the pitch of the drum played by the middle C, measured in MIDI note numbers and cents. Available values range from 48.00 to 72.00. The default value is 48.00. For more details see↑10.1.5, Pitch Range, Tuning, and MIDI Notes. Note that the pitch of this instrument is heavily dependent on the settings on the Advanced page (see below).
Decay	Adjusts the duration of the sound's tail, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %).
Bend	Adjusts the pitch sweep of the sound, measured as a percentage. Available values range from -100.0 % to 100.0 % (default: 0.0 %). At zero the sound stays at its original pitch during its entire decaying phase. At higher values, the pitch bends upwards. At lower values, the pitch bends downwards.
Impact	Adjusts the amount of attack, measured as a percentage. Available values range from 0.0 % (soft attack) to 100.0 % (maximum attack). The default value is 80.0 %.

Element	Description
Color	Adjusts a simple filter which affects the brightness of the sound. Available values range from 0.0 to 100.0 % (default: 50.0 %).
Glide	The tuning of the Fractal tom is locked for each note; in other words the change in tuning is applied only when a new note is received. When the Glide parameter is set higher than zero, the pitch glides smoothly to the new tuning. The Glide parameter then defines the duration this glide takes, measured in milliseconds: as you increase the Glide value, the glide gets slower and more audible. This also applies when the tom is played across the keyboard. Available values range from None (no glide) to 350.0 ms (slowest glide). The default value is 5.5 ms.

Advanced Page

The Advanced page contains parameters controlling the individual oscillators.

Element	Description
HARMONICS Section	
KTr. Mode (Key Tracking Mode)	Selects from two key tracking modes: *Harmonic* (default) and *Dissonant*. In *Harmonic* mode all oscillators track the Tune parameter (on the Main page, see above) and your keyboard evenly. Therefore, the drum stays in tune with itself as the Tune parameter is adjusted, and can be played chromatically across the keyboard. In *Dissonant* mode the oscillators track the Tune parameter of your keyboard/pads unevenly. Therefore, the drum produces dissonant, detuned harmonics when the Tune parameter is adjusted or when you play different notes.
Mix	Adjusts the mix between the tone oscillator and the feedback oscillator bank, measured as a percentage. Available values range from 0.0 % (tone oscillator only) to 100.0 % (feedback oscillator bank only). The default value is 5.0 %.

Element	Description
Transpose	Adjusts the pitch transposition of the feedback oscillator bank only, measured in semitones and cents. This is useful for tuning it to the tone oscillator. Available values range from -12.00 to 12.00 semitones (default: 0.00).
Freq A	Adjusts the pitch of oscillator A within the feedback oscillator bank, measured as a percentage. Available values range from 0.0 to 100.0 % (default).
Freq B	Adjusts the pitch of oscillator B within the feedback oscillator bank, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 75.0 %). Note that this control has no effect when FM and AM are set to zero (see below).
FM	Adjusts the amount of frequency modulation within the feedback oscillator bank, measured as a percentage. Frequency modulation tends to add bell-like, ringing overtones. Available values range from 0.0 to 100.0 % (default: 50.0 %).
AM	Adjusts the amount of amplitude modulation within the feedback oscillator bank, measured as a percentage. Amplitude modulation tends to add brash, bright overtones. Available values range from 0.0 to 100.0 % (default: 50.0 %).

Modulation Page

As with all other engines and Drumsynths, the Modulation page contains one parameter: Velocity.

Element	Description
SCALE Section	
Velocity	Adjusts the velocity response of the drum. Available values range from -100.0 % to 100.0 % (default value). At zero (mid course), the drum is played at full velocity, no matter how hard you hit the keys (or pads). From that mid position, by turning the knob to the right you increase the positive velocity response and make the drum more and more sensitive to the velocities at which you hit the keys/pads. From the mid position, turning the knob to the left as the inverse effect: the harder you hit the key/pad, the softer the resulting drum sound will be.

10.5.3 Tom – Floor

The Floor Tom is an acoustic tom that provides the emulation of a complete set of toms. Although it is more suitable for floor and low toms, it is also capable of producing interesting mid and high toms. Furthermore the control over the pitch bend and the mute parameters allow for a wide range of sounds.



The parameters described below are presented as they appear in the Control area (Arrange view). The same parameters are available in the Plug-in panel within the Plug-in Strip (Mix view). See ↑9.4, The Plug-in Strip for more information on this.

Main Page

Element	Description
MAIN Section	
Engine	Selects the engine used in the Tom Plug-in. If you change this setting, please refer to ↑10.5, The Toms.
Tune	Adjusts the pitch of the drum played by the middle C, measured in MIDI note numbers and cents. Available values range from 48.00 to 62.00. The default value is 48.00. For more details see ↑10.1.5, Pitch Range, Tuning, and MIDI Notes.

Element	Description
Decay	Adjusts the duration of the sound's tail, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %).
Tension	Adjusts the tension of the drum skin, measured as a percentage, allowing for a longer and bigger pitch bend. Available values range from 0.0 to 100.0 % (default).
Impact	Adjusts how hard the drum is hit, measured as a percentage. Available values range from 0.0 % (softest) to 100.0 % (hardest). The default value is 80.0 %.
Flex	Adjusts the elasticity of the skin, measured as a percentage, allowing for a greater pitch bend when the drum is hit. Available values range from 0.0 to 100.0 % (default: 30.0 %).
MUTE Section	
Skin	Adjusts the amount of damping applied to the drum skin, measured as a percentage. Available values range from 0.0 % (default) to 100.0 %.
Air	Adjusts the amount of damping applied to the air, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %).

Advanced Page

For this engine the Advanced page does not contain any parameters.

Modulation Page

As with all other engines and Drumsynths, the Modulation page contains one parameter: Velocity.

Element	Description
SCALE Section	
Velocity	Adjusts the velocity response of the drum. Available values range from -100.0 % to 100.0 % (default value). At zero (mid course), the drum is played at full velocity, no matter how hard you hit the keys (or pads). From the mid position, by turning the knob to the right you increase the positive velocity response and make the drum more and more sensitive to the velocities at which you hit the keys/pads. From the mid position, turning the knob to the left as the inverse effect: the harder you hit the key/pad, the softer the resulting drum sound will be.

10.5.4 Tom – High

The High Tom is an acoustic tom that complements the Floor Tom. With very few parameters it provides a wide range of tom rolls and fills.



The parameters described below are presented as they appear in the Control area (Arrange view). The same parameters are available in the Plug-in panel within the Plug-in Strip (Mix view). See ↑9.4, The Plug-in Strip for more information on this.

Main Page

Element	Description
MAIN Section	
Engine	Selects the engine used in the Tom plug-in. For more information on the available engines, please refer to section --- MISSING LINK ---.
Tune	Adjusts the pitch of the drum played by the middle C, measured in MIDI note numbers and cents. Available values range from 57.00 (NOTE A2) to 71.00 (NOTE B3). The default value is 57.00.
Decay	Adjusts the duration of the sound's tail, measured as a percentage. Available values range from 0.0 to 100.0% (default: 50.0%).

Element	Description
Tension	Adjusts the tension of the drum skin, measured as a percentage, allowing for a longer and bigger pitch bend. Available values range from 0.0 to 100.0% (default).
Impact	Adjusts the amount of click or initial attack, measured as a percentage. Available values range from 0.0 to 100.0% (default: 80.0%).

Advanced Page

For this engine the Advanced page does not contain any parameters.

Modulation Page

Like with all other engines and Drumsynths, the Modulation page contains one parameter: Velocity.

Element	Description
SCALE Section	
Velocity	Adjusts the velocity response of the drum. Available values range from -100.0% to 100.0% (default value). At zero (mid-course), the drum is played at full velocity, no matter how hard you hit the keys (or pads). From that mid position, by turning the knob to the right you increase the positive velocity response and make the drum more sensitive to the velocity at which you hit the keys/pads. From the mid position, turning the knob to the left as the inverse effect: the harder you hit the key/pad, the softer the resulting drum sound will be.

10.6 The Percussions

The Percussion Drumsynth can generate a variety of percussion sounds.



The Percussion in the Control area (Main page depicted).



The Percussion panel in the Plug-in Strip.

As in every Drumsynth, the engine can be selected via the Engine selector on the Main page. Each engine has a different character and set of parameters, as detailed in the following sections.

The Percussion provides following engines:

- **Fractal** (default): ↑10.6.1, Percussion – Fractal.
- **Kettle**: ↑10.6.2, Percussion – Kettle.
- **Shaker**: ↑10.6.3, Percussion – Shaker.



For more information on engines, see ↑10.1.1, Engines: Many Different Drums per Drumsynth. For general information on the Snare and the other Drumsynths, see ↑10.1, Drumsynths – General Handling.

10.6.1 Percussion – Fractal

The Fractal engine is the default engine of the Percussion.

The Fractal percussion mode is based on the feedback oscillator bank from the Fractal tom (see ↑10.5.2, Tom – Fractal). It's capable of a broad range of sounds, from bell-like to metallic, cymbal-like, subby, melodic, weird and twisted, and is intended to be played across the keyboard.



The parameters described below are presented as they appear in the Control area (Arrange view). The same parameters are available in the Plug-in panel within the Plug-in Strip (Mix view). See ↑9.4, The Plug-in Strip for more information on this.

Main Page

Element	Description
MAIN Section	
Engine	Selects the engine used in the Percussion Plug-in. If you change this setting, please refer to ↑10.6, The Percussions.
Tune	Adjusts the pitch of the drum played by the middle C, measured in MIDI note numbers and cents. Available values range from 60.00 to 108.00. The default value is 84.00. For more details see ↑10.1.5, Pitch Range, Tuning, and MIDI Notes. Note that the pitch of this instrument is heavily dependent on the settings on the Advanced page (see below).

Element	Description
Decay	Adjusts the duration of the sound's tail, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %).
Tune Hold	When Tune Hold is enabled, the tuning behavior is that of the Fractal tom: the tuning is fixed until the next note is received (see ↑10.5.1, Tom – Tronic). This allows you to create arpeggiated patterns by adjusting the Tune parameter while a sequence of notes is playing. When Tune Hold is disabled (default), the tuning behavior is that of the other modules: the tuning responds immediately when you adjust the Tune parameter.
Glide	Adjusts the glide between the pitch of new notes, measured in milliseconds. When the Glide parameter is set higher than zero, the pitch glides smoothly to the new tuning. The Glide parameter then defines the duration this glide takes. Available values range from None (no glide, default) to 762.8 ms.
Impact	Adjusts the amount of attack, measured as a percentage. Available values range from 0.0 % (soft attack) to 100.0 % (maximum attack). The default value is 60.0 %.

Advanced Page

The Advanced page contains parameters controlling the individual oscillators.

Element	Description
HARMONICS Section	
KTr. Mode (Key Tracking Mode)	Selects from two key tracking modes: *Harmonic* (default) and *Dissonant*. In *Harmonic* mode all oscillators track the Tune parameter (on the Main page, see above) and your keyboard evenly. Therefore, the drum stays in tune with itself as the Tune parameter is adjusted, and can be played chromatically across a keyboard or the pads. In *Dissonant* mode the oscillators track the Tune parameter you're your keyboard) unevenly. Therefore, the drum produces dissonant, detuned harmonics when the Tune parameter is adjusted or when you play different notes on a keyboard or the pads.
Freq A	Adjusts the pitch of oscillator A within the feedback oscillator bank, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %).
Freq B	Adjusts the pitch of oscillator B within the feedback oscillator bank, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %). Note that this parameter has no effect when FM and AM are set to zero (see below).
Freq C	Adjusts the pitch of oscillator C within the feedback oscillator bank, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 29.1 %). Note that this parameter has no effect when FM and AM are set to zero (see below).
FM	Adjusts the amount of frequency modulation within the feedback oscillator bank, measured as a percentage. Frequency modulation tends to add bell-like, ringing overtones. Available values range from 0.0 to 100.0 % (default: 34.4 %).
AM	Adjusts the amount of amplitude modulation within the feedback oscillator bank, measured as a percentage. Amplitude modulation tends to add brash, bright overtones. Available values range from 0.0 to 100.0 % (default: 18.6 %).

Modulation Page

As with all other engines and Drumsynths, the Modulation page contains one parameter: Velocity.

Element	Description
SCALE Section	
Velocity	Adjusts the velocity response of the drum. Available values range from -100.0 % to 100.0 % (default value). At zero (mid course), the drum is played at full velocity, no matter how hard you hit the keys (or pads). From that mid position, by turning the knob to the right you increase the positive velocity response and make the drum more and more sensitive to the velocities at which you hit the keys/pads. From the mid position, turning the knob to the left as the inverse effect: the harder you hit the key/pad, the softer the resulting drum sound will be.

10.6.2 Percussion – Kettle

The Kettle percussion is an acoustic timpani emulation that provides an orchestral and rich sound.



The parameters described below are presented as they appear in the Control area (Arrange view). The same parameters are available in the Plug-in panel within the Plug-in Strip (Mix view). See ↑9.4, The Plug-in Strip for more information on this.

Main Page

Element	Description
MAIN Section	
Engine	Selects the engine used in the Percussion Plug-in. If you change this setting, please refer to ↑10.6, The Percussions.

Element	Description
Tune	Adjusts the pitch of the drum played by the middle C, measured in MIDI note numbers and cents. Available values range from 33.00 to 57.00. The default value is 45.00. For more details see ↑10.1.5, Pitch Range, Tuning, and MIDI Notes.
Decay	Adjusts the duration of the sound's tail, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 50.0 %).
Puff	Adjusts the amount of feedback noise applied to the drum, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 25.0 %).
Damp	Adjusts the damping amount, measured as a percentage. Available values range from 0.0 % (default) to 100.0 %.
Impact	Adjusts the amount of attack. Available values range from 0.0 % (soft attack) to 100.0 % (maximum attack). The default value is 60.0 %.

Advanced Page

For this engine the Advanced page does not contain any parameters.

Modulation Page

As with all other engines and Drumsynths, the Modulation page contains one parameter: Velocity.

Element	Description
SCALE Section	
Velocity	Adjusts the velocity response of the drum. Available values range from -100.0 % to 100.0 % (default value). At zero (mid course), the drum is played at full velocity, no matter how hard you hit the keys (or pads). From that mid position, by turning the knob to the right you increase the positive velocity response and make the drum more and more sensitive to the velocities at which you hit the keys/pads. From the mid position, turning the knob to the left as the inverse effect: the harder you hit the key/pad, the softer the resulting drum sound will be.

10.6.3 Percussion – Shaker

The Shaker is a versatile electronic shaker/maraca engine.



The parameters described below are presented as they appear in the Control area (Arrange view). The same parameters are available in the Plug-in panel within the Plug-in Strip (Mix view). See ↑9.4, The Plug-in Strip for more information on this.

Main Page

Element	Description
MAIN Section	
Engine	Selects the engine used in the Percussion Plug-in. If you change this setting, please refer to ↑10.6, The Percussions.
Tune	Adjusts the center frequency of the filter applied to the noise source, which will define the pitch of the drum played by the middle C, measured as a percentage. Available values range from 0.0 % to 100.0 % (default: 50.0 %). For more details see ↑10.1.5, Pitch Range, Tuning, and MIDI Notes.

Element	Description
Filter	Adjusts the bandwidth of the filter applied to the noise source, measured as a percentage. Higher settings result in a wider filter. Lower settings result in a narrower filter, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 70.0 %).
Grain	Adjusts the timbre of the noise source, measured as a percentage. Higher settings emulate the grainy sound of a real shaker. Available values range from 0.0 to 100.0 % (default: 50.0 %). Furthermore the Grain parameter is assigned to velocity: lower velocity shakes contain more grain.
ENVELOPE Section	
Mode	Selects from two envelope modes: *Realistic* (default) and *Machine*. In *Realistic* mode the envelope uses curved attack and release stages for a more natural sound. In *Machine* mode the envelope uses linear attack, hold, and release stages for a static, machine-like sound. In *Performer* mode, instead of producing a one-shot sound like most drums, the shaker plays a rhythmic pattern like a real shaker. In this mode, simply hold the note for as long as you want the pattern to play.
Attack	Adjusts the duration of the envelope's attack stage, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 40.0 %).
Hold (Machine mode only)	Adjusts the duration of the envelope's hold stage, i.e. the time during which the envelope is held at its highest point, measured as a percentage. Available values range from 0.0 % (default) to 100.0 %.

Element	Description
Accent (Performer mode only)	Controls the amount of emphasis on certain notes within the shaker pattern, measured as a percentage. At low values, the groove is static and the notes rather quiet, as if the shaker were being shaken very gently and uniformly. As the parameter is increased, key notes in the pattern are emphasized, creating a classic shaker groove. High values simulate a shaker that is being shaken by someone who is having a lot of fun! Available values range from 0.0 to 100.0% (default: 70.0%).
Fill (Performer mode only)	The Fill parameter is designed to be set to *None* by default and played manually during performance or automated in the sequencer. By default, the shaker plays a pattern according to the Rate parameter on the Advanced page (see below). When the Fill parameter is set to *Double*, the speed of the pattern is doubled. When set to *Triple*, the shaker plays rapid triplets. Use this to insert improvised fills into your shaker parts to add variety and interest.
Release	Adjusts the duration of the envelope's release stage, measured as a percentage. Available values range from 0.0 to 100.0 % (default: 35.0 %).

Advanced Page

The Advanced page contains parameters only when the Shaker engine is in Performer mode (see Mode parameter above). These parameters further adjust the envelope.

ENVELOPE Section	

Element	Description
Sync	The Sync parameter has two options: *Lock* and *Retrig*. In *Lock* mode, the shaker pattern is synced to the song position; that is, it is always in time regardless of when a note is pressed. In *Retrig* mode, the shaker pattern (including accents) is retriggered on every note on, without quantizing to the nearest beat. In both cases, the tempo of the pattern remains correct for the song.
Rate	Sets the note division of the shaker pattern. For example, 1/16 (default value) will result in a shaker pattern that plays 16th notes, and so on.
Length	Adjusts the length of the pattern that is accented by the Accent parameter on the Main page (see above). By default, Length is set to 4, so the pattern will appear to repeat every 4 "shakes" (the note length of which can be set with the Rate parameter above). Syncopated patterns can be created by selecting a value other than 4 or 8 (or 3 or 6 if the Rate parameter is set to a triplet note division).
Offset	Adjusts the timing offset of the shaker pattern. Fine adjustment will shift the pattern slightly, by less than one note division, affecting the feel of the shaker pattern in relation to the beat. Coarse adjustment will shift the pattern by entire note divisions, allowing you to rapidly introduce syncopated variations to the shaker pattern during performance or using automation. Available values range from -4.00 to 4.00 (default: 0.00). On your controller, coarse adjustment (changing the value in steps of 1.0) occurs by default when the knob is moved. Fine-tuning can be achieved by holding the SHIFT button while turning the knob.

Element	Description
Swing	Adjusts the amount of swing or shuffle in the shaker pattern. Higher values will result in a pattern with more swing. Note that Swing alone will result in quite a mechanical feel — for a more human feel it is recommended to add some Twist as well (see below). Available values range from 0.0 to 100.0% (default: 0.0%).
Twist	The Twist parameter "skews" the groove of the shaker pattern. On its own, with the Swing parameter set to zero, it can sound very strange and lopsided. However, used sparingly in conjunction with Swing, the Twist parameter gives the pattern a flowing, natural groove, just like a real person playing a shaker. Available values range from 0.0 to 100.0% (default: 0.0%).

Modulation Page

As with all other engines and Drumsynths, the Modulation page contains one parameter: Velocity.

Element	Description
SCALE Section	
Velocity	Adjusts the velocity response of the drum. Available values range from -100.0 % to 100.0 % (default value). At zero (mid course), the drum is played at full velocity, no matter how hard you hit the keys (or pads). From that mid position, by turning the knob to the right you increase the positive velocity response and make the drum more and more sensitive to the velocities at which you hit the keys/pads. From the mid position, turning the knob to the left as the inverse effect: the harder you hit the key/pad, the softer the resulting drum sound will be.

10.7 The Cymbals

The Cymbal Drumsynth can generate a variety of cymbal sounds.



The Crash engine selected for the Cymbal in the Control area (Main page depicted).



The Crash engine selected on the Cymbal panel in the Plug-in Strip.

As in every Drumsynth, the engine can be selected via the Engine selector on the Main page. Each engine has a different character and set of parameters, as detailed in the following sections.

The Cymbal provides following engines:

- **Crash** (default): ↑10.7.1, Cymbal – Crash.
- **Ride**: ↑10.7.2, Cymbal – Ride.

For more information on engines, see ↑10.1.1, Engines: Many Different Drums per Drumsynth. For general information on the Cymbals and the other Drumsynths, see ↑10.1, Drumsynths – General Handling.

10.7.1 Cymbal – Crash

The Crash engine creates a wide range of cymbals: from a typical 909-like crash to more acoustic sounding timbres. Its parameters provide a great range of expression and spectral variation.

The parameters described below are presented as they appear in the Control area (Arrange view). The same parameters are available in the Plug-in panel within the Plug-in Strip (Mix view) — for more information please refer to section ↑9.4, The Plug-in Strip.

Main Page

Element	Description
MAIN Section	
Engine	Selects the engine used in the Cymbal plug-in. Available engines include Crash and Ride.
Tune	Adjusts the pitch of the drum played by the middle C, measured in MIDI note numbers and cents. Available values range from 0.00 to 100.0% (default value is 30.0%).
Decay	Adjusts the duration of the sound's tail, measured as a percentage. Available values range from 0.0 to 100.0% (default: 70.0%).
Impact	Adjusts the amount of click or initial attack, measured as a percentage. Available values range from 0.0 to 100.0% (default: 70.0%).

Element	Description
Width	Adjusts the perceived stereo image, measured as a percentage. At zero the sound is mono, at 100.0% the sound is a wide stereo image, replicating the effect of recording with overhead stereo microphones. Available values range from 0.0 to 100.0% (default: 50.0%).
COLOR Section	
Density	Adjusts the more complexity to the sound, measured as a percentage. Available values range from 0.0 to 100.0% (default: 100.0%)
Tone	Adjusts the balance of the spectral content, measured as a percentage. Available values range from 0.0 to 100.0% (default: 50.0%).
Mode	Selects from three different modes Metallic, Normal, or Soft (default: Metallic).

Advanced Page

For this engine the Advanced page does not contain any parameters.

Modulation Page

Like with all other engines and Drumsynths, the Modulation page contains one parameter: Velocity.

Element	Description
SCALE Section	
Velocity	Adjusts the velocity response of the drum. Available values range from -100.0% to 100.0% (default value). At zero (mid course), the drum is played at full velocity, no matter how hard you hit the keys (or pads). From that mid position, by turning the knob to the right you increase the positive velocity response and make the drum more sensitive to the velocity at which you hit the keys/pads. From the mid position, turning the knob to the left as the inverse effect: the harder you hit the key/pad, the softer the resulting drum sound will be.

10.7.2 Cymbal – Ride

The Ride engine is an acoustic emulation that allows the cymbal to be hit in many different ways through the use of the Edge and Bell parameters. The sonic palette ranges from soft Jazz-like rides to more noisy cymbals.



The parameters described below are presented as they appear in the Control area (Arrange view). The same parameters are available in the Plug-in panel within the Plug-in Strip (Mix view) — for more information please refer to section ↑9.4, The Plug-in Strip.

Main Page

Element	Description
MAIN Section	
Engine	Selects the engine used in the Cymbal plug-in. Available engines include Crash and Ride.
Tune	Adjusts the pitch of the drum played by the middle C, measured in MIDI note numbers and cents. Available values range from 0.00 to 1.00. The default value is 0.30.
Decay	Adjusts the duration of the sound's tail, measured as a percentage. Available values range from 0.0 to 100.0% (default: 70.0%).

Element	Description
Impact	Adjusts the amount of click or initial attack, measured as a percentage. Available values range from 0.0 to 100.0% (default: 70.0%).
Width	Adjusts the perceived stereo image, measured as a percentage. At zero the sound is mono, at 100.0% the sound is a wide stereo image, replicating the effect of recording with overhead stereo microphones. Available values range from 0.0 to 100.0% (default: 50.0%).
STRIKE Section	
Edge	Adjusts the point where the cymbal is hit, measured as a percentage. Hitting the edge of the cymbal (100%) creates a more chaotic sound, hitting it near the center (0.0%) creates a more high-pitched sound. Available values range from 0.0 to 100.0% (default: 50.0%)
Bell	Adjusts the high-frequencies on a narrow band, measured as a percentage. (default: 0.0%)

Advanced Page

Element	Description
HYBRID Section	
Character	Adjusts a wider range of timbers between more noisy to more metallic ones, measured as a percentage. Available values range from 0.0 to 100.0% (default: 20.0%).
Tail	Adjusts the length of the sound tail through an envelope. Available values range from 0.0 to 100.0% (default: 100.0%).

Modulation Page

Like with all other engines and Drumsynths, the Modulation page contains one parameter: Velocity.

Element	Description
SCALE Section	
Velocity	Adjusts the velocity response of the drum. Available values range from -100.0% to 100.0% (default value). At zero (mid course), the drum is played at full velocity, no matter how hard you hit the keys (or pads). From that mid position, by turning the knob to the right you increase the positive velocity response and make the drum more sensitive to the velocity at which you hit the keys/pads. From the mid position, turning the knob to the left as the inverse effect: the harder you hit the key/pad, the softer the resulting drum sound will be.

11 Using Effects

At each Project level (Sound, Group and Master) it is possible to add effects in form of Plug-ins. Each Sound, each Group and the Master can have an unlimited number of insert effects loaded in their Plug-ins slots. In each Plug-in slot you can load an Internal, Native Instruments or External Effect Plug-in.

The processing order is always from top to bottom, both in the Plug-in List of the Control area (in Arrange view) and in the channel strip of the Mixer (in Mix view). In the Plug-in Strip of the Mix view the processing order is from left to right.



For Sounds, the first Plug-in slot is often hosting an Instrument Plug-in (Sampler, Drumsynth, Native Instruments or External Plug-in) — this allows the Sound to generate its own audio. If instead you plug an effect to the first Plug-in slot of a Sound, this Sound will act as a bussing point for other Sounds and Groups, and you will find this Sound in the various Dest. selectors in the Output properties of other Sounds and Groups. See section ↑11.1, Applying Effects to a Sound, a Group or the Master below for more information.

Most of the features used in the procedures mentioned in this chapter have been already described in chapter ↑6, Working with Plug-ins — in MASCHINE, effects are just a certain type of Plug-ins. Nevertheless, we illustrate them here with various effect-oriented examples. Furthermore, from time to time we will use the Mix view instead of the default Arrange view — indeed, the intuitive routing facilities of the Mixer make it particularly well suited for quickly setting up advanced effect routings.

11.1 Applying Effects to a Sound, a Group or the Master

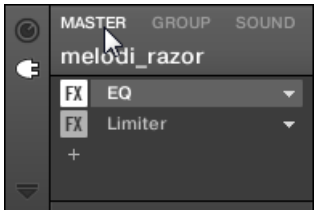
The procedures for applying an effect at the Sound, Group or Master level are very similar.

11.1.1 Adding an Effect

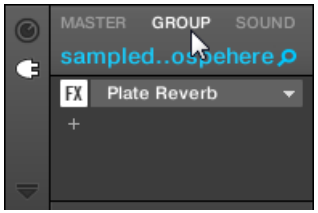
Let's add an Effect Plug-in somewhere in the Project. We first describe the detailed procedure in Arrange view, then we will show the equivalent procedure in Mix view.

Choose the Channel in Which the Effect Is to Be Inserted

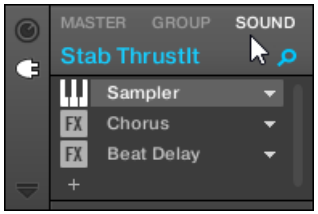
1. If you want to apply the effect to the Master (to process the audio of the whole Project), click the MASTER tab in the top left corner of the Control area.



2. If you want to apply the effect to a Group (to process the audio of the whole Group), click the desired Group on the left of the Arranger, and click the GROUP tab in the top left corner of the Control area.

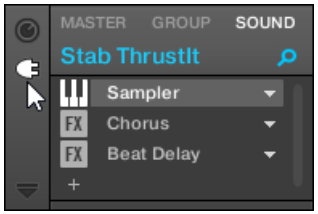


3. If you want to apply the effect to a Sound, click its parent Group in the Group List (on the left of the Arranger), click the desired Sound slot in the Sound List (on the left of the Pattern Editor), and click the SOUND tab in the top left corner of the Control area.

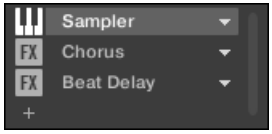


Load the Effect in a New Slot

1. At the far left of the Control area, click the little Plug-in icon to display the Plug-ins of the selected channel:

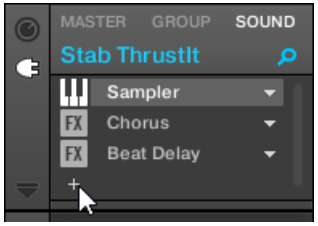


The icon lights up. The Plug-in List appears nearby, showing a stack of all Plug-ins already loaded in the channel:

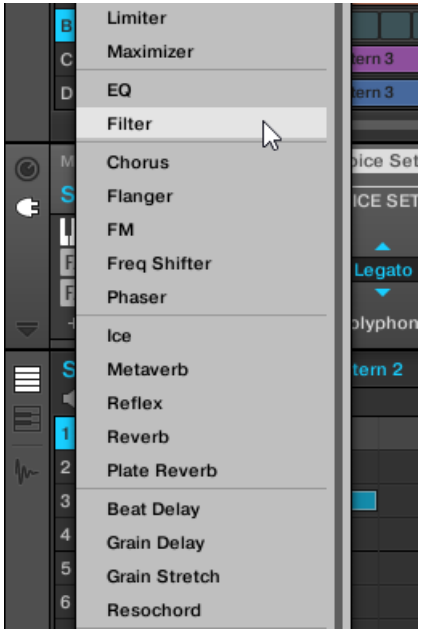


In the Plug-in List each Plug-in has its own slot.

2. Click the "+" icon under the last Plug-in in the list (or at the top if the list is empty).



The Plug-in menu opens and shows a list of all available Effect Plug-ins.



If you have selected a Sound and its Plug-in List is empty, the Plug-in menu also shows all available Instrument Plug-ins.

3. Click the desired entry in the list. If you have VST/AU effect plug-ins installed you may also load them from the menu by selecting the *Native Instruments* (for Native Instruments products) or *External* (for third-party products) submenu at the top of the list.

→ Upon your selection the effect is loaded in a new Plug-in slot at the end of the list and directly starts to process the audio of the channel. The effect parameters are displayed in the Parameter area on the right (in the example underneath we selected the *Phaser* effect in the Plug-in menu).



Notes and Hints on Loading Effects in the Software

- Instead of clicking the "+" icon to load the effect in a new slot, you can also click the down-pointing arrow on the right of an existing slot to open the Plug-in menu: The effect selected in the menu will **replace** the Plug-in currently loaded in that slot.
- Instead of using the Plug-in menu, you can also use the **Browser** to load a particular preset for an effect. In particular, this can come in handy to insert a new effect between two existing Plug-ins in the Plug-in List. Please refer to section ↑3.2, Searching and Loading Files from the Library for more information. Alternatively you can use Quick Browse to recall the search query that was used to load a particular Plug-in preset — see section ↑3.8, Using Quick Browse for more information on this.
- For all details on the parameters for each MASCHINE effect, please refer to chapter ↑12, Effect Reference.
- For additional, specific information on VST/AU plug-ins, please read ↑6.2.6, Page 6: Velocity / Modwheel.
- If you created a nice effect setting, you can put it to further use by saving it as a **Plug-in preset**. Please read ↑6.1.9, Saving and Recalling Plug-in Presets for more details.

Adding an Effect in Mix View

You can also load effects in Mix view. The procedure is quite similar to the one described above for the Arrange view.



Reminder: To switch the Mixer display between all Groups of your Project and all Sound slots in a particular Group, double-click the background of any Group header at the top of the Mixer. See section ↑9.2.1, Displaying Groups vs. Displaying Sounds for more information.

First, display the Plug-in List in Mix view:

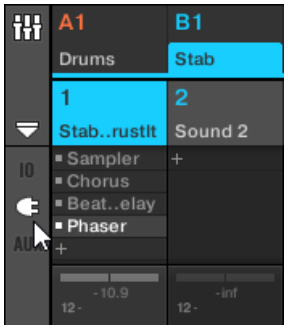
1. Click the Mix View button (showing three little faders) at the left of the Arranger to switch from Arrange view to Mix view:



2. If it's not already open, open the extended view of the Mixer by clicking the down-pointing arrow at the left of the Mixer:

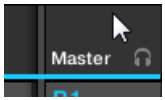


3. Check that the Plug-in icon is active on the left of the Mixer — if not, click it to display the Plug-in List in each channel strip.



Then, put the focus on the channel (Master, Group or Sound) in which you want to load the effect:

1. To set the focus to the **Master channel**: In the top right corner of the Mixer, click in the blank space above the Master label and headphones icon to set the focus to the Master/Cue channel strip.



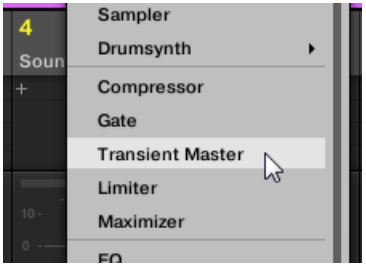
   If necessary click Master in that header to switch from the Cue channel to the Master channel.

2. To set the focus to a **Group channel**: If the Mixer is currently displaying the Group channel strips, click the header of the desired Group at the top of the Mixer. If the Mixer is currently displaying Sound channel strips, double-click the header of the desired Group at the top of the Mixer.

3. To set the focus to a **Sound channel**: If the Mixer is currently displaying the Group channel strips, in the Mixer's top row double-click the blank space in the header of the Group containing the desired Sound, then click the header of the desired Sound in the row below. If the Mixer is currently displaying Sound channel strips, in the top row click the header of the Group containing the desired Sound, then click the header of this Sound in the row below.

Finally, load the effect in the focused channel strip:

▶ In the Plug-in List of the focused channel, click the little "+" to append the effect to the list, or right-click ([Ctrl]-click on Mac OS X) an existing Plug-in slot to replace its current Plug-in, and select the desired effect in the Plug-in menu that opens.



→ The effect is loaded and directly starts to process the audio of the channel. The effect also appears in the Plug-in Strip under the Mixer, allowing you to adjust its parameters.



In fact you don't need to explicitly put the focus on the channel in which you want to load the effect: You only have to make that channel visible in the Mixer! You can then directly click the "+" symbol or right-click ([Ctrl]-click on Mac OS X) an existing Plug-in slot to load the effect in that channel. Nevertheless, setting the focus on the channel has the advantage of displaying the new effect in the Plug-in Strip under the Mixer for adjusting its parameters — you can do this afterwards.

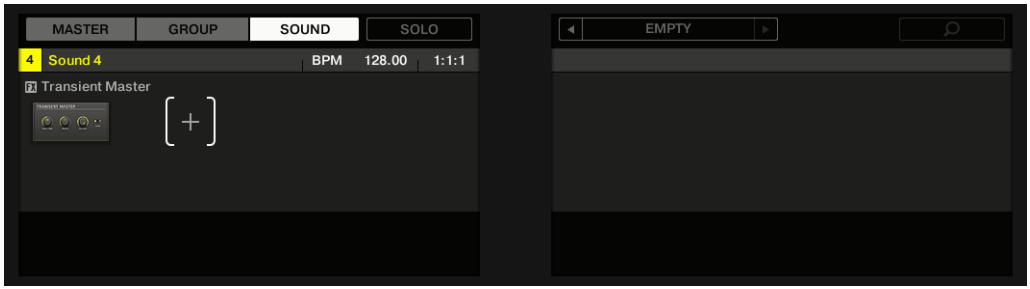


For more information on the Mixer and the Mix view in MASCHINE, please refer to section ↑9.2, The Mixer.

Adding an Effect on the Controller

1. Press the PLUG-IN button to enter Control mode and display the Plug-in slots.

2. If you want to apply the effect to the Master (to process the audio of the whole Project), press Button 1 to select the MASTER tab.
3. If you want to apply the effect to a Group (to process the audio of the whole Group), press Button 2 to select the GROUP tab and press the Group button A–H corresponding to the desired Group. If the desired Group is in another bank, before you select the Group you first need to press SHIFT + the corresponding Group button A–H to select the Group bank.
4. If you want to apply the effect to a Sound, press Button 3 to select the SOUND tab, select the Group containing that Sound (see previous step), and press SELECT + the pad of that Sound (or simply hit its pad if pads are in Group mode).
5. Press Button 5/6 to navigate to the Plug-in slot where you want to load the effect (the name of the Plug-in currently loaded in the selected slot appears between the left and right arrows under Button 5 and 6 as well as on the left display). If you want to add the effect in addition to the existing Plug-ins, press Button 6 repeatedly to select EMPTY.



6. Press SHIFT + BROWSE to open the Plug-in Browser and browse the available Effect Plug-ins.
7. On the left display, turn Knob 1 to select the TYPE from Internal, NI or External.
   The right display shows the list of available Internal, Native Instruments or External Plug-ins, respectively.
8. If you have selected the first Plug-in slot of a Sound, turn Knob 2 to set the SUBTYPE to Effect.
   If you have selected any other Plug-in slot the SUBTYPE field is not available — only Effect Plug-ins will be listed in the right display.
9. Turn the jog wheel or Knob 5 to browse the available Effect Plug-ins.

10. When you have found the effect you want to use, press the jog wheel or Button 8 (LOAD) to load it. You can also use Buttons 5 and 6 to step through the list and load each effect directly.
11. Leave the Plug-in Browser and switch back to Control mode by pressing PLUG-IN (or by pressing SHIFT + BROWSE again).

→ The effect is loaded in the selected Plug-in slot and it is automatically displayed on your controller. Now you can edit the effect parameters using Knobs 1–8 and the Page buttons — see section ↑3.2, Searching and Loading Files from the Library for more information.

Notes and Hints on Loading Effects from Your Controller

- If you have selected a Plug-in slot already containing a Plug-in, this Plug-in will be replaced with the new Effect Plug-in. If you have instead selected the EMPTY entry, the new Effect Plug-in will be appended to the list of loaded Plug-ins.
- Instead of using the Plug-in Browser, you can also press BROWSE and use the global Browser to load a particular preset for an Effect Plug-in. Please refer to section ↑3.2, Searching and Loading Files from the Library for more information.
- Instead of loading the effect into the selected Plug-in slot (possibly replacing the Plug-in currently loaded), you can also **insert** the effect directly after the selected slot (a new Plug-in slot will be automatically created): After you have selected the desired Plug-in slot in Control mode, press SHIFT + Button 4 (INSERT) and choose an effect preset in the Browser that automatically opened. Upon loading, your controller automatically leaves the Browser and switches back to Control mode. Please refer to section ↑3.2, Searching and Loading Files from the Library for more information on how to use the Browser to load an Effect preset.
- You can quickly load effects in several Plug-in slots in a row: Instead of leaving the Plug-in Browser at the last step above, hold NAVIGATE and press Button 5/6 to select another Plug-in slot, then release NAVIGATE and you can directly load another effect into this other slot.
- For all details on the parameters for each MASCHINE effect, please refer to chapter ↑12, Effect Reference.
- For additional, specific information on VST/AU plug-ins, please read ↑6.2.6, Page 6: Velocity / Modwheel.

- If you created a nice effect setting, you can put it to further use by saving it as a Plug-in preset in the software. Please read ↑6.1.9, Saving and Recalling Plug-in Presets for more details.

11.1.2 Other Operations on Effects

You can manipulate effects like any other Plug-in loaded in a Plug-in slot. This notably includes adjusting the effect parameters, removing effects, moving effects to other Plug-in slots, saving and recalling effect presets, etc.

Here we provide a reminder of every operation available on the effects both in Arrange view and Mix view.



Concerning the procedures listed below, the only difference between Arrange view and Mix view is the way to open the Plug-in menu: In Arrange view you open it by clicking the Plug-in slot's down-pointing arrow, whereas in Mix view you open it by right-clicking ([Ctrl]-clicking on Mac OS X) the effect name in the Plug-in List.

Action	Procedure
All Effects	
Insert an effect after an existing Plug-in	From the Browser or from your operating system, drag and drop the desired effect preset between two existing Plug-in slots.
Replace an effect	Open the Plug-in menu, and select another effect from the menu.
Remove an effect	Open the Plug-in menu, and select *None* from the menu.
Move an effect within the Plug-in List	Click and hold the effect in the Plug-in List, drag your mouse to the desired location (an insertion line appears where the effect will be dropped), and release the mouse button.
Move an effect to another channel (Sound, Group, or Master)	First, open the source slot's Plug-in menu and select *Cut*. Then open the Plug-in menu of the desired slot in the target channel (Sound, Group, or Master) and select *Paste*.

Action	Procedure
Duplicate an effect	First, open the source slot's Plug-in menu and select *Copy*. Then open the Plug-in menu of the desired slot in the target channel (Sound, Group, or Master) and select *Paste*.
Bypass an effect	Click the FX icon (in Arrange view) or the little square (in Mix view) at the left of the effect name in the Plug-in List. Click again to re-enable the effect.
Save the current effect settings as preset	Open the Plug-in menu, and select *Save As...* at the bottom of the menu.
Recall an effect preset	Use the Browser (see chapter ↑3, Browser), or open the Plug-in menu and select *Open...* at the bottom of the menu.
Native Instruments and External Effects	
Open/close the effect window	Arrange view: Click the little window icon in the top left corner of the Parameter area (at the left of the first page tab). Mix view: In the Plug-in Strip under the Mixer, click the little arrow in the top left corner of the effect panel.
Save the current settings as default preset for this effect	Open the Plug-in menu, and select *Save As Default...* at the bottom of the menu.

For detailed information on these topics, please refer to ↑6.1, Plug-in Overview. You will find more details on the specific operations available for Native Instruments and External Effects in section ↑6.2.6, Page 6: Velocity / Modwheel.

Other Effect Operations on the Controller

Once you have selected an Effect Plug-in in a Sound, in a Group or in the Master, following actions are available:

Action	Procedure
Insert another effect after the selected effect	Press SHIFT + Button 4. The Browser automatically opens and lets you select the desired effect preset to be inserted after the Plug-in currently selected.
Replace the effect	Use the Plug-in Browser (press SHIFT + BROWSE) or the Browser (BROWSE) as described in section ↑11.1.1, Adding an Effect above.
Remove the effect	Press SHIFT + Button 8. The effect is removed from the Plug-in slot and all following effects are shifted one slot up to fill the gap.
Move the effect	Press SHIFT + Button 5/6 to move the effect to the previous/next slot, respectively.
Bypass the effect	Press SHIFT + Button 7.
Recall an effect preset	Use the Browser (press BROWSE) to access and load any effect preset. See section ↑3.2, Searching and Loading Files from the Library for more on this.
Native Instruments and External Effects	
Open/close the effect window	Press SHIFT + Button 3 (EDIT).

You will find more details on Plug-in operation in section ↑6.1, Plug-in Overview. You will find more details on the specific operations available for Native Instruments and External Effects in section ↑6.2.6, Page 6: Velocity / Modwheel.

11.1.3 Using the Side-Chain Input

For certain Plug-ins, MASCHINE allows you to use a side-chain input to control how the effects process the audio.

What Is a Side-Chain Input?

If we consider an effect unit that processes the signal incoming at its main input, **side-chaining** means using a secondary signal (the "side-chain signal") fed to a secondary input of the unit (the "side-chain input") to control the behavior of the processing. Usually the amplitude of the side-chain signal will determine *how much* the main signal will be processed by the unit.

In music production the side-chain signal is most of the time another audio track of the project. A common example is the use of the kick drum track as side-chain for the compression of the bass track: on each kick the compressor will compress the bass more, resulting in a typical pumping effect between kick and bass that can be heard in various styles of dance music.

The Side-Chain Parameter Page

The following Internal, Native Instruments, and External Plug-ins support side-chaining:

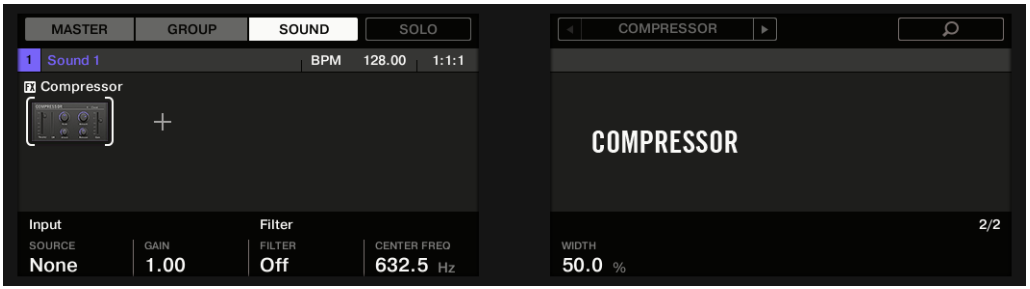
- Internal Plug-ins: Compressor, Maximizer, Limiter, Gate, Filter.
- AU plug-ins (Native Instruments and External): Any AU plug-in with side-chain input.
- VST plug-ins (Native Instruments and External): Any VST plug-in with multiple inputs.

When you load any of these Plug-ins in a Sound or a Group, a Side-Chain Input Parameter page appears at the end of the page list.

Side-chaining is not possible at the Master level (i.e. if the Plug-in is loaded in a Plug-in slot of the Master).



The Side-Chain Input page of the Compressor Plug-in in the Control area.



The SIDE-CHAIN INPUT page of the Compressor Plug-in on the controller.

Please refer to section ↑2.3.3, Navigating Channel Properties, Plug-ins, and Parameter Pages in the Control Area to know how to access Parameter pages.

The parameters of the side-chain input are not available in the Plug-in panel of the Plug-in Strip.

Parameter	Description
INPUT Section	
Source	Selects the audio signal you want to use as side-chain signal to control the Plug-in. Available options are *None* (side-chain disabled, default setting), the outputs of all (other) Sounds , and the outputs of all (other) Groups. In the menu these outputs are labeled as follows: For Groups: **[Group name]** (e.g., *Drums*) For Sounds: **[Group name]: [Sound name]** (e.g., *Drums: Kick*) In the selector display these outputs are labeled as follows: For Groups: **[Group name]** (e.g., Drums) For Sounds: **[Group letter+number]:S[Sound number]** (e.g., A1:S4 for the Sound 4 of Group A1)
Gain	Adjusts the input level of the side-chain signal fed into the Plug-in.

Parameter	Description
FILTER Section	
Filter	Activates a filter on the side-chain input. This filter can be useful to select only a specific frequency range of the side-chain signal to control the Plug-in.
Center Freq	Adjusts the center frequency of the filter.
Width	Adjusts the bandwidth of the filter.



On your controller the outputs available in the SOURCE parameter are labeled as in the display of the Source selector described above.



Note that the settings of the Side-Chain Input page stay in place when you switch to another Plug-in supporting side-chain. This notably allows you to try different compressors or different compression presets without losing the side-chain setup.

11.2 Applying Effects to External Audio

MASCHINE's flexible routing facilities allow you to apply effects to external audio as well. This external audio can come from the inputs of your audio interface if MASCHINE is used in stand-alone mode, or from your host if MASCHINE is used as a plug-in.

To do this, we will choose a Sound and make use of the **Audio page** in its **Input properties**.

11.2.1 Step 1: Configure MASCHINE Audio Inputs

MASCHINE's audio input configuration can be done in the software only. Furthermore, this configuration is necessary only if you use MASCHINE as stand-alone application.



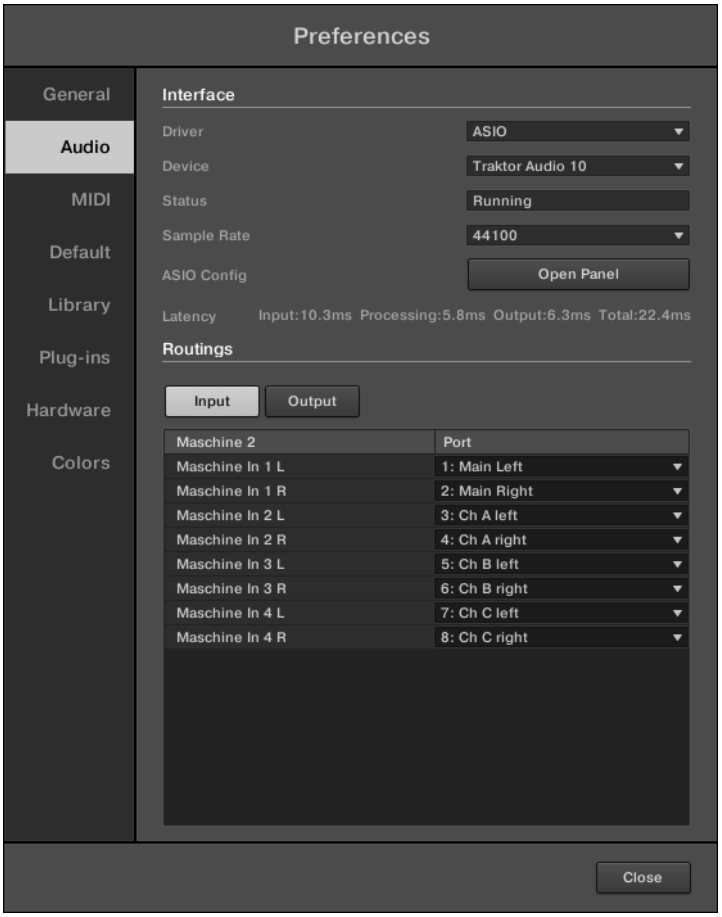
If you are using MASCHINE as a plug-in in a host application, MASCHINE can receive audio from your host on any of its eight mono virtual inputs. To know how to route audio in your host to the virtual inputs of the MASCHINE plug-in, please refer to your host documentation. When this is done, go directly to section ↑11.2.2, Step 2: Set up a Sound to Receive the External Input.

MASCHINE in Stand-Alone Mode

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:

1. Select the *Preferences...* entry from the File menu to open the Preferences panel.
2. In the Audio page click the Input button, activate the desired inputs by clicking their field in the Port column and selecting a physical input from the drop-down menu, then click Close.

→ Audio signals coming from external sources plugged in the inputs selected here will now be routed to the MASCHINE inputs shown in the first column.



Any audio source plugged into the first input of your audio interface will be available on the In 1 L input of MASCHINE, and so on.



See ↑2.6.2, Preferences – Audio Page for more information on the Audio page of the Preferences panel.

MASCHINE in Plug-in Mode

If MASCHINE is running as a plug-in in a host environment, the MASCHINE plug-in can receive audio from the host only. Please refer to your host documentation to find out how to route audio channels to the virtual audio inputs of the MASCHINE plug-in.

In this example, we will assume that you routed some audio channels of your host to the first virtual input pair of MASCHINE.

11.2.2 Step 2: Set up a Sound to Receive the External Input



We describe here the procedure in Arrange view. You can also do this in Mix view — see section ↑8.1.1, Sending External Audio to Sounds.

→ Now the external audio is routed to your Sound! You can adjust the level of the incoming signal via the Gain knob.



You will find a detailed reference of the Audio page of the Sounds' Input properties in section ↑8.1.1, Sending External Audio to Sounds.

On your controller, first select the Sound you want to configure:

1. Press the CHANNEL button to enter Control mode and display the Channel properties.
2. Press Button 3 to select the SOUND tab.
3. Press the Group button A–H of the Group containing the empty Sound you want to use. If the Group in question is in another bank, before you select the Group you first need to press SHIFT + the corresponding Group button A–H to select its Group bank.
4. Press SELECT + the unlit pad of the empty Sound you want to use (or simply hit its unlit pad if pads are in Group mode).

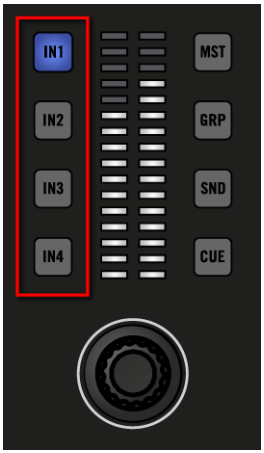
You can then select the desired input. You can do this via two methods: using the Master section of your controller, or using the Input properties on the displays.

Method 1: Using the Master Section

This is the quickest method for selecting an external input for your Sound:

► To select either of the four available stereo inputs, press the corresponding IN1–IN4 button in the Master section.

→ The button lights up and the corresponding external input is routed to your Sound!



Press either of the IN1–IN4 buttons to select an external input to be routed to the selected Sound. Here the first stereo pair is selected.

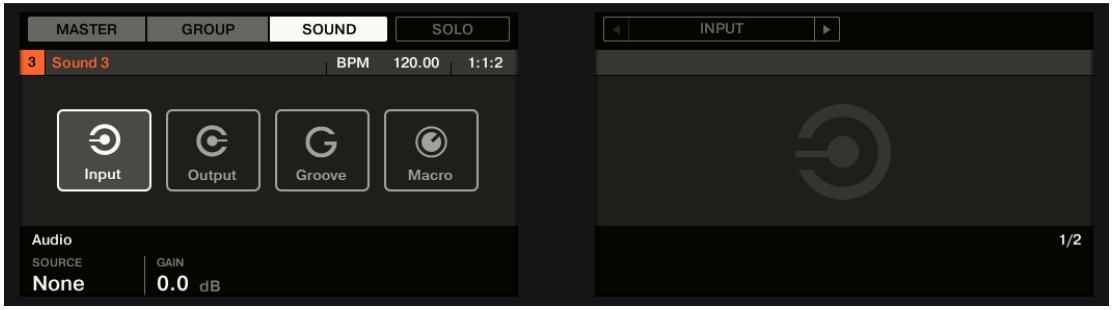
The Master section additionally provides you with very useful features:

- Upon your selection the level meter lights up blue and indicates the level of the selected input pair — and will indicate it until you press another input/output button in the Master section. At the top of the level meter, red LEDs will indicate any clipping in the input signal.
- The Master encoder allows you to quickly adjust the input gain of the selected input. Should the level meter above go up to the red clipping LEDs, simply turn the Master encoder counterclockwise to attenuate the level of the incoming signal.
- If you press another input button at the left of the level meter, you select another external input for the selected Sound.

- If you press an output button at the right of the level meter, your input selection stays active — this is indicated by the dim lit input button. However, the level meter and Master encoder will not be focused on the input but instead on the selected output. You must select your input again to control the input level and view it in the level meter.

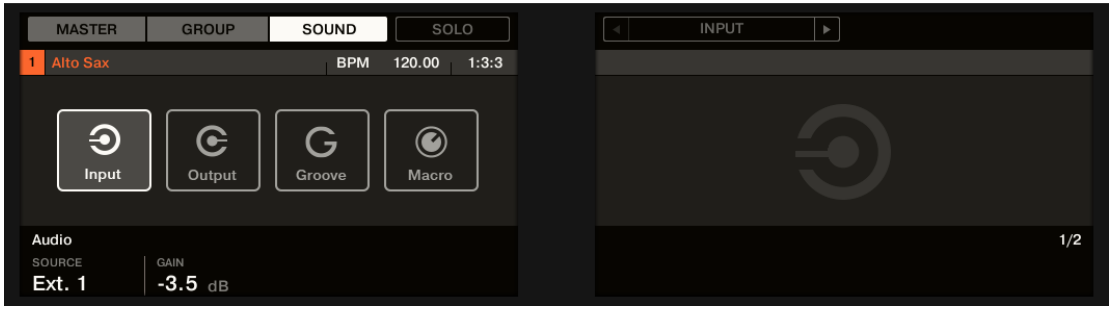
Method 2: Using the Input Properties

1. Press Button 5 repeatedly until the Input properties are selected (you should see INPUT at the top left of the right display, under Button 5/6).
2. Press NAVIGATE + pad 1 to select the Audio Parameter page. You can also press the Page Left button until it turns off, since the Audio page is the first page of the Input properties.



You will now see two parameters at the bottom of the left display: SOURCE (which selects the source) and GAIN (which adjusts the level of the input).

3. Turn Knob 1 to set the SOURCE to Ext. 1.



→ Now the external audio is routed to your Sound! You can adjust the level of the incoming signal by turning Knob 2 (GAIN).

11.2.3 Step 3: Load an Effect to Process an Input

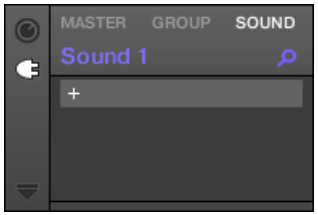
Here we describe the procedure in Arrange view. You can also do this in Mix view — see section ↑11.1.1, Adding an Effect.

You can now insert an Effect Plug-in into this Sound so that it processes the incoming audio.

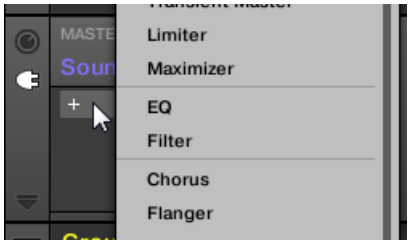
1. At the far left of the Control area, click the Plug-in icon to display the Plug-ins of the Sound:



The icon lights up. The Plug-in List appears nearby. Since we have chosen an empty Sound in section ↑11.2.2, Step 2: Set up a Sound to Receive the External Input above, the Plug-in List should be empty:



2. Click the "+" icon at the top of the Plug-in List.
The Plug-in menu opens and shows a list of all available Instrument and Effect Plug-ins.



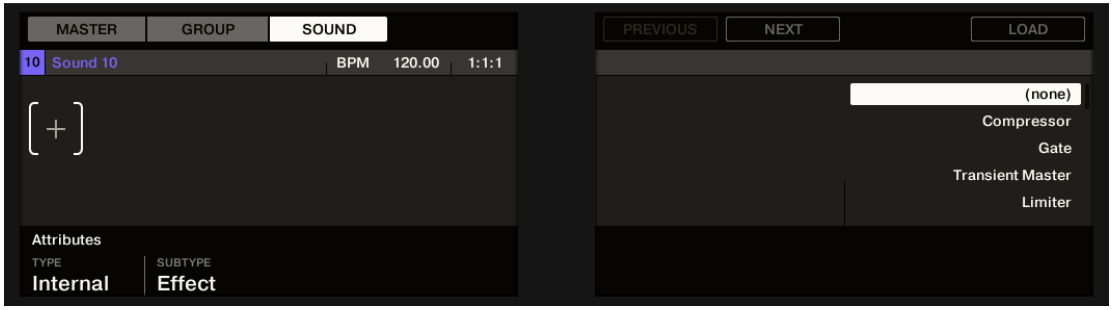
3. Click the desired effect in the list. If you have VST/AU effect plug-ins installed you may also load them from the menu by selecting the *Native Instruments* (Native Instruments products) or *External* (third-party products) submenu at the top of the list.

→ Upon your selection the effect is loaded in a new Plug-in slot and directly starts to process your external audio!

Loading an Effect to Process an Input on the Controller

On your controller:

1. Press the PLUG-IN button to show the Plug-in slots of the selected Sound.
   Since we have selected an empty Sound, you see EMPTY on the left of the left display as well as under Button 5/6 on the right display (i.e. there are no Plug-ins to navigate yet).
2. Press SHIFT + BROWSE to open the Plug-in Browser and browse the available Instrument and Effect Plug-ins.
3. Turn Knob 1 to choose between MASCHINE internal instruments and effects (Internal), VST/AU plug-ins from Native Instruments (NI) or VST/AU plug-ins from third-party manufacturers (External).
4. Turn Knob 2 to set SUBTYPE to Effect.
   The right display shows only Effect Plug-ins of the type you have selected.



5. Turn the jog wheel or Knob 5 to browse the available Plug-ins.
6. When you have found the effect you want to use, press the jog wheel or Button 8 (LOAD) to load it. You can also use Button 5/6 to step through the list and load each effect directly.

→ The selected effect is loaded in a new Plug-in slot and directly starts to process your external audio! By pressing PLUG-IN or SHIFT + BROWSE again you can switch back to Control mode and adjust the effect.

11.3 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. To make use of a send effect, you need to:

- Step 1: Set up a Sound or Group as send effect. This is done by loading an effect into its first Plug-in slot: ↑11.3.1, Step 1: Set Up a Sound or Group as Send Effect.
- Step 2: Route a portion of the desired audio signals from their original Sounds and Groups to that send effect. This is done via the Output properties of the corresponding Sounds and Groups: ↑11.3.2, Step 2: Route Audio to the Send Effect.

11.3.1 Step 1: Set Up a Sound or Group as Send Effect

The procedure to set up a Sound or Group as a send effect is straightforward: You just need to load an effect into its first Plug-in slot — MASCHINE will take care of the rest and make it available as destination for other channels of your Project!



The procedure in Arrange view is described here. You can also do this in Mix view — see section ↑11.1.1, Adding an Effect.

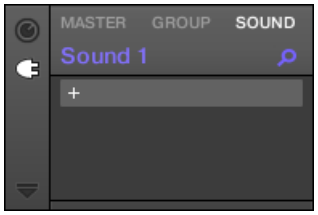
In this example we will use an empty Sound:

1. Choose the empty Sound you want to use as send effect: On the left of the Arranger click the Group containing that Sound, on the left of the Pattern Editor click the desired Sound slot, and click the SOUND tab in the top left corner of the Control area.

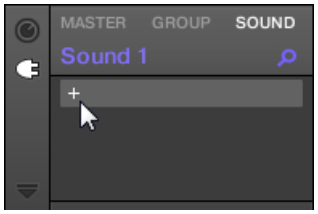
2. At the far left of the Control area, click the Plug-in icon to display the Plug-ins of the Sound:



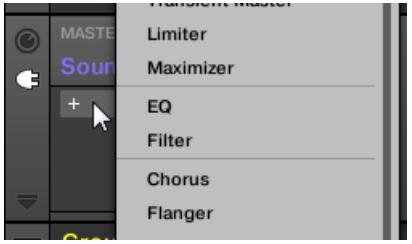
The icon lights up. The Plug-in List appears. Since we have chosen an empty Sound, the Plug-in List should be empty:



3. Click the "+" icon at the top of the Plug-in List.



The Plug-in menu opens and shows a list of all available Instrument and Effect Plug-ins.



4. Click the desired effect in the list. If you have VST/AU effect plug-ins installed you may also load them from the menu by selecting the *Native Instruments* (Native Instruments products) or *External* (third-party products) submenu at the top of the list.

→ Upon selection the effect is loaded and its parameters are displayed in the Parameter area. When you load an effect into the first Plug-in slot of a Sound, MASCHINE automatically configures the Sound's input to receive any signal(s) coming from other Sounds and Groups in your Project and sends them through its own Plug-in slots — in other words, you now have a send effect.



You could also load an effect preset from the Browser instead of using the Plug-in menu. For more information on how to load effect presets, see ↑3.2, Searching and Loading Files from the Library.

Now that the effect is loaded, we suggest that you rename the Sound slot to the Plug-in name: this will be of great help when routing other signals to that send effect (see section ↑11.3.2, Step 2: Route Audio to the Send Effect below). To rename the Sound slot:

1. Double-click the name of the Sound slot in the Sound List.
   The name becomes highlighted, ready to be edited.
2. Type the name of the Plug-in, and press [Enter] on your computer keyboard to confirm.

→ The Sound slot now mirrors the Plug-in name.

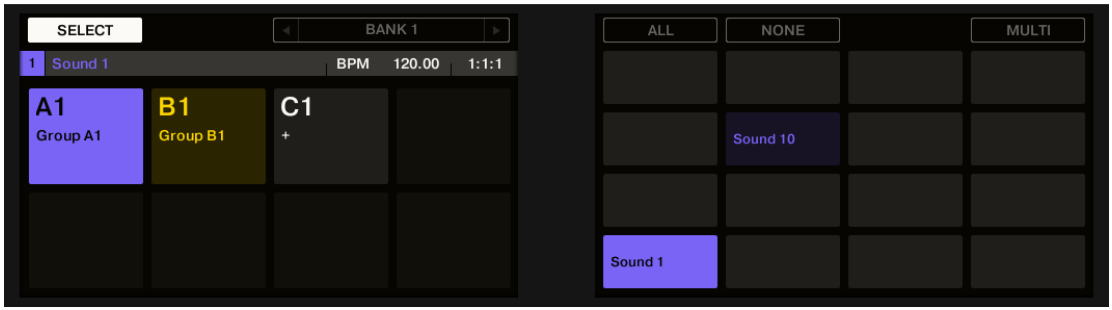


For more information on renaming Sound slots, see section ↑4.2.3, Renaming Sound Slots.

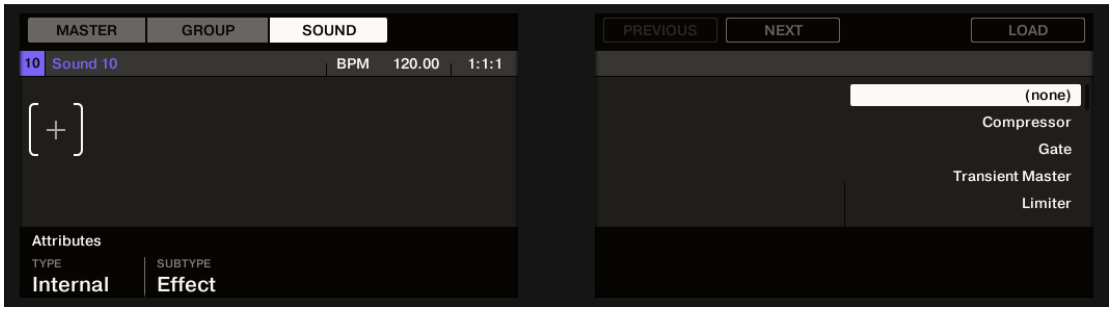
Set Up a Sound as Send Effect on the Controller

1. Press the PLUG-IN button to enter Control mode and show the Plug-in slots.
2. Press Button 3 to select the SOUND tab
3. Press the Group button A–H of the Group containing the empty Sound you want to use. If the Group in question is in another bank, before you select the Group you first need to press SHIFT + the corresponding Group button A–H to select its Group bank.

4. Press SELECT + the unlit pad of the empty Sound you want to use (or simply hit its unlit pad if pads are in Group mode).
   Since we have selected an empty Sound, you see (NONE) under Button 7/8 and these buttons are inactive (i.e. there are no Plug-ins to navigate yet).



5. Press SHIFT + BROWSE to open the Plug-in Browser and browse the available Instrument and Effect Plug-ins.
6. Turn Knob 1 (TYPE) to choose between MASCHINE internal instruments and effects (Internal), VST/AU plug-ins from Native Instruments (NI) or VST/AU plug-ins from third-party manufacturers (External).
7. Turn Knob 2 to set SUBTYPE to Effect.
   The right display shows only Effect Plug-ins of the type you have selected.



8. Turn the jog wheel or Knob 5 to browse the available Plug-ins.
9. When you have found the effect you want to use (e.g., the MASCHINE Compressor), press the jog wheel or Button 8 to load it. You can also use Button 5/6 to step through the list and load each effect directly.

10. Switch back to Control mode by pressing PLUG-IN (or by pressing SHIFT + BROWSE again).

→ Now you can edit the effect parameters using Knobs 1–8 and the Page buttons as usual (see ↑2.3.3, Navigating Channel Properties, Plug-ins, and Parameter Pages in the Control Area). When you load an effect into the first Plug-in slot of a Sound, MASCHINE automatically configures the Sound's input to receive any signal(s) coming from other Sounds and Groups in your Project and sends them through its own Plug-in slots — in other terms, you now have a send effect.



You could also load an effect preset from the Browser instead of using the Plug-in menu. For more information on how to load effect presets, see ↑3.2, Searching and Loading Files from the Library.

Now that the effect is loaded, we suggest that you rename the Sound slot to the Plug-in name: this will be of great help when routing other signals to that send effect (see section ↑11.3.2, Step 2: Route Audio to the Send Effect below). You can rename the Sound slot in the software as follows:

1. Double-click the name of the Sound slot in the Sound List.
   The name becomes highlighted, ready to be edited.
2. Type the name of the Plug-in, and press [Enter] on your computer keyboard to confirm.

→ The Sound slot now mirrors the Plug-in name.



For more information on renaming Sound slots, see section ↑4.2.3, Renaming Sound Slots.

11.3.2 Step 2: Route Audio to the Send Effect

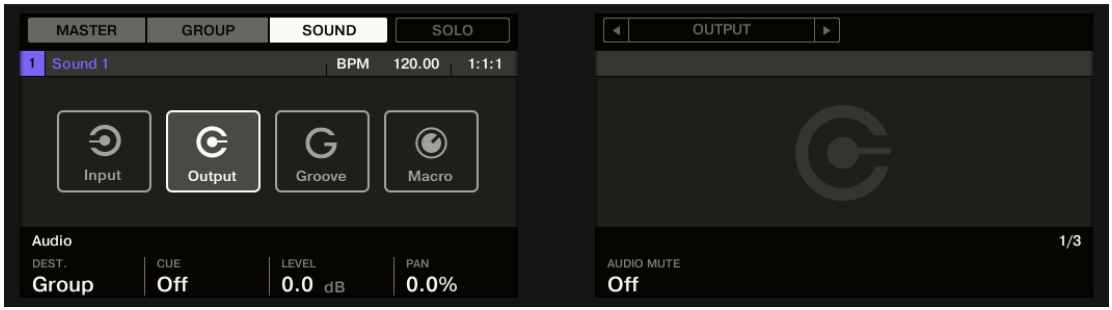
Once you have configured a Sound or Group as send effect (see ↑11.3.1, Step 1: Set Up a Sound or Group as Send Effect), you can send the output of any other Sounds and Groups to that Sound or Group. For this purpose, each Sound and each Group is equipped with an additional two auxiliary outputs available in its Output properties.

Here we describe the procedure in Arrange view. You can also do this in Mix view — see section ↑8.1.2, Configuring the Main Output of Sounds and Groups.

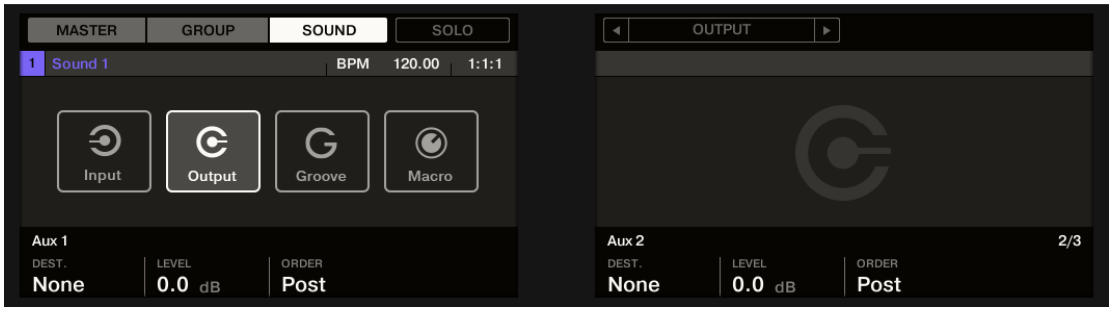
You can repeat the process to route more Sounds/Groups to the same send effect, or route the same Sound/Group to an additional send effect send using AUX 2.

Routing Audio to the Send Effect on the Controller

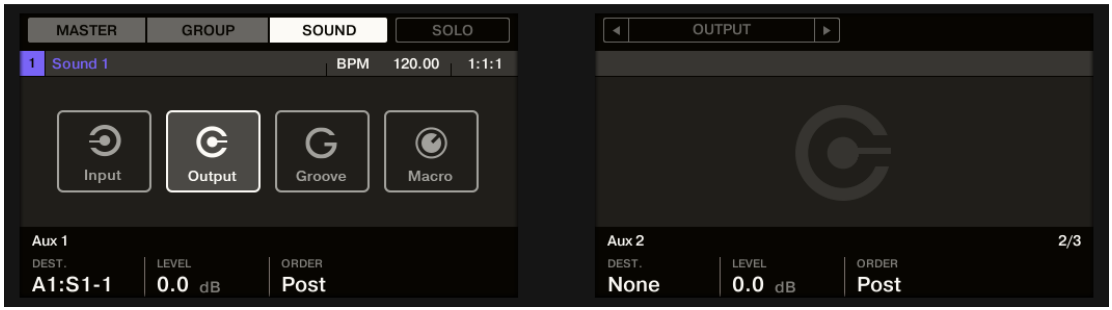
1. Press the CHANNEL button to enter Control mode and display the Channel properties.
2. If you want to route a Group's output to the send effect, press Button 2 to select the GROUP tab, if necessary press SHIFT + the Group button A–H corresponding to the bank containing the Group, and press the Group button A–H corresponding to the desired Group.
3. If you want to route a Sound's output to the send effect, press Button 3 to select the SOUND tab, select the Group containing that Sound as described in the previous step, and press SELECT + the pad of that Sound (or simply press its pad if pads are in Group mode).
4. Press Button 5/6 to select OUTPUT.
   The Output properties are shown in the displays of your controller (in the example underneath we show the Output properties of a Sound).



5. Press NAVIGATE + pad 2 to select the Aux page of parameters. You can also use the Page buttons for this.



6. Turn Knob 1 (Aux 1 DEST.) to assign the first auxiliary output to the desired send effect. In addition to the usual entries available in both fields, you will find all the Sounds and Groups with an Effect Plug-in loaded in their first Plug-in slot — see ↑11.3.1, Step 1: Set Up a Sound or Group as Send Effect. For each Sound, the entry shows the Group letter and number followed by the Sound number (in the example underneath we selected the entry A1:S1-1 for the Aux 1 output).



7. Use Knob 2 (Aux 1 LEVEL) to adjust the level of the signal sent to that auxiliary output.



The signal of each auxiliary output is taken by default after the main output level control has been applied. This can be changed via Knob 3 (Aux 1 ORDER). For more information, please see section ↑8.1.3, Setting Up Auxiliary Outputs for Sounds and Groups.

You can repeat the process to route more Sounds/Groups to the same send effect, or route the same Sound/Group to another send effect send using Aux 2.

11.3.3 A Few Notes on Send Effects

When working with send effects, please keep in mind the following:

- You cannot send the Master output to send effects.
- You cannot send a send effect's output to itself, nor the output of a Group to one of its own Sounds.

However, you can:

- Chain several Sounds configured as send effects by sending the output of a send effect into another send effect using the method described above (see ↑11.3.2, Step 2: Route Audio to the Send Effect).
- Use the Effect Plug-ins loaded in a Group to simultaneously process its own Sounds and other Sounds/Groups sent to it.

This opens up virtually endless routing possibilities!



When setting up complex routings, please take care to avoid feedback loops!

In addition, the following points are worth noting:

- **CPU load**: Send effects can be of great help to save CPU power. Using one reverb for many Sounds and Groups instead of loading another reverb in each Sound/Group makes a big difference on the CPU load. You can adjust at which extent the reverb must be applied on each Sound/Group via the respective Level controls in their Output properties.
- **MIDI control**: As with any other Sound, Sounds used as send effects can be controlled via MIDI! This is not only true for all effect parameters (see ↑8.2.3, Controlling Parameters via MIDI and Host Automation), but also for effects that require incoming notes (e.g., a vocoder). See ↑8.2.1, Triggering Sounds via MIDI Notes for more information.
- **Use Patterns**: You can create Patterns for your send effects to make them more lively. Simply record some automation in Control or Step mode for the desired effect parameters — or even record notes for effects requiring incoming notes (e.g., the vocoder mentioned above).

11.4 Creating Multi-Effects

Creating a multi-effect unit is basically the same thing as creating a series of Sounds as send effects within a Group and arrange them as you see fit. Following the procedure described in the previous section ↑11.3, Creating a Send Effect, in every Sound of the Group you can set up a send effect containing any number of effects, the only limit being the processing power of your computer! You can route Sounds within the Group to your liking: You can chain them all, keep them as separate effects to be used in parallel, build any combination of both, etc.

Organizing Your Effects into Several Sounds

If you plan to build a multi-effects containing more than a few Effect Plug-ins in series, you have many ways at your disposal. Since you can have any number of Effect Plug-ins in each Sound, you can set up the whole sequence of effects in series into one single Sound. However it might be judicious to split your sequence of effects across several Sounds whose outputs are sent into the inputs of the next Sound (thereby re-building an equivalent sequence of effects). Doing this can have several advantages, e.g.:

- The Sound List lets you keep a better overview of your effect sequence than the tiny Plug-in List in a single Sound.
- You can rename and colorize each Sound individually according to the effect(s) it contains.
- You have a better control on your whole effect sequence from your controller.
- You can easily re-arrange your effect sequence by changing the routing between your Sounds.

To use several Sounds plugged in series, use the procedure described in the previous section ↑11.3, Creating a Send Effect to send the output of each Sound to the input of the next one in the sequence.

Which of the Main, Aux 1, and Aux 2 Output To Use?

Each Sound provides three distinct outputs: Main, Aux 1, and Aux 2. If you want to build a series of effects split across several Sounds, for each Sound in the series you have to send one of these outputs to the input of the next Sound. For this we recommend you to use the *main output* of the Sound rather than any of its auxiliary outputs because it provides a few useful additional features not available on the auxiliary outputs:

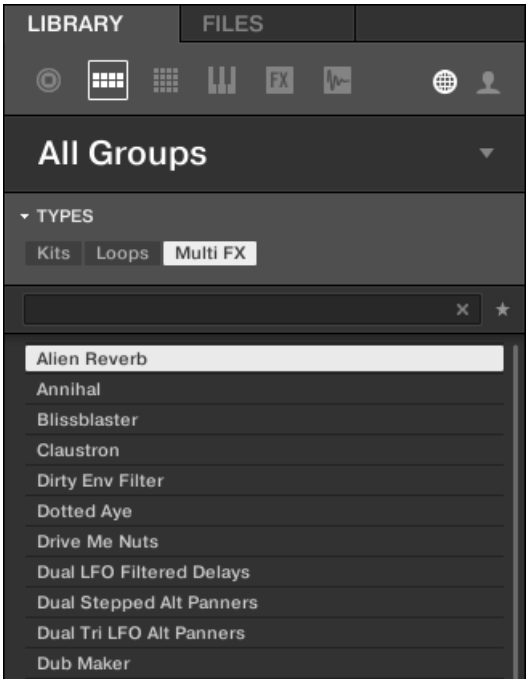
- Cue switch: You can send the Main output of any Sound to the Cue bus and pre-listen the channel on a distinct MASCHINE output (typically your headphones). Note that enabling the Cue switch automatically mutes both Aux 1 and Aux 2 outputs as well, but it doesn't send them to the Cue bus!
- Hardware control: Your controller provides various shortcuts allowing a quicker and easier control of your Sounds' Main output.

These can be of great help when building complex multi-effects!

Saving Your Multi Effects

You can then save the whole multi-effect Group for later use. 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 more effects on the multi-effect Group itself — imagine for example distinct send effects in different Sounds, but all of them being further processed by the same set of effects at the Group level.

However, take time 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 library. In the MASCHINE Library there are already a number of multi-effect Groups tagged Multi FX:



Groups of the Multi FX type in the LIBRARY pane.

12 Effect Reference

MASCHINE provides a healthy selection of more than 20 different Effect Plug-ins 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. Fore more information on how to use effects within your Project, please read chapter ↑11, Using Effects.

Available Effects

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.

Effects are organized into following categories:

- **Dynamics**: Compressor, Gate, Transient Master, Limiter, and Maximizer. See section ↑12.1, Dynamics.
- **Filtering effects**: EQ and Filter. See section ↑12.2, Filtering Effects.
- **Modulation effects**: Chorus, Flanger, FM, Freq Shifter, and Phaser. See section ↑12.3, Modulation Effects.
- **Spatial and Reverb effects**: Ice, Metaverb, Reflex, Reverb, and Plate Reverb. See section ↑12.4, Spatial and Reverb Effects.
- **Delays**: Beat Delay, Grain Delay, Grain Stretch, and Resochord. See section ↑12.5, Delays.
- **Distortion effects**: Distortion, Lofi, and Saturation. See section ↑12.6, Distortion Effects.
- **Performance FX**: Designed for spontaneous, tactile control in recording or live performance, these complex multi-effects alter motion, space, dynamics, and more for added expression. See section ↑12.7, Perform FX.

12.1 Dynamics

12.1.1 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 addition to the legacy Classic mode, the Compressor provides an alternate **Feedback mode**. If this effect is used in a Sound or a Group, it also provides a **Side-Chain Input page** (in the Control area and on your controller).



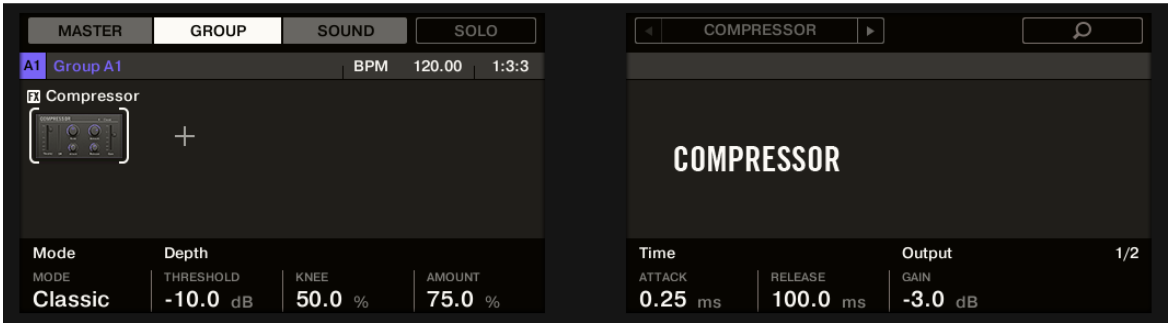
The Compressor panel in the Plug-in Strip.

Main Page



The Compressor in the Control area: Main page.

Parameter	Description
MODE Section	
Mode	Selects between two operation modes: *Classic* (default setting) and *Feedback*. Whereas Classic mode generates a cleaner and more precise compression, Feedback mode introduces a subtle change in transient shape and frequency responsiveness. The memory-based envelope detection along with the knee-dependent ratio and gain give this mode a typical vintage feel.
DEPTH Section	
Threshold	This value determines the threshold at which the Compressor starts to work.
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.
Amount	The amount of compression effect, often called ratio in typical applications.
TIME Section	
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 stop compressing after the input signal falls below the threshold. With longer release times it takes more time to get back to normal.
OUTPUT Section	
Gain	Use Gain 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.



The Compressor on the controller: MAIN page.

Side-Chain Input Page

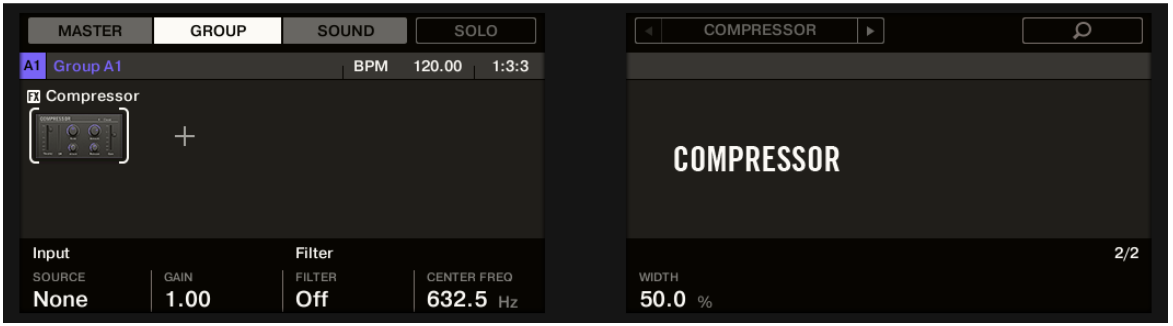


The Compressor in the Control area: Side-Chain Input page.

Parameter	Description
INPUT Section	
Source	Selects the audio signal you want to use as side-chain signal to control the Plug-in. Available options are *None* (side-chain disabled, default setting), the outputs of all (other) Sounds , and the outputs of all (other) Groups. In the menu these outputs are labeled as follows: For Groups: **[Group name]** (e.g., *Drums*) For Sounds: **[Group name]: [Sound name]** (e.g., *Drums: Kick*) In the selector display these outputs are labeled as follows: For Groups: **[Group name]** (e.g., Drums) For Sounds: **[Group letter+number]:S[Sound number]** (e.g., A1:S4 for the Sound 4 of Group A1)
Gain	Adjusts the input level of the side-chain signal fed into the Plug-in.
FILTER Section	
Filter	Activates a filter on the side-chain input. This filter can be useful to select only a specific frequency range of the side-chain signal to control the Plug-in.
Center Freq	Adjusts the center frequency of the filter.
Width	Adjusts the bandwidth of the filter.

On your controller the outputs available in the SOURCE parameter are labeled as in the display of the Source selector described above.

For more information on how to use the side-chain input, please refer to section ↑11.1.3, Using the Side-Chain Input.



The Compressor on the controller: SIDE-CHAIN INPUT page.

Level Meters in the Compressor Panel (Plug-in Strip)

In the Plug-in Strip, the Compressor panel offers a few extra features not available in the Control area:

- The Threshold and Gain faders (corresponding to the Threshold and Gain parameters of the Main page in the Control area) provide level meters for visual monitoring of the input and output levels. In particular, by comparing the input level with the position of the Threshold fader, you can easily see you which parts of the signal will be compressed, and adjust the Threshold fader accordingly.
- An additional GR level meter indicates the **gain reduction** currently applied by the Compressor to the input signal.

12.1.2 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.

If this effect is used in a Sound or a Group, it also provides a **Side-Chain Input page** (in the Control area and on your controller).



The Gate panel in the Plug-in Strip.

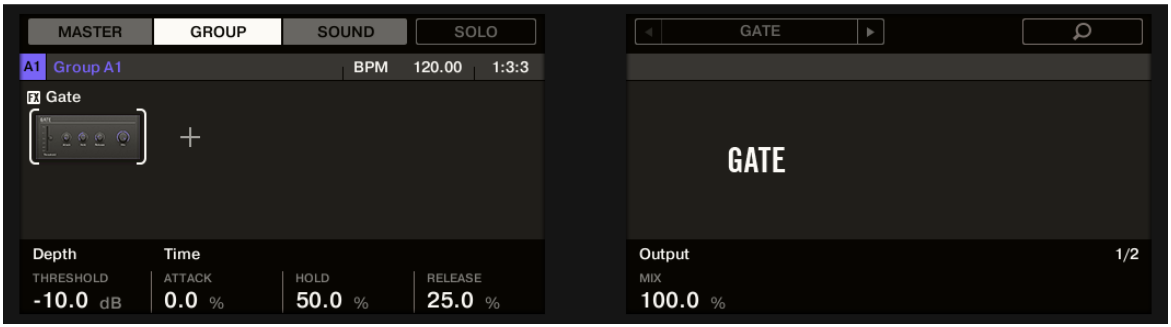
Main Page



The Gate in the Control area: Main page.

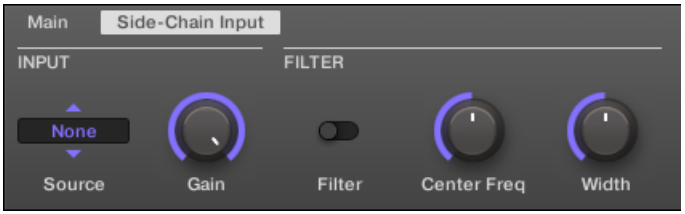
Parameter	Description
DEPTH Section	
Threshold	This value determines the threshold at which the Gate starts to work. Higher values will let only the loudest parts of the signal through the Gate.
TIME Section	
Attack	Use Attack to adjust how fast the Gate reacts to the incoming signal: the more you dial 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.

Parameter	Description
Release	The time the Gate will take to release the input signal after it rises above the threshold.
OUTPUT Section	
Mix	Mix lets you adjust the amount of the effect in relation to the dry original audio signal.



The Gate on the controller: MAIN page.

Side-Chain Input Page

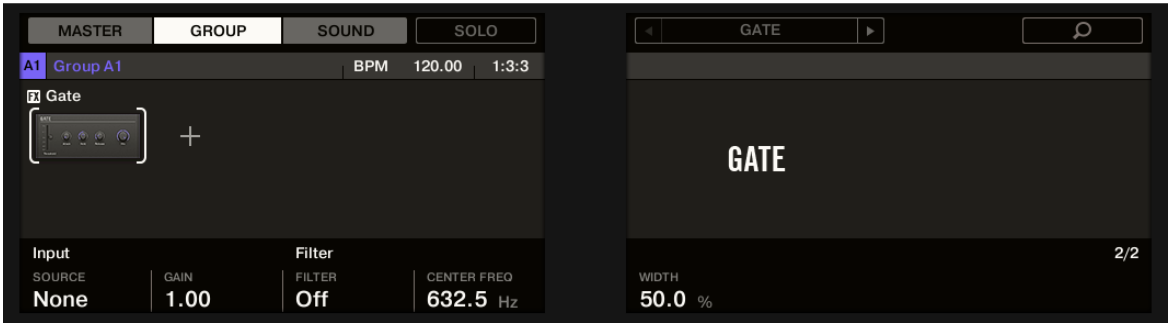


The Gate in the Control area: Side-Chain Input page.

Parameter	Description
INPUT Section	
Source	Selects the audio signal you want to use as side-chain signal to control the Plug-in. Available options are *None* (side-chain disabled, default setting), the outputs of all (other) Sounds , and the outputs of all (other) Groups. In the menu these outputs are labeled as follows: For Groups: **[Group name]** (e.g., *Drums*) For Sounds: **[Group name]: [Sound name]** (e.g., *Drums: Kick*) In the selector display these outputs are labeled as follows: For Groups: **[Group name]** (e.g., Drums) For Sounds: **[Group letter+number]:S[Sound number]** (e.g., A1:S4 for the Sound 4 of Group A1)
Gain	Adjusts the input level of the side-chain signal fed into the Plug-in.
FILTER Section	
Filter	Activates a filter on the side-chain input. This filter can be useful to select only a specific frequency range of the side-chain signal to control the Plug-in.
Center Freq	Adjusts the center frequency of the filter.
Width	Adjusts the bandwidth of the filter.

On your controller the outputs available in the SOURCE parameter are labeled as in the display of the Source selector described above.

For more information on how to use the side-chain input, please refer to section ↑11.1.3, Using the Side-Chain Input.



Input Level Meter in the Gate Panel (Plug-in Strip)

In the Plug-in Strip, the Gate panel offers an extra feature not available in the Control area: The Threshold fader (corresponding to the Threshold parameter of the Main page in the Control area) provides a level meter for visual monitoring of the input level. By comparing this input level with the position of the Threshold fader, you can easily see you which parts of the signal will pass through the Gate.

12.1.3 Transient Master

The Transient Master allows you to emphasize or attenuate the transients of your audio material by modifying the envelopes of every attack and sustain phase. For example, by increasing the attacks of a snare or a kick, you can build powerful percussive sounds without running the risk of damaging their natural sounding. Unlike other dynamic effects (compressors, limiters, etc.), the Transient Master does not use the input signal level to decide when to come into effect (no threshold) but rather affects all parts of the signal. This retains the musical character of your sound while keeping operation simple and intuitive: Adjust the desired amount of accentuation for the attack and/or sustain phases and you're all set!



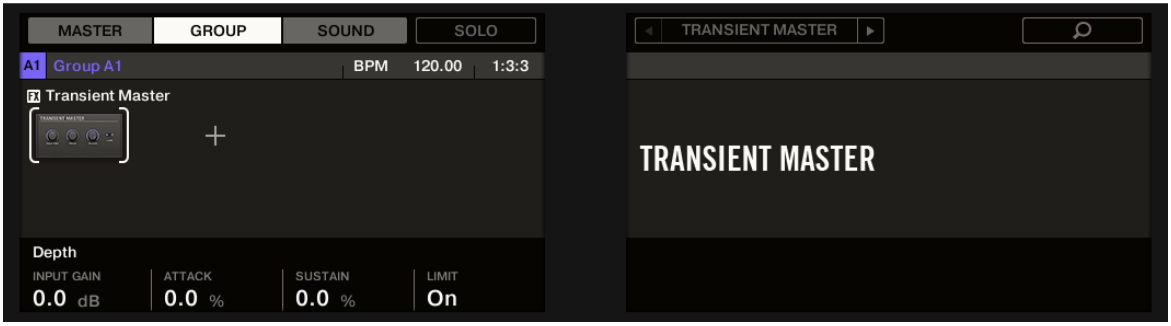
The Transient Master panel in the Plug-in Strip.



The Transient Master in the Control area.

Parameter	Description
DEPTH Section	
Input Gain	Adjusts the level of the input signal. This allows you to offset the overall level once you have set the desired effect, in order to counterbalance the gain or loss of level that might occur.
Attack	Sharpens/softens the attack phases in your signal. With the knob at the middle position, the attack phases are not altered. From this position, turning the Attack knob to the left softens the attack phases, while turning it to the right sharpens them.

Parameter	Description
Sustain	Prolongs/shortens the sustain phases in your signal. With the knob at the middle position, the sustain phases are not altered. From this position, turning the Sustain knob to the left shortens the sustain phases, while turning it to the right prolongs them.
Limit	Activates a hard limiter at the output, preventing the output signal from clipping. This can be useful when the Attack knob is set to a high value as this may produce amplified attack phases which become too loud.



The Transient Master on the controller.

12.1.4 Limiter

The Limiter does two things: firstly it ensures that the signal level stays below 0 dB, 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 Plug-in slot. However, please note that the Limiter introduces a small latency (or processing delay, see chapter ↑18, Glossary for a definition).

If this effect is used in a Sound or a Group, it also provides a **Side-Chain Input page** (in the Control area and on your controller).



The Limiter panel in the Plug-in Strip.

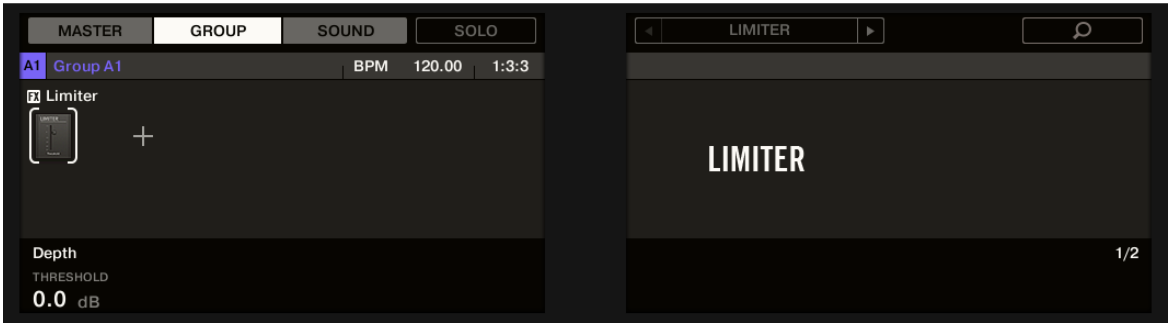
Main Page



The Limiter in the Control area: Main page.

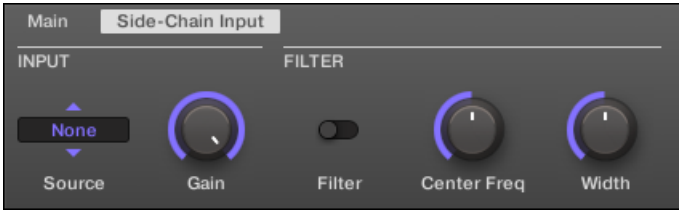
Element	Description
MODE Section	
Mode	Selects from two different limiter types. The available modes are **Legacy** and **Transparent**.
DEPTH Section (Transparent mode only)	
Threshold	This value determines the threshold where the Limiter kicks in. If you use it to prevent your signal from clipping, leave it at 0 dB; if you want to make your signal louder, dial the Knob to the left. Available values range in decibels from -40.0 dB to 0.0 dB (default: 0.0 dB).

Element	Description
Release	The time the limiter will take to stop limiting after the input signal falls below the threshold. With longer release times it takes more time to get back to normal. Available values can be adjusted in milliseconds from 1.0ms to 500.0ms (default: 1.0ms).
OUTPUT Section	
Ceiling	Adjusts the maximum output level, or ceiling. The signal will not rise above this. Available values range in decibels from -40.0 dB to -0.3 dB (default: -0.3 dB).



The Limiter on the controller: MAIN page.

Side-Chain Input Page



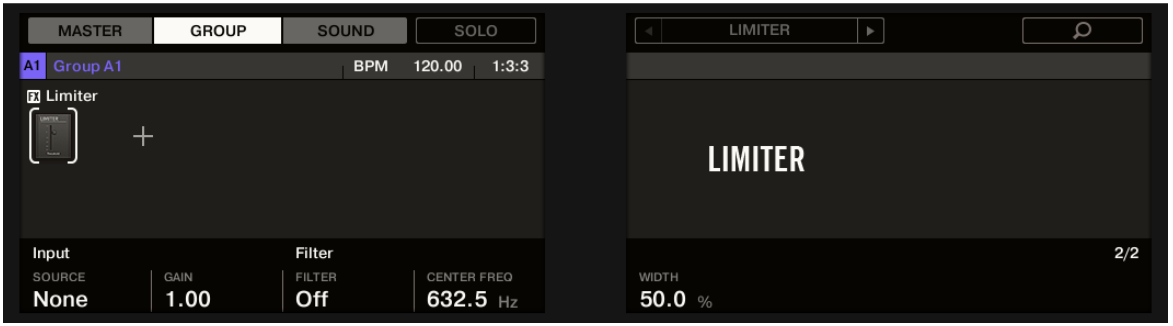
The Limiter in the Control area: Side-Chain Input page.

The **Modulation** page contains one parameter: **Velocity**.

Element	Description
INPUT Section	
Source	Selects the audio signal you want to use as side-chain signal to control the Plug-in. Available options are **None** (side-chain disabled, default setting), the outputs of all (other) Sounds, and the outputs of all (other) Groups. In the menu these outputs are labeled as follows: ▪ For Groups: **[Group name]** (e.g., Drums) ▪ For Sounds: **[Group name]**: **[Sound name]** (e.g., Drums: Kick) ▪ In the selector display these outputs are labeled as follows: ▪ For Groups: **[Group name]** (e.g., **Drums**) ▪ For Sounds: **[Group letter+number]:S[Sound number]** (e.g., **A1:S4** for the Sound 4 of Group A1)
Gain	Adjusts the input level of the side-chain signal fed into the Plug-in. Available values range from 0.00 dB to 1.00 (default: 1.00).
FILTER Section	
Filter	Activates a filter on the side-chain input. This filter can be useful to select only a specific frequency range of the side-chain signal to control the Plug-in. Available values are off and on (default: off).
Center Freq	Adjusts the center frequency of the filter. Available values range in kilohertz from 20.0 Hz to 20.0 kHz (default: 632.5 kHz).

On your controller the outputs available in the SOURCE parameter are labeled as in the display of the Source selector described above.

For more information on how to use the side-chain input, please refer to section ↑11.1.3, Using the Side-Chain Input.



The Limiter on the controller: SIDE-CHAIN INPUT page.

Input Level Meter in the Limiter Panel (Plug-in Strip)

In the Plug-in Strip, the Limiter panel offers an extra feature not available in the Control area: The Threshold fader (corresponding to the Threshold parameter of the Main page in the Control area) provides a level meter for visual monitoring of the input level. By comparing this input level with the position of the Threshold fader, you can easily see which parts of the signal will be limited, and adjust the Threshold fader accordingly.

12.1.5 Maximizer

The Maximizer reduces the dynamics within the sound, making the overall sound louder. It is similar to the Limiter, but it is specifically designed for increasing the perceived volume.

If this effect is used in a Sound or a Group, it also provides a **Side-Chain Input page** (in the Control area and on your controller).



The Maximizer panel in the Plug-in Strip.

Main Page



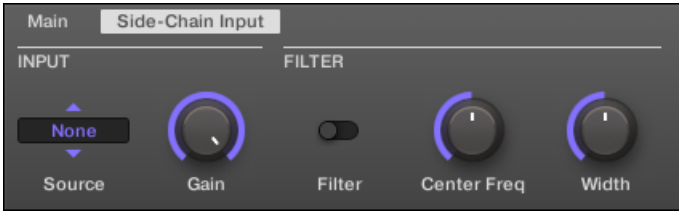
The Maximizer in the Control area: Main page.

Parameter	Description
DEPTH Section	
Amount	This parameter is used to adjust the amount of the Maximizer effect. Turn the knob clockwise to increase the loudness of the signal.
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 by causing the maximizing algorithm to be applied twice.



The Maximizer on the controller: MAIN page.

Side-Chain Input Page

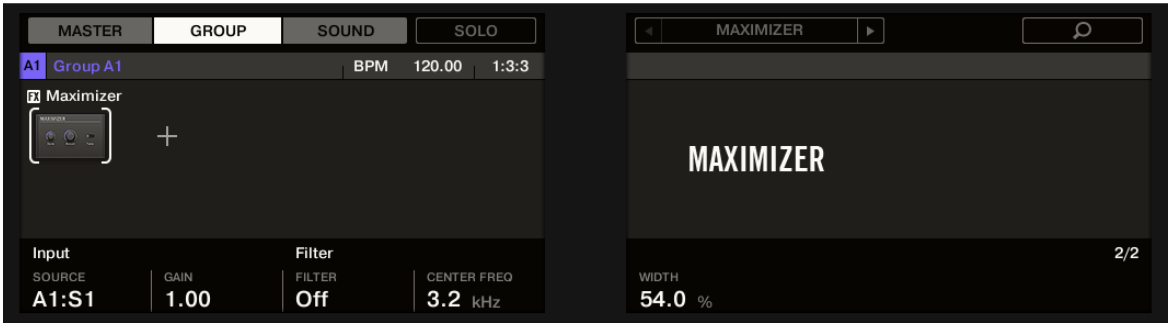


The Maximizer in the Control area: Side-Chain Input page.

Parameter	Description
INPUT Section	
Source	Selects the audio signal you want to use as side-chain signal to control the Plug-in. Available options are *None* (side-chain disabled, default setting), the outputs of all (other) Sounds , and the outputs of all (other) Groups. In the menu these outputs are labeled as follows: For Groups: **[Group name]** (e.g., *Drums*) For Sounds: **[Group name]: [Sound name]** (e.g., *Drums: Kick*) In the selector display these outputs are labeled as follows: For Groups: **[Group name]** (e.g., Drums) For Sounds: **[Group letter+number]:S[Sound number]** (e.g., A1:S4 for the Sound 4 of Group A1)
Gain	Adjusts the input level of the side-chain signal fed into the Plug-in.
FILTER Section	
Filter	Activates a filter on the side-chain input. This filter can be useful to select only a specific frequency range of the side-chain signal to control the Plug-in.
Center Freq	Adjusts the center frequency of the filter.
Width	Adjusts the bandwidth of the filter.

On your controller the outputs available in the SOURCE parameter are labeled as in the display of the Source selector described above.

For more information on how to use the side-chain input, please refer to section ↑11.1.3, Using the Side-Chain Input.



The Maximizer on the controller: SIDE-CHAIN INPUT page.

12.2 Filtering Effects

12.2.1 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 as a DJ-style cut-and-boost effect. Please note that in the Control area and on your controller the EQ parameters are spread over two pages.



The EQ panel in the Plug-in Strip.

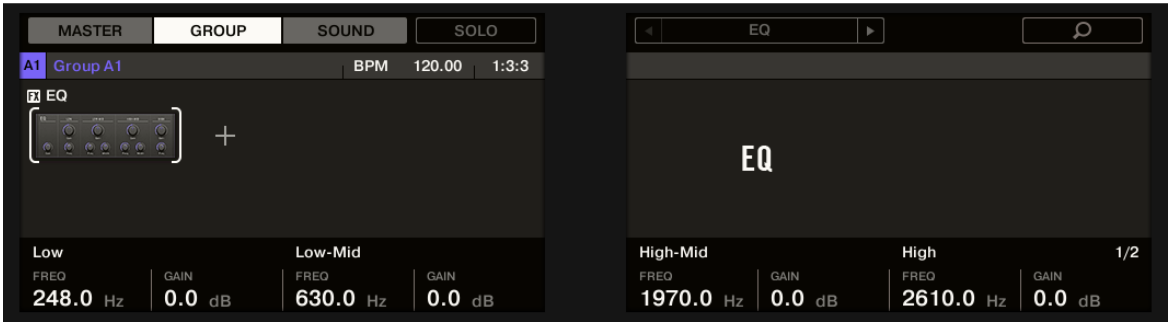
Freq / Gain Page



The EQ in the Control area: Freq / Gain page.

Parameter	Description
LOW Section	
Freq	Frequency selector for the low frequency band. Ranges from 20 Hz to 8 kHz.
Gain	This determines how much the selected frequency is increased/attenuated by.
LOW-MID Section	
Freq	Frequency selector for the first mid-frequency band. Ranges from 40 Hz to 16 kHz.
Gain	This determines how much the selected frequency is increased/attenuated by.
HIGH-MID Section	
Freq	Frequency selector for the second mid-frequency band. Ranges from 40 Hz to 16 kHz.
Gain	This determines how much the selected frequency is increased/attenuated by.
HIGH Section	

Parameter	Description
Freq	Frequency selector for the high frequency band. Ranges from 50 Hz to 20 kHz.
Gain	This determines how much the selected frequency is increased/attenuated by.



The EQ on the controller: FREQ / GAIN page.

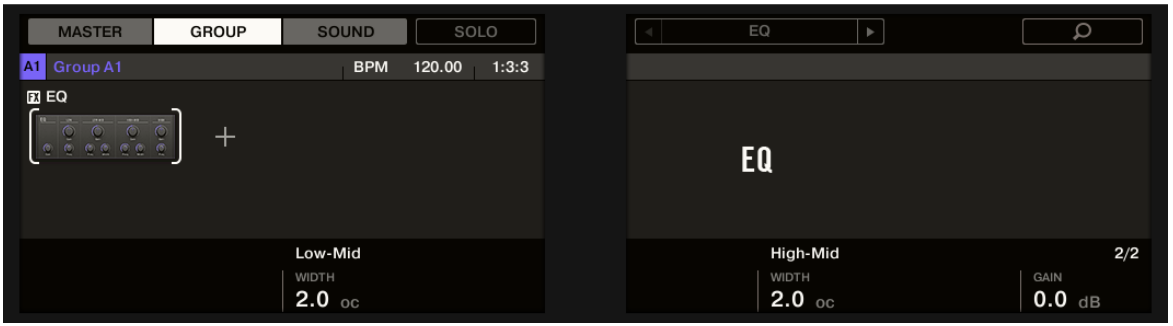
Width / Output Page



The EQ in the Control area: Width / Output page.

Parameter	Description
LOW-MID Section	
Width	Bandwidth control for the first mid-frequency band.
HIGH-MID Section	
Width	Bandwidth control for the second mid-frequency band.

Parameter	Description
OUTPUT Section	
Gain	Gain control for the EQ altogether.



The EQ on the controller: WIDTH / OUTPUT page.

12.2.2 Filter

Filter with selectable characteristics that can be modulated via LFO or envelope. 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.

If this effect is used in a Sound or a Group, it provides a **Side-Chain Input page** (in the Control area and on your controller).



The Filter panel in the Plug-in Strip.

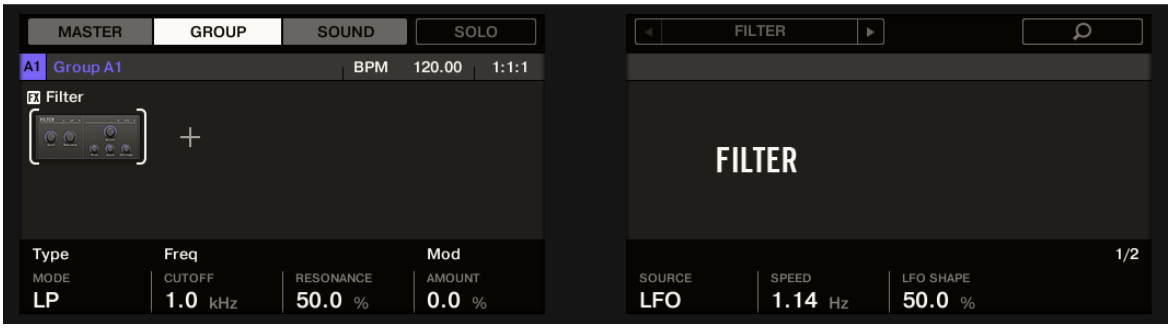
Main Page



The Filter in the Control area: Main page.

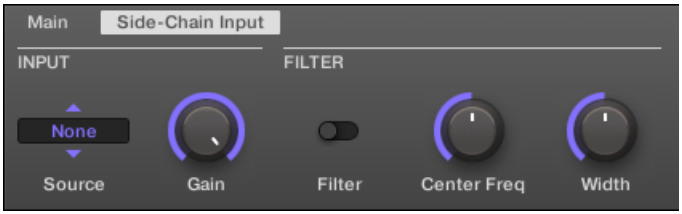
Parameter	Description
TYPE Section	
Mode	Here you can select between four different filter modes: *LP* (low-pass), *BP* (band-pass), *HP* (high-pass), and *Notch*. Depending on the mode selected, the following parameters vary as indicated.
FREQ Section	
Cutoff	Controls the cutoff frequency of the filter.
Resonance	Controls the amount of resonance, i.e. the amount of amplification near the cutoff frequency. It is not available with filter mode *Notch*.
MOD Section	
Amount	This defines how much the Filter gets modulated by the modulation source.
Source	Here you can select between three different modulation sources: *LFO*, *LFO Sync*, and *Envelope*. Depending on your choice for the modulation source, the following parameters appear to the right:
Source: LFO	
Speed	Defines the speed of the modulation in hertz ranging from 0.03 Hz up to 16 Hz.
LFO Shape	Defines how the LFO evolves over time.
Source: LFO Sync	

Parameter	Description
Speed	Defines the speed of the modulation in note values from 16/1 (one cycle every 16 bars) up to 1/32 note.
LFO Shape	Defines how the LFO evolves over time.
Phase	Adjusts the start phase of the LFO.
Source: 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.



The Filter on the controller: MAIN page.

Side-Chain Input Page

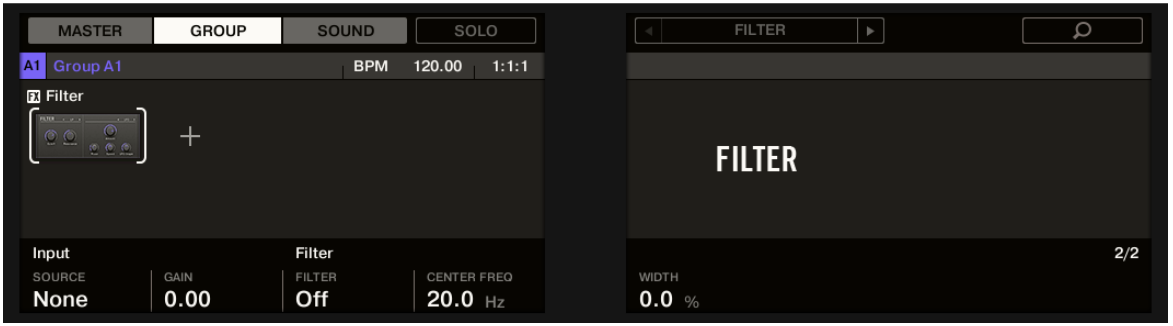


The Filter in the Control area: Side-Chain Input page.

Parameter	Description
INPUT Section	
Source	Selects the audio signal you want to use as side-chain signal to control the Plug-in. Available options are *None* (side-chain disabled, default setting), the outputs of all (other) Sounds , and the outputs of all (other) Groups. In the menu these outputs are labeled as follows: For Groups: **[Group name]** (e.g., *Drums*) For Sounds: **[Group name]: [Sound name]** (e.g., *Drums: Kick*) In the selector display these outputs are labeled as follows: For Groups: **[Group name]** (e.g., Drums) For Sounds: **[Group letter+number]:S[Sound number]** (e.g., A1:S4 for the Sound 4 of Group A1)
Gain	Adjusts the input level of the side-chain signal fed into the Plug-in.
FILTER Section	
Filter	Activates a filter on the side-chain input. This filter can be useful to select only a specific frequency range of the side-chain signal to control the Plug-in.
Center Freq	Adjusts the center frequency of the filter.
Width	Adjusts the bandwidth of the filter.

On your controller the outputs available in the SOURCE parameter are labeled as in the display of the Source selector described above.

For more information on how to use the side-chain input, please refer to section ↑11.1.3, Using the Side-Chain Input.



The Filter on the controller: SIDE-CHAIN INPUT page.

12.2.3 Cabinet

The Cabinet Emulation is a cabinet and microphone component that proves full control over all the (post-amp) stages of recording a guitar tone. Cabinet Emulation includes the four cabinet types, and the variable positioning of six different microphones.



The Cabinet Emulation effect in the Plug-in Strip.



The Cabinet Emulation in the Control area (Main page depicted).

Main Page

Element	Description
CABINET Section	
Cabinet	Selects from four different cabinet types, which includes: ▪ American Cabinet ▪ British Cabinet ▪ Vintage Cabinet ▪ Modern Cabinet
MICROPHONE Section	
Microphone	Selects from six different microphone types, which includes: ▪ Dynamic 57 ▪ Dynamic 421 ▪ Dynamic 441 ▪ Ribbon 121 ▪ Condenser 47 ▪ Condenser 67
Distance	Adjusts the distance of the microphone from the cabinet. Available values range from 0.0 to 100.0% (default: 0.0%).

Element	Description
OUTPUT Section	
Mix	Adjusts the ratio between the effect (wet) signal and original (dry) signals. Available values range from 0.0 to 100.0% (default: 100.0%).

12.3 Modulation Effects

12.3.1 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.

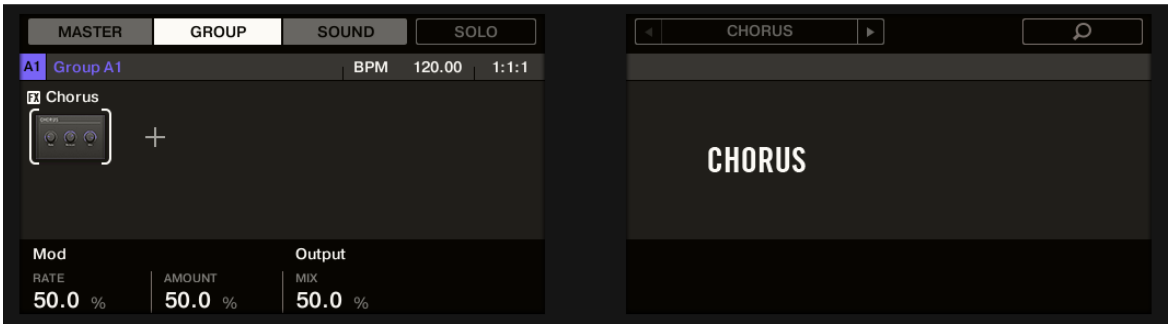


The Chorus panel in the Plug-in Strip.



The Chorus in the Control area.

Parameter	Description
MOD Section	
Rate	The Rate knob defines how fast the phase (and thus the perceived pitch) of the detuned signal is being modulated.
Amount	The amount of the Chorus effect.
OUTPUT Section	
Mix	Mix lets you adjust the amount of the effect in relation to the dry original audio signal.



The Chorus on the controller.

12.3.2 Flanger

Classic flanger effect with LFO and envelope modulation. The Flanger sounds a bit like the Chorus, but the difference between them is that the Flanger modulates the signal faster, it is equipped with a feedback mechanism, and can be synchronized to the tempo of the Project.



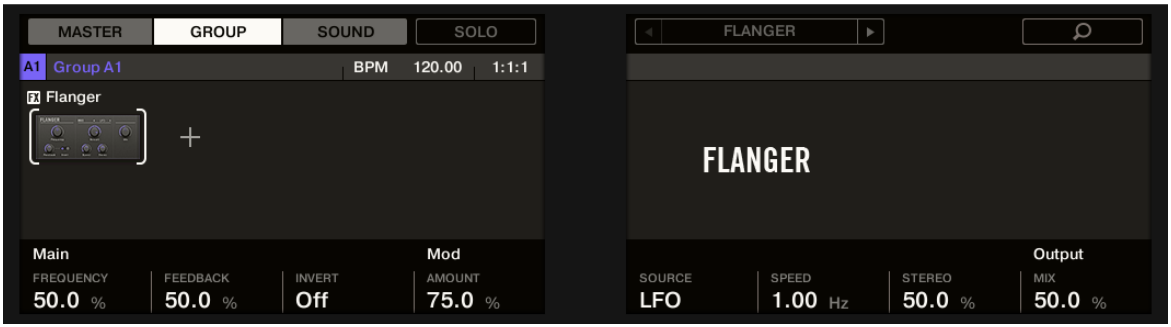
The Flanger panel in the Plug-in Strip.



The Flanger in the Control area.

Parameter	Description
MAIN Section	
Frequency	This defines the center frequency of the Flanger.
Feedback	Adjusts the amount of output signal fed back into the input.
Invert	Inverts the Flanger.
MOD Section	
Amount	This defines how much the Flanger gets modulated by the modulation source.
Source	Here you can select the modulation source of the Flanger: available options are *LFO*, *LFO Sync*, and *Envelope*. Depending on your selection, the parameter to the right will change.
Speed (LFO)	Defines the speed of the LFO in a range from 0.03 Hz up to 8 Hz.

Parameter	Description
Speed (LFO Sync)	Defines the speed of the LFO in note values from 16/1 (one cycle every 16 bars) up to 1/16 note.
Shape (Envelope)	Change the shape of the envelope here.
Stereo	This parameter widens the stereo field of the effect.
OUTPUT Section	
Mix	Mix lets you adjust the amount of the effect in relation to the dry original audio signal.



The Flanger on the controller.

12.3.3 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.

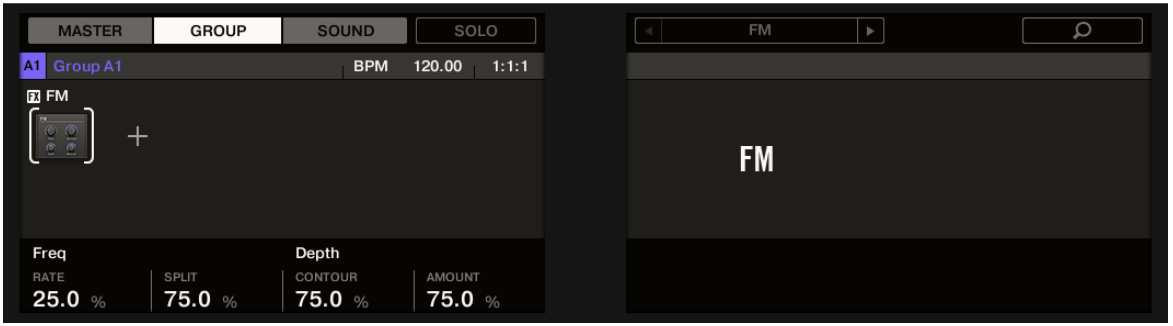


The FM panel in the Plug-in Strip.



FM in the Control area.

Parameter	Description
FREQ Section	
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 Section	
Contour	Contour determines the extent to which the input volume affects the intensity of the effect.
Amount	Determines the amount of the FM effect.



The FM on the controller.

12.3.4 Freq Shifter

The Freq 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.

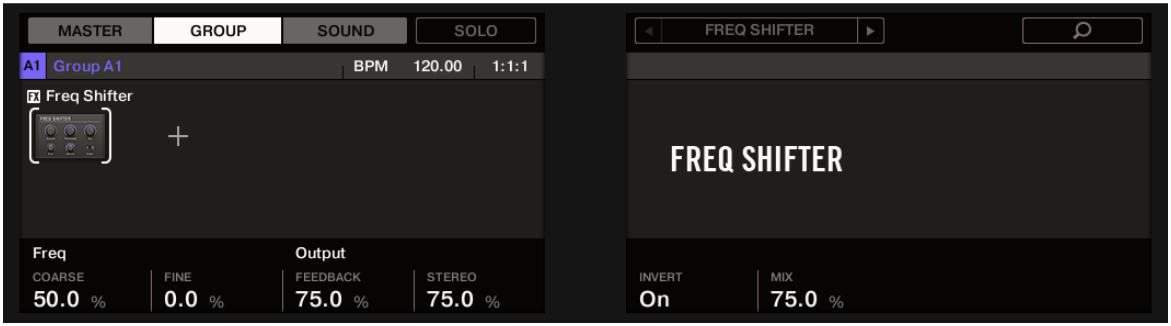


The Freq Shifter panel in the Plug-in Strip.



The Freq Shifter in the Control area.

Parameter	Description
FREQ Section	
Coarse	This is used to define the basic frequency of the Freq Shifter.
Fine	Fine-tune the frequency here.
OUTPUT Section	
Feedback	Adjusts the amount of output signal fed back into the input. Increasing this parameter will increase the intensity of the effect.
Stereo	This parameter widens the stereo field of the effect.
Invert	Inverts the settings of the Freq Shifter.
Mix	Mix lets you adjust the amount of the effect in relation to the dry original audio signal.



The Freq Shifter on the controller.

12.3.5 Phaser

Classic phaser with LFO and envelope modulation.



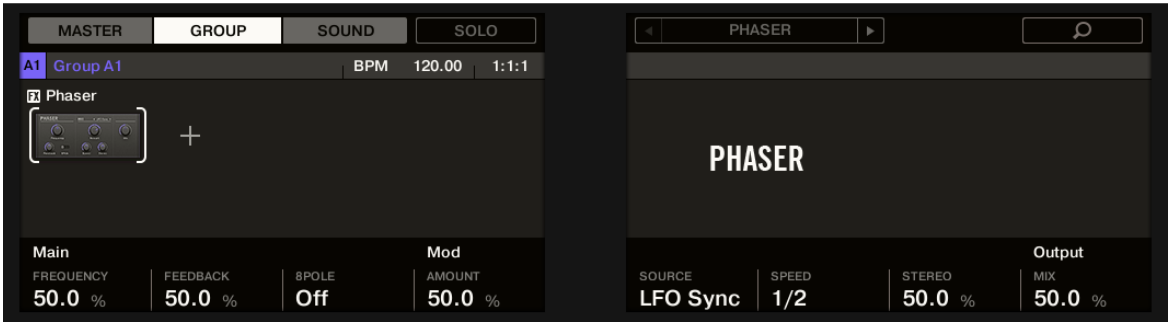
The Phaser panel in the Plug-in Strip.



The Phaser in the Control area.

Parameter	Description
MAIN Section	
Frequency	This defines the center frequency of the Phaser.
Feedback	Adjusts the amount of output signal fed back into the input.
8Pole	Activating this causes the Phaser to use the 8Pole mode, resulting in a more intense phasing effect.
MOD Section	
Amount	This defines how much the Phaser gets modulated by the modulation source.
Source	Here you can select the modulation source of the Phaser: available options are *LFO*, *LFO Sync*, and *Envelope*. Depending on your selection, the parameter to the right will change.

Parameter	Description
Speed (LFO)	Defines the speed of the LFO in a range from 0.03 Hz up to 8 Hz.
Speed (LFO Sync)	Defines the speed of the LFO in note values from 16/1 (one cycle every 16 bars) up to 1/16 note.
Shape (Envelope)	Change the shape of the envelope here.
Stereo	This parameter widens the stereo field of the effect.
OUTPUT Section	
Mix	Mix lets you adjust the amount of the effect in relation to the dry original audio signal.



The Phaser on the controller.

12.4 Spatial and Reverb Effects

12.4.1 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 Project “Come Into My Disco” from the MASCHINE factory library, you can hear how it creates deep soundscapes during the break in Scene 6.

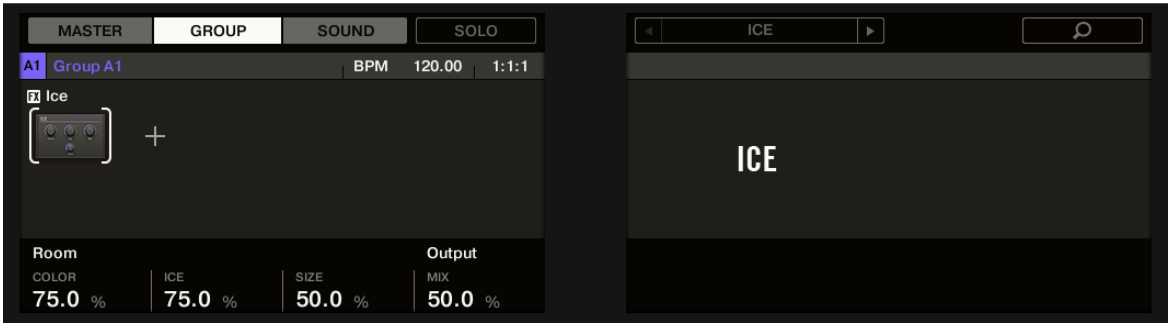


The Ice panel in the Plug-in Strip.



The Ice in the Control area.

Parameter	Description
ROOM Section	
Color	With lower settings, the general sound is a bit more muffled. The higher the Color value, the brighter it sounds.
Ice	The “ICE” factor: higher values sound more metallic.
Size	Adjust the size of the virtual room here.
OUTPUT Section	
Mix	Mix lets you adjust the amount of the effect in relation to the dry original audio signal.



The Ice on the controller.

12.4.2 Metaverb

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

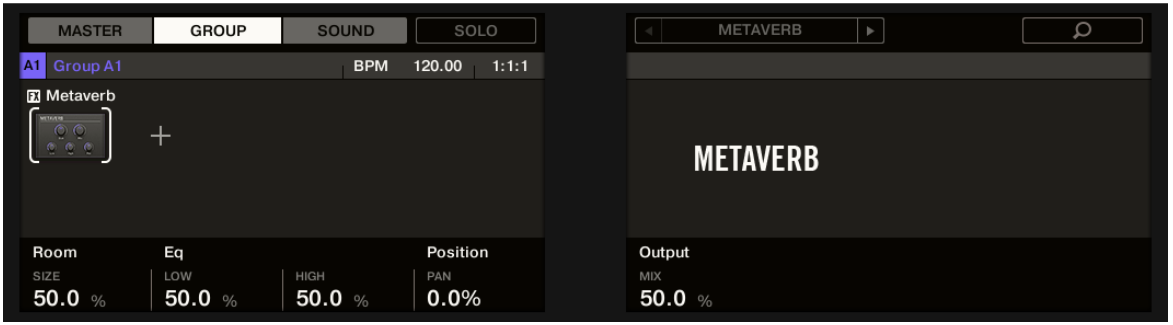


The Metaverb panel in the Plug-in Strip.



The Metaverb in the Control area.

Parameter	Description
ROOM Section	
Size	Adjust the size of the virtual room here.
EQ Section	
Low	Low band EQ to cut or boost bass frequencies.
High	High band EQ to cut or boost high frequencies.
POSITION Section	
Pan	This pans the dry signal. This is useful because the dry signal can not be panned after the effect without panning the reverb itself, which is unnatural.
OUTPUT Section	
Mix	Mix lets you adjust the amount of the effect in relation to the dry original audio signal.



The Metaverb on the controller.

12.4.3 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.

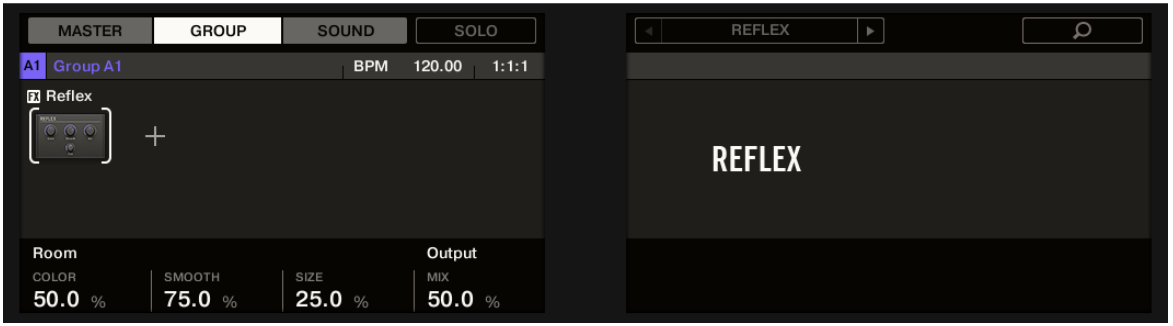


The Reflex panel in the Plug-in Strip.



The Reflex in the Control area.

Parameter	Description
ROOM Section	
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 Section	
Mix	Mix lets you adjust the amount of the effect in relation to the dry original audio signal.



The Reflex reverb on the controller.

12.4.4 Reverb (Legacy)

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.

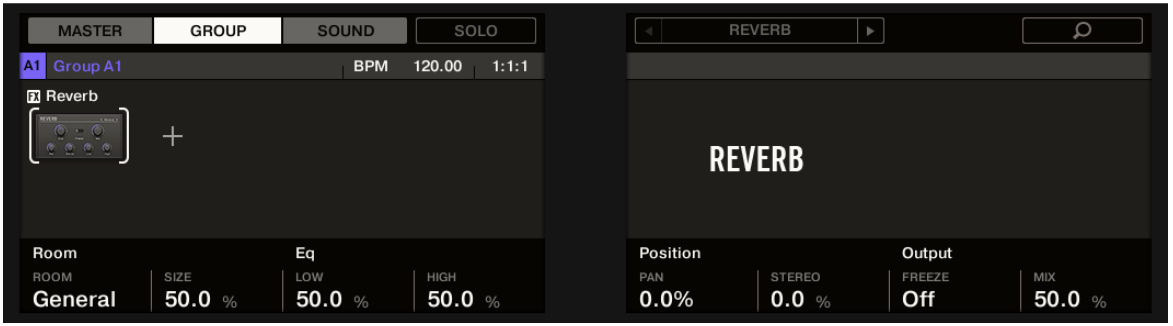


The Reverb panel in the Plug-in Strip.



The Reverb in the Control area.

Parameter	Description
ROOM Section	
Room	This allows you to choose one of four basic characteristics of the Reverb: *General*, *Bright*, *Guitar*, and *Shatter*.
Size	Adjust the size of the virtual room here.
EQ Section	
Low	Low band EQ to cut or boost bass frequencies.
High	High band EQ to cut or boost high frequencies.
POSITION Section	
Pan	This pans the dry signal. This is useful because the dry signal can not be panned after the effect without panning the reverb itself, which is unnatural.
Stereo	This parameter widens the stereo field of the effect.
OUTPUT Section	
Freeze	Enabling Freeze both mutes the dry signal and traps the current state of the Reverb output in a temporary buffer to make it last much longer. This is a powerful tool for playing live: By simultaneously tweaking the Mix knob nearby, you can create striking breaks! Setting the EQ's Low and High controls to generous values will further increase the effect.
Mix	Mix lets you adjust the amount of the effect in relation to the dry original audio signal.



The Reverb on the controller.

12.4.5 Reverb



The Plate Reverb panel in the Plug-in Strip.

12.4.5.1 Reverb Room

The Room mode is suited to drum and percussive sounds, and particularly sounds good when used on snares. Modulate the Room Size, and Pre Delay parameters to create special effects.



The Reverb effect in the Plug-in Strip.



The Reverb in the Control area (Main page depicted).

Main Page

Element	Description
ROOM Section	
Mode	Allows you to choose one of three basic modes of Reverb: Room, Hall, and Plate (default: Room).
Reverb Time	Adjusts the reverb decay time. Turn clockwise to increase decay. Available values range can be adjusted in seconds from 0.5s to 20.2s (default: 1.0s).
Reverb Size	Adjust the size of the simulated room. Turn clockwise to increase the perceived size of the room and reverb reflections. Available values range from 0.0 to 100.0% (default: 20.0%).
COLOR Section	

Element	Description
Damping	Adjusts damping of the high frequencies in the reverb signal. Damping refers to the rate at which the high frequencies decay. This effect causes the sound to become gradually muffled and warmer. Available values range from 0.0 to 100.0% (default: 50.0%).
Modulation	Sets the modulation amount. A value of 0 turns the delay modulation off. Available values range from 0.0 to 100.0% (default: 50.0%).
Diffusion	Controls the density of the reflections in the virtual room. A low diffusion setting makes the reflections sound more distinct, like closely spaced echoes. A high diffusion setting creates reflections so close they sound more like noise, in which echoes are indistinguishable. Available values range from 0.0 to 100.0% (default: 80.0%).
Pre Delays	Adjusts the initial delay between the original signal and the first reverberant sound. At higher values this can also be used in many creative ways. Available values can be adjusted in milliseconds from 0.0ms to 250.0ms (default: 0.0ms).
OUTPUT Section	
Mix	Adjusts the ratio between the effect (wet) signal and original (dry) signals. Available values range from 0.0 to 100.0% (default: 50.0%).

EQ page

The EQ page contains parameters to adjust the EQ of the reverb.

Element	Description
EQ Section	
High Cut	Adjusts the high frequencies in the reverberated signal. Available values range in kilohertz from 20.0 kHz to 2.0 kHz (default: 20.0 kHz).
Low Shelf	Adjusts the low-frequency content in the reverberated signal. Available values range in decibels from -0.0 dB to -12.0 dB (default: -0.0 dB).

12.4.5.2 Reverb Hall

The Reverb Hall mode is a spacious and natural reverb that is particularly suited to tonal sounds. When used with a high Reverb Time setting it provides a very lush reverb making it also suitable for ambient or experimental music. Modulate the Room Size, and Pre Delay parameters to create special effects.



The Reverb effect in the Plug-in Strip.



The Reverb in the Control area (Main page depicted).

Main Page

Element	Description
ROOM Section	
Mode	Allows you to choose one of three basic modes of Reverb: Room, Hall, and Plate (default: Room).
Reverb Time	Adjusts the reverb decay time. Turn clockwise to increase decay. Available values range can be adjusted in seconds from 0.5s to 20.2s (default: 2.2s).
Reverb Size	Adjust the size of the simulated room. Turn clockwise to increase the perceived size of the room and reverb reflections. Available values range from 0.0 to 100.0% (default: 10.0%).
COLOR Section	
Damping	Adjusts damping of the high frequencies in the reverb signal. Damping refers to the rate at which the high frequencies decay. This effect causes the sound to become gradually muffled and warmer. Available values range from 0.0 to 100.0% (default: 50.0%).
Modulation	Sets the modulation amount. A value of 0 turns the delay modulation off. Available values range from 0.0 to 100.0% (default: 40.0%).

Element	Description
Softness	Alters the balance between early reflections and the late reverb tail. It also changes the amount of diffusion present. It allows you to soften the attack of the reverb and push it more into the background, so it doesn't muddy the dry sound so much. Available values range from 0.0 to 100.0% (default: 90.0%).
Pre Delays	Adjusts the initial delay between the original signal and the first reverberant sound. At higher values this can also be used in many creative ways. Available values can be adjusted in milliseconds from 0.0ms to 250.0ms (default: 0.0ms).
OUTPUT Section	
Mix	Adjusts the ratio between the effect (wet) signal and original (dry) signals. Available values range from 0.0 to 100.0% (default: 50.0%).

EQ page

The EQ page contains parameters to adjust the EQ of the reverb.

Element	Description
EQ Section	
High Cut	Adjusts the high frequencies in the reverberated signal. Available values range in kilohertz from 20.0 kHz to 2.0 kHz (default: 20.0 kHz).
Low Shelf	Adjusts the low-frequency content in the reverberated signal. Available values range in decibels from -0.0 dB to -12.0 dB (default: -0.0 dB).

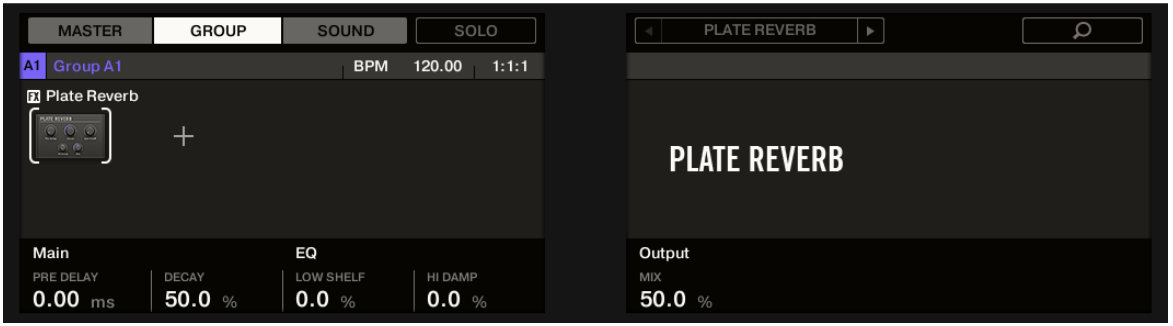
12.4.5.3 Plate Reverb

This effect emulates a plate reverberator. Partly inspired by a legendary plate reverb system, this efficient reverb effect can be used in numerous situations. Its controls make the Plate Reverb easy to use while still flexible and unique sounding. The Plate Reverb is the best choice if a vintage metallic sound is desired. It is particularly good for vocals, but popular for other material as well, such as snare drums.



The Plate Reverb in the Control area.

Parameter	Description
MAIN Section	
Pre Delay	Adjusts the time between the original signal and the early reflections.
Decay	Adjusts the damping of the plate, which directly affects the decay time of the reverb.
EQ Section	
Low Shelf	Controls the low-frequency content in the reverberated signal.
High Damp	Adjusts the damping of the high frequencies in the reverberated signal.
OUTPUT Section	
Mix	Mix lets you adjust the amount of the effect in relation to the dry original audio signal.



The Plate Reverb on the controller.

12.5 Delays

12.5.1 Beat Delay

The Beat Delay is specialized for creating delays that are synced to the tempo. If you wonder how this sounds, load up the Project "Big Stream" from the MASCHINE factory library: the Beat Delay is used in various Groups here and offers a lot of rhythmic sonic possibilities. Please note that in the Control area and on your controller the Beat Delay parameters are spread over two pages.



The Beat Delay panel in the Plug-in Strip.

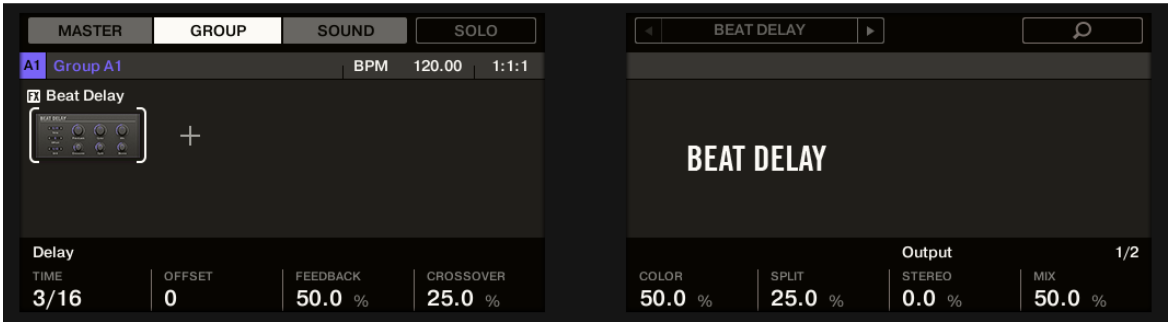
Main Page



The Beat Delay in the Control area: Main page.

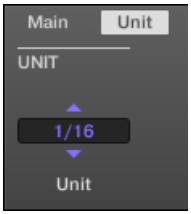
Parameter	Description
DELAY Section	
Time	The Time parameter defines the delay length in note values. The available values depend on the unit defined by the Unit parameter on the Unit page (see below). They range from half a unit to 16 units.
Offset	This parameter is used to shift the start of the delay in relation to the tempo.
Feedback	Adjusts the amount of output signal fed back into the input. Higher values produce more copies of the signal and longer decays.
Crossover	Allows for panning the feedback signal rhythmically in the stereo field.
Color	Defines the basic frequency of the feedback circuit: lower values result in a deeper sound, whereas higher values brighten the sound.
Split	Controls the difference in frequency between left and right channel. At full left, this control is disabled.
OUTPUT Section	

Parameter	Description
Stereo	This parameter widens the stereo field of the effect. Values go from -100.0 % to 100 % — negative values inverse the stereo field of the effect.
Mix	Mix lets you adjust the amount of the effect in relation to the dry original audio signal.



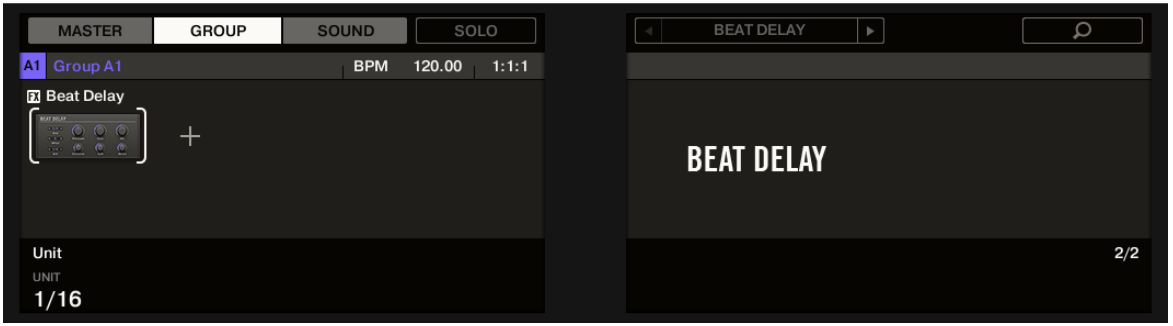
The Beat Delay on the controller: MAIN page.

Unit Page



The Beat Delay in the Control area: Unit page.

Parameter	Description
UNIT Section	
Unit	Defines the unit used by the Time and Offset parameters on the Main page.



The Beat Delay on the controller: UNIT page.

12.5.2 Grain Delay

By chopping the input into small “grains” and rearranging them as a cloud, 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. Please note that in the Control area and on your controller the Grain Delay parameters are spread over two pages.



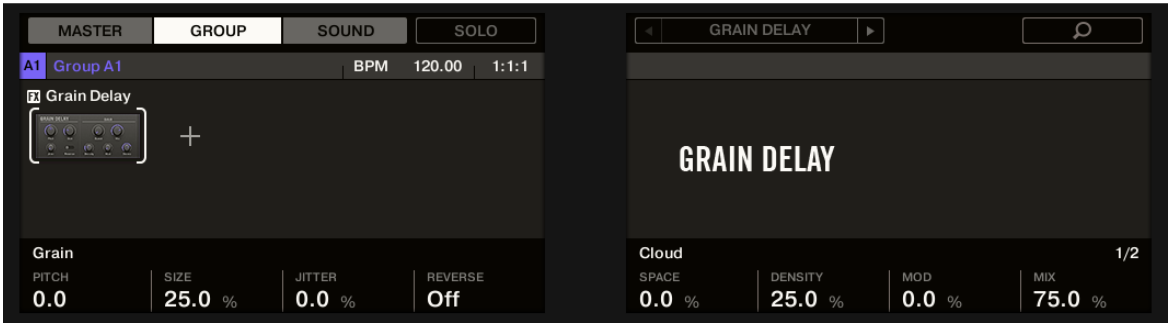
The Grain Delay panel in the Plug-in Strip.

Main Page



The Grain Delay in the Control area: Main page.

Parameter	Description
GRAIN Section	
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.
Reverse	Produces a reverse playback of the grain.
CLOUD Section	
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.
Mix	Mix lets you adjust the amount of the effect in relation to the dry original audio signal.



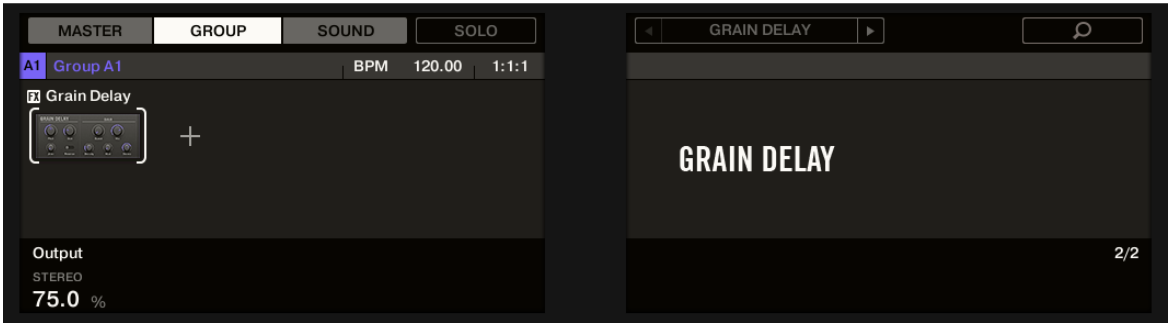
The Grain Delay on the controller: MAIN page.

Output Page



The Grain Delay in the Control area: Output page.

Parameter	Description
OUTPUT Section	
Stereo	This parameter widens the stereo field of the effect. Values go from 0 % (no stereo) to 100 % (full stereo).



The Grain Delay on the controller: OUTPUT page.

12.5.3 Grain Stretch

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

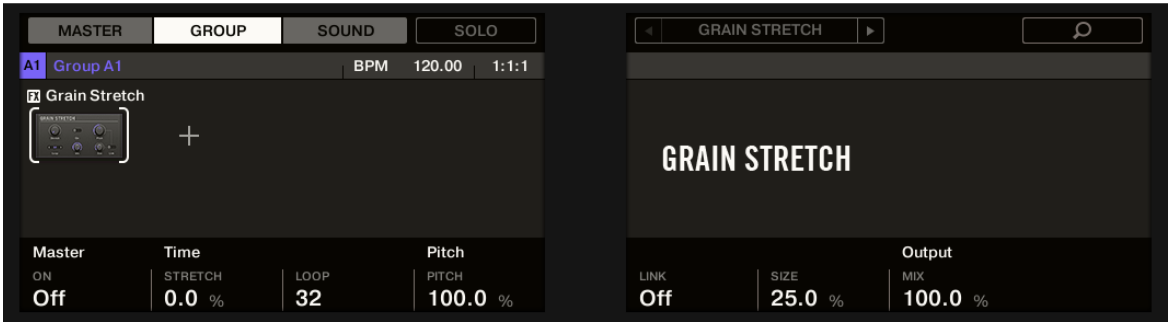


The Grain Stretch panel in the Plug-in Strip.



The Grain Stretch in the Control area.

Parameter	Description
MASTER Section	
On	Enables the effect. Every time this control is switched on, the Grain Stretch effect buffers incoming audio for 32 x 1/16th step.
TIME Section	
Stretch	Defines the time-stretch amount. Set to *50.0 %* for half speed.
Loop	Sets a loop length, in 1/16th steps.
PITCH Section	
Pitch	Adjusts the pitch of the grains.
Link	When on, grain size is corrected by the pitch.
Size	Adjusts the size of the grains.
OUTPUT Section	
Mix	Mix lets you adjust the amount of the effect in relation to the dry original audio signal.



The Grain Stretch on the controller.

12.5.4 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.



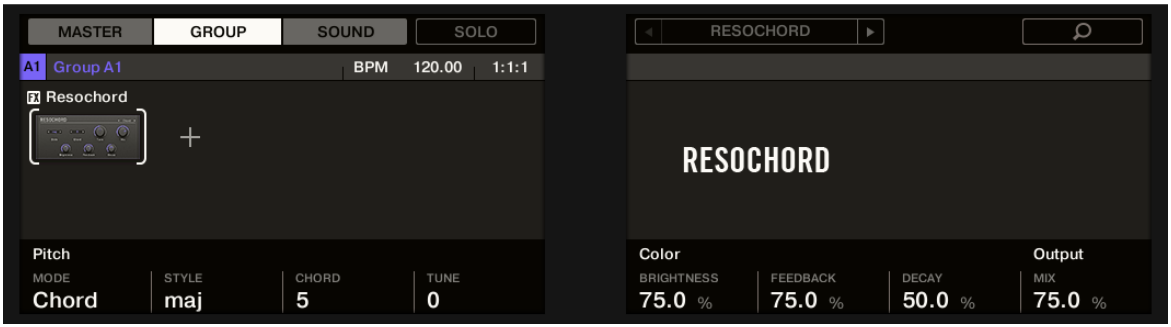
The Resochord panel in the Plug-in Strip.



The Resochord in the Control area.

Parameter	Description
PITCH Section	
Mode	Here you can select between the two modes of the Resochord: *Chord* and *String*. In Chord mode, the 6 combs are tuned according to various chords. In String mode, the 6 combs are centered around one frequency and can be spread for an intense chorus-like effect. Depending on your selection the other parameters in the Pitch area will change.

Parameter	Description
Spread (String mode)	Allows you to define how big the difference in tuning is between combs.
Style (Chord mode)	You can select between different chord-styles such as minor or major.
Chord (Chord mode)	Here you can choose from different chords to be applied to your audio signal.
Tune	It allows you to transpose the Resochord in semitones.
COLOR Section	
Brightness	This is to determine the basic sound characteristic of the Resochord: higher values will brighten the sound by adding high frequencies.
Feedback	Adjusts the amount of output signal fed back into the input.
Decay	With Decay you adjust how fast the Resochord fades out.
OUTPUT Section	
Mix	Mix lets you adjust the amount of the effect in relation to the dry original audio signal.



The Resochord on the controller.

12.6 Distortion Effects

12.6.1 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.



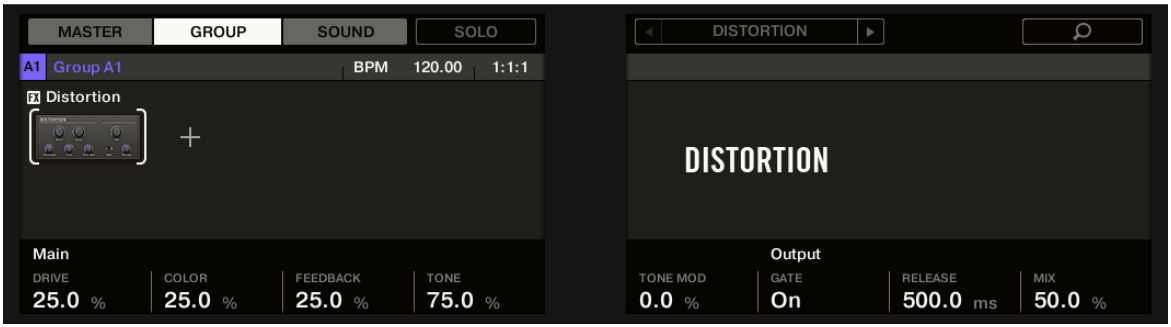
The Distortion panel in the Plug-in Strip.



The Distortion in the Control area.

Parameter	Description
MAIN Section	
Drive	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.

Parameter	Description
Feedback	Adjust the amount of output signal fed back into the input.
Tone	General tonal characteristic of the feedback signal.
Tone Mod	Modulation introduced in the feedback signal.
OUTPUT Section	
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.



The Distortion on the controller.

12.6.2 Lofi

The Lofi effect reduces the bit depth (or bit resolution) and Sample rate of the audio signal for an interesting “vintage” effect at subtle settings, and heavy digital distortion at extreme settings.

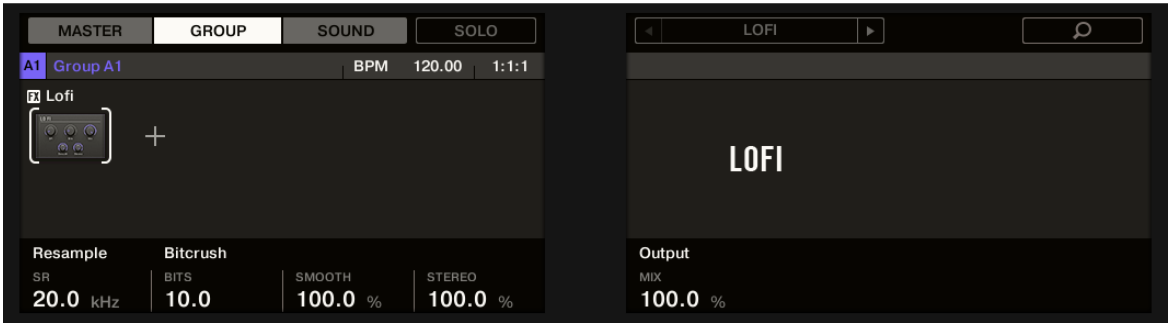


The Lofi panel in the Plug-in Strip.



The Lofi in the Control area.

Parameter	Description
RESAMPLE Section	
SR	SR stands for Sample Rate and ranges from CD-quality (44.1 kHz) to 99.5 Hz which results in a hissy crackle.
BITCRUSH Section	
Bits	Introduces a distortion based on bit reduction.
Smooth	Reduces the aliasing introduced by the Lofi effect.
Stereo	Widens the stereo field of the effect.
OUTPUT Section	
Mix	Mix lets you adjust the amount of the effect in relation to the dry original audio signal.



The Lofi on the controller.

12.6.3 Saturator

The Saturator is a flexible tool allowing you to apply various types of saturations to your signal. The Saturator offers three modes: Classic (legacy mode), Tape, and Tube. You can select the desired mode via the Mode selector. Since the three modes provide different sets of parameters, each of them is described separately below.



The Saturator panel (here in Tube mode) in the Plug-in Strip.

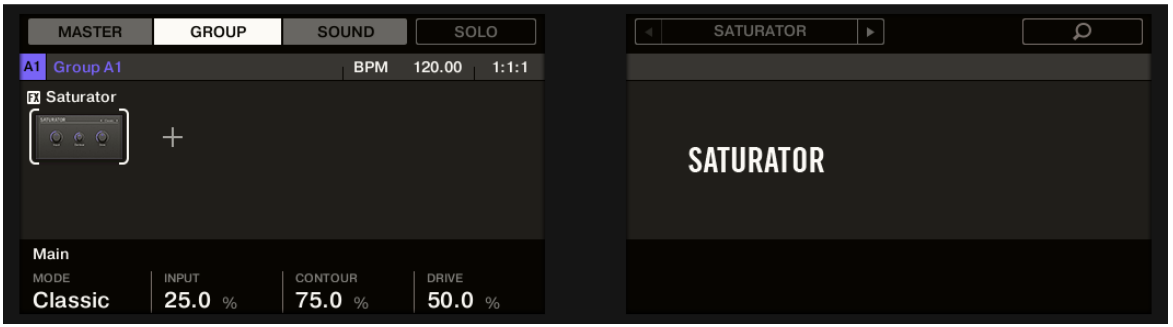
Classic Mode

The Classic mode is the legacy mode. It combines compression and saturation to increase the overall loudness and add additional harmonics.



The Saturator in Classic mode in the Control area.

Classic Mode – Parameter	Description
MAIN Section	
Mode	Selects between *Classic*, *Tape*, and *Tube* saturation modes. All other parameters vary according to the mode selected here.
Input	Controls the input gain of the effect. Increasing Input will also increase the amount of compression performed on the audio signal.
Contour	Determines how closely the Saturator responds to the input volume. Higher values create a more distorted sound.
Drive	Adjusts the amount of distortion introduced by the Saturator.



The Saturator in Classic mode on the controller.

Tape Mode

The Tape mode emulates the soft compression and pleasant saturation induced by recording to analogue magnetic tapes. It can be used lightly to add warmth and coloring to the sound, or heavily to add aggressive distortion.



The Saturator in Tape mode in the Control area.

Tape Mode – Parameter	Description
MAIN Section	
Mode	Selects between *Classic*, *Tape*, and *Tube* saturation modes. All other parameters vary according to the mode selected here.
Input	Controls the input gain of the effect. This affects the amount of tape distortion and compression.
Contour	Controls the high frequency roll-off starting frequency. Frequencies above this point will be attenuated.
Drive	Controls the low frequency boost/cut of the effect.

Tube Mode

The Tube mode emulates the smooth saturation of overdriven tube amplifiers. It is equipped with a feedback-driven dynamic compression and an additional EQ section allowing you to fine adjust the frequency content to be processed.



The Saturator in Tube mode in the Control area.

Tube Mode – Parameter	Description
MAIN Section	
Mode	Selects between *Classic*, *Tape*, and *Tube* saturation modes. All other parameters vary according to the mode selected here.
Charge	In Tube mode the Saturator provides a negative feedback loop that attenuates the level at the Saturator's input according to the amount of low frequencies at its output. This notably prevents the bass content "polluting" the saturation. The Charge parameter allows you to adjust the amount of feedback. At 0 (full left) the feedback loop is disabled. Increase the Charge value to strengthen the effect. Higher values additionally generate an interesting compression-like effect.
Overload	Boosts the low frequencies of the input signal. Used together with the Charge parameter (see above) it provides you with a powerful tool to produce a richer, fatter sound.
Drive	Adjusts the level of the input signal. This directly affects the amount of tube distortion.
EQ Section	
Bypass	Enable this button to bypass the EQ section.
Bass	Adjusts the level of the low frequency band.
Treble	Adjusts the level of the high frequency band.

Tube Mode – Parameter	Description
OUTPUT Section	
Gain	Adjusts the output level of the effect. Use this to compensate for changes in volume caused by input gain and signal compression.

12.6.4 Analog Distortion

The Analog Distortion be used to add grit to Drums and Percussion, Lead Synths and Guitars.



The Analog Distortion panel in the Plug-in Strip.



The Analog Distortion in the Control area (Main page depicted).

Main Page

Element	Description
MODE Section	
Mode	Select between two distortion modes: Analog and Mulholland (default: Mulholland).
DISTORTION Section	
Saturation	Sets the amount of saturation applied to the signal. Available values range from 0.0 to 100.0% (default: 25.0%).
Bass	Attenuates the low frequencies of the distortion effect. Available values range from 0.0 to 100.0% (default: 100.0%).
Tone	Sets the frequency for the high cut filter. Filtering the harmonically rich distorted signal produces a softer tone. Available values range from 0.0 to 100.0% (default: 100.0%).
Focus	Switches the frequency range of the processed signal, pulling it slightly further forwards in the mix. The effect is more pronounced when Definition is set to lower values.
Definition	Determines how pronounced the distortion effect is. Available values range from 0.0 to 100.0% (default: 50.0%).
OUTPUT Section	
Mix	Mix lets you adjust the amount of the effect in relation to the dry original audio signal. Available values range from 0.0 to 100.0% (default: 100.0%).

12.7 Perform FX

Designed for spontaneous, tactile control in recording or live performance, these eight complex multi-effects alter motion, space, dynamics, and more for added expression.

- **Filter**: The Filter is a raw-sounding, analog-modelled LP/BP/HP filter with additional saturation parameters and resonance that can be pushed into self-oscillation. For more information see section ↑12.7.1, Filter.
- **Flanger**: The Flanger is a comb filter effect. It can behave like a standard flanger or phaser but can also go pretty wild and sound more like a creative delay if you push the decay and delay time. Various tone-shaping controls are available. For more information see section ↑12.7.2, Flanger.
- **Brst Echo**: The Burst Echo is a warm, versatile echo with plenty of character. It's great as a dub echo but can also be used for quite extreme sound design. For more information see section ↑12.7.3, Burst Echo.
- **Reso Echo**: The Reso Echo is a crazy psychedelic echo which can be tightened up into a punchy resonator. For more information see section ↑12.7.4, Reso Echo.
- **Ring**: Based on a bank of ring modulators, the Ring effect adds a bell-like quality to melodic sound sources. An additional plate reverb lets you pick out individual notes with your finger and have them ring out for several seconds. For more information see section ↑12.7.5, Ring.
- **Stutter**: Stutter is a beat-mangling effect, great for adding glitches and fills to drum patterns and more. For more information see section ↑12.7.6, Stutter.
- **Tremolo**: Tremolo is a tremolo/vibrato effect, useful for adding expression and movement on the fly. For more information see section ↑12.7.7, Tremolo.
- **Scratcher**: At its most basic, Scratcher allows you to apply a turntable "brake" to the incoming signal and then scratch it, as if on vinyl. But an additional pitchshifter delay, linked to the Smart Strip position, adds a wealth of sonic possibilities, from simple thickening to alien-sounding sweeps. For more information see section ↑12.7.8, Scratcher.

12.7.1 Filter

An analog-modeled High, Low, and Band-pass filter capable of yielding raw, natural-sounding results using saturation and resonance. Roll off the highs for a thick, murky veil, or use the resonance to create sounds that float into self-oscillation infinity.



Filter Perform FX in the Plug-in Strip.



Filter Perform FX in the Control area.

Main Page

Parameter	Description
MODE Section	
Mode	Select an effect.
TOUCHSTRIP Section	

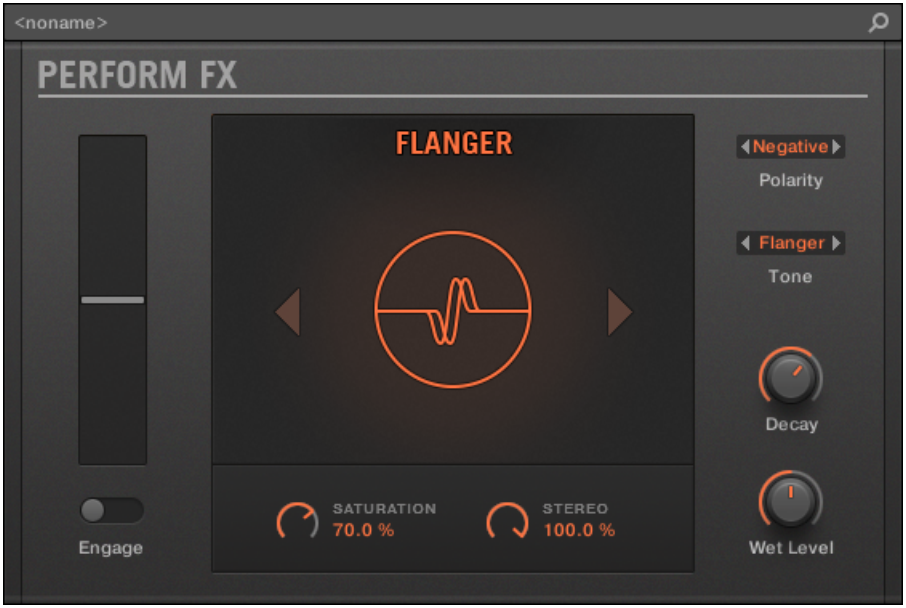
Parameter	Description
Engage	Activates the filter.
Frequency	Sets the cutoff frequency according to the min/max range parameters.
FILTER	
Type	Selects from Low Pass, Band Pass and High Pass modes.
Resonance	Sets the resonance of the filter. Values over 100% will lead to self-oscillation—be careful! Turn down the Output Gain (and turn up the Saturation to compensate) in order to avoid extremely loud ringing. Note that the resonance will sound more pronounced at lower saturation settings and vice versa.

Setup Page

Parameter	Description
RANGE Section	
Min. Freq	Sets the lower limit for cutoff frequency.
Max. Freq	Sets the upper limit for cutoff frequency.
SATURATION Section	
Saturation	Sets the input gain of the filter.
Out Level	Sets the output gain of the filter.

12.7.2 Flanger

A comb filter effect with more than a few tricks up its sleeve. Get performance-ready flanger or phaser effects, or expose its wild side – setting higher decay and frequency values unleashes ping-pong delay-like flutter effects.



Flanger Perform FX in the Plug-in Strip.



Flanger Perform FX in the Control area.

Main Page

Parameter	Description
MODE	
Mode	Select an effect.
TOUCHSTRIP	

Parameter	Description
Engage	Activates the effect.
Frequency	Controls the volume of the comb filter.
FLANGER	
Decay	Controls the decay time.
SATURATION	Controls the saturation in the feedback path, producing a dirtier, compressed sound.
STEREO	Controls the stereo spread of the effect.

Setup Page

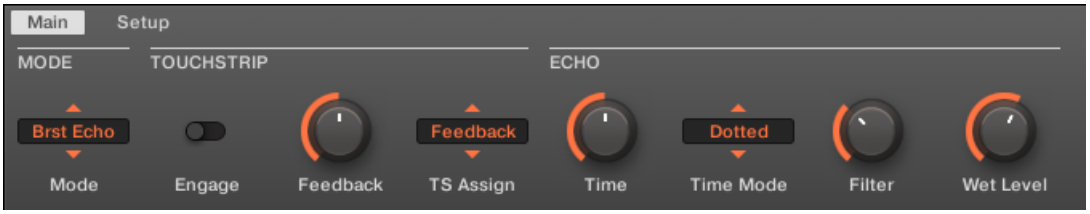
Parameter	Description
COLOR	
Polarity	Flips the phase of the signal in the feedback loop. Negative polarity lowers the pitch by an octave and produces a slightly hollower sound.
Tone	Offers the choice between Flanger mode, essentially a straightforward comb filter or short delay, and Phaser mode, which shifts the phase of the signal in the feedback loop to produce a more rounded, hollow tone.

12.7.3 Burst Echo

A warm, versatile echo with plenty of character, designed for spontaneous splashes of echo. Strong, responsive attacks that taper off into hazy trails are perfect for dub and can also be tweaked for more extreme sound design.



Burst Echo Perform FX in the Plug-in Strip.



Burst Echo Perform FX in the Control area.

Main Page

Parameter	Description
MODE	
Mode	Select an effect.
TOUCHSTRIP	

Parameter	Description
Engage	Activates the effect. When activated, feeds a burst of signal into the effect according to the length set by the Feed parameter.
TS Assign	Assigns the control to Feedback or Time. Feedback: Sets the delay feedback when the effect is activated. The feedback is reduced when the effect is disengaged.
ECHO	
Time	Controls the delay time, either continuously or in quantized divisions according to the Time Mode.
Time Mode	Sets the rhythm mode of the delay, either in quantized note divisions (Straight/Dotted/Free) or unquantized (milliseconds).
Filter	Adjusts the LP and HP filter in the feedback loop. At 0%, the filter is fully open. At higher values, the HPF frequency increases and LPF frequency decreases for more aggressive filtering.
Wet Level	Adjusts the volume of the delayed signal.

Setup Page

Parameter	Description
ROUTING	
Mix Mode	Mix mode sets the routing of the signal: ▪ In Mix mode, the dry signal is passed unprocessed and the wet signal is added on top according to the Wet Level parameter. ▪ In Replace mode, the dry signal is muted after the first repetition, leaving only the delay tail audible until the effect is released. ▪ In Wet Only mode, the dry signal is muted entirely, which is useful for placing the effect on a send.
Feed	Sets the length of the burst of audio to feed into the delay input whenever the effect is initially activated. Shorter burst lengths (e.g. 100-150ms) are useful for picking out notes or drum hits. Longer burst lengths (up to a second) can be used to repeat musical phrases. Set to maximum (>99%), the feed is continuous, deactivating burst mode entirely and simply feeding the delay whenever the effect is on.

12.7.4 Reso Echo

A complex resonant echo with advanced feedback and saturation that verge on psychedelic tendencies. Echoes range from a tight, punchy resonant hum to ambiguous howling sounds from another dimension.



Reso Echo Perform FX in the Plug-in Strip.



Reso Echo Perform FX in the Control area.

Main Page

Parameter	Description
MODE	
Mode	Select an effect.
TOUCHSTRIP	

Parameter	Description
Engage	Activates the effect.
Frequency	Controls the frequency of the filters in the filter bank, altering the tonality of the signal.
ECHO	
Time	Sets the delay time.
Feedback	Sets the delay feedback.
Pump	Controls the amount of compression applied to the feedback loop.
Wet Level	Controls the volume of the delayed signal.
Mix Mode	Sets the routing of the signal: - In Mix mode, the dry signal is passed unprocessed and the wet signal is added on top according to the Wet Level parameter. - In Insert mode, the dry signal is processed with a filter and the wet signal is added on top. The Wet Level parameter is an output level control for the whole effect while engaged. - In Wet Only mode, the dry signal is muted entirely, which is useful for placing the effect on a send.

Setup Page

COLOUR	
Saturation	Controls the amount of saturation applied to the feedback path.
Resonance	Controls the resonance of the filters in the filter bank. More resonance emphasizes the "singing" effect.

12.7.5 Ring

Built on a carefully selected bank of ring modulators, Ring adds a bell-like quality to melodic sound sources. Using the additional plate reverb, tweak a knob or Smart Strip to hand-pick individual notes and keep them ringing into the stratosphere.



Ring Perform FX in the Plug-in Strip.



Ring Perform FX in the Control area.

Main Page

Parameter	Description
MODE	
Mode	Select an effect.
TOUCHSTRIP	
Engage	Activates the effect.
Frequency	Controls the frequency of the ring modulators.
OSC	
Spread	Controls the frequency spread of the ring modulators. At low Spread values, the ring modulators converge to a single modulation frequency. At higher Spread values, the oscillator frequencies become further apart.
Glide	Sets the smoothing rate of the control position, allowing for pitch slides as you activate different values.
REVERB	
Rev Time	Controls the decay time of the plate reverb.
Rev Mix	Controls the dry/wet mix of the plate reverb.
MIX	
Dry/Wet	Controls the dry/wet mix of the overall effect.

Setup Page

Parameter	Description
ROUTING	
Mix Mode	Mix mode sets the routing of the signal: ▪ In Mix mode, the dry signal is passed unprocessed and the wet signal is added on top according to the Wet Level parameter. ▪ In Wet Only mode, the dry signal is muted entirely, leaving silence except when the effect is activated. This is useful for using Ring as an instrument with a sustained sound (e.g. a pad) as source material.

12.7.6 Stutter

Turn the intensity up, and down again with Stutter. This beat-mangling effect adds creative dynamics like glitches, fills, and expressive pitch-bending crescendos to drum patterns and more.



Stutter Perform FX in the Plug-in Strip.



Stutter Perform FX in the Control area.

Main Page

Parameter	Description
MODE	
Mode	Select an effect.
TOUCHSTRIP	

Parameter	Description
Engage	Controls a hard bypass. Activating the control commences looping, releasing the control bypasses the effect.
Length	Can be assigned to Length (loop length, by default) or Pitch (relative pitch) using TS Assign.
TS Assign	Assigns the control to Length or Pitch.
STUTTER	
Gate	Applies a volume envelope to the loop, exaggerating the "stutter" effect, especially at short loop lengths. Setting the parameter to 100% effectively disables the envelope whereas the gating is most extreme at 0%.
Pitch	Parameter controls playback pitch (relative to pitch when the effect is engaged) when the controls are assigned to Length, and the Length parameter controls loop length when the control is assigned to Pitch. Otherwise each of these parameters has no effect and is respectively hidden.
LOOP	
Direction	Controls the looping direction—Forward (always forward), Reverse (always reverse) or Both. In Both mode, direction is forwards by default on engage and whenever the most recent control movement was upwards, or reverse whenever the most recent control movement was downwards. The Direction parameter is available only when the TS Assign is set to Length.
Quantize	Quantizes the loop length and start point to the song position and tempo. When Quantize is off, the loop length is continuously variable and measured in milliseconds, and no quantization takes place. Quantization is especially meaningful if direction is set to Reverse or Both, since it's during reverse playback where a poorly timed loop will sound completely off-time.

12.7.7 Tremolo

A no-frills tremolo and vibrato effect that's perfect for creating motion and wobble on the fly. Instantly add expression with multiple modes, Rate, and Depth ranges, and use the Stereo knob to create auto-pan motion effects.



Tremolo Perform FX in the Plug-in Strip.



Tremolo Perform FX in the Control area.

Main Page

Parameter	Description
MODE	
Mode	Select an effect.
TOUCHSTRIP	
Engage	Enables and disables the effect.
Position	Controls the tremolo and vibrato rate and depth, within the ranges defined by the Min and Max parameters on the second page.
TREMOLO	
Trem/Vibr	Controls the balance between tremolo (modulation of amplitude) and vibrato (modulation of frequency/pitch).
Vibr Mode	Sets the vibrato mode. Two are available: Varispeed, which modulates the playback speed of the audio, much like moving the pitch control on a turntable or tape player, and Freq Shift, which uses a modulated frequency shifter. Freq Shift produces a somewhat detuned sound due to the nature of the frequency shifting—low frequencies are more audibly shifted than high frequencies. Varispeed scales pitches evenly across the audible range, but it introduces small fluctuations in timing.
Attk/Rel	Controls the speed at which the effect comes on after turning the effect on and tails off after releasing the effect.
Stereo	Controls the stereo width of the modulation.

Setup Page

Parameter	Description
DEPTH RANGE	
Depth Min	Controls the amplitude of the modulation when the parameter position is set to 0%.
Depth Max	Controls the amplitude of the modulation when the parameter position is set to 100%.
DEPTH RANGE	
Rate Min	Controls the rate of the modulation when the parameter position is set to 0%.
Rate Max	Controls the rate of the modulation when the parameter position is set to 100%.

12.7.8 Scratcher

Scratcher warps your sounds with turntable motion effects that can get other-worldly. Apply a 'brake' to a sound, then scratch with it – just like on vinyl. Or use the pitch shifter delay to thicken the sound and create alien-sounding sweeps.



Scratcher Perform FX in the Plug-in Strip.



Scratcher Perform FX in the Control area.

Main Page

Parameter	Description
MODE	
Mode	Select an effect.
TOUCHSTRIP	

Parameter	Description
Engage	Engages the turntable brake, enabling scratch control. When released, the effect is bypassed entirely.
Position	Controls the brake speed (higher = slower brake), the scratch position (higher = forward) and the delay time (higher = longer delay time).
SWIRL	
Delay Time	Controls the delay time range. Longer values produce a delay effect. Shorter values result in a comb filtering effect. The Position parameter acts as a further scale factor on this delay time.
Feedback	Controls the delay feedback.
Freq Shift	Controls a frequency shifter in the delay feedback loop. At 12 o'clock, the frequency shifter is disabled. Swirling, alien and metallic sounds can be made by enabling the frequency shifter and increasing the feedback.
Wet Level	Controls the level of the delay effect.

13 Creating a Song Using Scenes

In MASCHINE, a song is made of a variable number of **Scenes**, which represent the different parts of the song — e.g., intro, verse, chorus, break, another verse... Scenes provide a very flexible way to arrange your song.

13.1 Arranger Basics

The place where you organize Scenes is the **Arranger**, located in the top right part of the MASCHINE window.



For the Arranger to be visible the software must be in Arrange view (true by default). If you cannot see the Arranger, click the highlighted Mix View button left of the Mixer to switch from Mix view to Arrange view. You can also do this from your controller — see section ↑2.2.3, Switching between Arrange View and Mix View for more information.

The Arranger shows your Scenes in columns. You can have any number of Scenes.

To get you started we recommend you load a Project from the Factory Library and have a look at the Arranger:



Factory Project "Slammin'" in the Arranger with Scene 3 selected.

This is how Scenes work:

- Only one Scene is played at a time.
- In each Scene (i.e. each column of the Arranger), you can choose to play one particular Pattern of each Group.

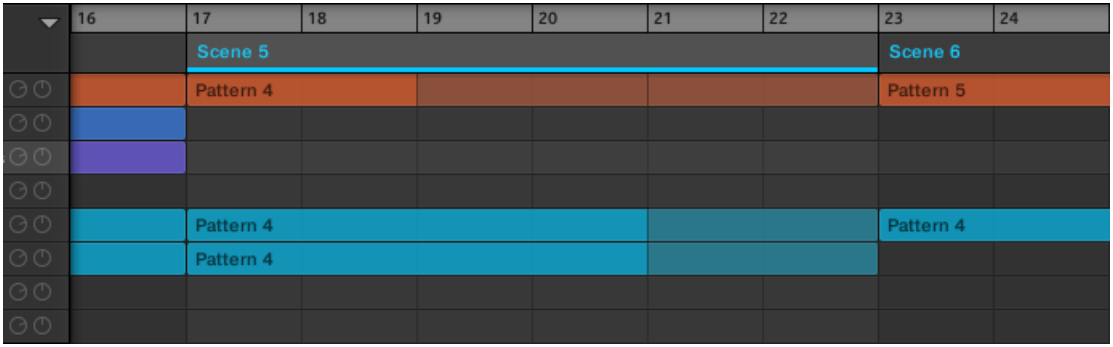
- A Pattern can be played in several Scenes: In fact a Scene only contains a **reference to your Pattern**, and you can place as many references to this Pattern as you want in different Scenes in the Arranger. When you modify your Pattern in the Pattern Editor, all references to it in the Arranger are updated accordingly. These references are called **Clips**. In the Arranger, you create, delete, and edit Clips — that is, references to your Patterns.

Clips within Scenes

Scenes and Clips obey following rules:

- By default the length of a Scene is automatically set to the longest Clip used within the Scene (**Auto Length**), unless the length of the Scene is manually set to a specific bar range (**Manual Length**).
    - **Auto Length**: By default, the length of a Scene corresponds to the longest Clip used in the Scene. Inserting a new Clip that is longer than the Scene automatically extends the Scene. Removing the longest Clip from the Scene automatically shrinks the Scene. Extending/shrinking the longest Clip automatically extends/shrinks the Scene accordingly.
    - **Manual Length**: A Scene that has been changed manually to a set length, can be shorter or longer than its contained Patterns. Inserting or removing Clips from the Scene will not alter the length of the Scene. The length of a Scene can be changed via dragging with the mouse directly in the timeline or by using your MASCHINE controller.
- If a Clip is shorter than the Scene it is placed in, it is **automatically repeated** until the end of the Scene (the last repetition might be shortened). These repetitions are automatically generated and cannot be edited. They reference the same Pattern as the original Clip

placed at the beginning of the Scene. Repetitions of a Clip are indicated by darker blocks in the Arranger:



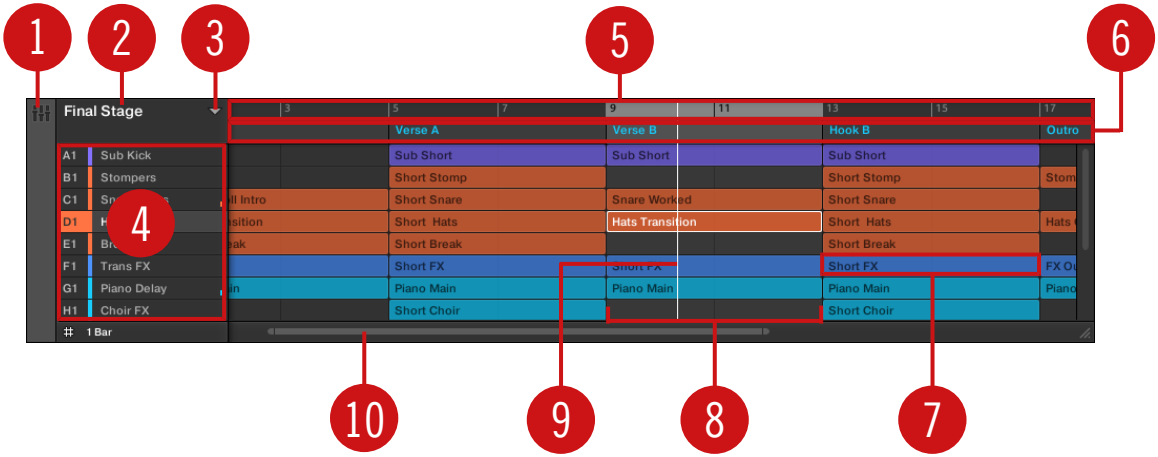
- If a Scene has been manually shortened, only the visible part of the Clip within the set length will be audible.
- Clips always start at the beginning of the Scene.

As a notable consequence, whatever you do in the Arranger, your Patterns stay untouched — with one exception: When you double-click a Clip, you can enter a name that will be saved to the referenced Pattern. See ↑7.7.6, Naming Patterns for more on this.

13.1.1 Arranger Overview

In the MASCHINE software, the Arranger is where you define what should play with what, and when.

This overview of the Arranger introduces you its main parts and control elements.



An overview of the Arranger.

(**1**) **Mix View button**: Click the Mix View button to switch the MASCHINE software between the Arrange view and the Mix view. The Arranger is visible only in Arrange view, i.e. only if the Mix View button is disabled.

(**2**) **Project name:** The name of the Project is displayed here.

(**3**) **Scene Manager button**: Click this arrow to open the Scene Manager. The Scene Manager allows you to organize your Scenes and provides all necessary Scene management functions. See section ↑13.2, Managing Scenes.

(**4**) **Group List**: All the Groups of your Project are listed here. In the row at the right of each Group you can choose which of its Patterns must be played in each Scene. You do this by creating Clips (**7**), each of them referencing a particular Pattern. See section ↑13.1.5, Creating and Removing Clips.

(**5**) **Arranger timeline**: The timeline at the top of the Arranger displays musical time units, including bars and beats. Click anywhere in the timeline to move the playhead (**8**) to that position (see section ↑13.1.4, Jumping to Another Playback Position in Your Project). Drag the Loop Range (**9**) or any of its border in the timeline to adjust the part of your song that will be looped.

(**6**) **Scene names**: The top of the Arranger displays all Scenes of your Project, represented by their name. All Clips located in the column under a Scene will be played together in that Scene. Clicking a Scene name selects the Scene, moves the playhead to that Scene (see section ↑13.3.2, Jumping to Other Scenes), and sets the Loop Range (**9**) to that Scene. By creating, deleting, duplicating and moving Scenes (in the top row of the Arranger or in the Scene Manager (**3**)) you can build up your entire arrangement. See section ↑13.2, Managing Scenes. If all Scenes cannot be displayed at once, use the horizontal zooming scroll bar (**10**) to navigate to the hidden Scenes.

(**7**) **Clips**: In a particular row, each Clip represents a Pattern from the Group at the left of that row in the Group List (**4**). Clips define which Pattern should be played in a Scene. Each Scene can have one Clip of each Group, and the same Pattern can be referenced by Clips in various Scenes.

(**8**) **Playhead indicator**: Shows the current playback position.

(**9**) **Loop Range**: Shows the region of your song that will be played in loop. In the timeline (**6**) the Loop Range is indicated by a lighter gray region. Drag this region or any of its borders in the timeline (**6**) to move or resize the Loop Range, respectively. You can also set the Loop Range to a particular Scene by clicking the Scene name (**5**) at the top of the Arranger, or double-click anywhere in the timeline (**6**) to set the Loop Range to all your Scenes together. See section ↑13.3.1, Selecting a Loop Range.

(**10**) **Horizontal zooming scroll bar**: Click the main part of the scroll bar and drag your mouse horizontally to scroll through the Arranger on the horizontal axis (time), or drag it vertically to zoom in/out on this time axis. You can also click the left or right handle of the scroll bar and drag it horizontally to zoom in/out while keeping the opposite border of the display at a fix position in the arrangement. Double-click the main part of the bar to reset the zoom and display all Scenes. See section ↑13.1.2, Navigating the Arranger.

Your controller provides numerous modes to work on your Scenes and their Clips:

- The Scene mode and Scene Arrange mode allow you to select and manage your Scenes, and work on the structure of your arrangement: ↑13.2, Managing Scenes.
- The Pattern mode lets you create and delete Clips: ↑13.1.5, Creating and Removing Clips.
- The Grid mode lets you adjust the Perform Grid used for transitions between Scenes: ↑13.3.2, Jumping to Other Scenes.

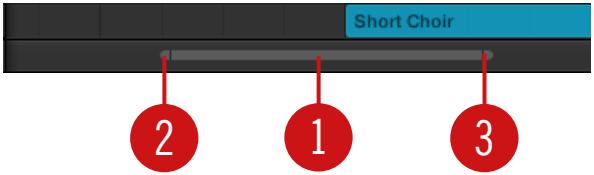
- Additionally, in all modes the TRANSPORT and EDIT section of your controller allow you to move and resize the Loop Range: ↑13.3.1, Selecting a Loop Range.

13.1.2 Navigating the Arranger

The Arranger can be scrolled and zoomed in or out to fit your current needs.

Navigating the Arranger Horizontally (Time)

A **zooming scroll bar** is available at the bottom of the Arranger. This tool allows you to both scroll and zoom in/out horizontally in the Event area and the Control Lane on the time axis:



The zooming scroll bar at the bottom of the Arranger.

Use the horizontal zooming scroll bar as follows:

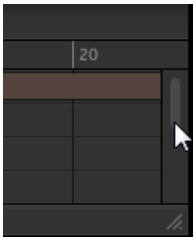
- Click the **main part** (**1**) of the scroll bar and hold the mouse button, then:
  - Drag your mouse horizontally to scroll through the Arranger on the time axis (common scroll bar behavior).
  - Drag your mouse vertically to zoom in or out of the Arranger on the time axis.
- Click the **left handle** (**2**) of the scroll bar, hold the mouse button, and drag your mouse horizontally to zoom in or out of the Arranger while keeping the right border of the display at a fixed position in the song.
- Similarly, click the **right handle** (**3**) of the scroll bar, hold the mouse button, and drag your mouse horizontally to zoom in or out of the Arranger while keeping the left border of the display at a fixed position in the song.
- Double-click the **main part** (**1**) to reset the zoom and display all Scenes.

Navigating the Arranger Vertically (Groups)

A classic scroll bar is available right of the Arranger. It allows you to scroll to hidden Groups in case all of them don't fit in the Arranger.

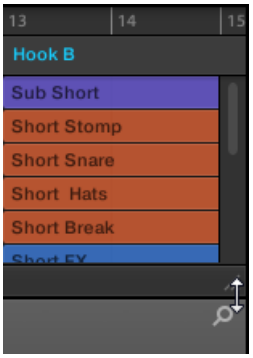


MS_SW_2.5_Arranger_zooming_bar_at_the_right



The classic scroll bar right of the Arranger.

You can also adjust the height of the Arranger in order to display more/less Groups at once by dragging its bottom right corner vertically with your mouse:

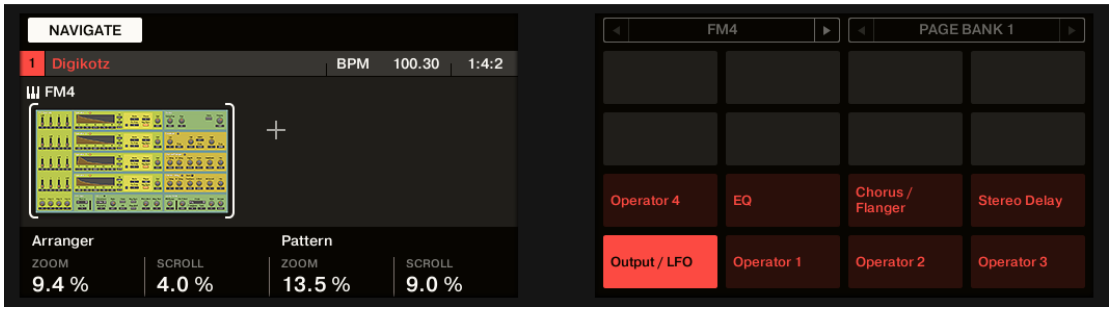


Drag the handle to adjust the Arranger's height.

Navigating the Arranger from the Controller

You can also control the position and zoom factor in the Arranger from your controller:

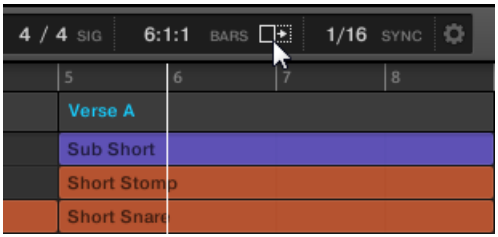
1. From Control mode, press and hold NAVIGATE to enter Navigate mode.



2. Turn Knob 1 (Arranger Zoom) to zoom in or out of the Arranger.
3. Turn Knob 2 (Arranger Scroll) to scroll through the Arranger.

13.1.3 Following the Playback Position in Your Project

If the Arranger doesn't display the entire Loop Range currently selected, at some point the playhead will go beyond the portion of your Project currently displayed in the Arranger and you might loose track of the playback position. To prevent this, you can force the Arranger to follow the playhead:



Activate the Follow button to keep following the playhead in the Arranger.

- ▶ To follow the playhead position in the Arranger during playback, click the Follow button in the MASCHINE Header.

→ The Follow button lights up in the MASCHINE Header. The Arranger will now switch to the next portion of your Project (with the same zoom factor) as soon as the playhead reaches the end of the portion currently displayed. This way, you always see the portion of your Project that is currently played.

> The Follow function will be automatically disabled as soon as you manually scroll in the Arranger or the Pattern Editor (in the software or from your controller).

The Follow function affects both the Pattern Editor and the Arranger simultaneously (see section ↑7.1.3, Following the Playback Position in the Pattern for more information on the Follow function in the Pattern Editor).

Following the Playback Position on Your Controller

To follow the playhead position in the Event area during playback:

1. Press ARRANGE to enter Arrange mode.
2. Press Button 3 (FOLLOW).

→ Both Button 3 and the FOLLOW label underneath light up. In the software the Arranger will now switch to the next portion of your Project (with the same zoom factor) as soon as the playhead reaches the end of the portion displayed. You can press ARRANGE again to leave Arrange mode: the Follow function will stay active.

The Follow function will be automatically disabled as soon as you manually scroll to another portion of the Pattern.

The Follow function simultaneously affects various displays in the software and on your controller:

- In the software the Follow function affects both the Pattern Editor and the Arranger.
- On your controller the Follow function affects the displays in Arrange mode (for both SCENE and PATTERN pages), Events mode, Step mode, and Note Repeat mode. Additionally, in Step mode the Follow function affects the pads: With Follow enabled, when the playhead has gone across all 16 steps shown by the pads on your controller, the pads automatically switch to the next 16 steps of the Pattern, if any. See section ↑7.4.2, Creating Events/Notes for more information on Step mode.

13.1.4 Jumping to Another Playback Position in Your Project

You can use the timeline under the Scene headers in the Arranger to set the playback to the desired position.

In the timeline and across the entire height of the Arranger, the playhead (a white vertical line) indicates the current play position in your Project.



The playhead shows you the current play position.

At any time you can jump to another position in your Project:

► Click anywhere in the timeline to move the playhead to that position in the Project.

Depending on the playback state, the following will happen:

- If playback is off, the playhead jumps to the closest Pattern Grid division before your mouse cursor. If the Pattern Grid is set to Off (i.e. disabled), the playhead jumps to the exact position you have clicked. If the Pattern Grid is set to Quick, the playhead jumps to the beginning of the bar you have clicked in.
- If playback is on, the playhead jumps to the closest position near your mouse cursor that retains the current playhead position relative to the Pattern Grid division. This allows seamless jumps that don't break the rhythm of your music. If the Pattern Grid is set to Off (i.e. disabled) or Quick, the playhead position is retained relative to the current bar.



For more information on the Pattern Grid, see section ↑7.1.6, Adjusting the Pattern Grid and the Pattern Length.

Example with playback on: Assuming that the Pattern Grid resolution is set to one bar, if you click around the 8.3 mark (3rd beat of the 8th bar) in the timeline when the playhead reaches the 3.2 mark (2nd beat of the 3rd bar), the playhead will jump from the 3.2 to the 8.2 mark (2nd beat of the 8th bar) and continue from there.



You can also change the playback position by switching to another Scene. The moment at which the jump will occur depends on the Perform Grid setting. See section ↑13.3.2, Jumping to Other Scenes for more information.

From your controller, you can control the playback position in two different resolutions.

Jumps Based on the Pattern Grid

► Turn the jog wheel to jump to the previous/next Pattern Grid division. You can also press the FUNCTION buttons under the jog wheel.

→ Depending on the playback state, the following will happen:

- If playback is off, the playhead jumps to the beginning of the previous/next Pattern Grid division.
- If playback is on, the playhead jumps to the same relative position in the previous/next Pattern Grid division. This allows seamless jumps that don't break the rhythm of your music.

If the Pattern Grid is set to OFF (i.e. disabled) or QUICK, the jumps are based on bars.



For more information on the Pattern Grid, see section ↑7.1.6, Adjusting the Pattern Grid and the Pattern Length.

Jumps Based on the Step Grid

You can also jump by finer increments:

► Hold SHIFT and turn the jog wheel to jump to the previous/next step, according to the current Step Grid settings. You can also hold SHIFT and press the FUNCTION buttons under the jog wheel.

→ Depending on the playback state, the following will happen:

- If playback is off, the playhead jumps to the beginning of the previous/next step.
- If playback is on, the playhead jumps to the same relative position in the previous/next step.

If the Step Grid is disabled (i.e. set to OFF), the jumps are based on bars.



For more information on the Step Grid, see section ↑7.1.7, Adjusting the Step Grid and the Nudge Grid.

13.1.5 Creating and Removing Clips

Each Clip placed in the Arranger references one of the Patterns available in the Pattern Editor for the corresponding Group. Therefore, “creating a Clip” means “creating a reference to the desired Pattern in the selected Scene,” while “deleting a Clip” means “removing the reference to the Pattern from the Scene.”

In the Arranger, each column represents a Scene and each row represents a Group.

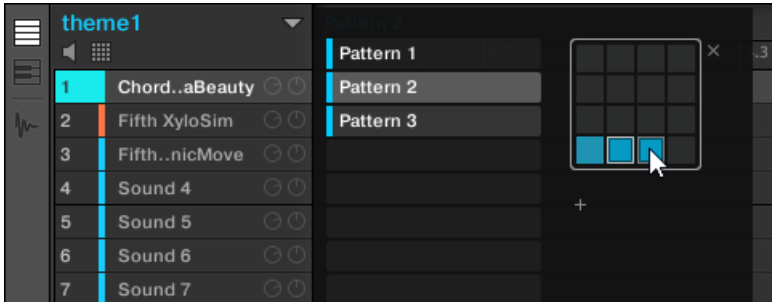
Creating a Clip Referencing an Existing Pattern

1. In the Arranger, click the cell located in the column of the desired Scene and in the row of the desired Group.
   This selects both the desired Scene and Group simultaneously.



   You can also click the desired Scene label and Group separately.

2. In the Pattern Editor, open the Pattern Manager and click the desired Pattern slot to select it (see section ↑7.7.2, Selecting Patterns and Pattern Banks for more information).



→ Upon your selection, a Clip referencing this Pattern is inserted into the selected Scene:

- The Clip replaces any previous Clip for that Group in the Scene.
- The Clip displays the name and color of the Pattern it is referencing.
- The Clip is inserted at the beginning of the Scene. If the Clip is longer than the Scene, the Scene is extended to include the entire Clip. If the Clip is shorter than the Scene, the Clip is automatically repeated in order to fill the entire Scene.
- The corresponding Pattern will now be played by that Scene.
- Additionally this Pattern is loaded in the Pattern Editor, ready to be modified.



Patterns and the Pattern Editor are described in chapter ↑7, Working with Patterns.



Double-clicking an empty cell in the Arranger will automatically create a Clip referencing a new empty Pattern.

Creating the Clip and the Pattern Simultaneously

You can also create a Clip referencing a new empty Pattern:

► In the Arranger, double-click the cell located in the column of the desired Scene and in the row of the desired Group.

→ A new empty Pattern is automatically created and referenced by a new Clip in the selected Scene.

Removing a Clip

Removing a Clip is done in the Arranger:

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

→ The Clip is removed from the Scene:

- The corresponding Pattern will not be played by that Scene anymore.
- The Pattern itself is left untouched.
- If the Clip was the longest in the Scene, the Scene is automatically shrinked to the next longest Clip.

Creating and Removing Clips on the Controller

Creating a Clip

Creating a Clip is done in Pattern mode.

First select the Scene in which you want to create a Clip:

1. Press and hold SCENE to enter Scene mode.

2. Press Button 7 and 8 to select the desired Scene bank.
3. Press the pad corresponding to the Scene in which you want to create a Clip.

Then create the Clip for the desired Group:

1. Press the desired Group button A–H to select the Group from which you want to select a Pattern.
2. Press and hold PATTERN.



Both your pads and the right display give you an overview of the available Patterns. Dim lit pads indicate the available Patterns. If a Clip already exists in the selected Scene for that Group, the referenced Pattern is highlighted and its pad is fully lit.

3. While you are holding PATTERN, press Button 7 or 8 to select the desired Pattern bank, then press the desired pad (or press the Page buttons) to select the Pattern you want to use in that Scene.

→ If you have pressed a dim lit pad, a Clip referencing this Pattern is inserted into the selected Scene. If you have pressed an unlit pad, a new empty Pattern is automatically created and referenced by a new Clip in the selected Scene. In both cases, any Clip previously existing for that Group in the Scene will be replaced.

Furthermore, the following happens:

- In the Arranger the Clip displays the name and color of the Pattern it is referencing.
- The Clip is inserted at the beginning of the Scene. If the Clip is longer than the Scene, the Scene is extended to include the entire Clip. If the Clip is shorter than the Scene, the Clip is automatically repeated in order to fill the entire Scene.
- The corresponding Pattern will now be played by that Scene.

- Additionally this Pattern is loaded in the Pattern Editor, ready to be modified.



For further information regarding the Pattern mode, please refer to section ↑7.7, Managing Patterns.

Removing a Clip

Removing a Clip is also done in Pattern mode:

▶ To remove the Clip for the selected Group from the selected Scene, press PATTERN + Button 2 (REMOVE).

→ The Clip is removed from the Scene:

- The corresponding Pattern will not be played by that Scene anymore.
- The Pattern itself is left untouched.
- If the Clip was the longest one in the Scene, the Scene is automatically shrinked to the next longest Clip.

13.2 Managing Scenes

Sequencing music in MASCHINE is done in a multi-tiered manner, the tiers being Patterns, Scenes, and Timeline. The most basic building block in the MASCHINE sequencer is the Pattern. This is where you program notes (events) and control information that trigger the Sounds, Instruments, and Effects loaded into a Group. You can have multiple Groups in your MASCHINE project, and each Group has its own unique set of Patterns.

Each Group will usually correspond to a musical element in your composition, such as Drums, Bassline, and Melody. You will then use the Patterns in these Groups to create motifs, riffs, or grooves for each part. For example, in the case of the drums, you might have a Pattern for the intro groove, a Pattern for the verse groove, and a third Pattern for the chorus groove. You can then make similar Patterns for the Bassline and Melody.

Once you've created these various musical motifs, you'll probably want to group them together to create "sections" in your composition. For example, the intro section of your song would probably include the intro Drum Pattern, the intro Bassline Pattern, and the intro Melody Pattern all playing together. This is the purpose of a Scene, which is essentially just a "snapshot"

of what Patterns should be playing on the Groups at any given time. You can have multiple Scenes in your project which correspond to multiple sections in your song, though only one Scene can play at a time. For example, you can have a Scene for the intro (as was just described), another Scene for the verse (which contains all the verse Patterns) and a third Scene for the chorus (which contains all the chorus Patterns). This now gives you the ability to play your composition live by triggering these various Scenes as you wish. You could for example, begin playing the intro Scene, let it play for 8 bars, then trigger the verse Scene and allow it to play for 32 bars. When it feels like it's time for the chorus, you trigger the chorus Scene and all the assigned chorus Patterns will play. If you want, after 16 bars, you could then trigger the verse Scene again to perform the second verse of your song.

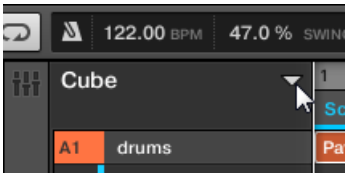
The Timeline is where you arrange the Scenes so that MASCHINE will trigger them automatically instead of requiring you to trigger them by hand. Following our previous example, you can put the intro Scene at the start of the Timeline and set its length to 8 bars. You can then place the verse Scene after it and give it a length of 32 bars. The chorus Scene would follow with a length of 16 bars. Now, when you play MASCHINE from the start of its Timeline, you'll hear your entire arrangement play back automatically. This is how you build a basic song structure in MASCHINE's sequencer.

However, once you have the basic structure in place, you may want to start introducing variations to the notes inside the Patterns, or to the Patterns used in a Scene. MASCHINE's sequencer offers a number of functions that help this process by either creating new data or by re-using existing data. Each approach has its own benefits and pitfalls, so you should familiarize yourself with all the methods so that you can choose the one that is most appropriate for what you are trying to do at any given time.

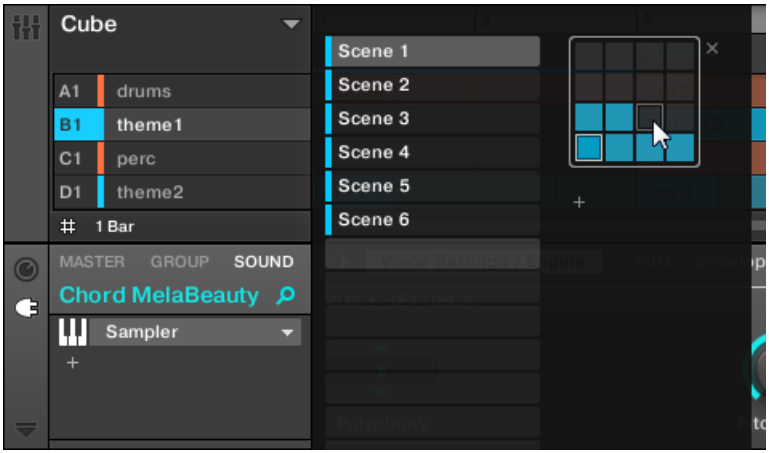
13.2.1 Scene Management Overview

In the software, all Scene management operations can be done in the **Scene Manager**:

- To open the Scene Manager, click the Scene Manager button (a down-pointing arrow) at the right of the Project name in the Arranger.



→ The Scene Manager appears underneath.



Use the Scene Manager to manage your Scenes.

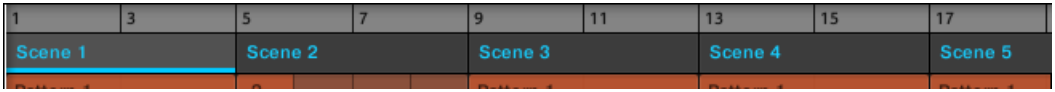
- On the left you can see the list of the 16 Scene slots in the selected Scene bank. Slots containing a Scene show a colored or white bar on the left along with the Scene name. The other slots contain no Scene. The selected Scene is highlighted (Scene 19 in the image above).
- On the right you can see the various Scene banks in form of pad grids — a pad grid is a square of 4x4 cells representing the pads of your controller. In each Scene bank the colored cells indicate Scene slots containing a Scene, while unlit cells indicate empty Scene slots. The selected Scene bank is surrounded by a white border (bank 2 in the picture above). If there are too many Scene banks to fit into the Scene Manager's height, use the scroll wheel of your mouse to display the other banks.
- The Scene slots on the left and the cells in the selected pad grid on the right are strictly equivalent: you can use either the slots or the corresponding cells to execute all the management commands described in the next sections.

Closing the Scene Manager

► To close the Scene Manager, click anywhere outside it.

Scene Manager vs. Arranger's Top Row

If all Scene operations can be done in the Scene Manager, most of them can also be done in the **top row of the Arranger**:



The top row of the Arranger.

The only difference between the Scene Manager and the Arranger's top row is that the Scene Manager allows you to manage your Scene banks, which is impossible in the Arranger's top row. Apart from this, actions in the Arranger's top row and in the Scene Manager are strictly equivalent.

The Scene Mode and Scene Arrange Mode on the Controller

On your controller you have two modes at your disposal to control your Scenes: the **Scene Arrange mode** and the **Scene mode**.

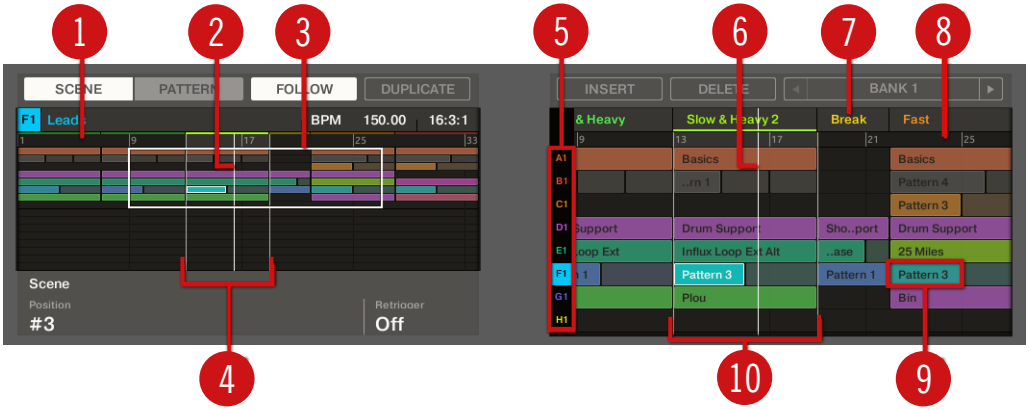
The Scene Arrange Mode

The **Scene Arrange mode** allows you to visually control the Scenes of your Project while providing important Scene management features. This mode allows you to easily build and modify your arrangement.

To enter Scene Arrange mode on your controller:

1. Press ARRANGE to enter Arrange mode.
   The ARRANGE lights up to indicate that Arrange mode is enabled.
2. Press Button 1 (SCENE) to enter Scene Arrange mode. You can also press BACK under the jog wheel.

→ Button 1 lights up and the SCENE label underneath is highlighted to indicate that the controller is in Scene Arrange mode.



The Scene Arrange mode in the controller displays.

In Scene Arrange mode, the displays of your controller show the following:

- The **left display** provides an **overview of the arrangement** for your entire Project:
  - Similarly to the Arranger in the software, you will find Scenes organized in columns and Groups organized in rows.
  - The overview includes a timeline (**1**) and shows the current Loop Range (**4**). A white vertical line indicates the current playback position (**2**). In addition, a frame (**3**) shows you which part of your arrangement is currently shown in the right display (see below).
  - Above the arrangement overview, you see the name of the Project, the focused Group or the focused Sound (depending on which of the MASTER, GROUP or SOUND tab is selected in the software's Control area) along with the current tempo and playback position.
- The **right display** provides a **detailed view of your Clips** for a portion of your arrangement:
  - Similarly to the left display and the Arranger in the software, you will find Scenes organized in columns and Groups organized in rows.
  - Vertically, only one Group bank is shown: At any time you will see the Group bank containing the focused Group. The eight Groups are represented in the leftmost column by their bank letter and index number (**5**). The focused Group is highlighted.

- Horizontally, the displayed time interval is variable: Turn Knob 5 and 6 to zoom and scroll in the right display to your liking, respectively. You can also enable Button 3 (FOLLOW) and let the right display follow the playhead as it travels through your arrangement — see section ↑13.1.3, Following the Playback Position in Your Project for more information.
- At the top of the right display you see the Scenes names (**7**) with the timeline (**8**) underneath. The name of the selected Scene is underlined. As in the left display, you can see the vertical playhead indicator (**6**) and the Loop Range (**10**) across the entire display.
- As in the software's Arranger, each Clip (**9**) shows the name and color of the Pattern it is referencing. The selected Clip (i.e. the Clip in the selected Scene for the focused Group) is highlighted. By pressing Button 2 (PATTERN) or the ENTER button under the jog wheel you can switch to Pattern Arrange mode and control the content of the Pattern referenced by this selected Clip — see section ↑7.1.1, Pattern Editor Overview.



To know how to modify the name and color of your Patterns, please refer to section ↑7.7.6, Naming Patterns and ↑7.7.7, Changing the Pattern's Color, respectively.

Furthermore, the pads on your controller represent the Scenes of the current Scene bank:

- The fully lit pad indicates the selected Scene slot.
- Dim lit pads indicate Scene slots containing a Scene.
- Unlit pads represent empty Scene slots.

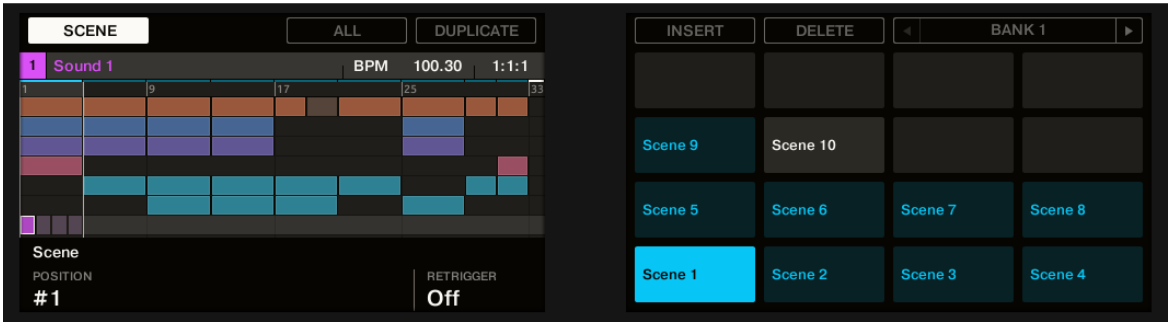
In addition, the Scene Arrange mode provides useful Scene management commands. These are described in the following sections.

Scene Mode

Although sharing many features with the Scene Arrange mode described above, the Scene mode focuses on Scene selection and manipulation rather than on their arrangement.

► To enter Scene mode on your controller, press and hold SCENE (you can pin it by pressing Button 1 at the same time).

→ Your controller switches to Scene mode. This is indicated by the lit SCENE button.



The Scene mode in the controller displays.

Apart from a few commands, the main difference between the Scene mode and the Scene Arrange mode is found in the right display of the controller: In Scene mode you see all Scene slots of the selected Scene bank represented as a square of 4x4 cells:

- The highlighted cell indicates the selected Scene slot.
- Cells showing a name represent Scene slots containing a Scene.
- Empty cells represent empty Scene slots.

This grid of cells shown in the right display corresponds to the pads of your controller, which have the same functionality as in Scene Arrange mode:

- The fully lit pad indicates the selected Scene slot.
- Dim lit pads indicate Scene slots containing a Scene.
- Unlit pads represent empty Scene slots.

In addition, the Scene mode provides useful Scene management commands similar to those of the Scene Arrange mode. These are described in the following sections.

13.2.2 Selecting Scenes and Scene Banks

You can select the desired Scene via the Scene Manager or directly in the Arranger.

Selecting a Scene in the Arranger

To select a Scene in the Arranger, do the following:

► Select the desired Scene by clicking its name at the top of the Arranger:

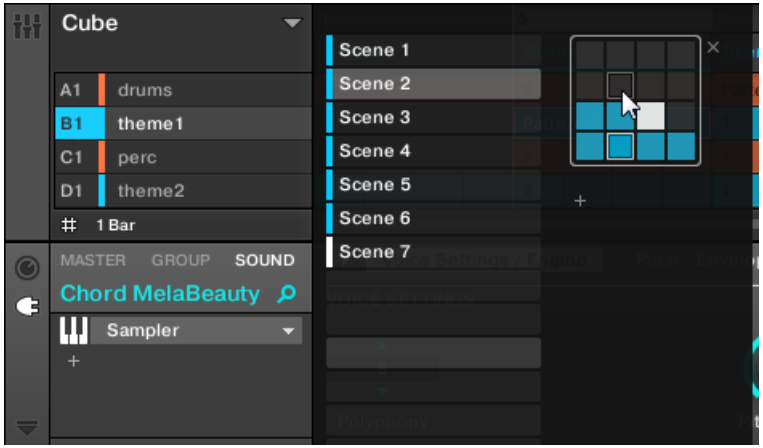


→ The Scene name is now underlined to indicate that this Scene is selected.

Selecting a Scene and a Scene Bank in the Scene Manager

To select a Scene in the Scene Manager, do the following:

1. Open the Scene Manager (see ↑13.2.1, Scene Management Overview).
2. If it is not already selected, select the Scene bank containing the desired Scene by clicking its pad grid on the right.



The selected Scene bank is surrounded by a white border, and the left part of the Scene Manager displays the Scene slots in that bank.

3. Select the desired Scene by clicking the slot with its name in the list on the left or by clicking its cell in the selected pad grid on the right.



→ The Scene slot and the corresponding cell on the right are now highlighted to indicate that this Scene is selected.

Once a Scene Has Been Selected…

Once you have selected a Scene using either of the methods described above, the following happens:

- The Pattern Editor displays the Pattern corresponding to the Clip for the focused Group in this Scene. If there is no Clip for the focused Group in the Scene you have just selected, the Pattern Editor is empty.
- Additionally, if the selected Scene is outside the current Loop Range:
  - The Loop Range is set to the selected Scene.
  - If playback is off the playhead immediately jumps to the beginning of the selected Scene. If playback is on the playhead jumps according to the Perform Grid settings.



For more info on the Loop Range see section ↑13.3.1, Selecting a Loop Range. For more info on the Perform Grid settings see section ↑13.3.2, Jumping to Other Scenes.

Selecting Scenes and Scene Banks on the Controller

Selecting a Scene Bank

To select a Scene located in another Scene bank than the one currently selected, you fist need to select that other Scene bank:

► Press SCENE + Button 7 or 8 to select the previous or next Scene bank, respectively.



If the last Scene bank is selected and not empty, pressing Button 8 will create a new, empty Pattern bank — see section ↑13.2.5, Creating and Deleting Scene Banks for more information.



You can also select Scene banks in Scene Arrange mode: press ARRANGE then Button 1 (SCENE), then use Button 7 and 8 as described above.

Selecting a Scene

► To select a Scene in the current Scene bank, press SCENE + the dim lit pad corresponding to the cell of the desired Scene on the right display. Alternatively you can press SCENE + Page buttons to select the previous/next Scene.



You can also select Scenes in Scene Arrange mode: press ARRANGE then Button 1 (SCENE), then use the pads or the Page buttons as described above.

Upon your selection, the following happens:

- The Pattern Editor displays the Pattern corresponding to the Clip for the focused Group in this Scene. If there is no Clip for the focused Group in the Scene you have just selected, the Pattern Editor is empty.
- If you have selected the Scene by pressing a pad, or if you have selected a Scene outside the current Loop Range via the Page buttons:
  - The Loop Range is set to the selected Scene — see section ↑13.3.1, Selecting a Loop Range.
  - If playback is off the playhead immediately jumps to the beginning of the selected Scene. If playback is on the playhead jumps according to the Perform Grid settings — see section ↑13.3.2, Jumping to Other Scenes.
- If you have selected a Scene within the current Loop Range via the Page buttons, the Loop Range and the playback position stay untouched.

13.2.3 Creating Scenes

You can create a new Scene via the Scene Manager or directly in the Arranger.

Creating a Scene in the Arranger

► To create a new Scene, click the "+" button located after all existing Scene names in the top row of the Arranger.



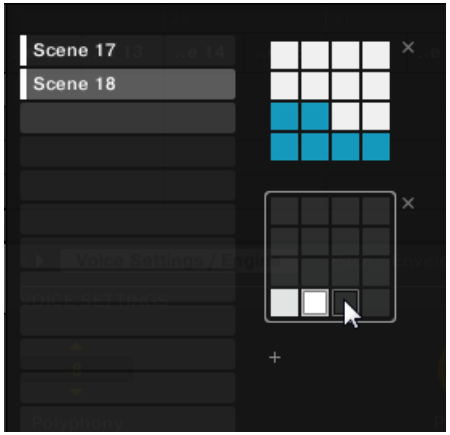
Click the "+" button to create a new Scene.

→ A new empty Scene is created after all existing Scenes. The new Scene also appears in the Scene Manager — it will be located in the last non-empty Scene bank right after the last Scene slot.

Creating a Scene in the Scene Manager

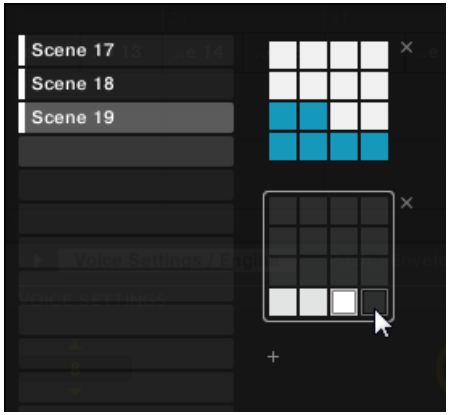
1. Open the Scene Manager (see ↑13.2.1, Scene Management Overview).

2. If it is not already selected, click the desired pad grid on the right to select the Scene bank where you want to create a Scene.



The selected Scene bank is surrounded by a white border, and the left part of the Scene Manager displays the Scene slots in that bank.

3. Click any empty Scene slot in the list on the left or click any dark cell in the selected pad grid on the right to create a new empty Scene there.

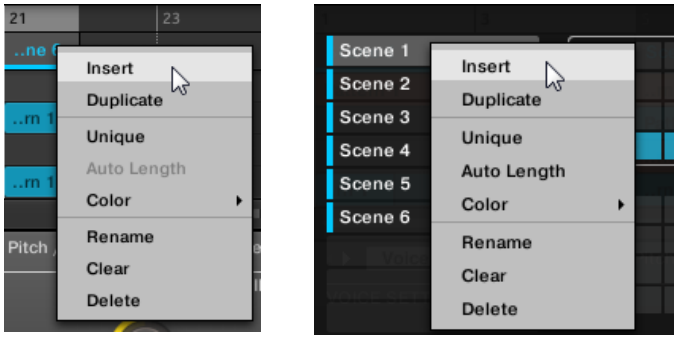


→ A new empty Scene is created in the selected Scene slot. The new Scene also appears in the pad grid on the right as well as in the Arranger — in the Arranger the new Scene is inserted at the location corresponding to its order of appearance in the Scene Manager.

Inserting a New Scene after Another Scene

You can also insert a new empty Scene after any existing Scene in your Project:

1. In the top row of the Arranger or in the Scene Manager, right-click ([Ctrl]-click on Mac OS X) the name of the Scene after which you want to insert the new Scene and select *Insert* from the context menu:



→ A new empty Scene is inserted right after the Scene in question, both in the Arranger and in the Scene Manager.

Creating a New Scene on Your Controller

► To create a new empty Scene in the current Scene bank, press SCENE + any unlit pad.



You can also create Scenes in Scene Arrange mode: press ARRANGE then Button 1 (SCENE), then press any unlit pad.

→ A new empty Scene is created at this position in the current Scene bank. Additionally the new Scene is selected. You can then fill it up with Clips both from your controller and in the software — see section ↑13.1.5, Creating and Removing Clips.

Inserting a New Scene after the Current Scene on the Controller

You can also insert a new Scene right after a particular Scene:

1. Press and hold SCENE to enter Scene mode.

2. Press Button 7 and 8 to select the desired Scene bank.
3. Press the pad corresponding to the Scene after which you want to insert a new Scene.
4. Press Button 5 (INSERT).

→ A new empty Scene is inserted right after the Scene in question.

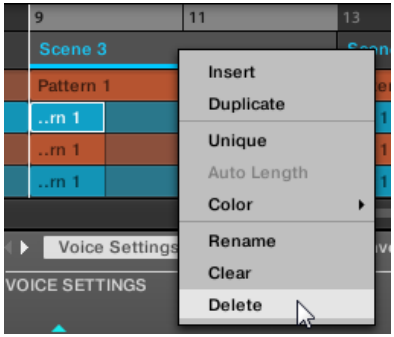


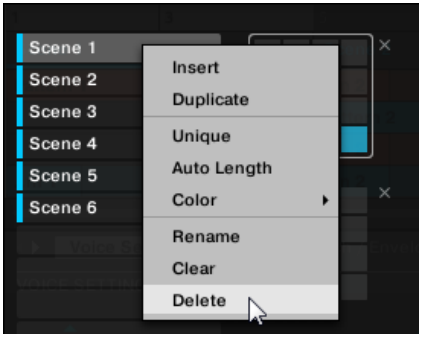
You can also insert new Scenes in Scene Arrange mode: press ARRANGE then Button 1 (SCENE) to enter Scene Arrange mode, then follow the procedure described above.

13.2.4 Deleting Scenes

To delete a Scene:

1. In the top row of the Arranger or in the Scene Manager, right-click ([Ctrl]-click on Mac OS X) the name of the Scene you want to delete and select *Delete* from the context menu:





→ The Scene is deleted with all its Clips. The next Scenes shift ahead to fill the gap.



Instead of deleting the Scene, which removes it entirely from your arrangement, you can also clear the Scene: This will only remove its content — the Scene will stay in your arrangement, but empty. For more information on clearing Scenes, see section ↑13.2.9, Clearing Scenes.

Alternate Method

Alternatively, you can delete Scenes as follows in the Scene Manager:

► To delete a Scene in the Scene Manager, hover the slot of the desired Scene with your mouse and click the little cross that appears on the right of the slot:



Deleting Scenes on the Controller

To delete a Scene on your controller:

1. Press and hold SCENE to enter Scene mode.
2. Press Button 7 and 8 to select the desired Scene bank.
3. Press the pad corresponding to the Scene you want to delete. Alternatively you can select the Scene by pressing the Page buttons.
4. Press Button 6 (DELETE).

→ The Scene is deleted with all its Clips. The next Scenes shift ahead to fill the gap.

Alternate Method

1. Press and hold SCENE to enter Scene mode.
2. Press Button 7 and 8 to select the desired Scene bank.
3. Press ERASE + the pad corresponding to the Scene you want to delete.

→ The Scene is deleted with all its Clips. The next Scenes shift ahead to fill the gap.



If the desired Scene bank is already selected (or if there is only one Scene bank), this alternate method can be simplified as follows: Press ERASE + SCENE + pad to delete the corresponding Scene!



You can also delete Scenes in Scene Arrange mode: press ARRANGE then Button 1 (SCENE) to enter Scene Arrange mode, then follow either of the procedures described above.

Deleting Scenes on the Controller

To delete a Scene on your controller:

1. Press and hold SCENE to enter Scene mode.
2. Press Button 7 and 8 to select the desired Scene bank.
3. Press the pad corresponding to the Scene you want to delete. Alternatively you can select the Scene by pressing the Page buttons.
4. Press Button 6 (DELETE).

→ The Scene is deleted with all its Clips. The next Scenes shift ahead to fill the gap.

Alternate Method

1. Press and hold SCENE to enter Scene mode.
2. Press Button 7 and 8 to select the desired Scene bank.
3. Press ERASE + the pad corresponding to the Scene you want to delete.

→ The Scene is deleted with all its Clips. The next Scenes shift ahead to fill the gap.



If the desired Scene bank is already selected (or if there is only one Scene bank), this alternate method can be simplified as follows: Press ERASE + SCENE + pad to delete the corresponding Scene!

Deleting Scenes on the Controller

To delete a Scene on your controller:

1. Press and hold SCENE to enter Scene mode.
2. Press SHIFT + Left/Right Arrow to select the desired Scene bank.
3. Press the pad corresponding to the Scene you want to delete.

4. Press F3 (DELETE).

→ The Scene is deleted with all its Clips. The next Scenes shift ahead to fill the gap.

Alternate Method

1. Press and hold SCENE to enter Scene mode.
2. Press SHIFT + Left/Right Arrow to select the desired Scene bank.
3. Press ERASE + the pad corresponding to the Scene you want to delete.

→ The Scene is deleted with all its Clips. The next Scenes shift ahead to fill the gap.



If the desired Scene bank is already selected (or if there is only one Scene bank), this alternate method can be simplified as follows: Press ERASE + SCENE + pad to delete the corresponding Scene!

13.2.5 Creating and Deleting Scene Banks

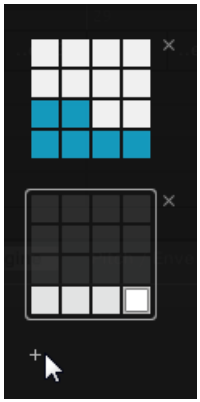
You can create and delete Scene banks in order to organize your Scenes to your liking.

Creating a Scene Bank

If the last Scene bank contains at least one Scene (even empty), you can create an additional Scene bank after that last bank. To do this:

1. Open the Scene Manager (see ↑13.2.1, Scene Management Overview).

2. Click the "+" symbol under the last pad grid on the right to create another Scene bank.



→ A new empty Scene bank is created and its pad grid appears in place of the "+" symbol.

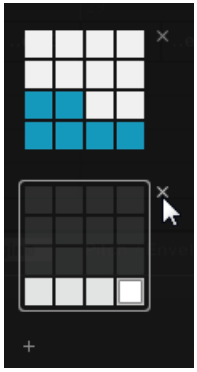
If the last Scene bank is empty, there is no "+" symbol under its pad grid and you cannot create any new Scene bank.

Deleting a Scene Bank

To delete a Scene bank:

1. Open the Scene Manager (see ↑13.2.1, Scene Management Overview).

2. Hover the pad grid of the desired Scene bank with your mouse.
   A little cross appears at the top right of the pad grid.



3. Click the little cross to delete that Scene bank.

→ The Scene bank is deleted including all its Scenes, if any. The following banks are shifted up to fill the gap.

Creating and Deleting Scene Banks on the Controller

Creating a Scene Bank

If the last Scene bank contains at least one Scene (even empty), you can create an additional Scene bank after that last bank. To do this:

1. Press and hold SCENE to enter Scene mode.
2. Press Button 8 repeatedly to select the last Scene bank.
   If this last bank contains at least one Scene, you can create an additional Scene bank.
3. Press Button 8 once more to create another Scene bank.

→ A new empty Scene bank is created and its content appears on the right display.



If the last Scene bank is empty, you cannot create any new Scene bank.

Deleting a Scene Bank

To delete a Scene bank:

1. Press and hold SCENE to enter Scene mode.
2. Press Button 7 and 8 to select the desired Scene bank.
3. Press SHIFT + Button 6 (DELETE) to delete the selected Scene bank.

→ The Scene bank is deleted including all its Scene, if any. The following banks are shifted up to fill the gap.



You can also create and delete Scene banks in Scene Arrange mode: press ARRANGE then Button 1 (SCENE) to enter Scene Arrange mode, then follow either of the procedures described above.

13.2.6 Naming Scenes

By default, Scenes are named Scene 1, Scene 2, Scene 3, etc. You can rename Scenes and use custom names of your own. Naming is only available from within the software, but any changes will also show up on your controller.

Renaming Scenes in the Arranger

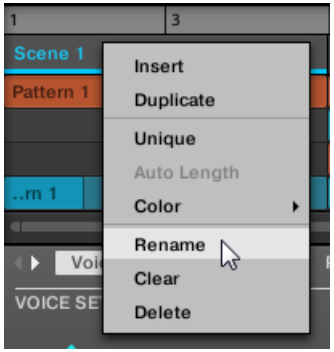
To rename a Scene in the Arranger:

1. Double-click the Scene name at the top of the Arranger:



You can also right-click ([Ctrl]-click on Mac OS X) the Scene slot or the corresponding cell

in the pad grid and select *Rename* from the context menu:



The Scene name gets highlighted and editable.

2. Type a name and press [Enter] on your computer keyboard to confirm (or press [Esc] to cancel you change).

→ The Scene is renamed.

Renaming Scenes in the Scene Manager

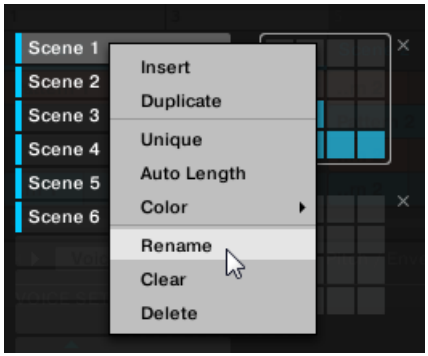
To rename a Scene in the Scene Manager:

1. Open the Scene Manager (see ↑13.2.1, Scene Management Overview).
2. If necessary, select the Scene bank containing the desired Scene by clicking its pad grid on the right.
3. On the right of the Scene slot, click the little pen icon:



You can also right-click ([Ctrl]-click on Mac OS X) the Scene slot or the corresponding cell

in the pad grid and select *Rename* from the context menu:



The Scene name gets highlighted and editable.

4. Type a name and press [Enter] on your computer keyboard to confirm (or press [Esc] to cancel your change).

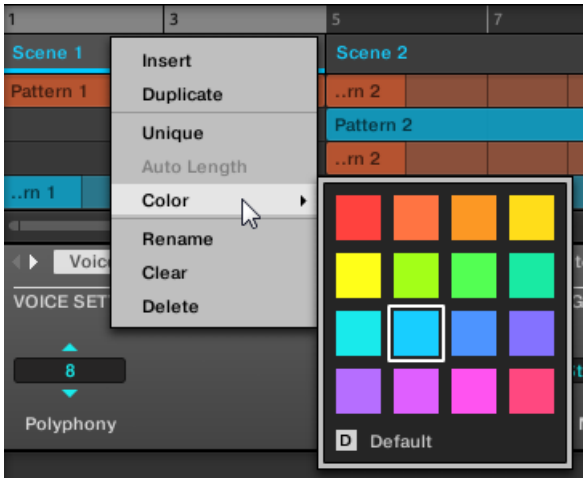
→ The Scene is renamed.

If you use MASCHINE as a plug-in, some hosts will utilize 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.

13.2.7 Changing the Scene's Color

You can change the color of each Scene in the software. To do this:

1. Right-click ([Ctrl]-click on Mac OS X) the name of the desired Scene in the Arranger or in the Scene Manager, and select *Color* from the context menu.
   A Color Palette appears. In the Palette, the current color of the Scene is highlighted.



2. Select the desired color in the Palette. You can also choose to set the Scene back to its default color by selecting *Default* at the bottom of the Color Palette.

→ The Scene slot takes the new color you select.



By default, Scenes are white. But you can choose another default color for Scenes in *Preferences* > *Colors* > *Scene Default*. See section ↑2.6.10, Preferences – Colors Page for more information.



Once you have set a custom color for a Scene as described above, the Scene will retain its color when you move it in the Arranger (or in the Scene Manager), and the color will be stored with the Scene when you save your Project. Note that you can select the same color as the one used by default: In that case the color (even unchanged) will be considered as a custom color and will follow the Scene as you move it.

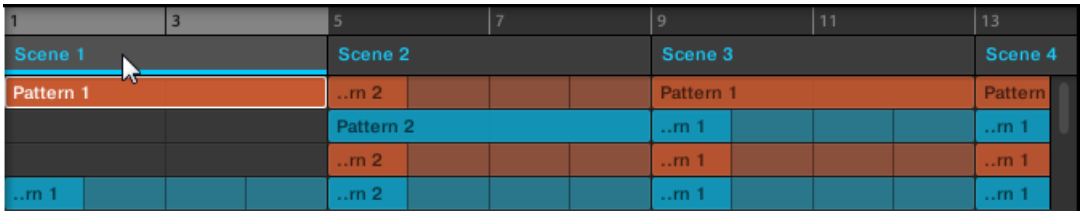
13.2.8 Moving Scenes

Reordering Scenes is essential to organize your Scenes and arrange your song.

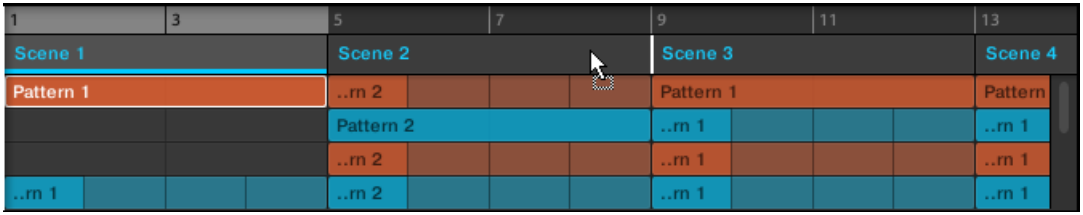
In the software you can move Scenes both in the Arranger and in the Scene Manager.

To move Scenes:

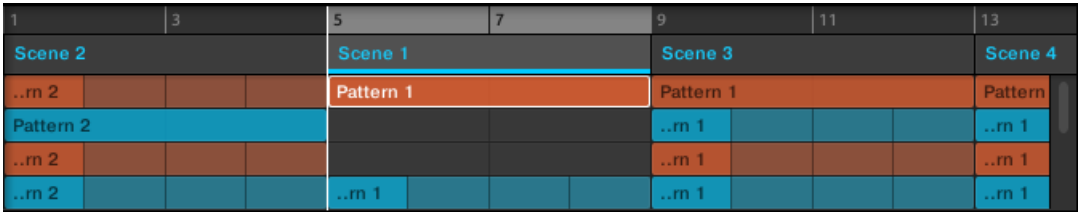
1. Click and hold the Scene name (in the Arranger) or the Scene slot (in the Scene Manager).



2. While holding the mouse button, drag your mouse horizontally (in the Arranger) or vertically (in the Scene Manager) toward the desired location.
   As the mouse cursor moves, an insertion line appears at the potential places where you can drop the Scene.
3. When the insertion line appears at the desired location, release the mouse button.



→ The Scene takes its new place. On your controller in Scene mode, you can now select this Scene via the pad corresponding to its new location.



In the Scene Manager, you can also:

- Drop the Scene slot onto another slot: the current Scene in that slot will be replaced (if any).
- Drag a Scene from the pad grid (on the right) onto the slot list (on the left), and inversely!

Moving Scenes on the Controller

To moves Scenes on your controller:

1. Press and hold SCENE to enter Scene mode (you can pin it by pressing Button 1).
2. Press Button 7 and 8 to select the Scene bank containing the Scene you want to move.
3. Press the pad of the Scene you want to move. Alternatively you can select the Scene by pressing the Page buttons.
4. Turn Knob 1 (Position) to move the selected Scene to another position in your arrangement.

→ The Scene takes its new place. In Scene mode you can now select this Scene via the pad corresponding to its new location.



You can also move Scenes in Scene Arrange mode: press ARRANGE then Button 1 (SCENE) to enter Scene Arrange mode, then follow the procedure described above.

13.2.9 Clearing Scenes

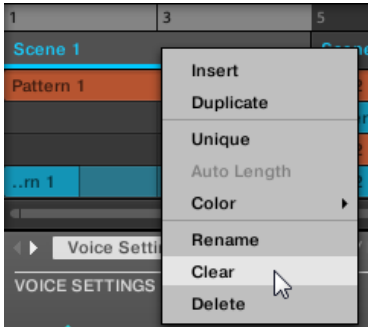
Clearing a Scene allows you to remove all its Clips, leaving the Scene empty. Clearing Scenes is only available from within the software.

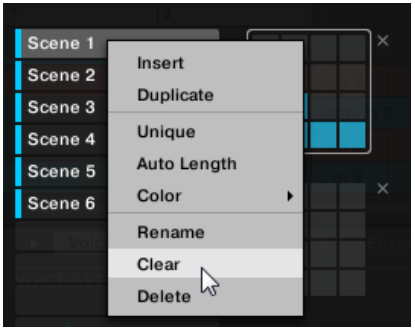


While deleting a Scene removes it entirely from your arrangement, clearing it only removes its content — the Scene stays in your arrangement, but empty. For more info on deleting Scenes, see section ↑13.2.4, Deleting Scenes.

To clear a Scene:

1. Right-click ([Ctrl]-click on Mac OS X) the name of the desired Scene in the Arranger or in the Scene Manager, and select *Clear* from the context menu.





→ The Scene is cleared.

13.2.10 Duplicating Scenes

The Scene context menu in the MASCHINE software Arranger Timeline contains a number of entries that allow you to duplicate and manage your Scenes. These features work in connection with settings made in the Default page of the Preferences.

Together they offer you options to:

- duplicate Scenes,
- duplicate Scenes and Patterns,
- link Scenes, and
- link when duplicating.

13.2.10.1 Scene Linking Basics

Scenes can be duplicated either as new Scenes, or as linked Scenes. Linked Scenes are helpful when you realize you need to change something in all instances of the verse, for example—you make one change and it automatically appears in all instances of the Scene. This is further emphasized by the fact that, when you select this Scene in the Timeline, you will also see the other linked Scenes become highlighted, too. This reminds you that any change you make to this Scene will be made to all the highlighted Scenes, too.

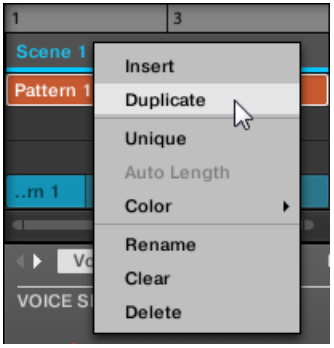
To duplicate a Scene and a Pattern:

1. Right-click (or ([Ctrl]-click on OS X) the Scene you want to duplicate in the Timeline.
2. Click *Duplicate*.

→ The Scene will be duplicated according to the Duplicate setting in the Preferences. For more information see ↑2.6.4, Preferences – Default Page.

13.2.10.2 Duplicating Scenes

By right-clicking on a Scene in the Timeline, a context menu appears which has a *Duplicate* entry.



Duplicate entry.

Duplicate has two results depending on the Scene settings in the Preferences. See ↑2.6.4, Preferences – Default Page for more information.

Duplicating Scenes Only

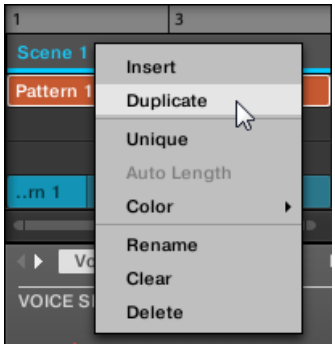
With *Scene Only* selected in the Preferences, *Duplicate* will create a new Scene just to the right and it will still contain the old Patterns of the original Scene. Use this when you want to have a new Scene which is like the first one, but only has different Patterns playing. You can change the Patterns being played in the new Scene without affecting the original Scene (for example, you could change the verse Drum Pattern to the chorus Drum Pattern in this Scene, and the original Scene will still contain the verse Drum Pattern).

Duplicating Scenes and Patterns

With *Scene and Pattern* selected in the Preferences, duplicating a Scene will create a new Scene just to the right as well as new Patterns which are copies of the original Patterns. This new Scene will sound the same as the original, but you will now have the freedom to edit the notes and controller information inside the Patterns without affecting the Patterns of any other Scene. This is useful when you want to add only slight variations, such as putting in a unique drum fill, or changing the melody slightly to fit the flow of lyrics.

To duplicate a Scene in the MASCHINE software:

1. Right-click (or ([Ctrl]-click on OS X) the Scene you want to duplicate in the Timeline.
2. Click *Duplicate*.



→ The Scene will be duplicated according to the setting in the Preferences. See ↑2.6.4, Preferences – Default Page for more information.

Duplicating a Scene on the Hardware

To duplicate a Scene on the hardware:

1. Hold SCENE.
2. Press Button 4 DUPLICATE.

→ The Scene will be duplicated according to the setting in the Preferences. See ↑2.6.4, Preferences – Default Page for more information.

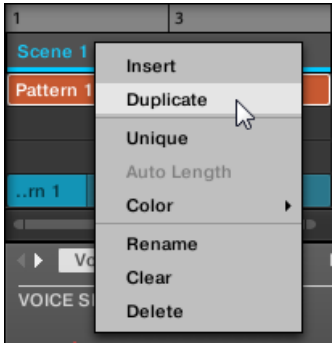
13.2.10.3 Link when Duplicating Scenes

Enabling the *Link when Duplicating* preference will make MASCHINE create linked Scenes instead of new Scenes when using the afore-mentioned Duplicate feature. For example, with this option turned on, right-clicking on the chorus Scene and choosing *Duplicate* will create a linked instance of the same Scene again in the Timeline as opposed to making a new Scene. Therefore, any changes you make to the Scene will be reflected in the other Scenes of the same name.

Enable *Link when Duplicating* in the Default page of the Preferences. See ↑2.6.4, Preferences – Default Page for more information.

To link when duplicating a Scene in the MASCHINE software:

1. Right-click (or ([Ctrl]-click on OS X) the Scene you want to link and duplicate in the Timeline.
2. Click *Duplicate*.



→ The Scene will be duplicated and linked according to the setting in the Preferences. See ↑2.6.4, Preferences – Default Page for more information.

Link when duplicating a Scene on the Hardware

To link when duplicating a Scene on the hardware:

1. Press and hold DUPLICATE, then press SCENE.
2. Select the Scene you want to link and duplicate by pressing the pad.

3. Press Button 2 LINK.
4. Press the pad that you want to duplicate the Scene to.

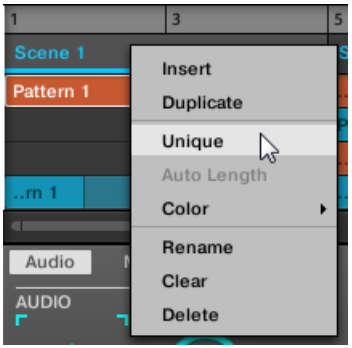
→ A linked duplicate copy will automatically be updated when the original Scene or Pattern is changed. See ↑2.6.4, Preferences – Default Page for more information.

13.2.10.4 Making Scenes Unique

At any time, you can make a linked Scene totally unique. This will create a new Scene in the same location, and will also create new Patterns. You are then free to edit the Patterns in the Scene, or the data in the Patterns, without affecting any of the original Scenes. This is great for when you want to introduce variations into a song structure that's been made with linked Scenes.

To make a Scene unique in the MASCHINE software:

1. Right-click (or ([Ctrl]-click on OS X) the Scene you want to make unique in the Timeline. The context menu will open.
2. Click *Unique*.



→ The Scene will become independent of any Scenes it was linked to and the Patterns can be edited without affecting any the original Scenes.

Making a Scene Unique on the Hardware

To make a Scene unique on the hardware:

1. Press SHIFT + SCENE.
2. Select the Scene you want to make unique by pressing the pad.
3. Press Button 2 UNIQUE.

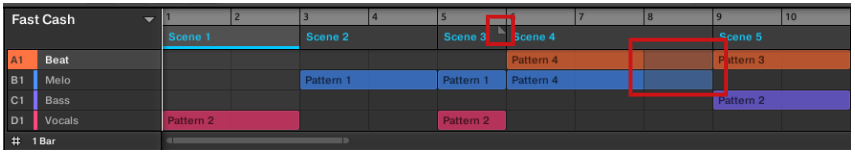
→ The Scene will become independent of any Scenes it was linked to and the Patterns can be edited without affecting any the original Scenes.

13.2.11 Adjustable Scene Length

Scenes and Clips obey following rules:

By default the length of a Scene is automatically set to the longest Clip used within the Scene (Auto Length), unless the length of the Scene is manually set to a specific bar range (Manual Length).

- **Auto Length**: By default, the length of a Scene corresponds to the longest Clip used in the Scene. Inserting a new Clip that is longer than the Scene automatically extends the Scene. Removing the longest Clip from the Scene automatically shrinks the Scene. Extending/shrinking the longest Clip automatically extends/shrinks the Scene accordingly.
- **Manual Length**: A Scene can be manually adjusted to a set length. This can be shorter or longer than the Clips contained within the Scene. Inserting or removing Clips from the Scene will not alter the length of the Scene, however the length of a Scene can be altered by dragging the mouse directly in the timeline or by using your MASCHINE controller.
- If a Clip is shorter than the Scene it is placed in, it is automatically repeated until the end of the Scene (the last repetition might be shortened). These repetitions are automatically generated and cannot be edited. They reference the same Pattern as the original Clip placed at the beginning of the Scene. Repetitions of a Clip are indicated by darker blocks in the Arranger, and a Truncated Clip marker will appear on the right-hand side of the Scene to indicate that a section of the Clip is hidden:



- If a Scene has been manually shortened, only the visible part of the Clip within the set length will be audible.

- Clips always start at the beginning of the Scene.

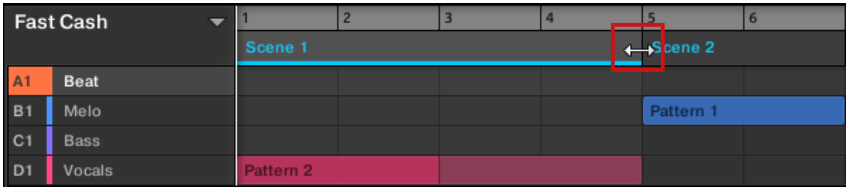
13.2.11.1 Adjusting the Length of a Scene Using the Software

Variable Scene length allows you to lengthen or shorten a Clip without altering the referenced Pattern. This is particularly useful as it avoids the need to create a new version of a pattern when you only want to extend or truncate a Pattern to make it fit an arrangement.

When the right Scene end marker is extended beyond the length of the Clips, the referenced Patterns are repeated. When the right Scene end marker is dragged so it is shorter than the Clips, only the part visible part of the Clips are audible.

To lengthen a Scene:

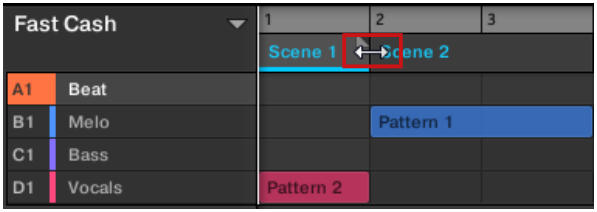
► Click and drag the Scene end marker to the right.



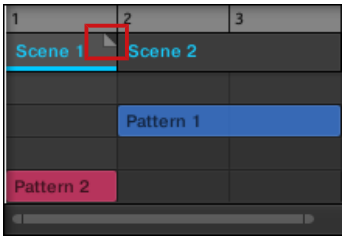
→ The Clip will be repeated if the adjustment is longer than the referenced Pattern.

To shorten a Scene:

► Click and drag the Scene end marker to the left.



→ The Clip will be shortened, and if the adjustment is shorter than the referenced Pattern a small Truncated Clip marker will appear on the right-hand side of the Scene to indicate that a section of the Clip is hidden. Only the visible part of the Clip will be audible during playback.



When adjusting the size of a Scene the following rules apply:

- The value set in the Arrange Grid is used for length increments.
- When [Shift] is pressed while changing the length, the value set in the Step Grid is used.
- The minimum length a Scene marker can be dragged without modifier is one Arrange Grid increment.
- When [Shift] is pressed, the minimum length a Scene marker can be dragged is one Step Grid increment.
- The minimum length of a Scene equals the minimum Pattern length. This can only be achieved if Arrange Grid or Step Grid is set to Off.

13.2.11.2 Adjusting the Length of a Scene Using the Controller

To adjust the length of a Scene using your hardware controller:

1. Press the SCENE button to enter the Scene page.
2. Press Button 1 to pin the page if required.
3. Turn Knob 4 to adjust the length of the Scene as required. Turning the knob left will shorten the Scene, turning it right will lengthen the Scene.
4. Press SHIFT and turn Knob 4 to change the Scene length in smaller increments.

→ The Scene length is adjusted accordingly.

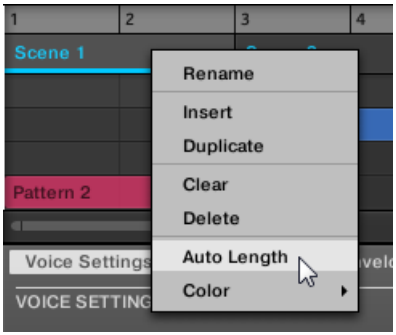
13.2.12 Enabling Scene Auto Length

By default a Scene is set to Auto Length allowing it to resize automatically to the content within the Scene. If the length of a Scene is manually adjusted by truncating or lengthening the Scene end marker, Auto Length is discarded and the Scene automatically set to Manual Length.

Using the software or controller it is possible to quickly reset a Scene to back to Auto Length in order to return to the Scene to its default state and reveal any truncated (hidden) content. When Auto Length is enabled, the Manual Length settings are discarded and the Scene is resized according to the Clips placed inside, and will continue to resize with the content unless the length is again manually adjusted.

To enable Auto Length for a Scene in the software:

1. Right-click on the Scene.
2. Click Auto Length in the menu.



→ Auto Length is enabled and the selected Scene is automatically resized to fit the content of the Clips within the Scene. Any manual adjustments that were previously made are discarded.

To enable Auto Length for a Scene using your controller:

1. Press SCENE to access the Scene page.
2. Press the corresponding pad to select a Scene.
3. Press Button 3 AUTO LENGTH to enable Auto Length.

→ The selected Scene is automatically resized to fit the content of the Clips within the Scene. Any manual adjustments that were previously made are discarded.

13.2.13 Looping

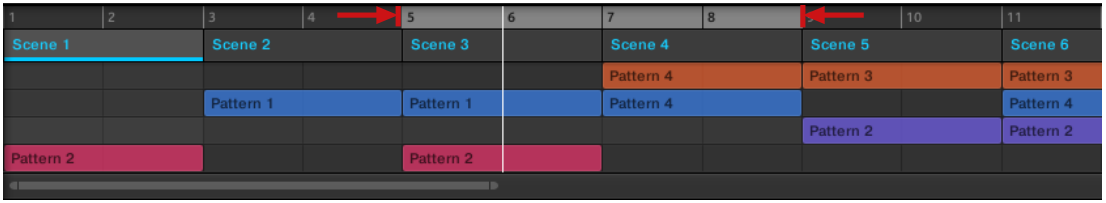
Activate a Loop to repeatedly play a section of the Arrangement. Once a loop is activated the Scenes within the range of the Loop play until the loop is deactivated. You can use the range to repeatedly play a particular part of a song. This can be good for composing, practicing a part before recording, recording multiple takes, etc. The loop range is permanently visible, (even when it is deactivate) and the range of the loop can be altered at any time using the left and right end points.

13.2.13.1 Setting the Loop Range in the Software

Set the start, end and position of the loop using the dedicated Loop range in the Timeline. The value set in the Arrange Grid is used for Loop range increments and movement of the loop range itself.

To adjust the Loop range using the software:

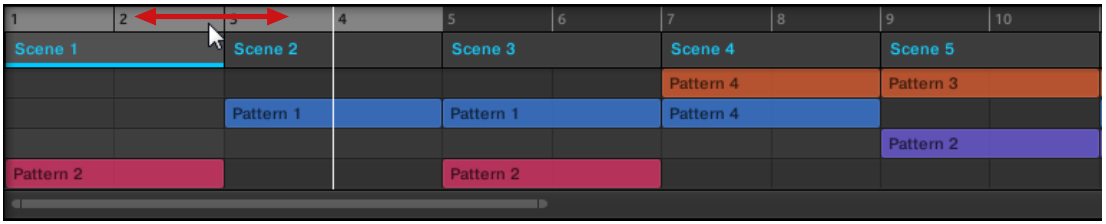
► Drag the left or right end of the Loop marker to make it longer.



→ The Loop range is elongated.

To move the Loop using the software:

► Click and drag the Loop range left or right.



→ The whole Loop range is moved.

Activating or Deactivating a Loop in the Software

To activate a Loop using the software:

► Click the Loop button in the header to activate or deactivate the loop.



When the Loop is activated the Scenes within the Loop range are repeated.

13.2.13.2 Setting the Loop Range Using the Controller

Set the start, end and position of the loop using the dedicated Loop page.

To set the loop range using MASCHINE STUDIO:

1. Press and hold SHIFT + RESTART (LOOP) to access the Loop screen.
2. Press Button 5 LOOP to activate the loop.
3. Turn Knob 3 START to set the start point of the loop.
4. Turn Knob 4 LENGTH to set the length of the loop.

→ The start and end points of the loop range are set.

► Turn Knob 1 POSITION to alter the position of the whole loop.

→ The position of the loop range is adjusted.

► Press Button 4 ALL to loop the whole song.

→ The start and end points of the loop range are set to the range of the whole song.

Activating or Deactivating a Loop Using MASCHINE STUDIO

To activate a Loop using the controller:

► Press SHIFT + RESTART (LOOP) to activate or deactivate the loop.

When the loop is activated the Scenes within the Loop range are repeated.

13.3 Playing with Scenes

MASCHINE provides you with various tools to precisely control which Scene has to be played, and when.

Studio Track or Live Performance?

If you are composing a studio track that you plan to export as is, you can arrange your Scenes so that your whole track can be played in one go from the very first Scene to the very last one.



Please refer to section ↑4.4.3, Exporting Audio for information on exporting audio.

On the other hand, if you are preparing a track for performing live, you will probably want to switch back and forth between different Scenes or groups of Scenes during your performance. This may also be necessary if you are composing a studio track in your host sequencer and want to control which Scene the MASCHINE plug-in has to play. This is where the MASCHINE tools described in the following sections come in handy.

13.3.1 Selecting a Loop Range

The basic rule is:

The MASCHINE sequencer is always looping.

In many situations a single Scene will be looped. But MASCHINE also allows you to select several consecutive Scenes and play them one after the other in a loop. You can even select a loop that doesn't start at the beginning of a Scene or end at the end of a Scene. The looped region is defined by its **Loop Range**.



If the playhead is outside the current Loop Range, the playback will loop at the end of the Project.

In the software the Loop Range is indicated by a highlighted region in the Arranger timeline, as well as two vertical segments going through the Arranger that represent the start and end points of the Loop Range:



The Loop Range in the Arranger.

The next paragraphs describe how to select the desired Loop Range.

Setting the Loop Range to a Single Scene

You can easily set the Loop Range to a single Scene by selecting any Scene outside the current Loop Range:

- ► To set the Loop Range to a single Scene outside the current Loop Range, simply select this Scene in the Arranger's top row or in the Scene Manager.



If you select a Scene within the Loop Range, the Loop Range is left untouched.



For more information on selecting Scenes, see section ↑13.2.2, Selecting Scenes and Scene Banks.

In particular, this method allows you to quickly switch the Loop Range from one Scene to another one.

Quickly Switching the Loop Range Between the Entire Project and the Selected Scene

You can quickly set the Loop Range to all Scenes in one go:

- Double-click anywhere in the Arranger timeline to include all available Scenes in the loop.

The other way around:

- If the Loop Range includes all Scenes, double-click anywhere in the Arranger timeline to set it to the selected Scene only.

Manually Adjusting the Loop Range

You can also precisely adjust the Loop Range in the Arranger timeline:



The Arranger timeline showing that the single Scene Scene 1 is looped.

You have following actions at your disposal:

- Drag the Loop Range's highlighted region horizontally to move the whole Loop Range.
- Drag the left or right border of the Loop Range horizontally to move the Loop Range's start or end point, respectively. This modifies the length of the Loop Range.

Your adjustments are quantized according to the Pattern Grid. If the Pattern Grid resolution is set to Quick mode, the quantization will use bars instead. If the Pattern Grid is disabled (i.e. set to Off) you can freely adjust the Loop Range at the maximum resolution.

For more information on the Pattern Grid, see section ↑7.1.6, Adjusting the Pattern Grid and the Pattern Length.

Manual Loop Range Adjustments and Playback Position

Manual adjustments of the Loop Range can also affect the playhead position:

- If the playhead is within the Loop Range it will stay within it no matter how the Loop Range is moved or resized:
  - As you move the Loop Range's start point (or the whole Loop Range) to the right in the Arranger, if the start point reaches the playhead position the playhead will follow the start point to the right as long as necessary in order to stay within the Loop Range.
  - As you move the Loop Range's end point (or the whole Loop Range) to the left in the Arranger, if the end point reaches the playhead position, the playhead will jump to the Loop Range's start point.
- If the playhead was outside the Loop Range and gets into the Loop Range (because of the normal playback, a change in the Loop Range or any other reason), the above applies.
- Any resulting jump of the playhead will be based on the same rules as when you move it manually — see section ↑13.1.4, Jumping to Another Playback Position in Your Project for more information.

Selecting a Loop Range on the Controller

On your controller you have several methods to control the Loop Range.

Setting the Loop Range to a Single Scene

You can easily set the Loop Range to a single Scene by selecting this Scene with the pads:

1. Press and hold SCENE to enter Scene mode (you can pin it by pressing Button 1) or press ARRANGE and Button 1 (SCENE) to enter Scene Arrange mode.
2. Press Button 7 and 8 to select the Scene bank containing the Scene you want to loop.
3. Press the pad of the Scene you want to loop.

→ The Scene is selected and the Loop Range is set to this Scene.

Setting the Loop Range to Several Scenes

To set the Loop Range to several consecutive Scenes, do the following:

1. Press and hold SCENE to enter Scene mode or press ARRANGE and Button 1 (SCENE) to enter Scene Arrange mode..
2. Press and hold the pad corresponding to the start Scene.
3. While holding the first pad, press the pad corresponding to the end Scene.

→ The start and end Scenes along with all Scenes in-between are included in the Loop Range and played one after the other in a loop.



If you further hold the pads for both the start and end Scene, you can switch between Scenes within the Loop Range by pressing any pad in-between without changing the Loop Range! Usual rules for Scene jumps will apply (see section ↑13.3.2, Jumping to Other Scenes).



The start and end Scenes can be in different Scene banks. Simply press Button 7 or 8 to switch to the desired Scene bank before you hold the pad of the start or end Scene.

Quickly Setting the Loop Range to the Entire Project

You can quickly select all Scenes in one go:

► Press SCENE + Button 3 (ALL) to include all available Scenes in the Loop Range.

If you want to set the Loop Range back to a particular Scene, press SCENE + the desired pad as described above.

Manually Adjusting the Loop Range

You can adjust the Loop Range manually from your controller at any time without switching your controller to Scene or Scene Arrange mode.



Hold SHIFT + RESTART to adjust the Loop Range in various ways.

Following actions are available:

- Hold SHIFT + RESTART (LOOP) and turn the Control encoder to move the whole Loop Range.
- Hold SHIFT + RESTART (LOOP) + Left/Right Locate button and turn the Control encoder to move the Loop Range's start or end point, respectively. This modifies the length of the Loop Range.

These adjustments are quantized according to the Pattern Grid. If the Pattern Grid resolution is set to Quick mode, the quantization uses bars instead. If the Pattern Grid is disabled (i.e. set to Off) you can freely adjust the Loop Range at the maximum resolution.



For more information on the Pattern Grid, see section ↑7.1.6, Adjusting the Pattern Grid and the Pattern Length.

13.3.2 Jumping to Other Scenes

If you set a new Loop Range by selecting another Scene or group of Scenes as described in section ↑13.3.1, Selecting a Loop Range, the playback will jump to the new Loop Range. This way you can easily move the playback position to other Scenes and adapt your song live.

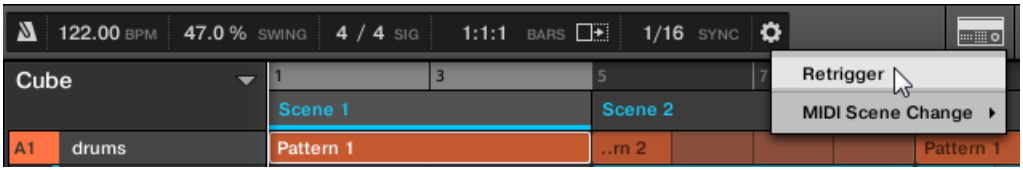


You can also move the playback position manually as described in section ↑13.1.4, Jumping to Another Playback Position in Your Project.

MASCHINE provides you with two additional settings to fine-tune the jumps between the Scene currently playing and the next Scene that is selected:

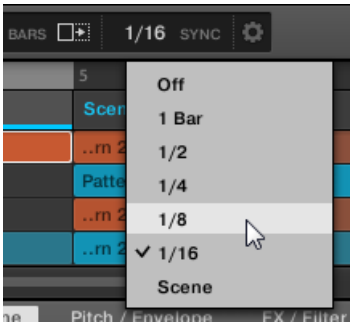
- The **Perform Grid** lets you quantize the Scene transitions: You can choose the point at which the playback will leave the current Scene. For example, you might not want a newly selected loop to fire off immediately — you might want it to wait until the next bar line. The available quantization values are: one bar, one half note, one quarter note, one eighth note, one sixteenth note, the whole Scene, and Off. If you choose Off, the Scene change will be performed immediately after you select the next loop.
- The **Retrigger** setting lets you decide where the next loop will start:
  - If Retrigger is enabled, the next Scene that is selected 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 Retrigger is disabled (default setting), the next Scene that is selected will play from the same offset to the beginning of the Scene: e.g., leaving the current Scene on beat 3 will cause the new Scene to start playing on its beat 3. This ensures that the global groove of your track is not interrupted!

In the software, the Perform Grid and the Retrigger setting can be adjusted in the MASCHINE Header:



Adjusting the Perform Grid and Retrigger setting.

▶ To adjust the Perform Grid, click the value left of the SYNC label in the MASCHINE Header and select the desired division from the menu:



→ The next time you select a new Scene or group of Scenes for looping, the switch will happen on the next division selected here.

▶ To enable/disable the Retrigger setting, click the little cog wheel in the MASCHINE Header and select *Retrigger* from the menu.

→ The next time you select a new Scene or group of Scenes for looping, the new loop will start from the beginning of the first Scene (Retrigger enabled) or from the same position as where it left the current Scene (Retrigger disabled).

Adjusting the Perform Grid on the Controller

To adjust the Perform Grid:

1. Press and hold GRID to enter Grid mode (or pin it by pressing GRID + Button 1).

2. Press Button 2 (PERFORM) to access the Perform Grid settings.
   The right display will show you which pad represents which resolution:



3. Select a resolution by pressing the corresponding pad. Alternatively you can press Button 5, 6 or 8 to successively select each of the resolutions in the corresponding column.

→ The selected value is highlighted on the right display and the corresponding pad turns fully lit. The next time you select a new Scene or group of Scenes for looping, the switch will happen on the next division selected here.

To disable the Pattern Grid, simply select the OFF value in the top right corner:

▶ To disable the Pattern Grid, hold GRID, press Button 2 (PERFORM), then press pad 16 (OFF).

Adjusting the Retrigger Setting on the Controller

To adjust the Retrigger setting:

1. Press and hold SCENE to enter Scene mode (you can pin it by pressing Button 1) or press ARRANGE and Button 1 (SCENE) to enter Scene Arrange mode.
2. Turn Knob 4 (Retrigger) to select the desired value.

→ The next time you select a new Scene or group of Scenes for looping, the new loop will start from the beginning of the first Scene (Retrigger enabled) or from the same position as where it left the current Scene (Retrigger disabled).

13.4 Triggering Scenes via MIDI (MASCHINE Plug-in Only)

If MASCHINE is running as a plug-in in a host environment, you can trigger and change Scenes using MIDI Note or MIDI Program Change messages sent from your host to the MASCHINE plug-in.

When this feature is enabled, MIDI notes or Program Change messages are linked to the first 128 Scenes slots MASCHINE's Scene Manager (i.e. the Scene slots of the first 8 Scene banks), whether they are empty or not:

Scene Slot	MIDI Note Number	Program Change Number
1	0	1
2	1	2
3	2	3
…	…	…
128	127	128



MIDI Note numbers: Host applications use various conventions to name MIDI notes. For example, in MASCHINE, MIDI note number 0 is referred to as C-2 and MIDI note number 60 (middle C) as C3. Please refer to the documentation of your host to know which convention is used.



Program Change numbers: Some host applications send Program Change numbers in the range [0–127] instead of [1–128]. In that case, the PC number 0 will trigger Scene slot 1, PC 1 will trigger Scene slot 2, etc. Please refer to the documentation of your host to know in which range it sends Program Change numbers.

To enable or disable the Scene MIDI Change feature, do the following:

1. In the MASCHINE Header, click the cog wheel icon.
   This opens the following menu:
   

2. Click *MIDI Scene Change* from the menu.
3. In the submenu that opens, select *MIDI Note* to trigger your Scenes via MIDI notes, *Program Change* to trigger your Scenes via MIDI Program Change messages, or *None* (default setting) to disable Scene MIDI Change completely.
4. If necessary, reopen the same submenu and select the MIDI channel the Scenes should receive MIDI messages from (channel 1 by default).

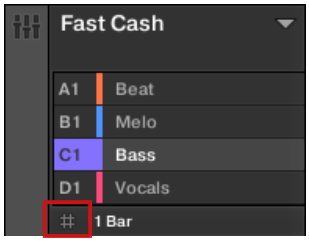
13.5 The Arrange Grid

The Arrange Grid is used to quantize all modifications related to the timeline. The value set here is used for following features:

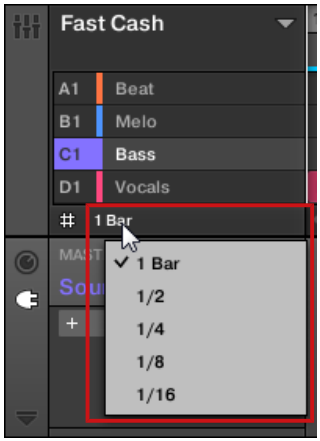
- Loop start / length
- Loop position
- Pattern length
- Scene length
- Song Clip start / length
- Playhead relocation

The Arrange Grid setting is located at the bottom left corner of the Arranger area and can be activated/deactivated by toggling the Grid symbol.

1. Click the Grid symbol next to the value to enable the Arrange Grid.



2. Click the current Arrange Grid value to open the drop-down menu.



3. Select a new value for the Arrange Grid.

→ The selected Arrange Grid value is applied.

On your controller:

1. Press the GRID button to access the Grid page.
2. Press Button 3 to select ARRANGE.
3. Press Button 5, or the corresponding pad to select an Arrange Grid value.

→ The selected Arrange Grid value is applied.

To Disable the Arrange Grid

► Press Button 8 or pad 16 to select OFF.

→ The Arrange Grid is disabled.

13.6 Quick Grid

The Quick Grid setting allows you to quickly and conveniently set the most common Pattern lengths using your controller.



Quick Grid is only accessible from your controller.

When the Quick Grid is used, the following rules apply:

- The available Pattern lengths are as follows:1 bar, 2 bars, 4 bars, 8 bars, 12 bars, 16 bars, etc. (+ 4 bars each time starting from 4 bars).
- The Quick Grid is exclusively applied to Pattern Length. For all other features related to the Grid (for example, adjusting the playback position or the Loop Range), the Arrange Grid is used.
- The Quick Grid setting is global and applies to all Patterns.
- When the Quick Grid is set to OFF, the Arrange Grid is used.

To enable the Quick Grid on your controller:

1. Press GRID to access the Grid page.
2. Press Button 3 to select ARRANGE.
3. Turn Knob 4 to enable the QUICK Grid.

→ Quick Grid is enabled and globally applied to all Patterns.

14 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.

You can apply various types of destructive processing to the recorded audio or to any Sample you want to use in a Sound.

The slicing feature 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 to particular Zones, 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.

All this can be done in the Sample Editor.

Make sure you 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 audio interface for information on connecting audio devices and instruments.

14.1 Opening the Sample Editor

To access the Sample Editor in the software, do the following:

1. In the Sound List left of the Pattern Editor, click the desired Sound to put it under focus. For more details on how to set the focus to a Sound, please see section ↑2.3.1, Setting the Focus on a Group or a Sound.

2. Click the Sample Editor button on the left of the Pattern Editor to switch to the Sample Editor.



The Sample Editor appears and displays the Sample content of the focused Sound.

3. In the Sample Editor, click the desired tab at the top to access the corresponding page:

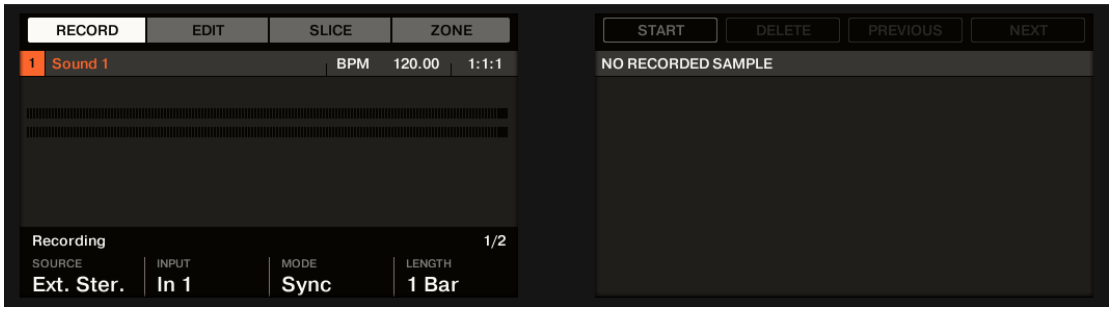
- The Record page allows you to record new Samples: ↑14.2, Recording a Sample.
- The Edit page allows you to apply destructive edits to existing Samples: ↑14.3, Editing a Sample.
- The Slice page allows you to create Slices from your existing Samples: ↑14.4, Slicing a Sample.
- The Zone page allows you to assign your Samples to particular note and velocity ranges (called Zones) in your Sound and to adjust various playback settings for each Zone individually: ↑14.5, Mapping Samples to Zones.

Entering Sampling Mode on the Controller

The equivalent to the Sample Editor on your controller is the **Sampling mode**. To enter Sampling mode, do the following:

1. With your controller in Control mode, press the pad of the desired Sound to put it under focus. For more details on how to set the focus to a Sound, please see section ↑2.3.1, Setting the Focus on a Group or a Sound.

2. Press SAMPLING to enter Sampling mode and access the Sample content of the focused Sound:



3. Press Button 1–4 to select the desired page:

- The Record page allows you to record new Samples: ↑14.2, Recording a Sample.
- The Edit page allows you to apply destructive edits to existing Samples: ↑14.3, Editing a Sample.
- The Slice page allows you to create Slices from your existing Samples: ↑14.4, Slicing a Sample.
- The Zone page allows you to assign your Samples to particular note and velocity ranges (called Zones) in your Sound and to adjust various playback settings for each Zone individually: ↑14.5, Mapping Samples to Zones.



The Sample Editor in the software is always in sync with the Sampling mode on your controller: Entering/leaving Sampling mode on your controller will automatically show/hide the Sample Editor in the software, and inversely. The page currently displayed in the Sample Editor / Sampling mode is also in sync.

14.2 Recording a Sample

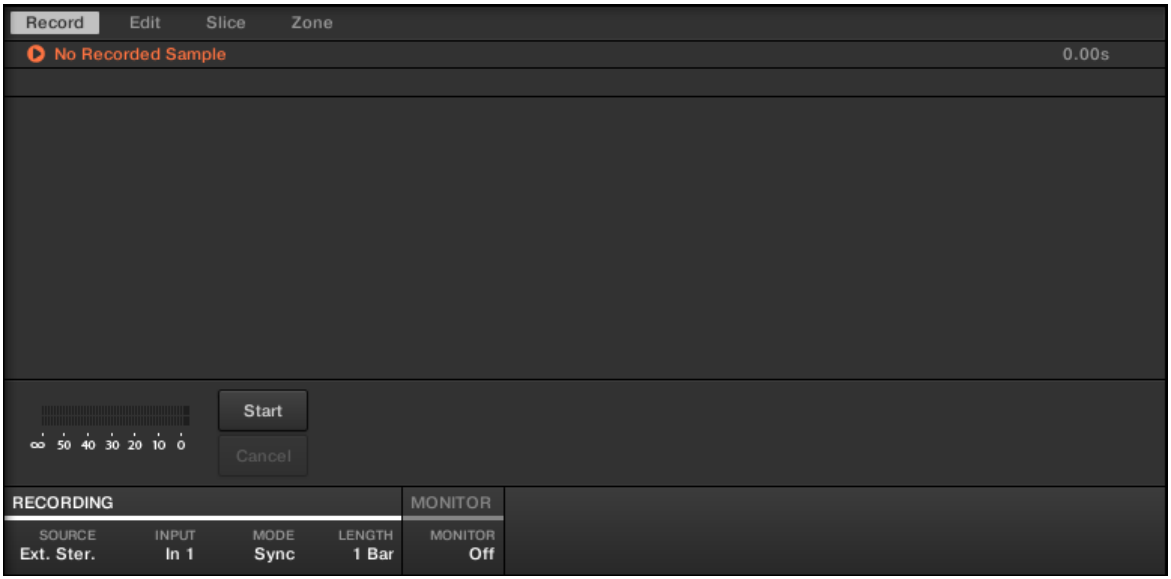
MASCHINE provides everything you need to record your own Samples.

14.2.1 Opening the Record Page

In the software, recording a new Sample is done in the Record page of the Sample Editor.

► In the Sample Editor, click the Record tab at the top to open the Record page.

The Record page looks as follows:

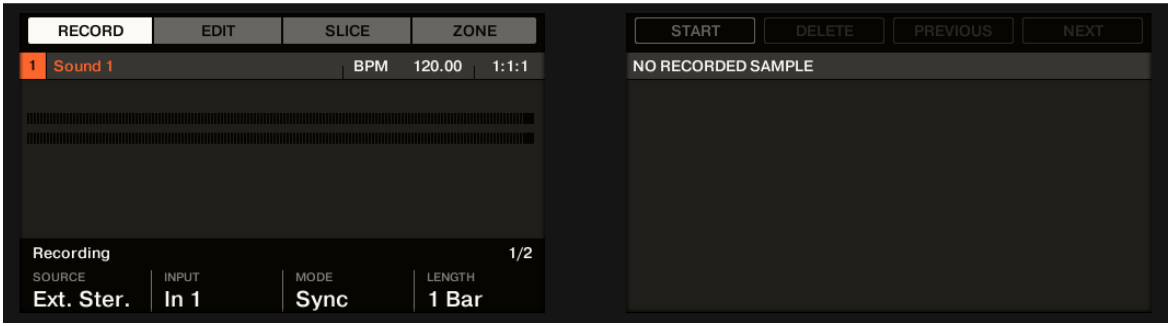


The Record page in the software.

Opening the RECORD Page on the Controller

► In Sampling mode, press Button 1 to access the RECORD page.

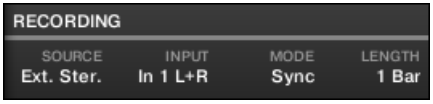
The RECORD page looks as follows:



The RECORD page on the controller.

14.2.2 Selecting the Source and the Recording Mode

At the bottom of the Record page, the parameters in the RECORDING section allow you to adjust which source should be recorded and how the recording should start and stop.



Adjusting the source and mode of the recording in the software.

Selecting the Source to Record

► Click the SOURCE selector on the left to select the type of source you want to record:

- To record external audio signals connected to your audio interface, select *Ext. Ster.* (for stereo signals) or *Ext. Mono* (for mono signals).
- To record audio signals coming from MASCHINE itself, select *Internal*.

► Click the INPUT selector to choose between the available inputs:

- If SOURCE is set to Ext. Ster., you can select either of MASCHINE's four external stereo inputs *In 1–4*.
- If SOURCE is set to Ext. Mono, you can select either of MASCHINE's eight external mono inputs: the left ("*L*") or right ("*R*") channel of each input pair *In 1–4*.

- If SOURCE is set to Internal, you can select the output of any available Group or the Master.



You can easily record the output of a particular Sound by setting SOURCE to Internal, soloing this Sound and selecting its parent Group in the INPUT selector!



You can also set SOURCE to Internal, choose as INPUT a Group with a drum kit loaded, and record your live improvisations on the pads while playing this drum kit! You will then have your own improvisations recorded as Samples, ready to be used, edited, sliced, etc., as any other Samples in MASCHINE!

Choosing a Recording Mode

► Click the MODE selector to select from the two available recording modes:

- **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 clicked Start. The recording will start at the top of the next bar. The LENGTH control on the right allows you to choose a length for the Sample to be recorded: either 1, 2, 4, 8, or 16 bars — or choose *Free* if you don't want to set any duration limit to the recording. At any time you can click Stop to stop the recording before the duration defined by LENGTH has been reached — the recording will then stop at the next bar.
- **Detect**: If Detect is selected, you can set a certain threshold using the THRESHOLD control on the right. After you clicked Start, the input signal level exceeding this threshold will start the recording. You can then manually stop the recording by clicking Stop. This is useful to record a singer or an instrumentalist, for example. You can also adjust the threshold by dragging the slider that appears on the horizontal input level meters above the RECORDING section:

  Any input level reaching the slider position will start the recording! Double-click the slider to reset the threshold to its default value (-12 dB).

Monitoring the Input Signal



Visually controlling the input signal.

The level meters above the RECORDING section show you at any time the level of the selected audio source. For example, this can come in handy to adjust the appropriate threshold in Detect mode. For this purpose, in Detect mode the level meters additionally provide a fader adjusting the threshold level — this fader is a strict equivalent to the THRESHOLD control described above. This way, you can easily visualize when the input signal exceeds the current threshold (and hence, when it would start the recording) and adjust that threshold accordingly.



Prelistening to the input signal.

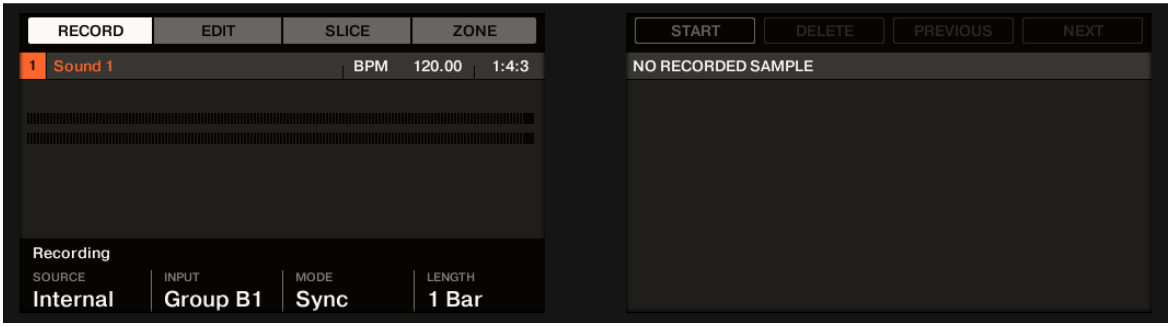
Furthermore, If you have selected an external signal (Ext. Ster. or Ext. Mono selected in SOURCE), an additional MONITOR section appears on the right. In this section, activate the MONITOR button to send the input signal to the Cue bus of MASCHINE, allowing you to hear on a separate channel (e.g., your headphones) the audio source that is about to be recorded.



For more information on how to use the Cue bus, please refer to section ↑9.2.6, Using the Cue Bus.

Selecting the Source and the Recording Mode on Your Controller

At the bottom of the left display, the parameters in the RECORDING section allow you to adjust which source should be recorded and how the recording should start and stop.



Adjusting the source and mode of the recording on your controller.

Selecting the Source to Record

First choose which source you want to record using the SOURCE and INPUT parameters:

Parameter	Description
SOURCE (Knob 1)	Select here the type of source you want to record. To record external audio signals connected to your audio interface, select EXT. STER. (for stereo signals) or EXT. MONO (for mono signals). To record audio signals coming from MASCHINE itself, select INTERNAL.
INPUT (Knob 2)	Choose here between the available inputs. The available inputs depend on the SOURCE setting (see above). If SOURCE is set to EXT. STER. you can select from the four external stereo inputs IN 1–4 available in MASCHINE. If SOURCE is set to EXT. MONO you can select either of MASCHINE's eight external mono inputs: the left ("L") or right ("R") channel of each input pair IN 1–4. If SOURCE is set to INTERNAL you can select the output of any available Group or the Master.

You can easily record the output of a particular Sound by setting SOURCE to INTERNAL, soloing this Sound and selecting its parent Group in the INPUT selector!

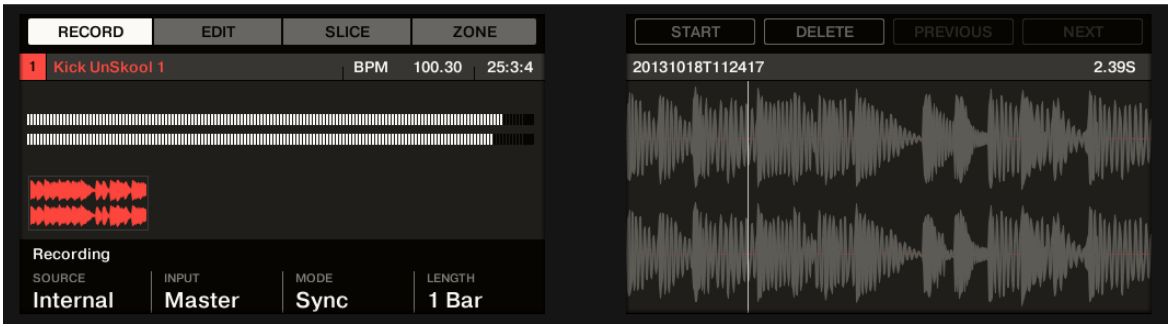
You can also set SOURCE to INTERNAL, choose as INPUT a Group with a drum kit loaded, and record your live improvisations on the pads while playing this drum kit! You will then have your own improvisations recorded as Samples, ready to be used, edited, sliced, etc., as any other Samples in MASCHINE!

Choosing a Recording Mode

Once you have selected the desired source, choose a recording mode:

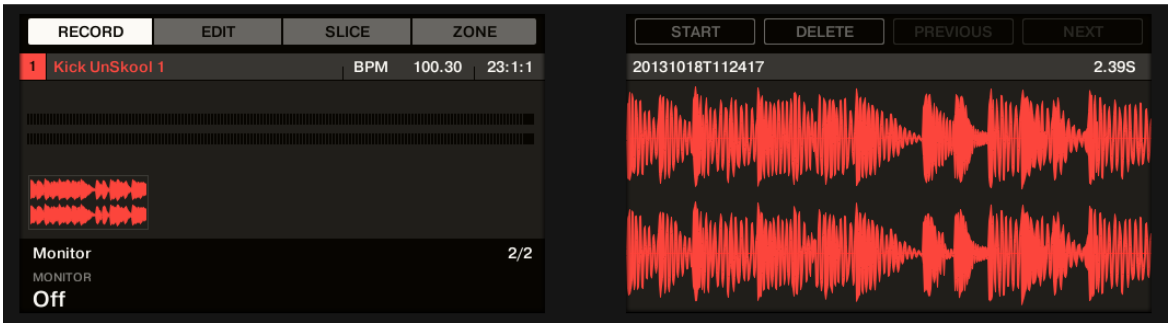
Parameter	Description
MODE (Knob 3)	Selects from the two available recording modes: **SYNC**: If SYNC is selected, you can synchronize the recording function to the sequencer, so that the recording starts in sync with the sequencer after you press Button 5 (START). The recording will start at the top of the next bar. Using Knob 4 (LENGTH), you can choose a length for the Sample to be recorded: either 1, 2, 4, 8, or 16 bars — or choose FREE if you don't want to set any duration limit to the recording. At any time you can press Button 5 (STOP) to stop the recording before the duration defined by LENGTH has been reached — the recording will then stop at the next bar. **DETECT**: If DETECT is selected, you can set a certain threshold using Knob 4 (THRESHOLD). The threshold is indicated by a little arrow above the level meters on the left display. After you pressed Button 5 (START), the input signal level exceeding this threshold will start the recording. You can then manually stop the recording by pressing Button 5 (STOP) again. This is useful to record a singer or an instrumentalist, for example.

Monitoring the Input Signal



Visually controlling the input signal.

The level meters above the RECORDING section show you at any time the level of the selected audio source. For example, this can come in handy to adjust the appropriate threshold in Detect mode. For this purpose, in Detect mode the level meters provide a little down-pointing arrow indicating the threshold level.

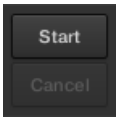


Prelistening to the input signal.

Furthermore, If you have selected an external signal (EXT. STER. or EXT. MONO selected in SOURCE), an additional MONITOR section is available by pressing the Right Page button. In this section, using Knob 1 you can set MONITOR to ON in order to send the input signal to the Cue bus of MASCHINE, allowing you to hear on a separate channel (e.g., your headphones) the audio source that is about to be recorded.

For more information on how to use the Cue bus, please refer to section ↑9.2.6, Using the Cue Bus.

14.2.3 Arming, Starting, and Stopping the Recording



The Start and Cancel buttons.

► Click Start to arm the recording.

After the recording has been armed, its behavior will depend on the recording mode you have selected (via the MODE selector, see section ↑14.2.2, Selecting the Source and the Recording Mode above):

- When recording in **Sync** mode:
  - The recording will start at the next bar. Until then the Start button reads a flashing Waiting label and the Waiting for the next bar… message appears in the information bar above the waveform display.
  - Once the recording has started, the audio is recorded for the duration set by the LENGTH control (see section ↑14.2.2, Selecting the Source and the Recording Mode above). You can also click Stop beforehand to stop the recording at the next bar, or Cancel to cancel the recording (in that case the recorded audio will not be saved).
- When recording in **Detect** mode:
  - The recording will start as soon as the input signal exceeds the THRESHOLD value. Until then the Start button turns to a Waiting button and the Waiting for input… message appears in the information bar above the waveform display. During this waiting phase you can also start the recording manually by clicking the Waiting button or cancel the recording by clicking Cancel.
  - Once the recording has started, click Stop to stop the recording (it stops immediately) or Cancel to cancel the recording (the recorded audio will not be saved).

If you want to start and stop the recording manually, you can set the MODE to Detect, dial the THRESHOLD down to OFF, and start the recording by clicking Start. To stop recording, click Stop.

In any case the recorded audio will be stored in the Sound that was under focus as you started the recording.

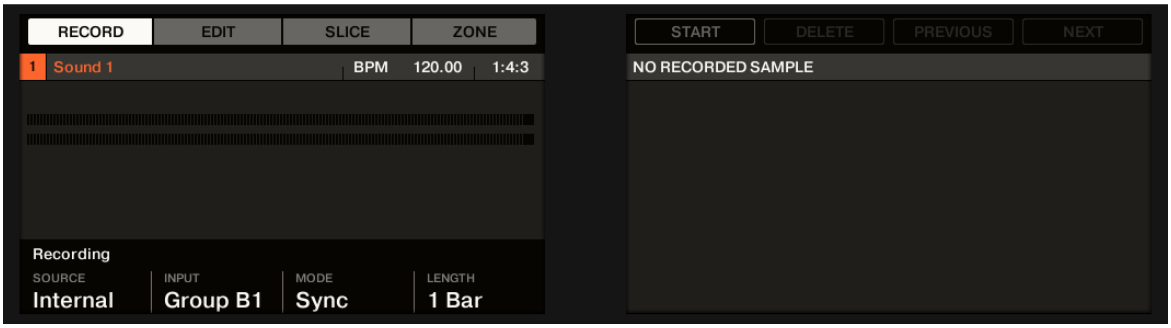
When the Recording is Done…

When the recording is done, the following things happen:

- The recording is named and stored as a file on your hard disk (see section ↑14.2.6, Location and Name of Your Recorded Samples).
- Its waveform appears in the waveform display and its name appears in the information bar above.
- The recording is automatically appended to the Recording History of the Sound and selected (see section ↑14.2.5, Checking Your Recordings below).
- A Sampler Plug-in is automatically loaded in the first Plug-in slot of the Sound, ready to play your new recording. All Plug-ins previously loaded in that Sound are removed.
- The Sound slot takes the name of your recording.
- The recording is mapped to a new Zone covering the entire key and velocity ranges in the Zone page, which makes your new Sample directly playable from the pad of its Sound slot (or from all your pads if pads are in Keyboard mode). Any existing Zones will be replaced. For more information on Zones, see section ↑14.5, Mapping Samples to Zones.

Note that any events for that Sound in the current Pattern will remain. As a consequence, your recording might directly start to play at the pitch defined by the existing events!

14.2.4 Arming, Starting, and Stopping the Recording on Your Controller



Starting and stopping the recording.

► Press Button 5 (START) to arm the recording.

After the recording has been armed, its behavior will depend on the recording mode you have selected (via the MODE selector, see section ↑14.2.2, Selecting the Source and the Recording Mode above):

- When recording in **Sync** mode:
  - The recording will start at the next bar. Until then Button 5 flashes, the label under it reads WAITING, and a WAITING FOR NEXT BAR… message appears underneath.
  - Once the recording has started, the audio is recorded for the duration set by the LENGTH control (see section ↑14.2.2, Selecting the Source and the Recording Mode above). You can also press Button 5 (STOP) beforehand to stop the recording at the next bar, or Button 6 (CANCEL) to cancel the recording (in that case the recorded audio will not be saved).
- When recording in **Detect** mode:
  - The recording will start as soon as the input signal exceeds the THRESHOLD value. Until then Button 5 flashes, the label under it reads WAITING, and a WAITING FOR INPUT… message appears underneath. During this waiting phase you can also start the recording manually by pressing Button 5 (WAITING) or cancel the recording by pressing Button 6 (CANCEL).

- Once the recording has started, press Button 5 (STOP) to stop the recording (it stops immediately) or Button 6 (CANCEL) to cancel the recording (the recorded audio will not be saved).



If you want to start and stop the recording manually, you can set the MODE to DETECT, dial the THRESHOLD down to OFF and start the recording by pressing START (Button 5). To stop recording, press STOP (Button 6).

In any case the recorded audio will be stored in the Sound that was under focus as you started the recording.

When the Recording is Done…

When the recording is done, the following things happen:

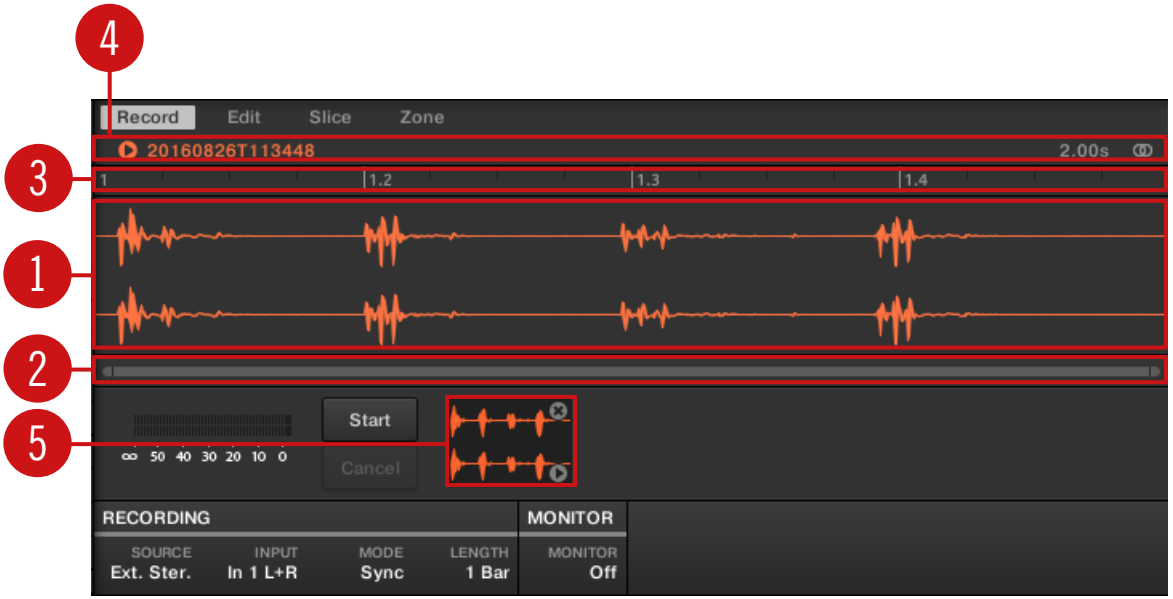
- The recording is named and stored as a file on your hard disk (see section ↑14.2.6, Location and Name of Your Recorded Samples).
- Its waveform appears on the right display and its name appears in the information bar above.
- The recording is automatically appended to the Recording History of the Sound and selected (see section ↑14.2.5, Checking Your Recordings below).
- A Sampler Plug-in is automatically loaded in the first Plug-in slot of the Sound, ready to play your new recording. All Plug-ins previously loaded in that Sound are removed.
- The Sound slot takes the name of your recording.
- The recording is mapped to a new Zone covering the entire key and velocity ranges in the ZONE page, which makes your new Sample directly playable from the pad of its Sound slot (or from all your pads if pads are in Keyboard mode). Any existing Zones will be replaced. For more information on Zones, see section ↑14.5, Mapping Samples to Zones.



Note that any events for that Sound in the current Pattern will remain. As a consequence, your recording might directly start to play at the pitch defined by the existing events!

14.2.5 Checking Your Recordings

You can visualize the last recordings you have made in the current Sound:



The waveform display and the information bar displaying a recording.

(1) Waveform display

Shows the waveform of the recording currently selected in the Recording History (**5**) — by default your last recording:

- Use the scroll wheel of your mouse to zoom in/out. You can also use the zooming scroll bar (**2**).
- When the Sample is played back (e.g., by pressing the pad or by clicking the little play icon in the information bar (**4**)), a **playhead indicator** (white vertical line) shows you the current play position within the waveform.
- Right-click (Mac OS X: [Ctrl]-click) anywhere in the waveform to open a **context menu** with the following commands:

Command	Description
Open containing folder	Opens the folder on your hard disk containing the Sample, providing quick access to the original file.
Save Sample As…	Opens a Save Sample As dialog allowing to save the recorded Sample under another name and/or to another location on your computer.

(2) Zooming scroll bar

Click the main part of the scroll bar and drag your mouse horizontally to scroll through the waveform on the horizontal axis (time), or drag it vertically to zoom in/out on the same time axis. You can also click the left or right handle of the scroll bar and drag it horizontally to zoom in/out while keeping the opposite border of the display at a fix position in the waveform. Double-click the main part of the bar to reset the zoom and display the entire waveform. Alternatively you can use the scroll wheel of your mouse when hovering the waveform display (**1**) to zoom in/out.

(3) Timeline

Shows the time scale in bars (Sync mode) or seconds (Detect mode).

(4) Information bar

Displays the file name and the length of the recorded Sample. Click and hold the little play icon on the left to listen to the Sample on the Cue bus (see section ↑9.2.6, Using the Cue Bus for more information). Click the little circle (or pair of circle) at the far right to switch the waveform display (**1**) between single-channel and two-channel display.

(5) Recording History

All the recordings you have made since you opened the current Project are stored in the Recording History and displayed as mini waveforms under the waveform display. The following actions are available:

- Click any mini waveform to select the corresponding recording for displaying—you can then further edit this recording via the other pages of the Sample Editor. When selected, a recording is also automatically mapped to a new Zone covering the entire key and velocity ranges in the Zone page. Any existing Zones will be replaced.
- Click and hold the little play icon in the bottom right corner to listen to the Sample on the Cue bus without loading it in the waveform nor in the Zone page.

- Click the little cross at the top right corner of a mini waveform to delete this particular recording.
- Drag any mini waveform to another Sound slot to load it in that Sound.

Right-click (Mac OS X: [Ctrl]-click) any mini waveform in the Recording History to open a **context menu** with the following commands:

Command	Description
Delete	Deletes the displayed Sample from the Recording History. This has the same effect as clicking the little cross at the top right corner of the selected mini waveform in the Recording History.
Remove unused recordings	Deletes from the Recording History all recordings that are not currently mapped to any Zone in the Zone page.
Map recordings to zones	Automatically maps all recordings of the Recording History to Zones in the Zone page. The created Zones are put on adjacent keys and cover the entire velocity range. Any existing Zones will be replaced.



The Recording History is not saved with the Project! The Recording History is meant as a temporary tool to help you manage the various recordings made during the current session. When you close the current Project, the Recording History is cleared for all Sounds — nevertheless all your recordings are saved as audio files and available for later use unless you explicitly delete them (via the MASCHINE interface or in your operating system).

Checking Your Recordings on the Controller

You can visualize the last recordings you have made in the current Sound on the right display of your controller:



The recorded Sample is shown on the right display.

The name and length of the displayed Sample are indicated above the waveform. When the Sample is played back (e.g., by pressing the fully lit pad), a playhead indicator (vertical line) shows you the current play position within the waveform.

► Turn Knob 5 to zoom in on the waveform of the Sample and Knob 6 to scroll through it.

Using the Recording History

All the recordings you have made since you opened the current Project are stored in the Recording History and displayed as mini waveforms on the left display. The following actions are available:

- To navigate your various recordings, press Button 7 (PREV) and Button 8 (NEXT).
- The selected recording is automatically loaded in the Sampler Plug-in and ready to be played. You can further edit the selected recording via the other pages of the Sampling mode. When selected, a recording is also automatically mapped to a new Zone covering the entire key and velocity ranges in the ZONE page. Any existing Zones will be replaced.
- Press the fully lit pad (the focused Sound slot) to listen to the displayed recording on the Cue bus (see section ↑9.2.6, Using the Cue Bus for more information).
- Press Button 6 (DELETE) to delete the selected recording.

The Recording History is not saved with the Project! The Recording History is meant as a temporary tool to help you manage the various recordings made during the current session. When you close the current Project, the Recording History is cleared for all Sounds — nevertheless all your recordings are saved as audio files and available for later use unless you explicitly delete them (via the MASCHINE interface or in your operating system).

14.2.6 Location and Name of Your Recorded Samples

By default, recorded Samples are saved in the Recordings subfolder of your Standard User Directory, as defined on the User pane of the Library page in the Preferences panel (see ↑2.6.4, Preferences – Default Page). If you activate the Prefer Project Folder option on the General page of the Preferences panel (see ↑2.6.1, Preferences – General Page), recorded Samples will be saved instead in a Recordings subfolder of the folder where your current Project is saved.

Recorded Samples are automatically named using the following scheme:

[YYMMDD]T[HHMMSS].wav

In the name above, [YYMMDD] stands for the current date (year, month, day, all 2-digit numbers) and [HHMMSS] for the current time (hours, minutes, seconds, all 2-digit numbers).

14.3 Editing a Sample

The Edit page of the Sample Editor in the software and its equivalent the EDIT page of the Sampling mode on your controller allow you to adjust the start and end points of a Sample or Slice and to apply various destructive audio processing functions to any part of the Sample.

Which Sample Is Shown in the Edit Page?

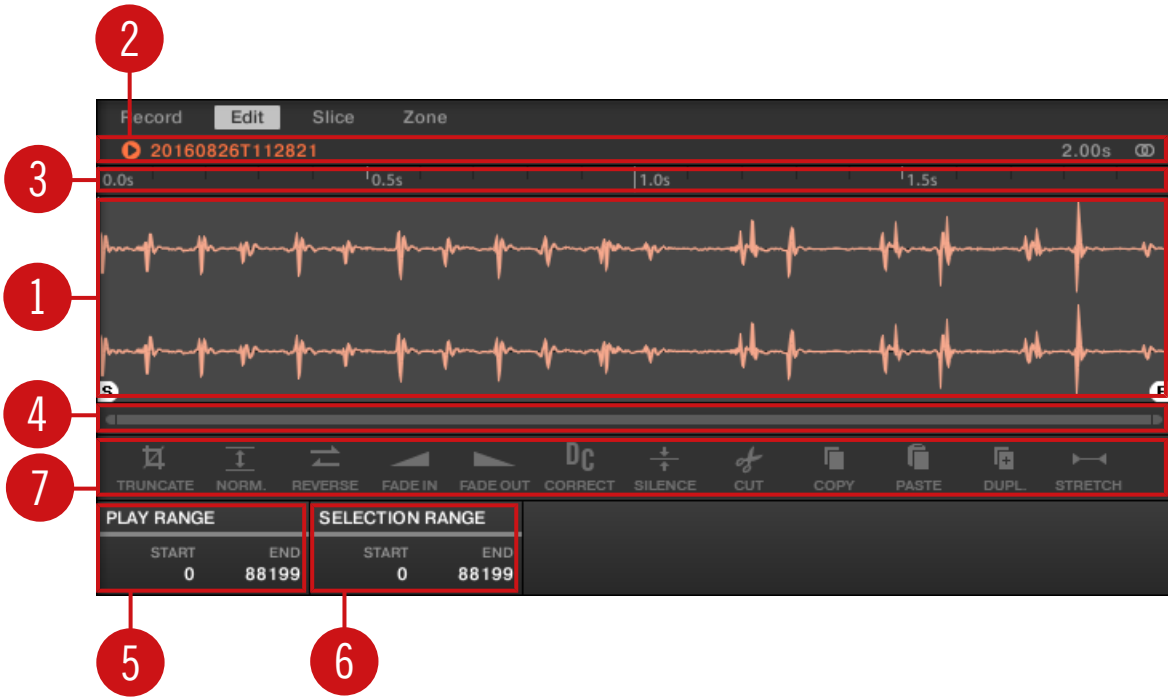
The Edit page (EDIT page on your controller) always displays the Sample of the Zone currently selected (see section ↑14.5.3, Selecting and Managing Zones in the Zone List for more information on selecting Zones), and all your actions in that page will affect this particular Sample. For example:

- If you have just recorded a Sample, it will directly appear here. If you have recorded more than one Sample, the Sampled selected in the Recording History (by default the last recorded Sample) will appear here — see section ↑14.2.5, Checking Your Recordings for more information on the Recording History.
- If the Sample in that Sound is already split into Slices, each Slice has its own Zone and the Slice of the focused Zone will appear here. See section ↑14.4, Slicing a Sample for more information on slicing Samples.

14.3.1 Using the Edit Page

► In the Sample Editor, click the Edit tab at the top to open the Edit page.

The Edit page looks as follows:



The Edit page in the software.

(1) Waveform display

Shows the waveform of the Sample for the focused Zone. The waveform display provides following tools:

- Drag any Sample onto the waveform to replace the current Sample for the focused Zone. If there is no Sample loaded yet, this automatically loads a Sampler Plug-in in the Sound and creates a Zone over the entire key and velocity ranges for the dragged Sample.
- Use the scroll wheel of your mouse to zoom in/out. You can also use the zooming scroll bar (**4**).
- **Play range**: The S and E markers indicate the start and end points of the play range, respectively. Drag them with the mouse to modify the portion of the Sample that will be played back. This can also be done using the controls in the PLAY RANGE section (**5**).
- **Loop range**: If a loop has been defined in the Sample, it is also indicated on the waveform. You can then adjust the loop by dragging its borders, and move the entire loop by dragging its title bar. Loops can be created and adjusted in the Zone page — see section ↑14.5.4, Selecting and Editing Zones in the Map View. Note that the loop will always stay within the play range. Therefore, when moving the Sample's start and end points closer to each other, keep in mind that it might also shrink the loop!
- **Playhead indicator**: When the Sample is played back (e.g., by pressing the pad or by clicking the little play icon in the information bar (**2**)), a playhead indicator (white vertical line) shows you the current play position within the waveform.
- **Selection range**: Click and drag your mouse to create a selection range. The selection range defines the portion to which the audio processing functions of the Audio Toolbar (**7**) will be applied. Adjust the current selection range by dragging its borders or move it by dragging its top part. Double-click anywhere in the waveform to set the selection range to the play range (i.e. to select everything between the S and E markers). You can also select particular ranges via the context menu (see below) and via the controls in the SELECTION RANGE section (**6**).
- **Context menu**: Right-click (Mac OS X: [Ctrl]-click) anywhere in the waveform to open a context menu with the following commands:

Command	Description
Deselect	Cancels the current selection range.
Select All	Selects the entire Sample.
Select Play Range	Selects the play range, i.e. the region between the S and E markers. This is equivalent to double-clicking anywhere in the waveform.
Select Loop	Selects the loop range.
Open containing folder	Opens the folder on your hard disk containing the Sample, providing quick access to the original file.
Save Sample As...	Opens a Save Sample As dialog allowing to save the Sample under another name and/or to another location on your computer.

(2) Information bar

Displays the file name and the length of the recorded Sample. Click and hold the little play icon on the left to play back the whole Sample on the Cue bus (see section ↑9.2.6, Using the Cue Bus for more information). Click the little circle (or pair of circle) at the far right to switch the waveform display (**1**) between single-channel and two-channel display.

(3) Timeline

Shows the time scale in seconds.

(4) Zooming scroll bar

Click the main part of the scroll bar and drag your mouse horizontally to scroll through the waveform on the horizontal axis (time), or drag it vertically to zoom in/out on the same time axis. You can also click the left or right handle of the scroll bar and drag it horizontally to zoom in/out while keeping the opposite border of the display at a fix position in the waveform. Double-click the main part of the bar to reset the zoom and display the entire waveform. Alternatively you can use the scroll wheel of your mouse when hovering the waveform display (**1**) to zoom in/out.

(5) PLAY RANGE section

Adjusts the range that will be played when you trigger a note. Adjust the play start and end points in the Sample via the Start and End parameters. You can also do it by dragging the white markers labeled S and E on the waveform display (**1**) using the mouse as described above.

(6) SELECTION RANGE section

Adjusts the range to which audio processing functions will be applied. You can also select the range by dragging your mouse on the waveform display (**1**) as described above.

(7) Audio Toolbar

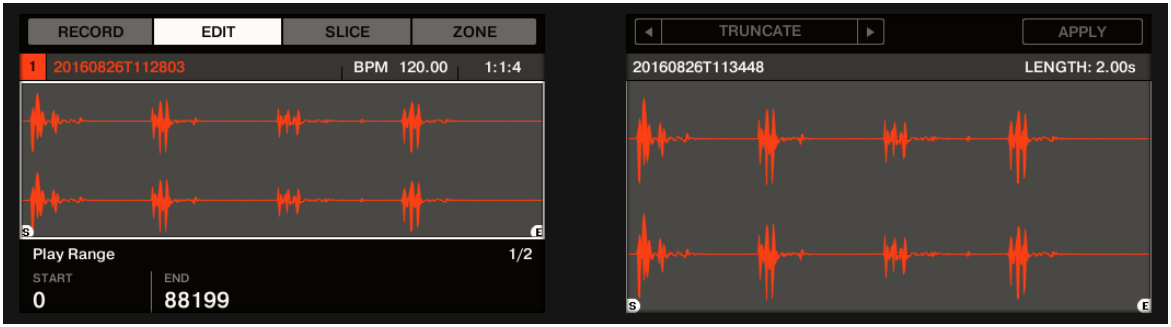
Provides a set of destructive audio processing functions to modify your Sample. The functions will be applied to the current selection range. The available functions are described in section ↑14.3.2, Audio Editing Functions below.



You can also edit the play and loop ranges on the Zone page. See section ↑14.5.6, Adjusting the Zone Settings for more information.

Using the EDIT Page on Your Controller

► In Sampling mode, press Button 2 to access the EDIT page.



The EDIT page on the controller.

The right display shows the **waveform** of the selected Sample:

- Turn Knob 5 to zoom in on the waveform of the Sample and Knob 6 to scroll through it.
- Above the waveform, the information bar indicates the name and length of the Sample.

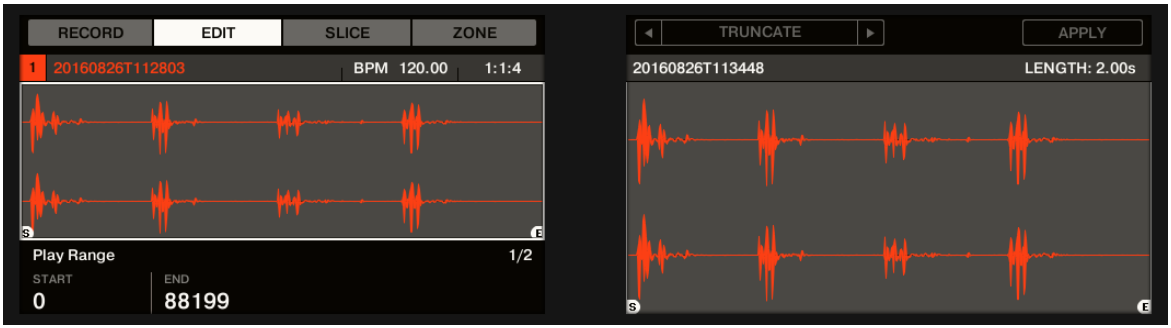
- The Sample can be played back at any time by pressing the corresponding pad on your controller. When the Sample is played back, the playhead indicator (vertical line) shows you the current play position within the waveform on the right display.

The parameters available at the bottom of the left display are spread over two pages.

► Use the Page buttons on the left of the displays to select the desired page.

Page 1 – PLAY RANGE Parameters

The parameters in the PLAY RANGE section allow you to adjust the range that will be played back when you trigger a note.



The EDIT page on the controller, page 1 of 2: adjusting the play range of the Sample.

Parameter	Description
START (Knob 1)	Adjusts the start point of the play range in the Sample.
END (Knob 2)	Adjusts the end point of the play range in the Sample.

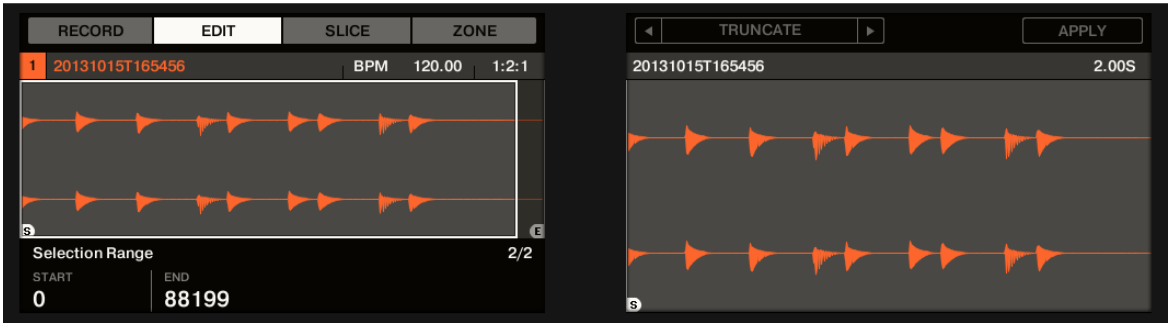
Hold SHIFT when turning the Knobs to adjust the parameters in finer increments.

In the waveform on the right display, the regions outside the play range are grayed out.

If a loop has been defined in the Sample, it is also indicated on the waveform. Loops can be created and adjusted in the ZONE page — see section ↑14.5.4, Selecting and Editing Zones in the Map View. Note that the loop will always stay within the play range. Therefore, when moving the Sample's start and end points closer to each other, keep in mind that it might also shrink the loop!

Page 2 – SELECTION RANGE Parameters

The parameters in the SELECTION RANGE section allow you to adjust the range to which audio processing functions will be applied.



The EDIT page on the controller, page 2 of 2: adjusting the selection range of the Sample.

Parameter	Description
START (Knob 1)	Adjusts the start point of the selection range in the Sample.
END (Knob 2)	Adjusts the end point of the selection range in the Sample.

Hold SHIFT when turning the Knobs to adjust the parameters in finer increments.

On the right display, the selection range is highlighted.

Changing the play range automatically resets the selection range to the new play range.

Audio Editing

The EDIT page provides several audio editing functions to process your Sample. Available via Button 5–8 above the right display, these functions are described in detail in the next section ↑14.3.2, Audio Editing Functions.

14.3.2 Audio Editing Functions

In the Edit page, the Audio Toolbar provides various audio functions. These will be performed on the selected region of the Sample, as defined by the Start and End parameters of the SELECTION RANGE section (see ↑14.3.1, Using the Edit Page above).

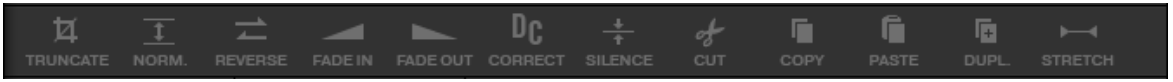
► To apply any audio function to the selected region in your Sample, click the desired icon in the Audio Toolbar.



These audio editing functions are destructive, i.e. they modify the audio material in the Sample. However, your original Sample will not be modified: For each audio function that you perform, a new, distinct copy of the Sample will be saved!



The playback settings of the Sample (e.g., tune, amplitude envelope, etc.) can be adjusted on the Zone page. See section ↑14.5.4, Selecting and Editing Zones in the Map View for more information.



The Audio Toolbar.

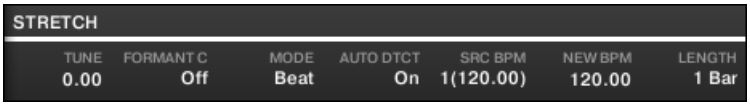
The Audio Toolbar provides following audio processing functions:

Command	Description
TRUNCATE	This deletes the part of the Sample that is outside of the selected region.
NORM. (Normalize)	This adjusts the level of the selected region to the maximum possible value without clipping.
REVERSE	This reverses the selected region of the Sample.

Command	Description
FADE IN	This applies a fade in to the selected region of the Sample.
FADE OUT	This applies a fade out to the selected region of the Sample.
DC CORRECT	This removes the DC offset. DC offset ("Direct Current offset") is an undesirable constant shift in the signal level that might be introduced by some audio processing units. This offset can notably waste some of the available headroom.
SILENCE	This silences the selected region of the Sample.
CUT	This deletes the selected region from the Sample and places it into the clipboard for later use.
COPY	This copies the selected region of the Sample to the clipboard for later use.
PASTE	This pastes the cut/copied region of the Sample, replacing the region of the Sample currently selected.
DUPL. (Duplicate)	This duplicates the selected region of the Sample. The copy is placed right after the original region.
STRETCH	This allows you to apply time stretching and/or pitch shifting to the selected region of the Sample. See below for a detailed description.

Time Stretching / Pitch Shifting

When you select STRETCH in the Audio Toolbar, the bottom of the Edit page switches to the following set of controls:



The stretch controls at the bottom of the Edit page.

These controls allow you to adjust the parameters of the time stretching / pitch shifting function before applying it to the selected region. Pitch shifting and time stretching can be applied independently.

The following parameters are available:

Parameter	Description
STRETCH section	
TUNE	Adjusts the detuning (pitch shifting) to be applied (in semitones and cents). Leave this value to 0.00 to leave the original pitch untouched.
FORMANT C (Formant Correction)	Enables/disables the formant correction. Formant correction allows the pitch-shifted audio to retain the timbre (or "color") of the original audio as much as possible. This is especially useful for melodic instruments.
MODE	Selects between Beat and Free mode: In Beat mode, the new tempo is defined relative to the time signature (the beats and bars) of the original audio. This can be useful if you sampled a loop with a clearly defined rhythm (e.g., a drum loop). In Free mode, the new tempo is defined independently from the time signature of the source. This is more suited for non-rhythmic Samples. In this mode only one parameter is available: SPEED (see below).
AUTO DTCT (Auto Detection, Beat mode only)	If enabled, MASCHINE automatically detects the tempo of the original audio.
SRC BPM (Source BPM, Beat mode only)	Allows to define the tempo of the original audio (in BPM). This tempo is defined in different ways according to the AUTO DTCT value: If AUTO DTCT is enabled, you can set the length (in bars) of the original audio. You can choose between 1/2, 1, and 2 bars. The number between brackets indicates the resulting tempo (in BPM) derived from the number of bars you have set and the computed tempo value. If AUTO DTCT is disabled, you can directly define the tempo of the original audio (in BPM).
NEW BPM (Beat Mode only)	Defines the target tempo of the time-shifted audio (in BPM).

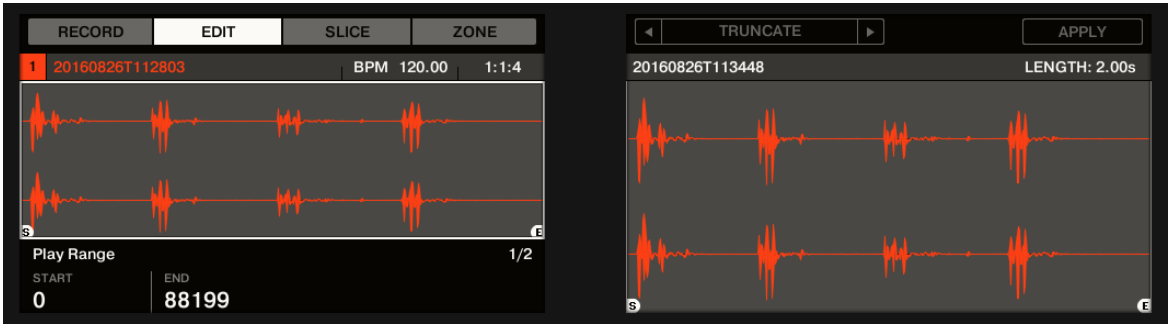
Parameter	Description
LENGTH (Stretch Length, Beat mode with Auto Detection enabled only)	If AUTO DTCT is enabled, you can define the length of the target audio (in bars). Please note that any change to the SRC BPM value (see above) will be automatically mirrored by this LENGTH value. Once you have set the number of bars in the source audio, you can set here another number of bars, thereby dividing or multiplying the tempo of the target audio. Available values are 1/16, 1/8, 1/4, 1/2, 1, 2, 4, and 8 bars, as well as the corresponding triplet values.
SPEED (Free mode only)	Adjusts the new tempo relative to the original tempo (in percentage). The minimum value is 10 %.

In Beat mode, if you set a target tempo that is smaller than a tenth of the original tempo, the Apply button will be disabled. Set a higher target tempo to enable the Apply button again!

- Once you have set the parameters to the desired values, click Apply to apply the pitch shifting and/or time stretching to the selected region in the Sample, or Cancel to let the Sample untouched.

Audio Editing Functions on the Controller

The EDIT page additionally provides several audio editing functions to process your Sample.



Audio editing functions on the right display of the controller.

1. Use Button 5 and 6 to select the desired audio function.

2. Press Button 8 to perform the selected audio function

→ The audio function will be performed on the selected region in your Sample, as defined by the START and END parameters of the SELECTION RANGE section on page 2 (see ↑14.3.1, Using the Edit Page).



These audio processing functions are destructive, i.e. they modify the audio material in the Sample. However, your original Sample will not be modified: For each audio function that you perform, a new, distinct copy of the Sample will be saved!



The playback settings of the Sample (e.g., tune, amplitude envelope, etc.) can be adjusted on the ZONE page. See section ↑14.5.4, Selecting and Editing Zones in the Map View for more information.

Available functions are:

Parameter	Description
TRUNCATE	This deletes the part of the Sample that is outside of the selected region.
NORMALIZE	This adjusts the level of the selected region to the maximum possible value without clipping.
REVERSE	This reverses the selected region of the Sample.
FADE IN	This applies a fade in to the selected region of the Sample.
FADE OUT	This applies a fade out to the selected region of the Sample.
FIX DC	This removes the DC offset. DC offset (“Direct Current offset”) is an undesirable constant shift in the signal level that might be introduced by some audio processing units. This offset can notably waste some of the available headroom.
SILENCE	This silences the selected region of the Sample.
CUT	This deletes the selected region from the Sample and places it into the clipboard for later use.

Parameter	Description
COPY	This copies the selected region of the Sample to the clipboard for later use.
PASTE	This pastes the cut/copied region of the Sample, replacing the region of the Sample currently selected.
DUPLICATE	This duplicates the selected region of the Sample. The copy is placed right after the original region.
STRETCH	This allows you to apply time stretching and/or pitch shifting to the selected region of the Sample. See below for a detailed description.

Time Stretching / Pitch Shifting

When STRETCH is selected, pressing Button 7 (SETTINGS) allows you to adjust the parameters of the time stretching / pitch shifting function before applying it to the selected region. Use Knob 1–8 to adjust the parameters. Pitch shifting and time stretching can be applied independently.



Parameters for the Stretch function.

Following parameters are available via Knob 1–8:

Parameter	Description
STRETCH section	
TUNE	Adjusts the detuning (pitch shifting) to be applied (in semitones and cents). Leave this value to 0.00 to leave the original pitch untouched.
FORMANT C (Formant Correction)	Enables/disables the formant correction. Formant correction allows the pitch-shifted audio to retain the timbre (or "color") of the original audio as much as possible. This is especially useful for melodic instruments.
MODE	Selects from the two available time shifting modes. **BEAT**: In Beat mode, the new tempo is defined relative to the time signature (the beats and bars) of the original audio. This can be useful if you sampled a loop with a clearly defined rhythm (e.g., a drum loop). **FREE**: In Free mode, the new tempo is defined independently from the time signature of the source. This is more suited for non-rhythmic Samples. In this mode only one parameter is available: SPEED (see below).
AUTO DTCT (Auto Detection, Beat mode only)	If AUTO DTCT (Auto Detection) is enabled, MASCHINE automatically detects the tempo of the original audio.
SRC BPM (Source BPM, Beat mode only)	SRC BPM (Source BPM) allows to define the tempo of the original audio (in BPM). This tempo is defined in different ways according to the AUTO DTCT value: If AUTO DTCT is enabled, you can set the length (in bars) of the original audio. You can choose between 1/2, 1, and 2 bars. The number between brackets indicates the resulting tempo (in BPM) derived from the number of bars you have set and the computed tempo value. If AUTO DTCT is disabled, you can directly define the tempo of the original audio (in BPM).

Parameter	Description
NEW BPM (Beat mode only)	Defines the target tempo of the time-shifted audio (in BPM).
LENGTH (Stretch Length, Beat mode with Auto Detection enabled only)	If AUTO DTCT is enabled, you can define the length of the target audio (in bars). Please note that any change to the SRC BPM value (see above) will be automatically mirrored by this LENGTH value. Once you have set the number of bars in the source audio, you can set here another number of bars, thereby dividing or multiplying the tempo of the target audio. Available values are 1/16, 1/8, 1/4, 1/2, 1, 2, 4, and 8 bars, as well as the corresponding triplet values.
SPEED (Free mode only)	Adjusts the new tempo relative to the original tempo (in percentage). The minimum value is 10 %.



In Beat mode, if you set a target tempo (NEW BPM) that is smaller than a tenth of the original tempo (SRC BPM), Button 8 (APPLY) will be grayed out and disabled. Set a higher target tempo to enable the button again!

- Once you have set the parameters to the desired values, press Button 8 (APPLY) to apply the pitch shifting and/or time stretching to the selected region in the Sample. If you don't want to use the Stretch function, press Button 7 (SETTINGS) again to switch back to the audio function selection.

14.4 Slicing a Sample

Slicing allows you to chop up loops to extract single Sounds (the drum sounds of a drum loop for example), but it's also good for preparing a loop to be played back at another tempo without changing its pitch or timing. The resulting **Slices** can then be exported to different notes of the same Sound or to different Sounds of the same Group.

The Slice page of the Sample Editor in the software and its equivalent the SLICE page of the Sampling mode on your controller allow you to slice your Samples in various ways.

The typical workflow for slicing your Samples is as follows:

1. Open the Slice page (SLICE page on the controller): ↑14.4.1, Opening the Slice Page.
2. Choose a method for slicing along with a few settings depending on the chosen method: ↑14.4.2, Adjusting the Slicing Settings.
3. If you wish, manually adjust the proposed Slices: ↑14.4.4, Manually Adjusting Your Slices.
4. Apply the slicing to your Sample and export the Slices — whether in place or to another Sound/Group: ↑14.4.5, Applying the Slicing.

Which Sample Is Shown in the Slice Page?

The Slice page (SLICE page on your controller) always displays the Sample of the Zone currently selected (see section ↑14.5.3, Selecting and Managing Zones in the Zone List for more information on selecting Zones), and all your actions in that page will affect this particular Sample. For example:

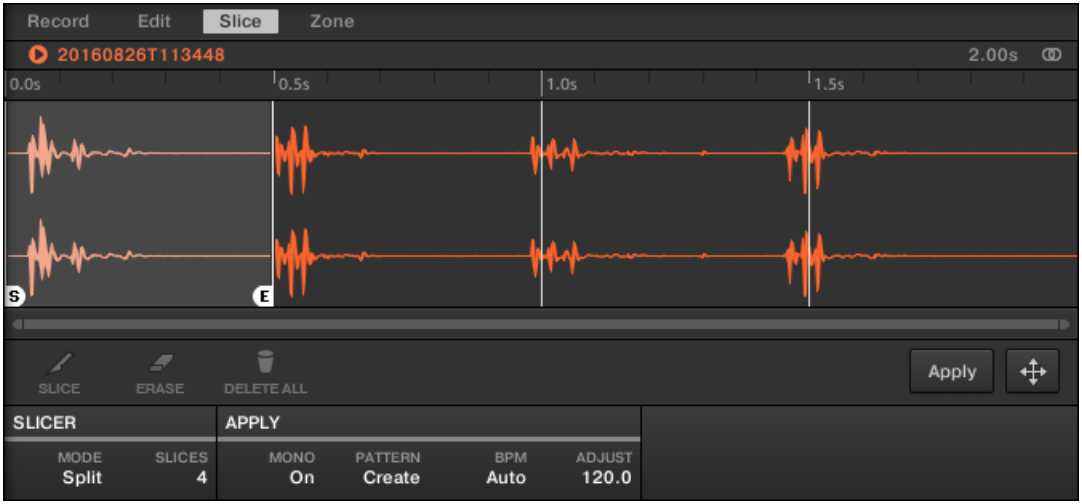
- If you have just recorded a Sample, it will directly appear here. If you have recorded more than one Sample, the Sampled selected in the Recording History (by default the last recorded Sample) will appear here — see section ↑14.2, Recording a Sample for more information on how to record Samples.
- You can also drag a Sample onto the focused Sound slot or directly to the Slice page from the Browser or from your operating system. It will then appear on the page and replace any Sample already loaded in that Sound.

14.4.1 Opening the Slice Page

In the software, slicing a Sample is done in the Slice page of the Sample Editor.

► In the Sample Editor, click the Slice tab at the top to open the Slice page.

The Slice page looks as follows:

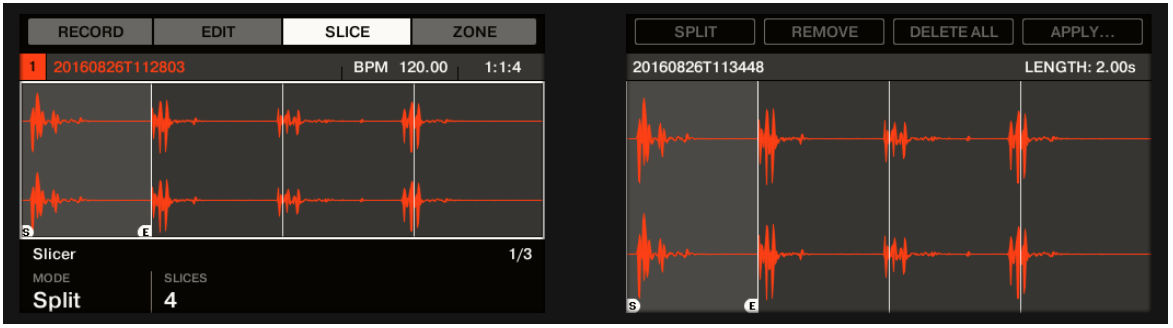


The Slice page in the software.

Opening the SLICE Page on Your Controller

► In Sampling mode, press Button 3 to access the SLICE page.

The SLICE page looks as follows:



The SLICE page 1 on the controller.

14.4.2 Adjusting the Slicing Settings

At the bottom of the Slice page, you can adjust the settings used to define where the various Slices will be created in the Sample.



Adjust the slicing settings at the bottom of the Slice page.

Any change to these settings will directly affect the number and position of the Slice markers displayed on the waveform above.

At any time you can prelisten to the proposed Slices on the Cue bus (see section ↑9.2.6, Using the Cue Bus for more information) by pressing the lit pads or clicking the Slices on the waveform display.

Following parameters are available:

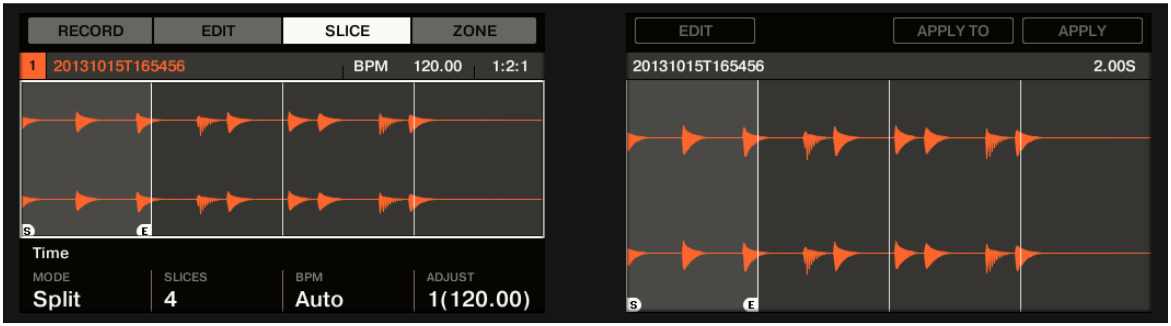
Parameter	Description
SLICER Section	
MODE	Here you can select either *Split*, *Grid*, *Detect* or *Manual*: **Detect mode**: The Sample will be sliced according to its transients. **Split mode**: The Sample will be sliced into equally spread Slices. **Grid mode**: The Sample will be sliced according to note values. **Manual mode**: Manually enter slice points using the pads on your controller, or adjust the start and end points of a slice.
SLICES (Split and Grid mode only)	When MODE is set to Split (see above), SLICES lets you choose the amount of Slices: 4, 8, 16 or 32. When MODE is set to Grid (see above), SLICES lets you choose the length of the Slices in note values: 4th, 8th,16th or 32nd notes.

Parameter	Description
AUTO-SNAP (Manual mode only)	The Sample Slicer Manual mode Auto-Snap feature automatically aligns Slice points to the nearest transient as you manually trigger the slicing from the pads. It can be turned off so that slice points are instead placed exactly where you trigger them. In order to use Auto-Snap, you must wait for analysis to be performed on the sample you're slicing—the analysis is very quick but will take longer for long audio files.
SENSITIVITY (Detect mode only)	When MODE is set to Detect (see above), SENSITIVITY lets you adjust the sensitivity of the transient detection. 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.
APPLY Section	
MONO	The Sample Slicer Mono option when activated automatically sets the Voice and Choke Group of all sample slices to 1 when slicing to a Group. This time saving feature is useful when you don't want to have lots of samples triggered or repeating at the same time, for example, when you slice a drum loop and trigger the individual hits to form a new pattern. When Mono is selected and the slices are applied to a Group, the sampler polyphony is automatically set to 1 so only one voice will play at a time. The Choke Group is also automatically set to 1 so each new pad that is hit will always take priority over the previous one by cancelling it out. This behavior can be found on 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.
BPM (BPM Mode)	Selects how the tempo is defined: If you select *Auto*, MASCHINE will calculate the tempo automatically. If you select *Manual*, you can enter the tempo in BPM manually.

Parameter	Description
ADJUST	If BPM is set to Auto, you can choose between the tempo that MASCHINE detected, or half or double of that tempo. If BPM is set to Manual, you can adjust the tempo manually.
ENGINE Section	**(Detect mode only)**
ZERO-X (Zero Crossing, Detect mode only)	When MODE is set to Detect, activate ZERO-X to force the detected Slices to be created on the closest locations where the audio signal crosses the zero value. This can be helpful to avoid clicks when playing back Slices in another sequence.

Adjusting the Slicing Settings on the Controller

At the bottom of the left display, you can adjust the settings used to define where the various Slices will be created in the Sample.



Adjust the slicing settings via Knob 1–4.

Any change to these settings will directly affect the number and position of the Slice markers shown in the waveform on the displays.

Selecting and Pre-Listening the Slices with the Pads

At any time, the proposed Slices are also available on your pads: The fully lit pad indicates the selected Slice, while the dim lit pads indicate the other Slices.

► Press any fully or dim lit pad to play back the corresponding Slice on the Cue bus (see section ↑9.2.6, Using the Cue Bus for more information).

For more information on the Cue channel, please refer to section ↑9.2.6, Using the Cue Bus.

If there are more than 16 Slices, you can select which set of 16 Slices should be triggered by your pads:

► If there are more than 16 Slices, press SHIFT + Button 7 or 8 to switch your pads to the previous/next 16 Slices, respectively.

Note that we haven't applied any slicing yet: For now your pads only allow you to prelisten how the proposed *would sound* after you apply the slicing. Applying the slicing will be described in section ↑14.4.5, Applying the Slicing.

Slicing Parameters

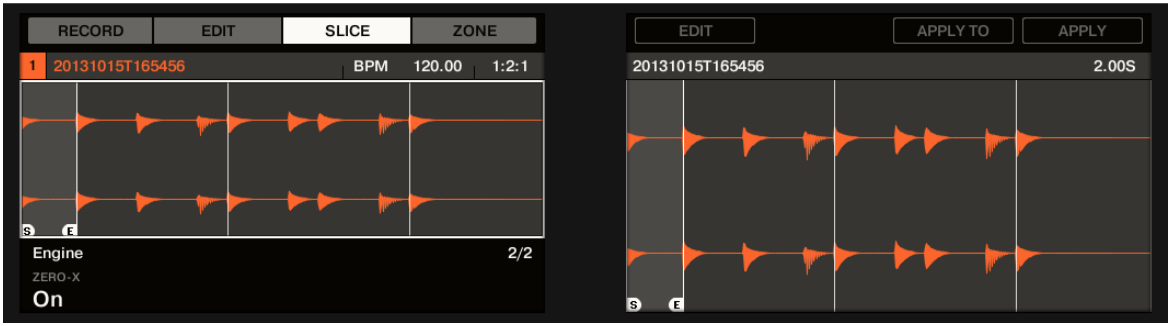
Following parameters are available:

Parameter	Description
TIME Section	
MODE	Here you can select either DETECT, SPLIT, GRID, or MANUAL: **Detect mode**: The Sample will be sliced according to its transients. **Split mode**: The Sample will be sliced into equally spread Slices. **Grid mode**: The Sample will be sliced according to note values. **Manual mode**: Manually enter slice points using the pads on your controller, and edit the start and end points of a slice.
SLICES (Split and Grid mode only)	When MODE is set to SPLIT (see above), SLICES lets you choose the amount of Slices: 4, 8, 16 or 32. When MODE is set to GRID (see above), SLICES lets you choose the length of the Slices in note values: 4th, 8th,16th or 32nd notes.

Parameter	Description
AUTO-SNAP (Manual mode only)	The Sample Slicer Manual mode Auto-Snap feature automatically aligns Slice points to the nearest transient as you manually trigger the slicing from the pads. It can be turned off so that slice points are instead placed exactly where you trigger them. In order to use Auto-Snap, you must wait for analysis to be performed on the sample you're slicing—the analysis is very quick but will take longer for long audio files.
SENSITIVITY (Detect mode only)	When MODE is set to DETECT (see above), SENSITIVITY lets you adjust the sensitivity of the transient detection. 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.
BPM (BPM Mode)	Selects how the tempo is defined: If you select AUTO, MASCHINE will calculate the tempo automatically. If you select MANUAL, you can enter the tempo in BPM manually.
ADJUST	If BPM is set to AUTO, you can choose between the tempo that MASCHINE detected, or half or double of that tempo. If BPM is set to MANUAL, you can adjust the tempo manually.

When MODE is set to DETECT, a second section of parameters is available at the bottom of the left display: the ENGINE section.

► When MODE is set to DETECT, press the Right Page button to show the ENGINE section.



The ENGINE section.

This ENGINE section contains a single parameter: ZERO-X.

Parameter	Description
ENGINE Section	**(Detect mode only)**
ZERO-X (Zero Crossing, Detect mode only)	When MODE is set to DETECT, activate ZERO-X to force the detected Slices to be created on the closest locations where the audio signal crosses the zero value. This can be helpful to avoid clicks when playing back Slices in another sequence.

14.4.3 Live Slicing

Live Slicing is a quick and intuitive way to add slices to a sample using the pads on your controller. The first pad is used to trigger the sample and the subsequent pads are used to add slice points as required. If necessary, the start and end points of the slices can then be fine-tuned using Edit mode.

Live Slicing is only available from your MASCHINE controller.

14.4.3.1 Live Slicing Using MASCHINE STUDIO

To manually add Slices to a sample using the pads on your controller:

1. Press the SAMPLING button to enter the Sampling page.

2. Press Button 3 to select SLICE to open the SLICE tab.
3. Turn Knob 1 to select Manual mode.

⇨ Pad 1 will begin to flash to indicate that the first Slice can be added.

4. Press Pad 1 to add the first Slice to the sample.

⇨ Playback of the sample will begin and the next pad will begin to flash to indicate that the next slice point can be added.

5. Press Pad 2 to add the second slice point.
6. Continue to press subsequent pads as they flash to add more slices.

→ When playback of the sample stops you may fine-tune the start and end points of your slices by entering EDIT mode.



Press SHIFT + MUTE if you want to stop playback of a long sample.



Press SHIFT + Button 7 and 8 to access each bank of Slices.

14.4.3.2 Delete All Slices

The DELETE ALL option in SAMPLING EDIT mode is a quick and convenient way to delete all Slices at once from a sample using your controller.

Use the DELETE ALL option to delete all slices at once from a sample.

To delete all Slices from a sample:

1. Press the SAMPLING button to enter the Sampler.
2. Press Button 3 to select SLICE to enter the Slice mode.
3. Turn Knob 1 to select Manual mode.
4. Press Button 4 EDIT.
5. Press Button 8 to select DELETE ALL to delete all slices.

→ All slices are deleted from the current sample.

Deleting All Slices after They Have Been Applied to the Pattern Editor

If you have committed your Slices using the APPLY option, you must return to Edit mode and apply the DELETE ALL option to fully remove them from the Keyzone and Pattern.

To delete all Slices after they have been applied:

1. Press the SAMPLING button to enter the Sampler.
2. Press button 4 EDIT to return to Edit mode.
3. Press Button 8 to select DELETE ALL to delete all slices.
4. Press Button 4 EDIT to exit EDIT Mode.
5. Press APPLY to remove the Slices from the Sound or Group.

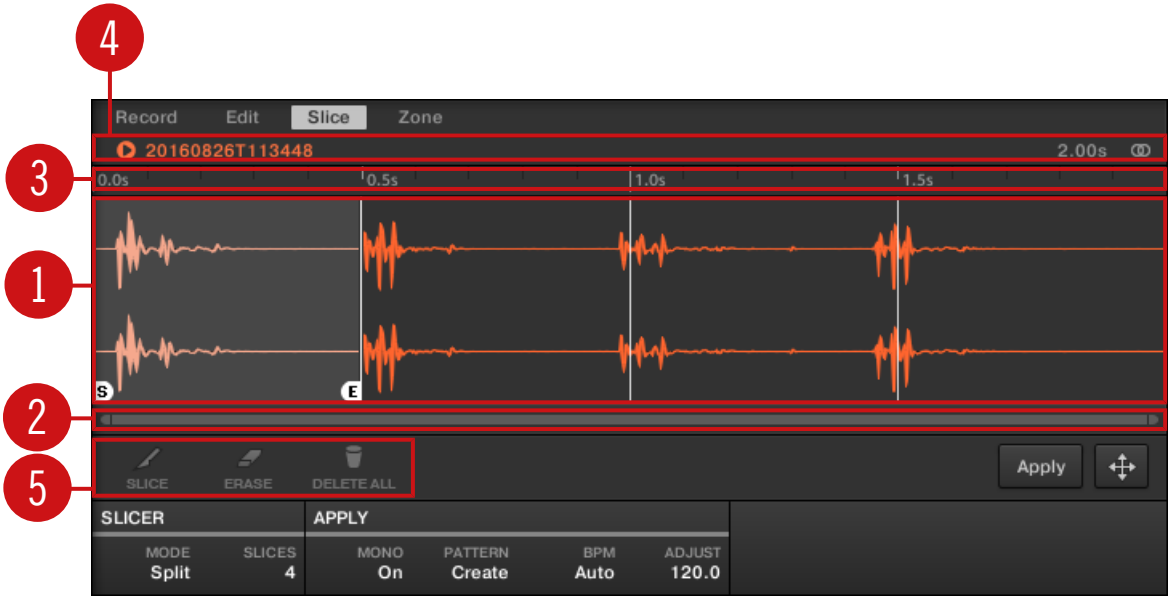
→ All extra Slices and Keyzones will be deleted leaving just the first Keyzone in place.

14.4.4 Manually Adjusting Your Slices

In addition to the Detect, Split, Grid, and Manual modes that create Slices automatically (see section ↑14.4.2, Adjusting the Slicing Settings above), you can also adjust Slices manually using your mouse, the waveform display, and the various edit tools at your disposal.



You can directly adjust your Slices manually by selecting *Manual* in the MODE selector, or start from MASCHINE's proposed Slices as described in section ↑14.4.2, Adjusting the Slicing Settings and fine-adjust these Slices manually — in that case the MODE selector automatically switches to Manual.



Manually adjusting your Slices.

(1) Waveform display

Shows the selected Sample with a couple of spread vertical lines in the waveform: this is where the Slices are going to be applied (i.e. cut).

- Hover a Slice with the mouse to select it (it is highlighted). Little "S" and "E" markers appear at the bottom of the Slice borders to indicate the start and end point of that Slice, respectively.
- Use the scroll wheel of your mouse to zoom in/out. You can also use the zooming scroll bar (**2**).
- When the entire Sample or a particular Slice is played back, a **playhead indicator** (white vertical line) shows you the current play position within the waveform.
- **Context menu**: Right-click (Mac OS X: [Ctrl]-click) anywhere in a Slice to open a context menu with the following commands:

Command	Description
Open containing folder	Opens the folder on your hard disk containing the Sample, providing quick access to the original file.
Save Sample As...	Opens a Save Sample As dialog allowing to save the Slice under as a distinct file on your computer.

By default, you can adjust Slices with your mouse as follows:

- Click inside a Slice (i.e. anywhere between its borders) to play it back on the Cue bus (see section ↑9.2.6, Using the Cue Bus for more information).
- Drag the borders of a Slice to adjust them. You have two possibilities:
  - If the end point of the previous Slice and the start point of the next Slice are joined, drag the border's *vertical line* to move both the end point of the previous Slice and the start point of the next Slice together, so that both Slices stay joined.
  - Drag the little "S" (or "E") *marker* at the bottom of the vertical line to move the start (or end) point of a Slice independently of the end (or start) point of the previous (or next) Slice. If you want this border to stick again with that of the previous (or next) Slice, drag the *vertical line* (instead of the "S"/"E" marker) toward that of the previous (or next) Slice.



By moving the start and end points of Slices independently, you can create overlapping Slices or gaps between Slices.

These default mouse actions are valid only if the SLICE and REMOVE buttons are disabled in the edit tools (**5**). Enabling any of them provides alternative mouse controls described below.

(2) Zooming scroll bar

Click the main part of the scroll bar and drag your mouse horizontally to scroll through the waveform on the horizontal axis (time), or drag it vertically to zoom in/out on this time axis. You can also click the left or right handle of the scroll bar and drag it horizontally to zoom in/out while keeping the opposite border of the display at a fix position in the waveform. Double-click the main part of the bar to reset the zoom and display the entire waveform. Alternatively you can use the scroll wheel of your mouse when hovering the waveform display (**1**) to zoom in/out.

(3) Timeline

Shows the time scale in seconds.

(4) Information bar

Displays the file name and the length of the selected Sample. Click and hold the little play icon on the left to play back the whole Sample on the Cue bus (see section ↑9.2.6, Using the Cue Bus for more information). Click the little circle (or pair of circle) at the far right to switch the waveform display (**1**) between single-channel and two-channel display.

(5) Edit tools

The three buttons in the edit tools allow you to add or remove Slices:

- SLICE: When the SLICE button is enabled, the default mouse behavior in the waveform display is replaced by the following:
  - Click inside a Slice to split it into two Slices at that location.
  - Adjust the borders of existing Slices as described above in the waveform display (**1**).
- REMOVE: When the REMOVE button is enabled, over the waveform display the mouse pointer turns into a rubber icon and the default mouse actions are replaced by the following:
  - Click the start border of a Slice to delete that border and merge the Slice with the previous one.
  - Click inside a Slice (i.e. anywhere between its borders) to remove the entire Slice. The corresponding part of the Sample is grayed out and won't be exported as Slice.
- DELETE ALL: Click the DELETE ALL button to delete all proposed Slices and start slicing from scratch again.



The SLICE and REMOVE buttons are mutually exclusive.



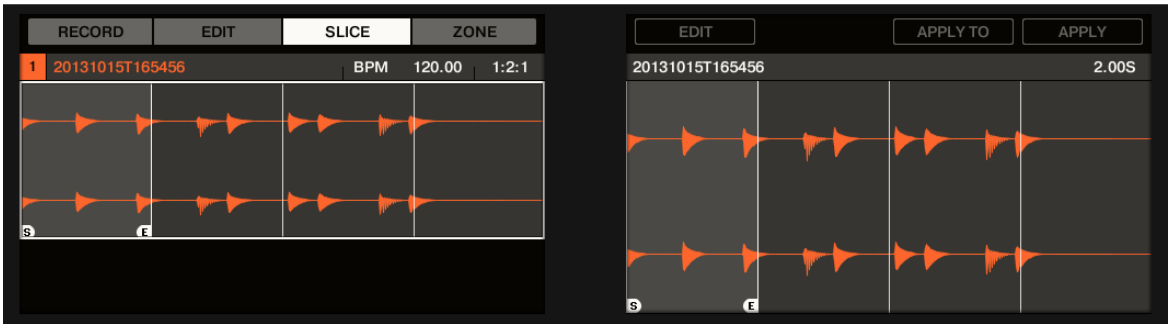
With SLICE or REMOVE enabled, you can still prelisten to your individual Slices by pressing the corresponding pads on your controller!

Manually Adjusting Slices Using Your Controller

Your controller provides a dedicated Slice Edit mode that allows you to select and fine-tune each particular Slice.

- ► On the SLICE page of the Sampling mode, press Button 5 (EDIT) to enter/leave Slice Edit mode.

→ When Slice Edit mode is active, Button 5 is fully lit and the EDIT label underneath is highlighted.



The Edit mode in the SLICE page.

In Slice Edit mode following parameters and commands are available:

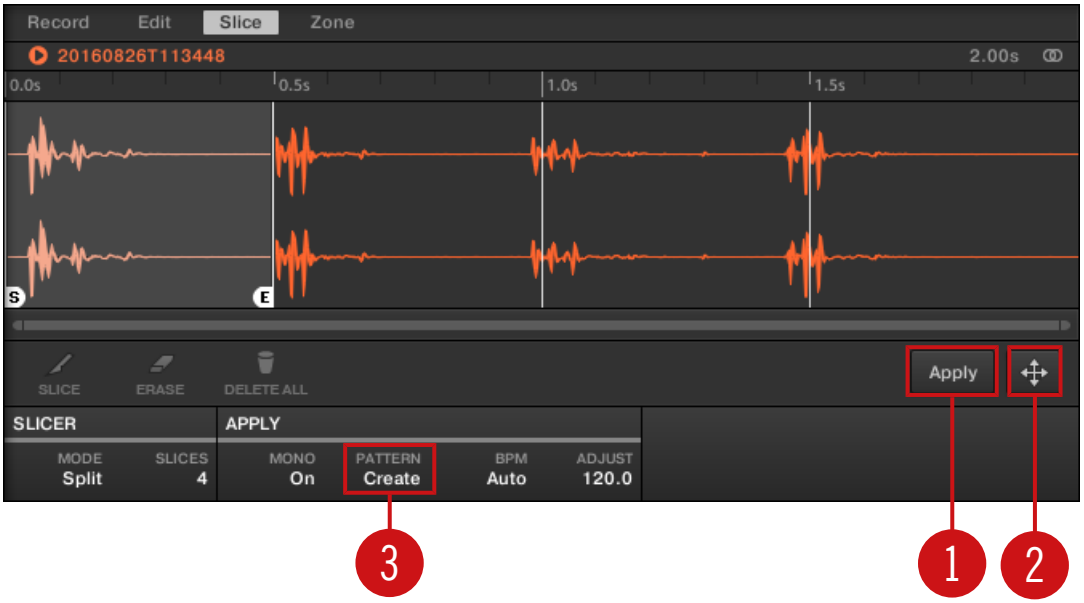
Parameter	Description
SELECTION section	
SLICE (Knob 1)	Selects the Slice to edit. The display will show you which Slice is currently selected. You can also use the pads to select Slices starting from pad 1.
START (Knob 3)	Adjusts the start point of the selected Slice. Hold SHIFT when turning the Knob to adjust the parameter in finer increments. If the start point of the Slice and the end point of the previous Slice are still joined, moving the start point of the Slice simultaneously moves the end point of the previous Slice, so that both Slices stay joined.

Parameter	Description
END (Knob 4)	Adjusts the end point of the selected Slice. Hold SHIFT when turning the Knob to adjust the parameter in finer increments. Note that moving the end point of a Slice does *not* simultaneously move the start point of the next Slice — in opposition to adjusting the START parameter (see above).
Button 6, 7 and 8	
SPLIT/SLICE	Splits the sample in half, or adds a Slice during sample playback.
REMOVE (Button 7)	Removes the start border of the selected Slice, thereby joining this Slice with the previous Slice.
DELETE ALL (Button 8)	Removes all Slices.

- After you have performed your Slice edits, confirm them by pressing Button 5 (EDIT) again to leave Slice Edit mode.

14.4.5 Applying the Slicing

Once you are satisfied with the proposed and/or manually adjusted Slices (see section ↑14.4.2, Adjusting the Slicing Settings), you can apply the slicing in order to actually cut the original Sample and create these Slices. This is done via the three elements at the bottom right of the Slice page:



You can apply the slicing in various ways.

(1) Apply button

Exports the Slices to the same Sound. If you click Apply, the Slices will be mapped to individual notes of this Sound, the Sample Editor will be replaced by the Pattern Editor in Keyboard view, and the pads of your controller will switch to Keyboard mode so that you can directly play your Slices on the pads. Additionally, depending on the setting of the Pattern Creation selector (**3**), some notes can be automatically created for each Slice (see below).

(2) Slice Dragger

Drag the Slice Dragger to export the Slices to any other Sound or Group:

- If you drag to a Sound (in the Sound List at the left of the Sample Editor):
  - The Slices will be mapped to individual notes of this Sound, starting with the bottom C (C-2 in MASCHINE convention). The base key of the Sound will be set to the bottom C as well (see section ↑5.1.3, Adjusting the Base Key for more information on the base key). Any previous content in the Sound will be replaced.
  - The Sample Editor will be replaced by the Pattern Editor in Keyboard view.

- The pads of your controller will switch to Keyboard mode so that you can directly play your Slices on the pads.
- Depending on the setting of the Pattern Creation selector (**3**), notes will be automatically created for each Slice (see below).



In other words, the Apply button (**1**) is just a shortcut for dragging the Slice Dragger to the focused Sound itself!

- If you drag to a Group (in the Group List at the left of the Arranger):
  - The Slices will be mapped to individual Sound slots, replacing their current content (if any). Only the first 16 Slices will be exported.
  - The Sample Editor will be replaced by the Pattern Editor in Group view.
  - The pads of your controller will switch to Group mode so that you can directly play your Slices on the pads.
  - Depending on the setting of the Pattern Creation selector (**3**), notes will be automatically created for each Slice (see below).

(3) Pattern Creation selector

Selects from three modes controlling the automatic note creation upon Slice export. The mode selected here will be used both when clicking the Apply button (**1**) and when using the Slice Dragger (**2**). Following options are available:

- *Create Pattern* (default setting): Upon Slice export a new Pattern will be created with one note for each pitch (if Slices are exported to a Sound) or one note for each Sound (if Slices are exported to a Group) so that the Pattern reproduces the original, unsliced Sample.
- *Replace Pattern*: Upon Slice export a sequence of notes will be created in the current Pattern so that the Pattern reproduces the original, unsliced Sample. If the sequence is shorter than the current Pattern it will be repeated to fill the Pattern; if the sequence is longer than the Pattern the Pattern will be extended according to the Pattern Grid and the content of other Sounds will be repeated.
  - If Slices are exported to a Sound, the sequence of notes will contain one note for each pitch. Any existing notes for that Sound will be replaced. Notes for other Sounds in the Pattern will stay untouched.

- If Slices are exported to a Group the sequence of notes will contain one note for each Sound containing a Slice. Any existing notes for these Sounds will be replaced. Notes for other Sounds in the Pattern will stay untouched.

- *No Pattern*: No Pattern is created, and the current Pattern is left untouched.

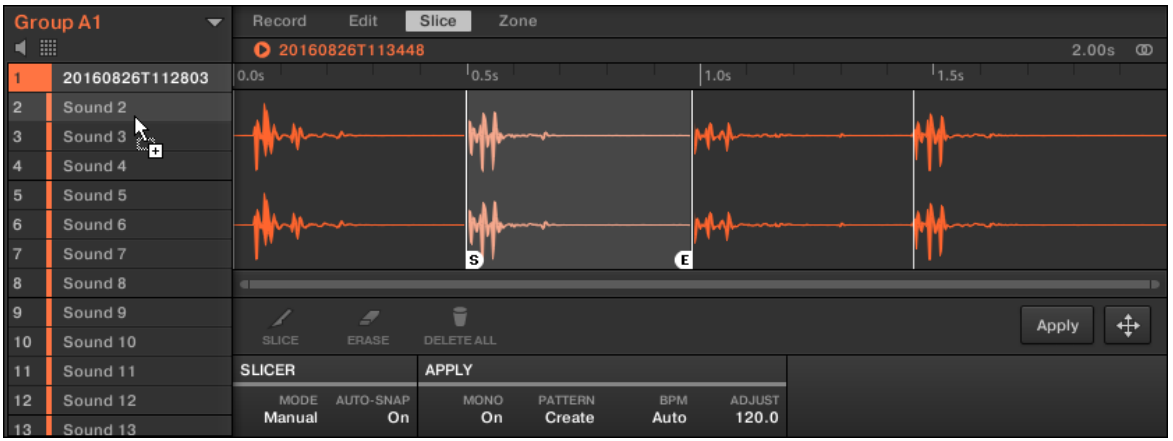


Play around with the slicing feature by removing some of these notes, quantizing or completely rearranging them!

The notes in the picture above represent the Slices and trigger them in order to play the Sample with correct timing and pitch. If you change the tempo of your Project, you will hear that the loop automatically adjusts to the new tempo.

Exporting Single Slices

You can also export an individual Slice to another Sound by drag-and-drop:



Dragging an individual Slice to another Sound.

Applying a Sliced Sample to a Sound

If you drag a Slice to a Group in the Group List (at the left of the Arranger), it will be exported to the first Sound slot of that Group. Any Sound loaded in that Sound slot will be replaced.

When applying a sliced sample to a Sound in an otherwise empty Group, the root note of the Sounds in that Group is set to C-2, matching the key zones of the slices.

The root note parameter is shared among all Sounds in a Group. However, when applying slices to a Sound, these slices will always start at the lowest possible note, to make room for the maximum number of slices. If you already have Sounds in a Group, the root note is not changed after applying slices, in order to not change the behavior of the existing Sounds. This will, however, lead to a mismatch in how you accessed slices across Pads in the Sampling / Slice tab and how they are laid out in the Sound you applied them to. You will typically play a root note of C3 with Pad 1, while the lowest slice will start at C-2. To avoid this mismatch, and to access slices on a Sound exactly as you created them in the Sampling / Slice screen, apply slices to a Sound in a Group where you have not loaded anything to the other Sounds. This also works when you start by loading a Sample into a Sound in a Group where you have not yet loaded anything else.

Exporting the Slices on the Controller

Once you are satisfied with the proposed and/or manually adjusted Slices (see section ↑14.4.2, Adjusting the Slicing Settings), you can apply the slicing in order to actually cut the original Sample and create these Slices. This is done via the two commands at the top of the right display: APPLY… (Button 8).

Choosing a Destination for the Slices

► Press Button 8 (APPLY…) to export the Slices to any Sound or Group in your Project.

→ The displays switch to a Selection mode allowing you to choose a destination for the exported Slices.



Selecting a target for the exported Slices.

In this Selection mode, you can choose to export the Slices to a Sound or to a Group.

To export the Slices to a Sound:

1. Select the Group containing the target Sound by pressing its Group button A–H. If your Project has more than eight Groups, you can use Button 3 and 4 to first select the desired Group bank.
   The selected Group button starts flashing and the corresponding Group is highlighted on the left display. In addition the pads now represent the Sound slots of that Group.
2. Select the target Sound by pressing its pad.
   The Group button stops flashing, the selected pad starts flashing to indicate that it is now the target.
3. Press Button 8 (OK) to export the Slices.

→ The Slices will be mapped to individual notes of the selected Sound, starting with the bottom C (C-2 in MASCHINE convention). The base key of the Sound will be set to the bottom C as well (see section ↑5.1.3, Adjusting the Base Key for more information on the base key). Any previous content in the Sound will be replaced. Your controller will leave Sample mode and return to Control mode. The pads will switch to Keyboard mode so that you can directly play your Slices on the pads. Additionally, depending on the setting of the Pattern Creation selector in the Slice page of the software, notes will be automatically created for each Slice (see above for more information).

To export the Slices to a Group:

1. Select the desired Group by pressing its Group button A–H. If your Project has more than eight Groups, you can use Button 3 and 4 to first select the desired Group bank.
   The selected Group button starts flashing and the corresponding Group is highlighted on the left display.
2. Press Button 8 (OK) to export the Slices.

→ The Slices will be mapped to individual Sound slots, replacing their current content (if any). Only the first 16 Slices will be exported. Your controller will leave Sample mode and return to Control mode. The pads will switch to Group mode so that you can directly play your Slices on the pads. Additionally, depending on the setting of the Pattern Creation selector in the Slice page of the software, notes will be automatically created for each Slice (see below).



At any time you can press Button 7 (CANCEL) to cancel the export and return to the SLICE page.

Exporting a Single Slice

Instead of exporting all Slices, you can also export the selected Slice only:

1. Press Button 7 (APPLY TO).
   The controller switches to the Selection mode described above.
2. Press Button 5 (SINGLE) to export the selected Slice only.
3. Choose the target Sound or Group as described above.
4. Press Button 8 (APPLY) to export the selected Slice.

APPLY: Exporting the Slices to the Same Sound

► On the SLICE page, press Button 8 (APPLY) to export all Slices to the focused Sound itself.

→ The Sample currently loaded in that Sound will be replaced by its own Slices, each of them being mapped to a particular note.

This is equivalent to pressing Button 7 (APPLY TO) and selecting the Sound in which you already are preparing the Slices.

14.5 Mapping Samples to Zones

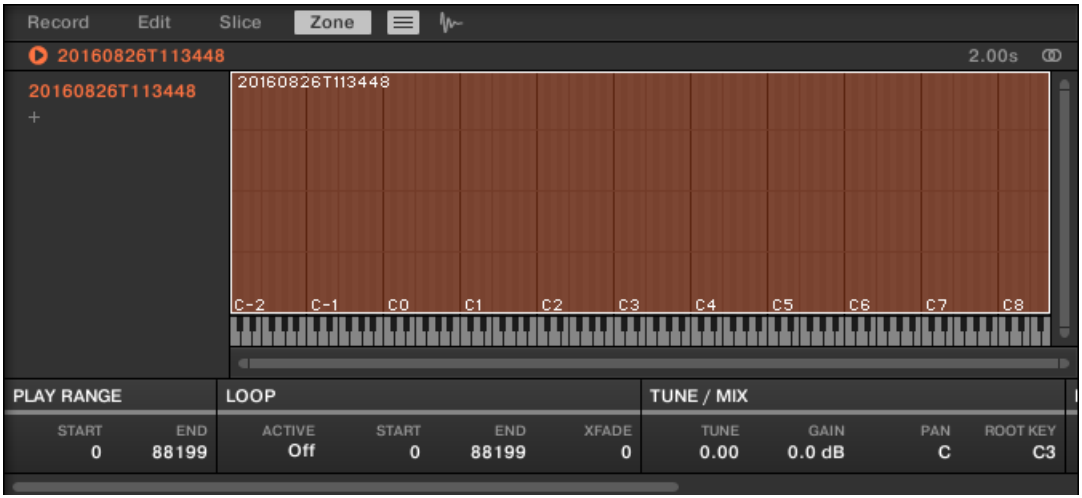
Mapping Samples is a way to create Sounds with more than one Sample across the MIDI keyboard and with different velocities. You can create and adjust **Zones** that define a key (or pitch) range and a velocity range for each Sample included in the Sound. In other terms, the Sample will be triggered only if the played note is within its Zone's key range and velocity range.

The Zones can overlap, allowing you to trigger different Samples at once or triggering different Samples depending on how hard you hit the pads. You can adjust various playback settings for the Sample of each Zone individually. The set of all Zones define the **Sample Map** (or "**Map**" for short) of the Sound.

14.5.1 Opening the Zone Page

Mapping is done in the Zone page of the Sample Editor.

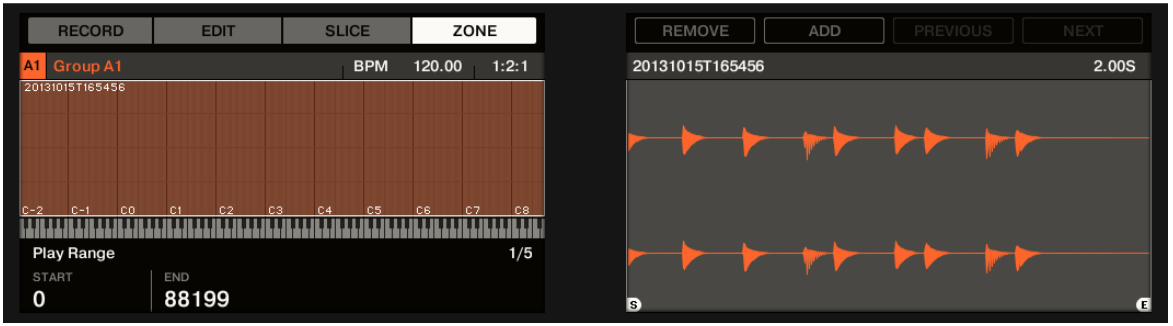
- ► Select a Sound slot, then open the Sample Editor (by clicking the button with the waveform icon on the left of the Pattern Editor), and click the Zone tab to show the Zone page.



The Zone page (here for an empty Sound).

Opening the ZONE Page on Your Controller

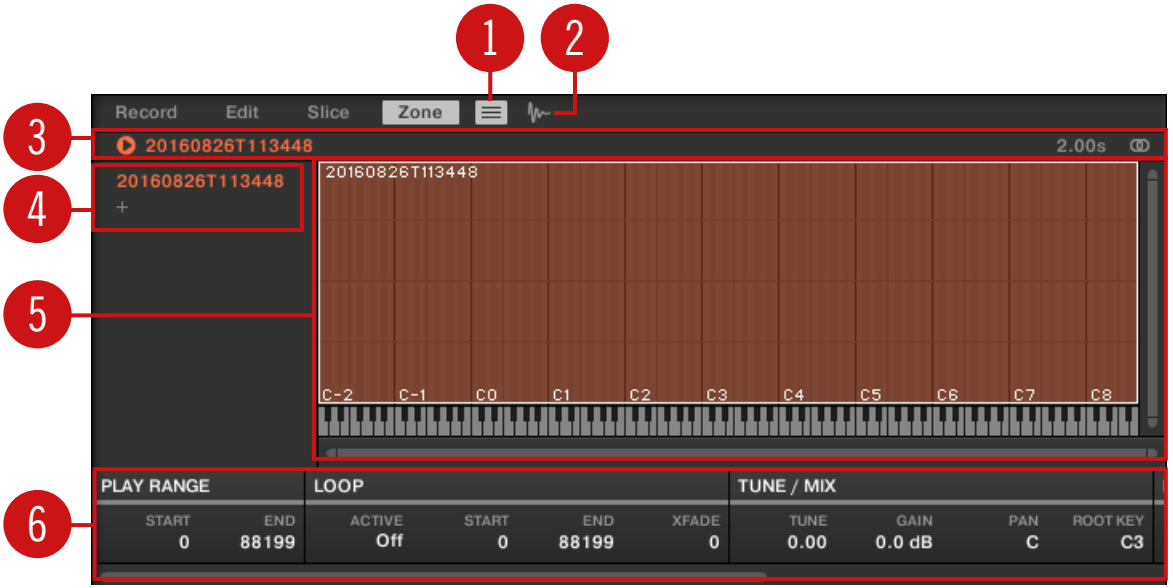
- ► In Sampling mode, press Button 4 to access the ZONE page.



The ZONE page on the controller.

14.5.2 Zone Page Overview

The Zone page provides following elements:



The Zone page: an overview.

(**1**) **Zone List button**: Shows/hides the Zone List (**4**).

(**2**) **Sample View button**: Switches the Zone page between Map view and Sample view (**5**).

(**3**) **Information bar**: Displays the file name and the length of the Sample in the focused Zone. Click and hold the little play icon on the left to play back the whole Sample on the Cue bus (see section ↑9.2.6, Using the Cue Bus for more information). Click the little circle (or pair of circle) at the far right to switch the waveform display (**1**) between single-channel and two-channel display.

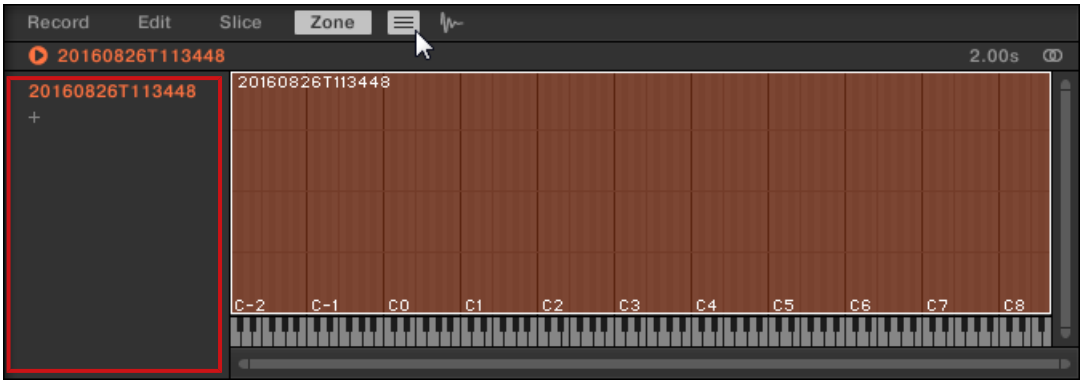
(**4**) **Zone List**: Shows all Zones in a list. The Zone List can be shown/hidden by clicking the Zone List button (**1**). Click an entry in the list to set the focus to that Zone. You can also select multiple Zones, move them via drag and drop, and add/delete Zones in the list. See section ↑14.5.3, Selecting and Managing Zones in the Zone List for a complete description of the Zone List.

(**5**) **Map view / Sample view**: The Map view is the default view (pictured above). It shows and lets you edit all Zones contained in your Sound. The Sample view shows the waveform of the Sample for the focused Zone and lets you edit some of its settings. Click the Sample View button (**2**) to switch between the Map view and the Sample view (the Sample view is visible when the Sample View button is enabled). The Map and Sample views are explained in detail in section ↑14.5.4, Selecting and Editing Zones in the Map View and ↑14.5.5, Editing Zones in the Sample View, respectively.

(**6**) **Zone settings**: Displays the parameters for the focused Zone. See section ↑14.5.6, Adjusting the Zone Settings for a detailed description of the available parameters.

14.5.3 Selecting and Managing Zones in the Zone List

The Zone List shows all Zones of the focused Sound.



The Zone List in the Zone page.

► Click the Zone List button next to the Slice tab to show/hide the Zone List.

The Zone List allows you to add, remove, replace, select, and reorder Zones in the list.



You can adjust the width of the Zone List by dragging its right border.

Adding a New Zone to the Zone List

You can add a new Zone to the Zone List in two ways:

► Drag a Sample from the Browser's LIBRARY or FILES pane or from your operating system onto the empty area in the Zone List.



or

1. Click the "+" at the end of the Zone List.

   A Load Sample dialog opens up.

2. Navigate to the desired audio file on your operating system and press [Enter] to confirm.

→ A new Zone is created at the end of the list containing the dragged or selected Sample.



You can drag and drop several Samples at once: It will creates as many new Zones!

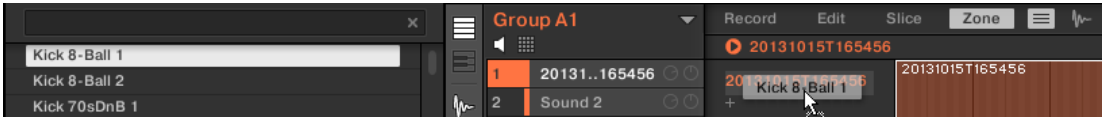


You can also add Zones to your Sound by dragging and dropping Samples directly onto the Sample Map of the Map view. See section ↑14.5.7, Adding Samples to the Sample Map for more on this.

Replacing the Sample of an Existing Zone

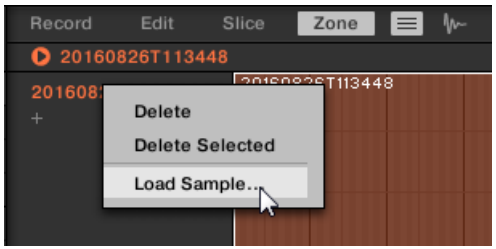
You can also put a new Sample into an existing Zone, thereby replacing the Sample currently contained in that Zone. Again, you have two methods at your disposal:

► Drag a Sample from the Browser's LIBRARY or FILES pane or from your operating system onto the desired entry in the Zone List.



or

1. Right-click ([Ctrl]-click on Mac OS X) the desired entry in the Zone List and select *Load Sample...* in the menu that opens.



   A Load Sample dialog opens up.

2. Navigate to the desired audio file on your operating system and press [Enter] to confirm.

→ The dragged or selected Sample replaced the previous Sample in the target Zone.

Selecting a Zone in the List

► Click any Zone entry in the Zone List to put it under focus.

→ The focused Zone gets highlighted in color both in the list and in the Map view (if visible). In addition:

- The focused Zone is displayed in the Sample view and its settings appear in the Zone settings at the bottom of the page. See section ↑14.5.6, Adjusting the Zone Settings for more information on these settings.
- The focused Zone also appears on the Edit and Slice pages, which allows you to further process of its contained Sample. For more information on the Edit and Slice pages, please refer to section ↑14.3, Editing a Sample and ↑14.4, Slicing a Sample, respectively.

Selecting Multiple Zones in the List

You can select several Zones in the list at once using the common methods of your operating system. The basic rules for multiple selection are the following:

- The focused Zone is automatically selected. It is highlighted in the color of the Sound and its waveform and parameters are displayed in the Slice page's Sample view and Zone settings as well as on the Edit and Slice pages.

- The other selected Zones are highlighted in white. Their settings are not displayed anywhere, however they will be affected by your actions in the Zone List and in the Map view (see section ↑14.5.4, Selecting and Editing Zones in the Map View for more on this).

Mouse/Keyboard Action	Command
Multiple Selection	
Hold [Ctrl] ([Cmd] on Mac OS X) and click several entries in the list	Selects all clicked Zones. Click a selected Zone to deselect it (i.e. remove it from the selection).
Hold [Shift] and click two entries	Selects both Zones and all Zones in-between.
Press [Ctrl]+[A] ([Cmd]+[A] on Mac OS X)	Selects/deselects all Zones in the list. When deselecting, only the focused Zone remains selected.

Deleting Zones from the List

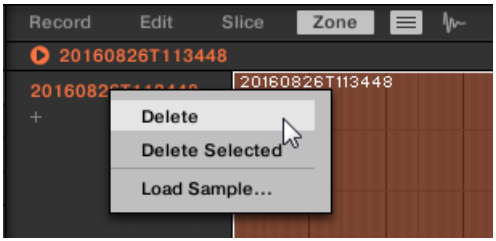
To remove one or more Zone(s) from the Zone List:

1. Select the Zone(s) you want to remove.
2. Press [Del] or [Backspace] on your computer keyboard.

→ The selected Zones are removed from the Zone List and from the Sample Map, and the corresponding Samples are not used in the Sound anymore.

After you have selected the Zone(s) you want to remove, you can also use the context menu:

1. Select the Zone(s) you want to remove.
2. Right-click ([Ctrl]-click on Mac OS X) any of the selected Zones.
   A menu opens up.



3. In that menu selects *Delete* to remove the focused Zone only, or *Delete Selected* to remove all selected Zones.

Moving Zones in the List

You can move your Zones across the Zone List via drag and drop:

1. Select the Zone(s) you want to move.
2. Click and hold the mouse button, and drag your mouse vertically.
   As the mouse pointer moves, an insertion line appears at various places between the existing entries.



3. When the insertion line indicates the desired location, release the mouse button to drop the selected Zone(s) to this new place.



Moving Zones allow you to reorder the Zone List. This can come in handy before you run the *Map as Drum Kit* command from the Sample Map's context menu, so that your Samples are well ordered in the new mapping. See section ↑14.5.4, Selecting and Editing Zones in the Map View for more information on the Sample Map.

Selecting and Managing Zones on Your Controller

You can select and remove Zones on your controller.

Selecting a Zone

► On the ZONE page of Sampling mode, press Button 7 (PREVIOUS) or 8 (NEXT) to set the focus to the previous or next Zone in the Zone List, respectively.

→ The waveform of the Sample in this focused Zone appears on the right display, and the Zone settings appear at the bottom of the left display.

Multiple selection is not possible from the controller. Hence, setting the focus to the previous/next Zone automatically deselects any other Zone, the focused Zone now being the only selected Zone.

The Sample can be played back on the Cue channel at any time by pressing the corresponding pad on your controller. When the Sample is played back, the Playhead indicator (vertical line) shows you the current play position within the waveform on the right display.

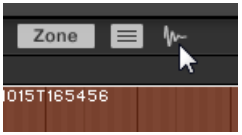
For more information on the Cue channel, please refer to section ↑9.2.6, Using the Cue Bus.

Removing a Zone

► On the ZONE page of Sampling mode, press Button 5 (REMOVE) to remove the focused Zone from the Sound.

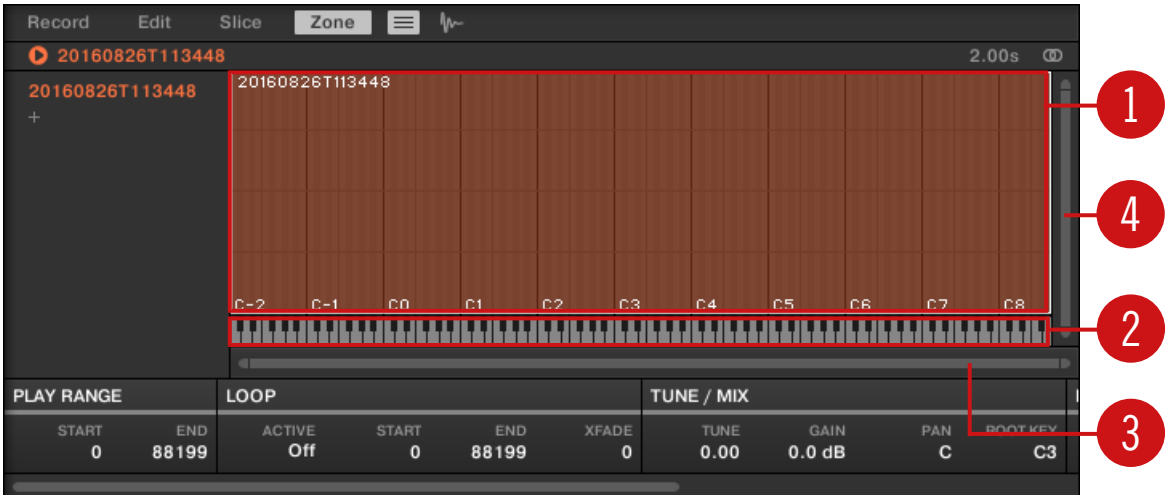
14.5.4 Selecting and Editing Zones in the Map View

The Map view is visible when the Sample View button (showing a little waveform icon at the right of the Zone tab) is disabled.



Disable the Sample View button to see the Map view.

The Map view contains following elements:



The Map view of the Zone page.

(1) Sample Map

The Sample Map shows all Zones contained in your Sound.

- The horizontal axis represents keys (or pitches) from C-2 to G8, while the vertical axis represents velocities from 0 to 127.
- Each Zone is depicted as a rectangle defining a specific key range (the rectangle's width) and a velocity range (the rectangle's height). Any note played within these key and velocity ranges will trigger the Sample of that Zone.
- You can zoom in/out both horizontally and vertically via the zooming scroll bars (**3**) and (**4**), respectively.
- Each Zone header displays the name of the corresponding Sample.
- Click a Zone in the Map to put it under focus. The focused Zone is highlighted; its information and parameters are displayed in the Zone settings at the bottom of the Zone page.
- You can select multiple Zones at once: All your mouse actions within the Map view (moving, resizing, etc.) will affect all selected Zones — see the next paragraph for more details on the available selection and edit commands in the Map.



You can also add a Sample by dragging it directly onto the Sample Map. See section ↑14.5.7, Adding Samples to the Sample Map for more information.

(2) Virtual keyboard

Below the Mapping view, the virtual keyboard represents the entire key scale. The root note of the selected Zone is indicated by the colored key. You can drag this key with the mouse to modify the root key.

(3) Horizontal zooming scroll bar

Click the main part of the scroll bar and drag your mouse horizontally to scroll through the Sample Map on the horizontal axis (pitch), or drag it vertically to zoom in/out on this pitch axis. You can also click the left or right handle of the scroll bar and drag it horizontally to zoom in/out while keeping the opposite border of the display at a fix position in the Sample Map. Double-click the main part of the bar to reset the zoom and display the entire pitch range.

(4) Vertical zooming scroll bar

Click the main part of the scroll bar and drag your mouse vertically to scroll through the Sample Map on the vertical axis (velocity), or drag it horizontally to zoom in/out on this velocity axis. You can also click the top or bottom handle of the scroll bar and drag it vertically to zoom in/out while keeping the opposite border of the display at a fix position in the Sample Map. Double-click the main part of the bar to reset the zoom and display the entire velocity range.

Available Actions in the Map

You can select and edit Zones with your mouse and your keyboard in the Map. Following actions are available:

Mouse/Keyboard Action	Command
Selection Commands	
Click a Zone	Puts this Zone under focus. The focused Zone is highlighted. You can edit the focused Zone and the playback settings of its Sample via the Zone settings at the bottom of the Zone page, as well as process the Sample's audio material on the Edit page and/or slice the Sample on the Slice page.

Mouse/Keyboard Action	Command
Hold [Ctrl] ([Cmd] on Mac OS X) and click several Zones	Selects all clicked Zones. Click a selected Zone to deselect it (i.e. remove it from the selection).
Hold [Shift] and click two Zones	Selects both Zones and all Zones in-between.
Click and drag a selection frame in the Sample Map	Selects all Zones within or overlapping the frame.
Press [Ctrl]+[A] ([Cmd]+[A] on Mac OS X)	Selects/deselects all Zones. When deselecting, only the focused Zone remains selected.
Edit Commands	
Drag the left/right border of a Zone	Adjusts the key range for the selected Zones.
Drag the higher/lower border of a Zone	Adjusts the velocity range for the selected Zones.
Drag a corner of a Zone	Simultaneously adjusts the lowest/highest note and the lowest/highest velocity of the selected Zone(s) — depending on the corner.
Click inside a Zone and drag	Moves the selected Zone(s) across the Sample Map. Note that the Root Key of each Zone is moved accordingly.
Double-click a Zone	Extends the key and velocity ranges of the Zone so that it fits the key and velocity limits of the neighbor Zones. This can be very useful to quickly fill up any key or velocity gap between Zones.
Right-click ([Cmd]-click on Mac OS X) a Zone	Opens the Sample Map menu (see below).
Press [Del] or [Backspace]	Removes the selected Zone(s) from the Sample Map.



You can also adjust the key and velocity ranges in the Zone settings at the bottom of the Zone page. See ↑14.5.6, Adjusting the Zone Settings for a detailed description.



For more information on the Edit and Slice pages, please refer to section ↑14.3, Editing a Sample and ↑14.4, Slicing a Sample, respectively.

Sample Map Menu

The Sample Map menu contains additional editing facilities.

► Right-click ([Ctrl]-click on Mac OS X) a Zone to open the Sample Map menu.

The commands in the Sample Map menu will affect all selected Zones. The menu provides following commands:

Command	Description
Delete	Removes the selected Zone(s) from the Sample Map.
Map as Drum Kit	Reduces the selected Zones to one note over the full velocity range and puts the Zones next to each other upwards from the middle C (C3). The actual note assigned to each Zone depends on the Zone position in the Zone List: The topmost Zone will be mapped to middle C (C3), the Zone underneath to C#3, etc.

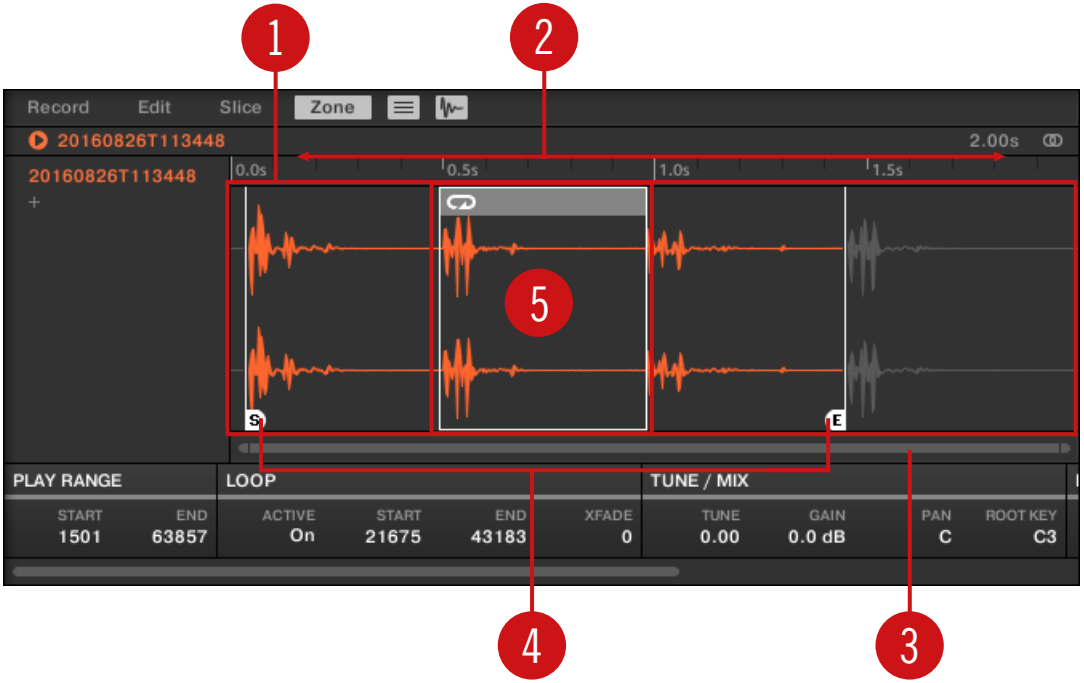
14.5.5 Editing Zones in the Sample View

The Sample view is visible when the Sample View button (showing a little waveform icon at the right of the Zone tab) is enabled.



Enable the Sample View button to see the Sample view.

The Sample view contains following elements:



The Sample view of the Zone page.

(1) Waveform display

Shows the waveform of the Sample for the focused Zone. The waveform display provides following tools:

- Use the scroll wheel of your mouse to zoom in/out. You can also use the zooming scroll bar (**3**).
- **Play range markers (4) and loop markers (5)**: See below.
- **Playhead indicator**: When the Sample is played back (e.g., by pressing the pad or by clicking the little play icon in the information bar above the waveform), a playhead indicator (white vertical line) shows you the current play position within the waveform.
- **Context menu**: Right-click (Mac OS X: [Ctrl]-click) anywhere in the waveform to open a context menu with the following commands:

Command	Description
Open containing folder	Opens the folder on your hard disk containing the Sample, providing quick access to the original file.
Save Sample As…	Opens a Save Sample As dialog allowing to save the Sample of the focused Zone under another name and/or to another location on your computer.

(2) Timeline

Shows the time scale in seconds.

(3) Zooming scroll bar

Click the main part of the scroll bar and drag your mouse horizontally to scroll through the waveform on the horizontal axis (time), or drag it vertically to zoom in/out on this time axis. You can also click the left or right handle of the scroll bar and drag it horizontally to zoom in/out while keeping the opposite border of the display at a fix position in the waveform. Double-click the main part of the bar to reset the zoom and display the entire waveform. Alternatively you can use the scroll wheel of your mouse when hovering the waveform display (**1**) to zoom in/out.

(4) Play range markers

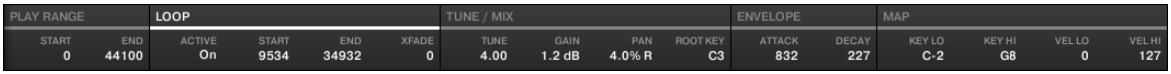
The S and E markers indicate the start and end points of the play range, respectively. Drag them with the mouse to modify the portion of the Sample that will be played back. This can also be done in the PLAY RANGE section of the Zone settings, under the waveform display (see section ↑14.5.6, Adjusting the Zone Settings).

(5) Loop markers

If a loop has been defined in the Sample, it is also indicated on the waveform. You can then adjust the loop by dragging its borders, and move the entire loop by dragging its title bar. Loops can be created and adjusted in the LOOP section of the Zone settings, under the waveform display (see section ↑14.5.6, Adjusting the Zone Settings). Note that the loop will always stay within the play range. Therefore, when moving the Sample's start and end points closer to each other (see above), keep in mind that it might also shrink the loop!

14.5.6 Adjusting the Zone Settings

At the bottom of the Zone page, the Zone settings allow you to adjust how each Zone should be played back.



The Zone settings in the software.

The various sections always display the values for the focused Zone.



If the MASCHINE window is not wide enough to display all Zone settings at once, a horizontal bar appears underneath to scroll to the desired section of parameters.

Following parameters are available:

(1) PLAY RANGE section

The parameters in the PLAY RANGE section allow you to adjust the portion of Sample that will be played back when the Zone is triggered.

Parameter	Description
START	Adjusts the playback's start point in the Sample of the focused Zone.
END	Adjusts the playback's end point in the Sample of the focused Zone.

(2) LOOP section

The parameters in the LOOP section allow you to define and adjust a portion that will play in loop while the note is held.

Parameter	Description
ACTIVE	Enable this to define a loop in the Sample of the focused Zone. When the play position reaches the loop, the playback is looped as long as the note is held. This can be useful to loop either a whole Sample or part of it, e.g., to simulate a longer tone. Note: this technique requires that you set the Sampler's Type selector to *AHD* or *ADSR* on the Pitch / Envelope page (see ↑6.2.2, Page 2: Pitch / Envelope).
START	Adjusts the loop's start point.
END	Adjusts the loop's end point.
XFADE (Crossfade)	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.

Alternatively you can also adjust the loop' start and end points by dragging the borders of the loop in the Sample view, and move the entire loop by dragging its title bar.



By moving the loop's start and end points closer to each other you can shrink the loop to very small values on-the-fly, thereby creating very interesting glitch effects in a live situation.



The loop will always stay within the play range of the Sample. Therefore, when moving the Sample's playback start and end points closer to each other, keep in mind that it might also shrink the loop!

(3) TUNE / MIX section

The TUNE / MIX section contains parameters controlling pitch- and level-related aspects of the Sample playback.

Parameter	Description
TUNE	Sets the tuning of the focused Zone.
GAIN	Sets the gain of the focused Zone.

Parameter	Description
PAN	Sets the panorama position of the focused Zone.
ROOT KEY	Adjusts the **root key** of the focused Zone, that is the key at which the Sample will be played back at its original pitch. The root key is also indicated by the colored key on the virtual keyboard; to change it, you can drag it to another note on the keyboard.

(4) ENVELOPE section

This amplitude envelope can be used to get rid of clicks after slicing; you can either apply it to the Zone of the whole Sample or to individual Zones for selected Slices.

Parameter	Description
ATTACK	Adjusts how quickly the Sample/Slice reaches full volume after being triggered.
DECAY	Adjusts how fast the Sample/Slice dies down.

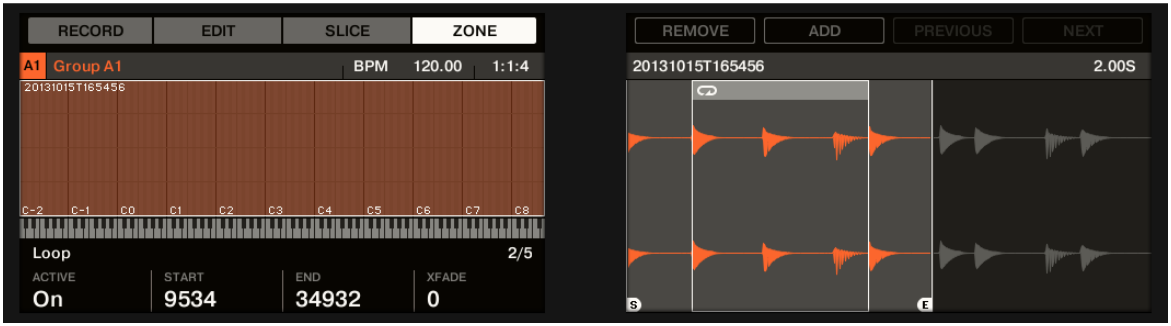
(5) MAP section

The MAP section contains the parameters defining the key and velocity ranges of the Zone.

Parameter	Description
KEY LO (Lowest Key)	Sets the lowest note (key) of the focused Zone. Alternatively, you can drag the left border of the Zone in the Map.
KEY HI (Highest Key)	Set the highest note (key) of the focused Zone. Alternatively, you can drag the right border of the Zone in the Map.
VEL LO (Lowest Velocity)	Defines the lowest velocity of the focused Zone. Alternatively, you can drag the lower border of the Zone in the Map.
VEL HI (Highest Velocity)	Defines the highest velocity of the focused Zone. Alternatively, you can drag the higher border of the Zone in the Map.

Editing Your Zones on Your Controller

At the bottom of the left display, the Zone settings allow you to adjust how each Zone should be played back.



The Zone settings on the controller.

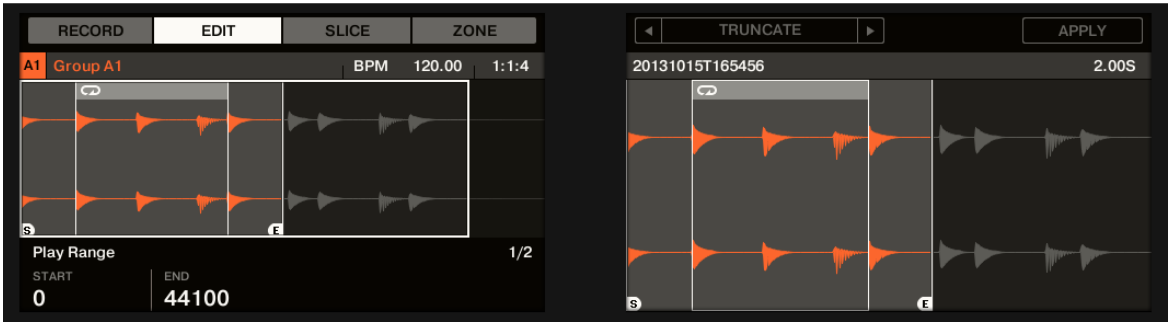
The various parameters always display the values **for the focused Zone**.

The parameters available in the Zone settings are spread over five pages.

► Use the Page buttons on the left of the displays to select the desired page.

Page 1 – PLAY RANGE Parameters

The parameters in the PLAY RANGE page allow you to adjust the portion of Sample that will be played back when the Zone is triggered.



The ZONE page on the controller – page 1 of 5: PLAY RANGE parameters.

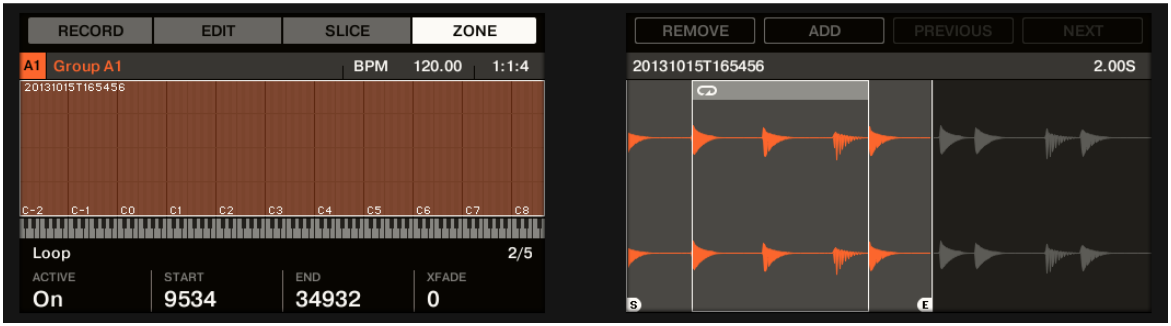
Parameter	Description
START (Knob 1)	Adjusts the playback's start point in the Sample of the focused Zone.
END (Knob 2)	Adjusts the playback's end point in the Sample of the focused Zone.

► Hold SHIFT when turning the Knobs to adjust the parameters in finer increments.

In the waveform on the right display, the regions outside the play range are grayed out.

Page 2 – LOOP Parameters

The parameters in the LOOP page allow you to define and adjust a portion that will play in loop while the note is held.



The ZONE page on the controller, page 2 of 5: LOOP parameters.

Parameter	Description
ACTIVE (Knob 1)	Enable this to define a loop in the Sample of the focused Zone. When the play position reaches the loop, the playback is looped as long as the note is held. This can be useful to loop either a whole Sample or part of it, e.g., to simulate a longer tone. Note: this technique requires that you set the Sampler's TYPE selector to AHD or ADSR in the PITCH / GATE section (Parameter page 2, see ↑6.2.2, Page 2: Pitch / Envelope).
START (Knob 2)	Adjusts the start point of the loop.

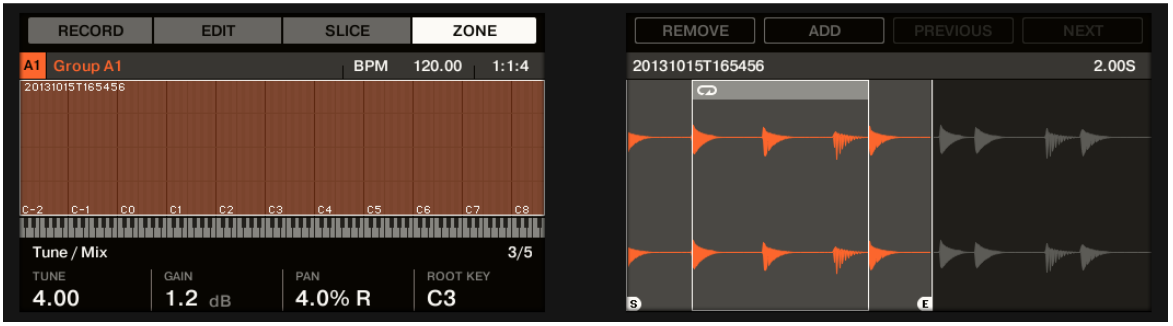
Parameter	Description
END (Knob 3)	Adjusts the end point of the loop.
XFADE (Knob 4)	Allows you to blend a little of the material near the loop start and end points in order to get a smoother, less abrupt loop. This is particularly helpful if the loop is inducing any clicks.

Hold SHIFT when turning the Knobs to adjust the parameters in finer increments.

By moving the loop's start and end points closer to each other you can shrink the loop to very small values on-the-fly, thereby creating very interesting glitch effects in a live situation.

Page 3 – TUNE / MIX Parameters

The TUNE / MIX page contains parameters controlling pitch- and level-related aspects of the Sample playback.



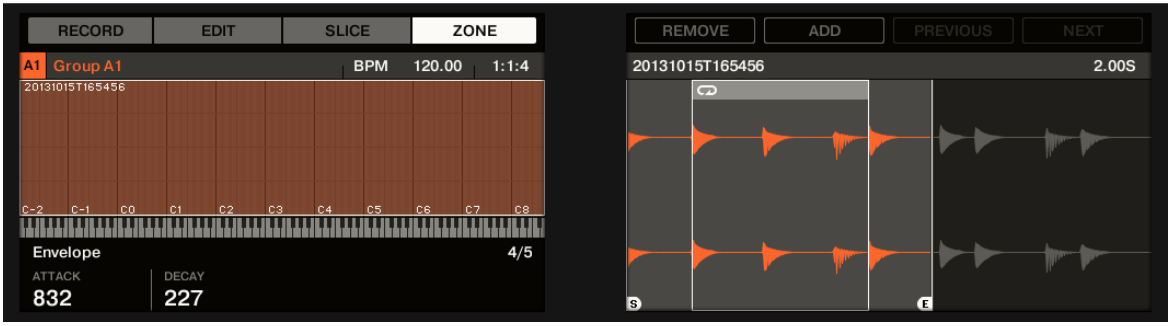
The ZONE page on the controller, page 3 of 5: TUNE / MIX parameters.

Parameter	Description
TUNE (Knob 1)	Sets the tuning of the focused Zone.
GAIN (Knob 2)	Sets the gain of the focused Zone.

Parameter	Description
PAN (Knob 3)	Sets the panorama position of the focused Zone.
ROOT KEY (Knob 4)	Adjusts the **root key** of the focused Zone, that is the key at which the Sample will be played back at its original pitch.

Page 4 – ENVELOPE Parameters

This amplitude envelope can be used to get rid of clicks after slicing; you can either apply it to the Zone of the whole Sample or to individual Zones for selected Slices.



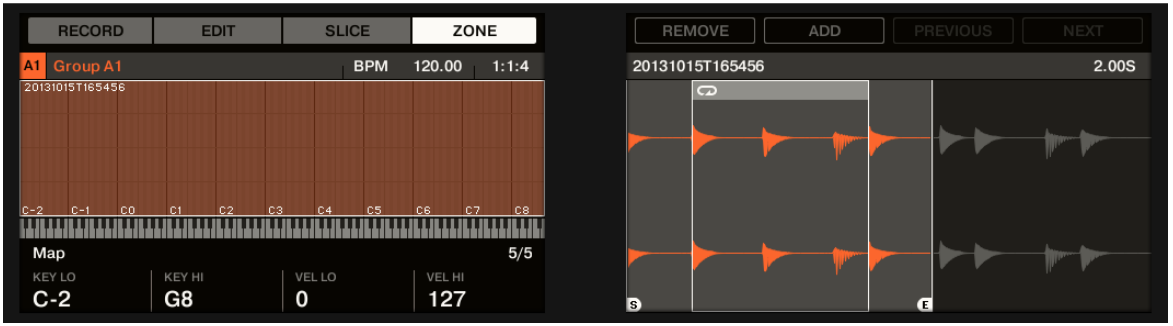
The ZONE page on the controller, page 4 of 5: ENVELOPE parameters.

Parameter	Description
ATTACK (Knob 1)	Adjusts how quickly the Sample/Slice reaches full volume after being triggered.
DECAY (Knob 2)	Adjusts how fast the Sample/Slice dies down.

Hold SHIFT when turning the Knobs to adjust the parameters in finer increments.

Page 5 – MAP Parameters

The MAP page contains the parameters defining the key and velocity ranges of the Zone.



The ZONE page on the controller, page 5 of 5: MAP parameters.

Parameter	Description
KEY LO (Lowest Key, Knob 1)	Sets the lowest note (key) of the focused Zone.
KEY HI (Highest Key, Knob 2)	Sets the highest note (key) of the focused Zone.
VEL LO (Lowest Velocity, Knob 3)	Defines the lowest velocity of the focused Zone.
VEL HI (Highest Velocity, Knob 4)	Defines the highest velocity of the focused Zone.

14.5.7 Adding Samples to the Sample Map

You can add Samples directly to the Map view of the Zone page.



To see the Map view, make sure that the Sample View button is disabled next to the Zone tab at the top of the Sample Editor. If this is not the case, click it to disable it.

- To add a new Sample, select one from the Browser or from your operating system and drag it onto the Sample Map of the Map view (the biggest part in the middle of the Zone page). Once your mouse is hovering the Sample Map, and *before* you release the mouse button:
  - Drag your mouse horizontally to choose the root key of the new Zone.

- Drag your mouse vertically to adjust the key range: With your mouse in the lower half of the Sample Map the Zone will cover the root key only; dragging your mouse up in the upper half of the Sample Map will extend the Zone's key range up to one octave above the root key; with your mouse at the top of the Sample Map, the Zone will cover the entire keyboard.

→ As you release the mouse button, the Zone is created.

You can add other Samples to the Sound via this method.

The key range of several Zones can overlap, as can the velocity range.

Adding Multiple Samples at Once

You can also drag several Samples to the Sample Map at once:

1. Hold [Ctrl] ([Cmd] on Mac OS X) or [Shift] on your computer keyboard and click the desired Samples in the Browser or in your operating system.
2. Drag the selected Samples to the Sample Map.

→ This will create multiple adjacent Zones. The width (i.e. key range) of these Zones will again depend on where they are dropped in the Sample Map: The higher you drop, the wider each Zone will be. Dragging to the top part layers all Zones across the entire keyboard.

The placement of the Zones depends on the original Samples' position in the selection list: The first Sample selected will get the Zone with the lowest key range, the second Sample selected will get the Zone just over the previous one, etc.

Adding a Sample to the Sample Map on the Controller

To add a new Sample to the Sample Map of the current Sound:

1. Press SAMPLING to enter Sampling mode and press Button 4 (ZONE) to open the ZONE page.
2. Press Button 6 (ADD).
   Your controller automatically switches to the Browser with the SAMPLE type preselected. Button 1 and 2 are inactive so that you can only select and load Samples.

3. In the Browser, select the Sample you want to add to the map of the current Sound (see ↑3.2, Searching and Loading Files from the Library for more information on using the Browser on your controller).
4. Press Button 8 (LOAD) to load the Sample.

→ A new Zone is created that contains the added Sample. Your controller automatically switches back to Sampling mode and the new Zone is selected and appears on the right display, ready to be tweaked.



While in the Browser you can press Button 6 (CANCEL) to return to Sampling mode without loading any new Sample.

15 KOMPLETE KONTROL Integration

MASCHINE supports the KOMPLETE KONTROL S-SERIES keyboards from Native Instruments. The KOMPLETE KONTROL S-SERIES keyboards are tightly integrated into the MASCHINE workflows. From your KOMPLETE KONTROL S-SERIES keyboard you can do the following in MASCHINE:

- Switch the focus of your keyboard to/from any MASCHINE instance: ↑15.1, Switching the Keyboard Focus to/from a MASCHINE Instance.
- Control the transport: ↑15.2, Controlling the Transport in MASCHINE.
- Navigate and control your Sounds in any Group: ↑15.3, Navigating and Controlling Your Sounds within a Group.
- Browse and load files from your MASCHINE Library: ↑15.4, Browsing Your MASCHINE Library.
- Control the Perform features: ↑15.5, Using the Perform Features.
- Use both Touch Strips: ↑15.6, Using the Touch Strips.
- Record modulation: ↑15.7, Recording Modulation from Your Keyboard.

In addition, you can adjusts settings for your keyboard via MASCHINE's Preferences panel, as described in section ↑15.8, Adjusting the Settings for Your Keyboard in the MASCHINE Preferences.



Some of these features are similar to those available in the KOMPLETE KONTROL application. However keep in mind that these features are distinct. For more information on how to use your KOMPLETE KONTROL S-SERIES keyboard with KOMPLETE KONTROL, please refer to the KOMPLETE KONTROL Manual.

15.1 Switching the Keyboard Focus to/from a MASCHINE Instance

Your KOMPLETE KONTROL S-SERIES device can be running in various modes, according to what it is focused on your computer:

- KOMPLETE KONTROL mode: Your keyboard focuses on a running KOMPLETE KONTROL instance (standalone or plug-in). For more details on this mode, please refer to the KOMPLETE KONTROL manual.
- MIDI mode: Your keyboard acts as a MIDI controller. You can adjust your keyboard's MIDI assignments via the Controller Editor. For more details, please refer to the Controller Editor manual.
- MASCHINE mode: Your keyboard focuses on a running MASCHINE instance (standalone or plug-in).

You can switch the focus of your keyboard at any time via various ways:

- When loading a new instance of MASCHINE or KOMPLETE KONTROL, your keyboard can automatically switch to that new instance under certain circumstances.
- From your keyboard, you can choose which instance to focus on.
- From any instance, you can "call" your keyboard so that it focuses on this particular instance/software.

These various situations are described in the following paragraphs.

Default Focus for New Instances

When you load a new instance (standalone or plug-in) of MASCHINE or KOMPLETE KONTROL, your KOMPLETE KONTROL S-SERIES keyboard can automatically switch its focus to that new instance depending on the current situation:

- If your keyboard is currently focused on a MASCHINE instance or is in MIDI mode, it will automatically switch to the new MASCHINE or KOMPLETE KONTROL instance.
- If your keyboard is currently focused on a KOMPLETE KONTROL instance, it will automatically switch to a new KOMPLETE KONTROL instance. If you load a new MASCHINE instance, your keyboard will remain focused on its current KOMPLETE KONTROL instance.

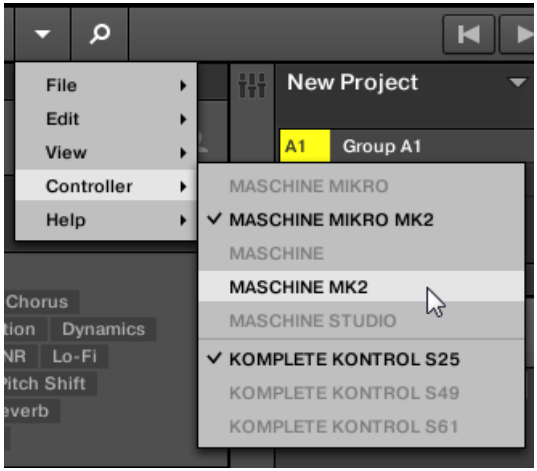
Switching the Focus from the MASCHINE Instance: Controller Menu

You can call the connected KOMPLETE KONTROL S-SERIES keyboard from any running MASCHINE instance, may it run as a standalone application or as a plug-in in your DAW.

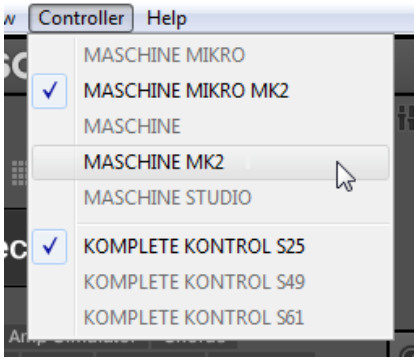
You can also call your keyboard from any KOMPLETE KONTROL instance (plug-in or standalone) and from the Controller Editor. To know how to do this, please refer to the KOMPLETE KONTROL manual and the Controller Editor manual, respectively.

To connect your KOMPLETE KONTROL S-SERIES keyboard to a particular instance of MASCHINE:

1. Bring the desired MASCHINE instance to the front in your operating system (or open its user interface in your DAW).
2. Open the *Controller* submenu in the MASCHINE menu and select your KOMPLETE KONTROL S-SERIES device from the menu:



If MASCHINE is running as a standalone application you can also use the Controller menu in the Application Menu Bar:



→ The MASCHINE instance takes the focus of your KOMPLETE KONTROL S-SERIES keyboard.

In MASCHINE the Controller menu allows you to select your KOMPLETE KONTROL S-SERIES keyboard:

- The first section (above the separator line) allows you to select your MASCHINE controller:
  - The section lists all devices of the MASCHINE controller family.
  - Grayed out entries indicate controllers that are not connected to your computer. You cannot select them.
  - Black entries indicate connected controllers. Select any of them to bring its focus to this MASCHINE instance.
  - Only one item can be selected at a time. It is indicated by the check mark. Selecting another controller automatically deselects the one previously selected in this section — in other words, only one controller from the MASCHINE controller family can focus on a particular MASCHINE instance at a time.
- The second section (below the separator line) lists all KOMPLETE KONTROL S-SERIES keyboards. It works in exactly the same way as the first section described above, with the same features and restrictions.

Note that you can have **both a MASCHINE controller and a KOMPLETE KONTROL S-SERIES keyboard focused on the same MASCHINE instance**. To do this, simply select the desired entry in the upper section, and the desired entry in the lower section of the menu/submenu. You will see a check mark in both sections (as in the pictures above).



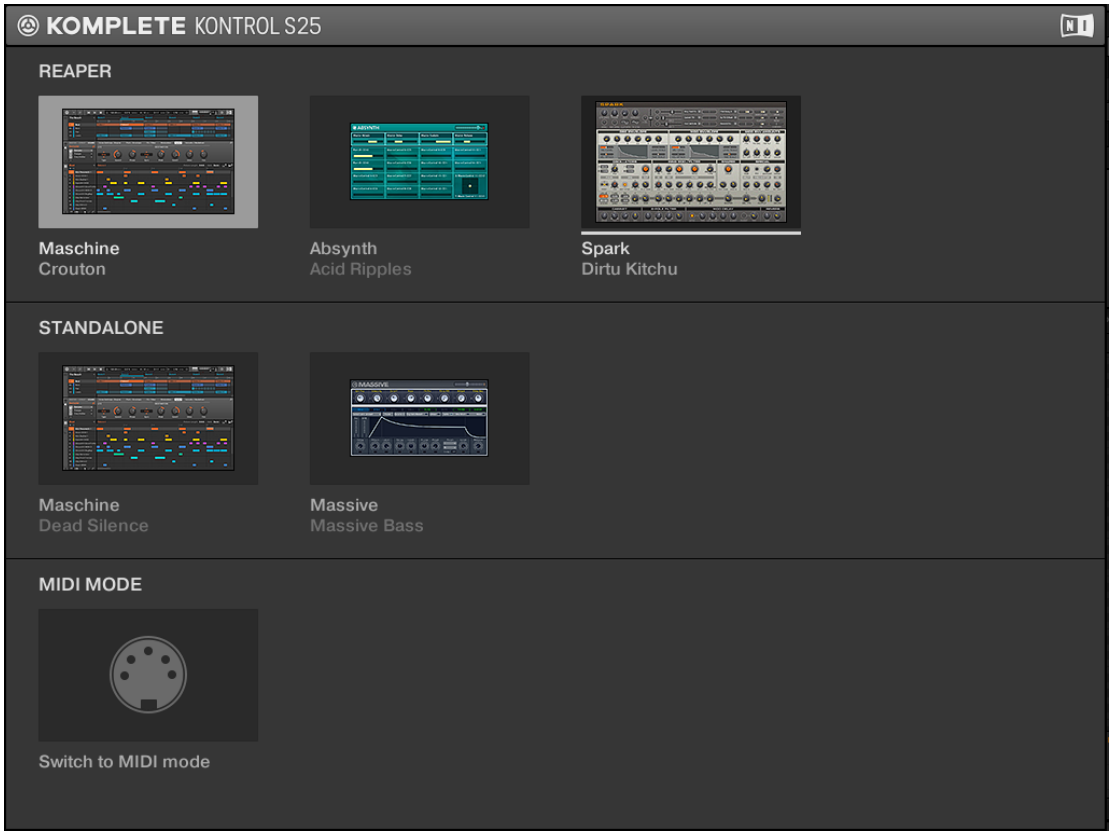
The Connect button (the little controller icon in the MASCHINE Header) only supports controllers from the MASCHINE family. Hence, its functionality is unchanged.

Switching the Focus from Your Keyboard

You can also select a particular MASCHINE instance to focus on directly from your KOMPLETE KONTROL S-SERIES keyboard. This procedure makes use of an On-Screen Overlay on your computer screen. This On-Screen Overlay is common to the MASCHINE and KOMPLETE KONTROL applications: All instances of **both applications** will be listed here.

With one or more MASCHINE and/or KOMPLETE KONTROL instance(s) running, do the following on your KOMPLETE KONTROL S-SERIES keyboard:

1. Press INSTANCE.
   The On-Screen Overlay appears on your computer screen with all available MASCHINE and KOMPLETE KONTROL instances:



2. Turn the Control encoder to select the desired instance, and press the encoder to switch the focus to that instance.

→ Now your KOMPLETE KONTROL S-SERIES keyboard focuses on the selected instance. If another KOMPLETE KONTROL S-SERIES keyboard was already focused on that instance, its focus is automatically removed from that instance.

In this On-Screen Overlay, the focused instance is highlighted. As you turn the Control encoder, the selection is indicated by a white bar underneath. Instances are organized into distinct sections according to their host environment:

- Each host (that includes MASCHINE and/or KOMPLETE KONTROL plug-ins loaded) has its own section. Within that section, every instance is represented by a picture and two fields:
  - The overview picture illustrates the instance via a generic picture of the corresponding NI product (a picture of MASCHINE for MASCHINE instances, or of the particular NI product loaded in each KOMPLETE KONTROL instance).
  - The Instrument name: For MASCHINE instances this reads Maschine. For KOMPLETE KONTROL instances this shows the particular NI product loaded into that KOMPLETE KONTROL instance.
  - The Project/Preset name: For MASCHINE instances this reads the name of the Project loaded in that instance. For KOMPLETE KONTROL instances this shows the name of the preset currently loaded in the NI product within the KOMPLETE KONTROL instance.
- The STANDALONE section displays the instances of MASCHINE and KOMPLETE KONTROL running in standalone mode, if any.
- At the bottom, the MIDI MODE section allows you to switch your keyboard to MIDI mode. Note that, under certain circumstances, you can also do it by pressing SHIFT + INSTANCE on your keyboard: This will directly switch your keyboard to/from MIDI mode without opening the On-Screen Overlay. See next paragraph for more information on this.

Keyboard Auto-Focus in Supported Hosts

In particular hosts, your KOMPLETE KONTROL S-SERIES keyboard automatically switches its focus depending on the track selected in your host.



For more information on the auto-focus feature in supported hosts, please refer to the KOMPLETE KONTROL manual.

In these hosts, the INSTANCE button of your keyboard is disabled. If your keyboard is currently focused on a MASCHINE instance, pressing SHIFT + INSTANCE disconnects your keyboard from that MASCHINE instance and re-enables auto-focus:

- If the currently selected track contains an instance of KOMPLETE KONTROL, your keyboard focuses on that instance.
- If the currently selected track does *not* contain any instance of KOMPLETE KONTROL, your keyboard switches to MIDI mode.

You can also do this by clicking the desired track in the window of your host:

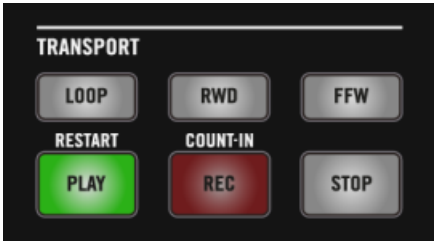
- Clicking on a host track that contains a KOMPLETE KONTROL instance disconnects your keyboard from its MASCHINE instance and sets its focus to that KOMPLETE KONTROL instance.
- Clicking on a host track that doesn't contain any KOMPLETE KONTROL instance disconnects your keyboard from its MASCHINE instance and switches it to MIDI mode, re-enabling auto-focus.



In all following sections we will assume that your KOMPLETE KONTROL S-SERIES keyboard is focused on a MASCHINE instance!

15.2 Controlling the Transport in MASCHINE

When your KOMPLETE KONTROL S-SERIES keyboard is focused on the MASCHINE software, the buttons in the TRANSPORT section of your keyboard can control various transport functions in MASCHINE.



The TRANSPORT section on your keyboard.

Transport in MASCHINE Running as a Standalone Application

If your keyboard is focused on a MASCHINE instance running as a standalone application and no KOMPLETE KONTROL instance is loaded in any host application, all six buttons in the TRANSPORT section of your keyboard control the transport in MASCHINE.



If a host application with at least one KOMPLETE KONTROL instance loaded is also running on your computer, the TRANSPORT section on your keyboard will control the host transport instead of the MASCHINE transport. If the running host application doesn't contain any KOMPLETE KONTROL instance, the TRANSPORT section on your keyboard will control both the MASCHINE and host transports. To avoid this, you can disable the control of the MASCHINE transport in the Preferences panel, as described at the end of this section.

In some cases they are used in combination with the Control encoder and the Navigate Left/Right buttons in the NAVIGATE section (see table below). At any time the button states are synchronized with the MASCHINE software (and with any MASCHINE controller also focused on that MASCHINE instance).

More precisely, the buttons of the TRANSPORT section trigger the following commands in the MASCHINE instance:

Element (or Combination)	Command in MASCHINE
Basic Transport	
PLAY	Play/Stop
SHIFT + PLAY (RESTART)	Restart playback at the beginning of the Loop Range
REC	Record
SHIFT + REC (COUNT-IN)	Record with Count-in
STOP	Stop
SHIFT + STOP	Metronome on/off
Loop Range	
LOOP + Control encoder	Move the whole Loop Range

Element (or Combination)	Command in MASCHINE
LOOP + Navigate Left + Control encoder	Move the Loop Range's start point
LOOP + Navigate Right + Control encoder	Move the Loop Range's end point
SHIFT + LOOP	Include all Scenes in the Loop Range
Playhead Jumps	
Control encoder (turn)	Moves the playhead by Pattern Grid increments
SHIFT + Control encoder (turn)	Moved the playhead by Step Grid increments
RWD	Moves the playhead backwards by Pattern Grid increments
FFW	Moves the playhead forwards by Pattern Grid increments
SHIFT + RWD	Moves the playhead backwards by Step Grid increments
SHIFT + FFW	Moves the playhead forwards by Step Grid increments

Transport in MASCHINE Running as a Plug-in

If keyboard is focused on MASCHINE plug-in, Komplete Kontrol S Transport controls control the host rather than Maschine - none of them control Maschine plug-in.

Transport in MASCHINE with On-Screen Overlay Displayed

If the on-screen overlay is currently displayed, the commands listed above are still valid both in standalone and plug-in case except those involving the Control encoder (used for focusing and selecting items in the on-screen overlay):

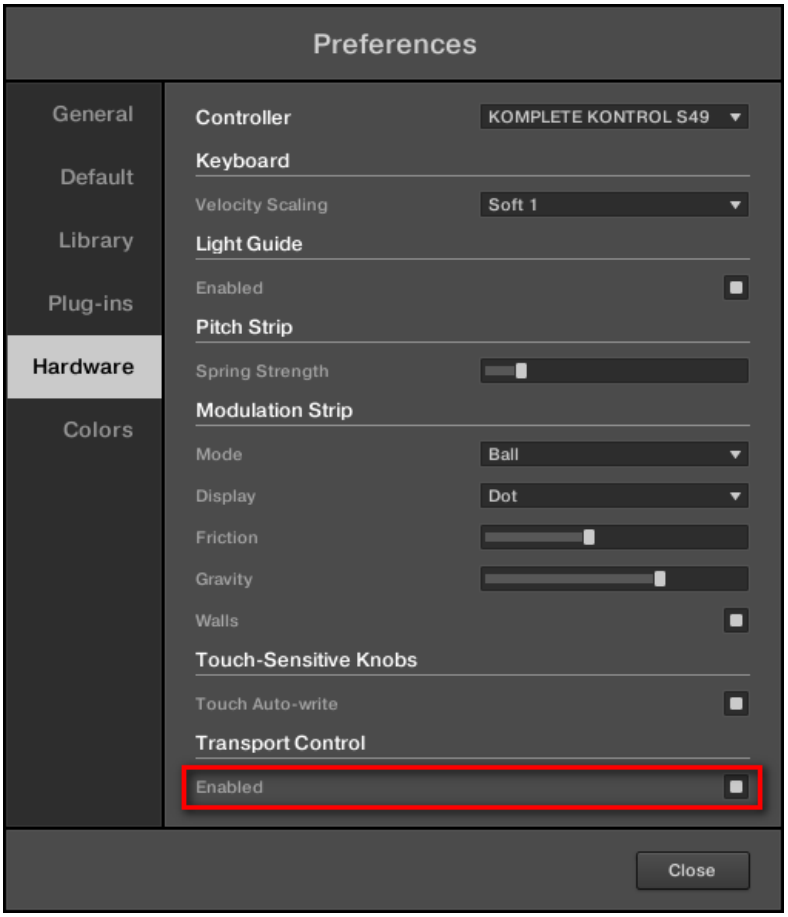
- Control encoder.
- SHIFT + Control encoder.
- LOOP (+ Navigate Left/Right) + Control encoder.



For more information on the on-screen overlay, see section ↑15.1, Switching the Keyboard Focus to/from a MASCHINE Instance and ↑15.4, Browsing Your MASCHINE Library.

Disabling MASCHINE Transport Functions on Your Keyboard

If needed, you can disable your keyboard's transport functions in MASCHINE (they are enabled by default). This is done in the Transport Control section of the Hardware page in the Preferences panel:



Enabling/disabling your keyboard's transport functions in MASCHINE.

► To enable or disable the transport functions of your keyboard in MASCHINE, click the Enabled check box in the Transport Control section of the Hardware page in the Preferences panel.

To access the settings for your KOMPLETE KONTROL S-SERIES keyboard in the Hardware page of the Preferences panel, your keyboard must be connected to your computer and controlling the MASCHINE instance. Moreover if a controller from the MASCHINE family is also focused on the MASCHINE instance, make sure that your keyboard is selected in the Controller menu at the top of the Hardware page in order to see its settings! For more information, see section ↑2.6.9, Controller Menu in the Hardware Page of the Preferences Panel.

15.3 Navigating and Controlling Your Sounds within a Group

This section describes how your KOMPLETE KONTROL S-SERIES keyboard integrates into your MASCHINE Project and its various Sounds and Groups.

Your Keyboard Controls the Focused Sound in the Focused Group

When it is connected to a MASCHINE instance, your KOMPLETE KONTROL S-SERIES keyboard **always controls the focused Sound slot in the focused Group** of your Project:

- The keys trigger notes in the focused Sound. The Pitch and Modulation strips affect that Sound as well.
- If your keyboard is in Instrument mode (the default mode), Knobs 1–8 control the parameters in the Parameter pages of the selected **Plug-in** in the focused Sound.

Besides Instrument mode, your KOMPLETE KONTROL S-SERIES keyboard can be in Scale Edit mode or Arp Edit mode, which is indicated by the PAGE field in the leftmost display reading SCALE or ARP, respectively. In order to use Knobs 1–8 to control the Plug-in parameters of the focused Sound, switch back to the default Instrument mode by pressing BACK. For more information on Scale Edit and Arp Edit mode, see section ↑15.5, Using the Perform Features.

The focus of Knobs 1–8 on your KOMPLETE KONTROL S-SERIES keyboard is synchronized with the focus at the Sound level in the MASCHINE software (and on any connected controller from the MASCHINE family) as follows:

- If the Control area in the MASCHINE software currently displays the Plug-ins of the focused Sound, Knobs 1–8 on your keyboard mirror the parameters of the selected Parameter page.

- If the Control area in the MASCHINE software currently displays the Channel properties of the focused Sound, or if it displays another level (MASTER or GROUP tab active), Knobs 1–8 on your keyboard continue to control the selected Parameter page in the selected Plug-in of the (possibly underlying) focused Sound.



Since your keyboard remains focused on the Sound level, you can for example focus your MASCHINE device on the parent Group (or the Master) and control parameters at both levels simultaneously using both devices! You can also switch your MASCHINE device to another mode (Pattern mode, Scene mode, etc.) and keep controlling the focused Sound from your keyboard.

The displays under Knobs 1–8 indicate the parameters controlled by the Knobs: the first row contains the parameter names, and the second row contains the section names, if any — section names are displayed under the first parameter of each section.

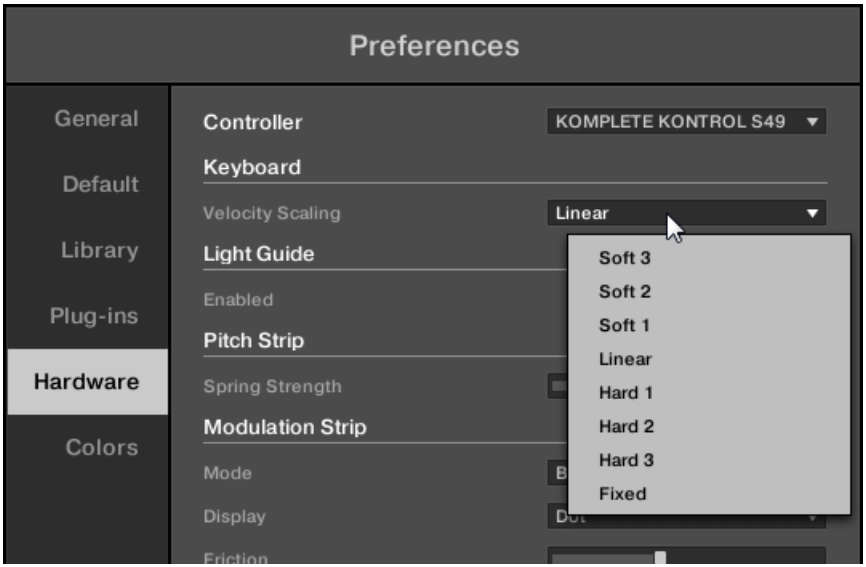
Any parameter change made via your keyboard is instantly mirrored in the MASCHINE software and on any MASCHINE controller, and vice versa.



You can hold SHIFT while turning any of the Knobs 1–8 to adjust the parameter value in finer increments.

Adjusting the Velocity Scale of the Keybed

You can adjust how the keys of your KOMPLETE KONTROL S-SERIES keyboard should react to the hits of your fingers. This can be of importance depending on the Sound(s) you plan to control from your keyboard. This is done via the Velocity Scaling menu in the Hardware page of the Preferences panel when your keyboard is connected and focused on that MASCHINE instance:



Use the Velocity Scaling menu to adjust the behavior of keys.

The Velocity Scaling menu lets you determine how your playing is translated into velocity values: starting from *Soft 3* (a soft touch is enough to get a big velocity value) through *Linear* (default) to *Hard 3* (you really have to press the key hard to get a big velocity value). If you select *Fixed*, all notes will be played at the maximum velocity, no matter how hard you hit the keys.

To access the settings for your KOMPLETE KONTROL S-SERIES keyboard in the Hardware page of the Preferences panel, your keyboard must be connected to your computer and controlling the MASCHINE instance. Moreover if a controller from the MASCHINE family is also focused on the MASCHINE instance, make sure that your keyboard is selected in the Controller menu at the top of the Hardware page in order to see its settings! For more information, see section ↑2.6.9, Controller Menu in the Hardware Page of the Preferences Panel.

Visual Feedback on the Leftmost Display

When your keyboard is in Instrument mode, the leftmost display shows you at any time the Parameter page / Plug-in / Sound slot / Group currently selected:

- By default the leftmost display indicates which Parameter page of which Plug-in is currently controlled by Knobs 1–8:



  - The PRESET field shows the name of the Plug-in currently selected. If the Plug-in slot is empty, the field is blank.
  - The PAGE field shows the number of the current Parameter page in the form [page number]/[total number of pages]. If the Plug-in slot is empty, the field reads EMPTY, and PRESS BROWSE appears in the other displays. Press BROWSE and select the desired Plug-in preset from the MASCHINE Library to load it in this Plug-in slot.

- If you hold SHIFT the leftmost display indicates the focused Sound and Group:



  - The PRESET field shows the name of the focused Sound.
  - The PAGE field shows the index of the selected Sound slot in the form [Group letter and number].[Sound slot number]. For example, if the first Sound slot of Group B1 is under focus, the PAGE field reads B1.1.

Navigating Parameter Pages, Plug-ins, Sounds, and Groups

You can quickly switch to another Parameter page, Plug-in, Sound or Group directly from your KOMPLETE KONTROL S-SERIES keyboard:

Switch to the previous/next…	Shortcut	Notes
Parameter page	Page buttons (above the leftmost display)	The PAGE field in the leftmost display indicates the selected Parameter page (see above).
Plug-in	Navigate Left/Right buttons	The PRESET field in the leftmost display indicates the selected Plug-in (see above). If the last Plug-in is already selected and you press the Navigate Right button, the PAGE field reads EMPTY, and PRESS BROWSE appears in the other displays. Press BROWSE and select the desired Plug-in preset from the MASCHINE Library to load it at the end of the Plug-in List.

Switch to the previous/next…	Shortcut	Notes
Sound slot	Navigate Up/Down buttons	In the leftmost display, the PAGE field shortly reads the index of the selected Sound slot in the form [Group letter and number].[Sound slot number]), and the PRESET field shortly reads the name of the selected Sound. After that, the display indicates the selected Plug-in name and Parameter page number as usual (see above). If the selected Sound slot is empty, the PAGE field reads EMPTY, and PRESS BROWSE appears in the other displays. Press BROWSE and select the desired Plug-in preset or Sound from the MASCHINE Library to load it into this Sound slot.
Group	SHIFT + Navigate Up/Down buttons	If the last Group is already selected and you press SHIFT + Navigate Down button, the PAGE field reads EMPTY, and PRESS BROWSE appears in the other displays. Additionally, the MASCHINE software (and any connected MASCHINE device) automatically switches to the MASTER tab. Press BROWSE and select the desired file from the MASCHINE Library to load it as follows: If you load a Project, it will replace the current Project (as usual). If you load a Group, it will be appended to the Group List. If you load a Sound, Instrument preset or Sample, it will be loaded into Sound slot 1 of a new Group appended to the Group List. If you load an Effect preset, it will be loaded into the selected Plug-in slot of the Master.

For more information on browsing your MASCHINE Library from your KOMPLETE KONTROL S-SERIES keyboard, see section ↑15.4, Browsing Your MASCHINE Library.

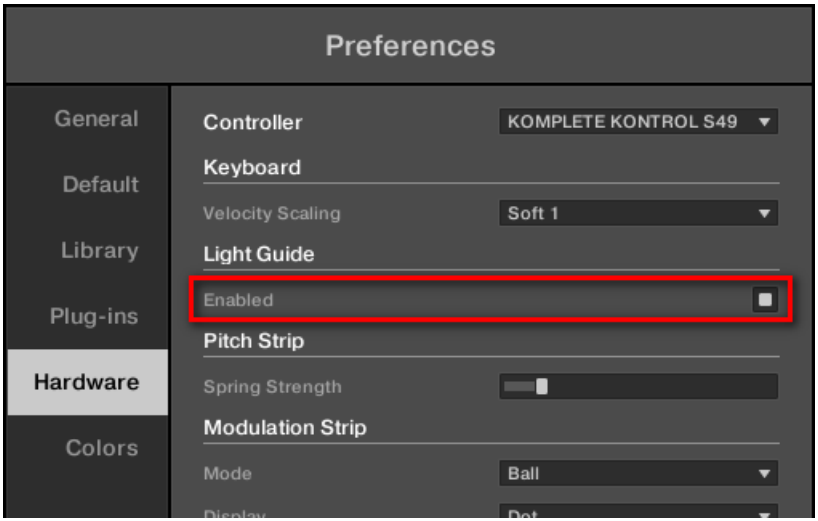
Visual Feedback on the Light Guide

The LEDs of the Light Guide above the keybed provide a useful feedback on the state of each key underneath. The LEDs' behavior depends on the content of the focused Sound slot:

- If the focused Sound slot is empty:
  - The LEDs of the Light Guide mirror the color of the Sound slot and are dimmed.
  - When a key is played (whether because you press it or because your keyboard receives a MIDI note corresponding to that key), its LED turns fully on.
- If the focused Sound slot contains a non-KOMPLETE Instrument or a KOMPLETE Instrument that does not provide any colors:
  - The LEDs of the Light Guide mirror the color of the Sound slot and are dimmed.
  - When a key is played (whether because you press it or because your keyboard receives a MIDI note corresponding to that key), its LED turns fully on.
- If the focused Sound slot contains a KOMPLETE or NKS Instrument providing key colors:
  - The LEDs of the Light Guide mirror the colors provided by the KOMPLETE Instrument.
  - When you press a key, its LED turns fully on.
  - When your keyboard receives a MIDI note, the LED of the corresponding key turns fully on unless this key is a control key (e.g., a keyswitch) in the loaded KOMPLETE Instrument.

When SCALE is on, the Light Guide additionally shows the modifications induced by the Scale and Chord engine. This is described in section ↑15.5, Using the Perform Features.

You can also **disable the Light Guide completely** — all LEDs above the keybed will be off. The Light Guide can be enabled/disabled via the Enabled check box available in the Light Guide section of the Hardware page in the Preferences panel:



The Enabled check box in the Light Guide section allows you to completely disable the LEDs above the keybed.

To access and modify the settings for your KOMPLETE KONTROL S-SERIES keyboard, it must be currently connected to your computer and controlling the MASCHINE software, and it must be selected in the Controller menu at the top of the Hardware page. See section ↑2.6.9, Controller Menu in the Hardware Page of the Preferences Panel for more information on this.

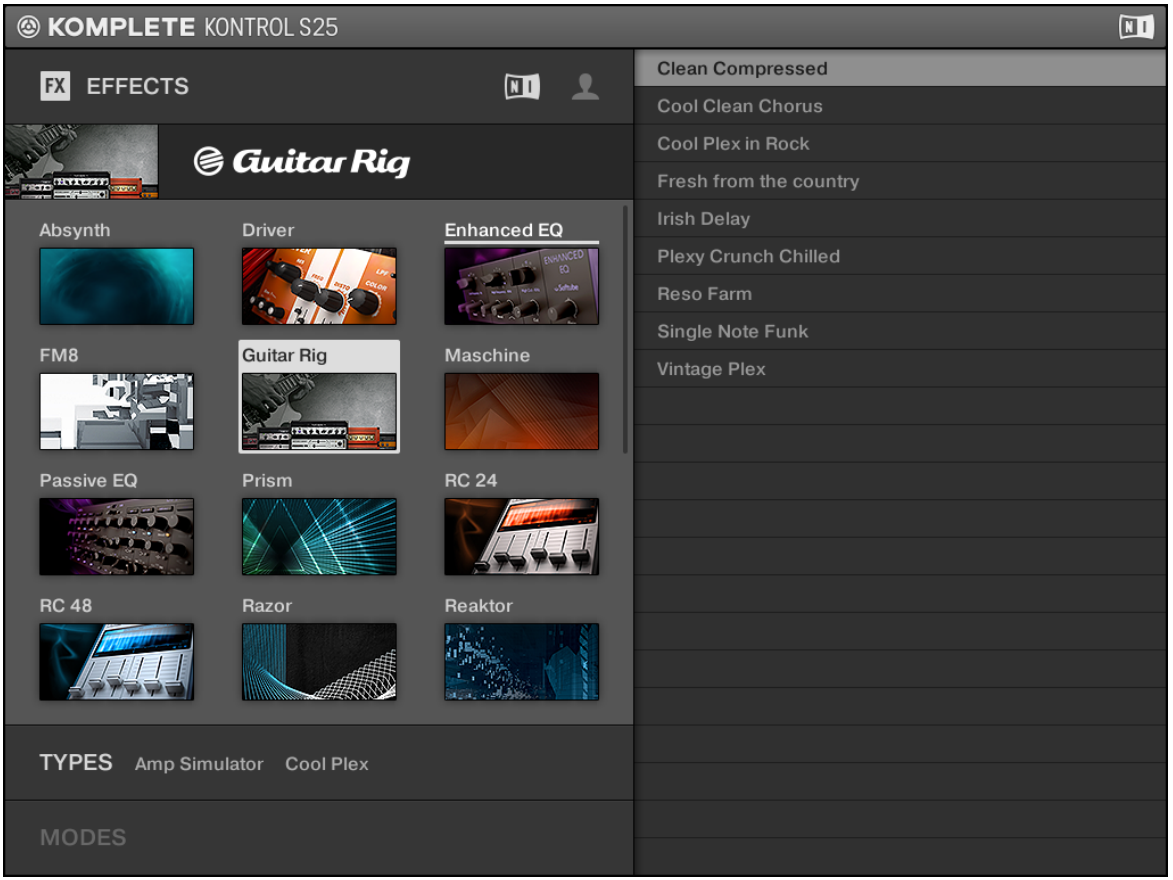
15.4 Browsing Your MASCHINE Library

You can browse your MASCHINE Library directly from your KOMPLETE KONTROL S-SERIES and load the desired files into the focused MASCHINE instance. For this, your KOMPLETE KONTROL S-SERIES keyboard makes use of an on-screen overlay displaying the browser on top of your applications that you can control via the NAVIGATE section of your keyboard.

When your KOMPLETE KONTROL S-SERIES keyboard is focused on a MASCHINE instance:

- Press BROWSE in the NAVIGATE section of your keyboard to open an on-screen overlay and browse your MASCHINE Library.

When the on-screen overlay is open, pressing BROWSE again will close it without loading anything.



Browsing the Effect presets of your MASCHINE Library directly from your KOMPLETE KONTROL S-SERIES keyboard (here a S25, as shown in the header).

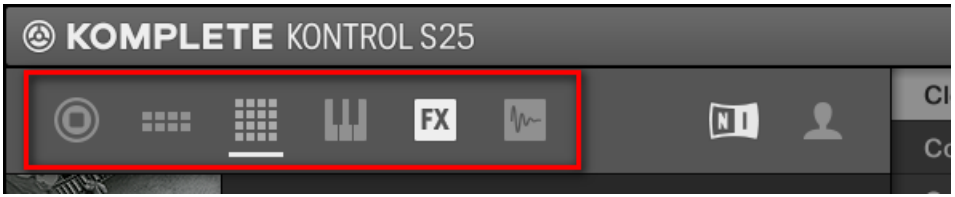
The on-screen overlay browser in MASCHINE is very similar to that in the KOMPLETE KONTROL software, both in appearance and use. We will focus here on the few differences between both. For all details and procedures on using the on-screen overlay browser from your KOMPLETE KONTROL S-SERIES keyboard, please refer to the KOMPLETE KONTROL Manual.

Synchronization Between On-Screen Overlay and MASCHINE Browser

The MASCHINE Browser and the on-screen overlay browser are always **synchronized**: Any selection you make in the on-screen overlay browser will be mirrored in the LIBRARY pane of the MASCHINE software's Browser (as well as on any connected controller from the MASCHINE family in Browse mode), and vice versa, selections made in the LIBRARY pane of the software or in the Browse mode of your controller will be mirrored in the on-screen overlay next time you call it up, or on the display of your KOMPLETE KONTROL keyboard if you have set the Navigate preference in Hardware section to Hardware.

Selecting a File Type

The main difference between the MASCHINE Library and the KOMPLETE KONTROL Library is that the latter only contains Instrument presets whereas the former contains many more file types: Projects, Groups, Sounds, Instrument presets, Effect presets, and Samples. As a consequence, the on-screen overlay browser used in MASCHINE provides a **File Type selector** equivalent to that found in the LIBRARY pane of the MASCHINE Browser:



The open File Type selector in the on-screen overlay browser.

If no query has been made in the MASCHINE Browser, the File Type selector is under focus in the on-screen overlay.

You can also open the File Type selector via the usual navigation method in the on-screen overlay, i.e. pressing the appropriate arrow buttons at the bottom of the NAVIGATE section (see the KOMPLETE KONTROL Manual for more details).

Reminder: At any time, dim lit arrow buttons on the keyboard indicate the possible movements within the on-screen overlay!

There is always one file type selected. When the File Type selector is open, the selected file type is highlighted. You can turn the control encoder to move the focus (indicated by the white underline) to another file type, and once the focus is on the desired file type, select it by pressing the control encoder. The File Type selector then closes, its header shows the icon and name of the selected file type, and the Product selector underneath opens.



Note that, as in the MASCHINE Browser, the File Type selector and the Content selector on its right are mutually independent: For example, if the File Type selector is set to Sounds and the Content selector is set to user content, if you select another file type, say, Groups, the Content selector will stay untouched, and the browser will show you Groups from the User Content. Furthermore, upon your selection in the Content selector, the focus is not automatically moved to the next section.

Selecting a Product

If only one product has files available for the selected file type, this product is automatically selected in the Product selector and the focus of the control encoder directly moves to the next available section (e.g., the Bank selection or the TYPES filter).



This handy feature allows you to quickly narrow your search: E.g., if you have no MASCHINE EXPANSIONS installed, the only product offering in Groups will be MASCHINE. If you just set the File Type selector to Groups, MASCHINE will be automatically selected in the Product selector and you can directly select a Bank or a set of Types to further narrow your search.

Selecting a Type at the Third Level

In the MASCHINE Library, Projects, Groups, Sounds, and Samples can be tagged by up to three hierarchical levels of Types. Accordingly, the on-screen overlay lets you progressively narrow your search by selecting tags in these three levels. The procedure remains the same as in KOMPLETE KONTROL: When you select a Type at an upper level, a tag cloud appears underneath with all Sub-Types available at the next level, and this new tag cloud is automatically focused to speed up your search.



Reminder: You can select multiple tags at a particular level by holding SHIFT when you press the control encoder, thereby widening your search to files tagged with any of the selected tags. Note that in this case the focus won't automatically move to the next section.



Reminder: You can deselect tags by moving the focus onto them and pressing the control encoder.

If the on-screen overlay is not big enough to display all tags, the tag cloud under focus is displayed entirely. When the focus moves to another level of Types, the section scrolls so that the cloud at this new level can be displayed entirely.

Resetting the Search Query

Each time you open the on-screen overlay browser, it mirrors the current state of the MASCHINE Browser. Furthermore the focus is on the section where it was left when closing it (e.g., the result list). Your keyboard provides shortcuts to **start from the beginning** and optionally **reset the search query** in the on-screen overlay:

- Press BACK to bring the focus directly to the File Type selector without modifying any selection in the on-screen overlay.

or

- Press SHIFT + BACK to bring the focus directly to the File Type selector, keep the current selection in the File Type and Content selectors, and remove all other selections.

Loading a File from the Result List

In the on-screen overlay browser, the result list appears in the right part. If it is not focused, press the Navigate Right button to bring it into focus. To load a file from the result list:

- Turn the Control encoder to select the desired file from the result list, and press the Control encoder (or the ENTER button) to load it into MASCHINE.

Depending on what file type you have selected, the file will be loaded to different locations within MASCHINE:

- If it is a Project it will load all associated files replacing all files in memory. If your current Project contains unsaved changes a dialog will appear asking you if you want to save them. This is to prevent you from losing changes by accidentally loading a new Project without saving the old one.
- If it is a Group, it will be loaded into the Group in focus.

- If it is a Sound, it will be loaded into the Sound slot in focus.
- If it is an Instrument preset, it will be loaded into the first Plug-in slot of the Sound slot in focus.
- If it is an Effect preset, it will be loaded into the selected Plug-in slot.
- If it is a Sample, it will be loaded into the Sound slot in focus. The Sampler Plug-in will be automatically loaded in the first Plug-in slot in order to play the Sample. The Sample will spread over the entire velocity and note range.



You can also use the Browser when creating a new Group. In this case, the locations in which the selected file will be loaded slightly differ from the general rules described above. For more information, see section ↑15.3, Navigating and Controlling Your Sounds within a Group.

Loading the Previous/Next File from the Result List

► Press the PRESET buttons (right of the control encoder) to load the previous/next item from the result list.



The result list does not wrap. When the first item in the result list is selected, the upper PRESET button is unlit and inactive; similarly, when the last item in the result list is selected, the lower PRESET button is unlit and inactive.

Quick Browse

You can access Quick Browse directly from your KOMPLETE KONTROL S-SERIES keyboard:

► Press SHIFT + BROWSE to recall the search query that was used to find and load the focused Filetype.

15.5 Using the Perform Features

Your KOMPLETE KONTROL S-SERIES keyboard provides a dedicated PERFORM section, and of course it perfectly integrates into the Perform features of MASCHINE.

General Notes on the Perform Features on Your KOMPLETE KONTROL S-SERIES Keyboard

- The Perform features (Scale, Chord, and Arp) on your KOMPLETE KONTROL S-SERIES keyboard and on controllers from the MASCHINE family are very similar and share most of their parameters: If you modify a shared parameter on a device, your changes will be automatically mirrored on the other device(s).
- Although the Perform features on your keyboard and on MASCHINE controllers are very similar and share most of their parameters, **they can be used independently from each other**: For example, you can set up and activate scales, chords, and/or arpeggios on your keyboard without affecting the current pad behavior, mode and displays on your MASCHINE controller, and inversely.
- The Scale, Chord, and Arp features are not available on your keyboard if it is focused on a MASCHINE instance running as a plug-in in a host environment. In this case, the SCALE and ARP buttons are off and disabled, and pressing SHIFT + SCALE / SHIFT + ARP will not work either.



Note that this does not affect the Perform features on controllers from the MASCHINE family. These are available when MASCHINE is running both as a standalone application and as a plug-in in a host.

- The Scale, Chord, and Arp parameters cannot be modulated or automated in MASCHINE.

Setting Up Scales and Chords on Your Keyboard

On your KOMPLETE KONTROL S-SERIES keyboard:

► Press SCALE to enable or disable the Scale and Chord engine.

The SCALE button is fully lit when the Scale and Chord engine is enabled, otherwise it is dimly lit.

The state of the SCALE button and of the Scale and Chord engine is saved for each Group separately in the Project. It is independent of the state of the Scale and Chord engine on any controller from the MASCHINE family (but the Scale and Chord parameters are synchronized between all devices). If you disconnect and re-connect your keyboard, the state of the Scale and Chord engine and SCALE button is recalled for each Group.

Since your KOMPLETE KONTROL S-SERIES keyboard always controls notes of one particular Sound, the Scale and Chord features can be used regardless of whether the focused Group is in Group or Keyboard mode.

To adjust the Scale and Chord parameters and configure the scale and/or chords you want to use, switch your keyboard to **Scale Edit mode**:

► Press SHIFT + SCALE to switch Knobs 1–8 to Scale Edit mode and access the Scale and Chord parameters.

→ The displays below Knobs 1–8 switch to the Scale and Chords parameters. When you release SHIFT, the PAGE field in the leftmost display reads SCALE. Note that the PRESET field underneath keeps indicating the selected Plug-in in the focused Sound slot, if any (the Sampler in the picture below):



As long as you hold SHIFT, the leftmost display shows instead the index letter and number of the focused Sound slot (PAGE field) along with its name (PRESET field). For more information, see section ↑15.3, Navigating and Controlling Your Sounds within a Group.

When your keyboard is connected to a MASCHINE instance, Scale Edit mode shows the same Knob layout and parameters as when it is connected to a KOMPLETE KONTROL instance:

- Knob 1 controls the **Root Note**. Please note that this Root Note is defined as in KOMPLETE KONTROL, i.e. it only sets the note on which the selected scale is based: You can choose from the 12 available notes (C to B). On the other hand, the Root Note on MASCHINE controllers in Keyboard mode additionally sets the pitch played by pad 1: You additionally choose a particular octave (C1, C2, C3, etc.) in order to define the mapping of pad 1 (all other pads are then mapped accordingly). Nevertheless, modifying the Root Note on either device will update that of the other device accordingly (ignoring the octave number). For more information on the Root Note on controllers from the MASCHINE family, see section ↑5.5.3, Scale and Chord Parameters.
- Knob 2 controls the **Scale Type**. This parameter is shared with MASCHINE controllers.

- Knob 3 controls the **Key Mode**. This parameter is specific to your keyboard. As a reminder, KEY MODE lets you choose from three operating modes: In GUIDE mode, the Light Guide acts as a visual guide for the selected scale which is mapped to the keyboard. However notes outside of the selected scale remain active. In MAPPED mode (default mode), keys outside the current scale are off and inactive. In EASY mode, notes within the current scale are spread over white keys, and black keys trigger the closest note within the scale. For more details, please refer to the KOMPLETE KONTROL Manual.
- Knob 5 controls the **Chord Mode**. This parameter is shared with MASCHINE controllers.
- Knob 6 controls the **Chord Type**. This parameter is shared with MASCHINE controllers.

To sum up, **all Scale and Chord parameter values are always synchronized** between your KOMPLETE KONTROL S-SERIES keyboard and the connected controller from the MASCHINE family (except the KEY MODE parameter, which is specific to your keyboard) — only the on/off states on each device are independent of each other. Again, all these parameters are described in section ↑5.5.3, Scale and Chord Parameters.



For consistency, the enharmonic spelling of the Root Note in the displays of your keyboard mirrors the spelling used on MASCHINE controllers — see section ↑5.5.3, Scale and Chord Parameters for all details.

Scales and Chords: Visual Feedback on the Light Guide

When SCALE is on, the LEDs of the Light Guide above the keybed keep you informed at any time on the current scale and chord configuration. The LEDs' behavior is the same as when your keyboard is focused on the KOMPLETE KONTROL software.

When **Chord Mode** is set to **Off** or **Harmonizer**:

Type of Key for Selected Scale	LED in Default State	LED when Key Triggered
Root notes	Fully lit	White
Keys in the scale except root notes	Dimly lit	Fully lit
Keys outside the scale	Off *	Off **

* This has priority over the information coming from the loaded KOMPLETE 10 Instrument (if any), except for control notes, which are never hidden by the Scale engine.

** If Key Mode is set to Standard, since the "off" keys are re-mapped to keys within the selected scale, when you press an "off" key its target key will light up (fully lit or white, depending on the key), showing you which note was effectively triggered.

Note that if Chord Mode is set to Harmonizer, the notes triggered as part of the chord will also light up.

When **Chord Mode** is set to **Chord Set**:

Type of Key	LED in Default State	LED when Key Triggered
C keys	Fully lit	White
Other keys	Dimly lit	Fully lit



This lighting behavior comes on top of the default LED behavior (when SCALE is off). You can also disable the Light Guide completely. For more information on these topics, see section ↑15.3, Navigating and Controlling Your Sounds within a Group.

Setting Up Arpeggios on Your Keyboard

On your KOMPLETE KONTROL S-SERIES keyboard:

► Press ARP to enable or disable the Arp engine.

The ARP button is fully lit when the Arp engine is enabled, otherwise it is dimly lit.

The state of the ARP button and of the Scale and Chord engine is saved globally for the session. It is independent of the state of the Arp engine on any controller from the MASCHINE family. If you close and re-open the Project, if you disconnect and re-connect your keyboard, or if you switch the focus to another device, the state of the Arp engine and ARP button is reset to its default value (disabled).

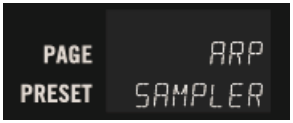


Since your KOMPLETE KONTROL S-SERIES keyboard always controls notes of one particular Sound, the Arp feature can be used regardless of whether the focused Group is in Group or Keyboard mode (and the Note Repeat feature is not available as such).

To adjust the Arp parameters and configure the arpeggio you want to use, do the following:

▶ Press SHIFT + ARP to switch Knobs 1–8 to Arp Edit mode and access the Arp parameters.

→ The displays below Knobs 1–8 switch to the Arp parameters. When you release SHIFT, the PAGE field in the leftmost display reads ARP. Note that the PRESET field underneath keeps indicating the selected Plug-in in the focused Sound slot (the Sampler in the picture below):



As long as you hold SHIFT, the leftmost display shows instead the index letter and number of the focused Sound slot (PAGE field) along with its name (PRESET field). For more information, see section ↑15.3, Navigating and Controlling Your Sounds within a Group.

When your keyboard is connected to a MASCHINE instance, Arp Edit mode shows the same Knob layout and section names as on the MASCHINE STUDIO or MASCHINE (MK2) controller except for the Preset selection (Knob 1), which is included in the MAIN section:

Element	Description
MAIN Section	
Knob 1	Selects between the four available **presets**, labeled PRESET 1–4. The presets are the same as on MASCHINE controllers.
Knob 2	Selects the **Type** of arpeggio. This parameter is shared with MASCHINE controllers.
RHYTHM Section	
Knob 3	Adjusts the **Rate** of the arpeggio. This parameter is shared with MASCHINE controllers.
Knob 4	Selects the **Unit** of the arpeggio. This parameter is shared with MASCHINE controllers.

Element	Description
Knob 5 (SEQUENCE)	Selects a **Sequence** for the arpeggio. This parameter is shared with MASCHINE controllers.
OTHER Section	
Knob 6 (OCTAVES)	Adjusts the **Octaves** parameter. This parameter is shared with MASCHINE controllers.
Knob 7 (DYNAMIC)	Adjusts the **Dynamic** parameter. This parameter is shared with MASCHINE controllers.
Knob 8 (GATE)	Adjusts the **Gate** parameter. This parameter is shared with MASCHINE controllers.



As when your KOMPLETE KONTROL S-SERIES keyboard is connected to the KOMPLETE KONTROL software, the displays below the first four Knobs always show the parameter values — as opposed to other Knobs whose displays show the parameter name by default and the parameter value when touched. This provides a quicker way of checking important parameters in a live situation, since their values are quite self-explanatory.

To sum up, **all Arp parameter values are always synchronized** between your KOMPLETE KONTROL S-SERIES keyboard and the connected controller from the MASCHINE family. Again, all these parameters are described in section ↑5.5.3, Scale and Chord Parameters.

15.6 Using the Touch Strips

When your keyboard is focused on a MASCHINE instance, its left and right touch strips always send Pitch and Modulation data to the focused Sound, respectively.

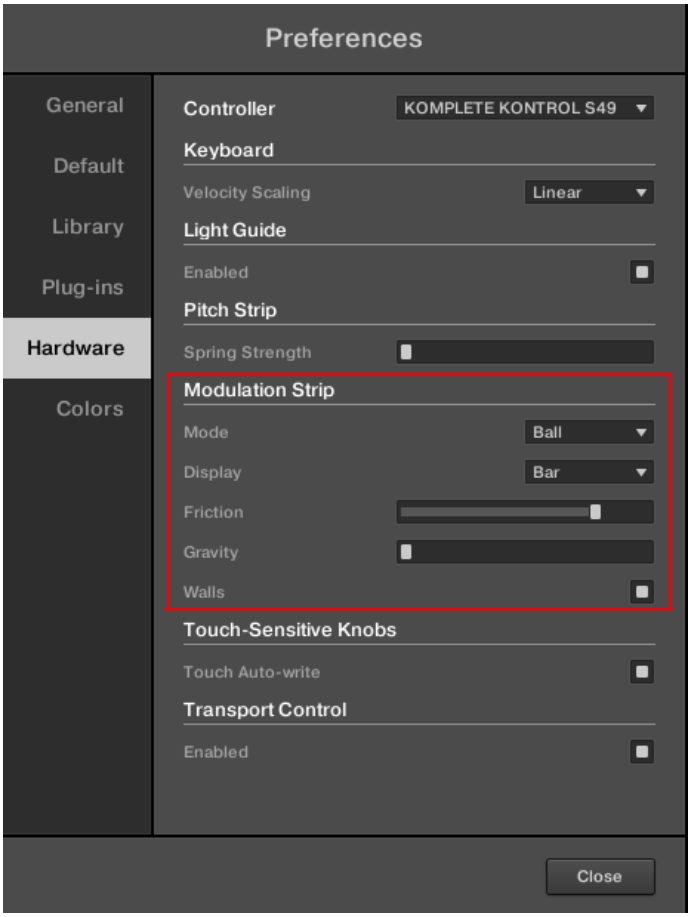


The way Pitch and Modulation data is interpreted can vary with the Plug-in loaded in the focused Sound. For example, MASCHINE's Sampler Plug-in lets you configure various destinations for the Modulation data (in the MODWHEEL DESTINATION section of the Velocity / Modwheel page, in the Control area).

When you record a Pattern in your MASCHINE Project, your actions on the left and right touch strips are recorded as Pitch and Modulation (CC1) MIDI data for the focused Sound, respectively. You will be able to see and edit these tracks in the MIDI Pane of the Control Lane under the Pattern Editor — please refer to the MASCHINE 2.0 Manual for more information on this.

Touch Strip Behavior

You can adjust the behavior of each touch strip, i.e. how it reacts to your actions. These behaviors can be selected and adjusted in the Pitch Strip and Modulation Strip sections of the Hardware page in the Preferences panel:



The touch strip settings in the Hardware page of the Preferences panel.

To access the settings for your KOMPLETE KONTROL S-SERIES keyboard in the Hardware page of the Preferences panel, your keyboard must be connected to your computer and controlling the MASCHINE instance. Moreover if a controller from the MASCHINE family is also focused on the MASCHINE instance, make sure that your keyboard is selected in the Controller menu at the top of the Hardware page in order to see its settings! For more information, see section ↑2.6.9, Controller Menu in the Hardware Page of the Preferences Panel.

The **Pitch strip** (left strip) behaves like a typical Pitchbend wheel: It simulates a simple spring holding back the current pitch value when it moves away from its default position, which is in the middle of the strip. When you put your finger somewhere on the strip, the value instantly jumps to the corresponding position and stays there as long as you keep your finger on the strip. When you remove your finger, the value moves back to the default position. The strip's LED chain illustrates this behavior (the blue LED indicates the pitch value). One parameter is available:

Pitch Strip Section	Parameter Description
Spring Strength	Adjusts the speed at which the pitch returns back to its default position when you remove your finger: the higher the Spring Strength setting, the quicker the pitch value will return to its default position.

The **Modulation Strip** (right strip) on your KOMPLETE KONTROL S-SERIES keyboard is a highly versatile modulation control. It has five distinct modes that can be set with the Mode menu found on the Hardware page of the Preferences panel in the MASCHINE software:

- **Standard**: This is the default mode for the modulation strip on your KOMPLETE KONTROL S-SERIES keyboard and corresponds to the usual behavior for a modulation control. In this mode the touch strip reads the position of your finger and applies the value to the assigned instrument parameter. Wherever you put your finger on the strip, the value instantly jumps to the corresponding position and remains there. In Standard mode, the following additional settings are available for the modulation strip:
  - **Display menu**: Lets you select one of two ways to display the current state of the modulation strip: Bar or Dot. Bar displays a bar of lit LEDs from the default position of the strip to the current value; whereas Dot displays a dot of lit LEDs at the current value.
- **Spring**: This mode simulates a simple spring that can be deflected both up and down from its default position, which is the middle of the pitch strip. The current position of the spring (the parameter value) is indicated by a blue LED. If you put your finger on the strip, the value instantly jumps to the corresponding position and stays there as long as you keep your finger on the strip. When you remove your finger, the value moves back to the default position. In Spring mode, the following additional settings are available for the modulation strip:

  - **Display menu**: Lets you select one of two ways to display the current state of the modulation strip: Bar or Dot. Bar displays a bar of lit LEDs from the default position of the strip to the current value; whereas Dot displays a dot of lit LEDs at the current value.
  - **Strength slider**: Adjusts the rate at which the spring rebounds to its default position. The higher the Strength setting, the quicker the value will spring back.

- **Ball**: This mode simulates a ball that is attracted by the gravity of your finger pressing on the surface of the touch strip. The current position of the ball (the parameter value) is indicated by a blue LED. If you put your finger on the strip, the ball will move towards your finger and stop as it reaches the finger's position. If you remove your finger before, the ball sustains its momentum and continues to move along the modulation strip until the friction of the surface causes it to slow down and stop. Alternatively, you can "throw" the ball by putting your finger on the ball's current position, dragging it in any direction, and removing your finger. The faster you drag your finger, the faster the ball will get. In Ball mode, the following additional settings are available for the modulation strip:
  - **Display** menu: Lets you select one of two ways to display the current state of the modulation strip: Bar or Dot. Bar displays a bar of lit LEDs from the default position of the strip to the current value; whereas Dot displays a dot of lit LEDs at the current value.
  - **Friction** slider: Adjusts the friction of the surface that slows down the ball once you have removed your finger. The higher the Friction value, the quicker the ball will decelerate and stop. When fully left, the ball never stops. When fully right, the ball stops instantly.
  - **Gravity** slider: Adjusts the attraction of your finger on the ball: The higher the Gravity value, the faster the ball will move. This parameter doesn't affect the ball movement if you throw the ball with your finger (see above).
  - **Walls** button: Sets the behavior of the ball when it reaches the range limits. If Walls is set to on, the ball bounces off the range limit and continues its trip in the opposite direction. If Walls is set to off, the ball jumps to the opposite range limit and continues from there in the same direction.

- **Tempo**: Just like Ball mode, Tempo mode simulates a ball that is attracted by the gravity of your finger. The current position of the ball (the parameter value) is indicated by a blue LED. You can play it in the same way as Ball mode (see above), however in this case the ball adopts its movement to a steady beat instead of slowing down and stopping. This enables you to create tempo-synced modulations with the modulation strip. When using KOM-

PLETE KONTROL with MASCHINE, the tempo is defined by the MASCHINE software. When using the KOMPLETE KONTROL stand-alone application, you can set the tempo in the header of the software interface. In Ball mode, the following additional settings are available for the modulation strip:

- **Display** menu: Lets you select one of two ways to display the current state of the modulation strip: Bar or Dot. Bar displays a bar of lit LEDs from the default position of the strip to the current value; whereas Dot displays a dot of lit LEDs at the current value.
- **Rate** menu: Lets you select one of 13 time signatures to set the beat of the ball's movement relative to the tempo, from 1/8 to 4/1, including triplet and dotted time signatures.
- **Friction** slider: Adjusts the rate at which the ball movement catches up with the tempo. The higher the Friction value, the quicker the ball will match the beat as set in the Rate menu. When fully right, the ball matches the given beat instantly.
- **Gravity** slider: Adjusts the attraction of your finger on the ball: The higher the Gravity value, the faster the ball will move. This parameter doesn't affect the ball movement if you throw the ball with your finger (see above).
- **Walls** button: Sets the behavior of the ball when it reaches the range limits. If Walls is set to on, the ball bounces off the range limit and continues its trip in the opposite direction. If Walls is set to off, the ball jumps to the opposite range limit and continues from there in the same direction.

- **Stepped**: This mode divides the modulation strip into two to five sections, indicated by white LEDs. When being pressed with a finger, each section triggers one of two to five evenly spaced parameter values across the whole modulation range. The currently active section (parameter value) is indicated by three blue LEDs. In Stepped mode, the following additional settings are available for the modulation strip:
  - **Divisions** menu: Lets you select the number of sections the modulation strip is divided into.

The parameters available in the section depend on the selected behavior:

Modulation Strip Section	Parameter Description
Mode	Selects from the two available behaviors: *Standard* and *Ball* (see description above).
Display	Defines how the value is indicated on the strip's LED chain: *Dot*: The blue LED indicates the current value. White LEDs are disabled. *Bar*: The blue LED indicates the current value. Additionally, white LEDs fill the distance between the current value (in blue) and the zero.
Ball mode	
Friction	Adjusts the air friction that slows down the ball once you have removed your finger. The higher the Friction value, the quicker the ball will decelerate and stop. When the slider is set fully left, the ball never stops. When fully right, the ball stops instantly.
Gravity	Adjusts the attraction of your finger on the ball: The higher the Gravity value, the faster the ball will move. This parameter doesn't affect the ball movement if you throw the ball with your finger (see the description of the Ball mode above).
Walls	Adjusts the behavior of the ball when it reaches the range limits. If Walls is set to *On*, the ball bounces off the range limit and continues its trip in the opposite direction. If Walls is set to *Off*, the ball jumps to the opposite range limit and continues from there in the same direction.

15.7 Recording Modulation from Your Keyboard

You can record modulation in MASCHINE from your KOMPLETE KONTROL S-SERIES keyboard. To do this, your keyboard must be in Instrument mode.



You cannot record modulation when your keyboard is in Scale Edit or Arp Edit mode. For more information on these modes, see section ↑15.5, Using the Perform Features.

In order to record modulation, your keyboard provides an **Auto-write mode** similar to the one found on the various MASCHINE controllers, except that on your keyboard Auto-write mode is always pinned (it is never a temporary mode).

To record modulation from your keyboard, do as follows:

1. Check that MASCHINE's playback is on.
2. On your keyboard, press SHIFT + Page Left + Page Right simultaneously to enter Auto-write mode.
   The leftmost display reads AUTO ON. While you are holding SHIFT, both Page buttons are fully lit to indicate that Auto-write mode is active.
   In the displays under Knobs 1–8 parameters that cannot be modulated disappear and the corresponding Knobs above are disabled. For modulatable parameters the bars switch to bipolar mode and the values (appearing only when you touch the Knobs) indicate the deviations to the actual values, measured in percentage:



3. Turn the desired Knobs 1–8 above the displays to record deviations to the actual values. Your modulation gets recorded now. Each Knob movement is stored in your Pattern as a modulation event. It will be automatically played with your Pattern upon its next cycle.
4. When you're done, press SHIFT + Page Left + Page Right again to quit Auto-write mode. The leftmost display shortly reads AUTO OFF. While you are holding SHIFT, both Page buttons are dimmed to indicate that Auto-write mode is inactive.

At any time you can check whether Auto-write mode is active or not by holding SHIFT on your keyboard: If Auto-write is enabled both Page buttons will be fully lit, otherwise both Page buttons will be dimly lit.



The Auto-write mode of your keyboard and that of any MASCHINE controller simultaneously connected are independent from each other: You can enable and use Auto-write mode on either device without affecting the functionality of the other device.

Using the Touch Sensitivity of Knobs 1–8

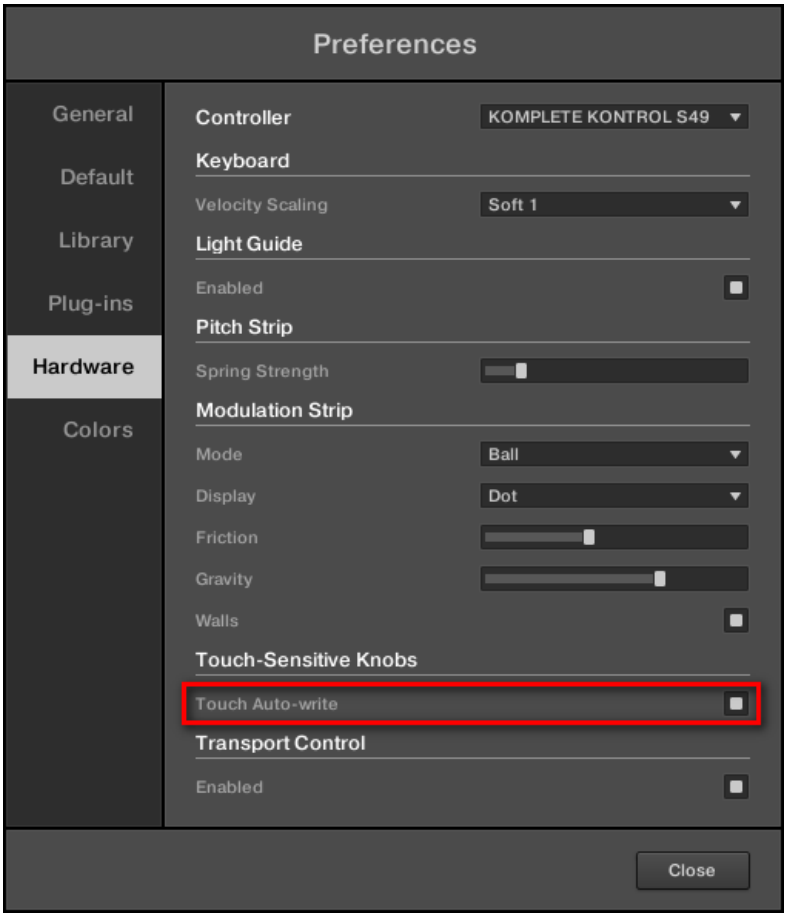
Modulation recording also benefits from the touch sensitivity of Knobs 1–8 via the **Touch Auto-write option**.

Enabled by default, the Touch Auto-write option allows you to record modulation events as soon as you touch Knobs 1–8, even if you don't rotate them. In particular, this allows you to overwrite existing modulation events while keeping the last modulation value you have recorded.



This option is the same as for MASCHINE STUDIO. For all details, please refer to section ↑2.6.8.3, Touch Auto-Write Option.

The Touch Auto-write option can be enabled or disabled in the Hardware page of the Preferences panel when your keyboard is connected and focused on that MASCHINE instance:



The Touch Auto-write check box in the Hardware page of the Preferences panel.

► To enable or disable the Touch Auto-write option, click the Touch Auto-write check box in the Touch-Sensitive Knobs section of the Hardware page in the Preferences panel.



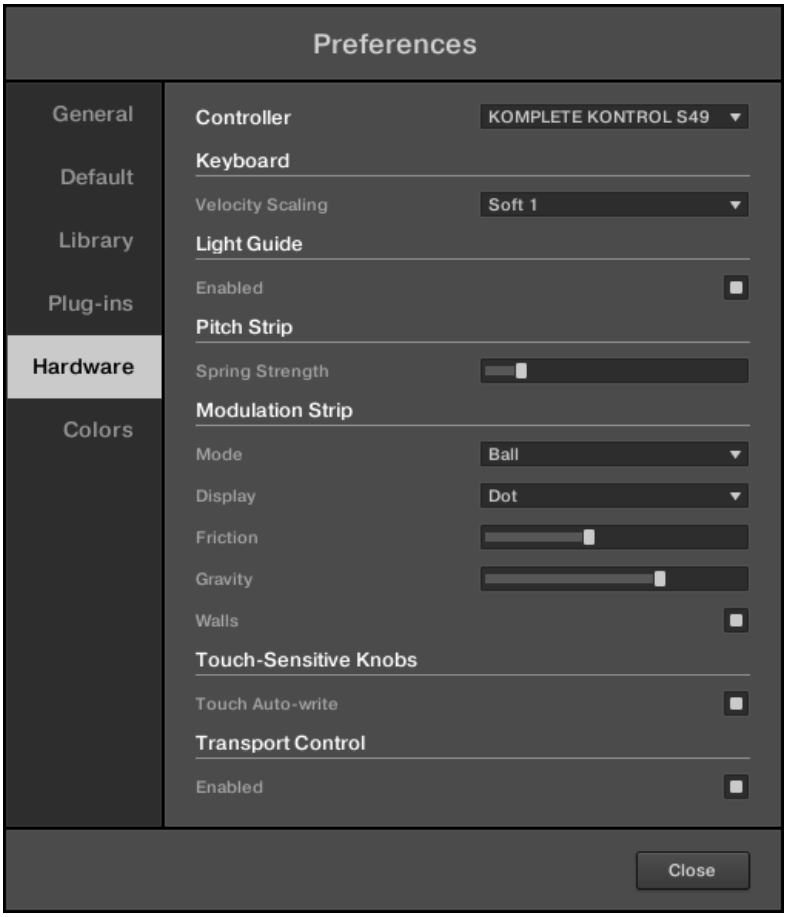
To access the settings for your KOMPLETE KONTROL S-SERIES keyboard in the Hardware page of the Preferences panel, your keyboard must be connected to your computer and controlling the MASCHINE instance. Moreover if a controller from the MASCHINE family is also focused on the MASCHINE instance, make sure that your keyboard is selected in the Controller menu at the top of the Hardware page in order to see its settings! For more information, see section ↑2.6.9, Controller Menu in the Hardware Page of the Preferences Panel.

15.8 Adjusting the Settings for Your Keyboard in the MASCHINE Preferences

When your KOMPLETE KONTROL S-SERIES keyboard is focused on a MASCHINE instance, the Hardware page of MASCHINE's Preferences panel allows you to adjust a few settings for your keyboard.



If a controller from the MASCHINE family is also focused on that MASCHINE instance, make sure that your KOMPLETE KONTROL S-SERIES keyboard is selected in the Controller menu at the top of the Hardware page in order to see its settings! For more information, see section ↑2.6.9, Controller Menu in the Hardware Page of the Preferences Panel.



The Hardware page of the Preferences panel for the KOMPLETE KONTROL S-SERIES keyboards.

The available parameters are listed in the table below. Each of them is described in detail in the corresponding section.

Section/Parameter	Description
Keyboard	
Velocity Scaling menu	Adjusts how your playing is translated into velocity values. See section ↑15.3, Navigating and Controlling Your Sounds within a Group.
Light Guide	
Enabled check box	Switches the colored LEDs of the Light Guide (above the keybed) on or off. See section ↑15.3, Navigating and Controlling Your Sounds within a Group.
Transport Control	
Enabled check box	Switches the transport functions of your keyboard in MASCHINE on or off. See section ↑15.2, Controlling the Transport in MASCHINE.
Pitch Strip and **Modulation Strip**	
All parameters	Adjust the behavior of the touch strips. See section ↑15.6, Using the Touch Strips.
Touch-Sensitive Knobs	
Touch Auto-write check box	Enables or disables the Touch Auto-write option. See section ↑15.7, Recording Modulation from Your Keyboard.

15.9 Arp Hold Mode

The arpeggiator "Hold" function allows you to latch the notes played by the arpeggiator.

To use the Hold function from your hardware:

1. Press SHIFT + PAD MODE to enter keyboard mode.
2. Press and hold NOTE REPEAT to access the arpeggiator.
3. Press Button 3 HOLD to use enable the arpeggiator latch function.

4. Press Button 2 LOCK if you want the arpeggiator to continue while you access other modes.

→ The arpeggiated notes are held. Press the Button 3 again to disable HOLD.



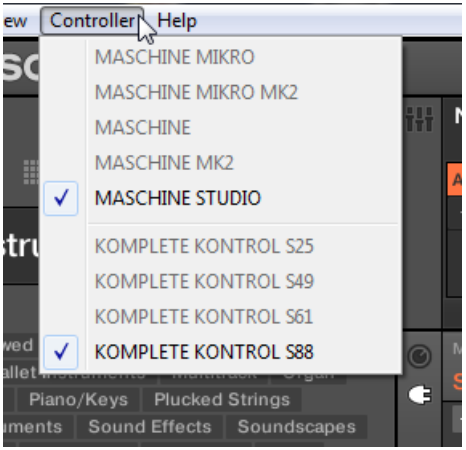
Press SHIFT Button 3 to access FOLLOW.

15.10 Support for KOMPLETE KONTROL S88

MASCHINE 2.4 supports the new flagship of the S-Series keyboard line, KOMPLETE KONTROL S88 from Native Instruments. KOMPLETE KONTROL S88 delivers an expansive, professional-grade Fatar keybed for true piano feel across 88 fully-weighted, hammer-action keys.

The KOMPLETE KONTROL S-SERIES keyboards are tightly integrated into the MASCHINE workflows.

Connected the KOMPLETE KONTROL S88 will appear in the header and will become available for selection from the *Controller* menu.



Controller menu with KOMPLETE KONTROL S88 and MASCHINE STUDIO selected

16 Troubleshooting – Getting Help

This chapter assists you in solving common issues with MASCHINE and provides you with the necessary information for getting further assistance.

Before getting help please make sure you have downloaded the latest MASCHINE software and documentation from Service Center!

16.1 Troubleshooting

A few common issues and possible solutions when working with MASCHINE are listed in this section.

16.1.1 The MASCHINE Software Won't Start

- Check the system requirements for MASCHINE. The minimum requirements are the very least you can get by with and are often not enough for advanced use (e.g., many effects, complex routing…). Increasing the RAM in your computer may help significantly.
- Make sure you have the most recent version of the MASCHINE software installed. You can find the latest available version following this link:
  http://www.native-instruments.com/updates
- Make sure that you have not clicked an outdated application alias/shortcut.
- Try to restart your computer. Disconnect any other audio interfaces and computer peripherals like printers, scanners, and the like.

16.1.2 Latency Issues

- Please check if your computer is suited for handling real-time audio processing without dropouts. In general, it is not recommended to use laptops with shared-memory graphic cards. You will need all the memory and processing power available for your audio software.
- It is not recommended to run the laptop on battery, as built-in power management systems might slow the clock rate of the CPU in an effort to extend battery life.

- Disconnect all unused hardware (e.g., printer, scanner). This will increase the amount of processing power available for your music software.
- Laptops are often equipped with built-in devices that disturb audio processing, most commonly Bluetooth transceivers, an Ethernet network adapter, or a wireless LAN card. You might need to disable these devices while working with MASCHINE.

Windows users: The Online Knowledge Base contains additional tuning tips for your operating system. See following articles:

- Windows 7 tuning tips for audio processing:
  http://www.native-instruments.com/knowledge/questions/847/
- Windows 8 tuning tips for audio processing:
  http://www.native-instruments.com/knowledge/questions/1395/

16.1.3 The MASCHINE Software Crashes

In case of a crash during runtime, please contact the Native Instruments technical support team as described in section ↑16.2.2, Technical Support and send them your crashlog and a detailed description of what you were doing with the software just before the crash happened. You will find the crashlog in the following folders:

- Windows: *My Documents\Native Instruments\Maschine 2\Crashlogs*
- Mac OS X: *Users/~/Library/Logs/CrashReporter*

16.1.4 Updates

Whenever you encounter problems, it is recommended that you first download and install any available software updates. Updates are released regularly to fix known problems, maintain compatibility with operating system updates, and to continuously improve the software. The version number of your software is displayed in the About dialog for all Native Instruments applications. This dialog can be opened by clicking the NI logo in the upper right corner of the user interface, by clicking the MASCHINE logo in its upper left corner, or by selecting *About Maschine* from the Help menu in the Application Menu Bar or from the *Help* submenu in the MASCHINE menu. Alternatively, you can find the version numbers of all installed Native Instruments applications when showing the details for an application within the Overview page of the Service Center. Updates are available on the Update page in Service Center or on our website under:

http://www.native-instruments.com/updates

16.2 Getting Help

If you are experiencing problems related to your Native Instruments product that the supplied documentation does not cover, there are several ways of getting help!



The links in the following sections can also be reached from the Service Center application: Open the Service Center application and click on the Support button in the upper-right corner.

16.2.1 Knowledge Base

The Online Knowledge Base gathers useful information about your Native Instruments product and can be of great help to solve possible issues you may encounter. You can reach the Knowledge Base via:

www.native-instruments.com/knowledge

You can also access the Knowledge Base directly from MASCHINE by selecting *Visit Online Knowledge Base* from the Help menu in the Application Menu Bar or from the *Help* submenu in the MASCHINE menu.

16.2.2 Technical Support

If no Knowledge Base entry matches your problem, or if the matching entry does not solve the problem, you can use the Online Support Form to contact the Technical Support team of Native Instruments. The Online Support Form will ask you to enter information about your hardware and software setup. This information is essential for our Support team to be able to provide you with quality assistance. You can reach the Online Support via:

www.native-instruments.com/suppform

When communicating with the Native Instruments Support team, keep in mind that the more details you can provide about your hardware, your operating system, the version of the software you are running, and the problem you are experiencing, the better they will be able to help you.

In your description, you should mention:

- How to reproduce the problem
- How you have already tried to fix the problem
- A description of your setup, including all hardware and the version of your software
- The brand and specifications of your computer

When installing new software or software updates, a Readme file is included that contains late breaking news and new information that was not yet included in the documentation. Please open and read this Readme file before contacting Technical Support.

16.2.3 Registration Support

If problems occur during the product activation procedure, please contact our Registration Support team:

www.native-instruments.com/regsuppfrm

16.2.4 User Forum

In the Native Instruments User Forum, you can discuss product features directly with other users and with experts moderating the forum. Please be aware that the Technical Support team does not participate in the forum. If you're encountering an issue that can't be solved by other users, contact Native Instruments' Technical Support team via the online support as described above. You can reach the User Forum via:

www.native-instruments.com/forum

17 Appendix: Tips for Playing Live

MASCHINE is a very hands-on tool for producing music as well as for performing live. Here we have specifically gathered some tips to help you when playing live. If you are used to playing live, you may not need them, but maybe you will find some new ideas to integrate into your set.

17.1 Preparations

17.1.1 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.

17.1.2 Customize the Pads of the Hardware

Take your time to setup the pad sensitivity and velocity scaling to your personal taste (see section ↑2.6.6, Preferences – Plug-ins Page to learn how to do that) — you will have even more fun playing MASCHINE.

17.1.3 Check Your CPU Power Before Playing

Some things can be embarrassing, if for example, you are on stage and your computer starts to have problems because it cannot handle the amount of effects you are using. 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. Have a look at the CPU meter in the MASCHINE software's Header to ensure it never turns red. If necessary, increase the Latency value (see ↑2.6.1, Preferences – General Page).

17.1.4 Name and Color Your Groups, Patterns, Sounds and Scenes

Naming and coloring your Groups, Patterns, Sounds and Scenes gives you a better overview of exactly what you are doing. The colors you select are mirrored on the controller. This is especially helpful if you focus on playing with the MASCHINE controller. It might not be something that is very interesting, but it certainly pays off in a hectic live situation.

17.1.5 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 audio interface, this is a useful safety measure. However, 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! See ↑12.1.4, Limiter for more information.

17.1.6 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 controller's MIDI IN socket 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 another software. You can also let MASCHINE send the MIDI Clock signal by activating *Send MIDI Clock* from the Preferences. Please refer to section ↑2.7, Integrating MASCHINE into Your MIDI Setup for more information on these features. Make sure you also setup the Sync Offset Slave value correctly (see chapter ↑2.6.1, Preferences – General Page) so that all your devices and MASCHINE are tightly synchronized.

17.1.7 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!

17.2 Basic Techniques

17.2.1 Use Mute and Solo

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

By pinning the Mute and Solo mode (press Button 1 simultaneously for this), you have both hands free to mute or solo Sounds and Groups. Since soloing a Sound mutes all Sounds except one, the MUTE button can then 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. See ↑17.2.4, Use Note Repeat for more on this.

17.2.2 Use Scene Mode and Tweak the Loop Range

Scene mode is useful to trigger different parts of an arrangement by switching Scenes, while changing the Loop Range adds another layer of improvisation. By using a short value for the Perform Grid, you can quickly combine Scenes and create new variations. Please refer to section ↑13.3.1, Selecting a Loop Range for more information.

17.2.3 Create Variations of Your Drum Patterns in the Step Sequencer

You can easily create interesting drum patterns by adding or removing steps in the step sequencer. Breaks and build-ups like snare rolls or a double-tempo hi-hat can be created on the fly. See ↑7.3, Recording Patterns with the Step Sequencer for more information on the step sequencer.

17.2.4 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 Keyboard mode to create synthesizer-like arpeggios. See Note Repeat for more information.

17.2.5 Set Up Your Own Multi-effect Groups and Automate Them

You can setup multi-effect Groups containing all the effects you want to use in a live set. You can find several multi-effect Groups in the LIBRARY pane of the Browser to give you an idea of what works for you. To be able to quickly change and modulate the effect settings, you can set modulation for the multi-effect as Patterns from within the MASCHINE software. By using Patterns for the multi-effect Group you could for example trigger a filter sweep or a wild modulated Beat Delay. See section ↑11.4, Creating Multi-Effects for more details!

17.3 Special Tricks

17.3.1 Changing Pattern Length for Variation

Try a short Pattern Grid resolution like a quarter or eighth note and change the Pattern Length (see section ↑7.1.6, Adjusting the Pattern Grid and the Pattern Length) to create variations of a Pattern. If you select an even smaller value like 1/64th you can create stuttering breaks and rolls.

17.3.2 Using Loops to Cycle Through Samples

You can use loops to cycle through Samples, creating glitches and stuttering breaks or interesting soundscapes. Just enter the ZONE page in Sampling mode on your controller, switch on the ACTIVE parameter on the Loop page and play with the parameters for the start and end point of the loop. Use the SHIFT button to change the values in smaller increments. See ↑6.2.1, Page 1: Voice Settings / Engine for more on this. Note: this technique requires that you choose either AHD or ADSR as the Amplitude Envelope in the Sampler's Parameter pages (see ↑14.5.4, Selecting and Editing Zones in the Map View).

17.3.3 Load Long Audio Files and Play with the Start Point

You can adjust the start point of a Sample in the Sampler's Parameter pages (see ↑6.2.1, Page 1: Voice Settings / Engine). If you load a long audio file, you can create interesting variations by tweaking (…or modulating) the start point.

18 Glossary

In this glossary you will find short definitions for numerous terms used in the MASCHINE context. If you have any doubts about the meaning of a word, this is the place to check!

Arranger

The Arranger is the big area located in the upper part of the MASCHINE window, right under the Header, when the MASCHINE software is in Mix view (default view). On its left you can select Groups. The Arranger allows you to combine Clips (references to Patterns) into Scenes, and arrange these Scenes into a song. You can adjust the Perform Grid resolution in order to adjust transitions between Scenes, as well as the Loop Range in order to loop various parts of your arrangement.

Autoload

When Autoload is enabled, any Group, Sound, Plug-in preset (instrument or effect), or Sample that you select in the Browser is instantly loaded into the selected Group, Sound slot or Plug-in slot. This way, you can listen to this object in the current context of your Project.

Automation

Automation means the control of MASCHINE parameters from an external source (MIDI or host). You can automate most continuous parameters of both Plug-ins and Channel properties in Sounds, Groups, and the Master.

Control Lane

The Control Lane is located at the bottom of the Pattern Editor in the MASCHINE window. Firstly, the Control Lane contains a Modulation pane showing the modulation recorded for any parameter. The Modulation pane contains a modulation track for each modulated parameter. Each modulation track contains a series of modulation points. You can add, remove, or manipulate existing modulation points as well as add new parameters to modulate. Secondly, the Control Lane contains a MIDI pane allowing you to create MIDI tracks for the desired Sounds: These MIDI tracks will send MIDI data to the outside world — both in real-time and when exporting the Pattern as MIDI file.

BPM

BPM stands for “beats per minute.” It is the most common unit to measure the tempo in a musical context.

Browser

The Browser is the front end for accessing all MASCHINE files: Projects, Groups, Sounds, presets for Instrument and Effect Plug-ins, and Samples. Each of these can be stored, tagged, and categorized in a way that allows you easy access to all of them. MASCHINE’s factory library is already completely tagged, as well as factory libraries of any Native Instruments products installed on your computer. You can also import your own files to the Library and tag them as well.

Bussing point

A bussing point is a point in the signal flow that can accept signals coming from various locations in the audio routing system. In MASCHINE for example, the first Plug-in slot of a Sound usually contains a sound source (which you will hear by pressing the corresponding pad on your controller). If you load an effect Plug-in in this first Plug-in slot, though, the Sound won’t generate audio itself but instead it becomes available for other Sounds and Groups to process their audio. You then only have to set up the desired Sound(s) and Group(s) of your Project to send some of their audio to this bussing point. This basically is the way to set up send effects in MASCHINE!

Channel Properties

Channel properties are sets of parameters available for each channel (i.e. each Sound, each Group, and the Master) that are independent of the Plug-ins loaded in that Sound/Group/Master. Channel properties are grouped into four sets: Input properties, Output properties, Groove properties, and Macro properties. Like the Plug-in parameters, in the software the parameters of the Channel properties are displayed via Parameter pages in the Control area. For example, the volume, pan or swing controls are found in the Channel properties of their respective Sound/Group/Master.

Choke Groups

Choke group allows you establish links between pads so that triggering the Sound of a pad automatically mutes other Sounds in that Choke group. You can have up to eight Choke groups in each Group. In a Choke group, each pad can be set as Master or Slave: Pressing a Master pad will trigger its own Sound and mute all other Sounds in the Choke group, while pressing a Slave pad will only trigger its own Sound.

Clip

Clips are found in the Arranger in form of colored blocks. Clips are the building blocks for Scenes. A Clip is a reference to a particular Pattern of a Group. In one Scene you can create one Clip for each Group — in other terms, in each Scene you can play one Pattern of each Group. You can create several Clips referencing the same Pattern in different Scenes. When you modify your Pattern in the Pattern Editor, all Clips referencing this Pattern in the Arranger will get updated accordingly.

Control Area

The Control area is located in the middle of the MASCHINE window in Arrange view, between the Arranger (above) and the Pattern Editor (below). This area allows you to adjust all the parameters (in Channel properties and Plug-ins) of the focused Sound/Group or the Master: routing, effects, plug-ins, mixing, Macro Controls, etc.

Control Mode

Control mode is the default mode of your controller. In this mode, you can play or record your actions on the pads in real-time. Control mode also allows you to adjust any parameter of any Sound, Group or the Master.

Effect

An effect modifies the audio material it receives. MASCHINE already includes many different effects. You may also use VST/AU plug-in effects by Native Instruments or any third-party manufacturer. Effects can be loaded as Plug-ins in any Plug-in slot of the Sound, Group, and Master levels. MASCHINE's flexible routing allows you not only to apply insert effects but also to create send effects, multi-effects, and side-chains.

Event

Events are the individual drum hits or notes that make up a Pattern. In the Pattern Editor, events are visually represented by rectangles in the Event area. Depending on the current view in the Pattern Editor, you can see events for all Sounds slots (Group view) or for the focused Sound slot only (Keyboard view).

Groove Properties

The Groove properties control the rhythmic relationship between events for the selected Group/Sound or the Master. By shifting some of the events, you can e.g. give a shuffling, ternary touch to your Patterns.

Group

A Group contains 16 Sound slots. In addition to the effects applied to individual Sounds, a Group can have its own insert effect loaded in its Plug-in slots. These affect all the Sounds in the Group. A Group can also contain any number of Patterns (grouped into banks of 16 Patterns each).

Group View

Group view is the view of the Pattern Editor that shows events for all 16 Sound slots of the selected Group. In Group view each row of the Event area represents a different Sound slot. This mode is well suited for rhythmic instruments (e.g., a drum kit). The Group view of the Pattern Editor and the Group mode of the pads on your controller are bound together: If you enable Group view in the Pattern Editor, the pads of your controller automatically switch to Group mode, and inversely.

Insert Effect

An insert effect is an effect directly inserted in the signal path of the audio to be processed.

Instance

You can run several instances of the MASCHINE plug-in simultaneously in your host environment — the only limit being the resources of your computer! At any time you can switch the focus of your hardware controller between the plug-in instances. You can even use different controllers (e.g., a MASCHINE MK2 controller and a MASCHINE MIKRO MK2 controller) to control different plug-in instances.

Header

The Header is the topmost row of controls in the MASCHINE software window. Always visible, the Header contains global settings, such as the Master Volume slider, the Transport controls, controls for global swing, tempo, time signature, etc.

Keyboard View

Keyboard view is the view of the Pattern Editor that shows events for the focused Sound only. The Keyboard view provides a vertical on-screen keyboard that indicates the pitch of each event (one row per semi-tone). This mode is well suited for melodic instruments (e.g., synthesizer). The Keyboard view of the Pattern Editor and the Keyboard mode of the pads on your controller are bound together: If you enable Keyboard view in the Pattern Editor, the pads of your controller automatically switch to Keyboard mode, and inversely.

Latency

The term latency refers to the period of time a computer (or any digital device) needs to process an audio signal. It is usually measured in milliseconds. If the latency is too high, it can be disturbing during music recording and playback. This applies for example if you record a software instrument via a MIDI controller keyboard and the latency is so high that there is an audible delay between hitting a key and the playback of the audio signal through the speakers. Thus, the latency should be set as low as possible to avoid audible delays. However, if the latency is set too low, distortion, crackles and dropouts may occur because the computer cannot process the audio material quickly enough. If this is the case, gradually increase the latency until the playback is clean.

Library

MASCHINE includes a huge factory library of Samples, Sounds, Plug-in presets, Groups, and Projects. Of course, you can further extend it with your own files.

Link Groups

Link groups allow you to establish links between pads so that the Sound of a pad can be also triggered by pressing another pad. You can have up to eight Link groups in each Group. In a Link group, each pad can be set as Master or Slave: In addition to its own Sound, a Master pad will trigger the Sounds of all pads in the Link group, while a Slave pad will only trigger its own Sound.

Macro Control

Each Sound, each Group as well as the Master provides Macro Controls to which you can assign any of its parameters (of any parameters of any Sound or Group within it). This way, in any Sound, any Group or the Master you can define your custom set of parameters for quick access!

Master

The Master is where all audio signals from each of the Groups and Sounds come together and get mixed. The Master channel can also have any number of insert effects loaded in its Plug-in slots. These effects are applied to all Groups and the Sounds within them.

Modulation

Modulation allows you to record changes of parameter values from within MASCHINE so that you don't need to actuate these parameters in real-time. You can modulate parameters of Plug-ins and Channel properties in Sounds and Groups. The modulation of a parameter is displayed as a modulation track in the Modulation pane of the Control Lane, at the bottom of the Pattern Editor. Additionally, modulation of continuous parameters is indicated on the ring around their knob in the Control area.

Mute and Solo

Muting allows you to bypass a Sound or a Group, whereas Soloing is pretty much the opposite: It mutes all other Sounds or Groups so that only the soloed Sound or Group is played. The combination of muting and soloing is a useful means both to play live and to test different sequences together.

Pad Mode

Your controller offers various pad modes that allow you to play your Sounds from the pads in different ways: Depending on the selected pad mode, you can either assign one Sound to all 16 pads (Keyboard mode and 16 Velocities mode) or trigger each Sound with a distinct pad (Group mode and Fixed Velocity mode). The Keyboard mode on your controller and the Keyboard view in the software's Pattern Editor are bound together: If you enter Keyboard mode on the controller, Keyboard view gets automatically enabled in the software, and inversely.

Parameter Pages

The Parameter pages constitute the biggest part of the Control area in the MASCHINE window. They contain the adjustable parameters for the Plug-ins and Channel properties of the focused Sound/Group or those of the Master.

Pattern

A Pattern is a sequence that plays Sounds from a Group. It belongs to that Group and will be saved together with the Group. In every Scene you can choose for each Group which of its Patterns has to be played.

Pattern Editor

Located at the bottom of the MASCHINE window, the Pattern Editor allows you to select Sound slots (on the left), display and edit your Patterns, change the Step Grid settings and create/edit automation.

Plug-in

Each Sound, each Group, and the Master can hold any number of Plug-ins. Plug-ins can be instruments or effects, and they can be internal (included with MASCHINE), from other Native Instruments products (instruments or effects), or external (third-party VST/AU plug-ins). Instru-

ment and Effect Plug-ins can be loaded in the first Plug-in slot of Sounds. The other Plug-in slots of Sounds, as well as the Plug-in slots of Groups and of the Master can hold Effect Plug-ins only. At each level (Sound, Group, and Master), Plug-ins process the audio in series, according to the order in which they are stacked up.

Plug-in Preset

You can save the current settings of any Plug-in in form of a Plug-in preset for later use. Notably, this will make the Plug-in preset available in the MASCHINE Browser.

Prehear

The Prehear feature allows you to listen to Samples directly from the Browser without loading them into Sound slots first. This way, you can quietly choose a Sample before modifying anything in your Project.

Project

A Project contains all data needed for a song: all Groups, Patterns, Sounds, Samples, Scenes and all settings, modulation, effects, routings, etc. It's like a snapshot of the entire state of MASCHINE.

Quantization

To quantize a Pattern is to make its events snap to a set of equally distributed locations known as steps. This ensures that these events are on beat. You can also let MASCHINE automatically quantize events that you record live. Quantization makes it easier to get a rhythm going, but too much use can make the Pattern seem stiff or lifeless.

Sample

A Sample is any piece of audio that can be used e.g. to build a drum kit or a melodic instrument, or as a distinct loop in your song. You can load one or several Samples into Sound slots.

Sample Editor

The Sample Editor can be displayed in place of the Pattern Editor in the MASCHINE software. The Sample Editor is the all-in-one editor for Samples. It notably allows you to record Samples, edit them, split them into slices and map them across notes and velocities on your keyboard. Its equivalent on your controller is the Sampling mode.

Sample Rate

The sample rate of an audio signal is the number of samples stored in the audio signal per time unit (typically per second). Any digital audio signal is made up of a discrete series of values called "samples." Taken as a whole, these samples are a digital representation of the original sonic wave. The number of samples contained in one second of audio signal defines the "sample rate" of the signal. Note: In this context the term "sample" has nothing to do with the MASCHINE file type referred to as "Sample" available in the Browser, loaded in the Sampler Plug-in, and manipulated in the Sample Editor!

Scene

A Scene is a combination of Clips for your different Groups. Each Clip references a specific Pattern of a Group. In a Scene you can create one Clip for each Group. Scenes are located in the Arranger. They can be used to build up a finished arrangement or to trigger different parts of a song during a live performance.

Send Effect

A send effect is an effect available for audio signals located in other Sounds and/or Groups. These audio signals can be routed to a variable extent to the send effect for the effect to process them. Send effects notably allow you to reuse the same effect on different Sounds and/or Groups, thereby limiting the overall CPU load.

Sequencer

Generally speaking, a sequencer is a hardware unit or software tool that arranges musical sequences, e.g. drum patterns or chord progressions. Hardware sequencers typically function as a set of steps, where every step can be filled with musical content. The steps are then played

back as a musical sequence. MASCHINE has its own sequencing abilities: you can record and play single Patterns as well as arrange Patterns into Scenes and Scenes into full songs. MASCHINE also provides a step sequencer to create and edit your Patterns.

Slice

A Slice is a piece of Sample ready to be exported to a particular note or Sound. The Sample Editor in the MASCHINE software and its equivalent the Sampling mode on your controller allow you to cut any Sample or loop into a customizable set of Slices and to export these Slices to individual notes or Sounds. This will allow you to play the Slices individually with the pads, create new Patterns with them, etc.

Sound

Sounds are the building blocks of all sound content in MASCHINE. A Sound is made up of any number of Plug-ins. Each Sound of the selected Group is mapped to one of the 16 pads on the hardware controller, so you can play the Sounds by pressing the pads.

Step

Steps are elementary time blocks. They are notably used to apply quantization or to compose Patterns from your controller in Step mode. All steps together make up the Step Grid. In the software's Pattern Editor, steps are visualized by vertical lines. You can adjust the step size (i.e. the Step Grid resolution), e.g., to apply different quantization to different events or to divide the Event area into finer divisions to edit your Pattern more precisely.

Step Grid

The Step Grid is a set of parallel lines that divide the Event area into steps. By changing the resolution of the Step Grid (i.e. the step size), you can adjust the note values at which you can quantize your Pattern and the number of steps available in Step mode on your controller.

Step Mode

In Step mode, your controller can be used as a traditional step sequencer, where each of the 16 pads represent a step of the Step Grid. Just as on classical drum machines, a light representing the sequence runs from pad 1 up to pad 16, highlighting each step during playback. Select a Sound and put events at chosen steps in the sequence by pressing the corresponding pads. By repeating the process Sound by Sound you can build up the whole Pattern.

Swing

The Swing allows you to shift some of the events in your Pattern to create a shuffling effect. It is located in the Groove properties.

Solo

See Mute and Solo.

Tempo

The tempo of a Project (or song, track…) is the speed at which the song is played. The tempo is usually measured in beats per minute (BPM).

Time Signature

The time signature of a Project (or song) defines both the Project's time unit (e.g., the quarter note) and the Project's bar length measured in that unit (e.g., four quarter notes). The time signature is written in form of a fraction: for example, a time signature of 3/8 will mean that the Project's time unit is the eighth note, and the Project's bars are three eighth note long.

VST/AU Preset

You can use VST/AU plug-ins in MASCHINE (both instruments and effects, by Native Instruments or any third-party manufacturer) by loading them as Plug-ins into the Plug-in slots of the Sound, Group, and Master level. You might already have collections of presets (or patches, programs, etc.) for your favorite VST/AU plug-ins. You can not only load these VST/AU presets in MASCHINE but also save them as Plug-in presets: This will make them appear directly in the MASCHINE Browser and take advantage of all Browser's features.

Zone

A Zone defines the key range (note interval) and the velocity range in which a Sample will be triggered. Each Sample of a Sound has its own Zone, i.e. its own key range and velocity range. In the Zone page of the Sample Editor, Zones are represented by rectangles. You can build up complex sets of Zones to make your Sound react differently according to the pitch and velocity of the played notes.

The set of all Zones in a Sound is the Sample Map: It is the “map” of all Samples included in the Sound along with the individual key ranges and velocity ranges at which these Samples are triggered.

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