



# GROOVE AGENT<sub>5</sub>

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# Installation and Setup

Before you can use Groove Agent, you must install the program and the required content and set up your system.

## Conventions

In our documentation, we use typographical and markup elements to structure information.

## Typographical Elements

The following typographical elements mark the following purposes.

### Prerequisite

Requires you to complete an action or to fulfill a condition before starting a procedure.

### Procedure

Lists the steps that you must take to achieve a specific result.

### Important

Informs you about issues that might affect the system, the connected hardware, or that might bring a risk of data loss.

### Note

Informs you about issues that you should consider.

### Example

Provides you with an example.

### Result

Shows the result of the procedure.

### After Completing This Task

Informs you about actions or tasks that you can perform after completing the procedure.

### Related Links

Lists related topics that you can find in this documentation.

## Markup

Bold text indicates the name of a menu, option, function, dialog, window, etc.

---

### EXAMPLE

In the header of the plug-in panel, click the **Preset Management** button next to the preset name field and select **Load Preset**.

---

If bold text is separated by a greater-than symbol, this indicates a sequence of different menus to open.

## Key Commands

Many of the default key commands, also known as keyboard shortcuts, use modifier keys, some of which are different depending on the operating system.

Many of the default key commands use modifier keys, some of which are different depending on the operating system. When key commands with modifier keys are described in this manual, they are indicated with the Windows modifier key first, followed by the macOS modifier key and the key.

---

EXAMPLE

**Ctrl/Cmd-Z** means: press **Ctrl** on Windows or **Cmd** on macOS, then press **Z**.

---

## Installing the Program

After downloading the required files, you can install Groove Agent on your computer.

For detailed installation instructions, see <https://www.steinberg.net/how-to-install-groove-agent-5>.

## Activating Your License

Groove Agent uses a software-based copy protection scheme. This Soft-eLicenser is installed automatically with Groove Agent. It can be accessed via the eLicenser Control Center application that is installed automatically with the product.

After installation, you must activate your product.

If you purchased Groove Agent in a shop, the product package contains a “Download Access Code” that allows you to download both the software and the license of the product.

If you purchased the download version of Groove Agent, you receive an e-mail with the activation code and a description of the activation process.

## How You Can Reach Us

Click the Steinberg logo in the top right corner of the control panel to open a pop-up menu containing items for getting additional information and help.

- This menu contains links to various Steinberg web pages. Select a link to open the corresponding page. On the web pages, you can find support and compatibility information, answers to frequently asked questions, links for downloading new drivers, etc.

## About the Documentation

The documentation is available online and can be downloaded in PDF format from [steinberg.help](http://steinberg.help)

- To visit [steinberg.help](http://steinberg.help), enter [steinberg.help](http://steinberg.help) in the address bar of your web browser or open Groove Agent, click the Steinberg logo in the top right corner and select **Help > Groove Agent Help**.

## Setting Up

The following sections describe how to use Groove Agent as a plug-in in different host applications.

### NOTE

Groove Agent can also be used as a standalone application.

---

## Selecting Outputs

Groove Agent loads with a stereo output configuration by default. However, you can use up to 32 stereo outputs in the Steinberg DAW. This allows you to route all kit slots to a dedicated channel in the **MixConsole**.

### PROCEDURE

1. To make the outputs available in the VST instrument, open the **VST Instruments** window.
  2. Click the **Activate Outputs** button for the instrument.
  3. Activate the outputs that you want to use.
- 

### RESULT

The Steinberg DAW automatically adds an output channel for each additional output to the **MixConsole**.

## Using the Instrument in an AU-Compatible Application

The AU version of Groove Agent is installed in your AU plug-ins folder and lets Groove Agent work in an AU environment without any performance loss or incompatibilities.

For example, to load Groove Agent as an AU instrument for Logic Pro, proceed as follows:

### PROCEDURE

1. Open the Track Mixer and select the instrument channel that you want to use.
  2. Click in the **I/O** field and select **AU Instruments > Steinberg > Groove Agent**.
  3. Select one of the available channel configurations.
- 

## Using the Instrument in an AAX-Compatible Application

The AAX version of Groove Agent is installed in your AAX plug-ins folder and makes Groove Agent available as AAX instrument in ProTools.

### PROCEDURE

1. To use Groove Agent as stereo multichannel plug-in, open the **Track** menu, and select **New > Stereo > Instrument Track**.
  2. On the instrument track, click **Inserts** and select Groove Agent from the **multichannel plug-in > Instrument** submenus.
- 

## Using the Instrument as Standalone Application

Groove Agent can be used as a standalone application, independently of any host application. In this case, you can connect the instrument directly to your audio hardware.

RELATED LINKS

[Using the Standalone Version of the Plug-In on page 198](#)

# Common Editing Methods

## Dials and Sliders

Dials and sliders can be unidirectional or bidirectional. Unidirectional values, for example level values, start at a minimum value and go up to the maximum. Bidirectional controls start from the middle position and go to the left for negative and to the right for positive values.

Most of the editing methods are the same for dials and sliders.

- To adjust a value, click a dial or a slider and drag up and down, or use the mouse wheel. If you press **Alt** when clicking a dial, a small slider appears, allowing you to set the parameter.
- To make fine adjustments, press **Shift** and move the dial or use the mouse wheel.
- To restore the default value for a parameter, press **Ctrl/Cmd** and click on the control.

## Multi Selection and Parameter Controls

To edit multiple pad parameters at the same time, select the pads that you want to edit.

If several pads are selected and they are not set to the exact same values, most of the controls indicate this by turning red. This is true for dials, on/off buttons, combo boxes, value fields, and text faders.

### NOTE

More complex controls, such as the envelope editors, only show the values of the focused pad.

### Adjusting Value Ranges

You can adjust the value range of a parameter using the corona of the encoder. The values for the pads are distributed within the new range, keeping their relative distances.

- To compress or expand the value range, drag the corona.
- To adjust the upper limit of the range, hold down **Ctrl/Cmd** and drag the corona.
- To adjust the lower limit of the range, hold down **Alt** and drag the corona.

## Buttons

### On/Off Buttons

These buttons have two states: on and off. If you move the mouse over an **On/Off** button, it changes its appearance to show that you can click it.



## Push Buttons

Push buttons trigger an action and then go back to their inactive state. These buttons open menus or file dialogs.

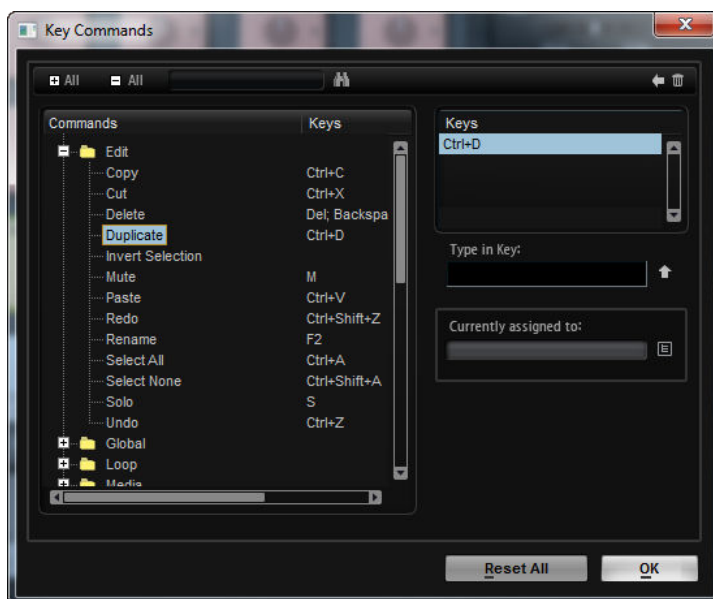
## Value Fields

To set a value, you have the following possibilities:

- Double-click in a value field, enter a new value, and press **Enter**.  
If the entered value exceeds the parameter range, it is automatically set to the maximum or the minimum value, respectively.
- Click in the value field and drag up or down.
- Position the mouse over a value field and use the mouse wheel.
- Click the up/down triangles next to the field.
- To set the parameter to its default value, **Ctrl/Cmd**-click the value field.
- To use a fader to adjust the value, **Alt**-click a value field.
- To enter musical values, such as key ranges or the root key, with your MIDI keyboard, double-click the value field, press a key on your MIDI keyboard, and press **Return**.
- To navigate to the next parameter, press **Tab**. To jump backwards to the previous parameter, press **Shift-Tab**.

If no parameter is selected inside the focused view, pressing **Tab** always jumps to the first parameter.



## Using Key Commands



- To open the **Key Commands** dialog, open the **Options** page and click the **Key Commands** button.

The commands are arranged in a hierarchical folder structure on the left. When you open a category folder, the items and functions are displayed with any currently assigned key commands.

- To set up a key command, select the function in the list, enter the key command in the **Type in Key** field and click the **Assign** button to the right of the field. If this key command is already used for another function, this is displayed in the field below.

- To delete a key command, select the function in the list, select the key command in the **Keys** list and click the **Delete**  button.
- To search for a specific function, enter its name in the search field at the top of the dialog and click the **Start/Continue Search**  button.

#### NOTE

You can set up several key commands for the same function.

---

## Presets

Groove Agent offers two types of presets: section/module presets and VST presets. Section and module presets store and recall the setup of a specific component on the Groove Agent panel. VST presets contain all information necessary to restore the complete state of the plug-in.

During setup, the factory presets are installed in a dedicated folder and a user folder is created for your own presets. The handling of presets is the same throughout the program.

#### NOTE

Factory presets are write-protected, but may be overwritten when a software update is executed. Presets in your user folder are never changed by the software update.

---

## Handling Section and Module Presets


The preset controls can be found throughout the program. The handling is always the same.

- To save a preset, click **Save** .

#### NOTE

You cannot overwrite factory presets. If you want to save changes made to a factory preset, save the preset under a new name or in a new location.

---

- To load a preset, click the arrow icon and select a preset from the list.
- To delete a preset, click **Delete** .

#### NOTE

Factory presets cannot be deleted.

---

## Handling VST Presets

### Loading VST Presets

#### PROCEDURE

1. In the header of the plug-in panel, click the **Preset Management** button next to the preset name field and select **Load Preset**.
  2. Do one of the following:
    - Select a preset to load it.
    - Double-click a preset to load it and close the preset loader.
-

## Saving VST Presets

---

### PROCEDURE

- In the header of the plug-in panel, click the **Preset Management** button next to the preset name field and select **Save Preset**.
-

# Getting Started

These sections help you to get started with Groove Agent and introduce program functions and settings.

## Window Overview

The Groove Agent window is divided into several sections.



- 1 In the standalone version of Groove Agent, you find a number of additional functions in an extra section at the top of the application window.
- 2 If you use the plug-in in a host application, you find the plug-in functions section at the top of the window.
- 3 Below the plug in-functions section on the left, the kit slot is located.
- 4 On the right of the kit slot, you find the kit rack.
- 5 The edit display on the right contains the **Edit**, **Mixer**, **Perform**, and **Options** pages.
- 6 With the two buttons at the top right of the edit display, you can expand the window to show a keyboard at the bottom, and/or the **Load** panel at the right.
- 7 On the left of the edit display, you can find the pad section.

### RELATED LINKS

[Kit Slot](#) on page 33

[Kit Rack](#) on page 34

[Using the Standalone Version of the Plug-In](#) on page 198

## Agents, Kits, Presets, and Content Files

Groove Agent comes with a variety of content that can be loaded and edited. At the top of the hierarchy, you can load kits or multis. Further down the hierarchy, you can load and edit MIDI patterns, styles, drum samples, etc.

### Agents

Groove Agent combines the creative power of different rhythm modules: Acoustic Agent, Beat Agent, and Percussion Agent.


Each of these modules offers its own approach to drums and rhythms, with special ways of creating your own inspiring beats in a huge range of styles.

The creative potential of each agent can be combined with any of the others. Four slots allow you to mix and match your ideal rhythm section or create ultra-modern hybrid beats, for example.


### Kits

Kits are loaded to play the sounds in Groove Agent. They contain all information that is required to produce the sound of the selected drum kit, that is, about the sliced loop and the MIDI phrase that is needed to play back the loop, about the used MIDI patterns or styles, and about the insert effects that are used on the mixer channel.

You can save and load kits via the kit rack or the kit slot section.

Furthermore, kits contain information on the agent that the kit uses. In the **Load** dialog and on the **Kits** tab in the **Load** panel, kits are identified by the kit preset icon .

### VST Presets

VST presets contain all Groove Agent settings, that is, all information necessary to restore the complete state of the plug-in. This includes all 4 kits, the MIDI patterns or styles, as well as any insert and AUX effects. All of these settings are also saved with the project in your host application. You can load VST presets via the pop-up menus in the plug-in header and in the plug-in functions section. In the **Load** dialog, these presets are identified by the VST preset icon .

### Content Files and Folder Structure

Groove Agent comes with a large number of ready-to-use sound content files, containing kits, patterns, styles, and presets. Factory kits are write-protected. You can edit those files while they are loaded, but you cannot overwrite them.

To save your modifications to a factory kit, save the file under a new name. The file gets the file name extension `.vstpreset` and is saved with your user content. User content can be searched and categorized in the same way as factory content. User content is saved in a predefined folder structure on your hard disk. You can create subfolders within this structure to facilitate moving or exchanging content.

### MIDI Patterns

MIDI patterns contain information on notes and drum sounds and the rhythm in which they are played.

### Styles

Styles are complex structures of multiple patterns suited to create different parts of the drum tracks, for example, main pattern, fill, ending, and intro.

You can manage your user MIDI patterns and styles, for example by adding new subfolders to the folder structure, by moving or removing MIDI files, etc. To access the folder where the user

MIDI patterns or styles are saved, right-click the pattern or style, either in the **Load** panel or the **Load** dialog and select **Show in Explorer/Finder**. In this location, you can add, remove and rename files and create subfolders to organize your MIDI patterns.

## Groove Agent ONE Content

Groove Agent can load Groove Agent ONE presets. The presets can either be loaded as kits in the kit rack or the kit slot section or as plug-in presets via the preset management menu in the plug-in header.

If you load a Groove Agent ONE preset as a plug-in preset, the global plug-in parameters are set to the default values.

If you load a preset as a kit, the global plug-in parameters remain unchanged.

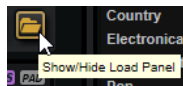
## Loading a Kit

To be able to hear a sound, you need to load a kit into Groove Agent.

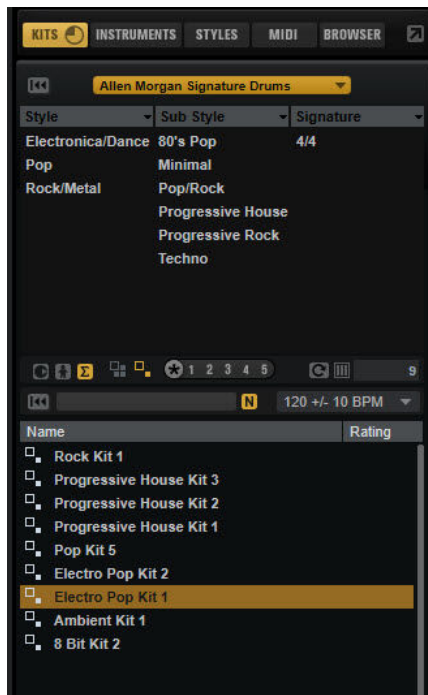
---

### PROCEDURE

1. Select a kit slot in the kit rack.
2. Open the **Load** panel and select the **Kits** tab.



3. On the **Select Content Set** pop-up menu at the top of the page, select a content set.



4. In the attribute columns, specify the sound that you want to use, by selecting a musical style, sub style, etc.
  5. In the results list, select a kit and double-click it or drag it onto the kit slot.
- 

### RELATED LINKS

[Managing and Loading Files](#) on page 36

## Pattern and Instrument Pads

In Groove Agent, you can edit both the sounds and the patterns that are used by your drum tracks. Instrument sounds can be accessed via the instrument pads. The pattern or style that is played can be edited via the pattern pads.

- To switch between the instrument pads and the pattern pads, click the corresponding button above the pads.



### Instrument Pads

If the instrument pads are shown, the pads trigger the instrument samples and you can edit the sound of the instruments. These instruments are then used by the pattern pads to play the selected MIDI pattern or style.

### Pattern Pads

If the pattern pads are shown, the pads trigger the selected MIDI pattern or style.

- **MIDI patterns** contain information on notes and drum sounds and the rhythm in which they are played.
- **Styles** are complex structures of multiple patterns suited to create different sections of the drum tracks, such as, fills, endings, and intros.

## Browsing for MIDI Patterns and Styles

The **Load** panel allows you to browse for patterns and styles and assign them to the pattern pads.

### PREREQUISITE

**Show Pattern Pads** is activated on the left.

---

### PROCEDURE

1. Depending on the file type that you want to load, select the **Styles** or **MIDI** page.
2. On the **Select Content Set** menu, select the content set from which you want to load a file. To browse the entire content, select **All**.
3. Optional: In the upper section of the page, click on an attribute to display only those files containing the attribute, for example, percussion, or a specific musical style, etc. You can activate several attribute filters simultaneously.
4. If you are looking for a specific file, enter its name in the text search field on the toolbar. You can also enter text that is part of the file name or the file attributes in the search field.
5. Use the transport controls below the results list to prelisten the results.
6. Step through the files in the results list and listen to them until you found the file that you want to use.
7. Drag the file onto a pad.
8. Repeat the above steps to assigning more files to other pads.

---

### RELATED LINKS

[Prelistening Patterns and Styles](#) on page 41


[Prelisten Section for MIDI Patterns and Styles](#) on page 40

## Playing back Pattern Pads

You can play back pattern pads using the **MIDI Player** or the **Style Player**. The MIDI player allows you to play and modify one pattern. The style player offers a variety of patterns, suited to create the different sections of your drum tracks.

---

### PROCEDURE

1. Load an Acoustic Agent kit.
  2. Open the **Pattern** page and click on an empty pattern pad.  
If a pattern pad is empty, it also plays the instrument sound.
  3. To activate the pattern pad and make it play the pattern, open the **Edit** page in the right section of the plug-in panel and click **Pad On/Off** in the top right so that it lights up.
  4. Click the **Use Style** button to activate the style player, and select a style from the **Select Style** pop-up menu.
  5. Adjust the tempo in the DAW to match the tempo of the style.  
The original tempo of the style is indicated by the second number in the file name of the style and in the value field to the right of the **Select Style** pop-up menu.
- 
6. Click the **Play** button in the transport section to play back the style.
  7. Try out different **Quantize** and **Swing** settings, move the **Complexity** slider, select a main pattern, a fill, an ending, etc., and listen to the results.
  8. Keep the settings as they are and select different styles on the **Pattern Library** pop-up menu in the **Pattern** section to compare the sound and to find the style that you want to use.
- 

## Converting Styles to MIDI Patterns

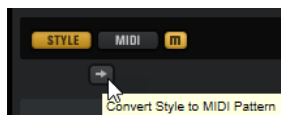
If you have found an acoustic or a percussion style that you want to use on your pad, but want to edit it further in the **Pattern** editor, you must convert it to a MIDI pattern first.

### PREREQUISITE

- In the pad section on the left, the pad that contains the style is active.
  - You have set up the style on the **Agent** page so that it plays the way you want it.
- 

### PROCEDURE

- Click **Convert Style to MIDI Pattern** on the **Agent** page to convert the current style into a MIDI pattern.



### NOTE

The conversion takes into account all the settings in the **Performance** section, with one exception: If you convert a percussion style, **Random Complexity** is not taken into account.

If you convert an acoustic style, only the active part of the style, that is, the selected main, fill, intro, or ending is converted.

---



#### RESULT

The style is converted and the Agent page automatically switches to the MIDI player. The **Pattern** editor becomes available, allowing you to modify the pattern.

#### NOTE

Once a style is converted to a MIDI pattern, it can no longer be opened in the style player.

---

## Modifying MIDI Patterns in the Pattern Editor

In the **Pattern** editor, you can modify patterns by adding or deleting notes, by replacing a drum sound with another, etc.

---

#### PROCEDURE

1. Click the **Pattern** tab in the edit display to open the **Pattern** editor.
  2. Edit the pattern. You can for example insert new notes for an existing or for a new drum sound, delete notes or move notes.
- 

#### RELATED LINKS

[Entering, Editing, and Previewing Notes](#) on page 85

## Creating the Different Sections of a Drum Track

To create the different sections of your drum track, for example, an intro, a fill, a main part, and an ending, it is useful to start by copying the current style to other pads. And then, to modify the style for those pads.

#### PREREQUISITE

You have set up a pattern pad to play back a style.

---

#### PROCEDURE

1. To copy the settings of the current pad to another pad, hold down **Alt** and drag the pad onto another pad.
2. Repeat this until you have four pads with the same settings.
3. Select the second pad. Set the dial to a fill.  
You can choose between eight fills.
4. Set up the fill to your liking. For example, change the complexity, activate half-time, try out different intensity settings, etc.
5. When you are done, right-click the pattern pad, select **Rename Pad** from the context menu, and enter a name for the pad, for example **Fill**.
6. Set up the pads for intro and ending in the same way.



#### AFTER COMPLETING THIS TASK

You can now record trigger notes for the pads in the DAW or transfer the patterns to the DAW by dragging them into a project.

#### RELATED LINKS

[Pattern Editor](#) on page 81

[Converting Styles to MIDI Patterns](#) on page 16

[Dragging Patterns into a Project](#) on page 18

[Recording Trigger Notes for Your Patterns](#) on page 18

## Recording Trigger Notes for Your Patterns

When you use Groove Agent in a DAW project, you can record trigger notes at the positions where you want to trigger the patterns. This allows you to create the drums for your project on the fly, in the project context.

#### PREREQUISITE

You have created a project in your DAW to which you want to add a drum track.

You have added a MIDI track that is assigned to Groove Agent.

---

#### PROCEDURE

1. In Groove Agent, set up the MIDI patterns or styles for your drum track.
2. In the DAW, record-enable the MIDI track and start playback of your project.
3. Record the trigger notes at the positions in the project where you want to hear the drums.

---

#### RESULT

When you now play back the project, the trigger notes trigger the pattern playback. You can automate parameters like **Complexity** and **Intensity** from within the DAW. Any changes that you make to a pattern in Groove Agent are automatically reflected in all occurrences of this pattern in the project.

## Dragging Patterns into a Project

You can drag patterns from Groove Agent into your DAW project and edit them there.

#### PREREQUISITE

You have created a project in your DAW to which you want to add a drum track.

You have added a MIDI track that is assigned to Groove Agent.

Before you drag your patterns into a project, check whether the pattern pads are mapped to the same keys as the instrument pads. If this is the case, the trigger notes of the pattern pads interfere with the notes that are part of your pattern pads. To prevent this, you can either set up a different MIDI port or a different MIDI channel for the pattern pads.

---

#### PROCEDURE

1. In Groove Agent, set up the MIDI patterns or styles for your drum track.
  2. Select the pad that plays the pattern that you want to use and drag it onto the MIDI track at the position where you want to insert it.
  3. In the same way, drag the other pads into the project until you have assembled your drum track.
-

#### RESULT

The patterns are inserted as MIDI parts on the track. When you play back the project, the drum parts are played back as well.

#### RELATED LINKS

[Using Different MIDI Channels/Ports for Instrument Pads and Pattern Pads](#) on page 52

[Editing Patterns in the DAW](#) on page 19

## Editing Patterns in the DAW

When you have created MIDI parts from your Groove Agent patterns, you can further edit the parts in the DAW.

#### PREREQUISITE

You have assigned a MIDI track in your DAW to Groove Agent.

You have dragged your patterns to this track.

---

#### PROCEDURE

1. In the **Inspector** of your Steinberg DAW, open the **Drum Map** pop-up menu for the track and select **Create Drum Map from Instrument**.  
This creates a drum map based on the information about the used drum sounds in Groove Agent.
  2. Open the part in the **Drum Editor**.  
The editor displays the correct drum names in the drum names list on the left. In the event display on the right, the MIDI notes are shown.
  3. Set up the pattern by deleting or entering notes, by copying or moving notes, etc.  
For information about how to edit notes and controllers in the **Drum Editor**, refer to the **Operation Manual** for your Steinberg DAW.
-

## Working with Multiple Agents

Using multiple agents allows you to add drums of different styles to your drum track, for example, to add percussion to your acoustic drums.



When working with multiple agents, the **Overview** page shows you exactly which kit contains which patterns, to which pads the patterns are mapped, and which patterns are played simultaneously. The four columns correspond to the four kits in the kit rack. The 16 slots represent the pattern pads of the selected pattern group.

## Adding a Second Agent to Complement the First Agent

You can set up the kits for two different agents to play styles that complement each other.

Some of the Percussion Agent styles were created to be used with Acoustic Agent styles. These styles are found in the **Complements** folder of the **Select Style** pop-up menu for the style player in Percussion Agent.

---

### PROCEDURE

1. For the first kit slot in the kit rack, open the **Kits** tab in the **Load** section.
2. Deactivate **Load Kit with Patterns or Styles** and load an Acoustic Agent kit.
3. For the second kit slot, load a Percussion Agent kit, also without patterns.
4. Select a pattern pad from the first kit, open the **Agent** page, activate the pad and select the style player.
5. Select the style **Acid Jazz 01** for the pattern pad.
6. Select the main pattern and adjust the complexity to your liking.
7. Select the second kit, open the **Select Style** pop-up menu, navigate to the **Complements** folder, and select a style from the **Acid Jazz 01** folder.

The instrument sounds for this kit are received on MIDI channel 2.

---

#### RESULT

Now, the pattern pads for Acoustic Agent and Percussion Agent trigger matching styles.

- To listen only to the patterns of one kit, deactivate the patterns of the other kit on the **Overview** page or mute the sounds of the second kit in the corresponding **Agent** mixer.

## Adding a Second Agent to Fatten the Sound


You can fatten the sound of your current drum kit by adding a kit from another agent that does not contain its own patterns, but that adds to the patterns of the first kit.

#### PREREQUISITE

You have loaded a kit in the first kit slot and set it up to play the way you want it.

---

#### PROCEDURE

1. Select the second kit slot in the kit rack and open the **Kits** tab in the **Load** section.
2. Deactivate **Load Kit with Patterns or Styles** .
3. Load a kit in the second slot.
4. On the **Overview** page, copy the patterns or styles of the first agent to the second agent. This way, the same groove is played by both kits.
5. To accentuate only particular drum sounds, for example, snare or kick drums, make sure that only these drum sounds are used for the pads.  
This way, the unused instrument pads do not play back any samples. Do one of the following:
  - Reset the instrument pads for all drum sounds that you do not want to use.
  - Edit the MIDI patterns for the drum sounds that you want to use, so that it contains only the notes that you want to play.
6. If you use Beat Agent kits, you can load your own drum samples to customize your drum sounds even further.

---

#### RELATED LINKS

[Assigning Samples to Pads](#) on page 92

## Recording the MIDI Output

If the host application supports MIDI output from plug-ins, you can record the MIDI output on a track in your DAW.

The kits in the kit rack are routed to the MIDI output ports Kit 1 to Kit 4.

---

#### PROCEDURE

1. In Groove Agent, load one or more kits with patterns.
  2. In the DAW, create one or more MIDI tracks.
  3. On the **MIDI input** pop-up menu for each track, select one of the four kit outputs.
  4. Record-enable the tracks.
  5. If you have not recorded trigger notes in the DAW, select the patterns that you want to use for the kits on the **Pattern** page and activate **Follow Transport** in the kit slot section.
  6. In the DAW, activate recording.
-

#### RESULT

The MIDI output of the kits is recorded on the tracks for which Groove Agent is selected as MIDI input.

#### NOTE

Under VST2 hosts, the kits send their events only to the first MIDI output port. If you do not want to record all loaded kits, deactivate MIDI output for the kits that you do not want to use in the kit slot section.

#### AFTER COMPLETING THIS TASK

You can now separate the recordings for the kits by dissolving the recorded MIDI part according to MIDI channel. The channel number of the events of a kit corresponds to the MIDI channel that is set in the kit slot section.

## Note Repeat

**Note Repeat** allows you to repeat the notes of a particular drum sound.

In its most basic form, **Note Repeat** plays the current note with its velocity and note length over and over again. Additionally, **Note Repeat** allows you to specify the note length, based on note values or on milliseconds, and to define the velocity of the notes.

Using the phrase player, you can set up a complex series of repeat notes, specify both a velocity and a pitch progression for the notes, and create your own rhythmic patterns.

Each kit comes with its own **Note Repeat** settings. This allows you to simultaneously perform note repeats for different instruments of multiple kits on dedicated MIDI channels.

The **Note Repeat** notes are also sent to the MIDI output of Groove Agent, allowing you to trigger external plug-ins, or to record the notes in your host sequencer. Furthermore, if you are working with Beat Agent, you can use the pitch curve to modulate the pitch of your samples.

## Note Repeat Page

The **Note Repeat** page has two sections. The upper section allows you to create simple note repeats, assign trigger keys, and control the general behavior. The lower section provides the phrase player.

- To open the **Note Repeat** page, open the **Perform** page in the edit display.



#### Active

Activates the **Note Repeat** parameters.

#### Sync

If **Sync** is activated, the repeat notes always start on the next valid note position, depending on the current song position.

If **Sync** is deactivated, the note repeat starts immediately, even if the note is not played on the beat.

### Mono

By default, **Note Repeat** works on all instruments that you trigger simultaneously, which means that if you play two notes, both are repeated.

If **Mono** is activated, only the last note that was played is repeated.

### Trigger Source

Determines whether the keys on the keyboard or MIDI controller messages are used to switch between variations.

- If this parameter is set to **Keys**, you can specify a key, either by clicking in the field below the button and dragging up or down, or by playing the note on your keyboard.

#### NOTE

Trigger notes for variations can only be used for one variation at a time.

- If this parameter is set to **Controllers**, you can specify a controller, either by clicking in the field below the button and selecting a controller from the list, or by using the corresponding hardware control on your MIDI keyboard.

### Low Key/High Key

You can limit the key range that is affected by **Note Repeat** with the **Low Key** and **High Key** parameters.

Notes outside this range are not repeated, they are played back normally. This way, you can use **Note Repeat** to record complex hi-hat patterns in your host sequencer, without repeating an already recorded bass drum or snare from the same kit, for example.

### Velocity Controller

Determines how the output velocities of the repeated notes are generated.

If you use single note repeat notes, the following applies:

- **Constant (127)** triggers the notes with a fixed velocity of 127.
- **Velocity** triggers the notes with the velocity of the note that you play.
- The **MIDI Controller** submenu allows you to select a MIDI controller. The value of this MIDI controller is used as velocity for the triggered notes.
- If **Aftertouch** is selected, the triggered notes get the velocity from the aftertouch controller.
- **Poly Pressure** is similar to **Aftertouch**, but by sending poly pressure messages, you can control the velocity per key.

#### NOTE

**Note Repeat** starts to trigger notes if a poly pressure value greater than 0 is received, even if no MIDI note is triggered.

If you use note repeat phrases, the following applies:

- If **Constant (127)** is selected, the velocity of the trigger note is not taken into account. The output velocity is determined by the velocity specified for the steps.
- If **Velocity**, **MIDI Controller**, **Aftertouch**, or **Poly Pressure** are selected, the velocity progression specified in the phrase is used to modulate the velocity of the trigger note. For example, if a phrase contains 3 steps with the velocity values 127, 64, and 1, and you trigger the phrase using a note with the velocity 127, the output velocity of the 3 steps is 127, 64, and 1. However, if you trigger the phrase with a velocity of 64, the output velocity of the 3 steps is scaled, and you get 64, 32, and 1.

## Fetch

If aftertouch, poly pressure, or a MIDI controller are used to specify the velocity of the notes, the **Fetch** option determines the way that the notes are generated.

- If **Fetch** is activated, the first note that you play defines the initial velocity. As soon as the controller value exceeds this velocity, new notes get their velocity from the controller.
- If **Fetch** is deactivated, notes are directly generated with the current controller value.

If poly pressure is used, notes are only generated for values larger than 0. This means that if you play a note, and the poly pressure has not yet been set to a value larger than 0, no note repeats are generated. If you raise the poly pressure value above 0, note repeats are generated, with a velocity that corresponds to the current poly pressure value.

## Note Repeat Variation Buttons 1–8

You can set up eight different variations for the **Note Repeat** and use these buttons to play the associated repeat notes or phrases.

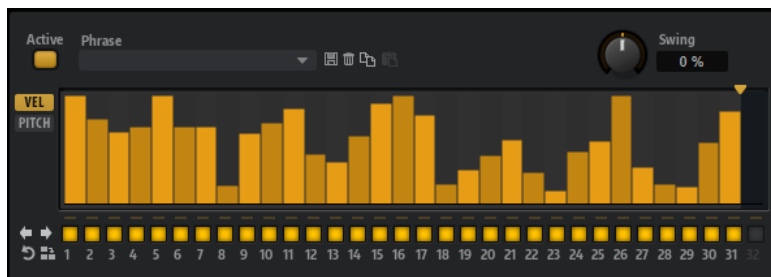
## MIDI Follow

- If **MIDI Follow** is activated and you switch between note repeat variations, the editor also switches to the current settings.
- If **MIDI Follow** is deactivated, the editor always shows the settings for the selected note repeat variation.

## Phrase Player Section

The lower section of the page contains the phrase player.

You can edit the velocity and the pitch controller values for the steps. To display the velocity values, activate **VEL**, and to display the pitch modulation curve, activate **PITCH**.



### Active

Activates/Deactivates the phrase player.

### Phrase

Allows you to select one of the available phrases.

### Preset controls

With the preset controls, you can save a phrase or remove it from the user library, or copy and paste phrases between variations.

### MIDI Controller

If the pitch modulation curve is displayed, this pop-up menu allows you to select the MIDI controller that is used for pitch modulation.

If you want to use the pitch curve to modulate the pitch of your samples, open the **Pitch** page for the corresponding pad and select the same MIDI controller on the **MIDI Controller** pop-up menu.

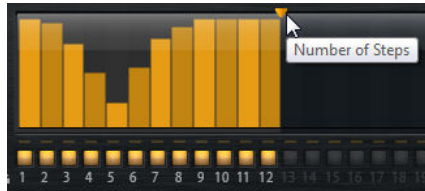


### Swing

Shifts the timing of notes on even-numbered beats. This way, the pattern gets a swing feeling. Negative values let the notes play earlier, positive values let the notes play later.

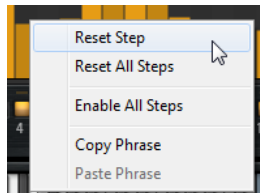
### Number of Steps

To specify the length of the phrase, drag the **Number of Steps** handle to the right or left.



### Step display context menu

The context menu is available both for the velocities and for the pitch modulation values of the steps.



- If velocity values are displayed, **Reset Step** sets the velocity of the step to 127. If the pitch modulation curve is displayed, **Reset Step** sets the pitch modulation for the step to 0 semitones.
- If velocity values are displayed, **Reset All Steps** sets the velocity of all steps to 127. If the pitch modulation curve is displayed, **Reset All Steps** sets the pitch modulation for all steps to 0 semitones.
- **Enable All Steps** activates all steps.
- If velocity values are displayed, **Copy Phrase** copies the current phrase to the clipboard. If the pitch modulation curve is displayed, **Copy Phrase** copies the pitch modulation curve to the clipboard.
- If velocity values are displayed, **Paste Phrase** pastes the phrase from the clipboard to the current phrase player. This allows you to copy phrases between different kits. If the pitch modulation curve is displayed, **Paste Phrase** pastes the pitch modulation curve to the current curve display. This allows you to copy pitch modulation curves between different kits.

## Performing Simple Note Repeats

You can create note repeats for a particular drum sound, and specify the interval in which the notes are repeated.

### PREREQUISITE

- A MIDI keyboard is connected to your computer and set up correctly.
- You have loaded a kit into the first kit slot.

#### PROCEDURE

1. Open the **Perform** page in the edit display.
2. Set **Trigger Mode** to **Keys**.  
This way, you can trigger the note repeats using the keys on your MIDI keyboard.

#### NOTE

Note Repeat variation trigger notes have a higher priority than instrument notes, which means that if they share the same key, you cannot play the instrument on that key.

---

3. Activate the first variation button.
4. Specify the trigger note in the field below the button.  
The corresponding instrument pad displays a repeat icon.



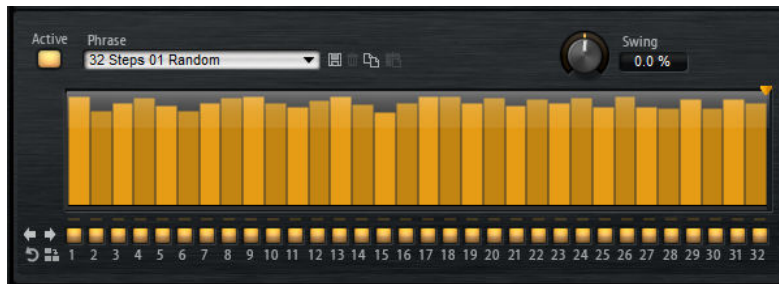
5. Click the **Note Values/Milliseconds** button below the trigger note field to specify whether you want to set the repeat interval in note values or milliseconds.
  6. Use the control below the **Note Values/Milliseconds** button to specify the note repeat interval.
  7. On the MIDI keyboard, play the trigger key for the instrument pad, and then play the trigger key that you specified for the note repeat.
- 

#### RESULT

The drum sound is repeated, according to the set interval, for as long as you press the key.

## Creating Note Repeat Phrases

With the phrase player in the lower section of the **Note Repeat** page, you can create complex note repeats phrases for a particular drum sound.



- To use the phrase player, activate the **Active** button.

### Activating Steps

A phrase can contain up to 32 steps. Only the steps that are activated are played.

- To activate a step, click its **On/Off** button below the display.
- To activate all steps, right-click in the step display and select **Enable All Steps** from the context menu.



### Setting the Velocity for the Steps

The height of a step represents its velocity value. You can edit the velocity of steps in the following way:

- To adjust the velocity for a single step, click it and drag up or down.

- To adjust the velocity of multiple steps, click and draw a curve.
- To adjust the velocity of all steps relatively, **Shift**-click and drag.
- To draw a ramp, hold down **Alt** and draw a line.
- To draw symmetric ramps at the beginning and the end of the sequence, hold down **Shift-Alt** and draw a line.
- To reset the velocity of a step to 127, **Ctrl/Cmd**-click the step.
- To reset the velocity of all steps to 127, hold **Shift-Ctrl/Cmd** and click a step.

### Adjusting the Phrase

- To shift the rhythm of the phrase, use the **Shift Phrase Right** /**Shift Phrase Left**  buttons.

If you shift the rhythm of the phrase to the left, the first step is moved to the end. If you shift the phrase to the right, the last step is moved to the beginning.

- To reverse the phrase, click the **Reverse Phrase** button.
- To duplicate short phrases, click the **Duplicate Phrase** button.

#### NOTE

The maximum number of steps is 32. Therefore, phrases that contain more than 16 steps cannot be duplicated entirely.

---

### Phrase Presets

Groove Agent comes with a set of phrase presets.

- To load a preset, click in the **Phrase** field and select a preset from the pop-up menu.
- To create your own presets, use the preset controls to the right of the **Phrase** field.

## Performing Note Repeat Phrases

#### PREREQUISITE

- A MIDI keyboard is connected to your computer and set up correctly.
- You have loaded a kit into the first kit slot.

---

#### PROCEDURE

1. Open the **Perform** page in the edit display.
2. Set the **Trigger Mode to Keys**.  
This way, you can trigger the note repeats using keys on your MIDI keyboard.

#### NOTE

Note Repeat variation trigger notes have a higher priority than normal instrument notes, which means that if they share the same key, you cannot play the instrument on that key.

---

3. Activate the first variation button.
4. Specify the trigger note in the field below the button.  
The corresponding instrument pad displays a repeat icon.



5. Activate the phrase player by clicking the **Phrase On/Off** button.
6. Set up the steps for the phrase or select a phrase from the **Phrase** pop-up menu.

7. On the MIDI keyboard, play the trigger key for the instrument pad, and then play the trigger key that you specified for the note repeat phrase.
- 

#### RESULT

The phrase is repeated for as long as you keep the keys pressed.

## Creating and Using Note Repeat Variations

You can set up eight different **Note Repeat** variations using the variation buttons and switch between them to bring more variation to your **Note Repeat** performance.



Variations can trigger both **Note Repeat** notes and **Note Repeat** phrases. For example, you can set up repeats with different note values, and then switch between them in real time, or switch between phrases of different complexities.

If a pattern pad and a note repeat variation share the same trigger note, the pattern pad gets priority.

You can copy and paste variation settings between buttons using the commands on the variation button context menu.

### Triggering Variations Using MIDI Controllers

If you trigger the variations using MIDI controllers, a variation is activated as soon as the controller value exceeds 64. The last controller value higher than 64 decides which variation to play.

It is recommended to use On/Off buttons or push buttons rather than faders or encoders to control the variation selection. Set the buttons up so that they send a value of 127 when you press the button, and a value of 0 when you release it.

The use of faders or encoder controls is not recommended for the triggering of variations, because they do not offer the required amount of control.

### Note Repeat Variations and Sync to Beat



- If **Sync to Beat** is activated, the repeated notes always start at the next valid position. If you play a legato to switch between two variations, the repeat phrase is not restarted, but continues from the current beat position.
- If **Sync to Beat** is deactivated, the note repeat starts immediately, even if the note is not played on the beat. Phrases are always restarted from the beginning.

## Recording the Notes Created by Note Repeat

You can record the **Note Repeat** output using the pattern player. This way, you can record complex rhythmic patterns that would be difficult to play live or use the recorded notes to trigger another plug-in.

### PREREQUISITE

You have added two instrument tracks in your Steinberg DAW.

If you record a drum pattern in a loop, you can add different instruments with each cycle using various note repeat variations.

### NOTE

It is not recommended to route the recording track back to the kit that you are using to generate the note repeat notes, because if you want to record a second cycle, notes that have been recorded in a first cycle will also be affected by this second cycle.

---

### PROCEDURE

1. Leave the first kit slot empty.  
This slot is used to generate the notes.
  2. Open the **Perform** page for the first kit slot and activate the note repeat functionality by clicking the **Active** button.
  3. Select kit slot 2 and load the kit that contains the drum sound that you want to use for the repeated notes.
  4. In the DAW, route the first track to kit slot 1. This way, the notes that you play on your MIDI keyboard are routed to the **Note Repeat** page for the first kit slot.
  5. Set up the note repeat parameters for kit slot 1.
  6. Activate the **Monitor** button on the first track in the DAW.
  7. For the second track, open the **Input Routing** pop-up menu, and select **Groove Agent Kit 1**.
  8. Set the MIDI channel for the track to channel 2. This way, the notes are sent to the second kit slot.
  9. Record-enable the second track.
  10. Activate the **Record** button and play an instrument key together with a note repeat variation key to generate and record the notes.
- 

## Recording Patterns on Pattern Pads

Notes generated by **Note Repeat** can be used to record complex patterns directly on the pattern pads in Groove Agent.

---

### PROCEDURE

1. Load a kit in the first kit slot.
2. Activate and configure the **Note Repeat** parameters for that slot.
3. Select an empty pattern pad and click the **Record** button.
4. Click the **Play** button.  
Recording starts.
5. Play your instruments and add note repeats.  
The instrument notes and the repeated notes are recorded into the pattern.
6. Optional: Add different note repeat notes which each pattern cycle.

7. Click the **Stop** button to stop recording.
- 

#### RESULT

When you trigger the pattern pad, it plays the pattern that you recorded.

## Decompose

If you are working with Beat Agent kits, you can use the **Decompose** function to split your samples into their noise and tonal components.

This allows you to edit the tonal and the noise components of your samples separately, for example, to change the distribution between the noise and tonal portions of a sample, to combine different noise samples with a tonal sample, or to experiment with different source samples to create entirely new sounds.



## Decomposing Samples

The **Decompose** function separates the noise and the tonal components of a sample and allows you to save these components separately as new samples.

#### PREREQUISITE

- The instrument pads are shown in the pad section.
- You have loaded the sample that you want to decompose and opened the **Decompose** tab.

---

#### PROCEDURE

1. Optional: On the **Main** tab, click **Prelisten**.  
You can now play back the two components separately by using the corresponding **Solo** buttons.
  2. Click **Apply** to decompose the sample.
- 

#### RESULT

Two new samples are created. They are saved with the extensions “\_noise” and “\_tonal”, respectively.

#### NOTE

If a sample with the same name already exists at the save location, for example, because you tried out different **Decompose** settings, a number is added to the new file name. No sample files are overwritten by the **Decompose** function.

---

#### AFTER COMPLETING THIS TASK

You can now edit the tonal and noise samples separately, combine them differently, etc.

#### RELATED LINKS

[Changing the Distribution of the Tonal and the Noise Components of Samples](#) on page 32

[Fine-Tuning the Decompose Settings](#) on page 32

[Decompose Tab](#) on page 121

## Combining Noise and Tonal Components of Different Samples

Once the tonal and noise components are split, you can use them separately. This allows you to try out different noise components with a tonal sample, edit the components of a sample separately before combining them again, etc. You can also create entirely new sounds from your samples this way.

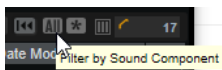
#### PREREQUISITE

You used the **Decompose** function on several samples, so that you have a variety of different noise and tonal samples to choose from.

---

#### PROCEDURE

1. On the **Load** panel, open the **Browse** tab.
2. Navigate to the folder that contains the decomposed samples or filter the view to show only the decomposed samples using the **Filter by Sound Component** pop-up menu.  
You can filter the list to show the tonal component samples, the noise component samples, or all the component samples, that is, noise and tonal, that were created with the **Decompose** function.



3. Drag the samples on the instrument pads.  
By layering two components from different original samples on one pad, you can play them together.
  4. Play back the pad.
  5. Experiment with different combinations.
- 

#### AFTER COMPLETING THIS TASK

When you found the combination that you want to use, you can edit the samples further on the **Sample** tab, for example.

#### RELATED LINKS

[Sample Tab](#) on page 109

## Changing the Distribution of the Tonal and the Noise Components of Samples

The **Decompose** function allows you to mix the noise and the tonal components of samples differently. This can be used to reduce the sound of the drum stick hitting the drum head, for example.

### PREREQUISITE

You have loaded the sample that you want to decompose and opened the **Decompose** tab.

---

### PROCEDURE

1. Click **Prelisten**.
  2. Modify the mix by adjusting the **Level** dial of the **Noise** or the **Tonal** component.
  3. When you are satisfied with the mix, activate **Mix** and click **Apply**.
- 

### RESULT

The two components are mixed and the modified sample is saved with the extension “\_mix”.

### NOTE

If a sample with the same name already exists at the save location, for example, because you tried out different **Decompose** settings, a number is added to the new file name. No sample files are overwritten by the **Decompose** function.

---

## Fine-Tuning the Decompose Settings

If the **Decompose** algorithm does not separate the noise and tonal components to your liking, you can fine-tune the settings using the parameters on the **Main** tab.

### Sensitivity

Allows you to specify the level difference that is required between the signal partials and the noise floor. The value you specify defines the minimum distance between the peaks and the troughs of the spectrum for a partial to be detected. If you lower this value, more signal portions of the sample are considered to be part of the tonal component.

### Cutoff

Allows you to define the upper limit of the range in which Groove Agent searches for partials. Any signals above the **Cutoff** frequency are considered to be noise, regardless of the **Sensitivity** or **Duration** settings.

### Duration

Allows you to specify the minimum length for a partial. Signals that are shorter than the value specified here are automatically considered to be noise, longer signals are considered to be part of the tonal component.

You can try to lower this setting if you work with samples that have fast attacks or strong transients that were not detected correctly by the **Decompose** function.



# Managing Your Sounds

The following sections describe how to load, save, and manage the different kinds of sound files in Groove Agent.

## Loading Kits

You need at least one kit to produce a sound with Groove Agent.

There are several ways to load kits:

- Via drag & drop from the **Kits** page or the **Browser** page in the **Load** panel onto the kit slot or the kit rack.
- Via drag & drop from the File Explorer/macOS Finder or the **MediaBay** of your Steinberg DAW.
- Via the context menu in the kit rack.
- By clicking the **Load Kit** button at the right of the kit name in the kit slot section.
- By clicking the name of the kit in the lower section of the kit rack to open the **Load** dialog and selecting a new kit.

## Kit Slot

This section shows the name of the loaded kit, allows you to load a different kit, and make basic settings such as specifying the polyphony for the kit, for example.



### Load button

Click this button to show the list of available kits.

You can also click the kit name to open this list. Right-click the kit name to open the kit context menu.

### Load Previous/Next Kit

Click these buttons to load the previous/next kit from the list of available kits.

### Load Kit with Patterns

Activate this button to make sure that kits are always loaded together with their patterns.

### Polyphony

Adjusts the polyphony of the kit.

### MIDI Channel

Sets the MIDI channel for the kit.

### MIDI Input Indicator

The MIDI symbol starts blinking if incoming MIDI signals are detected.

### MIDI Out

Deactivates MIDI output for the kit.

### Velocity Curve

Sets the velocity response curve of the kit. This allows you to adapt the kit to your hardware MIDI controller or playing style.

### Follow Transport

If **Follow Transport** is activated, you can use the transport functions in the DAW to start and stop playback both in the DAW and in Groove Agent. This allows you to record an audio track in your host application while Groove Agent plays the drums, for example.

- If playback is started in the DAW, Groove Agent plays back the active pad.
- If trigger keys are sent and the active pad is in **Exclusive** mode, playback switches to the pad that was triggered last. Playback returns to the active pad as soon as the trigger key is released. Pads that are not in **Exclusive** mode can play simultaneously.

#### NOTE

**Follow Transport** works differently in **Jam Mode**.

---

### Song Position Counter

The song position counter shows the current song position in bars, beats, and 16th notes. If you activate the **Play** button in Groove Agent, the song position counter always starts at 1.0.0.0 and runs until you click stop.

### Tempo Display

The tempo display next to the position counter shows the tempo of the host application.

#### RELATED LINKS

[Jam Mode](#) on page 76

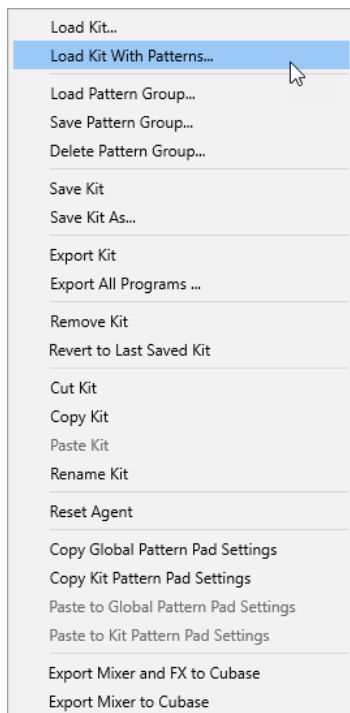
## Kit Rack

The kit rack to the right of the kit slot section gives you an overview over the loaded kits and their corresponding agent, and allows you to perform some editing for the selected kit via the context menu.



- To select a kit, click on it.
- To solo or mute a kit, activate the **Mute** or the **Solo** button. This is the same as activating the corresponding button in the **Kit mixer**.
- Empty Beat Agent kits are grayed out in the kit rack.

## Kit Context Menu



### **Load Kit**

Allows you to load a kit.

### **Load Kit With Patterns**

Allows you to load a kit with its MIDI patterns or its styles, if any.

### **Load Pattern Group**

Allows you to load a predefined set of MIDI file assignments and play parameter settings for the 16 pads of the selected group.

### **Save Pattern Group**

Allows you to save the 16 pads of the current group and their settings as a pattern group.

### **Delete Pattern Group**

Allows you to delete a pattern group.

### **Save Kit**

Saves the kit. If you try to overwrite write-protected factory content, a dialog opens that allows you to save the edited kit under a new name.

### **Save Kit As**

Allows you to save the kit under a new name.

### **Remove Kit**

Removes the kit and its patterns from the slot.

### **Revert to Last Saved Kit**

Reverts to the kit that was originally loaded on the slot. If the kit was loaded without patterns, only the kit and no patterns are loaded.

### **Cut Kit**

Copies the kit and its patterns and removes it from the slot.

### Copy Kit

Copies the kit and its patterns.

### Paste Kit

Pastes the copied kit into the slot. If the slot already contains a kit, it is replaced.

### Rename Kit

Allows you to rename the kit.

### Reset Agent

Loads the Init preset of the agent.

### Import (Beat Agent only)

Allows you to import MPC and GAK files into Beat Agent kits.

### Export Kit With Samples (Beat Agent only)

Exports the Beat Agent kit together with its associated samples.

#### NOTE

Samples that are part of protected content, such as the VST Sound content, cannot be exported.

### Copy Global Pattern Pad Settings

Copies the global pattern pad settings.

### Copy Kit Pattern Pad Settings

Copies the pattern pad settings of the focused kit slot.

### Paste to Global Pattern Pad Settings

Pastes the copied settings as global pattern pad settings.

### Paste to Kit Pattern Pad Settings

Pastes the copied settings to the focused kit slot.

### Export Mixer and FX to Cubase/Nuendo

Allows you to transfer the Acoustic Agent mixer settings, complete with equalizer settings and effects, to your Steinberg DAW, which means, you can perform mixing for the kit entirely in the **MixConsole**.

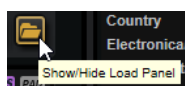
### Export Mixer to Cubase/Nuendo

Allows you to transfer the Acoustic Agent mixer settings, without equalizer settings or effects, to your Steinberg DAW. This is useful if you want to create your own mix from scratch.

## Managing and Loading Files

The **Load** panel allows you to manage, navigate to, load, and preview different file types.

To display the **Load** panel, click the corresponding button in the top right of the edit display.



To open the **Load** panel in a separate window, click **Dock/Undock Load Panel**  at the right of the page buttons.

The **Load** panel contains the **Kits**, **Instruments**, **Styles**, **MIDI**, and **Browser** pages.

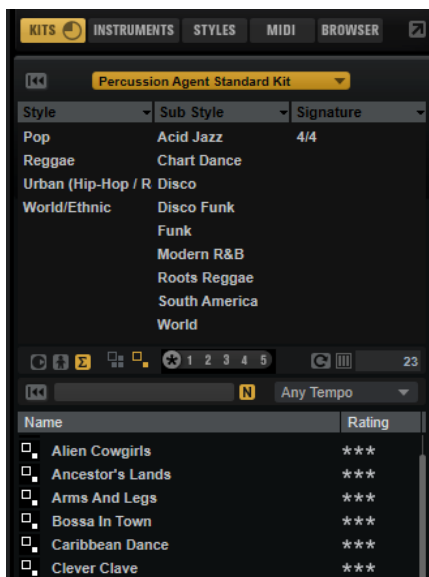
In the top section of the page, you specify which sounds to look for. The lower section presents the corresponding results.



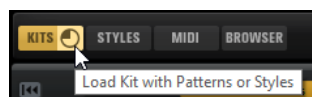
- To adjust the size of the two sections, drag the divider at the top of the results list.

## Managing Files via the Kits, Instruments, Styles, and MIDI Pages

The **Kits**, **Instruments**, **Styles**, and **MIDI** pages are based on Steinberg's **MediaBay** technology. These pages give you access to the available kits, MIDI patterns, styles, etc.



- The **Kits** page gives you access to the kits.  
If you want to load kits with their patterns or styles, activate **Load Kit with Patterns or Styles**.



If this button is deactivated, only the kits are loaded while the patterns and styles are kept.

- The **Instruments** page on the **Load** panel shows the instruments that you created from your instrument pads.

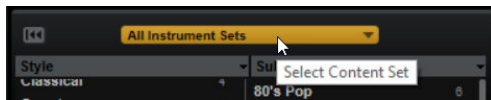
- The **Styles** page gives you access to the styles.  
The factory styles are created for Acoustic Agent kits and are usually loaded and used in the **Style Player**. Furthermore, content from Content Sets such as “Nashville” and “Simon Phillips Studio Drums”, make use of the style player.  
You can also load styles in Beat Agent. However, in this case, make sure to map the instruments correctly to the instrument pads.  
Percussion styles are available for the **Percussion Player** used by Percussion Agent, but can also be used with the **MIDI Player**.
- The **MIDI** page gives you access to MIDI files and MIDI patterns. They can be used in the MIDI Player. The MIDI files in the factory content are created for use in Beat Agent kits. Furthermore, the MIDI file content from VST Sound Instrument Sets such as “Neuro Mindset” or “Prime Cuts” can be loaded in the **MIDI Player**.

## Filtering the Results

You can filter the results list using the configurable attribute columns at the top or by restricting the search to a specific content set.

### Content Set Filter

Use the **Select Content Set** pop-up menu to restrict the search to a specific content set. By default, the search is performed in all installed content sets.



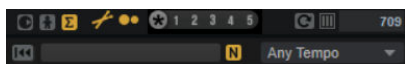
### Attribute Filter

- To set up the filter, click on specific values in the columns.
- To select different filter criteria, click the column header and select a different attribute from the submenu.




Only the files that match the set filter are displayed in the results list.

## Results List

The results list shows all files that have been found, according to your filter settings.





### Content Filters

The content filter buttons allow you to define whether to show the entire content , only the factory content , or only your user content .

### View Filters (Kits Page)

The toolbar has two filter buttons that allow you to define which preset types to display: multis or kits. In the results list, the corresponding icon is shown to the left of the preset name.

### Style Filters (Styles Page)

The two style filter buttons allow you to show the styles that are used in the **Style Player** , the styles that are used in the **Percussion Player** , or both.

### Rating Filter

You can limit the results list according to the rating of the presets. Use the rating slider to define the minimum rating.

### Rescan Disk

Rescans the disk for files that match the search criteria. Click this button if you added or removed files on your hard disk, for example.

### Set Up Result Columns

Allows you to select which attribute columns to display on the toolbar.

### Results Counter

Displays the number of files that match the filter criteria. To stop an active scanning process, click in the value field.

### Text Search

In the text search field on the results list toolbar, you can enter text contained in the name or any of the attributes of a preset that you are looking for. The results list is updated immediately and the category search section above shows all categories that contain presets matching the text search.

To reset the text-based result filter, click **Clear Search Text** next to the search field.

To restrict the search to the names only, activate **Search Names Only** . This way, other attributes are not taken into account.

### Tempo Filter

The **Tempo Filter** pop-up menu allows you to limit the results list to files within a specified tempo range. This way, you can restrict the results to files that match your current project. The options on the pop-up menu are automatically adapted to the tempo of the host application. You can set the filter to display only files that match the project tempo, or you can allow for a deviation of 5, 10, or 20 bpm from the project tempo.

#### NOTE

If you change the tempo in the host application, this is not reflected automatically on the pop-up menu. The menu is updated when you open it and select an option.

---

To show all files, regardless of their tempo, set **Tempo Filter** to **Any Tempo**.

#### RELATED LINKS

[Configuring the Results List](#) on page 39

## Configuring the Results List

You can specify which file attributes you want to be displayed in the results list and set up the column order so that this attribute is visible without scrolling. This allows you to find the files that have a particular attribute more quickly.

- To configure which attributes are shown in the results list, click **Set up Result Columns** in the upper right corner of the results list and activate the corresponding entries. New attributes are added at the right of the list.
- To reorder the columns in the results list, drag the column headers to another position.
- To change the sorting of the list entries, click the column header. The triangle in the column header shows the sorting direction.

## Assigning General MIDI Program Change Numbers to Sounds

Assigning General MIDI program change numbers to sounds allows you to use MIDI program change messages to load the sounds into the slot of the corresponding MIDI channel.

---

### PROCEDURE

1. In the **Load** section, select the **Kits**, **Styles**, or **MIDI** page and click **Set up Result Columns** on the title bar of the lower section.
2. Select **Musical > GM Sound**.
3. Select the sound to which you want to apply the GM program change number.
4. In the **GM Sound** column for the sound, select the General MIDI program change number that you want to use.

You can assign the same GM Sound program number several times. If a program number is used more than once, the **Rating** attribute can be used to decide which program to load.

---

## File Info Section

The **File Info** section below the results list shows information about the selected file.



- For MIDI files, original tempo, signature, and length are shown, as they are saved in the file.
- For styles, signature and length are shown.
- For instruments, the name of the instrument and the number of samples that it contains are shown.

## Prelisten Section for MIDI Patterns and Styles

The **Prelisten** section below the results list allows you to listen to the selected MIDI pattern or style.



For MIDI pattern and style files, the following controls are available:

### Level

Adjusts the playback level.

### Play

Plays back the focused file.

### Stop

Stops playback. The play locator jumps back to the start of the file.

### Pause

Pauses playback. Click again to resume playback.

### Auto Play

Automatically starts playback of the focused file.



### Loop Playback

If this button is activated, the focused file is played back repeatedly.

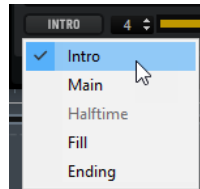
### Play Position

The play position indicator shows the playback position within the focused file. To select another position for playback, click on the slider or drag the handle.

For styles, the following additional controls are available:

### Style Part

Allows you to select a part of the style, such as intro, fill, ending, etc.



### Complexity/Variation

- If the **Main** part of the style is selected, you can select a complexity.
- If any other part of the style is selected, you can select a variation.


## Prelistening Patterns and Styles

With the controls below the results list, you can listen to the MIDI patterns and styles in the results list before loading them.



---

### PROCEDURE

1. On the **Styles** or **MIDI** page, select a file in the results list.  
If you listen to a style, you can use the pop-up menu on the left to specify which part of the style you want to listen to. With the **Complexity/Variation** control, you can select a complexity for the **Main** part of the style or a variation for the other parts of the style.
  2. Use the transport controls below the list to play back the file.  
If **Auto Play**  is activated, the selected file is automatically played back.
  3. Step through the files in the results list to listen to different files.
- 

## Prelisten Section for Instruments

The **Prelisten** section below the results list allows you to listen to the selected instrument.



### Level

Adjusts the playback level.

### Play

Plays back the focused file.

### Stop

Stops playback. The play locator jumps back to the start of the file.

### Prelisten in Place

Activates prelistening of the selected instrument. This allows you to listen to the instrument in the context of a running style or pattern.

Click the triangle above the button to select a prelisten option.

- If **Always** is selected, selecting an instrument in the results list always triggers the instrument.
- If **Auto** is selected, selecting an instrument in the results list does not trigger the instrument if the **Style Player** or the **MIDI Player** are playing. This prevents the prelisten instruments from being triggered off the beat.

#### NOTE

As soon as the instrument loses the focus in the results list, the **Prelisten** function stops and the original pad content is played again. This allows you to quickly compare two instruments, for example.

---

## Loading MIDI Patterns or Styles in Your Host Application

You can drag MIDI patterns and styles from the **Load** panel onto a MIDI track in your host application.

#### PREREQUISITE

You have added a MIDI track in your host application project.

---

#### PROCEDURE

1. In the **Load** section, open the **MIDI** page or the **Styles** page.
  2. Select the file that you want to import into your host application.
  3. If you want to drag a style into the project, use the prelisten controls below the results list to select the part of the file and the complexity/variation.  
All performance settings, such as **Auto Complexity**, **Auto Fill**, **Quantize**, etc. are taken into account, that is, they will be part of the resulting MIDI pattern.
  4. Drag the file onto a MIDI track in your DAW.
- 

#### RESULT

A MIDI part containing the pattern is added to your project.

The MIDI patterns that you drag out of Groove Agent are MIDI files, that is, you can drop them in any host application that supports drag and drop of MIDI files.

## Loading Kits into Slots

To load a kit into the selected agent slot, you have the following possibilities:

- Select the slot into which you want to load the kit, and double-click the kit in the results list.
- Drag a kit from the results list to a kit in the kit rack or onto the slot in the kit slot section.  
If a kit is already loaded, it is replaced with the new kit.
- Right-click the kit in the results list and select **Load Kit** from the context menu.

## Editing Attributes

Presets can be described by using a predefined set of attributes.

---

### PROCEDURE

1. In the **New Preset Attributes** section of the **Save** dialog, click in the field of the attribute value that you want to set.  
Depending on the attribute, a menu or a dialog opens.
  2. Select a value.  
Attribute values are written into the corresponding preset files.
- 

## Deleting User Presets

- To delete a user preset, right-click it and select **Delete** from the context menu.

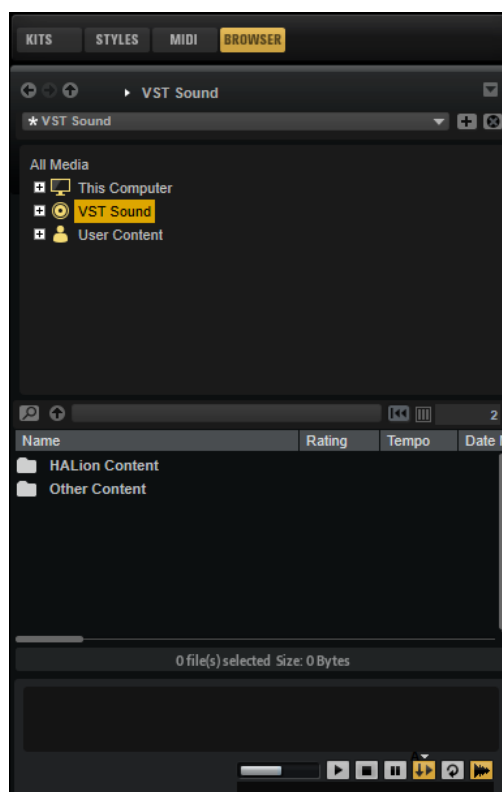
### NOTE

Factory presets cannot be deleted.

---

## Loading Files Using the Browser

In the **Browser**, you can browse for samples, MIDI files, and presets. The **Browser** also shows samples that are part of VST Sound content.



In the **Browser**, you can search and load the following files:

- Samples from the file system or from within loaded kits.

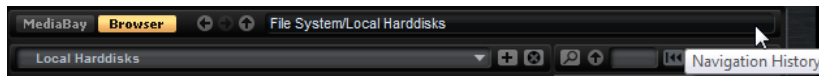
### NOTE

Samples can only be loaded for Beat Agent kits.

---

- MIDI files.
- Multis and kits.

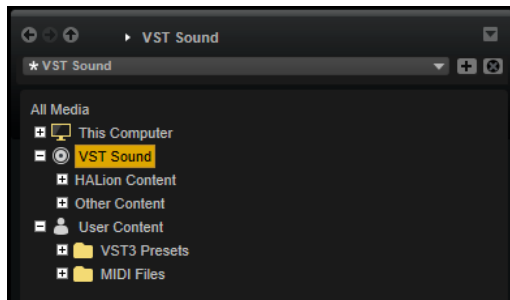
## Path Section



- To step through the recent locations, click the **Previous Browse Location/Next Browse Location** buttons.
- To navigate to the folder one level up in the location tree, click the **Browse Containing Folder** button.
- The path to the current position in the hierarchy is shown on the right. To navigate to one of these folders, click its name.
- To open the navigation history, click at the very right of the path field.

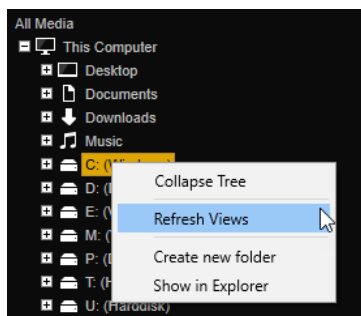
## Location Tree

The location tree on the left in the **Browser** allows you to navigate through your samples, in any folder on your system. You can even access files contained in VST Sound containers and ISO files.



If you select an entry in the tree, the results list shows the corresponding content.

## Location Tree Context Menu



### Refresh Views

Updates the tree. This is useful if you added a new disk to your setup or created a new folder on the hard disk.

### Rescan Disk

Rescans the selected element in the tree. The corresponding files are opened, the information is extracted, and the database file is updated accordingly.

### Quick Rescan Disk

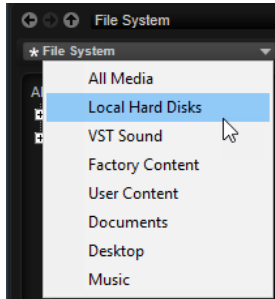
Rescans only the folders that have changed since the last scan.

### Show in Explorer (Win)/Reveal in Finder (Mac)

Shows the location of the selected file on your system.

## Locations

Locations are folders or directories on your system that contain media files. By setting up locations, you can organize the files that are available in the results list according to context.



The text field above the tree shows the name of the selected folder. If the name is preceded by an asterisk, the folder has not been saved as a location yet.

## Managing Locations

- To open the list of favorite locations, click in the text field.
- To add the current folder to the favorite locations, click **Add Selected Media Node as Favorite Location**.  
You can keep the folder name or specify a new name for the location.
- To delete the current location from the list, click **Remove Favorite Location**.

## Results List

The results list shows the files found in the selected folder. It displays all files that Groove Agent can read, such as VST presets or samples.

In addition to information like file name and path, the columns in the results list can be configured to show different attributes.

The results list also shows any subfolders of the selected folder, but does not include the files contained in the subfolders themselves. To see the content of subfolders, you must select the corresponding subfolder.

- To open a folder or location, double-click it in the results list.  
If you double-click a preset, its contents are shown.
- To move up one level in the folder hierarchy, click **Browse Containing Folder**.

You can limit the number of results in the results list using the text search function. This way, you can search for files with specific names, for example. For presets, the search also takes any attributes into account. The value field in the top right corner indicates the number of files that match the search text. To clear the search text, click **Clear Filter Text**.

## Configuring the Results List

You can specify which file attributes you want to be displayed in the results list and set up the column order so that this attribute is visible without scrolling. This allows you to find the files that have a particular attribute more quickly.

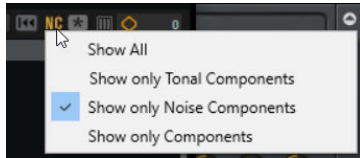
- To configure which attributes are shown in the results list, click **Set up Result Columns** in the upper right corner of the results list and activate the corresponding entries. New attributes are added at the right of the list.

- To reorder the columns in the results list, drag the column headers to another position.
- To change the sorting of the list entries, click the column header. The triangle in the column header shows the sorting direction.

## Browsing For Tonal and Noise Samples Created with the Decompose Function

When you want to edit or use your tonal or noise samples, you can filter the results list to show only these samples.

On the toolbar, click **Filter by Sound Component** and select an option from the pop-up menu.



### Show All Files

If this option is selected, the results list is not filtered.

### Show Tonal Components

Displays only the samples containing the tonal component. Those samples have the extension “\_tonal”.

### Show Noise Components

Displays only the samples containing the noise component. Those samples have the extension “\_noise”.

### Show Components only


Displays both the noise and the tonal sample files.

## Searching for Files on Your System

Instead of searching the current results list, you can also use the text search to look for files on your hard disks or in VST Sound containers.

---

### PROCEDURE

1. Select the location that you want to use as the starting point for the search.  
The higher up in the hierarchy the location, the longer the search takes.
2. In the top left corner of the results list, click the **Search Location Content**  button and enter the search text in the text field.
3. Optional: Click the button to the right of the search field to specify whether you want to search for samples, MIDI patterns, kits, multis, or all types.
4. To start the search, press **Return** or click **Search/Stop Search** to the right of the search text.  
The files that match the search criteria are listed in the results list.

### NOTE

The maximum of files that can be displayed in the list is 10,000.

5. Double-click a result to show it in the location tree.
-

## File Info Section

The **File Info** section below the results list shows information about the focused file.



- For MIDI files, the original tempo, signature, and length are shown, as they are saved in the file.
- For styles, the signature and length are shown.
- For samples, the length, channels, bit depth, and sample rate are shown. If available, root key, key, and velocity range are also shown.

## Prelisten Section for MIDI Patterns and Styles

The **Prelisten** section below the results list allows you to listen to the selected MIDI pattern or style.



For MIDI pattern and style files, the following controls are available:

### Level

Adjusts the playback level.

### Play

Plays back the focused file.

### Stop

Stops playback. The play locator jumps back to the start of the file.

### Pause

Pauses playback. Click again to resume playback.

### Auto Play

Automatically starts playback of the focused file.

### Loop Playback

If this button is activated, the focused file is played back repeatedly.

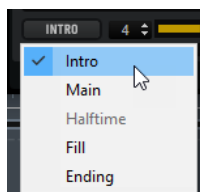
### Play Position

The play position indicator shows the playback position within the focused file. To select another position for playback, click on the slider or drag the handle.

For styles, the following additional controls are available:

### Style Part

Allows you to select a part of the style, such as intro, fill, ending, etc.



### Complexity/Variation

- If the **Main** part of the style is selected, you can select a complexity.
- If any other part of the style is selected, you can select a variation.

## Prelisten Section for Samples

The **Prelisten** section below the results list allows you to listen to the selected sample.



### Level

Adjusts the playback level.

### Play

Plays back the focused file.

### Stop

Stops playback. The play locator jumps back to the start of the file.

### Pause

Pauses playback. Click again to resume playback.

### Prelisten in Place

Activates prelistening of the selected sample.

Click the triangle above the button to select a prelisten option.

- If **Always** is selected, selecting an audio file in the results list always triggers the sample, regardless of whether a sequence from the host or the internal pattern player is playing.
- If **Auto** is selected, selecting an audio file in the results list does not trigger the sample if a sequence from the host or the internal **Style Player** or **MIDI Player** are playing. This prevents the prelisten samples from being triggered off the beat. However, the prelisten sample for the pad is replaced and when the pad is played, the new sample is used.

### NOTE

As soon as the sample loses the focus in the results list, the **Prelisten** function stops and the original pad content is played again. This allows you to quickly compare two samples, for example.

### Loop Playback

If this button is activated, the focused file is played back repeatedly.

### Replace Pad/Focused Sample

Determines whether the sample that is selected for prelistening replaces the entire pad  or the focused sample .

### Play Position

The play position indicator shows the playback position within the focused file. To select another position for playback, click on the slider or drag the handle.



## Missing Samples

If you browse the samples of a program and you cannot load them or listen to them, they may have been moved or deleted. In this case, the sample info displays “Sample not found”.

To remedy this, load the program again and make sure that no samples are missing. Afterwards, be sure to save the program with the restored sample paths.

### RELATED LINKS

[Finding Missing Samples](#) on page 134

## Loading Files

- To load the sample that is focused in the results list into the selected instrument pad, use the key commands **Return** or **L**, or double-click the file.
- To load a kit, drag it from the results list to the kit slot, the kit rack, or onto a pad.

### NOTE

This replaces the current samples and resets the sound settings.

---

Some file types are not supported. In this case, an icon is displayed to indicate that the file format cannot be loaded.

Protected kits are shown with a lock icon to indicate that you cannot extract single samples. However, you can load the kit as a whole.

## Replacing the Focused Sample

When you load a sample via the **Browser**, all samples on the selected pad are replaced. But you can also replace only a specific sample.

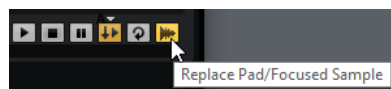
### NOTE

You can also replace samples that are part of the factory VST Sound content.

---

### PROCEDURE

1. On the **Edit** page, in the mapping view, select the sample that you want to replace.
2. In the **Browser**, activate **Replace Pad/Focused Sample** so that a waveform is displayed on the button.



3. In the location tree, browse to the new sample and double-click it.
- 

### RESULT

The selected sample is replaced with the new sample. All sound settings of the previous sample are kept.

### NOTE

**Replace Pad/Focused Sample** affects only the loading of samples via double-click or key commands. It does not affect the loading of samples via drag & drop from the **Browser** to pads.

---

# Working With Pads

Groove Agent features two different types of pads: instrument pads and pattern pads. Instrument pads are used to trigger samples. Pattern pads trigger MIDI drum patterns or styles.

Instrument and pattern pads have multiple functions and can show various information about the pads. Some pad functions are only available for specific agents. If this is the case, this is clearly stated.

The pad section on the left can show the instrument pads or the pattern pads. To switch between the instrument pads and the pattern pads, click the corresponding button above the pads.



## Pad Section

The pad section is located on the left in the plug-in window. It contains the transport controls, the group buttons, and the pads.

### Transport Controls

The transport controls allow you to trigger the focused pattern pad without playing a MIDI note.



#### Stop

Stops playback of the selected pad.

#### Start

Starts playback of the selected pad.

#### NOTE

If you switch between pattern pads during playback, the pattern changes according to the set **Trigger Mode**.

#### Record

Allows you to record MIDI events live.

#### Jam Mode

Activates/Deactivates **Jam Mode**.

### Group Buttons



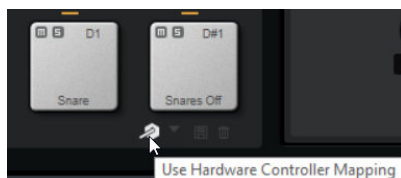
The pad section provides up to 128 pads, organized in eight groups of 16 pads.

You can switch between the groups by clicking on the group buttons. The button of the active group is highlighted. If one or more pads of a group have samples mapped to them, an orange LED above the group button lights up. If a pad within a group receives a MIDI note, a green MIDI indicator LED lights up.

## Pads

Pattern pads trigger MIDI drum patterns or styles. Instrument pads trigger samples.

- Pads show the associated MIDI note in the top right corner.  
For pattern pads, you can change the MIDI note assignment. For instrument pads, you can only change this if **Use Hardware Controller Mapping** is activated.



- In the lower section, the name of the pad is displayed.
- If samples are assigned to an instrument pad, the LED above the pad lights up.
- If a MIDI file is mapped to a pattern pad, the LED above the pad lights up.
- A pad lights up if the associated MIDI note is triggered.
- To select a pad without triggering a sample or pattern, **Alt**-click the pad.
- A yellow frame around a pad indicates that this pad is selected for editing.
- You can edit multiple selected pads. The first selected pad shows a yellow frame, the rest of the selected pads a lighter yellow frame.

## Pad Colors

You can colorize the pads using up to 16 different colors. This can improve the overview over the instruments within your kit. For example, you can set the bass drum to one color, the snare to another, toms and cymbals to another, etc.

- To apply a color to a pad or to several selected pads, open the context menu and select a color from the **Set Color** submenu.

### NOTE

If you use the pattern pads in individual mode, you can set up different pad colors for each kit slot.

---

### RELATED LINKS

[Recording MIDI Events Live](#) on page 89

[Jam Mode](#) on page 76

[Beat Agent Sound Editing](#) on page 90

[Acoustic Agent Sound Editing](#) on page 136

[Percussion Agent Sound Editing](#) on page 145

## Renaming Pads

Renaming pads is useful if the names of the samples or the MIDI files are either too long or not very intuitive. Furthermore, it allows you to indicate that more than one sample is mapped to a pad, for example.

---

### PROCEDURE

- To change the name of a pad, right-click it, select **Rename Pad**, enter a new name and press **Enter**.

### NOTE

You can set up different pad names for the individual kit slots if **Global** mode is not activated for the pattern pads.

---

## Using Different MIDI Channels/Ports for Instrument Pads and Pattern Pads

By default, instrument and pattern pads share the same MIDI port. If instrument and pattern pads are both assigned and share the same trigger note, the pattern pad always gets priority, therefore, instrument pads that use the same trigger note as a pattern pad cannot be played via the same MIDI port. In this case, you have two options: You can set up a different MIDI port or a different MIDI channel for the pattern pads.

It is recommended to use either of these functions or combine them, in order to control pattern and instrument pads separately.

## Using the Pattern MIDI Port for Pattern Pads

To be able to play all instrument and pattern pads via MIDI, assign a separate MIDI port to the pattern pad section. This way, you can trigger instruments on one MIDI port and patterns on the other.

---

### PROCEDURE

1. Activate **Use Pattern MIDI Port for Pattern Pads** in the lower left corner of the pattern pad section.  
If another port is used, MIDI data is received on all MIDI channels.
  2. In your DAW, set up two MIDI tracks and set the MIDI output of the first track to **Groove Agent Main** and the MIDI output of the second track to **Groove Agent Pattern**.
- 

### RESULT

You can use one MIDI track to play the instrument pads and another MIDI track to play the pattern pads.

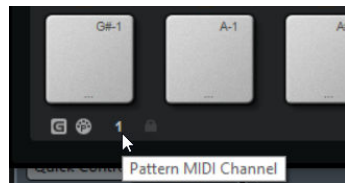
## Using Different MIDI Channels for Pattern Pads and Instrument Pads

You can specify a dedicated MIDI channel to trigger the pads in the pattern pads section. This is useful if your host sequencer does not support more than one MIDI port.

---

### PROCEDURE

- Click in the MIDI channel field below the pads and select the channel that you want to use from the pop-up menu.



If this is set to **Omni**, the pattern pads receive trigger notes on all 16 MIDI channels.

---

## Instrument Pads

Instrument pads are used to trigger samples.

Each pad is mapped to a MIDI note, which can trigger a sample. If samples are assigned to a pad, the LED above the pad lights up. You can trigger the pads with different velocities. Click in the lower section of a pad for lower velocities and at the top of the pad for higher velocities.



### Mute

To mute an instrument pad, click the **Mute** icon in the upper left corner of the pad. Click again to unmute.

To unmute all instrument pads, click **Reset All Mute** below the pads.

### Solo

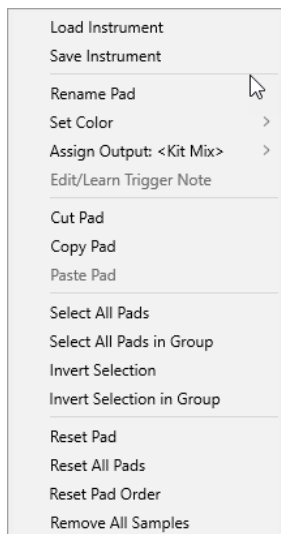
To solo an instrument pad, click the **Solo** icon in the upper left corner of the pad. Click again to unsolo.

To unsolo all instrument pads, click **Reset All Solo** below the pads.

Below the pad section, you find several buttons. These are different for the different agents.

## Instrument Pad Context Menu

The context menu contains functions and settings for the instrument pads.



### Load Instrument (Beat Agent only)

Allows you to load an instrument that you saved for a pad.

### Save Instrument (Beat Agent only)

Allows you to save the current pad with its samples and settings as instrument. The created instruments are available on the **Instruments** tab on the **Load** panel.

### Rename Pad

Allows you to rename the pad.

### Set Color

Allows you to select one of the 16 available colors for the pad.

### Assign Output (Beat Agent only)

Allows you to specify an output for all samples of the pad. The following outputs are available:

- The **Kit Mix**.
- One of the 16 **Agent** mixer channels.
- One of the 16 stereo output busses of the plug-in.

If you use Groove Agent in a Steinberg DAW, selecting a plug-in output from the menu automatically activates this output in the host application. The first stereo out is the **Master** output. This output is always active.

#### NOTE

Samples that are routed to an output that is deactivated in your host application are automatically sent to the **Master** output of the plug-in.

- One of the AUX channels. This allows you to create sub groups, for example.

### Edit/Learn Trigger Note

Allows you to specify a new trigger note for the pad, either by entering it into the value field or by playing the corresponding note on your hardware controller.

### Cut Pad

Removes all pad settings and pastes them to the clipboard.

### Copy Pad

Copies the settings of the pad to the clipboard.

### Paste Pad

Allows you to paste the pad settings from the clipboard to another pattern pad, of the same or a different pattern group.

### Select All Pads

Selects all 128 pads.

### Select All Pads in Group

Selects all 16 pads of the pad group.

### Invert Selection

Inverts the selection for all pads, that is, all unselected pads become selected and vice versa.

### Invert Selection in Group

Inverts the selection for the pad group, that is, all unselected pads of the group become selected and vice versa.

### Reset Pad

Removes all samples and resets name, color, and trigger note to the default values for the selected pad.

### Reset All Pads

Removes all samples from all 128 pads and resets name, color, and trigger note to the default values.

### Reset Pad Order

Resets all pads to a chromatic order.

### Remove All Samples

Removes the samples from the selected instrument pad.

### RELATED LINKS

[Saving Beat Agent Instruments](#) on page 94

[Loading Beat Agent Instruments](#) on page 94

## Using an Alternative MIDI Trigger Note Mapping

If you use an external hardware drum controller that sends specific MIDI notes for specific instruments, you can specify an alternative MIDI trigger note mapping.

---

### PROCEDURE

1. Activate **Use Hardware Controller Mapping** in the lower right corner of the instrument pad section.  
Now you can load, save, and delete different trigger note configurations.
2. Specify a new trigger note for the pad.
  - Right-click a pad, select **Edit/Learn Trigger Note** and specify the new trigger note by entering it into the value field or by playing the corresponding note on your hardware controller.
  - Right-click a pad, select **Trigger Notes > Assign Trigger Note** and select the note from the submenus.

Groove Agent jumps to the next pad.

3. Assign a MIDI note to all the pads that you want to use and press **Enter** to stop assigning MIDI notes.  
Assigned trigger notes are shown on the **Trigger Notes** submenu of the context menu.
- 

## Assigning Multiple Trigger Notes to an Instrument Pad

Some hardware drum controller instruments, like crash cymbals, provide several zones. These zones are sending different MIDI notes, in order to play different articulations. If a drum kit comes with a sample mapping that contains all articulations on dedicated instrument pads, each instrument pad only requires one specific trigger note. However, if the kit does not provide a pad for each articulation, you can assign multiple trigger notes to one instrument pad, so that each zone on the hardware controller triggers the same sample.

---

### PROCEDURE

1. Activate **Use Hardware Controller Mapping** in the lower right corner of the instrument pad section.  
Now you can load, save, and delete different trigger note configurations.
2. To specify an additional trigger note for the pad, do one of the following:
  - Right-click the instrument pad, select **Trigger Notes > Add/Remove Trigger Note** and select the note that you want to add from the submenus.
  - Right-click the instrument pad, select **Trigger Notes > Learn Additional Trigger Notes** and play the additional note on your keyboard.

You can specify up to three additional notes for each pad.

Assigned trigger notes are shown on the **Trigger Notes** submenu of the context menu.

---

## Removing Additional Trigger Notes

You can remove additional trigger notes in the following ways:

- On the context menu for an instrument pad, select **Trigger Notes > Add/Remove Trigger Note** and deselect the note that you want to remove.
- On the context menu for an instrument pad, select **Trigger Notes > Remove Trigger Notes** and select the note that you want to remove.
- To remove all additional trigger notes and replace them with a new single trigger note, use the **Edit/Learn** option on the context menu.

## Using MIDI Effects

For each instrument pad, you can set up MIDI effects on the **MIDI FX** page.

The **MIDI FX** page is divided into the **Pad Mode**, **Rudiments**, and **MIDI Delay** sections.





## Pad Mode

**Pad Mode** determines to which pad the settings on the **MIDI FX** page are applied.

### Internal

In **Internal** mode, the MIDI effects are applied to the samples on the selected pad.

### Remote

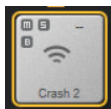
In **Remote** mode, you can select to which destination pad you want to apply the MIDI effects.

This allows you to trigger an instrument with and without MIDI effects, for example.

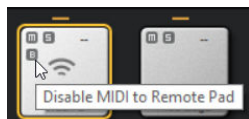
#### NOTE

- If the destination pad also contains MIDI effects, these are not taken into account.
- If you set up remote MIDI effects on a pad for which samples are assigned, the remote MIDI effects are applied only to the samples on the destination pad.

If **Remote** mode is activated for a pad and a destination pad is specified, a remote icon is displayed on the pad.



- To bypass the remote effects, click **Disable MIDI to Remote Pad** to the left of the remote icon.



## Rudiments

### Active

Click this to activate the articulation.

### Type

Determines the rudiment type.

- **Flam** plays two hits very close together.
- **Drag** plays three hits very close together.
- **Ruff** plays four hits very close together.
- **Roll** continually plays drum hits to produce a sustaining drum sound.
- **Buzz** emulates the effect of a drummer pressing the stick into the drum while hitting it. The stick bounces on the drum, producing multiple hits that sound like a decaying drum roll.

### Flam, Drag, Ruff and Roll

For **Flam**, **Drag**, **Ruff**, and **Roll**, the following parameters are available:

#### Sync

Synchronizes the hits to the project tempo. The time span between the hits is set in fractions of beats.

#### Time

Adjusts the time span between the hits.

#### Note Value

If **Sync** is activated, this parameter adjusts the time span in fractions of beats.

#### Dynamics

Adjusts the dynamics of the hits.

At the minimum setting, all hits are played with the same volume. The higher the setting, the more the difference in volume between the loud and the soft hits increases.

#### Humanize

Use this parameter to randomize the timing, the dynamics, and the pitch of the hits.

### Buzz

For **Buzz**, the following parameters are available:

#### Grip

Determines how the drumstick is held. Higher settings produce less buzz.

#### Pressure

Adjusts the pressure on the stick. Higher settings produce a longer decay of the buzz.

#### Humanize

Use this parameter to randomize the timing, the dynamics, and the pitch of the hits.

## MIDI Delay

MIDI Delay produces echo effects by repeating the notes that you play.

The subsequent note events can be modified, for example, you can vary the time span between the echoes with the **Distribution** parameter.

#### Active

Activates/Deactivates the MIDI Delay effect.

#### Sync

Synchronizes the echoes to the project tempo. The time span between the echoes is set in fractions of beats.

### Time

Adjusts the time span between the echoes.

### Note Value

If **Sync** is activated, this parameter adjusts the time span in fractions of beats.

### Repeats

Determines the maximum number of echoes.

### Damping

Determines whether the echoes fade in or fade out with the MIDI velocity. If you set this parameter to negative values, the MIDI velocity gradually increases. If you set this parameter to positive values, the MIDI velocity gradually decreases.

#### NOTE

Damping only shows an effect if the sound settings of the samples use velocity.

---

### Pitch

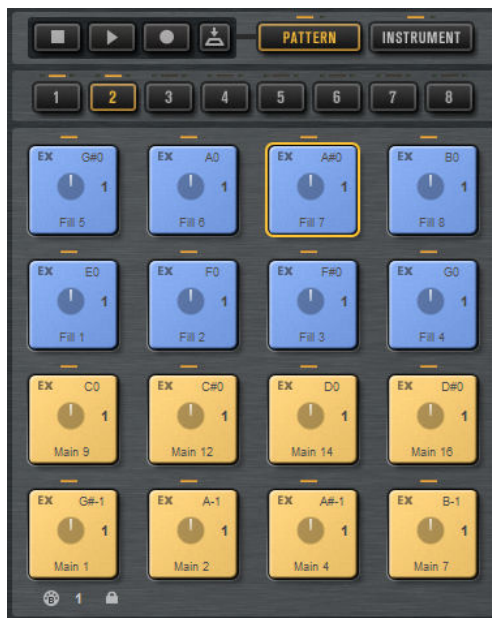
Determines how much the pitch changes from echo to echo.

### Distribution

Determines the time distribution of the echoes. If you set this parameter to negative values, the time span between echoes gets shorter, that is, the echoes speed up. With positive values, the echoes slow down.

## Pattern Pads

Pattern pads trigger MIDI drum patterns or styles.



The pad section provides up to 128 pads, organized in 8 groups of 16 pads. Each pad is mapped to a MIDI note. You can assign MIDI patterns to each pattern pad, to trigger complete drum patterns or single instrument patterns, depending on the MIDI files. The pads are used to switch between patterns.

If a MIDI file is assigned to a pad, the pad shows a progress indicator and a beat counter. When the pattern is triggered, the progress indicator shows the playing progress graphically. In addition, the beat counter shows the current beat during playback. This allows you to see which

patterns are currently running and at which playing position, relative to the length of the pattern. This can be particularly helpful when **Toggle** is selected on the **Play Mode** pop-up menu, because it provides a quick overview of the patterns that will be stopped and those that will be triggered.

## Assigning MIDI Patterns or Styles to Pads

You can assign MIDI patterns or styles to pads from various locations, by double-clicking, by using drag and drop or via the **Load** dialogs.

- Double click a file on the **Styles** page or the **MIDI** page in the **Load** panel to assign it to the selected pad.


### NOTE

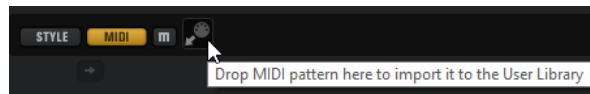
If you double click a percussion style when a Beat Agent or Acoustic Agent kit is loaded, the style is converted to a MIDI pattern and opened in the **Pattern Player**.

- Drag a MIDI pattern from the **MIDI** page in the **Load** panel onto a pad. You can also assign multiple MIDI files to consecutive pads this way.
- Drag a style from the **Styles** page in the **Load** panel onto a pad. You can also assign multiple styles to consecutive pads this way.

### NOTE

If the current player that is used for a pad does not support the dragged style, the file is converted to a MIDI pattern and loaded into the **MIDI Player**.

- Drag a MIDI pattern or a style from the **Load** panel onto the **Load** field in the **MIDI Player/Style Player**.
- Drag a MIDI pattern or a style onto a field on the **Overview** page.
- Drag a MIDI pattern or a style onto the **Select MIDI Pattern** field at the top of the **Pattern** editor.
- Drag a MIDI file from the File Explorer/macOS Finder or from the **MediaBay** of the Steinberg DAW onto a pad.
- Drag a MIDI part from the host application onto a pad.
- Drag a file from the File Explorer/macOS Finder onto the **MIDI Import**  field in the **MIDI Player**. The file is imported to your user pattern library and assigned to the selected pad.



- Select a pad, open the **MIDI Player** or the **Style Player** and select a file from the **Select MIDI Pattern/Select Style** pop-up menus.

### RELATED LINKS

[Assigning Multiple Files to Pads](#) on page 60

## Assigning Multiple Files to Pads

You can assign several MIDI patterns or styles to multiple consecutive pads at the same time.

### PROCEDURE

1. Move the mouse over the lower part of the pad on which you want to drop the first file. A yellow frame indicates which pads receive a file.



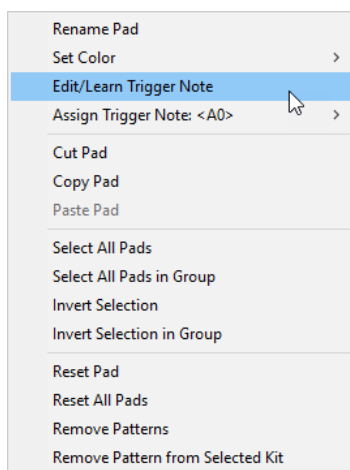
2. Drop the files.
- 

#### RESULT

The files are imported to your user library and are automatically assigned to the pads.

## Pattern Pad Context Menu

The context menu contains functions and settings for the pattern pads.



### Rename Pad

Allows you to rename the pad.

### Set Color

Allows you to select one of the 16 available colors for the pad.

### Edit/Learn Trigger Note

Allows you to specify a new trigger note for the pad, either by entering it into the value field or by playing the corresponding note on your hardware controller.

### Assign Trigger Note

Allows you to select a new trigger note for the pad from a submenu.

### Cut Pad

Removes all pad settings and pastes them to the clipboard.

### Copy Pad

Copies the settings of the pad to the clipboard.

### Paste Pad

Allows you to paste the pad settings from the clipboard to another pattern pad, of the same or a different pattern group.

### Select All Pads

Selects all 128 pads.

### Invert Selection

Inverts the selection for all pads, that is, all unselected pads become selected and vice versa.

### Reset Pad

Removes the MIDI file and the name from the pad and resets color and trigger note settings to the default values.

### Reset All Pads

Removes the MIDI file and the name from all pads and resets their color and trigger note settings to the default values.

### Remove Patterns

Removes all patterns and styles.

### Remove Pattern from Selected Kit

Removes the pattern or style for the selected kit.

## Global Pattern Pads

You can use the pattern pads in Groove Agent individually for each kit or globally for all kits.

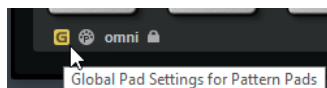
### NOTE

Be sure to check whether instrument pads and pattern pads share the same trigger key. It may be necessary to separate control over pattern and instrument pads, using the **Use Pattern MIDI Port for Pattern Pads** option or by selecting a different MIDI channel for the pattern pads.

If **Global** mode is not activated, each kit plays its patterns when pattern pads are triggered. Pad colors, names, and other pad settings are individual for each kit. The patterns are played using the MIDI channel that is selected for the pattern pad. If pattern pads are set to the same MIDI channel, they are played together.

If **Global** mode is activated, all patterns of all kits play together when a pattern pad is triggered. This allows you to play complex arrangements of multiple kits using only one key.

To use global mode, activate **Global Pad Settings for Pattern Pads** on the left below the pads.



When you switch to global mode, the pattern pads start out with their default settings, that is, no colors or names are specified for the pads and no pad settings, such as **Exclusive** mode, for example, are made.

You can configure the global pads independently for the individual pattern pads. You can also copy and paste pattern pad settings, either between individual pattern pads, or between global and individual pattern pads. This allows you to use the pattern pad settings of one kit slot for the global pattern pad settings, too, for example.

- To copy settings, right-click a kit in the kit rack and select **Copy Global Pattern Pad Settings** or **Copy Kit Pattern Pad Settings**, depending on which settings you want to copy.
- To paste the settings, open the kit rack context menu and select **Paste To Kit Pattern Pad Settings** or **Paste To Global Pattern Pad Settings**, depending on where you want to paste the copied settings.

### RELATED LINKS

[Using Different MIDI Channels/Ports for Instrument Pads and Pattern Pads](#) on page 52

## Playing Patterns Using the Transport Controls

In individual mode, each kit has its own transport controls.

---

### PROCEDURE

1. Select a pattern pad for one kit slot and press **Play**.  
Only this pattern is played back.
2. Switch to another slot, select a pad, and press **Play**.  
The second kit slot starts to play. If **Sync to Beat** is activated, playback starts based on the current playback position.
3. If you now press **Stop**, playback only stops for the current kit slot. To start or stop playback for all kit slots simultaneously, **Shift-click** the **Play** or **Stop** buttons.

### NOTE

- If you activate **Follow Transport** for one slot, its playback follows the start/stop commands and time position of your host sequencer. However, any slots for which **Follow Transport** is not activated will not follow. You can still manually control their playback using the transport controls in Groove Agent.
  - To activate/deactivate **Follow Transport** for all kit slots simultaneously, **Shift-click** the **Follow Transport** button.
- 

## Muting Individual Pads in Global Mode

The **Overview** page allows you to mute individual pads, even while **Global** mode is activated

### PREREQUISITE

**Global** mode is activated below the pattern pads.

### NOTE

If **Global** mode is deactivated, you can mute individual pads using the **Pad On/Off** buttons at the top right of the **Agent** page.

---

### PROCEDURE

1. Open the **Overview** page.
  2. Deactivate the **Pattern Active** button for the pad that you want to mute.
- 

## Removing MIDI Files from Pads

You can remove patterns and styles from a pattern pad using the pad context menu.

- To remove the pattern or style for a single kit and pattern pad, right-click a pad and select **Remove Pattern from Selected Kit** from the context menu.
- To remove all patterns and styles from all kits at the same time right-click one of the pads and select **Remove Patterns** from the context menu.

## Locking Pad Settings

Locking the pad settings is useful if **Global** mode is activated for the pattern pads and you want to keep the current pad settings for one kit slot, for example.

If the pad settings are not locked and you load a new kit, pad settings that are saved in the kit preset, such as **Exclusive**, **Play Mode**, pad color, etc. overwrite the existing pad settings.

NOTE

Inactive pads saved in the kit preset do not overwrite any existing pad settings.

---

- To lock the pad settings, activate **Lock Global Pad Settings**  below the pad section. If this button is activated, the current pad settings are kept when you load a new kit.

## Moving and Copying Pattern Pads

You can copy or move pattern pads with all their settings to other pattern pads of the same or a different pattern group.

- To move the active pattern pad with all its settings to another pad, drag the pad and drop it on the destination pad.
- To copy a pattern pad to another pad, hold down **Alt** and drag the pad on the destination pad.
- To move or copy one or more pads onto other pads, use the context menu commands **Cut Pad**, **Copy Pad**, and **Paste Pad**.  
This way, you can move or copy multiple pads at the same time.

NOTE

You can also move or copy pads between pad groups. To do so, first drag the pad onto the group button for the group to which you want to move or copy the pad, then drop it onto the destination pad.

---

## Pattern Groups

You can save the 16 pads of a group with their patterns and settings as a pattern group. This allows you to quickly restore and reuse particular patterns and settings.

Pattern groups include all settings that you make in the **Pad Settings** section at the bottom of the **Agent** page, such as **Exclusive** mode, **Play Mode**, etc.

- To save the current pattern group for a kit, right-click the kit in the kit rack or the corresponding slot on the **Overview** page and select **Save Pattern Group**.
- To load a pattern group, right-click the kit in the kit rack and select **Load Pattern Group**.

NOTE

If you load a pattern group, the pad settings are only restored on empty pads. If you have assigned a pattern to a pad, your pad settings are not overwritten by the pattern group.

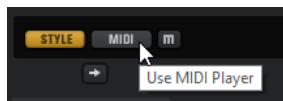
---

## Agent Page

The **Agent** page allows you to select and set up the patterns or styles that are played by the pattern pads. With the two buttons at the top, you can select whether you want to use the **MIDI Player** or the **Style Player**.

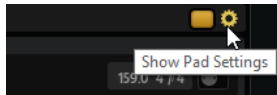
The **MIDI Player** allows you to play and modify one pattern. The **Style Player** offers a variety of patterns, suited to create the different parts of your drum tracks, for example. Both players offer you a range of playback functions and settings.

You can switch between the two players using the buttons at the top of the page.

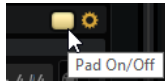




You can display the pad settings at the bottom of the page by activating the **Show Pad Settings** button at the top right of the **Agent** page.



The players are only available for active pads. To activate a pad, click the **Pad On/Off** button in the top right section of the page.



#### RELATED LINKS

[Style Player](#) on page 67

[MIDI Player](#) on page 65

[Pad Settings](#) on page 74

## MIDI Player

The **MIDI Player** allows you to load your own MIDI files or one of the included MIDI patterns and set up playback for them.



### Mute Pattern

Mutes the current pattern.

### MIDI Import

To import MIDI files from your file system or MIDI parts from your host application into the user pattern library, drag them onto the **MIDI Import** field.

You can import multiple MIDI files at the same time. The first file is assigned to the selected pad.

### Load MIDI Pattern

Allows you to load a MIDI pattern.

#### NOTE

Pattern pads always contain the MIDI data and do not reference the original MIDI files.

You can also load a pattern by dragging it from the **Load** panel onto the **Load MIDI Pattern** field. If you drag a style file onto the field, the **Agent** page automatically switches to the **Style Player**.


### Save MIDI Pattern

Allows you to save the current MIDI pattern as user pattern.

### Original Tempo/Time Signature

Displays the original tempo and time signature as saved in the MIDI file.

### MIDI Export

To export a pattern, click the **MIDI Export**  field and drag it onto a MIDI track in your host application. You can also drag the pattern to other locations and applications that support MIDI files.

### Quantize Amount

This parameter defines how much of the quantization grid is applied. A value of 100 % means the MIDI note events play back only at the specified quantize note value. Smaller values move the notes only partially towards the next quantize note value. With a value of 0 %, no quantization is applied.

### Quantize Grid

This parameter allows you to set up a quantization grid, in fractions of beats. You can also specify dotted and triplet values.

### Swing Factor

Allows you to shift the timing of notes on even numbered beats to give the pattern a swing feeling. Negative values shift the timing backward, and the notes are played earlier. Positive values shift the timing forward, and the notes are played later.

### Swing Grid

Determines the grid for applying **Swing**. For example, to shift the timing of every 16th note in a pattern, set this to **1/16**.

### Start

Specifies the beat from which the pattern starts to play.

### End

Specifies the end of the pattern. Initially, this parameter is set to the original length of the MIDI pattern.

This value is limited to the length of the pattern. You can change the maximum length in the **Pattern** editor, either by dragging the locator to the right or by entering the value manually in the **End** field on the info line.

### Effective Pattern Length

You can use the range slider below the **Start** and **End** parameters to adjust the range of the pattern loop. To change one of the values, drag the left or right edge of the slider.

### Gate Scale

Allows you to shorten or lengthen the notes of the pattern. At a value of 100 %, the notes play with their original gate length.

#### NOTE

**Gate Scale** has no effect on samples that are played in **One Shot** mode. They always sound until the end.

### Velocity Scale

Raises or lowers the note-on velocities of the pattern. At a value of 100 %, the notes are played with their original velocity.

### Tempo Scale

Defines the speed at which the pattern is running. You can choose between half, normal, and double speed.

### MIDI Import/Export and Alternative Trigger Note Mappings

If you are working with alternative trigger note mappings, this is taken into account and the MIDI pattern is adapted automatically on import/export. This is important if you are recording MIDI with a hardware drum controller and you want to import MIDI parts from the host application or export patterns from Groove Agent to the host application during that process.

If you recorded the MIDI file with the standard trigger note mapping, deactivate **Use Hardware Controller Mapping** in the pad section.

#### RELATED LINKS

[Playing back Pattern Pads](#) on page 16

[Using an Alternative MIDI Trigger Note Mapping](#) on page 55

[Pattern Editor Toolbar](#) on page 83

## Style Player

The **Style Player** allows you to load one of the included styles and make playback settings for it.

**Styles** are complex structures of multiple patterns suited to create different sections of the drum tracks, such as, fills, endings, and intros.



#### NOTE

If you want to use Beat Agent kits with the **Style Player**, make sure to use a GM instrument mapping, such as is used in the Acoustic Agent kits, for example.

### Mute Pattern

Mutes the current pattern.

### Load Style

Allows you to load a style.

You can also load a style by dragging it from the **Load** section onto the **Load Style** field. If you drag a MIDI pattern file onto the field, the **Agent** page automatically switches to the **MIDI Player**.

### Original Tempo/Time Signature

Displays the original tempo and time signature as saved in the MIDI file.

### MIDI Export

To export a style, click the **MIDI Export** field and drag it onto a MIDI track in your host application. You can also drag the style to other locations and applications that support MIDI files.

### Quantize Amount

Adjusts the timing of the pattern, from live-played to hard-quantized timing.

- At a setting of 0 %, the pattern plays with the original timing.
- At a setting of 100 %, the timing is hard-quantized.

#### NOTE

Flams and rolls are not affected by this parameter.

---

### Swing Factor

Allows you to shift the timing of notes on even numbered beats to give the pattern a swing feeling. Negative values shift the timing backward, and the notes are played earlier. Positive values shift the timing forward, and the notes are played later.

### Swing Grid

Determines the grid for applying **Swing**. For example, to shift the timing of every 16th note in a pattern, set this to **1/16**.

### Pattern Dial

Allows you to specify whether you want the style player to play a **Main** pattern, a **Fill**, an **Ending**, or an **Intro**. Depending on your selection, you can choose between different variations. For example, eight different fills are available.

### Complexity

You can modify the complexity of drum patterns. Increasing the complexity can add more notes, change from hihat to ride or from snare to toms, for example. This allows you to introduce a feel of free-style playing to a pattern. You can set the complexity in the following ways:

- Move the **Complexity** handle below the display to the right or left. Drag to the right to increase the complexity, and to the left to decrease the complexity.
- Click in the display and move the combined **Complexity/Intensity** control to the left or right.  
You can modify complexity and intensity at the same time by moving the control both on the x and the y axis.
- Double-click in the Complexity value field above the display and enter a new value.

#### NOTE

The **Complexity** parameter is only available for main and halftime patterns, not for intros, fills, and endings.

---

### Intensity

The intensity is controlled via the y-axis of the x/y control of the Style Player. All patterns support the **Intensity** parameter. The patterns play with their original velocity at the top position of the y-axis. Decreasing the intensity means decreasing the velocity. You can set the intensity in the following ways:

- Move the **Intensity** handle to the right of the display up or down.

- Click in the display and move the combined **Complexity/Intensity** control up or down.  
You can modify complexity and intensity at the same time by moving the control both on the x and the y axis.
- Double-click in the Intensity value field below the display and enter a new value.

### Half-Time On/Off

Activates half-time rhythmic feel for the playback of the main pattern. This is reached by extending the normal rhythm over two bars rather than by halving the tempo. If a style does not contain halftime patterns, this parameter is not available.

#### NOTE

This parameter affects only the main patterns. Intros, endings, and fills do not support half-time playing.

---

### Auto Complexity

This parameter varies the set **Complexity** randomly, creating a less static playback of the styles.

Click **Auto Complexity** to open the menu with the available options.

- **1/1 Bar** – The complexity varies randomly after a full bar.
- **1/2 Bar** – The complexity varies randomly after half of a bar.
- **1** – The complexity is increased on the first beat of a bar. All other beats of the bar have the same or a lower complexity.
- **1+3** – The complexity is increased on the first and the third beat of a bar. The other beats have the same or a lower complexity.
- **2+4** – The complexity is increased on the second and the fourth beat of a bar. All other beats of the bar have the same or a lower complexity.
- **1+4** – The complexity is increased on the first and the fourth beat of a bar. All other beats of the bar have the same or a lower complexity.
- **Auto Fill** – The complexity changes every time that a fill is played by the **Auto Fill** function.

For example, if **Auto Fill** is set to 2, the complexity changes automatically after bar 2, 4, 6, and so on.

#### NOTE

If **Auto Fill** is deactivated, the complexity does not change.

---

- To deactivate **Auto Complexity**, select **Off**.

If **Auto Complexity** is activated, the dot in the background of the complexity/intensity display indicates which complexity is currently played.

### Break

The fills from the style player do not have to cover an entire bar. For example, a fill might cover only the last two beats of a bar.

- If you want a pause before the fill starts, activate the **Break** button.
- If you want the previous pattern to play up to the start of the fill, deactivate the **Break** button. This way, no gaps occur.

If no pattern is playing when you trigger a fill, the main pattern of the style that is used by the pad is played until the fill starts. The **Complexity** setting of the pad is taken into account.

### Auto Fill

With the **Auto Fill** function, the main pattern can play back a fill after a specified interval of bars. This is useful for jamming with Groove Agent. For example, with a setting of **4**, you get a fill every 4 bars. Each time, the fill is randomly chosen from the eight available fills.

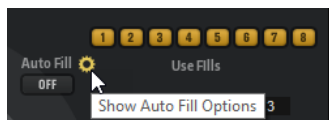
If **Auto Fill** is activated, the number of the fill that is playing lights up in yellow.

#### NOTE

This setting affects only the main pattern. Intros, endings, and fills are not affected. They play back as usual, that is, they do not change into a fill after the set interval.

---

### Auto Fill Options



If the **Auto Fill Options** are activated, you can choose which fills are used by **Auto Fill**. This way, you can limit the use of fills to those that really go with your sound.

#### NOTE

When you change the pattern group or load another kit, all fills are automatically activated.

---

### Crash Mode

Determines whether main pattern, intro, fill, and ending play with crash cymbals.

- If **Always** is selected, the style player plays the crash cymbals of the main pattern and a crash cymbal on the first beat after the fill.
- If **Fill/Ending** is selected, the style player plays only crash cymbals that are part of the fill or the ending. For example, crash cymbals from a main pattern that are used to fill up endings that do not start at the first beat are not played.
- If **Main** is selected, the style player plays only the crash cymbals of the main pattern.
- If **Off** is selected, the style player leaves out all crash cymbals.

### Hihat Mode

Specifies whether a pattern plays the hihat with all articulations, or only with the tip or the shank articulation.

#### NOTE

- This setting is taken into account when you export a pattern by dragging the MIDI export field to a MIDI track in your host application.
  - External MIDI input is not affected by this setting, that is, you can play all articulations.
- 

### Ride Mode

Specifies whether a pattern plays the ride cymbal with or without bell articulation.

#### NOTE

- This setting is taken into account when you export a pattern by dragging the MIDI export field to a MIDI track in your host application.

- External MIDI input is not affected by this setting, that is, you can play all articulations.
- 

RELATED LINKS

[Playing back Pattern Pads](#) on page 16

## Using the Style Player

If the **Style Player** is activated and a style is selected on the pop-up menu, you can assign intros, fills, and endings to pattern pads by using the large dial in the Performance section.

- To do so, activate the pattern pad and set the dial to the intro, fill, or ending that you want to use.

The pattern pad plays the selected part each time you trigger it.

NOTE

- Intros and endings are not affected by the parameters **Halftime**, **Complexity**, **Auto Complexity**, **Auto Fill**, and **Crash Mode**.
  - Fills are not affected by the parameters **Halftime**, **Complexity**, **Auto Complexity**, and **Auto Fill**.
- 

## Converting Intros, Main Patterns, Fills, or Endings into MIDI Patterns

You can convert the selected part of a style to a MIDI pattern. This allows you to edit this part in the **Pattern** editor, for example.

The conversion takes into account the playback parameters of a style, for example, **Intensity**, **Quantize**, **Swing**, and **Crash Filter** and converts them into MIDI events in the MIDI pattern. The resulting MIDI pattern for the main pattern of a style also reflects the set **Complexity**.

NOTE

**Auto Complexity** and **Auto Fill** are not taken into account.

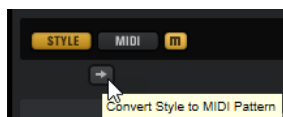
---

You can convert styles on the **Agent** page or on the **Overview** page.

---

PROCEDURE

1. In the **Style Player** page, select the part of the style that you want to convert, that is, main pattern, intro, fill, or ending that you want to convert.
2. Set up the playback parameters, and click **Convert Style to MIDI Pattern**.



When converting the **Main** part of a style, all performance settings, such as **Auto Complexity**, **Auto Fill**, **Quantize**, etc. are taken into account. For example, if **Auto Fill** is set to 2 and the **Main** part is 4 bars long, the converted MIDI pattern will contain a fill on bar 2 and another one on bar 4. If **Auto Fill** is set to 4, only the last bar will be a fill.

---

RESULT

The style is converted into a MIDI pattern and the **MIDI Player** is automatically shown on the **Agent** page.

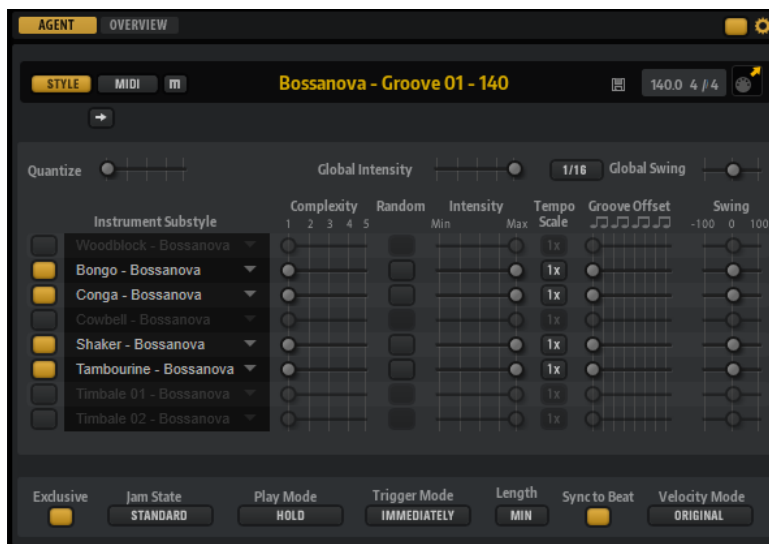
NOTE

Once you have converted a part of a style into a MIDI pattern, it cannot be used in the **Style Player** any longer.

---

## Percussion Agent Style Player

The **Style Player** allows you to combine up to eight instrument substyles. Each substyle plays a typical rhythm pattern with a specified percussion instrument.



### Mute Pattern

Mutes the current pattern.

### Load Style

Allows you to load a style.

You can also load a style by dragging it from the **Load** section onto the **Load Style** field. If you drag a MIDI pattern file onto the field, the **Agent** page automatically switches to the **MIDI Player**.

### Save Percussion Style

Allows you to save your settings as user style.

### Original Tempo/Time Signature

Displays the original tempo and time signature as saved in the MIDI file.

### MIDI Export

To export a style, click the **MIDI Export** field and drag it onto a MIDI track in your host application. You can also drag the style to other locations and applications that support MIDI files.

### Quantize

Adjusts the timing of the pattern, from live-played to hard-quantized timing.

- At a setting of 0 %, the pattern plays with the original timing.
- At a setting of 100 %, the timing is hard-quantized.

NOTE

Rudiments in the MIDI patterns are not affected by this parameter.

---



### Global Intensity

Decreases the intensity for the style.

### Global Swing

Allows you to shift the timing of notes on even-numbered beats to give the pattern a swing feeling. Negative values shift the timing backward, and the notes are played earlier. Positive values shift the timing forward, and the notes are played later.

### Global Swing Grid

Determines the grid for applying **Swing**. For example, to shift the timing at every 16th note position in a pattern, set this to **1/16**.

## Substyle Parameters

The following parameters affect only the playback of the substyles:

### Instrument On/Off

Activates/Deactivates playback for the corresponding instrument.

### Instrument Substyle

Allows you to load an instrument substyle.

Right-click the field to open a context menu allowing you to remove substyles.

- **Clear** removes the selected substyle.
- **Clear All Inactive** removes all substyles that are not active.
- **Clear All** removes all substyles.

### Complexity

- The higher the complexity, the more intense the rhythm pattern.  
This way, you can have more intensity in the bongo than in the cowbell, for example.

### Random Complexity

Randomizes the playback. The substyle automatically switches to a random complexity at each full bar.

### Intensity

Decreases the intensity for each substyle separately.

### Tempo Scale

Allows you to set the tempo of a substyle to half speed (**1/2**), normal speed (**1x**) and double speed (**2x**).

### Groove Offset

Offsets playback of the substyle by up to 8 eighth notes. For example, with an offset of 2, the playback starts on the second quarter note.

### Swing

Adjusts the swing factor for each substyle individually. The swing grid is defined globally with the **Global Swing Grid** parameter.

## Compiling a Percussion Style

You can compile a percussion style using up to eight substyles. The substyles are organized into folders according to their musical style.

### PREREQUISITE


- You have activated the pad that you want to use and the **Style Player** is activated on the **Agent** page.

- If you want to base your style on an existing style, you have loaded a percussion style via the **Load Style** field.
- 

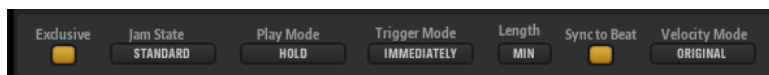
#### PROCEDURE

1. Activate the instrument substyles that you want to use.
  2. Click the small triangle at the right of the substyle field and select a substyle from the pop-up menus.  
The menus include substyles for accompanying specific styles from Acoustic Agent are available. These can be found in folders that are named after the corresponding Acoustic Agent style.
  3. Adjust the performance parameters.  
This allows you to modify playback of the substyle. For example, the **Complexity** parameter allows you to select one of five variations for a particular substyle.
  4. Click **Save Percussion Style** in the top right of the **Agent** page to save your compilation of instrument substyles together with the performance parameters with your user content.
- 

## Pad Settings

To display the pad settings below the MIDI Player or the Style Player, activate **Show Pad Settings**  at the top right of the **Agent** page.

The pad settings are common to all slots, that is, you set them up only once. However, these settings are part of the kits, and are replaced when you load a new kit into a slot.



### Exclusive

Activates/Deactivates exclusive playback for a pad. Triggering an exclusive pad stops playback of the current pattern, according to the set **Trigger Mode**. Pads for which this button is not activated can play simultaneously with other patterns.

If **Exclusive** mode is activated for a pad, this is indicated by an icon in the upper left corner of a pad.



### Jam State

Determines the play order of the pads if **Jam Mode** is activated and the pattern pad is in exclusive mode.

- If a pad with **Standard** jam state is triggered, any previous pads stop playing. The new pad plays exclusively.
- If **Next** is selected, playback jumps automatically to the first pad for which **Standard** jam state is selected and which is mapped higher up on the keyboard. If no pad with **Standard** jam state exists, the current pad plays back in a loop.
- If **Return** is selected, playback jumps back to the previous pad. Use this mode to switch from a pad with a fill back to the previous pad, for example. If you trigger several pads for which **Return** is activated in sequence, Groove Agent returns to the last pad in **Standard**, **Next**, or **Stop** mode. If no pad was triggered before, the current pad plays back in a loop.
- If **Stop** is selected, playback stops automatically when the entire pattern is played back.

The **Jam State** is indicated by different icons in the upper left corner of the pads.



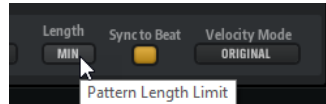
### Play Mode

- To play a pattern for as long as you hold down a key, select **Hold**.
- To start and stop playback with the trigger note for a pad, select **Toggle**.  
**Toggle** mode is best used for live performances. Otherwise, it can lead to unpredictable results, for example, when stopping and restarting playback in the host application or when locating to another position during playback.
- To play a pattern completely to its end, select **One Shot**. In this mode, note-off events are ignored. Playback stops automatically at the end of the pattern. To make sure that the pattern plays from start to end, deactivate **Sync to Beat**.

### Trigger Mode

Determines whether a pattern starts to play immediately, at the next beat, or at the next full measure.

### Pattern Length Limit



Determines the pattern length for playing back patterns when **Jam Mode** is active.

### Sync to Beat

If **Sync to Beat** is activated, triggering a pattern starts the pattern in sync with any other patterns that are playing. For example, if you trigger a pattern and trigger the next pattern after 3 beats, this pattern starts playing at beat 3. If **Sync to Beat** is deactivated, the second pattern starts from the beginning.

#### NOTE

If **Jam Mode** is activated, **Sync to Beat** is automatically deactivated for exclusive pads. This way, the patterns on exclusive pads are always played on the first beat, to ensure a predictable pattern switching behavior.

### Velocity Mode

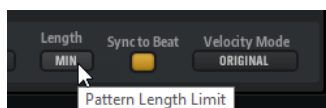
Specifies how the velocity of the notes that you play affects the notes of the pattern.

- If **Original** is selected, the notes of the pattern are played with the velocity that is saved with the pattern.
- If **As Played** is selected, the notes of the pattern are played with the velocity that you are playing on the keyboard.
- If **Original + As Played** is selected, the pattern velocity is determined by the combination of the velocity saved with the pattern and the velocity of your playing.

## Setting the Pattern Length Limit

When you work with multiple kits in different kit slots, they each have different patterns and these patterns or styles can differ in length. In this case, the corresponding players must use

different loop intervals. You can set up this interval with the **Pattern Length Limit** parameter in the **Pad Settings** section.



---

#### EXAMPLE

If you have two patterns, and pattern A plays one bar on the first kit and pattern B plays four bars on the second kit, pattern A loops four times while pattern B is only played once.

During regular playback, this works as expected, because the overall loop only plays for as long as you hold down a key. However, if **Jam Mode** is activated, it is necessary to specify at which moment playback must switch between pads. This is especially important for intros, fills, and endings.

---

#### EXAMPLE

If pattern A is a 1-bar fill that plays an Acoustic Agent style, and pattern B is a 4-bar Percussion Agent style, you want to play the fill and then jump back to the main pattern pad. This requires a reference length that forces the pad to play only this one bar. To set the reference length, set the length limit to **Min**. This way, playback switches between pads as soon as the shortest pattern or style has finished playing.

---

#### EXAMPLE

If you want to create a main drum rhythm that contains a 4-bar drum style with a 1-bar percussion pattern, you set **Pattern Length Limit** to **Max** to allow the drum style to play its full length and to let the percussion pattern loop four times.

If you set the length limit to **Max**, the longest pattern defines when to switch between pads. This can be useful for exclusive pads for which the **Jam State** is set to **Standard**, because they do not change automatically to another pad but continue to play until you trigger another pad.


---

#### EXAMPLE

If you use a pad with an ending that is based on a 2-bar file, but you only want to play a 1-bar ending, set **Pattern Length Limit** to **1** to make playback stop after one bar.

## Jam Mode

**Jam Mode** allows you to automatically switch between pattern pads during playback. For example, you can switch from an intro to a verse, or from a fill back to the previous verse, or even automatically stop playback.

If **Jam Mode**  is activated in the transport section, the **Play Mode** and **Trigger Mode** parameters are not available for pads in **Exclusive** mode. These pads are played back with a single click. Patterns only switch after entire bars. Pattern pads for which the **Exclusive Mode** button is deactivated behave like normal.

#### NOTE

If **Jam Mode** is activated, **Sync to Beat** is automatically deactivated for exclusive pads. This way, the patterns on exclusive pads are always played on the first beat, to ensure a predictable pattern switching behavior.

---

## Jam States

How the pattern pads behave in **Jam Mode** is defined by the **Jam State** parameter. This parameter is available if the **Jam Mode** button and the **Exclusive Mode** button are activated for a pattern pad.

RELATED LINKS

[Jam State](#) on page 74

## Using Jam Mode

**Jam Mode** allows you to play along and jam with Groove Agent. It is much more flexible than a static song or pattern list.

---

PROCEDURE

1. Load an intro, a verse, a fill, and an ending to four consecutive pattern pads.
  2. Activate **Exclusive Mode** for all four pads and set up the **Jam State** as follows:
    - Set the first pad containing the intro to **Next**.
    - Set the second pad containing the verse to **Standard**.
    - Set the third pad containing the fill to **Return**.
    - Set the fourth pad containing the ending to **Stop**.
  3. Activate **Jam Mode**.  
The **Play** button starts blinking to indicate that Groove Agent is waiting for a pattern pad to be triggered.
  4. Trigger the pad with the intro.  
The intro is played back. Then, playback switches to the pad that contains the verse and plays back the verse in a loop.
  5. Trigger the pad with the fill. After the fill, playback switches back to the pad with the verse and plays it back in a loop.
  6. Trigger the pad with the ending. Playback stops once the ending is completed.
- 

## Playing Individual Patterns in Jam Mode

If **Global** mode is deactivated, **Jam Mode** works independently for each kit slot. You can activate **Jam Mode** for multiple kit slots and jam on all of them.

---

PROCEDURE

1. Load two kits in two slots and activate **Jam Mode** for the first kit.  
The **Play** button starts blinking.
2. Trigger a pattern pad so that it starts to play.
3. Now switch to the second kit and activate **Jam Mode** here, too.  
As for the first kit, the **Play** button starts blinking and waits for a pattern to be triggered.

**NOTE**

To activate/deactivate **Jam Mode** for all kit slots simultaneously, **Shift-click** the **Jam Mode** button.

4. Trigger a pad. Playback of this pad now joins the playback of the first pad at the current play position.
- 

RESULT

You can now switch between the two running kit slots and switch pattern pads.

## Jam Mode and Follow Transport

If **Follow Transport** is activated in the kit slot section, Groove Agent reacts to the transport commands in the DAW.

If **Follow Transport** and **Jam Mode** are both activated, playback in Groove Agent begins as soon as the host transport starts.

If **Exclusive** mode is activated for the selected pad, playback starts with this pad. If **Exclusive** mode is not activated, playback starts with the first pad for which **Jam Mode** is set to **Standard**.

If you stop playback in the DAW, it also stops in Groove Agent.

However, if playback in Groove Agent stops, either because you use the **Stop** button or because playback reaches a pad that is set to **Stop**, playback in the host application still continues. If, at a later stage, you use the **Play** button in Groove Agent again, playback resumes at the project cursor position of the host application.

## Overview Page

The **Overview** page shows which patterns and styles are assigned to the pattern pads of the loaded kits. The columns correspond to the kits in the kit rack.

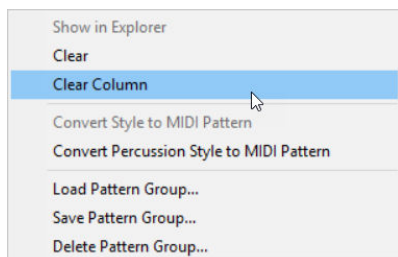


For each kit slot, the 16 pattern pads of the selected pattern group are displayed. Cells in which a name is displayed have a pattern or style assigned. If a pattern is assigned to a pad, its background is gray. If a style is assigned, its background is dark blue.

- To activate/deactivate playback for a pad, click its **Pad Active** button. This allows you to mute individual pads in **Global** mode.
- To load a pattern or style, click the small triangle on the right in a cell and select a file in the **Load** dialog.

## Overview Page Context Menu

The context menu contains the available editing functions.



### Show in File Explorer/macOS Finder

Opens the folder on your system in which the current user MIDI pattern or style is stored.

### Clear

Removes the assignment for the selected pattern pad.

### Clear Column

Removes all assignments for the selected pattern group.

### Convert Style to MIDI Pattern

Converts the style used by the pattern pad into a MIDI pattern.

### Convert Percussion Style to MIDI Pattern

Converts the percussion style used by the pattern pad into a MIDI pattern.

### Load Pattern Group

Allows you to load a pattern group.

### Save Pattern Group

Saves the current settings as pattern group.

### Delete Pattern Group

Allows you to delete a pattern group.

#### NOTE

You can delete your user pattern groups. Factory content cannot be deleted.

---

## Assigning Patterns and Styles to Cells

You can assign patterns or styles to the cells on the **Overview** page using the **Load** panel or the **Load** dialog.

---

### PROCEDURE

- Do one of the following:
    - Click the arrow icon on the right of a cell to open the **Load** dialog, select the pattern or style that you want to use and click **OK**.
    - Open the **MIDI** or **Styles** page in the **Load** section, activate **Auto Play**, step through the list until you found the file that you want to load and double-click it.
-

## Moving and Copying Patterns and Styles

The **Overview** page offers several possibilities to move, copy, or exchange the patterns or styles between the cells.

- To switch the content of two cells, drag a cell to another cell.
- To copy a pattern or style of a cell to another cell, hold down **Alt** and drag the cell to another cell.
- To move or copy patterns or styles to other groups, hold down **Alt** and drag the cell first over the corresponding group button.

This switches the **Overview** page to display this group. Now, you can drop the content on the destination cell.

### NOTE

- If you try to move or copy a style to a cell for an agent that does not support them, the styles are automatically converted to MIDI patterns.
  - If you load a pattern group that contains styles into a slot for an agent that does not support these styles, they are automatically converted to MIDI patterns.
- 

## Opening Patterns in the Pattern Editor

- To create a new pattern, double-click an empty cell.  
This opens the **Pattern** editor where you can enter events to create a new pattern.
- To edit an existing pattern, double-click the cell.  
This opens the **Pattern** editor where you can edit the events of the pattern.

### NOTE

You can only edit patterns in the **Pattern** editor, not styles. If you want to edit your styles this way, you must first convert the part of the style to a MIDI pattern.

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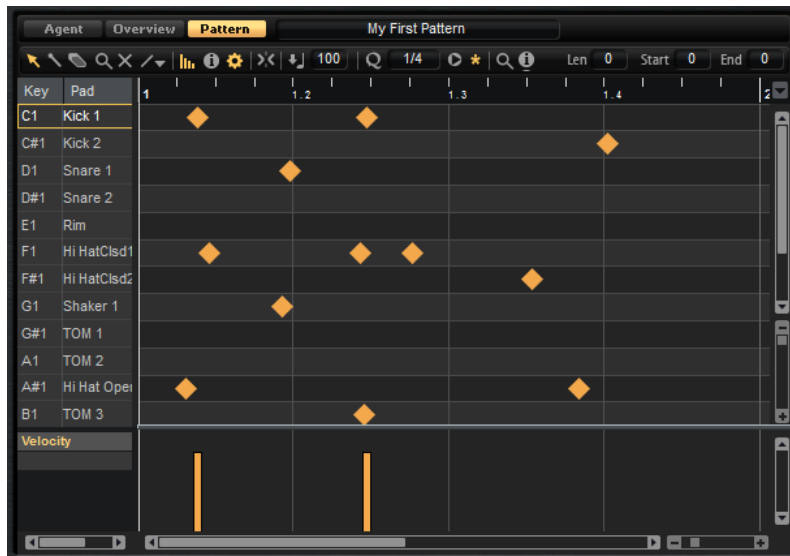
### RELATED LINKS

[Converting Intros, Main Patterns, Fills, or Endings into MIDI Patterns](#) on page 71  
[Pattern Editor](#) on page 81



## Pattern Editor

In the **Pattern** editor, you can create and edit MIDI drum patterns.



- To open the **Pattern** editor, click the **Pattern** tab on the **Edit** page.

### NOTE

The **Pattern** editor is only available for MIDI patterns, not for styles. You can convert styles to MIDI patterns on the **Agent** page.

---

The editor is subdivided into several sections:

- The title bar showing the name of the current pattern at the top.
- The toolbar below the title bar.
- The drum sounds list on the left.
- The event display on the right. In the event display, the drum notes are shown.
- The controller lane at the bottom.

## Drum Sounds List

In the list on the left, the drum sounds are listed. What is shown in the list depends on the **Visibility** setting on the **Configuration** pop-up menu.

The columns show the key, the pad name, the quantize setting, and the mute status of the pads.

### NOTE

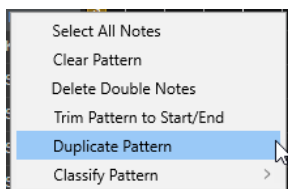
The column sorting is fixed, you cannot change it.

---

## Drum Sounds List Context Menu

Depending on whether you right-click the column header or the instrument lane, different options are available on the context menu.

The column header context menu contains the following options:



### Select All Notes

Selects all notes in the **Pattern** editor.

### Clear Pattern

Deletes all notes in the **Pattern** editor.

### Delete Double Notes

Deletes all double notes in the **Pattern** editor, that is, all notes that are placed on top of other notes at the same positions.

Double notes can occur when quantizing, drawing in notes, etc.

### Trim Pattern to Start/End

Deletes all notes outside the pattern start and end markers.

### Duplicate Pattern

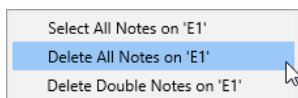
Copies all events between the pattern start and end markers and pastes them after the end marker. If any events are located after the end marker, these are deleted.

### Classify Pattern

This option is only available if you have used the **Classify Slices** function on the **Slice** tab for the instrument pad.

- **Use Best Classified Slices:** Moves the notes of each class to the cleanest sounding slice of the class.  
For example, if a sliced loop has clean sounding kicks and kicks with a crash or hihat on top, **Use Best Classified Slices** moves the notes to the slice with the cleanest sounding kick. This way, the sliced loop plays only with the cleanest sounding slices.
- **Use Longest Slices:** Moves the notes of each class to the longest slice of the class.  
This is useful if you want to play a sliced loop slower than its original tempo. If you slow down the tempo of a sliced loop, shorter slices can produce gaps. But if the sliced loop plays only with the longest slice of each class, these gaps are avoided.

On the context menu for the instrument lanes, the following options are available:



### Select All Notes on <Key>

Selects all notes on the selected key.

### Delete All Notes on <Key>

Deletes all notes on the selected key.

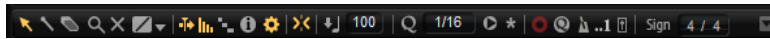
### Delete Double Notes on <Key>

Deletes all double notes on the selected key, that is, all notes that are placed on top of other notes at the same positions.

Double notes can occur when quantizing, drawing in notes, etc.

## Pattern Editor Toolbar

The toolbar contains tools, visibility options, and settings for creating and editing your patterns in the **Pattern** editor.



### Object Selection

Use this tool to select drum notes.

### Drumstick

Use this tool to draw in individual drum notes. To remove a note, click on it.

### Erase

Use this tool to remove drum notes.

### Zoom

Use this tool to zoom in on the click position. Hold down **Alt** to zoom out.

### Mute

Use this tool to mute individual drum notes.

### Lines

Use this tool to enter a line of drum notes or controller values.

### Auto-Scroll

Activates/Deactivates auto-scroll.

If **Auto-Scroll** is activated, the grid scrolls automatically during playback so that the position cursor is always visible.

### Show Controller Lane

Activate this button to show the controller lane at the bottom of the editor. In the controller lane, you can enter and edit MIDI controller values.

### Show Note Length

Switches the display of the notes between diamonds and bars. If bars are shown, you can edit the note length.

### Show Info Line

Shows/Hides the info line.

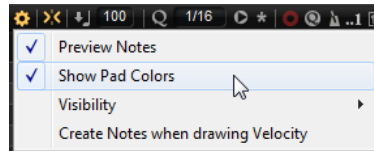
- If a note is selected, the info line shows the start, end, length, key, and velocity of the note event.  
To edit a parameter, double-click on the value, enter a new value, and press **Return**.
- If no note is selected, the info line shows the start and the end beat of the pattern.  
To change the pattern start, enter a new value or drag the start marker in the display to a new position. To change the pattern end, enter a new value or drag the end marker in the display to a new position.

#### NOTE

Notes after the pattern end and before the pattern start are not played back. However, they are not deleted when you change the pattern start/end.

## Configuration

If you click the **Configuration** button, the following options are available:



### Preview Notes

If this button is activated, notes are played back automatically when you create or select them.

### Show Pad Colors

If this button is activated, the notes in the editor are shown in the colors of the corresponding pads.

This allows you to keep a better overview over the different instruments if you are working with sliced loops that have been classified into kick, snare, hihat, etc.

### Visibility

- If you select **Show All Keys**, the list is sorted chromatically, starting with the lowest key (C-2) at the top and ending with the highest key (G8) at the bottom of the list.
- Select **Show Keys with Events** to show all keys for which MIDI notes are available at the top of the list. Keys that do not contain MIDI notes are not shown.
- Select **Show Keys with Pad Assignments** to show all keys for which samples are assigned to the pads. Keys without sample assignments are not shown.
- Select **Reverse Sorting** to reverse the sorting order of the drum sounds list.

### Create Notes when drawing Velocity

If this is activated, MIDI note events are automatically created when you draw in velocity events on the controller lane.

To the right of the **Configuration** button, the following tools and options are available:

### Snap

- If **Snap** is activated, notes snap to the grid when you create or move them.
- If **Snap** is deactivated, you can move notes freely to any position.

### NOTE

When working with the drumstick tool, you can deactivate **Snap** temporarily by pressing **Ctrl/Cmd**. This way, you can position notes freely.

### Velocity for new notes

Determines the velocity of notes that are entered in the **Pattern** editor.

- Click the button to select one of the four predefined velocity values, or enter the velocity value manually in the value field on the right.

### Iterative Quantize On/Off

Determines whether the notes are quantized exactly to the set quantize grid, or whether they are quantized iteratively, that is, moved half the way to the next quantize note value.

### Global Quantize On/Off

Allows you to select which value is used when **Snap** is activated – the global quantize value on the toolbar or the individual quantize values for the drum sounds.

### Record MIDI

Enables the live recording of MIDI events.

### Auto Quantize

If this button is activated, Groove Agent automatically quantizes the recorded notes according to either the note value set in the **Q** column of the instrument or, if **Global Quantize** is activated, according to the global quantization note value.

### Metronome

Activates/Deactivates the metronome for live recording of MIDI events.

### Precount Click

Activates/Deactivates a 1-bar precount for the metronome for live recording of MIDI events.

### Metronome Volume

Sets the volume of the click for live recording of MIDI events. To reset the setting, **Ctrl/Cmd**-click the button.

### Pattern Length

Displays the length of the pattern.

- To change the pattern length, enter a new value.

### Time Signature

Determines the time signature. You can enter the new signature as fractions of beats.

## Creating and Editing Patterns

You can create new patterns or edit existing patterns in the **Pattern** editor.

---

### PROCEDURE

1. Select the **Drumstick** tool.
2. Click in the editor to add new notes or modify the existing notes.
3. Optional: Enter controller values for the selected drum sound in the controller lane.
4. Optional: Enter a name for the pattern in the title bar.
5. Click the **Save MIDI Pattern** button in the title bar.

---

### RESULT

The pattern is saved in the User folder and can now be loaded via the pattern menu on the title bar.

## Entering, Editing, and Previewing Notes

- To enter notes, select the **Drumstick** tool and click in the event display. To enter a note and specify its velocity at the same time, hold down **Ctrl/Cmd-Shift**, click in the event display and drag up to increase the velocity, and down to decrease the velocity.

### NOTE

You can deactivate **Snap** temporarily by pressing **Ctrl/Cmd**. This way, you can position notes freely even if **Snap** is activated on the toolbar.

- 
- To preview an instrument, click in the **Key** column for the Instrument.
  - To mute a drum sound, click in the **Mute** column for the sound.

- To change the length of a note, activate the **Show Note Length** button on the toolbar, move the mouse pointer over the border of the note so that a double-arrow is shown, then click and drag left or right.  
If **Snap to Grid** is activated, the note end or start snaps to the grid when you change the note length.
- To move a note, drag it to another position.
- To delete a note, click it with the **Erase** tool.
- To cut, copy, and paste notes, use the standard key commands.  
Notes are pasted at the cursor position.
- To duplicate notes, select them and press **Ctrl/Cmd-[D]**.  
Duplicated notes are inserted after the last note of the selection, according to the set grid.


#### NOTE

When entering, editing, and duplicating notes, double notes can occur, that is, notes that are placed exactly on top of other notes. To remedy this, right-click the header of the drum sounds list and select **Delete Double Notes**.

---

## Quantizing Notes

You can draw notes with a global quantization grid or with an individual quantization grid for each instrument.

- To draw notes with the global quantization grid, set the **Quantize Presets** pop-up menu to the quantize value that you want to use and activate the **Global Quantize**  button.

#### NOTE

If you activate **Iterative Quantize**, the notes are not aligned with the exact quantize note positions, but are moved halfway there.

---

- To change the quantize value for a pad, click the **Q** column for the sound and select another value from the pop-up menu.

## Defining the Length of a Pattern

Changing the length of a pattern in the **Pattern** editor allows you to add a pause behind the last MIDI event of the pattern, for example.

---

#### PROCEDURE

- Drag the end marker to a new position on the timeline.  
If you drag the end marker to the left and the bars behind the end marker are empty, the length of the pattern is shortened automatically.  
If you drag the end marker to the left and the bars behind the end marker contain MIDI events, the length of the pattern is shortened only to the bar that contains the last MIDI event. No MIDI events are deleted.
- 

## Defining the Playback Range

You can specify the range of the pattern that you want to be played back.

---

#### PROCEDURE

- To define which part of a pattern is played back, drag the start and end markers of the pattern on the timeline.
-

#### RESULT

MIDI events before the start or after the end marker are not played back.

## Trimming Patterns

If you edit a pattern by changing its length, you can remove the notes and controllers that are no longer part of the pattern.

---

#### PROCEDURE

1. Set up the pattern start and end to encompass the range that you want to use for the pattern.
2. Right-click in the column header section of the drum sounds list, and select **Trim Pattern to Start/End**.

---

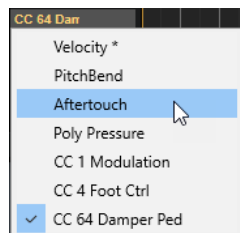
#### RESULT

All events outside the pattern start and end borders are removed.

## Editing Controllers on the Controller Lane

The controller lane below the event display shows MIDI controller events for the selected drum sound. You can show one MIDI controller at a time.

- To switch to another controller, click the name of the active controller and select another one from the list.



- To draw in controller events for the notes of the selected drum sound, move the mouse pointer over the controller lane and click.
- To draw in a series of controller events, use the **Lines** tool, and click and drag in the controller lane.

To select the mode for the **Lines** tool, click the arrow button to the right of the tool and select an option from the menu.

If **Line** is selected, you can click and drag to create a straight line of controller values.

If **Parabola**, **Sine**, **Triangle**, or **Square** are selected, you can insert a series of controller events representing the corresponding curve shapes.

- To control the open state of the hihat for an Acoustic Agent kit, select the controller **CC#4 Foot** and enter the controller events.

## Modulating the Pitch of Beat Agent Samples

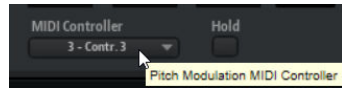
The **Pattern** editor allows you to modulate the pitch of Beat Agent samples that are assigned to instrument pads.

#### PREREQUISITE

You have added samples to your instrument pads and you have edited the samples to your liking.

#### PROCEDURE

1. Open the **Pitch** tab for a pad and select a MIDI controller on the **MIDI Controller** pop-up menu.



This makes the samples available for pitch modulation in the **Pattern** editor.

2. In the **Pattern** editor, open the controller lane pop-up menu and select the MIDI controller that you selected for the pad.
3. Draw in controller data to modulate the pitch of the samples.  
At a value of 65, the sample is played back without changes. Values above 65 increase the pitch, and values below 65 lower the pitch.

#### RESULT

The pitch of the sample is no longer static but modulated by the controller lane.

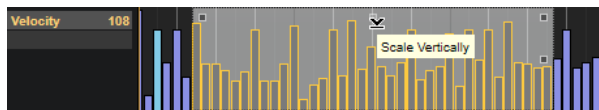
#### NOTE

You can assign several controllers to different samples/pads and control their pitches with multiple controller curves from within one pattern.

## Velocity Editing Options

If the **Velocity** controller values are displayed on the controller lane, several editing functions are available for selections.

If several MIDI notes are selected in the **Pattern** editor, their velocity values are enclosed in a selection rectangle on the controller lane. This rectangle offers you a variety of editing functions for the velocity curve.



#### Tilt Left

If you click in the upper left corner of the rectangle, you can tilt the left part of the curve. This allows you to tilt the event values at the start of the curve upwards or downwards.

#### Compress Left

If you **Alt**-click in the upper left corner of the editor, you can compress or expand the left part of the curve. This allows you to compress or expand the event values at the start of the curve.

#### Scale Vertically

If you click in the middle of the upper border of the editor, you can scale the curve vertically. This allows you to raise or lower the event values of the curve in percent.

#### Tilt Right

If you click in the upper right corner of the editor, you can tilt the right part of the curve. This allows you to tilt the event values at the end of the curve upwards or downwards.

#### Compress Right

If you **Alt**-click in the upper right corner of the editor, you can compress or expand the right part of the curve. This allows you to compress or expand the event values at the end of the curve.



### Scale Around Absolute Center

If you click in the middle right border of the editor, you can scale the curve absolute to its center. This allows you to raise or lower the event values horizontally around the center of the editor.

### Scale Around Relative Center

If you **Alt**-click in the middle right border of the editor, you can scale the curve relative to its center. This allows you to raise or lower the event values horizontally around the center of the editor.

## Recording MIDI Events Live

Instead of entering notes one by one using the tools in the **Pattern** editor, you can also record MIDI events live.

### PREREQUISITE

To enable the live recording of MIDI events, click the **Record MIDI** button on the toolbar of the **Pattern** editor or the **Record** button in the transport section above the pad section. The **Record** button in the transport section blinks to indicate that it is armed.

---

### PROCEDURE

1. Optional: Activate the **Metronome** and specify a **Precount Click**.
2. To start live recording, do one of the following:
  - Click the **Play** button in the pad section.
  - Trigger the pattern pad for which you want to record the notes.
  - Activate **Follow Transport** in the kit slot section and start playback in the sequencer application. This is especially useful if you want to record Groove Agent in the project context.
3. Play notes and MIDI controllers on your MIDI keyboard.  
If **Auto Quantize** is activated, the notes are recorded at the quantize grid positions.  
The recording runs in a cycle over the whole length of a pattern.

---

### RESULT

The notes that you play are added to the existing notes in the pattern.

### NOTE

If you record notes or controller events over already existing notes or controllers, these are replaced by the new ones.

---

### NOTE

**Jam Mode** and **Record MIDI** cannot be used together. The **Record** button is not active in **Jam Mode**. If you activate **Jam Mode** during recording, recording is stopped.

---

### RELATED LINKS

[Kit Slot](#) on page 33

# Beat Agent

Beat Agent is a full beat production instrument with all the tools and sounds to create amazing beats for any electronic or urban music genre.

Many amazing sounding drum kits are included, alongside all the advanced features that you need to edit existing kits and create your own ones.

Beat Agent also excels in manipulating samples and loops, with features like automatic loop slicing, one-click drum hit replacement, an onboard FX rack and much, much more.

## Beat Agent Sound Editing

On the **Edit** page for instrument pads, you set up the sound of the kits.

- To open the **Edit** page, click the **Edit** button in the upper section of the plug-in panel.



The **Edit** page contains the **Main**, **Pitch**, **Filter**, **Amp**, **Sample**, **Slice**, **Decompose**, **MIDI FX**, and **Recorder** tabs.

## Absolute and Relative Editing

When editing multiple samples, you can either change values absolutely for all the samples (**ABS**) or make relative changes (**REL**), depending on the setting of the corresponding button on the toolbar.

- If you use absolute editing and you change a parameter from 50 % to 60 % for one sample, all other samples are also set to 60 %.
- If you use relative editing and you change a parameter from 50 % to 60 % in one sample, another selected sample that was set to 70 % is set to 80 %.

#### NOTE

Relative changes can be made for all parameters that can be adjusted continuously. Changes of parameters that select one of multiple modes or switch between two states are always absolute.

---


#### RELATED LINKS

[Multi Selection and Parameter Controls](#) on page 8


## Showing Information About the Pads

Below the pads in the pad section, you can find two buttons that allow you to show more information on the instrument pads.

### Show Pad Info

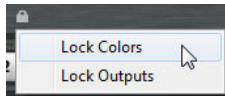
Activate **Show Pad Info**  to show the pad number, the number of samples, and the output on the pads.

### Show Exclusive Groups

Activate **Show Exclusive Groups**  to show the exclusive group settings for the pads. If you move the mouse over a pad that belongs to an exclusive group, all pads that belong to the same exclusive group are highlighted. If a hidden pad group contains pads that belong to the same exclusive group, a red LED above the group button lights up.

## Locking Color and Output Settings

Locking the color and output settings for the pads allows you to switch between different kits while keeping these settings.



---

#### PROCEDURE

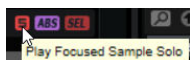
1. Right-click the lock button below the pads.
  2. On the context menu, specify which parameters you want to lock for the pads.  
If the button lights up, at least one setting is locked for the pads.
- 

## Editing Selected Samples or All Samples

You can apply your editing either to the selection (**SEL**) or to all samples of the pad (**PAD**), depending on the setting of the corresponding button on the toolbar.

## Soloing the Focused Sample

When you work with layered samples, there may be situations where you want to listen to and edit one single sample. For this, you can solo the focused sample.



If **Play Focused Sample Solo** on the top right of the **Edit** page is activated, only the focused sample is played when you trigger the pad, which enables you to edit individual samples in detail.

NOTE

This button is only available if **Edit Selected Samples or Pads** is set to **SEL**.

---

## Assigning Samples to Pads

You can assign samples to pads by using drag and drop, replace existing samples using the mapping view context menu, or add samples to pads using the **Browser**.

You can drag one or more samples from the File Explorer/macOS Finder and from your host application onto Groove Agent. Samples can be mapped to the same pad, or to different pads.

- To assign a sample to a pad, drag it onto the pad.

You can drag files from the following locations of the host application:

- MediaBay
- Project window
- Pool
- Sample Editor (regions)
- Audio Part Editor
- LoopMash slices

When you drag one or more samples onto a pad, the drop icons are shown. These determine whether the samples are added to the pad, whether the current sample is replaced with the one you are dragging, or whether the samples that you drag are assigned to multiple consecutive pads.

- Drag samples to the topmost drop icon to add them to the pad.

You can assign up to 32 samples to a pad.



- Drag one or more samples to the middle drop icon to replace the currently assigned samples with the ones that you are dragging.



- Drag several samples to the lowest drop icon to assign them to several consecutive pads in one or in several groups.



A yellow border is shown around the pads that receive one of the samples.

NOTE

How many samples can be dropped to several pads depends on the number of available pads.

---

If Groove Agent cannot supply a sufficient number of free pads for the number of dropped samples, a dialog is displayed, allowing you to proceed or cancel the operation. If pads already contained samples, these are replaced.

RELATED LINKS

[Mapping View](#) on page 95

## Moving and Copying Samples between Pads

You can be move and copy samples between pads, and even between different pad groups, using drag and drop.

- To move the samples from one pad to another pad, drag the pad onto the destination pad. Depending whether you drag it onto the top, middle, or bottom drop icon, the samples are added to the samples on the destination pad, or they replace any samples on the destination pad, or they are inserted onto the destination pad and the following pads.

**NOTE**

To copy the samples instead of moving them, keep **Alt** pressed when dragging the samples.

**NOTE**

When you copy pads that are part of a sliced loop, they are pasted as normal instrument pads, that is, they are no longer related to the loop.

## Moving and Copying Samples between Groups

To move or copy the samples to pads in another group, drag the samples on the group button first to show the group, and then to the new pad.

The options are the same as when moving samples between pads of the same group.

## Moving Sliced Loops

You can move sliced loops with one drag and drop operation.

- Drag the first slice of the loop and move it onto the pad section. When you start dragging, Groove Agent shows the pads on which the sliced loop can be dropped, that is, the pads that are followed by enough empty pads to insert all the slices. Pads on which the loop cannot be dropped are grayed out.
- Drop the slice on the pad from which you want to start inserting slices.

## Assigning Samples to Outputs

You can assign the output of an instrument pad to one of the available output busses. This allows you to apply external effect plug-ins to your samples or apply internal effects to the samples on a single pad, for example.

To apply your external effect plug-ins, assign the pad to one of the plug-in outputs. This allows you to edit the signals from this output in the **MixConsole** of your Steinberg DAW, for example.

To apply the internal effects on the samples of an instrument pad, assign it to one of the Beat Agent busses and add effects to this bus in the **Agent** mixer.

## Removing Samples From Pads

- To remove a sample from a pad, right-click it and select **Remove Sample** from the context menu.
- To remove all samples of a pad, right-click one of the samples and select **Remove Selected Samples**.

#### NOTE

If the **PAD/SEL** button is set to **PAD**, you cannot select individual samples and **Remove Selected Samples** removes all samples of the pad.

---

## Changing the Order of Pads

By default, instrument pads are sorted chromatically, based on the standard mapping. However, in some cases, you may want to display pads from other groups within a particular group. Therefore, you can exchange the position of pads.

For example, often a second bass drum is mapped to B0, which can be found in pad group 2. Most of the other common drum kit instruments are, however, located in group 3. If you want to see the second bass drum together with the other instruments of group 3, exchange the B0 pad with an unused pad in group 3.

- To exchange two pads, hold down **Shift** and drag one pad onto another pad. This exchanges the entire contents of the pads with all their settings.
- To see whether the order of the pads differs from the standard sorting, you can either check the trigger notes of the pads to see whether they are mapped chromatically or not, or you can click the **Info** button to see the pad index of all pads.
- To reset the order of all pads to a chromatic order, open the context menu for a pad and select **Reset Pad Order**.

## Saving Beat Agent Instruments

You can save Beat Agent instrument pads with all their settings as separate instruments.

---

#### PROCEDURE

1. Set up the instrument pad to your liking.
  2. Right-click the pad and select **Save Instrument**.
- 

#### RESULT

The pad is saved as a separate instrument and can be accessed via the **Instruments** tab on the **Load** panel.

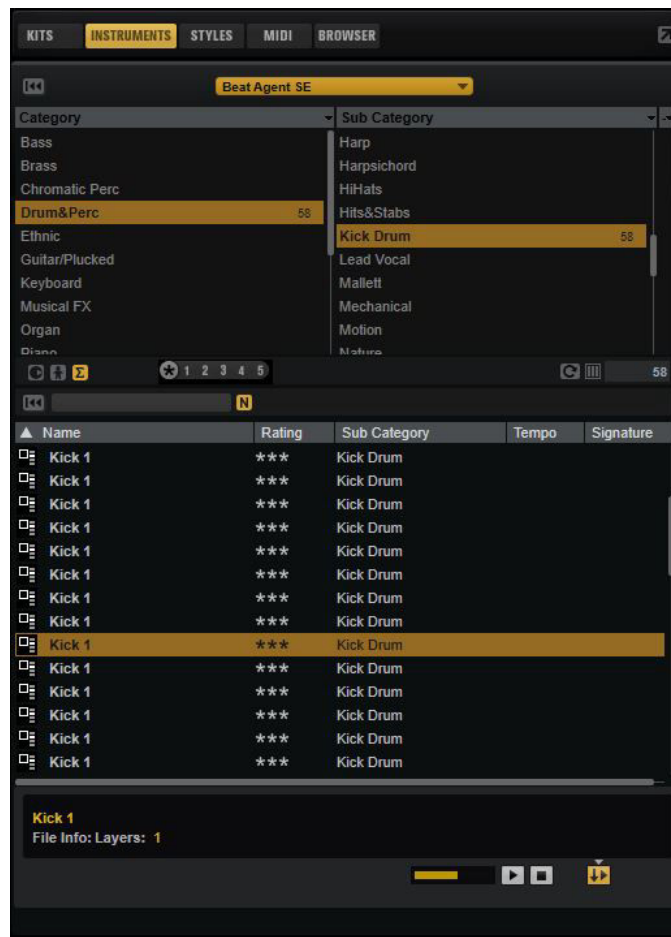
## Loading Beat Agent Instruments

You can load your saved instruments to an instrument pad. This is useful if you want to reuse your pads, or use them as basis for other instruments.

---

#### PROCEDURE

1. On the **Load** panel, open the **Instruments** tab.
2. Navigate to the instrument that you want to use.



3. Optional: Use the **Prelisten** controls below the results list to listen to the instruments. This helps you to find the instrument that works best in your current context.
4. When you have found the instrument that you want to use, double-click it or drag it onto the instrument pad.

#### NOTE

You can also load instruments via the pad context menu.

---

## Mapping View

The mapping view shows the sample mapping of the selected pad.

You can replace and remove samples in the mapping view and adjust their velocity ranges. The focused sample is displayed in a lighter color.

#### NOTE

The mapping view always shows the velocity ranges, even if they are not used to trigger samples.

---

#### RELATED LINKS

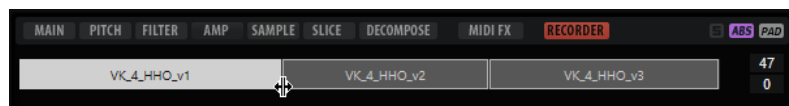
[Main Tab](#) on page 97

## Editing the Mapping of a Pad

A pad can contain up to 32 samples.



- You can add samples by dropping them onto the mapping view. They can be inserted between two other samples, behind the last sample, or in front of the first sample. This is indicated by a red insert line.
- To replace a sample, drag a new sample onto an existing sample. Which sample will be replaced is indicated by a red frame.
- To change the order of the samples, drag them to a new position.
- To map a sample to another pad, drag it onto the pad. This removes the sample from the current pad. To map the sample to another pad without losing the current mapping, hold down **Alt** while dragging.
- To change the velocity range, select a sample in the mapping view and enter new values in the **Hi** and **Lo** fields on the right or position the mouse between two samples, so that a double-arrow is shown, and drag to the left or right.



### NOTE

Changing the velocity range of a sample automatically adapts adjacent samples, that is, velocity ranges cannot overlap.

---

## Replacing Samples

You can replace individual samples in the mapping view with other samples on your hard disk.

### PROCEDURE

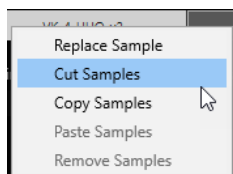
1. Right-click the sample and select **Replace Sample** from the context menu.
2. In the file dialog, navigate to the file that you want to use instead, select it, and click **Open**.

### RESULT


The sample is replaced.

## Mapping View Context Menu

The commands on the mapping view context menu allow you to manage the samples that are used on the pads.



### NOTE

You can only apply the context menu commands to individual samples if the **Edit Selected Samples or Pads** button is set to **SEL** . Otherwise, the entire pad content is affected.

---



### Replace Sample

Allows you to replace the focused sample.

### Cut Samples

Cuts the selected samples to the clipboard.

### Copy Samples

Copies the selected samples to the clipboard.

### Paste Samples

Pastes the samples from the clipboard to the focused pad. The pasted samples are inserted after the selected sample on the destination pad. All samples are evenly distributed over the velocity range.

#### NOTE

You can copy and paste samples between the pads of a kit, but also between different kits and even between different Groove Agent instances.

### Remove Samples

Removes the selected samples.

## Main Tab

The **Main** tab gives you access to the sample mapping of the pad as well as to the most important parameters.



The **Main** tab shows a simplified sample editor. You can adjust the sample start and end markers, the fade-in and fade-out markers, and the fade curves in the display.

### Mode

Determines the trigger mode for the samples of a pad:

- In **Velocity** mode, the incoming velocity determines which sample is played.
- In **Layer** mode, all samples are played at the same time, regardless of their velocity.
- In **Round Robin** mode, the samples are played repeatedly one after the other, from left to right.
- In **Random** mode, samples are played randomly. Repetitions can occur.

- In **Random Exclusive** mode, samples are played randomly, but repetitions are not allowed.

### Poly

Sets the maximum polyphony of a pad. For example, if this is set to 4, you can trigger a pad 4 times before notes are stolen.

#### NOTE

The polyphony value represents the number of notes that can sound simultaneously, therefore triggering layered samples on a pad may lead to a much higher number of actual sample voices.

---

### Fade

Specifies the time it takes for a voice to fade out when voices are stolen.

#### NOTE

You can specify different fade settings for the different samples of a pad.

---

### Exclusive Group

This allows you to assign a pad to one of 32 exclusive groups. Pads within a group are never played back simultaneously. When a new note is played, the previous note stops.

### Volume

Sets the level of the sample.

### Pan

Sets the position of the sample in the stereo panorama.

### Coarse

Adjusts the tuning in semitones.

### Fine

Adjusts the fine tuning in cents.

### Cutoff

Controls the cutoff frequency of the filter.

#### NOTE

**Cutoff**, **Resonance**, and **Distortion** are only available if a filter is used.

---

### Resonance

Sets the filter resonance.

### Distortion

Sets the amount of distortion. The effect of this parameter depends on the selected filter mode.

### Output

The output to which the samples are routed. The following outputs are available:

- The **Kit Mix**.
- One of the 16 **Agent** mixer channels.
- One of the 16 stereo output busses of the plug-in.

If you use Groove Agent in a Steinberg DAW, selecting a plug-in output from the menu automatically activates this output in the host application. The first stereo out is the **Master** output. This output is always active.

#### NOTE

Samples that are routed to an output that is deactivated in your host application are automatically sent to the **Master** output of the plug-in.

- One of the AUX channels. This allows you to create sub groups, for example.

#### NOTE

These outputs can all contain insert effects.

### Playback Quality

Sets the quality.

- **Standard:** Select this mode to play back the samples with their original bit depth and sample rate.
- **Vintage:** Select this mode to emulate the sound quality of early 12-bit drum machines. The detuning of the samples produces the typical aliasing effect. The sample rate is limited to 26040 Hz.
- **Turntable** mode is similar to **Vintage** mode. The samples are played with 12bit/26040 Hz. Use this mode to emulate the typical workflow of hip hop producers. Because the first digital drum machines only had a very limited amount of RAM, turntables were sampled at a speed of 45 RPM instead of 33 1/3 RPM. This way, more samples could be saved into the available RAM. During playback, the samples were tuned down, to correct for the change in pitch. This added the typical crunch and aliasing that the early drum machines are famous for.

#### NOTE

If **Vintage** or **Turntable** is selected for a sample, you cannot edit the sample using the AudioWarp functions on the **Sample** tab. If you try to select one of these modes for a sample that uses AudioWarp, a warning message is displayed.

### Filter Type

Sets the filter type. You can choose between **Classic**, **Tube Drive**, **Hard Clip**, **Bit Reduction** and **Rate Reduction**.

To deactivate the filter, select **Off**.

### Filter Shape

- LP 24, 18, 12, and 6 are low-pass filters with 24, 18, 12, and 6 dB/oct. Frequencies above the cutoff are attenuated.
- BP 12 and BP 24 are band-pass filters with 12 and 24 dB/oct. Frequencies below and above the cutoff are attenuated.
- HP 6+LP 18 and HP 6+LP 12 are combinations of a high-pass filter with 6 dB/oct and a low-pass filter with 18 and 12 dB/oct, respectively (asymmetric band-pass filter). Frequencies below and above the cutoff are attenuated. Attenuation is more pronounced for the frequencies above the cutoff.
- HP 12+LP 6 and HP 18+LP 6 are combinations of a high-pass filter with 12 and 18 dB/oct and a low-pass filter with 6 dB/oct (asymmetric band-pass filter). Frequencies below and above the cutoff are attenuated. Attenuation is more pronounced for the frequencies below the cutoff.

- HP 24, 18, 12, and 6 are high-pass filters with 24, 18, 12, and 6 dB/oct. Frequencies below the cutoff are attenuated.
- BR 12 and BR 24 are band-reject filters with 12 and 24 dB/oct. Frequencies around the cutoff are attenuated.
- BR 12+LP 6 and BR 12+LP 12 are combinations of a band-reject filter with 12 dB/oct and a low-pass filter with 6 and 12 dB/oct, respectively. Frequencies around and above the cutoff are attenuated.
- BP 12+BR 12 is a band-pass filter with 12 dB/oct plus a band-reject filter with 12 dB/oct. Frequencies below, above, and around the cutoff are attenuated.
- HP 6+BR 12 and HP 12+BR 12 are combinations of a high-pass filter with 6 and 12 dB/oct and a band-reject filter with 12 dB/oct. Frequencies below and around the cutoff are attenuated.
- AP is an all-pass filter with 18 dB/oct. Frequencies around the cutoff are attenuated.
- AP+LP 6 is an all-pass filter with 18 dB/oct plus a low-pass filter with 6 dB/oct. Frequencies around and above the cutoff are attenuated.
- HP 6+AP is a high-pass filter with 6 dB/oct plus an all-pass filter with 18 dB/oct. Frequencies around and below the cutoff are attenuated.

## Editing Envelopes

Beat Agent features pitch, filter, and amplifier envelopes. These envelopes are available on the **Pitch**, **Filter**, and **Amp** tabs.

Each of these multisegment envelopes has up to 128 nodes, for which **Time**, **Level**, and **Curve** parameters are available. The nodes and their parameters specify the shape of the envelope. You can edit one or multiple nodes by dragging them in the graphical envelope editor or by entering values manually. When editing an envelope node, a value tooltip displays the current settings of the node.

### Fixed

- If **Fixed** is activated and you move selected nodes on the time axis, only the selected nodes are moved.
- If **Fixed** is deactivated, all nodes that follow the edited nodes are also moved.

### Snap

You can select a second envelope to be displayed in the background of the edited envelope. If **Snap** is activated and you change the position of nodes, they snap to the nodes of the envelope that is shown in the background.




- To specify the envelope for the background, open the pop-up menu to the right of the **Snap** button and select an envelope from the list.

### NOTE

Pitch envelope nodes also snap to semitone positions.

### Show Channel Sum/Show Left Channel/Show Right Channel

With these buttons, you can show the sample waveform in the background of the envelope display. Any editing you perform on the envelopes is automatically reflected in the waveform.

- **Show Channel Sum**  shows the mono sum of the sample in the display.
- **Show Left Channel**  shows the left channel of the sample.
- **Show Right Channel**  shows the right channel of the sample.

## Selecting Nodes

- To select a node, click on it in the graphical editor.  
The focused node is indicated by a frame. The value fields to the left of the graphical envelope editor display the parameters of the focused node.
- If multiple nodes are selected, you can use the **Env Node** pop-up menu to set the focus to a different node without losing the current selection.
- To add a node to a selection, **Shift**-click the node. Selected nodes are edited together.
- You can select multiple nodes by drawing a rectangle around the nodes with the mouse.
- If the graphical editor has the focus, you can select the next or the previous node with the left and right arrow keys.

## Adjusting the Time Parameter

The **Time** parameter specifies the period of time between two nodes. Depending on the **Sync** mode, the **Time** parameter is displayed in milliseconds and seconds, or in fractions of beats.

- To set the **Time** parameter, select the nodes that you want to adjust and enter a value in the **Time** field.
- You can also adjust the **Time** parameter in the graphical envelope editor, by dragging the nodes left or right, to decrease or to increase the time span.  
For a higher resolution, hold **Shift** while moving the nodes.  
To limit the movement to the time axis, that is, to change only the horizontal position of a node, hold down **Ctrl/Cmd** while dragging.

## Adjusting the Level Parameter

The **Level** parameter specifies the amplitude of the envelope at the position set by the **Time** parameter.

- To set the **Level** parameter, select the nodes that you want to adjust and enter a value in the **Level** field.
- You can also adjust the **Level** parameter in the graphical envelope editor by dragging the selected nodes up or down, to decrease or increase the levels.  
For a higher resolution, hold **Shift** while moving the nodes.  
To limit the movement to the level axis, that is, to change only the vertical position of a node, hold down **Alt** while dragging.

## Adjusting the Curve Parameter

The **Curve** parameter allows you to adjust the curvature of the envelope curve between two nodes from linear to logarithmic or exponential behavior.

- To set the **Curve** parameter, select the nodes that you want to adjust and enter a value in the **Curve** field. Positive curve values change the curvature towards logarithmic and negative values towards exponential behavior.
- You can also adjust the **Curve** parameter in the graphical envelope editor by dragging the curve between two nodes.  
**Ctrl/Cmd**-click a curve to reset it to linear.

## Adding and Removing Nodes

- To add a node, double-click at the position where you want to add the node.
- To remove a node, double-click it.
- To delete several selected nodes, press **Delete**.

NOTE

- You cannot remove the first, the last, or the sustain node.
  - All nodes added after the sustain node always affect the release phase of the envelope.
- 

## Adding Nodes Using the Fill Function

The **Fill** function allows you to add multiple envelope nodes after the selected nodes.

---

PROCEDURE

1. On the pop-up menu to the right of the **Fill** button, select the number of nodes that you want to add.
  2. In the graphical envelope editor, select the node after which you want to add nodes.  
If several nodes are selected, the new nodes are inserted after the last selected node.  
If **Fixed** is deactivated, the added nodes are placed with the interval specified by the **Time** parameter of the selected node. If multiple nodes are selected, the interval is specified by the focused node.  
By activating **Sync**, you can specify the interval with the **Sync** note value. For example, if 1/4 is selected, new nodes are added at exact quarter note intervals.  
If **Fixed** is activated, the added nodes fill the space between the last selected node and the following one.
  3. Click the **Fill** button.
- 

## Synchronizing Envelopes to the Host Application

You can synchronize the envelopes to the tempo of your host application. This allows you to set envelope times that relate to musical time intervals, regardless of any tempo changes.

---

PROCEDURE

1. Click **Sync** to activate sync mode for the envelope.  
Sync mode is active if the button is highlighted. A grid spaced in fractions of beats is displayed in the graphical envelope editor.
2. On the pop-up menu located to the right of the **Sync** button, select a note value.  
This sets the resolution of the grid.

NOTE

The **Time** field of a node displays times in fractions of beats. The fraction is always reduced to the smallest possible value. 2/16 is displayed as 1/8, for example.

---

3. To use triplet note values, activate the **T** button.

NOTE

- Envelope nodes that do not exactly match a note value display the closest note value.
  - Nodes that exactly match a note value are indicated by a red dot inside the handle of the node. This is useful if you switch the grid between triplets and normal note values, for example. The triplet nodes still indicate that they match a note value, even if the grid shows normal note values.
- 

You can also enter note values and triplets manually in the value field.

---

## Envelope Modes

On the **Mode** pop-up menu, you can select one of four envelope modes, to specify how the envelope is played back each time you hit a key.

- Select **Sustain** to play the envelope from the first node to the sustain node. The sustain level is held for as long as you play the note. When you release the note, the envelope continues with the stages following the sustain. This mode is ideal for looped samples.
- Select **Loop** to play back the envelope from the first node to the loop nodes. Then, the loop is repeated for as long as the key is held. When you release the note, the envelope continues playing the stages that follow the sustain. This mode is ideal for adding motion to the sustain of the envelope.
- Select **One Shot** to play the envelope from the first to the last node, even if you release the key. The envelope has no sustain stage. This mode is ideal for drum samples.
- Select **Sample Loop** to preserve the natural attack of the sample. The decay of the envelope does not start until the sample has reached the sample loop start.

If you set the second node to the maximum level and use the following nodes to shape the decay during the loop phase of the sample, the envelope only affects the loop phase. The attack of the envelope is still executed.

## Setting Up the Loop

You can set up the envelope to repeat its playback between the selected nodes.

### PROCEDURE

1. Set the envelope mode to **Loop**.
2. The loop is indicated by the green region in the graphical envelope editor. Specify the loop start and end by dragging the borders of the region.  
The loop region can only be set up in the decay phase of the envelope.

## Pitch Tab

On the **Pitch** tab, you can set up the pitch envelope.



### Polarity

You can switch the pitch envelope from unipolar to bipolar.

If the **Polarity** button is activated, the envelope is bipolar, which means that you can modulate the pitch of the sample in two directions, higher or lower than the original pitch. If the **Polarity** button is deactivated, the envelope cannot be set to values below the original pitch.

### Key Range

Activate this button to specify the key range of the sample, that is, the range over which it is mapped chromatically to pads.

- **Low Key** specifies the first key for the mapping.
- **High Key** specifies the last key for the mapping.

If you deactivate the **Key Range** button, the **Low Key** and **High Key** fields are reset.

### Fixed Pitch

- If **Fixed Pitch** is deactivated, the sample plays chromatically within the key range.
- If **Fixed Pitch** is activated, the sample plays with its original pitch on all of the keys within the key range. This is useful if you want to layer a pad with the neighboring pads, for example.

### Coarse

Adjusts the tuning in semitones.

### Fine

Adjusts the fine tuning in cents.

### Random

Determines how much the pitch of a sample is changed randomly with each note that is played.

### Env Amnt

Determines how much the pitch is affected by the pitch envelope.

### Level Velocity (Vel>Lev)

Determines how the velocity affects the level of the envelope.

The level of the envelope depends on two factors: the setting of this parameter and how hard you hit a key. Positive values increase the level of the envelope the harder you hit a key. Negative values decrease the level of the envelope the harder you hit a key.

### Time Velocity (Vel>Time)

Adjusts the influence of velocity on the phases of the envelope. Positive values decrease the length of the phases for higher velocity values. Negative values increase the length of the phases for higher velocity values.

### Segments

Here, you can select which phases of the envelope are affected by the **Time Velocity** parameter.

- **Attack** – The velocity affects the attack only.
- **Attack + Decay** – The velocity affects all phases until the sustain.
- **Decay** – The velocity affects all phases until the sustain but without the attack.
- **Attack + Release** – The velocity affects the attack and the release phases.
- **All** – The velocity affects all phases.

### Level Velocity Curve

You can select the curve type to specify how the incoming velocity translates to the level of the envelope. The characteristic of each curve is displayed by a small icon.



### Pitchbend Up/Pitchbend Down

Determines the range for the modulation that is applied when you move the pitchbend wheel.

### MIDI Controller

Allows you to assign a MIDI controller that can be used to control the pitch of a sample. This controller can be sent either by the host application, a hardware controller, or internally using the controller lanes of the **Pattern** editor or the **Note Repeat** page.

### Hold

When playback in the **Pattern** editor or on the **Note Repeat** page is stopped, the controller values for pitch modulation are reset to a neutral value, without pitch modulation. If you activate **Hold**, the controllers remain on the last value that was sent.

## Mapping Samples Chromatically over Multiple Pads

The **Key Range** settings on the **Pitch** tab allow you to map samples chromatically over multiple pads.

---

### NOTE

If **Edit Selected Sample or Pad (SEL)** is activated, you adjust the key range for each sample individually.

---

### PROCEDURE

1. Set up the range with the **Low Key** and **High Key** value fields.  
When you adjust the key range for chromatically mapped samples, the pads within the key range inherit the name of the pad to which the original sample is assigned. The name is only set if the corresponding pad does not have a name. The offset in semitones from the original pad is added as suffix to the name. This helps you to find the original pad more easily.
  2. Optional: Set up the **Fixed Pitch** parameter.
    - If **Fixed Pitch** is activated, the sample is played with its original pitch on all the pads in the key range.
    - If **Fixed Pitch** is deactivated, the sample is played chromatically within the key range.
- 

### RESULT

The samples are mapped to the pads. An icon with two notes indicates which pads play a chromatically mapped sample.

### AFTER COMPLETING THIS TASK

The context menu of pads that contain chromatically mapped samples offers the **Chromatically Mapped from** function, allowing you to locate the original pad for the mapped samples. The original pad itself does not contain this function.

## Filter Tab

The **Filter** tab allows you to adjust the tone color of the sound. The filter envelope controls the cutoff frequency to shape the harmonic content over time.



### Filter Type

Sets the filter type. You can choose between **Classic**, **Tube Drive**, **Hard Clip**, **Bit Reduction** and **Rate Reduction**.

To deactivate the filter, select **Off**.

### Filter Shape

- LP 24, 18, 12, and 6 are low-pass filters with 24, 18, 12, and 6 dB/oct. Frequencies above the cutoff are attenuated.
- BP 12 and BP 24 are band-pass filters with 12 and 24 dB/oct. Frequencies below and above the cutoff are attenuated.
- HP 6+LP 18 and HP 6+LP 12 are combinations of a high-pass filter with 6 dB/oct and a low-pass filter with 18 and 12 dB/oct, respectively (asymmetric band-pass filter). Frequencies below and above the cutoff are attenuated. Attenuation is more pronounced for the frequencies above the cutoff.
- HP 12+LP 6 and HP 18+LP 6 are combinations of a high-pass filter with 12 and 18 dB/oct and a low-pass filter with 6 dB/oct (asymmetric band-pass filter). Frequencies below and above the cutoff are attenuated. Attenuation is more pronounced for the frequencies below the cutoff.
- HP 24, 18, 12, and 6 are high-pass filters with 24, 18, 12, and 6 dB/oct. Frequencies below the cutoff are attenuated.
- BR 12 and BR 24 are band-reject filters with 12 and 24 dB/oct. Frequencies around the cutoff are attenuated.
- BR 12+LP 6 and BR 12+LP 12 are combinations of a band-reject filter with 12 dB/oct and a low-pass filter with 6 and 12 dB/oct, respectively. Frequencies around and above the cutoff are attenuated.
- BP 12+BR 12 is a band-pass filter with 12 dB/oct plus a band-reject filter with 12 dB/oct. Frequencies below, above, and around the cutoff are attenuated.
- HP 6+BR 12 and HP 12+BR 12 are combinations of a high-pass filter with 6 and 12 dB/oct and a band-reject filter with 12 dB/oct. Frequencies below and around the cutoff are attenuated.
- AP is an all-pass filter with 18 dB/oct. Frequencies around the cutoff are attenuated.

- AP+LP 6 is an all-pass filter with 18 dB/oct plus a low-pass filter with 6 dB/oct. Frequencies around and above the cutoff are attenuated.
- HP 6+AP is a high-pass filter with 6 dB/oct plus an all-pass filter with 18 dB/oct. Frequencies around and below the cutoff are attenuated.

### Cutoff

Controls the cutoff frequency of the filter.

### Resonance

Sets the filter resonance.

### Distortion

Sets the amount of distortion. The effect of this parameter depends on the selected filter mode.

### Velocity

This parameter determines the influence that velocity has on the cutoff frequency. If **Velocity** is set to 0 %, the setting has no effect. At any other value, the cutoff frequency changes with the velocity.

### Env Amnt

Determines how much the filter is affected by the filter envelope.

### Level Velocity (Vel>Lev)

Determines how the velocity affects the level of the envelope.

The level of the envelope depends on two factors: the setting of this parameter and how hard you hit a key. Positive values increase the level of the envelope the harder you hit a key. Negative values decrease the level of the envelope the harder you hit a key.

### Time Velocity (Vel>Time)

Adjusts the influence of velocity on the phases of the envelope. Positive values decrease the length of the phases for higher velocity values. Negative values increase the length of the phases for higher velocity values.

### Segments

Here, you can select which phases of the envelope are affected by the **Time Velocity** parameter.

- **Attack** – The velocity affects the attack only.
- **Attack + Decay** – The velocity affects all phases until the sustain.
- **Decay** – The velocity affects all phases until the sustain but without the attack.
- **Attack + Release** – The velocity affects the attack and the release phases.
- **All** – The velocity affects all phases.

### Level Velocity Curve

You can select the curve type to specify how the incoming velocity translates to the level of the envelope. The characteristic of each curve is displayed by a small icon.

### RELATED LINKS

[Editing Envelopes](#) on page 100

## Amp Tab



### Volume

Sets the level of the sample.

### Pan

Sets the position of the sample in the stereo panorama.

### AUX 1-4

Here, you can specify the signal level that is sent to the 4 integrated AUX FX channels.

### Level Velocity (Vel>Lev)

Determines how the velocity affects the level of the envelope.

The level of the envelope depends on two factors: the setting of this parameter and how hard you hit a key. Positive values increase the level of the envelope the harder you hit a key. Negative values decrease the level of the envelope the harder you hit a key.

### Time Velocity (Vel>Time)

Adjusts the influence of velocity on the phases of the envelope. Positive values decrease the length of the phases for higher velocity values. Negative values increase the length of the phases for higher velocity values.

### Segments

Here, you can select which phases of the envelope are affected by the **Time Velocity** parameter.

- **Attack** – The velocity affects the attack only.
- **Attack + Decay** – The velocity affects all phases until the sustain.
- **Decay** – The velocity affects all phases until the sustain but without the attack.
- **Attack + Release** – The velocity affects the attack and the release phases.
- **All** – The velocity affects all phases.

### Level Velocity Curve

You can select the curve type to specify how the incoming velocity translates to the level of the envelope. The characteristic of each curve is displayed by a small icon.

### Output

The output to which the samples are routed. The following outputs are available:

- The **Kit Mix**.
- One of the 16 **Agent** mixer channels.
- One of the 16 stereo output busses of the plug-in.

If you use Groove Agent in a Steinberg DAW, selecting a plug-in output from the menu automatically activates this output in the host application. The first stereo out is the **Master** output. This output is always active.

**NOTE**

Samples that are routed to an output that is deactivated in your host application are automatically sent to the **Master** output of the plug-in.

- One of the AUX channels. This allows you to create sub groups, for example.

**NOTE**

These outputs can all contain insert effects.

**Norm (Use Normalized Velocity)**

- If you are working with normalized samples, keep this button deactivated.
- If you are using velocity-layered samples that are not normalized, activate this button. Otherwise, you might create unrealistic level transitions between different velocity layers when setting the **Vel<Lev** parameter.

## Sample Tab

The **Sample** tab contains the **Sample** editor. The upper section of the tab shows the mapping view and the waveform display and the lower section gives you access to all relevant sample parameters.



### Toolbar

The toolbar contains different tools for editing sample markers, loop markers, and slices.

#### Play Sample

Plays back the raw sample.

#### Play Selection Looped

Activate this button to play back the selection in a loop.

### **Auto-Scroll**

If this button is activated, the waveform display is scrolled during playback, keeping the playback cursor visible.

### **Follow Sample Playback**

Activate this button to see a play locator when triggering a sample via MIDI.

### **Range Selection Tool**

Click and drag with this tool to create a selection.

### **Zoom Tool**

If this tool is selected, you can click in the waveform to zoom in on the position where you click.

### **Play Tool**

If this tool is selected, you can click in the waveform to start playback. The sample is played back from this position until you release the mouse button.

### **Scrub Tool**

If this tool is selected, you can click in the waveform and drag sideways to play back the audio. The playback direction and speed depend on how fast and how far you move the mouse left or right from the position where you clicked.

### **Snap**

If this button is activated, the selection start and end points and markers snap to other markers.

### **Snap to Zero Crossing**

If this button is activated, markers and selection start and end points are only placed at zero crossings, that is, at positions in the audio where the amplitude is zero. This helps you avoid pops and clicks that are caused by sudden amplitude changes.

### **Edit Loop**

If this button is activated, the editor shows the looped region instead of the original sample data. This provides a better overview over the transition between loop end and loop start and allows you to set the loop markers to the best positions.

#### **NOTE**

If **Loop Mode** is deactivated when you activate **Edit Loop**, it is automatically set to **Continuous** and the loop markers are placed at the start and end of the sample.

---

### **Show Resulting Loop Crossfade**

Activate this button to see the effect of your crossfade settings in the waveform display. If this button is activated, the resulting waveform is displayed in red.

#### **NOTE**

This button only has an effect if **Edit Loop** is activated.

---

### **Trim Sample**

Trims the sample, either to the selection, or to the range that is set with the sample start/end markers.

### **Normalize Sample**

Normalizes the sample by detecting the highest peak level in the sample and adjusting the gain to reach a predefined level.

### Normalize Level

Sets the level for the **Normalize Sample** function.

### Revert to Full Sample

Undoes the trimming, so that the entire sample is restored.

#### NOTE

After undoing the trimming, make sure to set the start/end markers to their original positions, otherwise these parts are not played back.

### Show Fades in Wave

Activate this button to show your fade settings directly in the waveform.

### Show Channel Sum

Activate this button to show the sum of the left and right channels in the waveform display.

### Show Left Channel

Activate this button to show the left channel in the waveform display.

### Show Right Channel

Activate this button to show the right channel in the waveform display.

### Preview Volume

Click this icon to display a level slider. Keep the mouse button pressed and use the slider to specify the level for previewing your samples.

### Output

On this pop-up menu, you can specify to which plug-in output the **Sample Editor** sends its signals.

This is especially useful if the **Master** output uses insert effects that you do not want to hear while editing the samples.

### Ruler

The ruler shows the timeline in the specified display format.

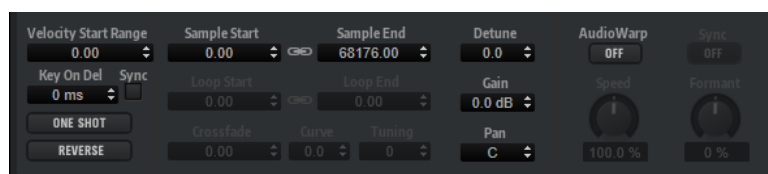
- To select the format, click the arrow button to the right of the ruler and select an option from the pop-up menu.  
You can choose to display bars and beats, seconds, or samples.

### Waveform Display and Level Scale

The waveform display shows the waveform image of the sample. To the left of the waveform display, a level scale is shown, indicating the amplitude of the audio.

- To select whether the level is shown as a percentage or in dB, click the level scale label at the top (dB or %), and select an option from the pop-up menu.
- To display the half level axis, right-click in the waveform display and select the corresponding option on the context menu.

### Parameter Section



### Velocity Start Range

Determines the influence of the velocity on the sample start. Move the start range marker to the right to start the sample later for lower velocities. Maximum velocity starts the sample at the original sample start.

### Key On Delay

With this parameter, you can delay the playback of the zone by a specified time or a note value.

- To synchronize the delay time to the host tempo, activate the **Sync** button and select a note value from the pop-up menu.
- To change the selected note value to a triplet, activate the **T** button.

If **Sync** is deactivated, the delay is specified in milliseconds. If **Sync** is activated, the delay is specified in fractions of beats.

### Loop Mode

Allows you to select a mode for the sustain loop and the release loop.

- If this is set to **No Loop**, the sample is played without loop.
- If this is set to **Continuous**, the loop is played continuously until the end of the amplitude envelope.
- If this is set to **Alternate**, the loop alternates forward and backward even if you release the key.
- If this is set to **Once**, the loop is repeated once.
- If this is set to **Until Release** (sustain loop only), the loop is repeated until you release the key on the keyboard.
- If this is set to **Alternate Until Release** (sustain loop only), the loop alternates forward and backward for as long as the key is held and then continues to the end of the sample.

#### NOTE

If **Loop Mode** is set to **Alternate** or **Alternate Until Release**, the loop crossfade is applied to the loop start and the loop end. All other modes on the **Loop Mode** pop-up menu apply the loop crossfade only to the loop end.

---

### Reverse

Reverses the sample, so that you hear it backwards.

### Sample Start

The start marker of the sample.

### Sample End

The end marker of the sample.

### Link Sample Start and End

If this button is activated, moving the sample start also moves the sample end, and vice versa.

### Loop Start

Specifies where the loop begins. You can enter a value numerically or move the start marker in the waveform display.

### Loop End

Specifies where the loop ends. You can enter a value numerically or move the end marker in the waveform display.



### Link Loop Start and End

If this button is activated, moving the loop start also moves the loop end, and vice versa.

### Loop Crossfade

Specifies the time of the crossfade.

The **Curve** parameter defines the curve of the crossfade, from linear to equal power.

### Loop Tuning

Here you can adjust the frequency of the loop in cents.

### Detune

Allows you to tune the sample by +/- 1200 cents.

### Gain

Determines the level of the sample.

#### NOTE

When using the **Normalize** function, this parameter is set automatically.

---

### Pan

Determines the panorama position of the sample.

## AudioWarp Parameters



In the **AudioWarp** section, you can apply time stretching and formant shifting to your samples.

#### NOTE

The AudioWarp functionality is not available if the playback quality is set to **Vintage** or **Turntable** on the **Main** tab.

---

### Mode

On this pop-up menu, you select the mode that is used for the AudioWarp functions.

- **Solo** mode offers parameters for time stretching and formant shifting. This mode is suitable for loops and samples with solo instruments or vocals.
- **Music** mode offers parameters for time stretching. This mode is suitable for complex material like drum loops and samples with mixed music. It uses considerably more CPU time than Solo mode. Note that the more the sample is stretched, the higher the CPU load.
- Select **Off** to deactivate the AudioWarp functions.

### Sync Mode

The **Sync** modes are used to match the playback speed of the sample to the tempo of the host application.

- If this is set to **Off**, you can specify the playback speed manually, in percent.
- If this is set to **Tempo**, the playback speed is calculated using the ratio between the original tempo of the sample and the tempo of the host.

- If this is set to **Beats**, the playback speed is calculated using the note length of the beats, the number of beats, and the tempo of the host.

#### NOTE

For the **Sync** modes to work properly, the loop of the sample has to be set up correctly. In Tempo mode, the original tempo must be set as exactly as possible.

---

### Speed

This control adjusts the playback speed of the sample in percent. You can speed up the tempo by up to 800 % of the original. In Music mode, the lower limit of the playback speed adjustment is 12.5 %. Values below this limit have no effect.

### Original BPM

If **Sync Mode** is set to **Tempo**, you can enter the original tempo of the sample in beats per minute. Groove Agent adjusts the playback speed of the sample to match the tempo of the host application.

#### NOTE

If you load a sample that contains tempo information in the file header, this information is used to set the **Original Tempo** parameter. If a sample does not contain any tempo information, the value is estimated. You can modify the parameter values manually.

---

### Note Length and Number of Beats

If **Sync Mode** is set to **Beats**, Groove Agent calculates the tempo of the sample, based on the note length and the number of beats you enter. For example, if the sample is a drum loop with four quarter notes, set **Note** to 1/4 and **Beats** to 4. Groove Agent adjusts the playback speed of the sample to match the tempo of the host application.

#### NOTE

If you load a sample that contains tempo information in the file header, this information is used to set the **Note Length** and **Number of Beats** parameters. If a sample does not contain any tempo information, the values are estimated. You can modify the parameter values manually.

---

### Formant (Solo Mode Only)

Specifies the amount of formant shifting.

## Markers

You can use a set of different markers to specify important positions in a sample.

### Sample Start

Defines where the sample starts to play. Audio before this marker is ignored.

### Sample End

Defines where the sample stops playing. Audio after this marker is ignored.

### Loop Start

Defines where the loop starts.

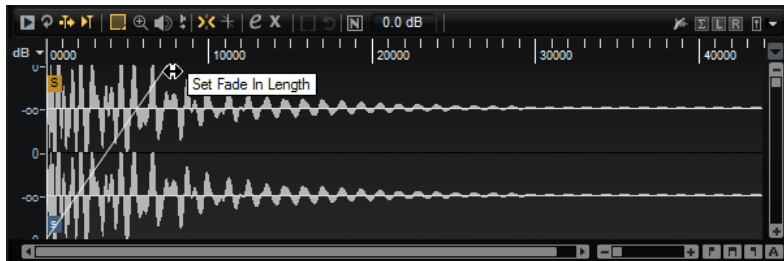
### Loop End

Defines where the loop ends.

### Velocity Start Range

Defines the attack phase of a sample, which can be used for the modulation of the sample start via velocity.

## Creating Fades



- To create fades, drag the fade handles in the waveform display on the **Sample** tab or specify the length for fade in and fade out on the **Slice** tab (if you created slices from the audio).
- To adjust the curvature, drag the fade line in the display up or down. To reset the fade curve back to linear, hold down **Ctrl/Cmd** and click on the fade line.

### NOTE

The fades directly influence sample playback. They are not part of the amp envelope.

---

## Zooming

- To zoom in/out on the time and level axis, use the horizontal and vertical zoom sliders.



Vertical zoom slider

- The three buttons to the right of the horizontal zoom slider allow you to zoom to the start, the end, and to the full range.



Depending on the situation, these options refer to the sample, the selection, or a loop. Click several times to increase the zoom level.

- To toggle between full zoom and the previous zoom setting, click the **A** button to the right of the horizontal zoom slider.
- To zoom in/out on the locator position, press **G** and **H**.
- You can click and drag the ruler to zoom in/out on the position you have clicked.
- Use the options on the **Zoom** submenu of the context menu.

## View Range

When changing from one sample to another, you can specify which range to show in the waveform display for the new sample.

These options can be found on the **View Range** submenu of the waveform display context menu.

### Auto

Follows the visible view range of the previous sample.

**Last**

Each sample stores the visible range individually. When you select a sample again, its view range is restored.

**Full**

Shows the entire sample.

**Sample**

Shows the range between sample start and sample end markers.

**Sample Start**

Shows the sample start marker with the current zoom factor.

**Sample Start Range**

Shows the sample start range marker with the current zoom factor.

**Sample End**

Shows the sample end marker with the current zoom factor.

**Loop**

Shows the entire loop.

**Loop Start**

Shows the loop start marker with the current zoom factor.

**Loop End**

Shows the loop end marker with the current zoom factor.

## Auditioning Samples

You can play back the sample using the **Play Sample** icon on the toolbar.

The following applies:

- If you have not made a selection, the whole sample is played back.
- If you have made a selection, this selection is played back.
- If the **Edit Loop** icon is activated, playback continues repeatedly until you deactivate the audition function.

## Making Selections

- To make a selection, click and drag with the **Range Selection** tool.

**NOTE**

If **Snap to Zero Crossing** is activated, start and end of the selection are always placed at zero crossings.

- To resize the selection, drag its left or right border, or **Shift**-click at the position where you want the selection to start/end.
- To move a selection, position the mouse pointer inside the selection and drag.

## Editing Selections

Once you have made a selection in the **Sample** editor, you can edit these selections further.

- To define the sample start and end from a selection, right-click in the **Sample** editor, and select **Selection > Set Sample Start/End to Selection**.
- To define the loop from a selection, right-click in the **Sample** editor, and select **Selection > Set Loop to Selection** the **Selection**.

- To assign a portion of a sample to another pad, position the mouse pointer inside the selection, click and drag the selection to a new pad.  
This assigns only the selected part of the sample to the pad.

**NOTE**

The sample portion that is assigned to the new pad still references the original sample, that is, no new sample is created on disk.


---

## Normalizing Samples

The **Normalize** function detects the highest peak level of the sample, and adjusts the gain to reach a predefined level.

---

**PROCEDURE**

1. On the toolbar, in the **Normalize Level** field, specify the level that you want to normalize the sample to.
  2. Click **Normalize Sample**  on the toolbar, or right-click the sample and select **Normalize Sample** from the **Sample** submenu of the context menu.
- 

**RESULT**

The **Gain** parameter of the sample is adjusted to conform with the predefined **Normalize** level. The amplitude of the waveform in the **Sample** editor changes accordingly.

**NOTE**



If you adjust the gain of the sample, the amplitude of the waveform in the **Sample** editor changes. This might be confounded with an adjustment to the vertical zoom of the waveform. To get a better visual feedback, set the vertical zoom to the minimum before you adjust the gain.

---

To play back the sample at its original level, set the **Gain** parameter to 0.0 dB.

## Trimming Samples

In the **Sample** editor, you can trim samples to the start and end markers, or to the selection.

- To trim the sample to the start and end markers, adjust the markers and click the **Trim**  button on the toolbar.
- To trim the sample to a selection, make a selection and click the **Trim**  button on the toolbar.

**NOTE**

The trim functions are also available on the context menu of the **Sample** editor.

---

All trim operations can be undone.

- To undo a trim operation, click the **Revert to Full Sample** button on the toolbar, or right-click the sample and select **Revert to Full Sample** from the context menu.

**NOTE**

After undoing the trim functions, make sure to set the start/end markers to their original positions, otherwise these parts are not included in the playback.

---

## Slice Tab

On the **Slice** tab, you can slice audio loops and automatically map the slices to instrument pads. During this process, a MIDI track is created and is associated with the first empty pattern pad.



After slicing a loop, you can play back the entire loop via the pattern pad or trigger individual slices with the instrument pads.

### Toolbar

The toolbar contains several tools that are also available on the **Sample** tab. In addition, the following tools are available:

#### Play Slice

Activate **Play Slice**  to play back slices when clicking on them.

#### Lock Slices

Activate **Lock Slices**  to prevent slice markers from being moved. Locked slices are shown with red markers.

#### Jump to Previous/Next Slice

Click the arrow buttons to jump to the next/previous slice.

#### BPM

Displays the tempo of the loop, as read from the sample file or calculated from the sample length.

You can adjust this value manually.

#### Bars/Beats

Shows the length of the sample found by the automatic tempo detection, in bars and beats. You can adjust this value manually, which has an effect on the grid and the tempo.

### Parameter Section

#### Create/Remove Slices

Click this button to create slices for the selected loop. If slices exist, click this button to remove them.

#### Slice Detection Mode

The slice detection automatically sets slice markers in the sample waveform. The following modes for slice detection are available:

- **Transient** mode allows you to specify the minimum peak level that a transient needs to become a slice marker.
- **Grid** mode sets the slice markers according to a beat grid. You can combine the **Transient** and **Grid** modes to detect slices that match both conditions.
- In **Manual** mode, no automatic slice detection is performed. Instead, you can add and remove slices manually by **Alt**-clicking in the waveform.

#### Threshold

Determines the minimum level that a transient must have to be detected as the start of a new slice.

#### Min Length

Determines the minimum length of a slice. Use this to avoid creating unwanted short slices.

#### Grid Catch

In **Transient+Grid** mode, you can use this control to specify how close to the grid a transient marker must be.

#### Fade In/Out

Sets the length of the fade in and the fade out for all slices of the loop.

#### MIDI Export Field

You can export the MIDI phrase by dragging the MIDI export field on a MIDI track in your host application.

## Slicing a loop

### PREREQUISITE

To slice a loop, it is best to start with an empty kit.

### NOTE

The maximum number of slices is 128. Therefore, it is recommended to start on a pad that is assigned to a lower note, so that enough empty pads are available.

---

### PROCEDURE

1. Drop the audio loop on the instrument pad that you want to start with.
  2. Open the **Slice** tab and click **Create Slices**.  
If the number of slices exceeds the number of available pads, some slices cannot be mapped to instrument pads. These slices are shown in red in the waveform display. In this case, the loop plays only with the length of the mapped slices.
  3. Adjust the parameters on the **Slice** tab to create the best set of slices.  
Any changes that lead to more or less slices will create slices on or remove slices from pads.
- 

## Automatically Classifying Drum Sounds

The **Slice** page offers a sophisticated **Classify Slices** feature to analyze sliced drum loops. This function analyzes the slices and assigns them automatically to one of five basic classes: kick, snare, hihat, tom, and percussion.

Each slice is assigned to the class it comes the closest to. For example, a kick drum with some hihat on top will still be assigned to the “kick” class. The name of the class and its predefined color is displayed in the classifier section in the lower part of the waveform display. You can also

define your own default class colors. Class colors and class names are transferred to the instrument pads as soon as you classify the slices. This helps you to get a better overview when working with sliced loops.

#### NOTE

Some slices are hard to analyze. For example, a kick drum with a crash cymbal on top could be recognized as a snare drum, or a very deep tom could be recognized as kick drum. You can assign these slices manually to classes.

---

#### PROCEDURE

1. Open a kit and load a drum loop onto an instrument pad.
  2. On the **Slice** page, click **Create Slices**.
  3. Optional: Adjust the **Threshold** and **Min Length** parameters.
  4. Activate **Classify Slices**.
- 

#### RESULT

The slices are analyzed and automatically assigned to one of the five classes. The color and the names of the instrument pads change accordingly.

#### NOTE

Very short slices cannot be recognized correctly and are not assigned to classes. In this case, the color and the name of the slices do not change. You can assign these slices manually to classes.

---

#### NOTE

Claps and sidestick are recognized as snare class. Cymbals, shaker, and tambourine are part of the hihat class.

---

## Manually Classifying Slices

If the automatic classifying did not work because the slices are too short or if slices were classified wrongly, you can manually set the class for a slice.

- To manually set the class for a slice, click the classifier section of the slice that you want to modify, and select the correct class from the menu.
- To discard your modifications, right-click the classifier section and select **Reset Classes**.

## Selecting all Slice Pads of the Same Class

You can select all pads that contain slices of the same drum class. This is useful if you want to apply the same editing on all slices of a drum class.

#### PREREQUISITE

Use the **Classify** function for a sliced loop.

This function is available on the pad context menu and on the context menu for the slice classes in the classifier section.

- Right-click a pad in the pad section and select **Select Pads of Same Class** on the context menu.
- On the **Slice** tab, right-click the classifier section of a slice that has the right drum class and select **Select Pads of Same Class** on the context menu.



#### RESULT

All pads of the current sliced loop that contain slices of the same class are selected. Pads containing slices from other loops are not taken into account.

## Replacing Slices With Slices of the Same Drum Class

In the **Pattern** editor, you can set all notes that belong to slices of the same drum class to a specific key out of that drum class. This way, all notes of a drum class play with the same slice. If some of the kick slices play in combination with a hihat and other kick slices play alone, you can set all notes of the kick class to a slice that plays alone. This allows for a more consistent sound.

---

#### PROCEDURE

1. Load a sliced drum loop.
2. Classify the slices.
3. Open the **Pattern** editor, right-click the slice that you want to use for playing all note events of that drum class, and select **Set Notes of Same Class to [key]**.

---

#### RESULT

The notes of the other slices of the same class are set to the key of the slice that you selected.

## Drum Class Colors

- To modify a class color, right-click the classifier section of a slice and select a new color from the **Set Class Color** submenu. All slices that belong to the same class change to this color.
- To return to the default class colors, right-click the classifier section of a slice and select **Apply Default Class Colors**.
- To save your class colors as default, right-click the classifier section of a slice and select **Save Class Colors as Default**. From now on, the classes use your class color settings.
- To reset the colors to the factory settings, right-click the classifier section of a slice and select **Reset Class Colors to Factory**.

## Adding and Removing Slices

- To add a slice marker, **Alt**-click in the editor.
- To remove a slice marker, **Alt**-click it.

#### NOTE

The number of slices that can be created is limited to the number of available empty instrument pads.

---

## Decompose Tab

On the **Decompose** tab, you can separate the tonal from the noise component of a sample, for example, the harmonic tonal part of a tom sample from the attack part, where the stick hits the drum head.

This allows you to mix the noise and tonal components of a sample differently, or to create new sounds by exchanging the noise component within a sample with the noise component of another sample.

This tab contains the mapping view at the top, the waveform display, and the **Decompose** parameters on the **Main** and **Options** tabs at the bottom.



## Toolbar

### Play Sample

Plays back the raw sample.

### Play Selection Looped

Activate this button to play back the selection in a loop.

### Auto-Scroll

If this button is activated, the waveform display is scrolled during playback, keeping the playback cursor visible.

### Follow Sample Playback

Activate this button to see a play locator when triggering a sample via MIDI.

### Range Selection Tool

Click and drag with this tool to create a selection.

### Zoom Tool

If this tool is selected, you can click in the waveform to zoom in on the position where you click.

### Play Tool

If this tool is selected, you can click in the waveform to start playback. The sample is played back from this position until you release the mouse button.

### Scrub Tool

If this tool is selected, you can click in the waveform and drag sideways to play back the audio. The playback direction and speed depend on how fast and how far you move the mouse left or right from the position where you clicked.

### Snap

If this button is activated, the selection start and end points and markers snap to other markers.

### Snap to Zero Crossing

If this button is activated, markers and selection start and end points are only placed at zero crossings, that is, at positions in the audio where the amplitude is zero. This helps you avoid pops and clicks that are caused by sudden amplitude changes.

### Trim Sample

Trims the sample, either to the selection, or to the range that is set with the sample start/end markers.

### Revert to Full Sample

Undoes the trimming, so that the entire sample is restored.

#### NOTE

After undoing the trimming, make sure to set the start/end markers to their original positions, otherwise these parts are not played back.

### Show Fades in Wave

Activate this button to show your fade settings directly in the waveform.

### Show Channel Sum

Activate this button to show the sum of the left and right channels in the waveform display.

### Show Left Channel

Activate this button to show the left channel in the waveform display.

### Show Right Channel

Activate this button to show the right channel in the waveform display.

### Preview Volume

Click this icon to display a level slider. Keep the mouse button pressed and use the slider to specify the level for previewing your samples.

### Output for Preview

Allows you to specify the output that is used for playback.

## Waveform Display and Level Scale

The waveform display shows the waveform image of the sample. To the left of the waveform display, a level scale is shown, indicating the amplitude of the audio.

- To select whether the level is shown as a percentage or in dB, click the level scale label at the top (dB or %), and select an option from the pop-up menu.
- To display the half level axis, right-click in the waveform display and select the corresponding option on the context menu.

## Main Tab



### Sensitivity

Specifies the relative level difference between signal partials and the noise floor. For a partial to be considered part of the tonal component of the sample, it requires the difference in level specified with this parameter.

### Cutoff

Allows you to limit the range in which Groove Agent searches for partials. Any signals above the **Cutoff** frequency are considered to be noise, regardless of the **Sensitivity** or **Duration** settings.

### Duration

Allows you to specify the minimum length for a partial. Signals that are shorter than the value specified here are automatically considered to be noise, longer signals are considered to be part of the tonal component.

### Tonal

Allows you to specify the level for the tonal component of the sample. Activate **Solo** to solo the tonal component.

Click **Apply** for your modifications to take effect.

### Noise

Allows you to specify the level for the noise component of the sample. Activate **Solo** to solo the noise component.

Click **Apply** for your modifications to take effect.

### Mix

Mixes the resulting components into a single sample rather than splitting it into two samples.

### Prelisten

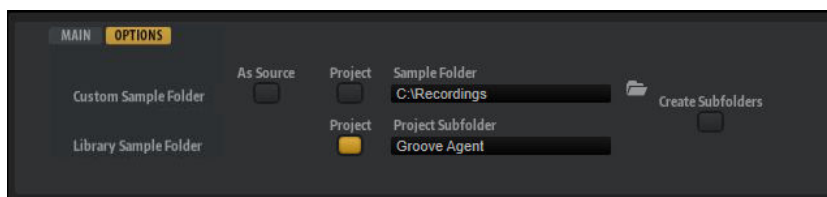
Pre-calculates the tonal and noise components, according to the settings that you made for **Sensitivity**, **Cutoff**, and **Duration**.

### Apply

Applies the **Decompose** function.

This creates two new sample files, one for the tonal and one for the noise component of your sample, or, if **Mix** is activated, a single new sample file containing both components.

## Options Tab



By default, the samples created by the **Decompose** function are saved in the same folder as the original file. However, if this is not what you want or if you decompose samples that are part of a write-protected VST Sound container, you can specify an alternative destination folder on the **Options** tab.

In the **Custom Sample Folder** section, you specify the location for samples that are created from unprotected source samples, and in the **Library Sample Folder** section, you specify the location for samples that are created from write-protected VST Sound containers.

### As Source

Activate **As Source** to save the created samples in the same folder as the original sample.

#### NOTE

**As Source** is only available if you work with source samples that are not part of a VST Sound container.

---

### Project

Activate **Project** to save the samples in the project folder of your Steinberg DAW.

### Project Subfolder

If **Project** is activated, you can specify a subfolder of the project folder in which the samples are to be saved. This allows you to structure your folders, to keep a better overview over your sample files.

### Sample Folder

If **Project** is not activated, you can enter the path to the folder in which the new samples are to be saved. You can enter the path manually in the text field or click **Select Folder** and browse to the destination folder.

### Create Subfolders

Activate **Create Subfolders** to save the tonal and the noise components in different subfolders.

#### RELATED LINKS

[Decomposing Samples](#) on page 30

[Mapping View](#) on page 95

[Combining Noise and Tonal Components of Different Samples](#) on page 31

[Changing the Distribution of the Tonal and the Noise Components of Samples](#) on page 32

[Fine-Tuning the Decompose Settings](#) on page 32

## Recorder Tab

The **Recorder** tab contains the **Sample Recorder**, which allows for live sampling in Groove Agent. You can sample the sounds of another plug-in and map them to the pads/keyboard, reduce CPU load by creating one sample from an audio event that contains fades, processing, etc., or quickly create sounds from events in your sequencer projects and edit them further in Groove Agent, for example.



## Waveform Display

During recording, the waveform display shows the sample waveform. When recording is stopped, it shows the sample that was created. If nothing has been recorded yet, the waveform display shows the waveform of the sample zone that is selected in the mapping view.

The ruler above the display can be switched between **Beats**, **Seconds**, and **Samples**.

## Main Tab

### Record/Record Enable

The behavior of this button depends on the **Record Start Trigger** setting.

- In **Manual** mode, this button starts/stops recording.
- In the **Audio Threshold**, **MIDI Note-On**, and **MIDI Note-Off** modes, this button record-enables the **Sample Recorder**. This means that recording starts as soon as the audio signal exceeds the threshold or a MIDI note-on or note-off event is received.

### NOTE

The **Sample Recorder** always records the sample for the selected pad. Every recording creates a new sample.

### Play/Stop

The behavior of this button depends on the **Start** setting in the **Trigger** section.

- In **Manual** mode, the **Play/Stop** button starts/stops playback of the recorded sample.
- In the **Audio Threshold**, **MIDI Note-On**, and **MIDI Note-Off** modes, the **Play/Stop** button starts/stops recording.

### Reset Recording

Removes the current recording, allowing you to start over.

### Input Gain

Adjusts the input level for the recording.

### Sample Mode

Determines whether you can make a single recording or record multiple samples.

- In **Single** mode, you can only record one sample.
- In **Auto-Next** mode, you can record multiple samples in a row. This is particularly useful when working with the **Audio Threshold**, **MIDI Note-On**, and **MIDI Note-Off** modes. Every time that recording is stopped, the **Sample Recorder** reverts to its record-enabled state and starts recording again as soon as the condition that triggers recording is met.

### Mapping

When you record multiple samples, you can specify how they are mapped.

- **As played** can be used when the recording start is triggered by MIDI notes. The played notes determine the root key of the sample.
- **Fixed** maps all samples to the key that is specified in the **Next Key** text field.
- **Chromatic** maps the samples chromatically to the keys on the keyboard, starting with the key that is specified in the **Next Key** text field.
- **White Keys** maps the samples to the white keys on the keyboard, starting with the key that is specified in the **Next Key** text field.
- **Black Keys** maps the samples to the black keys on the keyboard, starting with the key that is specified in the **Next Key** text field.

### Next Key

Specifies the initial key or the fixed key for the sample mapping, depending on the selection you made on the **Mapping** pop-up menu.

### Playback Mode

Specifies how the sample is played back.

- In **Normal** mode, the sample starts playing when a key is triggered and stops when the key is released.
- In **One Shot** mode, the sample is played back in its entirety, any note-off events are ignored.
- In **Loop** mode, the sample is played back in a loop. The loop is set up so that loop start and end correspond to the start and end of the sample.

### Record Start Trigger

Determines what starts the recording.

- If **Manual** is selected, recording starts when you click the **Record/Record Enable** button.
- If **Audio Threshold** is selected, recording starts as soon as the audio signal exceeds the specified threshold.
- If **MIDI Note-On** is selected, recording starts when a MIDI note-on event is received on the specified channel and port.
- If **MIDI Note-Off** is selected, recording starts when a MIDI note-off event is received on the specified channel and port.

### Record Stop Trigger

Determines what stops the recording.

- If **Manual** is selected, recording stops when you click the **Record/Record Enable** button.
- If **Audio Threshold** is selected, recording stops as soon as the audio signal falls below the specified threshold.
- If **MIDI Note-Off** is selected, the following applies:  
If **Trigger - Start** is set to **MIDI Note-On**, recording stops when the corresponding MIDI note-off is received on the specified channel and port.

**NOTE**

Only this specific note-off event stops the recording. Any other MIDI notes can be played and the resulting audio will be recorded.

---

If **Trigger - Start** is set to a setting other than **MIDI Note-On**, recording stops when a MIDI note-off event is received on the specified port.

- If **MIDI Note-On** is selected, recording stops when a MIDI note-on event is received on the specified channel and port.

**NOTE**

Any note that is sent on the specified channel and port stops the recording.

---

- **Fixed Duration** allows you to specify the duration for the recording, either as absolute recording time or as recording time in beats, in sync to the project tempo.

### Pre/Post Record

Allows you to start the recording slightly ahead or let it continue for a bit after the recording stop trigger is received. This way, you can capture transients or reverb tails that are slightly lower than the set threshold, or perform fine-adjustments of the start and end regions of the sample at a later stage, for example.

- **Full Range** - If this option is activated, the pre- and post-record portions of the recording span the entire sample range.
- **Pre** sets the time that is recorded before the recording is triggered. The sample start marker of the zone is set to the exact trigger moment. The pre-record time can then be used to adjust the start of the sample.
- **Post** sets the time that is recorded after the trigger event has stopped the recording. The sample end marker of the zone is set to the exact trigger moment. The post-record time can then be used to adjust the end of the sample.

**NOTE**

When you record multiple samples, **Post-Record** is automatically stopped 50 ms after a new sample recording has started, to avoid overlapping recordings.

---

### Auto Trim

**Zero Crossing** moves the sample start and end markers automatically to the nearest zero crossing before the start and after the end of the recording.

**Silence** automatically removes any silence before the audio starts and after it ends. The sample start and end markers are set accordingly.

---

### EXAMPLE

#### Manual Recording

If you set **Auto Trim** to **Off**, manually start recording, and play a note on your instrument, the recording contains silence before and after the recorded audio. This means that you must adjust the sample start and end markers manually.

If you activate **Auto Trim**, the sample start and end markers are automatically set to positions directly before the start and after the end of the audio.

---



#### EXAMPLE

### Recording With an Audio Threshold and Pre/Post Record

Set **Auto Trim** to **Off**, specify an audio threshold for both the start and the stop trigger for the recording, and activate and set up **Pre/Post Record**. Now, click the **Record/Record Enable** button to enable recording and play a note on your instrument.

As soon as the signal exceeds the **Start** threshold, recording starts and when the audio level falls below the **Stop** threshold, it ends.

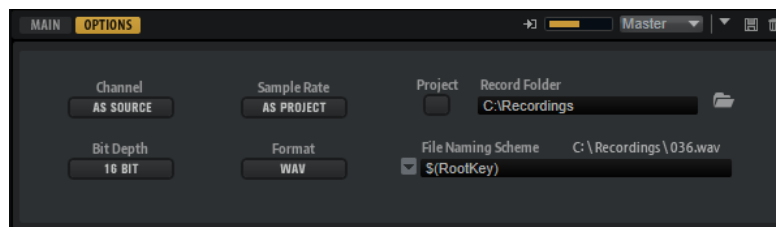
The resulting recording contains silence before and after the audio recording. This means that you must adjust the sample start and end markers manually.

If you activate **Auto Trim** and repeat the same procedure, the sample start and end markers are automatically moved into the pre and post record range to match the effective start and end of the audio when the recording is finished.

**Auto Trim** only affects the sample start and end markers and leaves the audio file as it is, including the pre and post record time.

---

## Options Tab



### Channel

- **As Source** adapts the number of channels automatically to the number of channels of the source.
- **Mono** records mono samples.

### Sample Rate

Specifies the sample rate for recorded samples. You can choose between a selection of predefined sample rates or use the sample rate that is used in the project of your host application.

### Bit Depth

Specifies the bit depth for the recorded samples.

### Format

Specifies the file format for the recorded samples.

### Project

Activate this button to record the sample files into the current project folder of the Steinberg DAW.

### Record Folder

Allows you to specify the destination folder for the recorded sample files. If the **Project** button is activated, you can define a subfolder or path inside the project folder.

### Naming Scheme

Allows you to set up a naming scheme for the recorded samples. The file name can be a combination of a text and a selection of predefined elements.

- You can enter the text for the file name in the text field.
- To add one of the predefined elements to the naming scheme, click the triangle to the left and select it from the pop-up menu.

- You can modify the naming scheme by cutting, copying, and pasting in the text field.

The resulting name is displayed as an example above the text field.

#### NOTE

To avoid duplicate file names, a continuous counter is automatically added to the file name.

---

## Monitoring the Input Signal

The **Sample Recorder** can play back the input signal. This is useful if you have routed an audio track from the DAW to the side-chain input of Groove Agent. In this case, the signal of the track is no longer sent to the master bus of your sequencer and cannot be heard.

The input monitoring controls are located on the right below the waveform display.

Activate **Enable Input Monitoring** to hear the signal at the input of the **Sample Recorder** and specify the routing and the level for monitoring.

#### NOTE

When you are routing a send from a track in the DAW to Groove Agent's side-chain input, the original track remains audible and you can deactivate **Monitor Input**.

---

## Recording From an Audio Track With Multiple Drum Sounds

Recording audio from a track in a Steinberg DAW allows you to save any processing, fades, etc. directly in the audio event.

#### PROCEDURE

1. In Groove Agent, select the pad for which you want to record the samples.
2. Open the **Sample Recorder**.
3. Set the **Next Key** field to the pad on which you want the first sample to be recorded.
4. In the plug-in header of Groove Agent, activate the **Activate Side-Chain** button.
5. In the DAW, route the output of the audio track to the side-chain input of Groove Agent. Alternatively, you can also add a send on the mixer channel of the audio track and route it to the side-chain input of Groove Agent.
6. In the **Sample Recorder**, set **Record Start Trigger** and **Record Stop Trigger** to **Audio Threshold** and specify the threshold levels.
7. Set the **Sample Mode** to **Auto Next** to create multiple sample recordings.
8. Set **Mapping** to **Chromatic** to map the zones automatically to the keys on the keyboard.
9. Click the **Record/Record Enable** button to enable recording.
10. In the Steinberg DAW, play back the audio track.  
As soon as the audio signal exceeds the **Start** threshold, the first sample recording starts. When the audio level falls below the **Stop** threshold, recording ends and the sample zone is created. The **Sample Recorder** automatically reverts to its record-enabled state and starts recording again as soon as the signal exceeds the threshold.

#### RESULT

Groove Agent creates a sample for each audio event on the track and maps them to the corresponding pads.

## Recording the Output of Another Plug-In

Recording the output of another plug-in allows you to save the sounds that you created with other plug-ins, software or hardware, exactly the way that you set them up. This can be particularly useful if a plug-in does not allow you to create presets, for example.

### PREREQUISITE

You have added two tracks in the Steinberg DAW, one for the plug-in from which you want to record, and one for Groove Agent.

---

### PROCEDURE

1. In Groove Agent, select the program for which you want to record the samples.
2. Open the **Sample Recorder**.
3. In the plug-in header of Groove Agent, activate the **Activate Side-Chain** button.
4. Route the output of the instrument track to the side-chain input of Groove Agent. Alternatively, you can also add a send on the mixer channel of the instrument track and route it to the side-chain input of Groove Agent.
5. In Groove Agent, set **Record Start Trigger** to **MIDI Note-On** and use the **Port** pop-up menu to specify a MIDI port and channel for the recording.
6. Set **Record Stop Trigger** to **MIDI Note-Off**.
7. Set **Sample Mode** to **Auto Next** to create multiple sample recordings.
8. Set **Mapping** to **As Played** to map the samples automatically to the keys that correspond to the notes on the source instrument track.
9. Copy the note events of the plug-in track to the Groove Agent track, so that they both receive the same MIDI notes.
10. Click the **Record/Record Enable** button to enable recording.
11. Start playback in the DAW.

As soon as the first note-on message is received, recording starts. When the note is released, recording stops. The **Sample Recorder** automatically reverts to its record-enabled state and starts recording again as soon as the next note is received.

### NOTE

You can also record samples by playing the notes manually. In this case, proceed as described above, activate the **Record-Enable** and **Monitor** buttons for the plug-in track and the Groove Agent track, so that you can trigger both tracks at the same time, and then play the notes on your keyboard.

---

### RESULT

Groove Agent creates a sample for each MIDI note that is played and maps it to the corresponding pad.

## Slicing a Drum Loop

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### PROCEDURE

1. In Groove Agent, select the pad on which you want to record the first slice.
2. Open the **Record** tab.
3. In the plug-in header of Groove Agent, activate the **Activate Side-Chain** button.
4. In the DAW, route the output of the audio track that contains the drum loop to the side-chain input of Groove Agent.

Alternatively, you can also add a send on the mixer channel of the audio track and route it to the side-chain input of Groove Agent.

5. On the **Record** tab in Groove Agent, set **Trigger – Start** and **Trigger – Stop** to **MIDI Note-On**.  
This way, each played MIDI note starts a new sample recording and ends the previous one. If you set **Trigger-Stop** to a **Fixed Duration** of 1/16th, for example, every time a note-on is received, a sample recording is started and it is stopped automatically after a 1/16th note.
6. Set the **Sample Mode** to **Auto Next** to create multiple sample recordings.
7. Set **Mapping** to **Chromatic** to map the samples automatically to the consecutive pads and their corresponding keys on the keyboard.
8. Activate the **Pre/Post** button and specify a **Pre Recording Time** of a few milliseconds. This helps you to avoid missing the attack of a sound when triggering a recording slightly too late, for example.
9. Set **Auto Trim** to **Silence**.  
This way, the attack of a sound is corrected, for example, if you triggered a recording too early or if the pre-recorded section contains silence.
10. Click the **Record/Record Enable** button to enable recording.
11. In the Steinberg DAW, play back the audio track.
12. Do one of the following:
  - Play a MIDI note each time that you want to start recording a new slice.
  - Use a programmed MIDI sequence that represents the slices that you want to record.  
For example, create a MIDI part that contains eight 1/8th note events and use this part to trigger the recording. This way, you have an exact and reproducible trigger sequence. This is particularly useful if the loop exists as an audio part inside the same project.

---

#### RESULT

Groove Agent creates a sample for each slice and maps it to the corresponding keys. You can now play a MIDI ramp sequence to play the original loop, or get creative and program completely different patterns.

## Recording Samples in the Standalone Version

In the standalone version of Groove Agent, you can create samples by recording the audio input of the plug-in.

---

#### PROCEDURE

1. Open the **Preferences** dialog, select the **Input** tab and select the audio inputs of your hardware for **Input 1** and **Input 2**, and click **OK**.
2. In the **Slot Rack**, select the program for which you want to record the samples.
3. In the **Kit Rack**, select the kit for which you want to record the samples.
4. Open the **Record** tab and make the following settings:
  - Set **Record Start Trigger** and **Record Stop Trigger** to **Audio Threshold** and specify the threshold levels.
  - Set **Sample Mode** to **Auto Next** to create multiple sample recordings.
  - Set **Mapping** to **Chromatic** to map the samples to the pads/keys automatically.
5. Click the **Record/Record Enable** button to enable recording.
6. Now play your guitar, or record various drum sounds, for example.

7. When you are done, click the **Record/Record Enable** button again to deactivate record-enable.

---

#### RESULT

As soon as the signal exceeds the **Start** threshold, recording starts, and when the audio level falls below the **Stop** threshold, it ends.

#### NOTE

You can also record from an external MIDI keyboard and make use of the **MIDI Note-On**, **MIDI Note-Off**, **Recording Start Trigger** and **Recording Stop Trigger** functions. In this case, make sure that the MIDI notes that you play on the keyboard are also received by Groove Agent.

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#### RELATED LINKS

[Preferences Dialog](#) on page 198

## Importing and Exporting Files

### Importing MPC and GAK Files

You can import AKAI MPC 500 and MPC 1000 files and GAK files created in Groove Agent ONE into Groove Agent.

You can import the files in the following ways:

- Drag a file from the File Explorer/macOS Finder onto the slot in the kit slot section or on the kit name in the kit rack.
- On the context menu for the kit, select **Import**, select the file in the dialog, and click **OK**.

#### NOTE

When importing GAK files, you will be asked to specify the folder in which to save the included files.

---

### Importing REX Files and Sliced Loops

You can import REX files and sliced audio parts from Cubase/Nuendo into Groove Agent.

- To import a REX file or a sliced audio part into Groove Agent, drop it onto an empty pad. The slices are automatically distributed across the pads, and a MIDI phrase is created and assigned to the first empty pattern pad.

Once the file is imported, you can trigger the slices with the instrument pads, or play back the entire loop by triggering the pattern pad.

Imported REX files and sliced audio parts are treated like audio loops that were sliced in Groove Agent.

Pads that are part of the sliced loop display a loop icon. The pad that contains the first slice displays a larger loop icon.

#### NOTE

If the number of available pads is not high enough to map all slices to pads, the slices that could not be added are shown in red on the slice edit page. You can move pads using drag and drop to free the necessary pads. As soon as enough pads are available, the slices that could not be mapped are automatically added.

---

#### NOTE

If you import a REX file, the **Slice Mode** in the slice editor is automatically set to **Manual**, to preserve the slice markers specified in the REX file. Note, however, that in some cases, the slices saved in a REX file may not represent a useful audio loop.

---

## Exporting Kits with Samples

Groove Agent kits can be exported together with the associated samples.

---

#### PROCEDURE

1. Right-click the kit in the kit bar and select **Export Kit with Samples** from the context menu.
  2. In the dialog, specify a name and a location for the file.
- 

#### RESULT

The kit file is created together with a folder containing the samples.

#### NOTE

Samples that are part of the protected factory content cannot be exported.

---

## Finding Missing Samples

There might be situations where loaded programs cannot find the samples they use. This can happen if the referenced samples are located on a different drive and the drive name has changed, or because the program was created on a different computer system.

When this happens, the **Find Missing Sample** dialog opens, showing a list of all samples that are missing, with additional information about the format, size, and creation date. The list groups all samples that are located in the same subfolder.

### Entering a Search Path

In the **Find Missing Sample** dialog, below the list of missing samples, you can enter the search path to find the missing samples.

#### NOTE

All subdirectories are searched before the results are displayed, therefore the search takes longer if you specify entire drives.

---

### Starting the Search

Once you have specified the search path, click the **Start Search** button to start the search process.

If the search only finds a single result for each missing sample, the sample path is automatically corrected in the program and the sample disappears from the **Missing Files** list. If all samples are found, the dialog is closed.

### Multiple Results

If sample files with the same name are found in more than one location, an additional **Found File** list appears below the **Missing File** list. This shows the available samples and their file locations.

- To select a sample or a complete folder that is to be used to resolve the missing samples, double-click it in the **Found Files** list.

Each sample or folder that is resolved this way disappears from the **Missing File** list.

Once all samples are resolved the dialog closes.

### **Favorite Paths**

If a path might be helpful for future searches, you can add it to the search path list. The next time the dialog opens, it allows you to select one or multiple predefined paths to specify which places to include in the search.

- To add a path, click the + sign.

### **Search Options**

By default, Groove Agent searches for samples that do not only have the same file name, but also correspond in terms of time, size, and format information. A sample is considered “found” only if all of the information is identical. However, you can exclude this information by activating the **Ignore File Time and Size** and **Ignore Audio Format and Length** options.

# Acoustic Agent

Acoustic Agent is a next-generation virtual acoustic drummer that offers first-class drum sounds and an integrated player that creates the perfect accompaniment for your songs.

The style player can conjure different grooves in a wealth of genres including Blues, Punk, Hip Hop, and Indie Rock – perfect for any contemporary music style. And you retain full control, both over intensity and complexity of the style player’s drumming and over the sound, thanks to the included **Agent** mixer.

## Acoustic Agent Sound Editing

On the **Edit** page for instrument pads, you set up the sound of the kits.



- To open the **Edit** page, click the **Edit** button in the upper section of the plug-in panel.
- To show the parameters for a particular drum instrument, click on it. Depending on the setting of the **Mute Instrument Trigger on Editor** button in the upper right corner of the **Edit** page, this also previews the instrument.
- If a drum instrument is triggered, this is shown by the instrument turning dark.



## Locking the Pad Colors

Locking the color settings for the pads allows you to switch between different kits while keeping the color settings.

---

### PROCEDURE

- To lock the color settings for the pads, activate **Lock Pad Colors** below the pads.
- 

## 24 Bit and 16 Bit Sample Versions

All Acoustic Agent and Percussion Agent kits come with dedicated samples in 16 and 24 bit. The 24 bit versions have the better audio quality at the cost of longer loading times and higher RAM usage. The 16 bit versions load faster and utilize less RAM at the cost of a lower audio quality.

You can set up which samples are loaded by default with the **Load Preference** setting on the **Options** page.

However, you can also switch between the 16 and 24 bit versions without changing the **Load Preference** setting and reloading the preset. This can be done on the **Edit** page.



- In the upper right corner of the Instrument page, click the **16 Bit** or the **24 Bit** button.

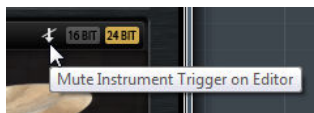
### NOTE

Not all agents come with 16 and 24 bit versions of the samples. The **16 Bit** and **24 Bit** buttons are only available if the agent supports this function.

---

## Instrument Preview

On the **Edit** page, you can specify whether you want to preview and select an instrument when clicking on it, or whether you only want to select it and show its sound parameters.



- To preview an instrument when clicking on it, deactivate the **Mute Instrument Trigger on Editor** button in the upper right corner of the **Edit** page.  
Instruments that have multiple articulations play the standard articulation. For example, a snare can be played open, with a rimshot, or with sidestick. For preview, the open articulation is used. To trigger the other articulations, use the instrument pads.
- To select an instrument and show its settings when clicking on it, activate **Mute Instrument Trigger on Editor**.

## Sound Parameters

If you click on an instrument on the **Edit** page, its sound parameters are available at the bottom of the panel. Each instrument has its own set of parameters.

Groove Agent comes with different content sets. These content sets feature different sets of drum instruments with different parameters and mixer channels.

## Studio Kit/Vintage Kit/Rock Kit

The content sets “Studio Kit”, “Vintage Kit”, and “Rock Kit” that come with Groove Agent feature the same drum instruments and the same set of controls. However, while they all contain the same instruments, the actual number of these instruments can differ between the sets.



### Kick Drums

#### Room Level

Adjusts the level of the room microphone.

#### Overhead Level

Adjusts the level of the overhead microphone.

#### Bleed

Adjusts how much the kick drum bleeds into the snare bottom microphone.

#### Tune

Adjusts the pitch.

#### Attack

Adjusts the attack time of the amplifier envelope.

#### Hold

Adjusts the hold time of the amplifier envelope. Turn the control all the way to the right to play the entire sample.

#### Decay

Adjusts the decay time of the amplifier envelope.

#### Kick A/B

Each kit allows you to choose between two alternative kick drums. Click the buttons to switch between kick A and kick B.

### Snare Drums

#### Room Level

Adjusts the level of the room microphone.

#### Overhead Level

Adjusts the level of the overhead microphone.

### **Master Bleed**

Adjusts how much the kick and the toms bleed into the snare bottom microphone. This control serves as master control by attenuating the snare bottom samples of the kick and toms.

### **Tune**

Adjusts the pitch.

### **Attack**

Adjusts the attack time of the amplifier envelope.

### **Hold**

Adjusts the hold time of the amplifier envelope. Turn the control all the way to the right to play the entire sample.

### **Decay**

Adjusts the decay time of the amplifier envelope.

### **Snare A/B**

Each kit allows you to choose between two alternative snare drums. Click the buttons to switch between snare A and B.

## **Toms**

### **Room Level**

Adjusts the level of the room microphone.

### **Overhead Level**

Adjusts the level of the overhead microphone.

### **Bleed**

Adjusts how much the tom bleeds into the snare bottom microphone.

### **Tune**

Adjusts the pitch.

### **Attack**

Adjusts the attack time of the amplifier envelope.

### **Hold**

Adjusts the hold time of the amplifier envelope. Turn the control all the way to the right to play the entire sample.

### **Decay**

Adjusts the decay time of the amplifier envelope.

## **Cowbell**

### **Room Level**

Adjusts the level of the room microphone.

### **Overhead Level**

Adjusts the level of the overhead microphone.

### **Tune**

Adjusts the pitch.

### **Attack**

Adjusts the attack time of the amplifier envelope.

**Hold**

Adjusts the hold time of the amplifier envelope. Turn the control all the way to the right to play the entire sample.

**Decay**

Adjusts the decay time of the amplifier envelope.

**Tambourine**

**Room Level**

Adjusts the level of the room microphone.

**Overhead Level**

Adjusts the level of the overhead microphone.

**Attack**

Adjusts the attack time of the amplifier envelope.

**Hold**

Adjusts the hold time of the amplifier envelope. Turn the control all the way to the right to play the entire sample.

**Decay**

Adjusts the decay time of the amplifier envelope.

**Claps**

**Room Level**

Adjusts the level of the room microphone.

**Attack**

Adjusts the attack time of the amplifier envelope.

**Hold**

Adjusts the hold time of the amplifier envelope. Turn the control all the way to the right to play the entire sample.

**Decay**

Adjusts the decay time of the amplifier envelope.

**Single, Small Group, Large Group**

Determines whether the D#1 key triggers a single clap, or claps from a small or a large group.

**Crash Cymbals A/B, Splash Cymbal, China Cymbal**

**Room Level**

Adjusts the level of the room microphone.

**Overhead Level**

Adjusts the level of the overhead microphone.

**Choke On/Off**

A choke effect for cymbals is created by hitting a cymbal, and then grabbing it with the hand, dampening the sound. If **Choke** is activated, you can choke a cymbal using poly pressure, aftertouch, or note-off events.

**Choke Controller**

Specifies which MIDI event triggers the choke for the cymbal.

- **Note-off:** To play the cymbal, hit the key and hold it. To choke the cymbal, release the key.
- **Aftertouch:** To play the cymbal, trigger the corresponding note. To choke the cymbal, send an aftertouch event that is greater than 64.
- **Poly Pressure:** To play the cymbal, trigger the corresponding note. To choke the cymbal, send a poly pressure event that is greater than 64.

## Ride Cymbal

You can play the ride cymbal with the shoulder of the stick on the bell of the cymbal, with the tip of the stick on the bow of the cymbal, or you can hit the cymbal on the edge for a crash sound.

### Room Level

Adjusts the level of the room microphone.

### Overhead Level

Adjusts the level of the overhead microphone.

### Bow

Adjusts the level of the **Bow** articulation that is triggered with D#2.

### Bell

Adjusts the level of the **Bell** articulation that is triggered with F2.

### Edge

Adjusts the level of the **Edge** articulation that is triggered with B2.

## Hihat



### Controller Filter

The open state of the closed hihat on A#1 and the shank hihat on A#0 can be controlled with MIDI controller #1 (modulation wheel) or with MIDI controller #4 (foot controller). Use these buttons to filter out any incoming MIDI data for controllers #1 or #4.

For example, activate **MW** to avoid that any incoming MIDI controller #1 is received from your MIDI keyboard.

### Room Level

Adjusts the level of the room microphone.

### Overhead Level

Adjusts the level of the overhead microphone.

### Shank, Tip, Foot

You can play the hihat with the shoulder of the stick on the edge or with the tip of the stick on the bow of the hihat. When you close the hihat, it produces a foot chick. You can adjust the level for each of these articulations.

- **Shank** adjusts the level of the shank hihat articulation that is triggered with F#0 and A#0.
- **Tip** adjusts the level of the tip hihat articulation that is triggered with F#1 and A#1.
- **Foot** adjusts the level of the foot and pedal hihat articulation that are triggered with G#0/G#1 (Foot) and A0/A-1 (Pedal).

### Hihat Open Min/Max

These controls adjust the minimum and the maximum opening state of the hihat, that is, they specify how much the hihat can be opened or closed with the corresponding hihat controller.

## The Kit



### Kick Drum

#### Articulation

For the kick drum, you can choose between four different beater articulations. The sound of the felt beaters is softer and with the wood beaters, the kick is more pronounced.

#### Room Level

Adjusts the level of the room microphone.

#### Overhead Level

Adjusts the level of the overhead microphone.

#### Tune

Adjusts the pitch.

#### Attack

Adjusts the attack time of the amplifier envelope.

#### Hold

Adjusts the hold time of the amplifier envelope. Turn the control all the way to the right to play the entire sample.

#### Decay

Adjusts the decay time of the amplifier envelope.

### Snare Drum

#### Articulation

For the snare drum, you can choose between three articulations.

- Select **Open** to reproduce the sound of a snare drum without damping.
- Select **Muffled** to use the sound of a snare with internal damping.

- Select **Towel** to use the sound of a snare drum that is covered with a towel. This results in a sound that is more muffled and quieter than the **Muffled** articulation.

#### **Room Level**

Adjusts the level of the room microphone.

#### **Overhead Level**

Adjusts the level of the overhead microphone.

#### **Tune**

Adjusts the pitch.

#### **Attack**

Adjusts the attack time of the amplifier envelope.

#### **Hold**

Adjusts the hold time of the amplifier envelope. Turn the control all the way to the right to play the entire sample.

#### **Decay**

Adjusts the decay time of the amplifier envelope.

### **Toms**

#### **Room Level**

Adjusts the level of the room microphone.

#### **Overhead Level**

Adjusts the level of the overhead microphone.

#### **Tune**

Adjusts the pitch.

#### **Attack**

Adjusts the attack time of the amplifier envelope.

#### **Hold**

Adjusts the hold time of the amplifier envelope. Turn the control all the way to the right to play the entire sample.

#### **Decay**

Adjusts the decay time of the amplifier envelope.

### **Crash Cymbals, Splash Cymbal, China Cymbal**

#### **Room Level**

Adjusts the level of the room microphone.

#### **Overhead Level**

Adjusts the level of the overhead microphone.

#### **Choke On/Off**

A choke effect for cymbals is created by hitting a cymbal, and then grabbing it with the hand, dampening the sound. If **Choke** is activated, you can choke a cymbal using poly pressure, aftertouch, or note-off events.

#### **Choke Controller**

Specifies which MIDI event triggers the choke for the cymbal.

- **Note-off:** To play the cymbal, hit the key and hold it. To choke the cymbal, release the key.
- **Aftertouch:** To play the cymbal, trigger the corresponding note. To choke the cymbal, send an aftertouch event that is greater than 64.
- **Poly Pressure:** To play the cymbal, trigger the corresponding note. To choke the cymbal, send a poly pressure event that is greater than 64.

## Ride Cymbals

You can play the ride cymbals with the shoulder of the stick on the bell of the cymbal, with the tip of the stick on the bow of the cymbal, or you can hit the cymbal on the edge for a crash sound.

### Room Level

Adjusts the level of the room microphone.

### Overhead Level

Adjusts the level of the overhead microphone.

### Bow

Adjusts the level of the **Bow** articulation that is triggered with D#2.

### Bell

Adjusts the level of the **Bell** articulation that is triggered with F2.

### Edge

Adjusts the level of the **Edge** articulation that is triggered with B2.

## Hihat

### Room Level

Adjusts the level of the room microphone.

### Overhead Level

Adjusts the level of the overhead microphone.

### Shank, Tip, Foot

You can play the hihat with the shoulder of the stick on the edge or with the tip of the stick on the bow of the hihat. When you close the hihat, it produces a foot chick. You can adjust the level for each of these articulations.

- **Shank** adjusts the level of the shank hihat articulation that is triggered with F#0 and A#0.
- **Tip** adjusts the level of the tip hihat articulation that is triggered with F#1 and A#1.
- **Foot** adjusts the level of the foot and pedal hihat articulation that are triggered with G#0/G#1 (Foot) and A0/A-1 (Pedal).

### Controller Filter

The open state of the closed hihat on A#1 and the shank hihat on A#0 can be controlled with MIDI controller #1 (modulation wheel) or with MIDI controller #4 (foot controller). Use these buttons to filter out any incoming MIDI data for controllers #1 or #4.

For example, activate **MW** to avoid that any incoming MIDI controller #1 is received from your MIDI keyboard.

### Hihat Open Min/Max

These controls adjust the minimum and the maximum opening state of the hihat, that is, they specify how much the hihat can be opened or closed with the corresponding hihat controller.



# Percussion Agent

Percussion Agent specializes in instruments, grooves, and styles that feature percussive elements.

Not only does this agent play perfect accompaniments to many of Acoustic Agent's grooves, but it offers an ideal way to create your own percussion tracks from scratch in just a few clicks using the integrated style player. Over 20 percussion instruments, such as bongos, congas, shakers, tambourines, and many more, have been recorded in minute detail using multiple microphones. Percussion Agent also offers a dedicated **Agent** mixer for full control of your sound.

## Percussion Agent Sound Editing

On the **Edit** page for instrument pads, you set up the sound of the kits.



- To open the **Edit** page, click the **Edit** button in the upper right section of the plug-in panel.
- To show the parameters for a particular percussion instrument, click on it.
- If a percussion instrument is triggered, this is shown by the instrument turning dark.

## Locking the Pad Colors

Locking the color settings for the pads allows you to switch between different kits while keeping the color settings.

---

### PROCEDURE

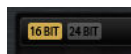
- To lock the color settings for the pads, activate **Lock Pad Colors** below the pads.
-

## 24 Bit and 16 Bit Sample Versions

All Acoustic Agent and Percussion Agent kits come with dedicated samples in 16 and 24 bit. The 24 bit versions have the better audio quality at the cost of longer loading times and higher RAM usage. The 16 bit versions load faster and utilize less RAM at the cost of a lower audio quality.

You can set up which samples are loaded by default with the **Load Preference** setting on the **Options** page.

However, you can also switch between the 16 and 24 bit versions without changing the **Load Preference** setting and reloading the preset. This can be done on the **Edit** page.



- In the upper right corner of the Instrument page, click the **16 Bit** or the **24 Bit** button.

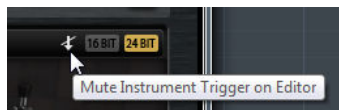
### NOTE

Not all agents come with 16 and 24 bit versions of the samples. The **16 Bit** and **24 Bit** buttons are only available if the agent supports this function.

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## Instrument Preview

On the **Edit** page, you can specify whether you want to preview and select an instrument when clicking on it, or whether you only want to select it and show its sound parameters.



- To preview an instrument when clicking on it, deactivate the **Mute Instrument Trigger on Editor** button in the upper right corner of the **Edit** page.  
Instruments that have multiple articulations play the standard articulation. For example, a conga can be played with the palm, open, or slapped. For preview, the open articulation is used. To trigger the other articulations, use the instrument pads.
- To select an instrument and show its settings when clicking on it, activate **Mute Instrument Trigger on Editor**.

## Sound Parameters

If you click on an instrument on the **Edit** page on the right, its sound parameters are available at the bottom of the panel.

Each instrument has its own set of parameters. These parameters can be set up separately for the available articulations of the instruments.

The following sound parameters are common for all percussion instruments and their articulations, except for the crash cymbal:

### Room Level

Adjusts the level of the room microphone.

### Tune

Adjusts the pitch.

### Attack

Adjusts the attack time of the amplifier envelope.

### **Hold**

Adjusts the hold time of the amplifier envelope. Turn the control all the way to the right to play the entire sample.

### **Decay**

Adjusts the decay time of the amplifier envelope.

## **Crash Cymbal**

For the crash cymbal, the following parameters are available.

### **Room Level**

Adjusts the level of the room microphone.

### **Choke On/Off**

A choke effect for cymbals is created by hitting a cymbal, and then grabbing it with the hand, dampening the sound. If **Choke** is activated, you can choke a cymbal using poly pressure, aftertouch, or note-off events.

### **Choke Controller**

Specifies which MIDI event triggers the choke for the cymbal.

- **Note-off:** To play the cymbal, hit the key and hold it. To choke the cymbal, release the key.
- **Aftertouch:** To play the cymbal, trigger the corresponding note. To choke the cymbal, send an aftertouch event that is greater than 64.
- **Poly Pressure:** To play the cymbal, trigger the corresponding note. To choke the cymbal, send a poly pressure event that is greater than 64.

# Mixing and Effect Handling

You perform your mixing operations on the **Mixer** page.

Each agent has a dedicated **Agent** mixer. In addition, the **AUX** mixer, the **Kit** mixer, and the **Master** mixer are available. The order of the mixer tabs on the page represents the signal flow.

## Beat Agent Mixer

The **Agent** mixer of Beat Agent offers 16 busses.

You can access the busses via the numbered buttons at the top. Click the buttons **1**, **2**, **3**, or **4** to display the busses 1 to 4, 5 to 8, 9 to 12, and 13 to 16, respectively.

By default, the output of the **Agent** mixer busses is routed to the **Kit Mix**, but you can also assign the busses to the plug-in outputs.



In the top right corner of the **Agent** mixer, you can find the global **Mute** and **Solo** buttons.

- To reset all **Mute** buttons of the **Agent** mixer, click the global **Mute** button.
- To reset all **Solo** buttons of the **Agent** mixer, click the global **Solo** button.

## Channel Parameters



The channel strips have the following parameters:

### Level

Adjusts the volume of the channel.

### Pan

Defines the position of the sound in the stereo panorama.

### Mute

Mutes the channel.

### Solo

Soloes the channel and mutes all other channels. Several channels can be soloed at the same time.

### Peak Level

Indicates the highest level on the bus.

- To reset the peak level, click the text field.

### Insert Effect Slots

You can use the slots on the right of the channel strip to add insert effects to the bus.

### AUX Sends 1-4

Use these controls to send the signal to the corresponding AUX busses of the agent.

### Bus Name

At the bottom of a channel strip, the name of the bus is displayed.

- To rename a bus, double-click its name and enter a new name.

## Acoustic Agent Mixer

The **Agent** mixer for Acoustic Agent kits allows you to perform the mixing of these kits. Different content sets feature different sets of drum instruments, therefore, the available channel strips in the mixer vary with the kits.

The drum kits for Acoustic Agent were recorded with multiple microphones. The **Agent** mixer contains a channel strip for each microphone, as well as a dedicated group channel for each of the different drums used in the kit.

The left section of the mixer gives you access to all recorded microphones for the different drums and to the group channels. Group channels are applied to the sum of all microphone channels of a particular drum instrument.



In the top right corner of the **Agent** mixer, you can find the global **Mute** and **Solo** buttons.

- To reset all **Mute** buttons of the **Agent** mixer, click the global **Mute** button.
- To reset all **Solo** buttons of the **Agent** mixer, click the global **Solo** button.

## Groups

If the **Groups** tab is active, the **Agent** mixer shows one channel strip for each drum instrument.

- To make settings for all instruments of a group simultaneously, select the **Group** tab.

## Close Microphone Channels

### Studio Kit/Rock Kit/Vintage Kit

If you are using a kit from the “Studio Kit”, “Rock Kit”, or “Vintage Kit” content sets, the **Kick/SN/HH** (kick, snare, hihat), **Toms**, **Cymbals**, and **Percussion** tabs display separate channel strips for the close microphone channels for the selected instrument.

Kick and snare drum were recorded with two microphones: kick main and additional, and snare top and bottom. The other instruments were recorded with a single close microphone.

### The Kit

Except for the cymbals, the instruments in the “The Kit” content were recorded with close microphones. Kick and snare drum were recorded with two microphones: kick in and out, and snare top and bottom. Hihat and toms were recorded with a single close microphone.

#### NOTE

The cymbals were recorded on the **Room** and **Overhead** microphone channels.

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## Room and Overhead Microphones

The **Room/OH** tab contains channels for the room and the overhead microphones.

If you are using a kit from the “The Kit” content set, the following applies:

The room channel is recorded using a compressed pressure zone microphone (PZM). You can deactivate the **Room** channel with the button below the **Mute** button. This reduces the processor load.

Furthermore, you can choose between several overhead microphones that were recorded with different setups.

## REV/MIX

The **REV/MIX** tab contains channel strips for the **Reverb** channel and the **Kit Mix** channel.

The **Reverb** channel strip allows you to add room character to the mix.

For the **Kit Mix** output channel, you can add a **Tube Saturator** effect.

- To activate the **Tube Saturator** effect, click its **On/Off** button.
- To change the effect sound, adjust the **Drive** parameter.

## Channel Parameters

The channel strips in the mixer contain a set of parameters. Some channel strips, such as the **Room** and **Overhead** channel strips, have additional controls.



### Level

Adjusts the volume of the channel.

### Pan

Defines the position of the sound in the stereo panorama.

### Mute

Mutes the channel.

### Solo

Solos the channel and mutes all other channels. Several channels can be soloed at the same time.

### Peak Level

Indicates the highest level on the bus.

- To reset the peak level, click the text field.

### AUX Sends 1-4

Use these controls to send the signal to the corresponding AUX busses of the agent.

### Output

By default, the output of the **Agent** mixer busses is routed to the **Kit Mix**, but you can also assign the busses to one of the plug-in outputs and to the AUX FX 1 to 4.

- Click the **Output** field to open the pop-up menu with the available outputs.

### Width (Room and Overhead channel strips only)

Adjusts the stereo width of the signal from mono to stereo.

### Room Channel On/Off (Room channel strip only)

Kits from the "The Kit" content set have an **On/Off** button below the **Mute** button that allows you to deactivate the **Room** channel and unload its samples from memory. This reduces the processor load.

### Reverb Channel On/Off (Reverb channel strip only)

The **On/Off** button below the **Mute** button allows you to deactivate the **Reverb** channel and unload its samples from memory. This way, you can reduce the processor load if you do not want to apply the reverb effect to the **Kit Mix**.

## Agent Mixer Equalizer and Effects

In the lower section of the **Agent** mixer, you can make equalizer and effect settings for the channels and groups.



- To make settings for an entire group, open the **Groups** tab and click the label of the channel strip for the group.
- To make settings for a single microphone channel, select the tab for the instrument that you want to edit, and click the label of the channel strip for that channel.

If a channel strip is selected, the section below the mixer channels shows the insert effects for this channel. The order of the effects can be modified by dragging the tabs. To show the parameters of an insert effect, select the corresponding tab.

- To activate an insert effect, click the corresponding **On/Off** button.

Each channel offers an equalizer, a vintage compressor, a tape saturator, and an envelope shaper for the insert effects. These effects correspond to the included effect plug-ins of the same name.

### RELATED LINKS

[Studio EQ](#) on page 162

[Vintage Compressor](#) on page 179

[Tape Saturator](#) on page 168

[Envelope Shaper](#) on page 185

## Mixer Presets

You can create mixer presets for Acoustic Agent. These presets contain all **Agent** mixer, **AUX** mixer, and **Kit** mixer settings for the loaded kit.

Mixer presets can only be applied to the kit they were saved for, because the number of used instruments and mixer channels varies between the kits. Each kit comes with its own set of presets.

The controls for loading, saving, and deleting mixer presets can be found to the left of the **ROOM/OH** tab.

## Mixing Your Kits in Cubase/Nuendo

You can perform the mixing of an Acoustic Agent kit in the **MixConsole** of your Steinberg DAW rather than in Groove Agent. You can either start from scratch or use the mixer settings from Groove Agent as a starting point.

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### PROCEDURE

- Right-click the kit in the **Kit Rack** and select **Export Mixer to Cubase/Nuendo** or **Export Mixer and FX to Cubase/Nuendo**.

Now, the following happens:

- For all Groove Agent group channels, such as **Kick** or **Snare**, corresponding group channels are created in your Steinberg DAW.



- Instrument channels, such as **Kick Main**, **Kick Add**, etc. are routed to individual plug-in outputs. These connections create the corresponding **MixConsole** channels in your Steinberg DAW.
- In the DAW, the instrument channels are routed to the group channels, following the original Groove Agent mixer structure. For example, **Kick Main** and **Kick Add** are routed to the **Kick** group channel.
- If you selected **Export Mixer and FX to Cubase/Nuendo**, all Groove Agent channel strip effect settings and equalizer settings are transferred to the DAW.

**NOTE**

The **Q** settings in the DAW differ slightly from the Groove Agent equalizer settings, but they are recreated as close as possible.

- The **Kit Mix** channel is added as a group channel and all instrument group channels and channels, such as **Room**, **Overhead**, etc. are routed to it.

**RESULT**

The Groove Agent **Agent** mixer is recreated completely in the DAW. In Groove Agent, the mixer is deactivated and all mixing is now performed in the DAW.

**NOTE**

- One Groove Agent kit at a time can be mixed in the DAW. If you want to export and mix multiple kits at the same time, you must use multiple instances of Groove Agent.
- If you want to reactivate the Acoustic Agent mixer, you must reload the original kit or use **Revert to Last Saved Kit** on the kit context menu.

## Percussion Agent Mixer

The **Agent** mixer contains a channel strip for each percussion instrument and its articulations.

The left section of the mixer gives you access to all recorded instruments that are grouped on tabs **A**, **B**, **C**, and **D**. The channel order in the mixer corresponds to the mapping of the instruments on the MIDI keyboard.



In the top right corner of the **Agent** mixer, you can find the global **Mute** and **Solo** buttons.

- To reset all **Mute** buttons of the **Agent** mixer, click the global **Mute** button.

- To reset all **Solo** buttons of the **Agent** mixer, click the global **Solo** button.

## Room Microphone

The **Room** channel strip contains the channels for the room microphone.

## Channel Parameters

The channels have the following parameters:

### Level

Adjusts the volume of the channel.

### Pan

Defines the position of the sound in the stereo panorama.

### Mute

Mutes the channel.

### Solo

Soloes the channel and mutes all other channels. Several channels can be soloed at the same time.

### Peak Level

Indicates the highest level on the bus.

- To reset the peak level, click the text field.

### Output

By default, the output of the **Agent** mixer busses is routed to the **Kit Mix**, but you can also assign the busses to one of the plug-in outputs and to the AUX FX 1 to 4.

- Click the **Output** field to open the pop-up menu with the available outputs.

### AUX Sends 1-4

Use these controls to send the signal to the corresponding AUX busses of the agent.

### Width (Room Channel Strip Only)

Adjusts the stereo width of the signal from mono to stereo.

## Agent Mixer Equalizer and Effects

In the lower section of the **Agent** mixer, you can make equalizer and effect settings for the channels.



- To make settings for an instrument channel, select the tab for the instrument that you want to edit, and click the label of the channel strip for that channel.

If a channel strip is selected, the section below the mixer channels shows the insert effects for this channel. The order of the effects can be modified by dragging the tabs. To show the parameters of an insert effect, select the corresponding tab.

- To activate an insert effect, click the corresponding **On/Off** button.

Each channel offers an equalizer, a vintage compressor, a tape saturator, and an envelope shaper for the insert effects. These effects are reduced versions of the included effect plug-ins.

## AUX Mixer

The **AUX** mixer features 4 AUX busses that can be used to realize classic send effects.

Each bus hosts up to 4 insert effects, which allows you to set up complex effects. The busses can be routed to the Master output of the plug-in or to one of the individual outputs. Each kit slot has its own **AUX** mixer. This means that you can use different Reverb send effects for the different slots, for example. All settings of the **AUX** mixer are saved in kit presets.

### Parameters



### Output

On this pop-up menu, you can select one of the 16 available outputs for the AUX bus or you can route the signal to the **Kit** mixer.

### Level

Allows you to set the level of the AUX bus.

### Pan

Sets the position of the AUX bus in the stereo panorama.

### Mute

Mutes the AUX bus.

### Effect Slots

You can use the 4 slots on the right of each channel strip to add insert effects to the slot.

## Kits Mixer

The **Kits** mixer contains a channel strip for each bus that is assigned to a kit slot.

Groove Agent allows you to load up to 4 kits into the kit slots. Each slot comes with a dedicated mixer channel that can be used to adjust levels between the different kits, for example. You can also solo and mute kits, to listen to individual kits, or combinations of them. Each mixer channel provides 4 insert effect slots to apply effects to the overall output signal of the kit.

### Parameters



### Output

On this pop-up menu, you can select one of the 16 available outputs.

### Level

The level fader allows you to adjust the volume of the slot.

### Pan

Sets the position of the slot in the stereo panorama.

### Mute

Mutes the slot.

### Solo

Solos the slot.

### Meter

The meters of the mixer channel show the output level of the kit.

### Peak Level Meter

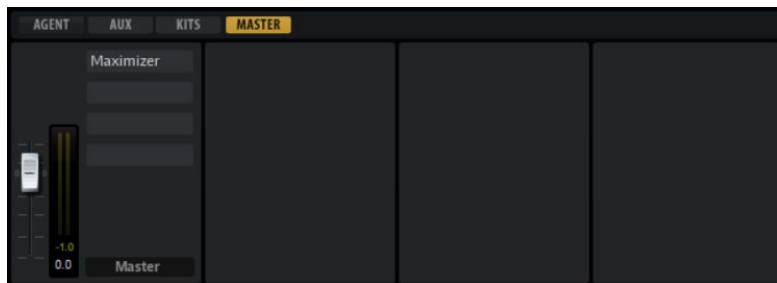
The meter indicates the highest level on the bus in dB. To reset the peak meter, click on the value field.

### Effect Slots

You can use the 4 slots on the right of the channel strip to add insert effects to the slot.

## Master Mixer

The **Master** mixer shows the channel for the **Master** stereo output bus. It can host up to four insert effects that can be used to add a global EQ or compressor to the signal chain, for example.



### Level

Allows you to set the level of the **Master** bus.

### Effect Slots

You can use the effect slots on the right to add insert effects.

## Effect Handling

Each kit slot in Groove Agent features an **AUX** mixer with 4 AUX busses that can be used to realize classic send effects. Each bus hosts up to 4 insert effects, which allows you to set up complex effects. The busses can be routed to the **Master** output of the plug-in or to one of the individual outputs.

The **Kit** Mixer provides access to the mixer channel of the kit which also features four inserts.

Furthermore, the **Mixer** provides access to the **Master** output bus. This can be used to add a global EQ or compressor to the signal chain, for example.

## Default Effect Settings

Each effect comes with factory default settings. However, you can save your own default settings for each effect as a preset.

- Set up the effect.
- Click the **Save Preset** button in the title bar of the effect section and save the preset under the name "--Default--".

The preset is saved in the presets folder of the effect and is loaded each time you load the effect.

- To return to the factory default settings, delete your default preset.

## Using the Insert Effect Slots

On the **Mixer** page, you can set up insert effects for the agent channels, the kit channels, the AUX busses, and the master channel.

Each bus provides four slots for insert effects.

- To assign an insert effect, click the effect slot and select the effect from the menu.
- To remove an insert effect including its current settings, click the effect slot and select **None** from the menu.
- To bypass an effect, activate the **Bypass** button of the slot. Bypass is active when the button lights up.
- To edit an insert effect, click the **e** button of the corresponding slot. You can edit only one effect at a time. The parameters of the insert effect are displayed in the bottom section.
- To move an effect to another slot, click its drag icon and drag it to another slot. This replaces any effect loaded in this slot.
- To change the order of the effects, drag them by their drag icon to a new position between two slots.
- To copy an effect into another slot, **Alt**-click its drag icon and drag it onto the new slot. This replaces any effect loaded in this slot.

### NOTE

You can also copy effects between the different mixers. First drag an effect to the corresponding mixer tab. Then drag it to the position where you want to insert it.

- To copy an effect and insert it between two effect slots, **Alt**-click its drag icon and drag it between two slots.

### NOTE

You can also copy effects between the different mixers. First drag an effect to the corresponding mixer tab. Then drag it to the position where you want to insert it.

---

# Effects Reference

## Reverb Effects

### REverence

REverence is a convolution tool that allows you to apply room characteristics (reverb) to the audio.



By recording an impulse in a room, you capture the characteristics of this room. Convolution superimposes these characteristics to the sound. The result is a very natural sounding reverb. Included with this effect is a collection of high-quality reverb impulse responses.

#### Impulse Response

Allows you to select an impulse response. This determines the basic sound character of the reverb.

#### Reverse

Reverses the impulse response.

#### Predelay

Determines the amount of time between the dry signal and the onset of the reverb. With higher predelay values, you can simulate larger rooms.

#### Time

Controls the reverb time. At a setting of 100 %, the impulse response is applied with its original length.

#### Size

Scales the size of the simulated room. At a setting of 100 %, the impulse response is applied as recorded in the original room.

#### Level

Adjusts the level of the impulse response.

#### Equalizer

Activates the built-in three-band equalizer.

### ER/Tail Split

Sets the split point between the early reflections and the reverb tail.

### ER/Tail Mix

Sets the balance between the early reflections and the reverb tail. At a setting of 50 % the early reflections and the tail have the same volume level. Settings below 50 % raise the early reflections and lower the tail, as a result the sound source moves towards the front of the room. Settings above 50 % raise the tail and lower the early reflections, as a result the sound source moves towards the back of the room.

## Reverb

This effect produces a high-quality algorithmic reverb with early reflections and reverb tail.



The early reflections are responsible for the spatial impression in the first milliseconds of the reverb. For emulating different rooms, you can choose between different early reflection patterns and adjust their size. The reverb tail, or late reverberation, offers parameters for controlling the room size and the reverb time. You can adjust the reverb time individually in three frequency bands.

### Predelay

Determines how much time passes before the reverb is applied. This allows you to simulate larger rooms by increasing the time it takes for the first reflections to reach the listener.

### Early Reflections

Here, you select an early reflections pattern. The early reflections pattern contains the most important delays that deliver the key information for the spatial impression of the room.

### Show Early Reflections Page/Show Chorusing Page

With these two buttons below the **Early Reflections** pop-up menu, you can choose whether to display the early reflections settings or the chorusing settings in the lower left part of the effect panel.

### ER/Tail

Sets the level balance between the early reflections and the reverb tail. At a setting of 50 %, early reflections and tail have the same volume. Settings below 50 % raise the early reflections and lower the tail, as a result the sound source moves towards the front of the room. Settings above 50 % raise the tail and lower the early reflections, as a result the sound source moves toward the back of the room.

### Delay

Delays the onset of the reverb tail.

### Room Size

Controls the dimensions of the simulated room. At a setting of 100 %, the dimensions correspond to a cathedral or a large concert hall. At a setting of 50 %, the dimensions correspond to a medium-sized room or studio. Settings below 50 % simulate the dimensions of small rooms or a booth.

### **Main Time**

Controls the overall reverb time of the tail. The higher this value, the longer the reverb tail will decay. At a setting of 100 %, the reverb time is infinitely long. The **Main Time** parameter also represents the mid band of the reverb tail.

### **High Time**

Controls the reverb time for the high frequencies of the reverb tail. With positive values, the decay time of the high frequencies is longer. With negative values, it is shorter. Frequencies are affected depending on the **High Freq** parameter.

### **Low Time**

Controls the reverb time for the low frequencies of the reverb tail. With positive values, low frequencies decay longer and vice versa. Frequencies will be affected depending on the **Low Freq** parameter.

### **High Freq**

Sets the cross-over frequency between the mid and the high band of the reverb tail. You can offset the reverb time for frequencies above this value from the main reverb time with the **High Time** parameter.

### **Low Freq**

Sets the cross-over frequency between the low and the mid band of the reverb tail. The reverb time for frequencies below this value can be offset from the main reverb time with the **Low Time** parameter.

### **Size**

Adjusts the length of the early reflections pattern. At a setting of 100 %, the pattern is applied with its original length and the room sounds the most natural. At settings below 100 %, the early reflections pattern is compressed and the room is perceived smaller.

### **ER Low Cut**

Attenuates the low frequencies of the early reflections. The higher this value, the fewer low frequencies are present in the early reflections.

### **ER High Cut**

Attenuates the high frequencies of the early reflections. The lower this value, the fewer high frequencies the early reflections will have.

### **Shape**

Controls the attack of the reverb tail. At a setting of 0 %, the attack is more immediate, which is a good setting for drums. The higher this value, the less immediate the attack.

### **Density**

Adjusts the echo density of the reverb tail. At a setting of 100 %, single reflections from walls cannot be heard. The lower this value, the more single reflections can be heard.

### **Tail High Cut**

Attenuates the high frequencies of the reverb tail. The lower this value, the fewer high frequencies the reverb tail will have.

### **Width**

Adjusts the output of the reverb signal between mono and stereo. At a setting of 0 %, the output of the reverb is mono, at 100 % it is stereo.

### **Mix**

Sets the ratio between the dry and the wet signal.



## Chorusing

Chorusing allows you to enrich the reverb tail through subtle pitch modulations. To access the chorusing parameters, click the **Show Chorusing Page** button.



### Chorusing On/Off

Activates/Deactivates the chorusing effect.

### Chorusing Rate

Specifies the frequency of the pitch modulation.

### Chorusing Depth

Sets the intensity of the pitch modulation.

## Delay Effects

### Multi Delay

This effect produces delays, with adjustable time, feedback, and filters.



### Mode

- **Stereo** has two independent delay lines, one for the left and one for the right audio channel, each with a feedback path of its own.
- **Cross** has two delay lines with cross feedback, where the delay of the left channel is fed back into the delay of the right channel, and vice versa.
- **Ping-Pong** mixes the left and right input channels and sends the mixed signal to hard-panned left and right delays. This way, the echoes bounce like a ping-pong ball between left and right in the stereo panorama.

### Time

Sets the overall time for the left and right delay. Use the **Delay L/R** parameter to shorten the time for the left or right delay.

### Sync

Activate **Sync** to synchronize the delay time to the host tempo. If **Sync** is activated, the time is set as a note value.

**NOTE**

The maximum delay time is 5000 ms. If the note length exceeds this value, it is automatically shortened.

---

**Delay L/R**

Offsets the time of the left or right delay from the overall delay time. At a factor of 1, the right or left delay time has the same length as the overall delay time. At a factor of 0.5, the time is half as long as the overall delay time.

- To offset the left delay time, turn the control to the left.
- To offset the right delay time, turn the control to the right.

**Feedback**

Sets the overall amount of feedback for the left and right delay. Feedback means that the output of the delay is fed back to its input. At a setting of 0 %, you hear one echo. At a setting of 100 %, the echoes repeat endlessly.

**Feedback L/R**

Offsets the amount of feedback of the left or right delay from the overall feedback. A factor of 1 means that the amount of feedback corresponds to the overall feedback. A factor of 0.5 means that the amount is half the overall feedback.

- To offset the left feedback, turn the control to the left.
- To offset the right feedback, turn the control to the right.

**NOTE**

This parameter is only available in **Stereo** mode.

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**High Freq**

Attenuates the high frequencies of the delays.

**Low Freq**

Attenuates the low frequencies of the delays.

**Mix**

Sets the ratio between the dry and the wet signal.

## EQ Effects

### Studio EQ

Studio EQ is a high-quality 4-band parametric equalizer.



With the four frequency bands, you can shape the tone color, to create a brighter or darker sound, for example. The two mid-range bands act as peak filters and the low and high bands act

as shelving filters. All bands are fully parametric with adjustable gain, frequency, and Q factor. Each frequency band offers the following controls:

**On/Off**

Activates/Deactivates the frequency band.

**Gain**

Sets the amount of cut or boost for the corresponding band.

**Freq**

Sets the frequency that is cut or boosted with the **Gain** parameter.

**Q (Quality)**

Adjusts the bandwidth of the mid-range peak filters from wide to narrow. By increasing the **Q** value on the low and high shelving filters, you can add a dip to their shape.

## Graphic EQ

Graphic EQ is an equalizer with ten frequency bands that can be cut or boosted by up to 12 dB. In addition, you can specify the overall range and output of the equalizer.



**Output**

Controls the overall output level of the equalizer.

**Mode**

Allows you to add color or character to the equalized output. The following options are available:

- **True Response** mode uses serial filters with accurate frequency response.
- **Classic** mode uses parallel filters where the resonance depends on the amount of gain.
- **Constant Q** mode uses parallel filters where the resonance is raised when boosting the gain.

**Range**

Adjusts the maximum cut or boost for all frequency bands together.

**Invert**

Activate this to invert the EQ curve.

**Flatten**

Resets all frequency bands to 0 dB.

## DJ-EQ

This plug-in is an easy-to-use 3-band parametric equalizer that resembles the EQs found on typical DJ mixers. This plug-in is designed for quick sound fixes.



### Low Freq/Mid Freq/High Freq

Set the amount of boost or attenuation for the low, mid, and high bands. You can also click and drag in the display to change these values.

### Low Cut/Mid Cut/High Cut

Cut the low, mid, and high bands.

### Reset Output Peak Level

Resets the peak level that is displayed in the output meter.

## Filter Effects

### Auto Filter

Auto Filter provides two morphable filter shapes with distortion.



The morphing between the two shapes, as well as the cutoff, can be controlled with a manual pedal control, an LFO, or an envelope follower.

### Filter Parameters

#### Filter Shape

- LP 24, 18, 12, and 6 are low-pass filters with 24, 18, 12, and 6 dB/oct. Frequencies above the cutoff are attenuated.
- BP 12 and BP 24 are band-pass filters with 12 and 24 dB/oct. Frequencies below and above the cutoff are attenuated.
- HP 6+LP 18 and HP 6+LP 12 are combinations of a high-pass filter with 6 dB/oct and a low-pass filter with 18 and 12 dB/oct, respectively (asymmetric band-pass filter). Frequencies below and above the cutoff are attenuated. Attenuation is more pronounced for the frequencies above the cutoff.
- HP 12+LP 6 and HP 18+LP 6 are combinations of a high-pass filter with 12 and 18 dB/oct and a low-pass filter with 6 dB/oct (asymmetric band-pass filter).

Frequencies below and above the cutoff are attenuated. Attenuation is more pronounced for the frequencies below the cutoff.

- HP 24, 18, 12, and 6 are high-pass filters with 24, 18, 12, and 6 dB/oct. Frequencies below the cutoff are attenuated.
- BR 12 and BR 24 are band-reject filters with 12 and 24 dB/oct. Frequencies around the cutoff are attenuated.
- BR 12+LP 6 and BR 12+LP 12 are combinations of a band-reject filter with 12 dB/oct and a low-pass filter with 6 and 12 dB/oct, respectively. Frequencies around and above the cutoff are attenuated.
- BP 12+BR 12 is a band-pass filter with 12 dB/oct plus a band-reject filter with 12 dB/oct. Frequencies below, above, and around the cutoff are attenuated.
- HP 6+BR 12 and HP 12+BR 12 are combinations of a high-pass filter with 6 and 12 dB/oct and a band-reject filter with 12 dB/oct. Frequencies below and around the cutoff are attenuated.
- AP is an all-pass filter with 18 dB/oct. Frequencies around the cutoff are attenuated.
- AP+LP 6 is an all-pass filter with 18 dB/oct plus a low-pass filter with 6 dB/oct. Frequencies around and above the cutoff are attenuated.
- HP 6+AP is a high-pass filter with 6 dB/oct plus an all-pass filter with 18 dB/oct. Frequencies around and below the cutoff are attenuated.

### Input

Adjusts the gain before the filter and distortion. This parameter only affects the wet signal.

### Cutoff

Specifies the cutoff frequency of the filter.

### Resonance

Emphasizes the frequencies around the cutoff. At higher resonance settings, the filter self-oscillates, which results in a ringing tone.

### Distortion Type

The following options are available:

- When this parameter is set to **Off**, the filter offers no distortion.
- **Tube Drive** adds warm, tube-like distortion.
- **Hard Clip** adds bright, transistor-like distortion.
- **Bit Red** adds digital distortion by means of quantization noise.
- **Rate Red** adds digital distortion by means of aliasing.

### Distortion

Adds distortion to the signal. The effect depends on the selected distortion type. At higher settings, it creates a very intense distortion effect.

#### NOTE

This parameter is not available if **Distortion Type** is set to **Off**.

---

### Output

Adjusts the gain after the filter and distortion. This parameter only affects the wet signal.

### Mix

Sets the ratio between the dry and the wet signal.

## LFO Section

### LFO Waveform and Shape

**Waveform** selects the basic type of waveform. **Shape** changes the characteristic of the waveform.

- **Sine** produces smooth modulation. **Shape** adds additional harmonics to the waveform.
- **Triangle** is similar in character to **Sine**. The waveform periodically ramps up and down. **Shape** continuously changes the triangle waveform to a trapezoid.
- **Saw** produces a ramp cycle. **Shape** continuously changes the waveform from ramp down to triangle to ramp up.
- **Pulse** produces stepped modulation, where the modulation switches abruptly between two values. **Shape** continuously changes the ratio between the high and low state of the waveform. At 50 %, it produces a square wave.
- **Ramp** is similar to the **Saw** waveform. **Shape** increasingly puts silence before the sawtooth ramps up.
- **Log** is a logarithmic curvature. **Shape** continuously changes the curvature from negative to positive.
- **S & H 1** produces random stepped modulation, where each step is different. **Shape** puts ramps between the steps and produces a smooth random signal when fully turned right.
- **S & H 2** is similar to **S & H 1**. The steps alternate between random high and low values. **Shape** puts ramps between the steps and produces a smooth random signal when fully turned right.

### Freq

Determines the frequency of the cutoff modulation.

### Sync

Activate this to set the **Freq** parameter in fractions of beats.

### Depth

Determines the output level of the LFO modulation signal.

### Cutoff

Determines the modulation intensity of the LFO on the filter cutoff.

### Morph

Determines the modulation intensity of the LFO on the filter morph.

## Envelope Follower Section

The Envelope Follower traces the input signal with an adjustable attack and release time and delivers a modulation signal representing the level envelope of the signal.

### Sensitivity

All input signals are mixed down to mono before they are sent to the Envelope Follower. This parameter sets the optimum input level for the Envelope Follower.

### Attack

Adjusts the attack time, that is, the time the Envelope Follower needs to approach increasing input levels.

### Release

Adjusts the release time, that is, the time the Envelope Follower needs to approach decreasing input levels.

### Depth

Determines the output level of the modulation signal of the Envelope Follower.

### Cutoff

Determines the modulation intensity of the Envelope Follower on the filter cutoff.

### Morph

Determines the modulation intensity of the Envelope Follower on the filter morph.

## Pedal Section

### Pedal

Sets the position of the pedal.

### Depth

Determines the output level of the pedal modulation signal.

### Cutoff

Determines the modulation intensity of the pedal on the filter cutoff.

### Morph

Determines the modulation intensity of the pedal on the filter morph.

## Morph Filter

Morph Filter allows you to mix low-pass and high-pass filter effects, allowing for creative morphings between two filters. You can specify the filter shapes independently for filter shape A and B.



### Filter Shape B

Here, you can choose between several high-pass and band-rejection filter shapes.

### Filter Shape A

Here, you can select a low-pass or a band-pass filter shape.

### Morph

Allows you to mix the output between the two selected filters.

### Cutoff

Adjusts the cutoff frequency of the filters.

#### NOTE

You can also set the **Cutoff** and **Morph** parameters simultaneously by clicking in the display and dragging.

---

### Resonance

Emphasizes the frequencies around the cutoff frequency. For an electronic sound, increase the resonance. At higher resonance settings, the filter self-oscillates, which results in a ringing tone.

## Distortion Effects

### Distortion

This effect offers the whole range of distortion, from low fidelity, digital distortion to high fidelity, analog sounding distortion. The available distortion types (**Rate Red**, **Tube Drive**, **Hard Clip**, and **Bit Red**) can be freely combined.



#### In Gain

Adjusts the input level of the sound.

#### Rate Red (Rate Reduction)

Rate reduction distorts the sound by means of aliasing. Enable the **Rate Red** option to activate the control that adjusts the amount of aliasing. The lower the setting, the more aliasing is added.

#### Tube Drive

Adds warm, tube-like distortion to the sound. Enable the **Tube Drive** option to activate the control that adjusts the amount of distortion. The higher the setting, the more distortion is added.

#### Hard Clip

Adds bright, transistor-like distortion to the sound. Enable the **Hard Clip** option to activate the control that adjusts the amount of distortion. The higher the setting, the more distortion is added.

#### Bit Red (Bit Reduction)

Bit reduction distorts the sound by means of quantization noise. Enable the **Bit Red** option to activate the control that adjusts the amount of quantization noise. The lower the setting, the more quantization noise is added.

#### Out Gain

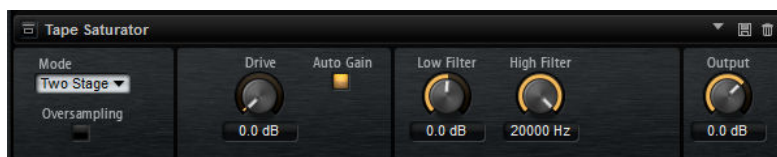
Adjusts the output level of the sound.

#### Mix

Sets the ratio between the dry and the wet signal.

## Tape Saturator

Tape Saturator simulates the behavior of classic tape recorders. These machines produced a specific saturation when recording higher input levels, which led to a compressed signal with light distortion.





### Mode

Here, you can choose between the effect of a single (**One Stage**) or two cascaded tape machines (**Two Stage**). **Two Stage** mode leads to higher saturation and compression.

### Oversampling

Activate this parameter to increase the accuracy of the effect by oversampling.

#### NOTE

If this parameter is activated, the effect requires more processing power.

---

### Drive

Determines the level of the input signal and thus the amount of saturation.

### Auto Gain

Activate this option for an automatic level compensation.

### Low Filter

Here, you can adjust the low frequency range below 1000 Hz by +/- 3 dB.

### High Filter

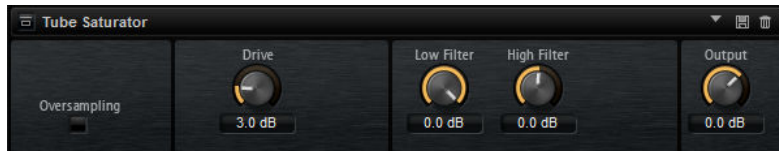
Here, you can attenuate the high frequency range. This high-cut filter works with a slope of 24 dB/octave.

### Output

Determines the level of the output signal.

## Tube Saturator

This effect enriches the sound by adding the characteristic harmonics of a saturated tube to the audio signal.



### Oversampling

Increases the accuracy of the effect by oversampling.

#### NOTE

If this parameter is activated, the effect requires more processing power.

---

### Drive

Determines the level of the input signal and thus the amount of saturation.

### Low Filter

Allows you to reduce the low frequency range by up to 6 dB before saturation.

### High Filter

Allows you to adjust the high frequency range by +/- 6 dB before saturation.

### Output

Determines the level of the output signal.

## Modulation Effects

### Chorus

Chorus thickens and broadens the sound by means of pitch modulation.



#### Rate

Determines the frequency of the pitch modulation, in Hertz.

#### Sync

Activate this to set the **Rate** value in fractions of beats.

#### Depth

Sets the intensity of the pitch modulation.

#### Phase

Widens the sound image of the effect from mono to stereo.

#### Shape

Adjusts the characteristics of the modulation. At a setting of 0 %, the pitch changes continuously, producing a steady modulation. At a setting of 100 %, the pitch does not change all the time, producing a less steady modulation.

#### Mix

Sets the ratio between the dry and the wet signal.

### Flanger

This effect thickens and broadens the sound by means of pitch modulation.



#### Rate

Allows you to specify the frequency of the pitch modulation in Hertz.

#### Sync

Activate this to set the Rate value in fractions of beats.

#### Depth

Sets the intensity of the pitch modulation.

#### Phase

Widens the sound image of the effect from mono to stereo. This parameter also changes the characteristic of the **Cross FB** parameter.

#### Shape

Adjusts the characteristics of the modulation. You hear this best when **Feedback** is activated. At a setting of 0 %, the sound sweeps linearly up and down. At a setting of 100 %, the sound sweeps exponentially up and down.

### Mix

Sets the ratio between the dry and the wet signal.

### Feedback

Adds resonances to the effect. This allows for jet-like sweeps of the sound.

### Cross FB

Mixes the feedback of the left channel with the right channel, and vice versa. The effect of this parameter is influenced by the **Phase** parameter.

#### NOTE

This parameter only takes effect if the **Feedback** parameter is set to a value above 0 %.

---

### Tone

Adjusts the tone color of the feedback. At lower values, the feedback is less bright.

## Step Flanger

The Step Flanger expands the Flanger with a Sample and Hold section that divides the modulation signal into a definable number of steps.



### Rate

Allows you to specify the frequency of the pitch modulation in Hertz.

### Sync

Activate this to set the **Rate** value in fractions of beats.

### Depth

Sets the intensity of the pitch modulation.

### Phase

Widens the sound image of the effect from mono to stereo. This parameter also changes the characteristic of the **Cross FB** parameter.

### Shape

Adjusts the characteristics of the modulation. You hear this best when **Feedback** is activated. At a setting of 0 %, the sound sweeps linearly up and down. At a setting of 100 %, the sound sweeps exponentially up and down.

### Mix

Sets the ratio between the dry and the wet signal.

### Feedback

Adds resonances to the effect. This allows for jet-like sweeps of the sound.

### Cross FB

Mixes the feedback of the left channel with the right channel, and vice versa. The effect of this parameter is influenced by the **Phase** parameter.

**NOTE**

This parameter only takes effect if the **Feedback** parameter is set to a value above 0 %.

**Tone**

Adjusts the tone color of the feedback. At lower values, the feedback is less bright.

**Type**

Defines the length of the delay line that is modulated. **Short** produces a sharper and **Long** a less defined, more blurred flanger sound.

**S&H Mix**

Use this parameter to blend the normal modulation signal with the stepped modulation signal. At 100 %, only the stepped modulation is used.

**Smooth**

Use this parameter to create ramps between the steps. This way, the stepped modulation signal sounds smoother.

**Steps**

Determines into how many steps the modulation signal is divided. You can use up to 32 steps.

## Phaser

The Phaser effect thickens and broadens the sound by means of phase modulation.



**Rate**

Specifies the frequency of the phase modulation.

**Sync**

Activate this to set the **Rate** value in fractions of beats.

**Depth**

Sets the intensity of the phase modulation.

**Shift**

Shifts the phase modulation upwards to higher frequencies of the spectrum.

**Phase**

Widens the sound image of the effect from mono to stereo.

**Feedback**

Adds resonances to the effect. Higher settings produce a more pronounced effect.

**Low Cut**

Attenuates the low frequencies.

**High Cut**

Attenuates the high frequencies.

### Mix

Sets the ratio between the dry and the wet signal.

## Ring Modulator

The Ring Modulator provides a sine oscillator that is multiplied with the input signal. This creates metallic, or bell-like, frequencies.

The integrated LFO modulates the frequency of the sine oscillator to vary the created frequencies over time. In addition, an envelope follower is available, which can be used to modulate the frequency of the sine oscillator depending on the level of the input signal.



### LFO Waveform and Shape

**Waveform** selects the basic type of waveform. **Shape** changes the characteristic of the waveform.

- **Sine** produces smooth modulation. **Shape** adds additional harmonics to the waveform.
- **Triangle** is similar in character to **Sine**. The waveform periodically ramps up and down. **Shape** continuously changes the triangle waveform to a trapezoid.
- **Saw** produces a ramp cycle. **Shape** continuously changes the waveform from ramp down to triangle to ramp up.
- **Pulse** produces stepped modulation, where the modulation switches abruptly between two values. **Shape** continuously changes the ratio between the high and low state of the waveform. At 50 %, it produces a square wave.
- **Ramp** is similar to the **Saw** waveform. **Shape** increasingly puts silence before the sawtooth ramps up.
- **Log** is a logarithmic curvature. **Shape** continuously changes the curvature from negative to positive.
- **S & H 1** produces random stepped modulation, where each step is different. **Shape** puts ramps between the steps and produces a smooth random signal when fully turned right.
- **S & H 2** is similar to **S & H 1**. The steps alternate between random high and low values. **Shape** puts ramps between the steps and produces a smooth random signal when fully turned right.

### LFO Freq

Use this to specify the frequency of the LFO for modulating the frequency of the sine oscillator.

### Sync

Activate this to set the **LFO Freq** value in fractions of beats.

### LFO Depth

Sets the intensity of the LFO modulation of the sine oscillator frequency.

### Frequency

Determines the frequency of the sine oscillator.

### Mix

Sets the ratio between the dry and the wet signal.

### Envelope Follower

The Envelope Follower traces the input signal with an adjustable attack and release time and delivers a modulation signal representing the level envelope of the signal.

### Sensitivity

All input signals are mixed down to mono before they are sent to the Envelope Follower. The **Sensitivity** parameter sets the optimum input level for the Envelope Follower.

### Attack

This adjusts the attack time, that is, the time the Envelope Follower needs to approach increasing input levels.

### Release

This adjusts the release time, that is, the time the Envelope Follower needs to approach decreasing input levels.

### Depth

Determines the output level of the modulation signal of the Envelope Follower.

## Frequency Shifter

A frequency shifter shifts each frequency of the input signal by a fixed amount.



Unlike pitch shifters, where the frequencies are shifted by a factor, and where the harmonic relations are kept, a frequency shifter alters the harmonic relations. Therefore, a larger frequency shift usually results in a disharmonic sound.

Furthermore, a frequency shifter alters the frequencies by adding an offset, while a pitch shifter multiplies the frequencies by a factor. The frequency shifter alters lower frequencies more than higher frequencies.

For example, if the input signal has the frequencies 100 Hz, 1000 Hz, and 10000 Hz, and you shift the frequency by +100 Hz, the resulting frequencies are 200 Hz, 1100 Hz, and 10100 Hz.

### Freq Coarse

Here you set the amount of frequency shift.

### Freq Fine

Here you can fine adjust the amount of frequency shift.

### L/R Offset Coarse

Sets an offset for the left and right channels. Positive values shift the right channel upwards and the left channel downwards, and vice versa.

### **L/R Offset Fine**

Allows for fine-adjustments of the offset between the left and right channels. Positive values shift the right channel upwards and the left channel downwards, and vice versa.

### **Mod Coarse**

Sets the maximum amount of frequency shift via modulation from LFO and Envelope Follower.

### **Mod Fine**

Allows for fine-adjustments to the amount of frequency shift via modulation from LFO and Envelope Follower.

### **Feedback**

Sets the amount of feedback, that is, the amount of signal that is sent from the output of the effect back to its input. The sound is similar to that of a phaser. You can control the direction and speed of this effect with the **Frequency Fine** parameter.

### **Notches**

Here you set the number of notches the phaser effect produces when you use larger amounts of Feedback.

## **LFO Section**

### **LFO Waveform and Shape**

**Waveform** selects the basic type of waveform. **Shape** changes the characteristic of the waveform.

- **Sine** produces smooth modulation. **Shape** adds additional harmonics to the waveform.
- **Triangle** is similar in character to **Sine**. The waveform periodically ramps up and down. **Shape** continuously changes the triangle waveform to a trapezoid.
- **Saw** produces a ramp cycle. **Shape** continuously changes the waveform from ramp down to triangle to ramp up.
- **Pulse** produces stepped modulation, where the modulation switches abruptly between two values. **Shape** continuously changes the ratio between the high and low state of the waveform. At 50 %, it produces a square wave.
- **Ramp** is similar to the **Saw** waveform. **Shape** increasingly puts silence before the sawtooth ramps up.
- **Log** is a logarithmic curvature. **Shape** continuously changes the curvature from negative to positive.
- **S & H 1** produces random stepped modulation, where each step is different. **Shape** puts ramps between the steps and produces a smooth random signal when fully turned right.
- **S & H 2** is similar to **S & H 1**. The steps alternate between random high and low values. **Shape** puts ramps between the steps and produces a smooth random signal when fully turned right.

### **Freq**

Specifies the frequency of the LFO in Hertz.

### **Sync**

Activate this to set the **Freq** parameter in fractions of beats.

### **Depth**

Determines the direction and amount of frequency shift from the LFO modulation signal.

## Envelope Follower

The Envelope Follower traces the input signal with an adjustable attack and release time and delivers a modulation signal representing the level envelope of the signal.

### Sensitivity

All input signals are mixed down to mono before they are sent to the Envelope Follower. This parameter sets the optimum input level for the Envelope Follower.

### Attack

Adjusts the attack time, that is, the time the Envelope Follower needs to approach increasing input levels.

### Release

Adjusts the release time, that is, the time the Envelope Follower needs to approach decreasing input levels.

### Depth

Determines the direction and amount of frequency shift from the envelope follower modulation signal.

#### NOTE

The maximum frequency shift via modulation from LFO or the Envelope Follower is determined by the parameters **Modulation Range Coarse** and **Modulation Range Fine**.

---

### Mix

Sets the ratio between the dry and the wet signal.

## Vintage Ensemble

This effect emulates the sound of classic ensemble modulation effects. It is based on a delay with LFO-modulated delay times. A secondary LFO with higher frequencies is used to produce the so-called shimmer.



### Rate

Sets the frequency of the LFO.

### Sync

If **Sync** is activated, you can set the **Rate** value in fractions of beats.

### Depth

Sets the intensity of the delay time modulation by the LFO.

### Shimmer

Sets the intensity of a secondary faster delay time modulation.

### Shimmer Rate

Determines the relation between the speed of the primary and the secondary delay modulation. For example, with a value of 10, the secondary modulation is 10 times faster.



### Low Cut

Applies a low-cut filter to the signal. Only frequencies above the set frequency are sent to the effect.

### High Cut

Applies a high-cut filter to the signal. Only frequencies below the set frequency are sent to the effect.

### FX Level

Allows you to adapt the effect signal level to compensate for level reductions caused by the low-cut and high-cut filters.

### Mix

Sets the ratio between the dry and the wet signal.

## Dynamics Effects

The effects Compressor, Limiter, Brickwall Limiter, Expander, Gate, and Maximizer work with an internal look-ahead function to guarantee the best possible audio quality.

However, this look-ahead function introduces a small amount of latency. Usually, this is not noticeable, but in some cases, it might introduce unwanted side effects. For example, if you work with parallel compression where signals are sent to an AUX bus and being returned to the rest of the mix, this might lead to unwanted flanging effects.

If you run into latency issues, you have the following possibilities:

- For the effects Compressor, Expander, and Gate, activate the **Live** button to use the effects without look-ahead functionality.
- For the effects Limiter, Brickwall Limiter, and Maximizer, send the signals to one of the plug-in outputs and add the corresponding effect directly in the DAW, to make use of the host's delay compensation.

## Compressor

The Compressor reduces the dynamic range of a sound. This way, the sound gains headroom. You can use this extra headroom to make the overall sound louder again.



The graphical control to the left indicates the compression curve. You can edit the **Threshold** and **Ratio** values with the handles of this control. The input and output VU meters indicate the level before and after the compression. The Gain Reduction meter indicates the current attenuation of the level.

### Threshold

Sets the threshold. Sounds that are louder than the threshold are reduced in gain. Sounds below the threshold stay untreated.

### Ratio

Sets the amount of gain reduction for sounds that are louder than the threshold. The higher the ratio, the more the output is lowered. For example, if the ratio is set to 2:1

and the amplitude of the sound is 4 dB above the threshold, the output is lowered by 2 dB. If the amplitude is 8 dB above the threshold, the output is lowered by 4 dB.

### Soft Knee

If this button is deactivated, signals above the threshold are compressed instantly according to the set ratio. If **Soft Knee** is activated, the onset of the compression is more gradual, producing a less drastic result.

### Make-Up

Raises the overall sound. This can become necessary if too much gain reduction is introduced by the **Threshold** and **Ratio** parameters. You can see the amount of gain reduction in the Gain Reduction meter.

#### NOTE

This parameter is not available if the **Auto** button is activated.

---

### Auto Make-Up Gain

Sets the **Make-Up** value automatically, depending on the current **Threshold** and **Ratio** settings.

### Attack

Determines how fast the Compressor reacts to sounds that exceed the threshold. The longer the attack time, the longer the time it takes to reduce the gain. With longer attack times, the onset of sounds exceeding the threshold pass through unprocessed.

### Hold

Sets the time period during which the compression is applied after the sound exceeds the set threshold.

### Release

Determines how fast the Compressor effect reacts to sounds that fall below the set threshold. The longer the release time, the longer it takes to return to the original level.

#### NOTE

This parameter is not available if the **Auto Release** button is activated.

---

### Auto Release

Activate this to set the release time automatically. The Compressor analyzes the input sound continuously to find the optimal setting.

### Peak/RMS

Determines whether the input signal is analyzed according to peak or RMS values or a mixture of both. At a setting of 0 %, the Compressor uses Peak sensing only and at 100 %, RMS sensing only. Peak means that the Compressor directly senses the peak level of the sound. RMS means that the Compressor senses the average power of the sound. Peak sensing responds faster than RMS sensing. Typically, Peak sensing is used for transient and RMS sensing for sustained sounds.

### Live

If this button is activated, the look-ahead feature of the effect is disengaged. Look-ahead produces more accurate processing, but adds a certain amount of latency as a trade-off. If **Live** mode is activated, there is no latency, which is better for live processing.

## Vintage Compressor

Vintage Compressor is modeled after vintage type compressors.

This compressor features separate controls for **Input** and **Output** gain, **Attack**, and **Release**. In addition, there is a **Punch** mode which preserves the attack phase of the signal and a program-dependent **Auto** feature for the **Release** parameter.



### In/Out Meters

Show the highest peaks of all available input and output channels.

### GR Meter

Shows the amount of gain reduction.

### Input

Determines the compression amount. The higher the input gain, the more compression is applied.

### Ratio

Sets the amount of gain reduction for sounds that are louder than the threshold. The higher the ratio, the more the output is lowered.

### Attack (0.1 to 100 ms)

Determines how fast the compressor responds. If the attack time is long, more of the initial part of the signal passes through unprocessed.

### Punch

If this is activated, the early attack phase of the signal is preserved, retaining the original punch in the audio material, even with short **Attack** settings.

### Release (10 to 1000 ms or Auto mode)

Sets the time after which the gain returns to its original level. If the **Auto Release** button is activated, the plug-in automatically finds the best release setting for the audio material.

### Output (-48 to 24 dB)

Sets the output gain.

## Tube Compressor

This versatile compressor with integrated tube-simulation allows you to achieve smooth and warm compression effects. The GR meter shows the amount of gain reduction. Tube Compressor features an internal side-chain section that lets you filter the trigger signal.



### In/Out Meters

Show the highest peaks of all available input and output channels.

### GR Meter

Shows the amount of gain reduction.

### Input

Determines the compression amount. The higher the input gain, the more compression is applied.

### Limit

Increases the ratio of the compressor for a limiting effect.

### Drive (1.0 to 6.0)

Controls the amount of tube saturation.

### Attack (0.1 to 100 ms)

Determines how fast the compressor responds. If the attack time is long, more of the initial part of the signal passes through unprocessed.

### Release (10 to 1000 ms or Auto mode)

Sets the time after which the gain returns to its original level. If the **Auto Release** button is activated, the plug-in automatically finds the best release setting for the audio material.

### Output (-12 to 12 dB)

Sets the output gain.

### Mix

Adjusts the mix between dry signal and wet signal preserving the transients of the input signal.

### Side-Chain

Activates the internal side-chain filter. The input signal can then be shaped according to the filter parameters. Internal side-chaining is useful for tailoring how the gate operates.

### Monitor

Allows you to monitor the filtered signal.

### Filter buttons (Low-Pass/Band-Pass/High-Pass)

If the **Side-Chain** button is activated, you can use these buttons to set the filter type to low-pass, band-pass, or high-pass.

### Center (50 to 20000 Hz)

If the **Side-Chain** button is activated, this sets the center frequency of the filter.

### Q-Factor

If the **Side-Chain** button is activated, this sets the resonance or width of the filter.

## Limiter

The Limiter effect prevents the sound from exceeding the set output level. This can be used to avoid clipping in following effects, for example.



The input and output meters indicate the level before and after the Limiter. The Gain Reduction meter in the middle indicates the current attenuation of the level.

### Input

Adjusts the input level of the sound. By increasing the input level, you can drive the sound more and more into limiting.

### Output

Sets the maximum output level of the sound.

### Release

Sets the time that the gain needs to return to its original level. The longer the release time, the longer it takes to return to the original level.

#### NOTE

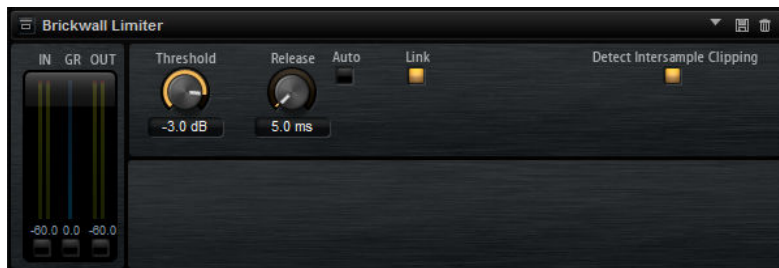
This parameter is not available if the **Auto** button is activated.

### Auto

Activate this to set the release time automatically. The Limiter analyzes the input sound continuously to find the optimal setting.

## Brickwall Limiter

Brickwall Limiter ensures that the output level never exceeds a set limit.



Due to its fast attack time, Brickwall Limiter can reduce even short audio level peaks without creating audible artifacts. However, this plug-in creates a latency of 1 ms. Brickwall Limiter features separate meters for input, output, and the amount of limiting.

### Threshold (-20 to 0 dB)

Determines the level where the limiter kicks in. Only signal levels above the set threshold are processed.

### Release (ms or Auto mode)

Sets the time after which the gain returns to the original level when the signal drops below the threshold. If the **Auto** button is activated, the plug-in automatically finds the best release setting for the audio material.

### Link

If this button is activated, **Brickwall Limiter** uses the channel with the highest level to analyze the input signal. If the button is deactivated, each channel is analyzed separately.

### Detect Intersample Clipping

If this option is activated, **Brickwall Limiter** uses oversampling to detect and limit signal levels between two samples to prevent distortion when converting digital signals into analog signals.

### NOTE

Brickwall Limiter is designed for the reduction of occasional peaks in the signal. If the Gain Reduction meter indicates constant limiting, try raising the threshold or lowering the overall level of the input signal.

---

## Maximizer

This plug-in raises the loudness of audio material without the risk of clipping.



### Optimize

Determines the loudness of the signal.

### Output

Sets the maximum output level.

### Soft Clip

If this button is activated, **Maximizer** starts limiting or clipping the signal softly. At the same time, harmonics are generated, adding a warm, tube-like characteristic to the audio material.

## Expander

The Expander reduces the output level in relation to the input level for signals below the set threshold. This is useful to enhance the dynamic range or reduce the noise in quiet passages.



The graphical control to the left shows the expansion curve. You can edit the **Threshold** and **Ratio** values with the handles of this control. The input and output meters indicate the level before and after the expansion. The Gain Reduction meter indicates the current attenuation of the level.

### Threshold

Sets the threshold. Sounds that are softer than the threshold are reduced in gain. Sounds above the threshold stay untreated.

### Ratio

Sets the amount of gain reduction for sounds that are softer than the threshold. The higher the ratio, the more the output is lowered. For example, if the ratio is set to 2:1 and the amplitude of the sound is 4 dB below the threshold, the output is lowered by 2 dB. If the amplitude is 8 dB below the threshold, the output is lowered by 4 dB.

### Soft Knee

If this button is deactivated, signals above the threshold are compressed instantly according to the set ratio. When **Soft Knee** is activated, the onset of the expansion is more gradual, producing a less drastic result.

### Attack

Determines how fast the Expander reduces the gain when the sound falls below the set threshold. The longer the attack time, the longer it takes to reduce the gain.

### Hold

Sets the time period during which the expansion is applied after the sound falls below the set threshold.

### Release

Determines how fast the Expander effect raises the gain after the sound exceeds the set threshold. The longer the release time, the longer it takes to raise the gain.

#### NOTE

This parameter is not available when the **Auto Release** button is activated.

### Auto

Activate this to set the release time automatically. The Expander analyzes the input sound continuously to find the optimal setting.

### Peak/RMS

Determines whether the input signal is analyzed according to peak or RMS values or a mixture of both. At a setting of 0 %, the Expander uses Peak sensing only and at 100 %, RMS sensing only. Peak means that the Expander directly senses the peak level of the sound. RMS means that the Expander senses the average power of the

sound. Peak sensing responds faster than RMS sensing. Typically, Peak sensing is used for transient and RMS sensing for sustained sounds.

### Live

If this button is activated, the look-ahead feature of the effect is disengaged. Look-ahead produces more accurate processing, but adds a certain amount of latency as a trade-off. If **Live** mode is activated, there is no latency, which is better for live processing.

## Gate

The Gate effect passes sound only to its output if the input sound exceeds the set threshold. Sounds below the threshold are silenced.

An internal side-chain filter allows you to analyze a filtered version of the input sound instead. This way, the gate detects only certain frequencies of the input sound.



### Threshold

Determines the level that activates the gate. Signal levels above the set threshold trigger the gate to open, and signal levels below the set threshold close the gate.

### Filter

Activates the internal side-chain filter. If this button is activated, the input sound is filtered before it is analyzed. The gate opens only if the filtered sound exceeds the set threshold. When the **Filter** button is deactivated, the filter controls are not available.

### Filter Type

Sets the filter type for the side-chain filter. Select high-pass (**HP**) to detect high frequencies, band-pass (**BP**) to detect mid frequencies, and low-pass (**LP**) to detect low frequencies only.

### Monitor

Activate this button to listen to the sound of the side-chain filter. The gate is inactive when the **Monitor** button is activated.

### Center

Sets the center frequency of the side-chain filter.

### Q-Factor

Adjusts the bandwidth of the filter from wide to narrow.

### Attack

Determines how fast the gate opens when the sound exceeds the set threshold. The longer the attack time, the longer it takes for the sound to fade in.

### Hold

Sets the time period during which the gate is applied after the sound falls below the set threshold.



### Release

Determines how fast the gate closes after the sound falls below the set threshold. The longer the release time, the longer it takes for the sound to fade out.

#### NOTE

This parameter is not available when the **Auto** button is activated.

---

### Auto

Activate this to set the Release time automatically. The Gate analyzes the input sound continuously to find the optimal setting.

### Peak/RMS

Determines whether the input signal is analyzed according to peak or RMS values (or a mixture of both). At a setting of 0 %, the Gate uses Peak sensing only and at 100 %, RMS sensing only. Peak means that the Gate directly senses the peak level of the sound. RMS means that the Gate senses the average power of the sound. Peak sensing responds faster than RMS sensing. Typically, Peak sensing is used for transient and RMS sensing for sustained sounds.

### Live

If this button is activated, the look-ahead feature of the effect is disengaged. Look-ahead produces more accurate processing, but adds a certain amount of latency as a trade-off. If **Live** mode is activated, there is no latency, which is better for live processing.

## Envelope Shaper

This effect can be used to attenuate or boost the gain of the attack and release phase of audio material.

Be careful with levels when boosting the gain and, if needed, reduce the output level to avoid clipping.



### Attack - Gain

Changes the gain of the attack phase of the signal.

### Attack - Length

Determines the length of the attack phase of the signal.

### Release - Gain

Changes the gain of the release phase of the signal.

### Output

Sets the output level.

## Spatial and Panner Effects

### Stereo Pan

This effect allows you to set the stereo position and width of the signal.



#### Input Swap

Swaps the stereo channels.

#### Pan

Sets the pan position of the signal. The panning is available for mono and stereo input signals.

#### Width

Adjusts the stereo width of the signal from stereo to mono.

### Stereo Enhancer

This plug-in expands the stereo width of stereo audio material. It cannot be used with mono files.



#### Width

Controls the width or depth of the stereo enhancement. Turn clockwise to increase the enhancement.

#### Delay

Increases the amount of differences between the left and right channels to further increase the stereo effect.

#### Color

Generates additional differences between the channels to increase the stereo enhancement.

#### Mono

Switches the output to mono, to check for possible unwanted coloring of the sound which sometimes can occur when enhancing the stereo image.

# Automation and MIDI Controllers

## Automation

You can automate most of the Groove Agent parameters from within your host application, whether these are kit parameters or global parameters such as AUX effects.

Groove Agent provides 512 automation parameters that can be addressed from within the host application. You can assign Groove Agent parameters to one of these automation parameters, and even assign multiple parameters to the same automation parameter, to control these parameters at the same time.

If you are working with Beat Agent kits, automated parameters always control the parameters of whole pads and not of single samples. Therefore, individual settings of samples are overwritten. For example, if the samples of a pad have different cutoff values, and you start automating the cutoff parameter, the samples are all set to the same cutoff value.

## Automation Page

All assigned automation parameters are shown on the **Automation** page.

To access this page, open the **Options** page and activate the **Automation** tab at the top.

With the tabs at the top of the **Automation** page, you can specify whether you want to show the automation parameters for the kit, the global parameters, or all automation parameters.

On the left, the name of the automation parameter is shown, and on the right, the name of the assigned Groove Agent parameter. If multiple Groove Agent parameters are assigned to one automation parameter, these are listed below each other on the right.

- To remove an automation parameter, click the trash icon to the right of the parameter name.
- To remove all automation parameters, click **Delete All Parameters** at the top of the page.
- To rename an automation parameter, double-click the parameter name and enter the new name. This name is then used in your host application.
- To replace the names for all automation parameters with the names of the pads, click **Refresh All Parameter Names** on the toolbar.

## Setting Up Automation

### Creating Automation Parameters

- To assign a parameter to an automation parameter, right-click the parameter control and select **Assign to New Automation**. The automation parameter is created on the first free automation parameter.
- To add a parameter to an existing automation parameter, right-click the control, select **Add to Automation** and select the automation parameter.

- To remove a parameter from the automation, right-click an automated control and select **Forget Automation**.
- To assign a parameter to an automation parameter automatically while working in your host application, activate **Automation Read/Write**, start playback, and use the controls on the Groove Agent interface.

## MIDI Controllers

You can assign Groove Agent parameters to MIDI controllers.

Some parameters are assigned to controllers by default, but you can customize this factory controller mapping. This way, you can adapt the mapping to your MIDI keyboard or controller.

To provide more control, you can set the minimum and maximum range for each assignment separately.

### NOTE

The controller assignments for the parameters **Volume** (CC 007) and **Pan** (CC 010) are fixed and cannot be edited or removed. To change volume or pan of a kit slot, send CC#7 or CC#10 messages on the corresponding MIDI channel of the slot.

---

## Assigning MIDI Controllers

To assign a MIDI controller to a parameter, proceed as follows:

### PROCEDURE

1. Right-click the control that you want to control remotely and select **Learn CC**.
2. On your MIDI keyboard or controller, use the potentiometer, fader, or button. The next time you right-click the control, the menu shows the assigned MIDI controller.

### NOTE

You can assign the same MIDI controller several times to different parameters. However, you cannot assign different MIDI controllers to the same parameter.

---

## Unassigning MIDI Controllers

### PROCEDURE

- To remove a MIDI controller assignment, right-click the control and select **Forget CC**.
- 

## Restoring the Factory MIDI Controller Assignment

To restore the factory MIDI controller assignments, open the **Options** page and click **Reset to Factory** in the **MIDI Controller** section.

## Saving a MIDI Controller Mapping as Default

After customizing the factory MIDI controller assignments, you can save them as default.

### PROCEDURE

- Open the **Options Editor** and, in the **MIDI Controller** section, click **Save as Default**.
-

#### RESULT

Now, each time that you load a new instance of the plug-in, your customized MIDI controller mapping is available as default.

#### NOTE

- Saving the controller mapping as default does not include the MIDI controller assignments of the AUX FX.
  - The MIDI controller mapping is saved with each project. This way, you can transfer your settings to other systems. The project also includes the MIDI controller assignments of the AUX FX.
- 

## Setting the Parameter Range

You can set the minimum and maximum values for the parameter for each assignment separately. This gives you more control over the parameter, for example, when you are performing live on stage.

---

#### PROCEDURE

1. Set the parameter to the minimum value.
  2. Right-click the control and select **Set Minimum** from the context menu.
  3. Set the parameter to the maximum value.
  4. Right-click the control and select **Set Maximum**.
-

# Global Functions and Settings

## Plug-in Functions Section

The plug-in functions section at the top of the window gives you access to global functions that affect both the currently loaded programs, and the general working of the plug-in.

The plug-in functions section contains the multi slot section, the master section, and the performance displays.

## Multi Slot Section



### Load Multi-Program

Opens a window that allows you to load multi-programs.

### Save Multi-Program

Opens a window that allows you to save your settings as multi-program.

## Master Section

The master section can be used to set volume and tuning of the plug-in.

### Master Volume

Adjusts the overall volume of the plug-in.

### Master Tune

You can set the **Master Tune** slider from 415.3 Hz to 466.2 Hz, which equals -100 cents to +100 cents.

## Performance Displays

The meters and text displays indicate the system load of the plug-in.



### CPU

This meter shows the processor load during playback. The more voices you play, the higher the processor load. If the overload indicator lights up, reduce the **Max Voices** setting on the **Options** page.

### Disk

This meter shows the hard disk transfer load during the streaming of samples or when loading presets. If the overload indicator lights up, the hard disk is not

supplying data fast enough. In such a case, open the **Options** page and adjust the **Disk vs. RAM** slider towards **RAM** or decrease the **Max Voices** setting.

### Polyphony

This display indicates the number of samples that are currently played back, to help you trace performance problems. For example, if you have to reduce the **Max Voices** setting on the **Options** page, you can verify your settings by monitoring the number of samples that are currently playing.

### Memory

This display indicates the overall amount of RAM that is currently used. The number refers to the streaming buffer and the preloaded samples. The **MEM** display helps you trace performance problems. For example, if you need to free up memory for other applications, you can adjust the **Disk vs. RAM** slider on the **Options** page toward **Disk**. You can verify your settings by monitoring the **MEM** display.

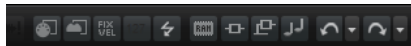
## Plug-in Name and Steinberg Logo

To get information regarding the version and build number of the plug-in, click the plug-in logo. This opens the **About** box. To close the **About** box, click it or press **Esc** on your computer keyboard.

If you click the Steinberg logo in the top right corner of the plug-in interface, a pop-up menu opens. Select one of the options to navigate to Steinberg web pages containing information on software updates, troubleshooting, etc.

## Toolbar

The toolbar contains useful global functions.



### MIDI Follow

If this button is activated and you trigger a sample or play an instrument via the keyboard, they are automatically shown in the corresponding editor. For example, a sample is automatically shown in the **Sample Editor**, and an instrument is automatically shown in the **Pattern Editor**.

### Controller Selector

By default, incoming velocity values determine which sample is played. You can use another controller instead. This allows you to select the sample via the modulation wheel, for example.

- To use another controller, activate the controller selector button, right-click it, and select the controller that you want to use from the list.

### NOTE

You cannot change the controller for sample playback if **Fix Velocity** is activated.

### Fix Velocity

To trigger all pads with the same velocity, activate this button. Use the button to the right to set the velocity value. This velocity is used for incoming MIDI notes, as well as for notes that are triggered by clicking a pad.

### Global insert, AUX, and Pattern Player buttons

Use these buttons to switch off all insert effects, AUX effects, and pattern players for the entire plug-in at once. You can use this to compare sounds with and without effects or to use a preset without the pattern player, for example.

### RAM Save

Allows you to unload unused samples.

### MIDI Reset

Click this button to stop playback and reset all MIDI controllers to their default values.

### Undo/Redo

To undo or redo a single operation, click the **Undo** or **Redo** buttons. To undo or redo multiple operations, click the arrow next to the button to open the history and select the step to which you want to return.

#### NOTE

How many undo/redo operations are available depends on the **Number of Undo Steps** setting on the **Options** page.

---

#### RELATED LINKS

[Unloading Unused Samples](#) on page 192

## Unloading Unused Samples

The **RAM Save** function scans the playback of your project and unloads unused samples.

---

#### PROCEDURE

1. Click **RAM Save** on the toolbar and in the dialog, click **Yes** to start collecting the necessary samples.  
The **RAM Save** button starts blinking.
  2. Play back the project in your host application from the beginning to the end or to the point where no new notes are played.  
**RAM Save** always keeps samples that are within the range between the highest and the lowest note of the played programs.
  3. Click the **RAM Save** button again. In the dialog, click **Yes**.
- 

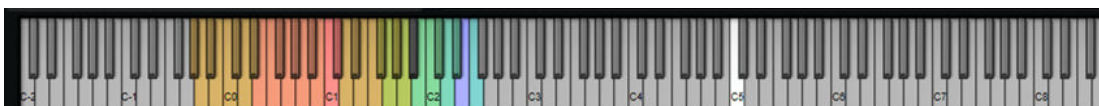
#### RESULT

The unused samples are unloaded.

To deactivate **RAM Save** and reload the unused samples, click the **RAM Save** button again.

## Keyboard

You can use the keyboard to get a better overview of the mapping and to trigger MIDI notes.



- To open the keyboard, click the **Show/Hide Keyboard** button in the upper right corner of the panel.



The keyboard shows the pattern pads and the instrument pads of the selected kit. If pads share the same keys, the pattern pads have priority, that is, only the pattern pad is shown on the keyboard.

If **Use Pattern MIDI Port for Pattern Pads** is activated on the **Pattern** page, instrument pads are not shown on the keyboard if the **Pattern** page is shown, and vice versa.

The following color scheme is used in the keyboard:

- Keys that are not assigned are grayed out.
- Keys that are assigned are shown in white and black, respectively.
- Keys that belong to a pad for which a color is assigned are shown in this color.
- Keys that trigger a note repeat variation button are shown in blue.

### Previewing Notes Using the Keyboard

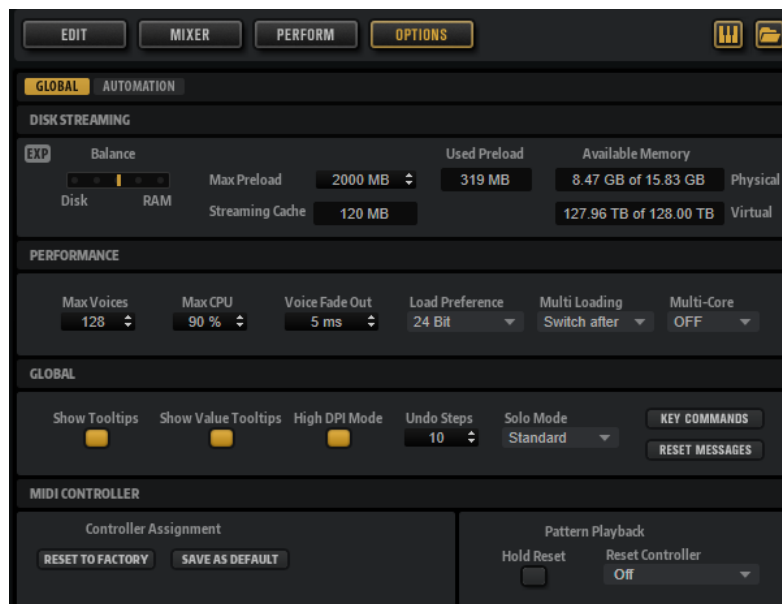
- To preview a note, click the corresponding key on the keyboard.  
The vertical position where you click a key defines the velocity that is used to trigger the note. Click the lower part of a key to use the highest velocity, and the upper part to use the lowest velocity.
- To play a key and all following keys at the same velocity, for as long as you keep the mouse button pressed, hold down **Ctrl/Cmd** and click the key on the keyboard.
- To play each note 10 times at increasing velocities between 1 and 127, hold down **Ctrl/Cmd-Alt** and click a key.

#### RELATED LINKS

[Note Repeat](#) on page 22

## Options Page

The **Options** page contains global settings regarding performance optimization, global functions, and MIDI controllers.



### Disk Streaming Section

Some of the programs come with a large amount of data. Ideally, the computer would load all the program data into the RAM for fast access. However, this would leave less RAM for other

applications. Also, your computer may not be able to handle this kind of load. Therefore, Groove Agent loads only the initial milliseconds of each sample into RAM. You can specify how much RAM should be used and how much Groove Agent should rely on accessing the hard-disk.

### Balancing Disk vs. RAM

Use the **Balance** slider to balance the hard disk versus the RAM usage.

- If you need more RAM for other applications, drag the slider to the left towards the **Disk** setting.
- If your hard disk is not supplying data fast enough, drag the slider to the right towards the **RAM** setting.

#### NOTE

The Disk vs. RAM setting always applies to all plug-in instances. It is not saved with the project. You set it up only once for your computer system.

---

### Used Preload and Available Memory

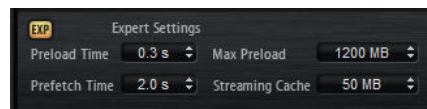
These displays provide information of the memory load in MB according to the current balance slider setting.

### Max Preload

Determines the maximum amount of RAM that Groove Agent uses for preloading samples. In most cases, the default values are sufficient. However, it may become necessary to reduce this value, for example, when working with other applications or plug-ins that require a lot of memory.

### Expert Mode

Activate **Expert Mode** if you want to adjust the **Disk Streaming** settings in greater detail.



- **Preload Time** defines how much of the start of the samples is preloaded into the RAM. Larger values allow for more samples to be triggered in a short time.
- **Prefetch Time** determines the read-ahead capacity into the RAM while streaming samples for a voice that is playing. Larger values allow for better transfer rates from disk, and usually for more voices. However, this requires larger streaming cache in RAM. If you increase the **Prefetch Time**, it is recommended to also increase the **Streaming Cache**.
- **Streaming Cache** determines the amount of RAM that is reserved for prefetching. The actually needed size depends on the prefetch time, the number of simultaneously streaming voices and the audio format of the samples. For example, higher sample and bit rates need more RAM.

### Performance Section

The **Performance** section contains settings to optimize the overall CPU performance of the plug-in.

### Max Voices

Determines the total number of voices that a plug-in instance can play back. As soon as this limit is reached, Groove Agent starts stealing voices.

### Max CPU

To avoid clicks from CPU overloads, you can specify a maximum limit for the CPU load of the plug-in instance. Groove Agent steals voices automatically when this limit is exceeded. At a setting of 100 %, this parameter is deactivated.

#### NOTE

Because of the reaction time of the plug-in, it is possible that you get CPU peaks that exceed the set limit. This can lead to artifacts, such as audio drop-outs. Therefore, it is good practice to set the **Max CPU** setting at a value a bit lower than actually needed.

---

### Voice Fade Out

Sets the time to fade out voices that need to be stolen because the **Max Voices** setting or the **Max CPU** setting have been reached.

### Load Preference

Determines how agents that come with 16 and 24 Bit samples are loaded by default. Set this to **16 Bit** to get faster loading times and to **24 Bit** to get better audio quality.

#### NOTE

Not all agents feature 16 and 24 Bit versions of their samples.

---

### Multi Loading

Normally, when loading multi-programs, the previous multi is kept in the RAM until the new multi has been completely loaded.

- To clear a multi before loading a new one, select **Clear before** on the pop-up menu.

### Multi-Core

On this pop-up menu, you can specify how many of the available CPU cores of your system can be used by the plug-in. This allows Groove Agent to compute each program on a different core, for example. The best setting here depends on multiple factors, and varies from system to system, and project to project. A good starting point is to set this value to one core less than the available number of cores.

#### NOTE

If problems occur, reduce the number of cores, or set the pop-up menu to **Off** and load multiple instances of Groove Agent instead. This way, the host application distributes the work load across the available cores.

---

## Global Section

Here, you find common settings of Groove Agent.

#### NOTE

The settings in this section are not saved with a project, but affect the plug-in as a whole.

---

### Show Tooltips

If this option is activated, a tooltip is shown when you move the mouse over a control.

### Show Value Tooltips

If this option is activated, parameters without a value field display their value in a tooltip when you use the corresponding control.

### High DPI Mode

- If you are using a high resolution monitor, such as 4k (UHD), 5k etc., activating **High DPI Mode** results in a sharper display of Groove Agent at a scaling of 150 % and higher. However, currently only even scaling factors are supported. For example, using a scaling of 150 % on your Windows system results in a scaling factor of 200 % in Groove Agent.

#### NOTE

**High DPI Mode** may not be compatible with some combinations of software and hardware. If you experience display issues with your setup, you can deactivate **High DPI Mode**.

- If **High DPI Mode** is deactivated, the native monitor resolution is used.

#### NOTE

If you use Groove Agent as a standalone application, the **High DPI Mode** option on the **Options** page is deactivated. Instead, the corresponding option in the **Preferences** dialog is used.

### Solo Mode

- In **Standard** mode, you can solo multiple instrument pads and mixer channels to hear them combined.
- In **Exclusive** mode, only one instrument pad or mixer channel can be soloed at a time.

### Number of Undo Steps

Specifies the number of available undo steps.

### Key Commands

Opens the **Key Commands** dialog, where you can view and assign key commands.

### Reset Messages

If you click this button, all message dialogs that have been suppressed with the **Don't Show Again** option are displayed again.

## MIDI Controller Section

### Controller Assignment

With the two buttons in this section, you can save your customized MIDI controller assignments as default or restore the factory MIDI controller assignments.

#### NOTE

**Save as Default** does not include any of the MIDI controller assignments of the AUX FX.

The current MIDI controller mapping is also saved with each project. This way, you can transfer your settings to other systems. The project includes the MIDI controller assignments of the AUX FX as well.

#### NOTE

The controller assignments for the parameters Volume (CC 007) and Pan (CC 010) are fixed and cannot be edited or removed. To change volume or pan of a kit slot, send CC#7 or CC#10 messages on the corresponding MIDI channel of the kit slot.

### **Pattern Playback**

**Hold Reset** sends a global hold reset message to all patterns that are used.

The **Reset Controller** pop-up menu allows you to assign a dedicated MIDI controller to the **Hold Reset** button for remote-controlling it.

#### RELATED LINKS

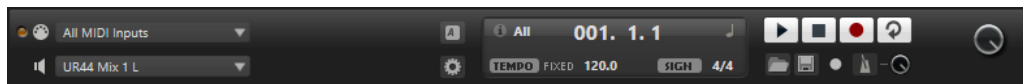
[Automation and MIDI Controllers](#) on page 187

[Preferences Dialog](#) on page 198

# Using the Standalone Version of the Plug-In

You can use Groove Agent independently from a host application.


If you use Groove Agent as a standalone application, an additional section is available at the top of the control panel. Here, you can define key commands, set up audio and MIDI interface routings, adjust the master volume, and access the integrated MIDI scratch pad, which allows you to record your musical ideas without having to start a MIDI sequencer application. It can also be used to play multitrack arrangements that trigger the different programs.



The standalone version of Groove Agent supports HiDPI, that is, the graphical user interface is adapted to the display settings with which the application is running. If you are using a high resolution monitor, such as 4k (UHD), 5k etc., activating **High DPI Mode** on the **General** tab in the **Plug-In Preferences** dialog results in a sharper display of Groove Agent at a scaling of 150 % and higher. However, currently only even scaling factors are supported. For example, using a scaling of 150 % on your Windows system results in a scaling factor of 200 % in Groove Agent.

## Making Preferences Settings

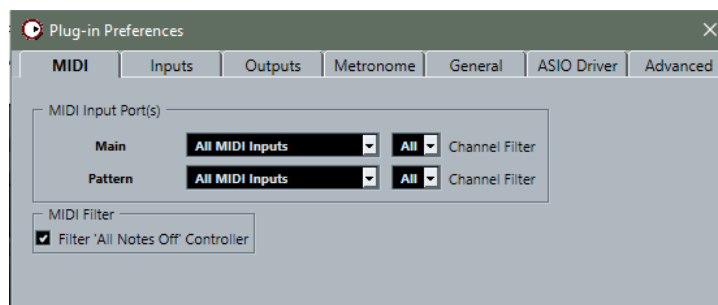
You can configure the standalone version of Groove Agent in the **Plug-In Preferences** dialog.

- To open the **Plug-In Preferences** dialog, click the **Open Preferences** button  to the right of the audio output field or right-click in the topmost section of the control panel and select **Plug-In Preferences** on the context menu.

## Preferences Dialog

The **Plug-In Preferences** dialog has several pages on which you can make settings.

### MIDI Page



On the **MIDI Routing** page, you can access the **Main** and **Pattern** input ports and make routing settings.

### MIDI Input Ports

Use this pop-up menu to specify a MIDI input.

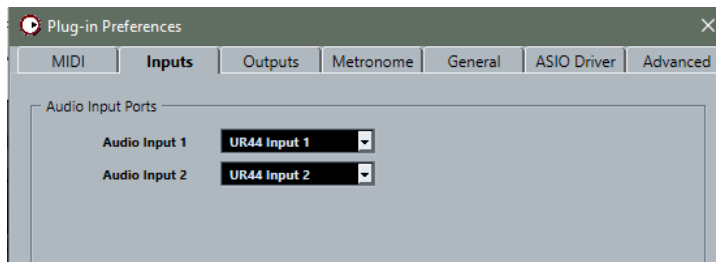
### Channel Filter

Determines whether MIDI events are recorded on all MIDI channels, or only on one specific channel.

### Filter 'All Notes Off' Controller

Activate this parameter to avoid unwanted "All Notes Off" messages. Such messages are sent by some keyboards when the last key is released. This causes Groove Agent to stop playback, even when the sustain pedal is still in use.

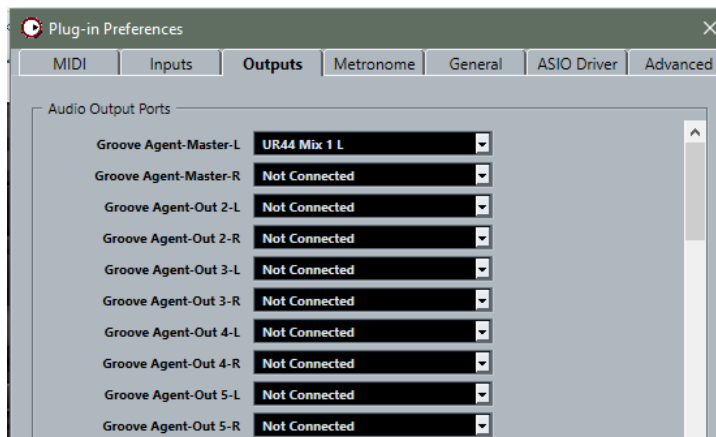
## Inputs Page



Here, you can specify which inputs of the audio interface are connected to Groove Agent's stereo input.

This is the input that can be selected in the **Sample Recorder**.

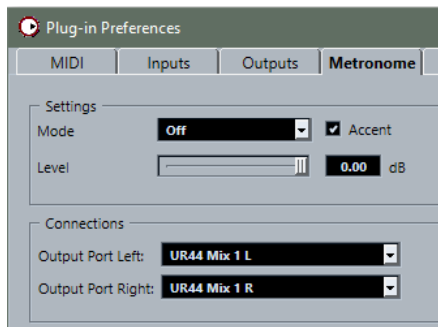
## Outputs Page



You can use the **Audio Output Ports** pop-up menus to assign different audio outputs. Groove Agent supports 16 channels. You can assign different audio outputs for each channel.

- To map an output to a channel, select it from the pop-up menu.
- To set the front and rear channels to incrementing audio output ports, hold down **Shift** and select an audio output.
- To assign the audio outputs in pairs to the front and rear channels, hold down **Alt-Shift** and select an audio output.

## Metronome Page



On the **Metronome** page, a number of settings can be made regarding the use of a metronome.

### Mode

Activates/Deactivates the metronome or sets it to **Count In** mode.

### Accent

Accentuates the first beat of each bar.

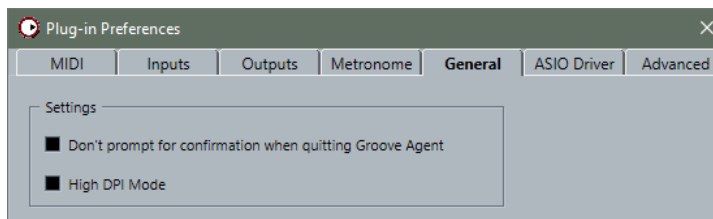
### Level

Adjusts the volume of the metronome.

### Connections

Allows you to select a separate stereo output for the metronome.

## General Page



### Don't prompt for confirmation when quitting Groove Agent

If you want the plug-in to close without prompting when you quit the program, activate **Don't prompt for confirmation when quitting Groove Agent**.

### High DPI Mode

- If **High DPI Mode** is activated, the plug-in uses high resolution bitmaps when it is displayed with a scaling of 150 % and higher on a high resolution monitor, such as 4k (UHD), 5k etc. This allows for sharper images on high resolution displays. However, currently only even scaling factors are supported. If you use a scaling of 150 % on your Windows system, for example, results in a scaling factor of 200 % in Groove Agent.

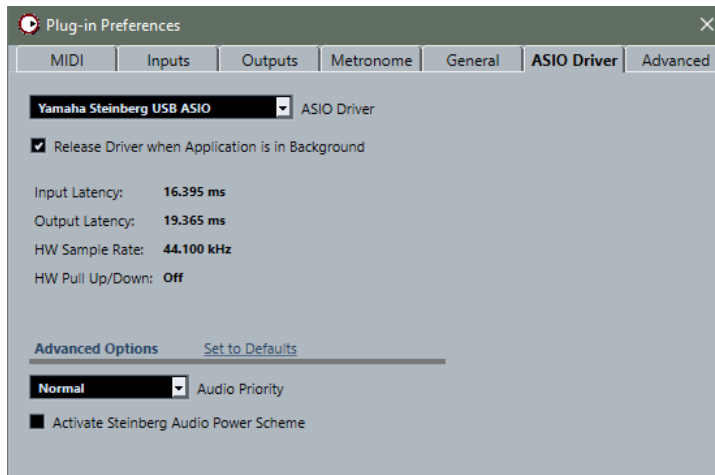
#### NOTE

**High DPI Mode** may not be compatible with some combinations of software and hardware. If you experience display issues with your setup, you can deactivate **High DPI Mode**.

- If **High DPI Mode** is deactivated, the native monitor resolution is used.



## ASIO Driver Page



On the **ASIO Driver** pop-up menu, you can select your audio hardware driver.

### Release Driver when Application is in Background

Activate this option if you plan to use several audio applications simultaneously.

### Input Latency/Output Latency

The input and output latency values for your audio hardware are displayed. Latency is the amount of time it takes for your system to respond to any messages that are sent to it. High latency results in a noticeable delay between when you press a key and when you hear the sound.

You can change the latency with the **Buffer Size** parameter in the control panel for your driver, opened by clicking the **Control Panel** button on the **Advanced** tab.

### Sample Rate

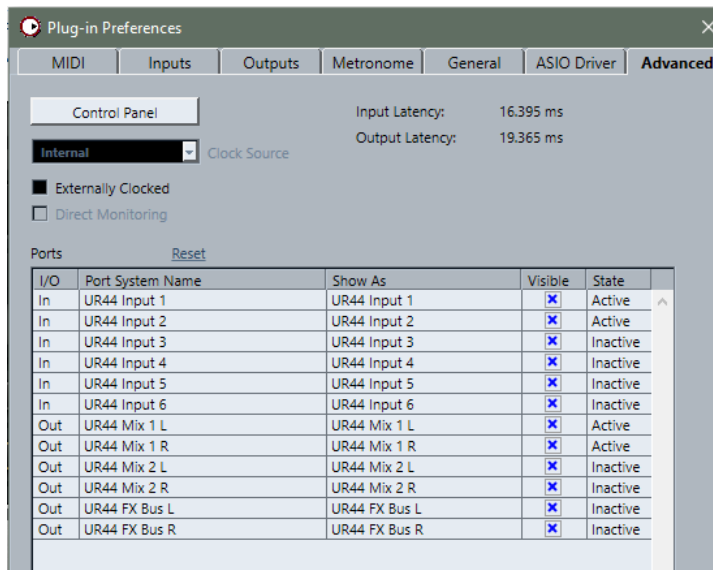
Below the latency values, the sample rate for the connected audio hardware is displayed.

### Audio Priority

Determines which of the Groove Agent processes gets priority when accessing processor resources on your computer.

- In **Normal** mode, non-audio processes and audio playback get roughly equal priorities.
- In **Boost** mode, audio precedes MIDI in priority. Try this mode if audio playback problems occur when playing back MIDI and audio material.

## Advanced Page



Once you have selected the driver, you can specify which inputs and outputs to use and name these on the **Advanced** page. Click the **Control Panel** button to open the control panel for the audio hardware and adjust the settings as recommended by the audio hardware manufacturer.

## Selecting the MIDI Input and the Audio Output

The MIDI input pop-up menu lists all MIDI devices that are installed on your system.

- Select the MIDI device that you want to use from the **MIDI Input** pop-up menu. The MIDI activity LED in the top left corner of the control panel indicates incoming MIDI messages via the selected MIDI input. The LED lights up on receiving note-on and controller messages. This way, you can check if Groove Agent and your MIDI keyboard are connected to the same MIDI device input.

The Audio output pop-up menu lists all outputs of the selected ASIO device.

- To select an audio output for the main stereo channel of the plug-in, open the **Audio Output** pop-up menu. If you select an audio output, the front and rear channels are set to incrementing audio output ports. To assign the audio outputs in pairs to the front and rear channels instead, hold down **Alt-Shift** and select an output.

### RELATED LINKS

[ASIO Driver Page](#) on page 201

## Scratch Pad

The scratch pad allows you to record and play back MIDI files in Standard MIDI File format. You can load existing MIDI files and you can record your own files and save them.

The transport section provides buttons for play, stop, record, and loop. The display shows the song position, the tempo, and the time signature of the MIDI file. In addition, there is a metronome that you can use for recording and practicing.

The scratch pad can play back multi-track MIDI files sending notes on all 16 MIDI channels.

## Transport Controls

### Play

Click **Play** to start playback of the MIDI file. Playback always starts at the song position.

### Stop

Click **Stop** to pause the MIDI file at the current position. Click the button twice to reset the song position to the start.

### Record

Click **Record** to start recording.

### Loop

Activate **Loop** to play the entire MIDI file in a loop.

## Info Icon

To check which MIDI file is loaded, point the mouse at the info icon in the top left corner of the scratch pad. A tooltip appears, showing the name of the MIDI file.

## Song Position Indicator

The song position indicator shows the position of the transport. Above the song position indicator, the position is displayed numerically.

After loading a MIDI file, the display shows the full length of the file.

- To move the transport to a different song position, drag the song position indicator to the new position.
- To switch the time format between **Time** and **Bars**, click **Select Time Format** in the top right corner of the display.

## Tempo and Time Signature

Below the song position display, the **Tempo** and **Time Signature** fields are located. These fields provide Groove Agent with tempo and time signature information. These settings are used by the scratch pad and the metronome.

### Fixed Tempo/Tempo Track

Set this parameter to **Track** to follow the original tempo of the MIDI file.

Set this parameter to **Fixed** to enter the tempo manually. You can either enter the value directly in the value field or you can enter a tempo by repeatedly clicking the **Tap to set Tempo** field next to the value field.

### Tempo Value

Determines the tempo of the MIDI file.

### Adjust Tempo

If the **Tempo Track** option is selected, this parameter is available, allowing you to scale the playback relatively to the original tempo of the MIDI file.

### Time Signature

Determines the time signature. You can enter the new signature as fractions of beats.

## Recording Your Performance

---

### PROCEDURE

1. Click the record symbol below the **Record** button to select a record mode.
    - To start recording immediately when you click the record button, select **Direct**.
    - To start recording with the first MIDI note, select **MIDI**.
    - To start the recording after a count-in of one bar, select **Count In 1**.
    - To start the recording after a count-in of 2 bars, select **Count In 2**.
  2. Click the **Record** button to start recording.  
To indicate that the recording is running, the song position indicator moves from left to right.
  3. When you are done recording, click the **Stop** button.
- 

### RELATED LINKS

[Saving a MIDI File](#) on page 204

## Using the Metronome

---

### PROCEDURE

- To select the playback mode of the metronome, click **Metronome** and select one of the options from the pop-up menu:
    - If **On** is selected, the metronome is activated and plays continuously.
    - If **Count In** is selected, the metronome plays only during the count-in of a recording.
    - To deactivate the metronome, select **Off**.
- 

## Loading a MIDI File

You can load MIDI files in Standard MIDI File format (file name extension `.mid`).

---

### PROCEDURE

1. Click the **Load MIDI File** button below the transport buttons.
  2. In the file dialog, select the file that you want to use.
  3. Click **Open** to load the MIDI file.
- 

## MIDI Channel Filter

If a multitrack MIDI file is loaded, you can play back all MIDI events or only the events of a specific MIDI channel.

- To specify which events to play back, click the **MIDI Channel Filter** field to the right of the info icon and select an option from the pop-up menu.

## Saving a MIDI File

---

### PROCEDURE

1. Click the **Save MIDI File** button below the transport buttons.

2. In the file dialog, specify a location and a file name.
  3. Click **Save** to save your recorded performance as a MIDI file.
- 

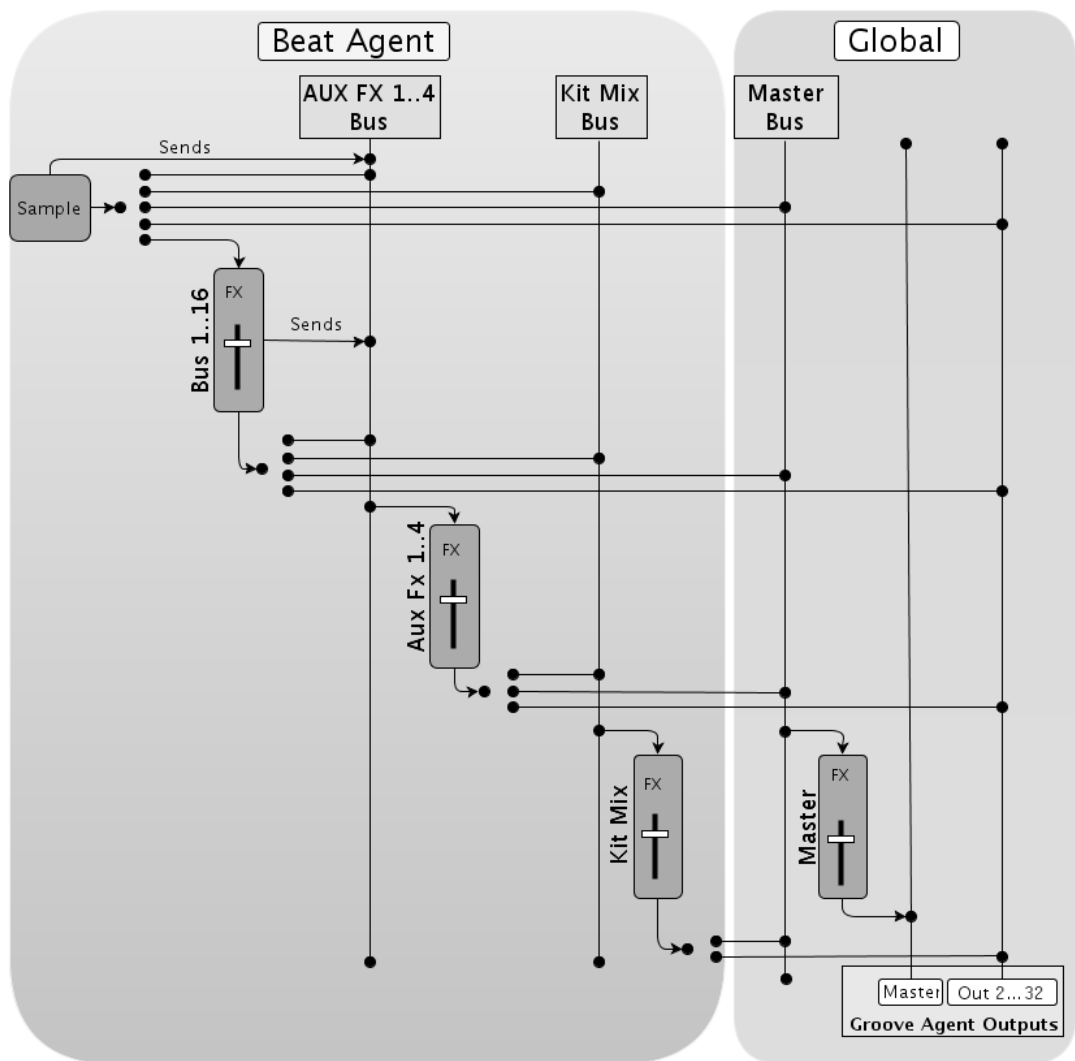
## Master Volume



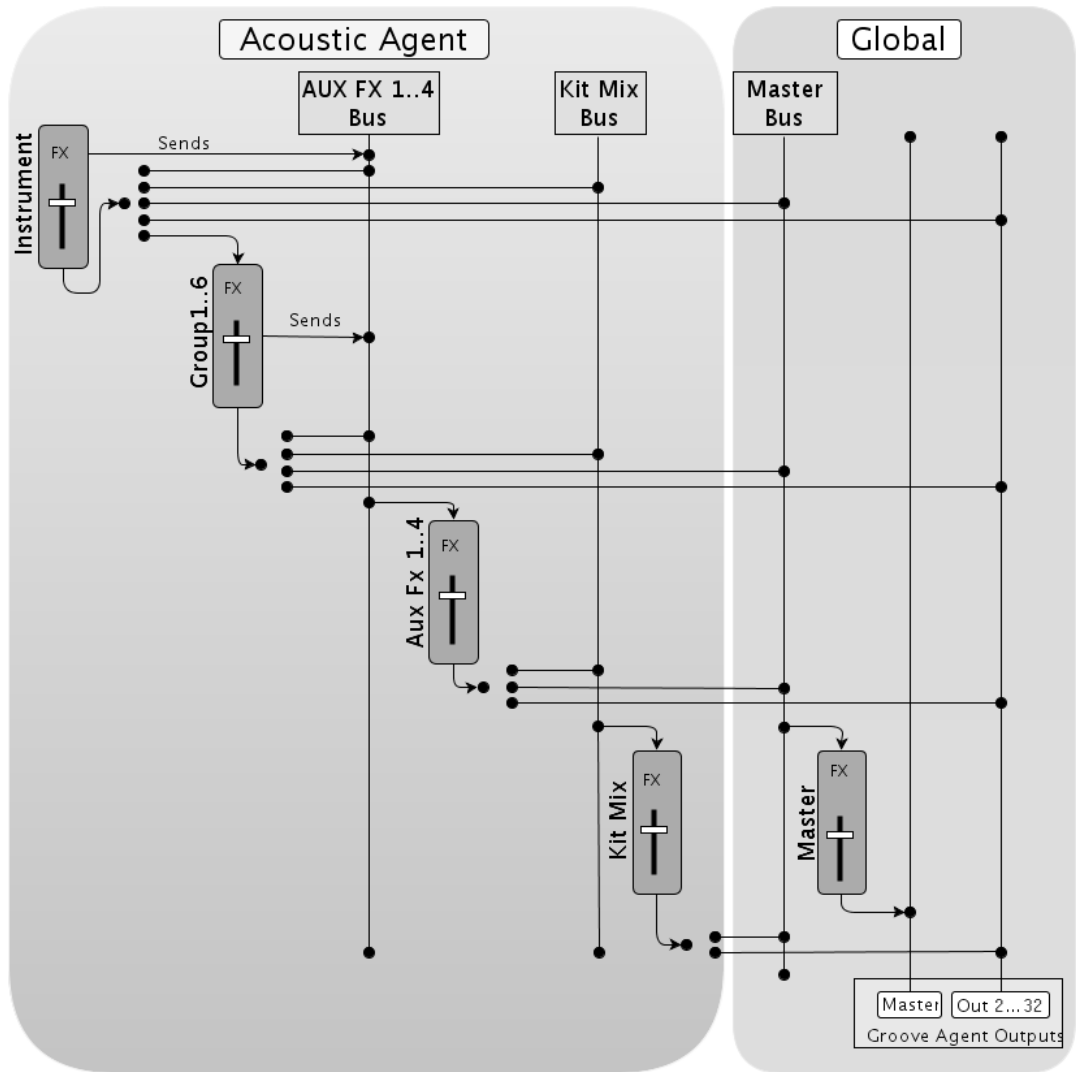
Use the volume control on the right to set the master volume of the outputs of the standalone version of Groove Agent. This includes the volume of the main outputs, the rear outputs, and the output of the metronome. This includes the volume of the outputs of Groove Agent and the output of the metronome.

# Mixer Routing Diagrams

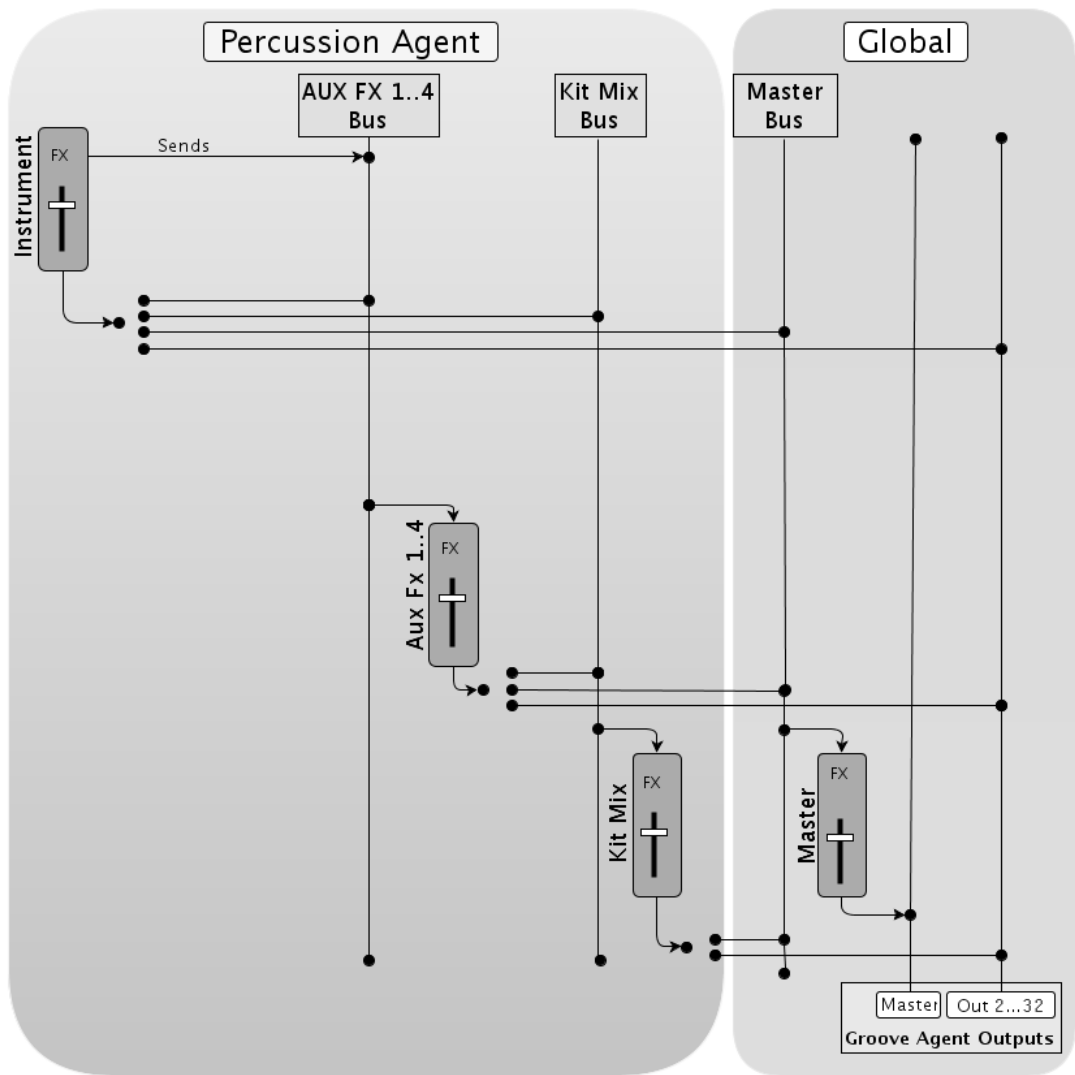
## Beat Agent Routing



### Acoustic Agent Routing



### Percussion Agent Routing





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