# Table of Contents

4 Introduction
4 Conventions
5 About the Documentation
6 Common Editing Methods
6 Dials and Sliders
6 Multi Selection and Parameter Controls
6 Buttons
7 Value Fields
7 Using Key Commands
8 Presets
10 Getting Started
10 Window Overview
11 Agents, Kits, Presets, and Content Files
12 Loading a Kit
13 Pattern and Instrument Pads
13 Browsing for MIDI Patterns and Styles
14 Playing back Pattern Pads
14 Converting Styles to MIDI Patterns
15 Creating the Different Sections of a Drum Track
16 Recording Trigger Notes for Your Patterns
16 Dragging Patterns into a Project
17 Editing Patterns in the DAW
18 Managing Your Sounds
18 Loading Kits
19 Kit Slot
20 Kit Rack
20 Kit Context Menu
21 Managing and Loading Files
34 Working With Pads
34 Pad Section
35 Renaming Pads
36 Using Different MIDI Channels/Ports for Instrument Pads and Pattern Pads
36 Instrument Pads
43 Pattern Pads
56 Beat Agent SE
56 Beat Agent SE Sound Editing
84 Importing and Exporting Files
87 Acoustic Agent SE
87 Acoustic Agent SE Sound Editing
96 Mixing and Effect Handling
96 Beat Agent SE Mixer
97 Acoustic Agent SE Mixer
100 AUX Mixer
101 Kits Mixer
102 Master Mixer
102 Effect Handling
104 Effects Reference
104 Reverb Effects
106 Delay Effects
108 EQ Effects
109 Filter Effects
113 Distortion Effects
115 Modulation Effects
122 Dynamics Effects
130 Spatial and Panner Effects
132 Automation and MIDI Controllers
132 Automation
133 MIDI Controllers
135 Global Functions and Settings
135 Plug-in Functions Section
136 Plug-in Name and Steinberg Logo
136 Toolbar
137 Keyboard
138 Options Page
141 Mixer Routing Diagrams
143 Index
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.

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**EXAMPLE**

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

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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.

About the Documentation

The documentation is available online and can be downloaded in PDF format from steinberg.help

- To visit steinberg.help, enter steinberg.help in the address bar of your web browser or open Groove Agent SE, click the Steinberg logo in the top right corner and select Help > Groove Agent SE Help.
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 in the Global section.

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

Window Overview

The Groove Agent SE window is divided into several sections.

1. At the top of the window, you can find the plug-in functions section.
2. Below the plug-in functions section on the left, the kit slot is located.
3. On the right of the kit slot, you find the kit rack.
4. The edit display on the right contains the Edit, Mixer, and Options pages.
5. 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.
6. On the left of the edit display, you can find the pad section.

RELATED LINKS
Kit Slot on page 18
Kit Rack on page 19
Agents, Kits, Presets, and Content Files

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

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.

Kits

Kits are loaded to play the sounds in Groove Agent SE. 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 SE settings, that is, all information necessary to restore the complete state of the plug-in. This includes the kit, 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 SE 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 SE 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 SE.

**PROCEDURE**

1. Select the 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 21
Pattern and Instrument Pads

In Groove Agent SE, 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 26
Prelisten Section for MIDI Patterns and Styles on page 25
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 SE 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.

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
Converting Styles to MIDI Patterns on page 14
Dragging Patterns into a Project on page 16
Recording Trigger Notes for Your Patterns on page 16
Recording Trigger Notes for Your Patterns

When you use Groove Agent SE 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 SE.

**PROCEDURE**
1. In Groove Agent SE, 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 SE are automatically reflected in all occurrences of this pattern in the project.

Dragging Patterns into a Project

You can drag patterns from Groove Agent SE 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 SE.

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 SE, 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 36
Editing Patterns in the DAW on page 17
Editing Patterns in the DAW

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

PREREQUISITE

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

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.
Managing Your Sounds

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

Loading Kits

You need to load a kit to produce a sound with Groove Agent SE.

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 Input Indicator
The MIDI symbol starts blinking if incoming MIDI signals are detected.
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 SE. This allows you to record an audio track in your host application while Groove Agent SE plays the drums, for example.

- If playback is started in the DAW, Groove Agent SE 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 SE, 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.

Kit Rack
The kit rack to the right of the kit slot section gives you an overview over the loaded kit and its agent, and allows you to perform some editing via the context menu.
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 group.

Save Pattern Group
Allows you to save the 16 pads of the 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 SE only)
Allows you to import MPC and GAK files into Beat Agent SE kits.

Export Kit With Samples (Beat Agent SE only)
Exports the Beat Agent SE kit together with its associated samples.

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

Export Mixer and FX to Cubase/Nuendo
Allows you to transfer the Acoustic Agent SE 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 SE 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 SE 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 SE. 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 SE 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 24

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 SE are MIDI files, that is, you can drop them in any host application that supports drag and drop of MIDI files.

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.
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 SE 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.

### 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.
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.

  ![Image of Style Part](image)

- **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 85

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 or onto a pad.

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 SE 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.

Group Buttons

The pad section provides 16 pattern pads and 128 instrument 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.

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 SE Main and the MIDI output of the second track to Groove Agent SE 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 SE only)
Allows you to load an instrument that you saved for a pad.
Save Instrument (Beat Agent SE 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 SE 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 SE 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 SE Instruments on page 60
Loading Beat Agent SE Instruments on page 60

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 SE 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 16 pattern 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 SE or Acoustic Agent SE 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.
  
  ![Drag a MIDI pattern or a style onto a field on the Overview page.](image)

- 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 44

### 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.

![Move the mouse over the lower part of the pad on which you want to drop the first file.](image)

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.

<table>
<thead>
<tr>
<th>Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rename Pad</td>
<td>Allows you to rename the pad.</td>
</tr>
<tr>
<td>Set Color</td>
<td>Allows you to select one of the 16 available colors for the pad.</td>
</tr>
<tr>
<td>Edit/Learn Trigger Note</td>
<td>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.</td>
</tr>
<tr>
<td>Assign Trigger Note</td>
<td>Allows you to select a new trigger note for the pad from a submenu.</td>
</tr>
<tr>
<td>Cut Pad</td>
<td>Removes all pad settings and pastes them to the clipboard.</td>
</tr>
<tr>
<td>Copy Pad</td>
<td>Copies the settings of the pad to the clipboard.</td>
</tr>
<tr>
<td>Paste Pad</td>
<td>Allows you to paste the pad settings from the clipboard to another pattern pad, of the same or a different pattern group.</td>
</tr>
<tr>
<td>Select All Pads</td>
<td>Selects all 128 pads.</td>
</tr>
<tr>
<td>Invert Selection</td>
<td>Inverts the selection for all pads, that is, all unselected pads become selected and vice versa.</td>
</tr>
<tr>
<td>Reset Pad</td>
<td>Removes the MIDI file and the name from the pad and resets color and trigger note settings to the default values.</td>
</tr>
<tr>
<td>Reset All Pads</td>
<td>Removes the MIDI file and the name from all pads and resets their color and trigger note settings to the default values.</td>
</tr>
<tr>
<td>Remove Patterns</td>
<td>Removes all patterns and styles.</td>
</tr>
</tbody>
</table>
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.

Pattern Groups

You can save the 16 pads 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 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 49
MIDI Player on page 47
Pad Settings on page 54

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 SE 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 14
Using an Alternative MIDI Trigger Note Mapping on page 39

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 SE kits with the *Style Player*, make sure to use a GM instrument mapping, such as is used in the Acoustic Agent SE 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 hi-hat 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 SE. 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 14

**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.

---

**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 part of the kits, that is, they are replaced when you load a new kit.

---

**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.

---

**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.

---

**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.

---

**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.
Beat Agent SE

Beat Agent SE 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 SE also excels in manipulating samples and loops, with features like automatic loop slicing, an onboard FX rack, and much more.

**Beat Agent SE 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**, and **MIDI FX** 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 6

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 on page 6 to show the pad number, the number of samples, and the output on the pads.

Show Exclusive Groups

Activate Show Exclusive Groups on page 6 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.

Assigning Samples to Pads

You can assign samples to pads by using drag and drop, or replace existing samples using the mapping view context menu.

You can drag one or more samples from the File Explorer/macOS Finder and from your host application onto Groove Agent SE. 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 SE 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 61

**Moving and Copying Samples between Pads**

You can 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 SE 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 SE 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 SE Instruments

You can save Beat Agent SE 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 SE 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 63](#)
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
Paste 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 SE 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 SE 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.
Beat Agent SE
Beat Agent SE Sound Editing

- **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.
- BR 12 and BR 24 are band-reject filters with 12 and 24 dB/oct. Frequencies around and above 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 SE 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 66

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**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 SE 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 Loop

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 SE 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 SE 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 SE 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**.
- 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.

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.

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 SE.

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 SE.

- To import a REX file or a sliced audio part into Groove Agent SE, 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 SE.

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 SE 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 SE 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 SE

Acoustic Agent SE 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 SE 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.
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 SE comes with different content sets. These content sets feature different sets of drum instruments with different parameters and mixer channels.

Studio Kit SE

![Image of Studio Kit SE]

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.

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.

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**
Determine 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 SE

Kick Drum

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
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.
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 SE Mixer**

The Agent mixer of Beat Agent SE 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.

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 SE Mixer
The Agent mixer for Acoustic Agent SE 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.

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
The left section of the mixer contains dedicated group channels for each of the instruments used in the kit.

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 SE” 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.

**Kit Mix Channel**

The Kit Mix tab contains the channel strip for the Kit Mix output. 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**
  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.

- **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 SE” 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.

Agent Mixer Equalizer and Effects

In the lower section of the Agent mixer, you can make equalizer and effect settings for the groups.

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 108
Vintage Compressor on page 124
Tape Saturator on page 114
Envelope Shaper on page 130

Mixer Presets

You can create mixer presets for Acoustic Agent SE. 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 SE kit in the MixConsole of your Steinberg DAW rather than in Groove Agent SE. You can either start from scratch or use the mixer settings from Groove Agent SE as a starting point.

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 SE 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 SE 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 SE 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 SE 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 SE **Agent** mixer is recreated completely in the DAW. In Groove Agent SE, the mixer is deactivated and all mixing is now performed in the DAW.

**NOTE**

If you want to reactivate the Acoustic Agent SE mixer, you must reload the original kit or use **Revert to Last Saved Kit** on the kit context menu.

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**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 the channel strip for the bus that is assigned to the kit slot.

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.

Effect Slots

You can use the effect slots on the right to add insert effects.

Effect Handling

Groove Agent SE 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.

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 kit channel and the AUX busses.

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.
Reverb Effects

Reverb

This effect produces a high-quality algorithmic reverb with early reflections and reverb tail.

![Reverb Effects Panel](image)

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.

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.

![Studio EQ interface](image)

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.

![Graphic EQ interface](image)

- **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

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.
**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.

![Vintage Compressor Interface](image)

**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 signal.
sound. Peak sensing responds faster than RMS sensing. Typically, Peak sensing is used for transient and RMS sensing for sustained sounds.

**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.

### 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.

![Envelope Shaper](image)

- **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.

![Stereo Pan](image)

- **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

You can automate most of the Groove Agent SE parameters from within your host application, whether these are kit parameters or global parameters such as AUX effects.

Groove Agent SE provides 512 automation parameters that can be addressed from within the host application. You can assign Groove Agent SE 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 SE 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 SE parameter. If multiple Groove Agent SE 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**

By default, the most important parameters for the 16 pads of group 3 are already assigned to automation parameters.

**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 SE interface.

**MIDI Controllers**

You can assign Groove Agent SE 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 Forgot 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.
Plug-in Functions Section

The plug-in functions section contains the multi slot section, the master section, and the performance displays.

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 137

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.

**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 SE loads only the initial milliseconds of each sample into RAM. You can specify how much RAM should be used and how much Groove Agent SE 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 SE 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 SE 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 SE 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.

Global Section
Here, you find common settings of Groove Agent SE.

**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 SE 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 SE.

**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.

Solo Mode
- In **Standard** mode, you can solo multiple instrument pads to hear them combined.
- In **Exclusive** mode, only one instrument pad 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.
Beat Agent SE Routing
Acoustic Agent SE Routing

Mixer Routing Diagrams

142
Index

A
ABS button 56
Absolute Editing 56
Acoustic Agent SE 87
   Sound Editing 87
Automation 132
AUX Mixer 100

B
Beat Agent SE 56
   Exporting Files 84
   Importing Files 84
   Mixing 96
   Sound Editing 56
Browser
   Loading Files 28
   Replacing Samples 33

D
Delay Effects 106
Distortion Effects 113
Dynamics Effects 122

E
Edit Page
   Amp Tab 72
   Filter Tab 71
   Main Tab 63
   Mapping View 61
   Pitch Tab 69
   Sample Tab 74
   Slice Tab 82
Effect Slots 102
Effects 96, 102
   Auto Filter 109
   Brickwall Limiter 126
   Chorus 115
   Compressor 122
   Distortion 113
   DJ-EQ 109
   Envelope Shaper 130
   Expander 128
   Flanger 115
   Frequency Shifter 119
   Gate 129
   Graphic EQ 108

Effects (continued)
   Limiter 126
   Maximizer 127
   MorphFilter 112
   Multi Delay 106
   Phaser 117
   Reverb 104
   Ring Modulator 118
   Step Flanger 116
   Stereo Pan 130
   StereoEnhancer 131
   Studio EQ 108
   Tape Saturator 114
   Tube Compressor 125
   Tube Saturator 114
   Using 102
   Vintage Compressor 124
   Vintage Ensemble 121
Effects Page 102
Envelopes
   Editing 66
   Selecting Nodes 66
   Setting up the Loop 69
EQ Effects 108
Exporting
   Kit with Samples 85

F
Filter Effects 109
Finding Missing Samples 85

G
GAK Files
   Importing 84
Groove Agent ONE Content 11

I
Instrument Pads 36
   MIDI Effects 40

K
Kit Context Menu 20
Kit Mixer 101
Kit Rack 19
Kit Slot 18
Index

Kits 11
  Loading 18

M
  Master Mixer 102
  Master Section 135
  MediaBay
    Filters 23
    Results List 23
  MIDI Controllers 133
    Assigning 133
    Parameter Range 134
  Missing Samples
    Finding 85
  Mixing 96
  Modulation Effects 115
  MPC Files
    Importing 84
  Multi Selection 6

O
  Options Page 138

P
  Pad Section 34
    Instrument Pads 36
    Pattern Pads 43
  Panner Effects 130
  Pattern Pads 43
  Presets 11
    Module Presets 8
    VST Presets 8

R
  REL button 56
  Relative Editing 56
  Reverb Effects 104
  REX Files
    Importing 84

S
  Sliced Loops
    Importing 84
  Spatial Effects 130

V
  Value Ranges
    Adjusting 6