BACKBONE
Drum Re-synthesizer

steinberg

This document provides improved access for people who are blind or have low vision. Please note that due to the complexity and number of images in this document, it is not possible to include text descriptions of images.

Backbone_1.6.0_en-US_2023-09-28

Table of Contents

New Features

The following list informs you about the most important improvements in Backbone and provides links to the corresponding descriptions.

New Features in Version 1.6.0

Load Panel

- The **Programs** and **Layers** tabs on the **Load Panel** have been redesigned to allow for an easier and quicker search. You can choose from filter tags that are proposed based on your search settings, you can configure attribute menus to narrow down the search results, and you can save your search settings as presets to use them when looking for similar content. See File Management with the Programs and Layers Tabs of the Load Panel.

New Features in Version 1.5.0

DrumGAN

- Backbone 1.5 now comes with DrumGAN, an innovative drum generator developed by Sony Computer Science Laboratories, Inc. (Sony CSL). Powered by artificial intelligence, it creates new kick drum, snare drum, and cymbal samples in a very fast, intuitive way. It can also analyze samples, replicate them and create countless variations. DrumGAN is the perfect addition to Backbone for crafting new drum sounds entirely from scratch, while staying in your favorite sample editing environment. See DrumGAN Drum Resynthesis.

New Features in Version 1.1.0

Export Settings

- You can now use the last triggered note and velocity as a reference for the export. See Export Settings.

Normalize Sample Parameters

- With version 1.1.0 of Backbone, **Normalize Sample** and **Normalize Level** were moved from the **Sample** page toolbar to the parameter section. In addition, a **Gain Offset** parameter was introduced. See Parameters.

Sample Range

- You can now move the **Sample Start** and **Sample End** markers together to change the sample range. See Setting up the Sample Range.

Loop Range

- You can now move the **Loop Start** and **Loop End** markers together to change the loop range. See Setting up the Loop Range.

Single Layer Export

- You can now export single layers from Backbone using drag and drop. See Exporting Single Layers.

Introduction

This is the **Operation Manual** for Steinberg's Backbone. Here you will find detailed information about all the features and functions in the application.

Typographical Conventions

In our documentation, we use structural and markup elements to present information according to its purpose.

Structural Elements

Prerequisite

Describes any actions or conditions you must have fulfilled before starting a procedure.

Procedure

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

Important

Informs you about serious issues; for example, issues that affect the system, the connected hardware, or that risk data loss.

Note

Informs you about issues or other relevant information.

Tip

Adds further information or useful suggestions.

Example

Provides you with an example.

Result

Describes 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, and so on.

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

File names and folder paths are shown in a different font.

EXAMPLE

`example_file.txt`

Key Commands

Many of the default key commands, also known as keyboard shortcuts, use modifier keys, some of which are specific to each operating system.

Whenever key commands with modifier keys are described in this manual, the Windows modifier key is indicated 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**.

How To Contact Us

Click the Steinberg logo in the top right corner of the control panel to open a pop-up menu which includes information on how to contact us and to receive help.

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

About the Documentation

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

- To visit steinberg.help, enter **steinberg.help** in the address bar of your web browser or open Backbone, click the Steinberg logo in the top right corner and select **Backbone Help**.

Getting Started

Window Overview

The Backbone window is fully resizable. It is divided into several sections.

1   Plug-in functions section

2   **Input**, **DrumGAN**, **Decompose**, and **Output** sections

3   **Layers** and **Main** tabs

4   **Edit** section

5   **Load** panel

6   **Effects** section

RELATED LINKS
Plug-in Functions Section on page 10
Input Section on page 11
Decompose Section on page 17
DrumGAN Drum Resynthesis on page 23
Output Section on page 12
Layers Section on page 27
Main Tab on page 28
Edit Section on page 31
Load Panel on page 59
Effects Section on page 81

Programs, Layers, and Samples

In Backbone, you can load and save programs, layers, and samples.

Programs

Programs can contain up to eight layers, complete with their effects, filter settings, amp settings, etc. You can load one program at a time into Backbone.

Layers

Layers are the sound components that make up the program. They contain the loaded samples and the settings that you make on the edit pages. Layers are loaded into the slots in the **Layers** section.

NOTE

Layers only reference the loaded samples. That is, when you edit a layer in the **Edit** section, you do not change the sample file, but the play parameters for the sample file. The effects are not part of the layers.

Samples

With the **Browser** tab of the **Load** panel, you can load mono or stereo samples from the hard disk into the layer slots in the **Layers** section.

Loading Programs

You can load programs via the program loader on the toolbar or via the **Load** panel.

CHOICES

- Click in the program loader field to open the **Programs** tab of the **Load** panel, navigate to the program, and double-click it.
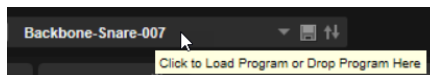
- Click the **Show/Hide Load Panel** button to open the **Load** panel, and do one of the following:
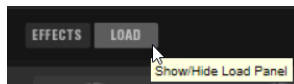
  - On the **Programs** tab, select a program, and double-click it or drag it from the list onto the program loader.

  - On the **Browser** tab, navigate to the program in the file system, and double-click it, or drag it from the list onto the program loader.

RELATED LINKS

Loading Layers

You can load layers that you created or that are included with an instrument.

CHOICES

- Open the slot menu and select **Load Layer**. On the **Load** panel, navigate to the layer that you want to load, and double-click it.

- Click the **Show/Hide Load Panel** button to open the **Load** panel, select the **Layers** page, and do one of the following:

  - Double-click a layer to load it into the selected slot.

  - Select a layer and drag it onto a slot.

Loading Samples

You can load your samples into Backbone.

CHOICES

- Drag a sample from the **Browser** tab of the **Load** panel onto a layer slot.

  If a layer is already loaded, this layer is replaced. Any layer settings are reset.

- Drag a sample from the **Browser** tab of the **Load** panel onto the edit section.

  This replaces the sample in the corresponding slot. Any layer settings you made are kept.

- Double-click a sample in the results list of the **Browser** tab of the **Load** panel.

  Whether this replaces the sample or the layer depends on the **Replace Mode** setting in the prelisten and file info section of the **Browser** tab.

- Drag a sample from the File Explorer/macOS Finder or from the **MediaBay** of your Steinberg DAW onto a layer slot to replace the layer or onto the edit section to replace only the sample.

RESULT

Loading samples converts them into Backbone layers.

RELATED LINKS

Global Functions and Settings

Plug-in Functions Section

Plug-in name

To get information regarding the version and build number of the plug-in, click the plug-in name on the left. This opens the **About** box. To close the **About** box, click it or press `Esc` on your computer keyboard.

Load Previous Program/Load Next Program

Click these buttons to load the previous/next program.

Program loader

To load a program, click the field where the program name is shown. In the **Load** panel, double-click the program that you want to load or drag it onto the program field.

Program loader context menu
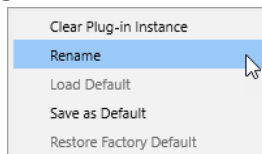
- **Clear Plug-in Instance** resets the entire plug-in instance to an empty state.
- **Rename** allows you to rename the program.
- **Load Default** loads the default program.
- **Save as Default** saves the current program as the default program.
- **Restore Factory Default** restores the factory default program.

Save Program

Allows you to save your program.

Save/Export Programs
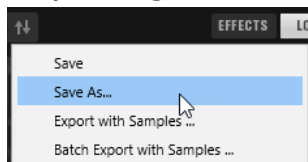
This pop-up menu contains the following options:

- **Save** saves the current program.
- **Save As** allows you to save the program under another name, and make attribute and location settings, etc.
- **Export with Samples** allows you to save the loaded program together with its samples.

- **Batch Export with Samples** allows you to save multiple programs together with their samples from your hard disk, without having to load them into Backbone first.

Show/Hide Effects

Opens the **Effects** section at the bottom of the window.

Show/Hide Load Panel

Opens the **Load** panel on the right side of the window.

Show/Hide Options

Opens the **Options** page that contains global settings and parameters, as well as the **Automation** editor and the **MIDI Controller** editor.

Switch off All Effects

Deactivates all effects. This lets you compare the sound with and without effects, for example.

NOTE

Switch off All Effects does not affect the global limiter in the **Output** section. If you want to hear the sound without the limiter, you must deactivate it manually.

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

The number of available undo/redo operations depends on the **Undo Steps** setting on the **Options** page.

Steinberg logo

Click the Steinberg logo to open a pop-up menu with links to Steinberg web pages containing information on software updates, troubleshooting, etc.

RELATED LINKS

Input Section

The **Input** section gives you a quick overview over the MIDI input and the trigger note.
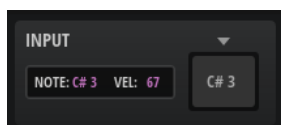
Triggered Note

Displays the last triggered note.

Velocity

Displays the velocity of the triggered note.

Trigger pad

The trigger pad on the right allows you to trigger the note that is displayed on the pad. The velocity depends on the vertical click position. Click at the top of the pad for a high velocity and at the bottom of the pad for a low velocity.

You can also set up a key command for this in the **Key Commands** dialog (**Play** category). In this case, the velocity is 127.

Edit Trigger Note

To change the trigger note, click **Edit Trigger Note** ▾ above the trigger pad and specify a different key.

Output Section

This section contains output settings, such as the output level, a bypass function for the internal global limiter, and sample export controls and settings.

Output Level Settings

Level meter

The level meter shows the current level. The most recent peak value is displayed in the value field on the right. To reset the peak value, click the field.
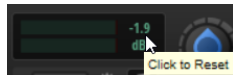
Main Level

The **Main Level** dial allows you to set the main output level of the plug-in.

Bypass Limiter

Backbone features an integrated limiter that prevents the output level of the plug-in to exceed 0 dB. Click **Bypass Limiter** to deactivate the integrated limiter, for example, to use a limiter in your host application.
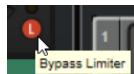
Export Section

The export controls allow you to export the sound of Backbone as a sample.

Export

Allows you to specify a name and location and to export the current sample.

Export Settings

Opens a pane where you can make additional export settings, specify a folder for the exported files, and export the current sample.

Drag icon

Drag Sample to Export allows you to export a sample by dragging it onto a track in your DAW, a folder in your system, or another layer within Backbone. The exported file gets the name of the program, followed by a number that increments with each export. The folder in which the file is saved and the way the sample is rendered depend on the settings in the **Export Settings** pane.

RELATED LINKS
Export Settings on page 13

Export Settings

In this pane, you can make settings for the exported files, such as the save location, the bit depth, etc.

- To open the pane, click **Export Settings** ⚙ in the top right section of the window.
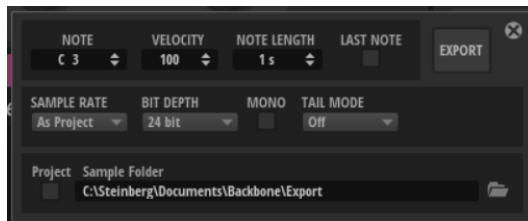
Note

Sets the MIDI trigger note. The sound that is produced when you play this MIDI note is exported.

Velocity

Sets the velocity. The sound that is produced when you play the MIDI note with this velocity is exported.

Note Length

Sets the note length. This parameter is available if **Sustain Mode** is activated for the amp envelope of one of the layers.

Last Note

If this option is activated, the last triggered note and velocity are used as a reference for the export. This way, you can quickly export a series of samples with varying pitches and velocities without having to change the export settings manually, for example.

Export

Exports all non-muted layers as a sample, according to the settings made on this pane.

Sample Rate

Sets the sample rate of the new sample.

Bit Depth

Sets the bit depth of the new sample.

Mono

If this option is activated, the sound is mixed down from stereo to mono and exported as a mono sample.

Tail Mode

The export includes all amplifier envelopes. However, if you are using time-based effects such as Reverb or Delay, the resulting sound may continue after that.

To make sure that the reverb or delay tail is part of the exported sample, select a **Tail Mode**.

- Use **Threshold** to specify an audio threshold below which the rendering is stopped.

- **Time** allows you to specify the time of the tail.

- Use **Silence** to render the sample until the last effect in the signal chain has entered silent mode, that is, when there is no more input and no signal to be processed. This mode ensures that even the longest reverb tail is exported in its entirety, but it can also lead to longer samples.

Sample Folder

Allows you to specify the destination folder for the exported samples.

This also applies to samples that are exported via drag and drop.

Export Samples to Cubase Project Folder

If you use a Steinberg DAW, activate **Export Samples to Cubase Project Folder** to keep all project-related samples in one place. You can then specify a subfolder within the project folder for the exported files.

This also applies to samples that are exported via drag and drop.

Options Page

On the **Options** page, you can find global options, the **Automation** editor, and the **MIDI Controller** editor.

- To open the **Options** page, click **Show/Hide Options** in the plug-in functions section.
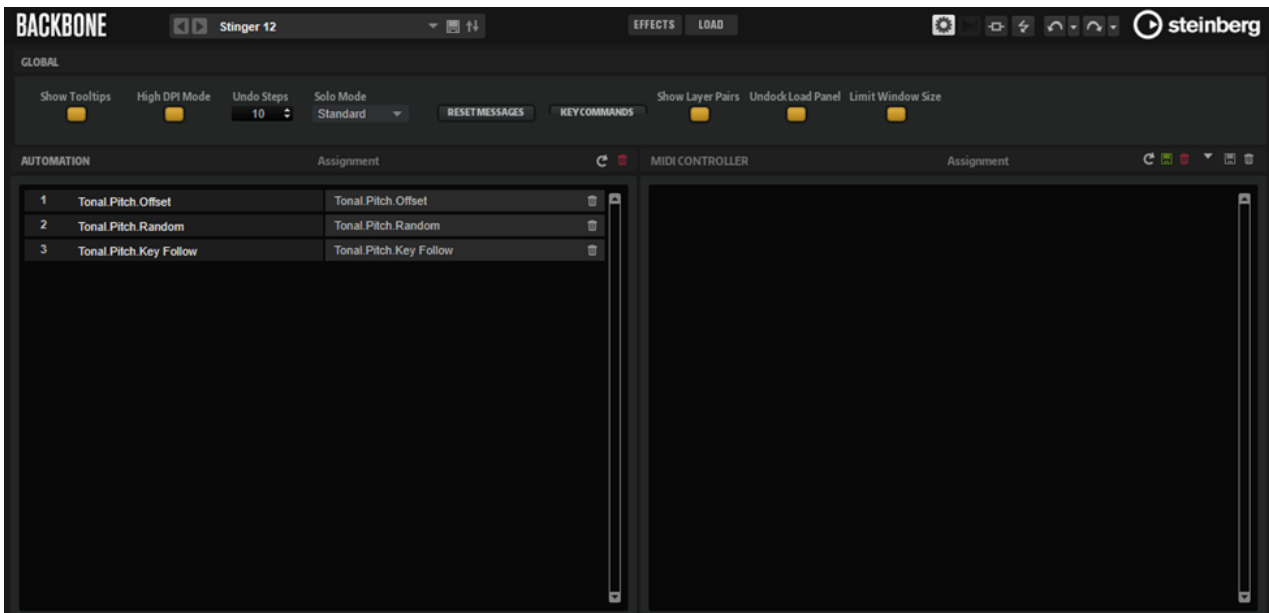
Global

Show Tooltips

If this option is activated, a tooltip is shown when you move the mouse over a control.

High DPI Mode

If **High DPI Mode** is activated, the plug-in uses high-resolution bitmaps when it is displayed with a scaling of 150 % and higher on a high-resolution monitor, such as 4K (UHD), 5K, etc. This allows for sharper images on high-resolution displays.

NOTE

Windows systems currently only support scaling factors that are multiples of 100. For example, if you use a scaling factor of 150 %, in Backbone, the scaling factor used is 200 %.

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.

Undo Steps

Specifies the number of available undo steps.

Solo Mode

- In **Standard** mode, you can solo multiple layers to hear them combined.
- In **Exclusive** mode, only one layer can be soloed at a time.

Reset Messages

If you click this button, all message dialogs that have been suppressed with the **Don't Show Again** option are displayed again.

Key Commands

Opens the **Key Commands** dialog, where you can view and assign key commands.

Show Layer Pairs

- If **Show Layer Pairs** is deactivated, the selected layer and the following layer are displayed.
- If **Show Layer Pairs** is activated, the layers 1 and 2, 3 and 4, 5 and 6, and 7 and 8 are always shown together.

Activating **Show Layer Pairs** can be useful when working with decomposed samples.

Undock Load Panel

If this option is activated, the **Load** panel always opens as an independent window.

Limit Window Size

If this option is activated, the height of the plug-in window is restricted, so that it cannot extend beyond the desktop. If necessary, scroll bars are added, allowing you to navigate to areas of the plug-in panel that are currently not shown. This prevents you from being unable to access functions because they are outside of the editable window space.

TIP

Activate this option if you run into display issues, which can occur with some display resolutions on small screens.

Automation

In the **Automation** editor, you can manage your automation assignments.

MIDI Controller

In the **MIDI Controller** editor, you can manage your MIDI controller assignments.

Key Commands

Key commands are assigned to many functions in Backbone.

You can view, edit, and add key commands in the **Key Commands** dialog.

- To open the **Key Commands** dialog, open the **Options** page and click the **Key Commands** button in the **Global** section.
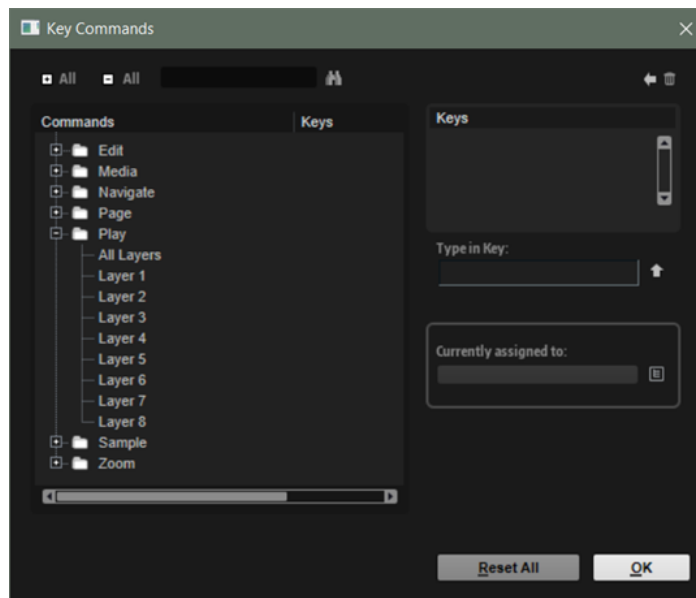
The commands are arranged in a hierarchical folder structure on the left. When you open a category folder, the items and functions are displayed with their currently assigned key commands.

- 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 Key** 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.

Decomposing Sounds

The **Decompose** function allows you to split your samples into their noise and tonal components.

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

NOTE

If **Resynth** is activated for a sample, the **Decompose** function cannot be used.

Decompose Section

The **Decompose** section at the top of the window contains the controls and settings for the **Decompose** function.

Decompose Settings

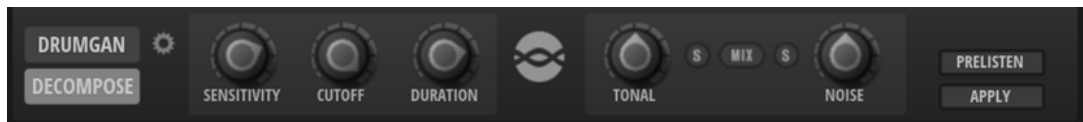Opens the **Decompose Settings** pane where you can specify the save location for the samples created with the **Decompose** function.

Sensitivity, Cutoff, and Duration

The quality of the **Decompose** function depends greatly on the **Sensitivity**, **Cutoff**, and **Duration** settings. Try out different settings before decomposing the sample.

NOTE

For the **Sensitivity**, **Cutoff**, and **Duration** parameters to have an effect, **Prelisten** must be active.

Sensitivity

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

Cutoff

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

Duration

Allows you to specify the minimum length for a partial. Signals that are shorter than the value specified are automatically considered as noise; longer signals are considered as belonging to the tonal component.

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

Tonal Level, Mix, and Noise Level

Tonal Level

Allows you to adjust the level of the tonal component.

Activate **Solo Tonal** to listen to the tonal component only.

NOTE

Make sure that **Solo Tonal** is deactivated when you click **Apply**. Otherwise, the layer is overwritten with the tonal component of the sample.

Mix

If this is activated, you can modify the mix with the **Tonal Level** and **Noise Level** dials and save the adjusted mix as a new file.

Noise Level

Allows you to adjust the level of the noise component.

Activate **Solo Noise** to listen to the noise component only.

NOTE

Make sure that **Solo Noise** is deactivated when you click **Apply**. Otherwise, the layer is overwritten with the noise component of the sample.

Prelisten and Apply

Prelisten

Calculates the tonal and noise components of your sample according to the current settings. This allows you to prelisten your **Decompose** settings.

- If **Solo Tonal** or **Solo Noise** is activated, you hear the tonal or the noise components of the layer.

- If **Mix** is activated, you hear the mix that you adjust with the **Tonal Level** and **Noise Level** controls.

Apply

Applies the **Decompose** function.

NOTE

- If **Mix** is activated, this replaces the sample.

- If **Solo** is activated for the tonal or the noise components, only this component replaces the sample in the layer.

- If **Mix** and **Solo** are both deactivated, two new layers are created, one for the tonal and one for the noise component of the sample.

RELATED LINKS

Decompose Settings

By default, the samples created by the **Decompose** function are saved in the same folder as the original file. However, if this is not what you want, you can specify an alternative destination folder on the **Decompose Settings** pane.
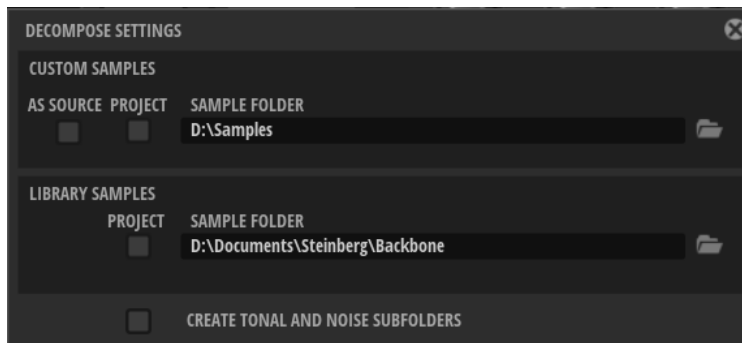
- To open the pane, click **Decompose Settings** in the **Decompose** section.
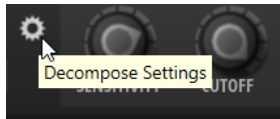
As Source

Activate **As Source** to save the created samples in the same folder as the original sample.

NOTE

As Source is only available if you work with source samples that are not part of a VST Sound container.

Project

Activate **Project** to save the samples in the project folder of your Steinberg DAW.

Custom Sample Folder

If **Project** is not activated, you can enter the path to the folder in which the new samples are to be saved. You can enter the path manually in the text field or click **Select Folder** and browse to the destination folder.

Create Tonal and Noise Subfolders

Allows you to save the tonal and the noise components in different subfolders.

Decomposing Samples

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

PREREQUISITE

- You have loaded the sample that you want to decompose into a slot.
- A slot is empty. This is necessary, because two slots are required for the tonal and noise layers.
- **Resynth** is deactivated for the layer.

PROCEDURE

1. Select the layer that you want to decompose.

2. Solo the layer.

3. Activate **Prelisten**.

   Backbone calculates the tonal and the noise components of the layer.

4. Activate **Solo Tonal** or **Solo Noise** and play back the corresponding component.

5. Try out different **Sensitivity**, **Cutoff**, and **Duration** settings.

   The **Prelisten** function recalculates the tonal and noise components automatically when you modify the parameters. During this process, an indicator is shown above the **Prelisten** button.

6. Optional: Use the **Tonal Level** and **Noise Level** controls to adjust the level of the corresponding component.

   NOTE

   Once you have identified the settings that you want to use, be sure to deactivate **Solo Tonal**/**Solo Noise**. Otherwise, only the corresponding component is saved when you click **Apply**.

7. Optional: Open the **Decompose Settings** pane and specify the save locations for the created files.

8. Click **Apply** to decompose the sample.

RESULT

Two new samples are created, one for the tonal and one for the noise component of the sound. They are saved with the extensions "_noise" and "_tonal", respectively. The tonal sample replaces the original sample in the slot. The noise sample is loaded into the next layer.

NOTE

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

AFTER COMPLETING THIS TASK

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

RELATED LINKS

Changing the Distribution of the Tonal and the Noise Components of Samples on page 21
Decompose Section on page 17

Combining Noise and Tonal Components of Different Samples

Once the tonal and noise components are split, you can use them separately. This allows you to try out different noise components with a tonal sample, edit the components of a sample

separately before combining them again, etc. You can also create entirely new sounds from your samples in this way.

PREREQUISITE

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

PROCEDURE

1. On the **Load** panel, open the **Browser** tab.

2. Navigate to the folder that contains the decomposed samples and filter the view to show only the decomposed samples using the **Filter by Sound Component** pop-up menu.

   You can filter the list to show the tonal component samples, the noise component samples, or all the component samples, that is, noise and tonal, that were created with the **Decompose** function.
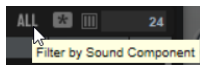
3. Drag the samples onto the noise or tonal waveform displays on the **Sample** page.

   By allocating two components from different original samples to separate layers, you can play them together.

4. Play back the layers.

5. Experiment with different combinations.

AFTER COMPLETING THIS TASK

Once you have identified the combination that you want to use, you can edit the samples further on the **Sample** page, for example.

RELATED LINKS
Sample Page on page 33

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

The **Decompose** function allows you to mix the noise and the tonal components of samples individually. This can be used to change the level of the snares of a snare drum, for example.

PREREQUISITE

You have selected the layer that you want to decompose.

PROCEDURE

1. Click **Prelisten**.

2. Modify the mix by adjusting the **Tonal Level** and **Noise Level** parameters.

3. When you are satisfied with the mix, activate **Mix** and click **Apply**.

RESULT

The modified mix of the two components replaces the original sample in the layer slot. The corresponding file is saved with the extension "_mix".

NOTE

If a sample with the same name already exists at the save location, a number is added to the file name. No sample files are overwritten by the **Decompose** function.

NOTE

DrumGAN Drum Resynthesis

DrumGAN allows you to create your own drum sounds, modify existing sounds, or create variations of drum sounds.

DrumGAN uses a GAN, a generative adversarial network, to synthesize drum samples. It was trained with a large collection of kick, snare, and cymbal sounds and offers intuitive control over the sound generation process.

You can use DrumGAN in the following ways:

- To generate drum samples from scratch.
- To analyze real samples and generate variations from them.
- To analyze the tonal or noise components of samples.
- To generate similar drum sounds that can be panned left/right to produce a stereo sound.

DrumGAN Section

The **DrumGAN** section at the top of the window contains the controls and settings for the **DrumGAN** function.
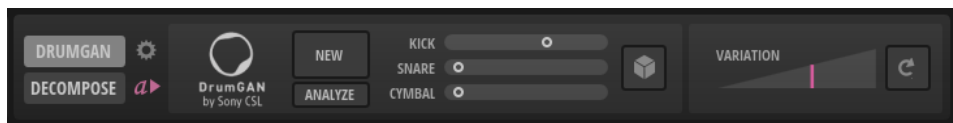
DrumGAN Settings

Opens the **DrumGAN Settings** pane, where you can specify the save location for the created samples.
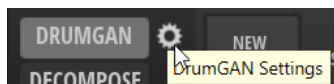
Play Sample After Changes
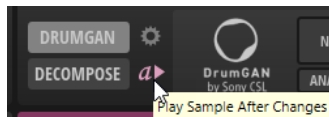
If this button is activated, every newly generated sample is automatically played back. This way, you can hear the result of your modifications.

New

Generates a random drum sound according to your settings for **Kick**, **Snare**, and **Cymbal**.

Analyze

Generates a replica of the sample of the selected layer. The **Kick**, **Snare**, and **Cymbal** sliders are set accordingly, and the **Variation Depth** is reset.

This function is useful if you want to use the **Variation Depth** slider to create a sound that differs slightly from an original sample.

Kick/Snare/Cymbal

Sets the amount of the respective instrument in the generated sample. For example, to start with a standard kick, snare, or cymbal sound, set the corresponding slider to the middle position and the two other sliders all the way to the left.

- In the middle position, the standard instrument sound is generated.

- Below the middle position, the results become more random.

- Above the middle position, the results become more uniform.

- If you set the control all the way to the right, you always get similar results.

Randomize Amounts

Click this button to generate randomized amounts of the **Kick**, **Snare**, and **Cymbal** sliders.

Variation Depth

Allows you to produce further diversity without changing the settings of the **Kick**, **Snare**, and **Cymbal** instruments. You can return to the original sound by setting the **Variation Depth** slider fully to the left.

Generate New Variation
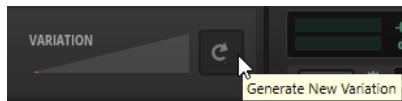
If you did not get the desired result when using the **Variation Depth** slider, you can generate a new range of variations for it by clicking this button.

NOTE

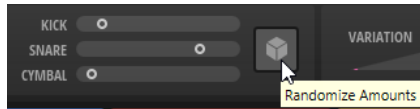This button has no effect if the **Variation Depth** slider is set all the way to the left.

RELATED LINKS
DrumGAN Settings on page 24

DrumGAN Settings

The settings pane allows you to specify the save location for the created samples.
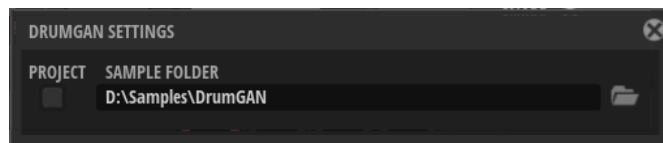
Project

Activate **Project** to save the samples in the project folder of your Steinberg DAW.

Custom Sample Folder

If **Project** is not activated, you can enter the path to the folder in which the new samples are to be saved. You can enter the path manually in the text field or click **Select Folder** and browse to the destination folder.

Generating Drum Sounds with DrumGAN

In the **DrumGAN** section, you can generate your own drum sounds.

PROCEDURE

1. Select a layer slot.

2. In the **DrumGAN** section, activate **Play Sample After Changes** .

   This way, you can hear what you are doing.

3. Set up the **Kick**, **Snare**, and **Cymbal** controls, depending on how prominent you want the respective instrument to be in the drum sound.

   - To start with a standard **Kick**, **Snare**, or **Cymbal** sound, set the corresponding slider to the middle position, and set the other two controls all the way to the left.

   - To combine your own set out of **Kick**, **Snare**, and **Cymbal**, move the faders individually until you find the sound that you want to use.

   - To generate random **Kick/Snare/Cymbal** distributions, click **Randomize Amounts** .

4. When you have found a sound that you like, you can either use it as it is, or you can click **New** to obtain a slightly different sound based on the same initial settings.

   Each time you click **New**, and each time you adjust any of the DrumGAN settings, the sample for the layer is replaced by a new sample, and the waveform display is updated to show the new waveform.

5. Optional: To return to a previously generated sound that you liked, use the **Undo** function.

   NOTE

   You can only go back until the maximum number of undo steps set on the Options page is reached.

AFTER COMPLETING THIS TASK

After creating your drum sound, you can perform further editing in Backbone. For example, to create stereo samples, you can layer two slightly different mono samples and pan them left and right. To create longer samples, you can use the functions on the **Resynth** page.

RELATED LINKS
Resynth Page on page 41
Exporting Single Layers on page 58

Creating Variations of Drum Sounds

You can create variations of drum samples. This allows you to create a stereo sound, for example, by creating two variations and panning them left and right.

PROCEDURE

1. Load the sample that you want to use to create variations.

2. Click **Analyze** to analyze the current sample.

   Backbone analyzes the sample and automatically sets the **Kick**, **Snare**, and **Cymbal** sliders to match the sample.

3. Use the **Variation Depth** slider to specify how much you want the new sample to deviate from the original sample.

4. If you do not get the desired result, click **Create New Variation**.

    This generates a new range of variations for the **Variation Depth** slider.

5. Use the **Variation Depth** slider again until you find a sound that you like.

    To create a stereo sound, load the original sample in another layer and pan one layer all the way to the right and one layer all the way to the left.

Editing Layers

The sounds in Backbone are made up of up to eight layers. Each layer contributes a specific detail of the sound, for example, the tonal and noise components of a drum sound. You can adjust and modify the sound of each layer extensively in the edit section.

The different pages in the edit section offer different editing possibilities.

- The **Sample** page contains the **Sample** editor, allowing you to edit the sample length, adjust the loop settings, etc.
- The **Resynth** page contains the integrated resynthesizer, allowing you to transform your samples on a spectral level.
- The **Pitch** page contains the pitch envelope and settings.
- The **Filter** page contains the filter envelope and settings.
- The **Amp** page contains the amplifier envelope and settings.

Layers Section

The **Layers** section on the left contains eight slots into which you can load samples or layer presets.
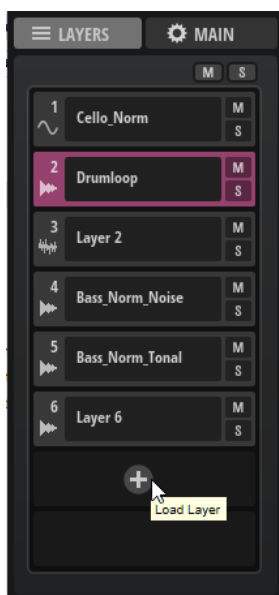
Reset Mute

Unmutes all muted layers.

Reset Solo

Unsolos all soloed layers.

Mute Layer

Mutes the layer.

Solo Layer

Solos the layer.

Layer Name

Shows the name of the layer.

To change the name, double-click it and enter a new name.

An icon to the left of the name indicates whether **Resynth** is activated for the layer and which **Resynth Mode** is active.

- **Resynth** not activated:
- **Resynth** activated, **Tonal** mode:
- **Resynth** activated, **Noise** mode:

Open Menu

Hover with the mouse over the name field until the **Open Menu** button appears. Click **Open Menu** to open a pop-up menu that allows you to load, save, or delete a layer.

RELATED LINKS
Resynth Page on page 41

Changing the Order of the Layers

You can reorder the layers in the **Layer** section using drag and drop.

- Click the layer slot and drag it to another position in the list.

  To replace another layer, drag the layer onto another slot.

  To insert the layer between two slots, drag it between the slots.

  To copy a layer, hold down **Alt/Opt** and drag it onto another slot.

RELATED LINKS
Decomposing Samples on page 19

Main Tab

The **Main** tab contains additional settings for the program and the layers.

The settings of the **Range** and **Modifier** sections are saved with the project in your host application. The **Voice**, **Glide**, and **Pitchbend** settings are saved in the Backbone program.
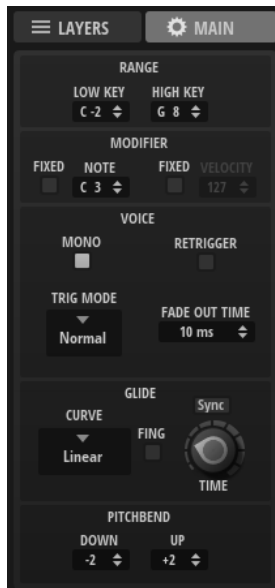
Range

In this section, you can make trigger settings for the program.

Low Key

Sets the lowest key on which the program is triggered.

High Key

Sets the highest key on which the program is triggered.

NOTE

The settings in this section are saved in the project in the host application, not in the program.

Modifier

This section allows you to modify the incoming MIDI notes.

Note

Here you specify which note on your external keyboard triggers C3. This is useful because C3 is the default MIDI note on which the factory presets are based.

For example, a kick drum preset has its original sound defined at C3. If you want to use the standard GM MIDI note C1 to trigger this sound, set **Note** to C1. With the default **Note** setting, the kick drum sounds two octaves lower.

Fixed Note

Activate this option if you want all incoming MIDI notes to automatically play C3.

Fixed Velocity

If this option is activated, you can trigger the layer with a defined velocity value instead of the incoming velocity.

Velocity

If **Fixed Velocity** is activated, you can specify the velocity that triggers the program in this value field.

NOTE

The settings in this section are saved in the project in the host application, not in the program.

Voice

Mono

Activates monophonic playback.

Retrigger

If **Retrigger** is activated, a note that was stolen by another note is retriggered if you still hold the stolen note when you release the new one. This way, you can play trills by holding one note and quickly and repeatedly pressing and releasing another note, for example.

NOTE

Retrigger is only available if **Mono** is activated.

Polyphony

If **Mono** is deactivated, this parameter determines how many notes can be triggered simultaneously.

NOTE

If the maximum **Polyphony** setting is exceeded, the notes that were played first are stolen in chronological order.

Trigger Mode

Defines the trigger behavior for new notes.

- **Normal** triggers a new note when the previous note gets stolen. The sample and the envelope of the new note are triggered from the start.

  To minimize discontinuities, use the **Fade Out Time** parameter.

- If **Resume** is selected, the envelope is retriggered for new notes, but resumes at the level of the stolen note. The pitch is set to the new note.

- If **Legato** is selected, the envelope keeps running for new notes. The pitch is set to the new note.

Fade Out Time

When a voice is stolen because the **Polyphony** limit is reached, it is faded out. Here, you can specify the fade out time.

Glide

Glide allows you to bend the pitch between notes that follow each other. For these parameters to have an effect, **Glide** must be activated for the layer on the **Pitch** page.

Sync

If **Sync** is activated, you can specify the glide time in note values. This allows you to synchronize the glide time to the host tempo. To use triplet note values, activate the **Triplets** button.

If **Sync** is deactivated, you can specify the glide time in milliseconds.

Fingered

Activate this parameter to glide the pitch only between notes that are played legato.

Curve

Allows you to select one of three curve types to define the glide behavior.

- With the **Linear** curve, the pitch glides from the start to the end pitch at a continuous speed.

- With the **Exponential** curve, the pitch starts gliding at a higher speed and decelerates towards the end pitch. This behavior is similar to the natural pitch glide produced by a singer.

- With the **Quantized** curve, the pitch glides from the start to the end pitch in semitones.

Glide Time

Sets the glide time, that is, the time it takes to bend the pitch from one note to the next.

Pitchbend

Pitchbend Up/Pitchbend Down

Determines the range of the modulation that is applied when you move the pitchbend wheel.

For the pitchbend range to have an effect, both the **Glide** and the **Pitchbend** parameters on the **Pitch** page must be activated for a layer.

RELATED LINKS
Pitch Page on page 48

Edit Section

In the **Edit** section, you can edit the layers.

The **Edit** section contains the **Sample**, **Resynth**, **Pitch**, **Filter**, and **Amp** pages.

By default, the **Edit** section shows an overview of all pages for the selected layer and the layer in the slot below. The selected layer is shown in pink, the layer that is not selected is shown in gray.

RELATED LINKS
Edit View vs. Overview on page 32
Sample Page on page 33

Edit View vs. Overview

By default, an overview of all pages is shown in the **Edit** section. You can set a page to edit view so that it fills the entire **Edit** section.

Edit View

Edit view shows more parameters and allows you to edit the layers in more detail.

- To open edit view for a page, click the corresponding page header.

  The buttons on the left of the section header allow you to navigate between the maximized **Sample**, **Resynth**, **Pitch**, **Filter**, and **Amp** pages.

- To return to the overview, click the header of a maximized page.

Overview

The overview pages give quick access to the most important parameters of two layers. Clicking a layer in the layer rack sets the focus to this layer.

Which two layers are shown in the overview depends on the **Show Layer Pairs** parameter on the **Options** page.

- If **Show Layer Pairs** is deactivated and you select a layer, this layer is shown in the top row. The row below shows the next layer. This means that you always see a combination of Layer 1 and 2, or Layer 2 and 3, and so on.

- If **Show Layer Pairs** is activated, the overview always shows two layers in odd and even pairs, 1 and 2, 3 and 4, and so on. This can be useful when working with decomposed samples.

In the **Sample** section, two additional functions are available:

- **Time Range** allows you to specify how many seconds of the sample are displayed in the overview for all layers.
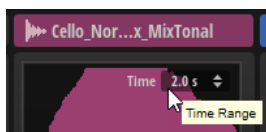
- Clicking in the sample display plays the corresponding layer.

  The vertical click position determines the trigger velocity. This allows you to quickly evaluate the sonic contribution of a layer without having to solo it.

  You can also set up a key command for this in the **Key Commands** dialog (**Play** category). In this case, the velocity is 127.

RELATED LINKS

Sample Page

The **Sample** page shows the sample waveform and allows you to play back and edit the sample.

On the left, you can find the play parameters. In the waveform display on the right, you can make a selection, specify the start and end of the sample, the start and end of the loop, and set up the fades. The toolbar above the display contains tools and settings for viewing and editing the sample.

Parameters

With the parameters in the section to the left of the waveform display, you can make settings for playback, the triggering behavior, etc.

Loop Mode

- If **Loop** is set to **Off**, playback stops at the end of the sample.
- If **Loop** is set to **On**, the loop range is played back continuously. When the loop end is reached, the playback jumps back to the start of the loop.

- If **Loop** is set to **Alternate**, the playback travels alternatingly forwards and backwards through the sample. This means that the playback direction changes every time the loop start or end marker is reached.

NOTE

This setting is linked to the **Loop Mode** setting on the **Resynth** page. Any changes you make here are also reflected on the **Resynth** page.

Reverse

Activate this to play the sample backwards.

This also reverses the waveform in the waveform display.

This setting is also available on the **Resynth** page. When you change it on one page, the change is automatically reflected on the other.

Note-On Delay

Allows you to delay the playback of each layer by a specified time or note value.

If **Sync** is deactivated, the delay is specified in milliseconds. If **Sync** is activated, the delay is specified in fractions of beats.

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 **Triplets On/Off**.

Trigger on Note-Off

Allows you to trigger a layer with a note-off signal, that is, when a key is released.

High-Pass

Adjusts the cutoff frequency of the integrated high-pass filter. This filter works with a slope of 12 dB/octave.

Frequencies below the cutoff are attenuated.

Low-Pass

Adjusts the cutoff frequency of the integrated low-pass filter. This filter works with a slope of 12 dB/octave.

Frequencies above the cutoff are attenuated.

Normalize Parameters
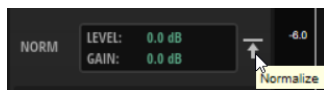
Normalize Level

Sets the level for the **Normalize Sample** function.

Gain Offset

Shows the amount of gain that was added to reach the set normalization level.

Normalize Sample

Normalizes the sample by detecting the highest peak level in the sample and adjusting the gain to reach a predefined level.

Pitch Analysis

You can analyze the pitch of the loaded sample and use the detected pitch as root key.

Pitch Analysis On/Off

Analyzes the pitch of the sample, which can then be used to determine its root key.

When the analysis is complete, the pitch curve is shown in the waveform display and the average pitch is displayed in the **Analyzed Pitch** section.

If no pitch can be detected for a sample, for example, because the sample contains mostly noise, **N/A** is displayed in the value field.

Analyzed Pitch

Note shows the analyzed MIDI note, and **Tune** shows the tune offset in cents.

Refresh Pitch Analysis

Reanalyzes the pitch of the sample.

This can be useful if the loaded sample does not have a steady pitch. In this case, the average pitch might not be the perfect choice to determine the root key. Instead, you can select a range within the sample where the pitch is stable and click **Refresh Pitch Analysis** to retrieve the average pitch of that selection.

Transfer Analyzed Pitch to Root Key

Sets the analyzed pitch value as the root key for the layer.

Root Key

Shows the root key of the layer.

If no pitch detection is performed, the **Root Key** is set to C3.

If no pitch can be detected for a sample, for example, because the sample contains mostly noise, you can enter the **Note** and **Tune** values manually.

Move Root Key to C3 Range

Allows you to move the root key for a sample closer to C3.

This can be useful to combine multiple samples with varying pitches more easily, and it guarantees that you can play them around middle C on the keyboard.

Toolbar

The toolbar contains tools with which you can play back and edit the sample and specify how it is displayed.
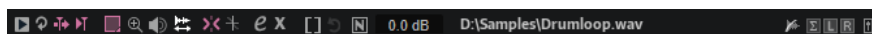
Play Sample

Plays back the raw sample.

Play Selection Looped

Activate this button to play back the selection in a loop.

Auto-Scroll

If this button is activated, the waveform display is scrolled during playback, keeping the playback cursor visible.

Follow Sample Playback

Activate this button to see a playback cursor 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 to the left or to the right from the position where you clicked.

Snap

If this button is activated, the selection start and end points and the 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 to avoid pops and clicks that are caused by sudden amplitude changes.

Edit Loop

If this button is activated, the editor shows the looped region as overlay with the original sample in the background. 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.

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.

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.

Sample Path

Shows the name of the loaded sample and its location on your system.

Show Fades in Wave

Activate this button to show the effect of your fade settings directly in the waveform.

Show Channel Sum/Show Left Channel/Show Right Channel

These buttons allow you to show the left channel, the right channel, or the sum of the left and right channels in the waveform display.

If no button is activated, the left channel of a stereo channel is shown at the top and the right channel at the bottom.

For single-channel samples, the available channel is shown.

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.

NOTE

Preview Volume affects the **Play Sample** function and the **Play** tool.

Waveform Display

In the waveform display, you can see and edit the sample waveform.

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.

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.

Markers

The waveform display shows markers for sample start and end, loop start and end, and fade-in and fade-out. You can move these markers by dragging them in the graphical display.

Sample Start

Defines where the sample starts to play. Audio before this marker is skipped.

Sample End

Defines where the sample stops playing. Audio after this marker is ignored.

Fade In

Defines the length of the fade in.

By default, the fade curve is linear, but you can change the curvature by dragging the curve up and down.

Fade Out

Defines the length of the fade out.

By default, the fade curve is linear, but you can change the curvature by dragging the curve up and down.

Loop Start

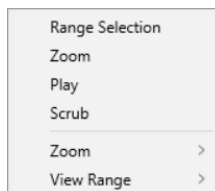Defines the start of the loop.

Loop End

Defines the end of the loop.

NOTE

The **Loop Start** and **Loop End** markers are only shown in the waveform display if **Edit Loop** is activated on the toolbar.

Context menu

Right-click the waveform to open the context menu with additional options.

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 to the left or to the right from the position where you clicked.

Zoom submenu

- **Zoom In** zooms in one step.
- **Zoom Out** zooms out one step.
- **Zoom Full** displays the entire sample in the waveform display.
- **Toggle Zoom Full/Last** switches between the last zoom setting and the display of the entire sample.
- **Zoom to Selection** zooms in on the current selection.
- **Zoom to Sample Start** zooms in on the start marker of the sample.
- **Zoom to Sample Start Range** zooms in on the start range.
- **Zoom to Start** zooms in on the start of the sample file.
- **Zoom to End** zooms in on the end of the sample file.

- **Zoom to Range** zooms in on the selection range.

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

Navigates to the file in the File Explorer/macOS Finder.

View Range submenu

When switching from one sample to another, you can specify which range to show in the waveform display for the new sample.

- **Auto** uses the view range of the previous sample.
- **Last** restores the view range that is saved with the sample.
- **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.

Zooming in the Sample Page Waveform Display

You can use the tools or the context menu to zoom in the waveform display.

CHOICES

- To zoom in/out on the time and level axis, use the horizontal and vertical zoom sliders.
- Use the three buttons to the right of the horizontal zoom slider 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 the 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**.
- Click and drag in the ruler to zoom in/out on the position where you have clicked.
- Use the options on the **Zoom** submenu of the context menu.

Setting up the Sample Range

You define the sample range with the **Sample Start** and **Sample End** markers in the waveform display.

CHOICES

- To set the sample start, drag the **Sample Start** marker.
- To set the sample end, drag the **Sample End** marker.
- To move sample start and end at the same time, position the mouse pointer between the **Sample Start** and **Sample End** markers at the height of the marker flags, and drag to the left or right.
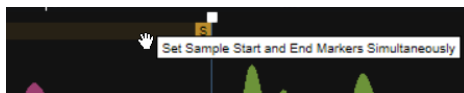
Setting up the Loop Range

You define the loop range with the **Loop Start** and **Loop End** markers in the waveform display.

CHOICES

● To set the loop start, drag the **Loop Start** marker.

● To set the loop end, drag the **Loop End** marker.

● To move loop start and end together, position the mouse pointer between the **Loop Start** and **Loop End** markers at the height of the marker flags, and drag to the left or right.
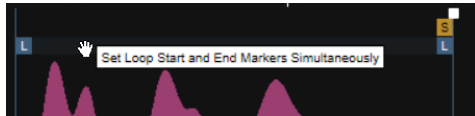
Creating Fades

You can create fades with the fade handles in the waveform display. The fades directly influence sample playback. They are not part of the amp envelope.

PROCEDURE

1. Drag the **Set Fade In Length** and **Set Fade Out Length** handles in the waveform display.

2. 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.

Modulating the Playback Start Using Velocity

You can use the markers on the **Sample** page to modulate the sample playback start using velocity. For example, this allows you to make samples more percussive for higher velocities, by playing the attack transient only with higher velocities.

PROCEDURE

1. Drag the **Sample Start Range** marker to the position from which you want the sample to be played at the lowest velocity.

   By default, the **Sample Start Range** marker is at the position of the sample start marker.

2. Drag the **Sample Start Velocity Range** marker to the position from which you want the sample to be played at the maximum velocity.

Tuning Drum Samples

You can use the **Pitch Analysis** function to tune your drum sound, so that the pitch matches the key of your current project. For example, if you want to use your bass drum samples for the bass line, you want those samples mapped to the corresponding keys, rather than to the default root key setting C3. If you do not know the pitch of the bass drum sample, you can detect it using the **Pitch Analysis** function and then assign the analyzed pitch as root key. That way, the bass drum sample is mapped correctly and the pitch matches that of the other instruments.

PROCEDURE

1. Select the layer that contains the drum sample that you want to tune.

2. On the **Sample** page, in the parameter section on the left, activate **Pitch Analysis**.

   The pitch of the drum sample is analyzed and shown in the **Analyzed** value fields. In the waveform display, a line indicates the pitch.

3. If the loaded sample does not have a steady pitch, select a range within the sample where the pitch is stable and click **Refresh Pitch Analysis** to retrieve the average pitch of that selection. Try out different ranges until it sounds right.
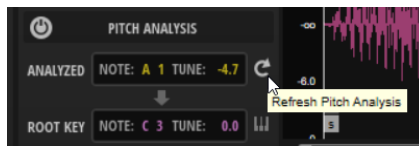
4. Click **Transfer Analyzed Pitch to Root Key** to use the analyzed pitch as the root key for the layer.

5. With the **Move Root Key to C3 Range** button, you can now move the root key into the C3 octave range.
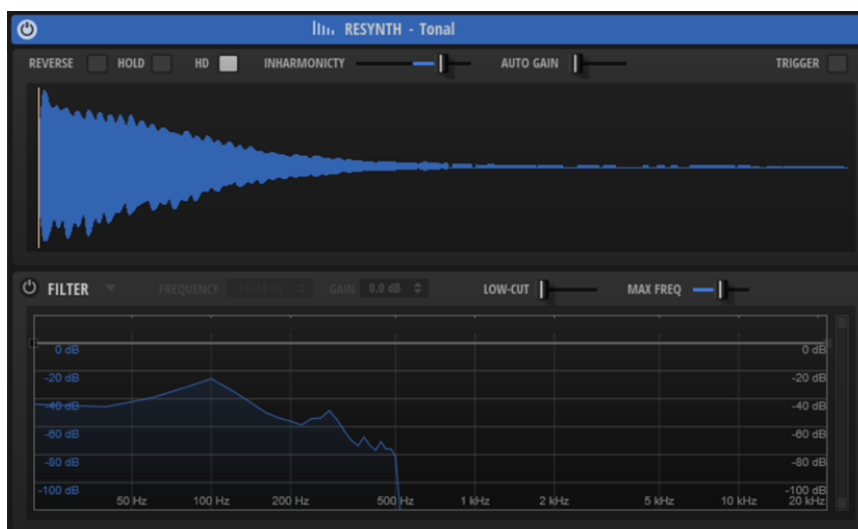
Resynth Page

Activating **Resynth** allows you to transform your samples on a spectral level, in a way that is not possible using classic subtractive synthesis.

With **Resynth**, the sample is split into its individual frequency components and overtones. These can then be filtered, amplified, or adjusted in relation to each other. In **Resynth** mode, the spectrum becomes independent from the original temporal progression of the sample. The sound is not played faster or slower for higher or lower notes, but instead keeps its timing. You can change the playback speed without affecting the pitch. When playing other pitches than the original sample pitch, it is possible to preserve the natural formants of the sound or tweak them independently to create more artificial variations.

In **Tonal** mode, the sample playback uses the original spectrum of the sample, which can then be edited with parameters like **Purity**, **Inharmonicity**, etc.

Noise mode allows you to use the original spectrum to shape a white noise signal. This allows you to resynthesize non-tonal components, for example, overtone-rich inharmonic signals, such as cymbals. But you can also use tonal samples in **Noise** mode and experiment to create rather inharmonic and chaotic signals.

Finally, applying the spectral filter with its free-form curve allows you to shape the spectrum, both in **Tonal** and **Noise** mode, even further.

Parameters

Resynth Mode

You can choose between two different resynthesis modes: **Tonal** and **Noise** .

- In **Tonal** mode, the sample playback uses the original spectrum of the sample, which can then be edited with parameters like **Purity**, **Inharmonicity**, etc. Use this mode for harmonic signals.

- In **Noise** mode, the original spectrum is used to shape a white noise signal. This mode is suited for mainly noisy or inharmonic signals.

Loop

- If **Loop** is set to **Off**, playback stops at the sample end.

- If **Loop** is set to **On**, the loop range is played back continuously. When the loop end is reached, playback jumps back to the start of the loop.

- If **Loop** is set to **Alternate**, playback travels alternatingly forwards and backwards through the sample. This means that the playback direction changes every time the loop start or end marker is reached.

NOTE

This setting is linked to the **Loop Mode** setting on the **Sample** page. Any changes you make here are also reflected on the **Sample** page.

Position

Sets the playback position. At a setting of 50 %, the playback position is in the middle of the sample.

Purity (Tonal Resynth Mode only)

Allows you to adjust the spectral purity of the sound. At 0 %, you hear the original sound.

- Positive values increase the level differences between partials, which results in a pure sound.

- Negative values decrease the level differences between partials, which results in a noisy, impure sound.

Purity Velocity (Tonal Resynth Mode only)

Allows you to define how the incoming velocity modulates the **Purity**. The amount that is set with the **Purity** control defines the value that is reached with maximum velocity.

Positive values increase the **Purity** for lower velocities.

Negative values decrease the **Purity** for lower velocities.

Formant Shift

Allows you to shift the formants of the spectrum.

Formant Scale

Scales the intensity of the formant filter.

If this parameter is set to 0, **Formant Shift** and **Formant Key Follow** have no effect. With negative values, the effect of the formant filter is inverted.

Formant Key Follow

Allows you to shift the formants with the played pitch.

With a value of 100 %, the formants follow the pitch. With a value of 0, the formants remain static. If you want to emulate the rather static formant characteristics of real instruments, start by setting this value to 0 and slowly raise it until you get the desired formants when playing notes in different key ranges.
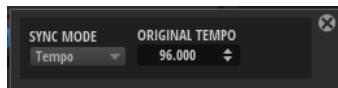
Sync to Tempo

Allows you to synchronize the playback speed to the tempo of the host application.

If **Sync to Tempo** is activated, the playback speed is determined by the **Speed** parameter and the tempo of the host application.

If **Sync to Tempo** is deactivated, the playback speed is determined by the **Speed** parameter only.

Show Sync Options

Click the triangle above the **Sync** button to open a panel where you can make settings for the **Sync Mode**.

Sync Mode

● If **Sync Mode** 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 application.

● If **Sync Mode** 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 application.

Speed

Adjusts the playback speed of the sample. A setting of 800.0 % equals an increase of three octaves in pitch.

NOTE

If you change the **Speed** parameter, you may need to adjust the envelope length on the envelope pages manually.

Speed Velocity

Determines how the **Speed** parameter is scaled by incoming velocity values. With a value of 0, the speed is the same for all velocities. Positive values increase the speed for higher velocities. Negative values decrease the speed for higher velocities.

For example, with **Speed** set to 0 and **Speed Velocity** set to +100, the speed for the lowest velocity is 0 % and the speed for the highest velocity is 800 %.

With **Speed** set to 800 and **Speed Velocity** set to -100, the speed for the lowest velocity is 800 % and the speed for the highest velocity is 0 %.

Speed Key Follow

Determines how the **Speed** parameter is scaled by the played key. With a value of 0, the speed is the same for all keys. Positive values increase the speed for keys above C3 and decrease the speed for keys below C3. Negative values decrease the speed for keys above C3 and increase the speed for keys below C3.

For example, with **Speed Key Follow** set to 100, playing a note one octave above C3 doubles the speed and a note one octave below C3 halves the speed.

Acceleration

Allows you to speed up or slow down the initial playback speed that is defined by the **Speed** parameter. Negative values slow down playback and positive values speed up playback. You can increase or decrease the **Acceleration** parameter until the minimum speed of 0% is reached and playback stops or until the maximum speed of +800% is reached.

RELATED LINKS
Filter Parameters on page 47

Waveform Display

The graphical editor shows the sample waveform and a marker at the position of the sample that is used for extracting the spectrum.
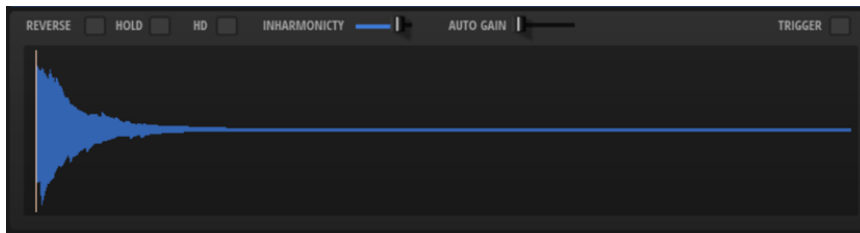
If **Speed** is set to 0, the position marker remains static. At a value above 0, the marker moves to show the current playback position. The spectrum changes depending on the sample position. If **Loop** is set to **On** or **Alternate**, you can edit the loop start and end markers by dragging them in the display.

Reverse Sample

Activate this to play the sample backwards.

This also reverses the waveform in the waveform display.

This setting is also available on the **Sample** page. When you change it on one page, the change is automatically reflected on the other.

Hold Last Spectrum

Activate **Hold Last Spectrum** to keep the last spectrum, once sample playback reaches the sample end or sample start, depending on the playback direction. This is especially useful if **Sustain Mode** is activated for the amplifier envelope, because the last spectrum acts like a single-cycle loop that can be played for as long as a key is held.

High Definition

Doubles the frequency resolution of the resynthesis. This can increase the sound quality for low note samples or samples that contain a very broad spectrum.

NOTE

This mode requires substantially more processing power. Therefore, you should only use it when necessary.

Inharmonicity (Tonal Resynth Mode only)

This parameter scales the frequency offsets of all partials. The effect of this parameter largely depends on whether frequency offsets exist in the signal. If a sound is strictly harmonic, that is, if there are no frequency offsets, the **Inharmonicity** control does not have an effect.

The frequencies of the partials are compared to the harmonic series, starting two octaves below the played pitch. If a sound is not strictly harmonic, the frequencies of some of the partials are offset to match the frequencies of the assumed harmonic series.

At 0%, only harmonic frequencies are allowed. At +100%, you hear the original sound. At +200%, the frequencies are assigned twice the frequency offset. Negative values invert the frequency offsets accordingly.

Auto Gain

Allows you to automatically adjust the level of quieter sample parts. Note that by raising the gain, you can lose the dynamics of the sample.

Trigger

Specifies what happens when you click in the waveform display.

- If **Trigger** is deactivated, you can set the position by clicking in the waveform display.

- If **Trigger** is activated, clicking in the waveform display triggers the sound.

  For this, the MIDI trigger note specified for the trigger pad in the **Input** section is used.

Modulating the Playback Position Using Velocity

You can use the position marker on the **Resynth** page to modulate the playback position using velocity. For example, this allows you to make sounds more percussive for higher velocities by playing the attack transient only with higher velocities.

PROCEDURE

1. Drag the **Position** marker to the position from which you want the sample to be played at the lowest velocity.

2. Drag the **Velocity Range** handle to the position from which you want the sample to be played at the maximum velocity.
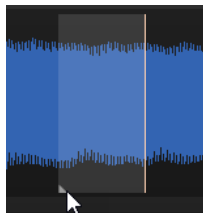
Filter Section

The **Filter** section in the lower area of the page contains a spectral filter that allows you to shape the overall spectrum of the sound.

Filter On/Off

Activates/Deactivates the spectral filter.

Filter Presets

Click **Open Menu** to open the menu allowing you to save, load, and delete filter presets.

Frequency

Sets the frequency of the selected node.

Gain

Sets the gain of the selected node.

Low Cut (Tonal Resynth Mode only)

Allows you to adjust the damping of low frequencies. The higher the amount, the more low frequencies are cut.

Low Cut does not work like a classic filter with a fixed cutoff frequency. Instead, it takes into account the current frequencies in the sample. For example, if you set this parameter to 10%, the low frequencies that occupy 10% of the overall energy in the spectrum are removed. This is especially useful to remove low rumbling sounds that can become audible when you apply pitch shift towards higher pitches. At higher values, **Low Cut** can produce more drastic effects.

Max Freq

Allows you to limit the resynthesis to the frequency range that is effectively used in a sample. This way, the resynthesis does not need to compute the full spectrum, which can greatly reduce the required processing power. Use this function when working with layers that contain the tonal part of a decomposed sample with only a few overtones, for example.

This parameter is particularly helpful in terms of reducing processing power if **High Definition** is activated.

NOTE

When you decompose a sample with a **Cutoff** setting of 1000 Hz, for example, the **Max Freq** parameter for the resulting tonal component is automatically set to 1000 Hz.

dB Range

The scrollbar on the right side allows you to define the dB range in which the filter curve can be adjusted. By default, it is set to the maximum range of +20 dB to 120 dB. This allows you to limit the range, for example, if you want to make very subtle adjustments within a range of +/-12 dB.

Drag the upper or lower edge to change the maximum value or the minimum value of the range. When the range is limited, you can also drag the middle of the scrollbar to change both at the same time.

Filter Parameters

If the filter is activated, the following parameters become available on the left:

Filter Velocity

Specifies how the velocity modulates the **Filter Shift** parameter. Increasing **Filter Velocity** moves the filter towards the lower frequencies when lower velocity values are received. The **Filter Shift** value is then reached with the maximum velocity.

Filter Shift

Allows you to shift the filter curve in the frequency domain. This can be compared to shifting the cutoff frequency of a classic synthesis filter.

Filter Key Follow

Allows you to adjust the **Filter Shift** parameter with the notes you play.

Set this parameter to positive values to raise the frequencies of the filter nodes with notes above C3. Set it to negative values to lower the frequencies of the filter nodes with notes above C3.

At a setting of 100, a note that is played one octave above C3 doubles the frequencies of all filter nodes and a note one octave below C3 halves the frequencies. This means that the filter curve follows the pitch of the played note.

Editing the Filter Curve

By adding nodes and moving them, you can create your own filter curves.

CHOICES

- To add a node, double-click in the graphical display.
- To remove a node, double-click it.
- To move a node, drag it to another position.

  NOTE

  If multiple nodes are selected, they are moved together.

- To change the frequency of a node, select it and enter a new value in the **Frequency** field. This is the same as dragging the node horizontally.

> **NOTE**
>
> If multiple nodes are selected, they are moved relatively, that is, the distances between the nodes are kept.

- To change the gain of a node, select it and enter a new value in the **Gain** field.
  This is the same as dragging the node vertically.

> **NOTE**
>
> If multiple nodes are selected, they are set to the same gain.

Pitch Page

On this page, you can make settings for tuning and pitch modulation.
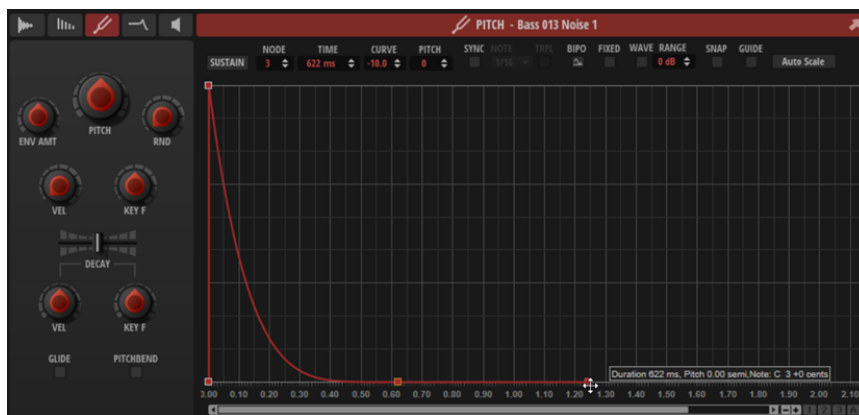
Pitch

Allows you to adjust the pitch of the layer by -/+ 60 semitones.

Pitch Envelope Amount

Determines how much the pitch is affected by the pitch envelope. For example, if this parameter is set to 12, an envelope node can raise/lower the pitch by one octave.

Random Pitch

Allows you to randomly offset the pitch with each played note. Higher values cause stronger variations. At a setting of 100 %, the random offsets can vary from -6 to +6 semitones.

Level Velocity

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. With positive values, the harder you hit a key, the higher the level of the envelope. With negative values, the harder you hit a key, the lower the level of the envelope.

Pitch Key Follow

Allows you to adjust the pitch modulation by MIDI note number. Set this parameter to positive values in order to raise the pitch the higher you play. Use negative values to lower the pitch the higher you play.

- At a setting of +100 %, the pitch follows the played note exactly.

- At a setting of 0 %, the sample is played with the pitch of the root key if no other modulations are active. This means you get a fixed pitch.

Decay Time

Allows you to offset the decay time of the envelope, that is, all segments after the first node.

If **Sustain Mode** is activated, this parameter also affects the release phase.

Decay Velocity

Adjusts the influence of velocity on the **Decay Time**. Positive values decrease the decay for higher velocity values. Negative values increase the decay for higher velocity values.

Decay Key Follow

Adjusts the influence of the played key on the **Decay Time**. Positive values decrease the decay for keys above C3. Negative values increase the decay for keys above C3.

Glide On/Off

Activates/Deactivates **Glide**. **Glide** allows you to bend the pitch between notes that follow each other. You achieve the best results in **Mono** mode.

You set up the **Glide Time**, **Curve**, etc. for all layers on the **Main** tab.

Pitchbend On/Off

Determines whether the layer is affected by the pitch bend wheel.

For example, this allows you to let a tonal layer follow the pitch bend, but not the corresponding noise layer.

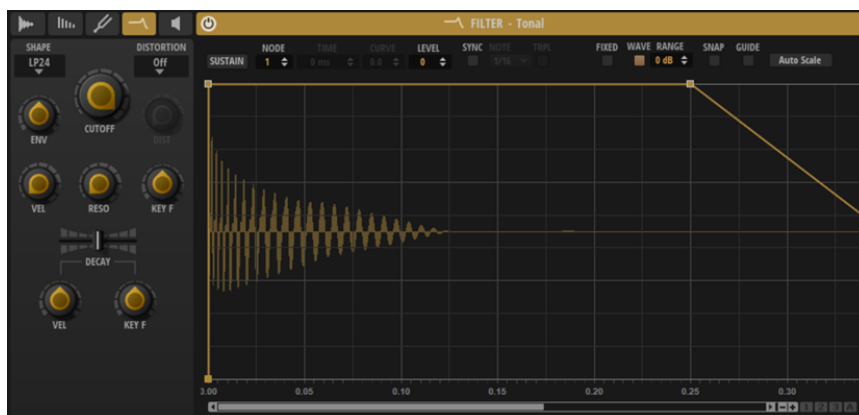You set up the pitch bend range for all layers on the **Main** tab.

RELATED LINKS

Filter Page

The **Filter** page lets you set up the filter and the filter envelope.

Filter Shape

- LP24, 18, 12, and 6 are low-pass filters with 24, 18, 12, and 6 dB/oct. Frequencies above the cutoff are attenuated.

- BP12 and BP24 are band-pass filters with 12 and 24 dB/oct. Frequencies below and above the cutoff are attenuated.

- HP6 + LP18 and HP6 + LP12 are a combination 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.

- HP12 + LP6 and HP18 + LP6 are a combination 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.

- HP24, 18, 12, and 6 are high-pass filters with 24, 18, 12, and 6 dB/oct. Frequencies below the cutoff are attenuated.

- BR12 and BR24 are band-reject filters with 12 and 24 dB/oct. Frequencies around the cutoff are attenuated.

- BR12 + LP6 and BR12 + LP12 are a combination 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.

- BP12 + BR12 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.

- HP6 + BR12 and HP12 + BR12 are a combination 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 + LP6 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.

- HP6 + 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.

Distortion Type

Lets you select a distortion type.

- **Tube** adds warm, tube-like distortion.

- **Hard Clip** adds bright, transistor-like distortion.

- **Bit Reduction** adds digital distortion by means of quantization noise.

- **Rate Reduction** adds digital distortion by means of aliasing.

- **Rate Reduction Key Follow** adds digital distortion by means of aliasing, but with **Key Follow**. The rate reduction follows the keyboard, so the higher you play, the higher the sample rate.

- Select **Off** if you do not want to apply any distortion.

Distortion

Sets the amount of distortion.

Envelope Amount

Controls the cutoff modulation from the filter envelope.

Cutoff

Controls the cutoff frequency of the filter.

Cutoff Velocity

Controls the cutoff modulation from velocity.

Increasing **Cutoff Velocity** moves the cutoff towards the lower frequencies when lower velocity values are received. The **Cutoff** value is then reached with the maximum velocity.

Resonance

Emphasizes the frequencies around the cutoff. At higher settings, the filter self-oscillates, which results in a ringing tone.

Cutoff Key Follow

Adjusts the cutoff modulation using the note number. Increase this parameter to raise the cutoff with higher notes. At 100%, the cutoff follows the played pitch exactly.

Decay Time

Allows you to offset the decay time of the envelope, that is, all segments after the first node.

If **Sustain Mode** is activated, this parameter also affects the release phase.

Decay Velocity

Adjusts the influence of velocity on the **Decay Time**. Positive values decrease the decay for higher velocity values. Negative values increase the decay for higher velocity values.

Decay Key Follow

Adjusts the influence of the played key on the **Decay Time**. Positive values decrease the decay for keys above C3. Negative values increase the decay for keys above C3.
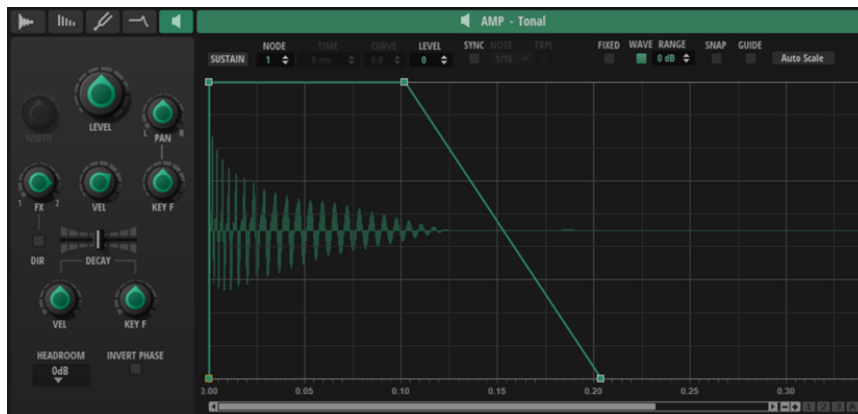
Amp Page

The **Amp** page contains settings for the amplifier and the amplifier envelope.

Level

Controls the overall volume of the layer.

Stereo Width

Controls the width of the stereo field. Turn right to widen the field and turn left to make it more narrow. If you turn the dial all the way to the left, you get a mono signal.

NOTE

This parameter only works for stereo signals. It cannot be used to artificially widen the stereo field of a mono signal.

Pan

Determines the position of the sound in the stereo panorama. At a setting of -100%, the sound is panned hard left, and at +100%, it is panned hard right.

Pan Key Follow

Allows you to adjust the pan position of a layer via the MIDI note number. Set this parameter to positive values to offset the pan position towards the right for notes above C3 and towards the left for notes below C3. Use negative values to offset the pan position towards the left for notes above C3 and towards the right for notes below C3.

With the maximum setting of +200 %, the pan position moves from hard left to hard right within two octaves. Fully left is reached one octave below C3 and fully right is reached one octave above C3.

Velocity

Controls the level modulation from velocity. At 0, all velocities are played with the same level.

FX Bus

Allows you to specify to which FX bus the output of the layer is sent. All the way to the left, the signal is sent to FX bus 1 and all the way to the right, it is sent to FX bus 2. Set it in the middle position to send equal parts of the signal to each of the busses.

Direct Out

Allows you to send the layer signal directly to the plug-in output, bypassing both effect busses. This allows you to add layers that you do not want to be processed by the effects to your sound.

Decay Time

Allows you to offset the decay time of the envelope, that is, all segments after the first node.

If **Sustain Mode** is activated, this parameter also affects the release phase.

Decay Velocity

Scales all times after the attack node. This allows you to lengthen or shorten the decay and the release of the envelope depending on the played velocity. For example, this allows you to create a hi-hat that closes and opens depending on the played velocity.

Positive values shorten the envelope and negative values lengthen the envelope with increasing velocities.

Decay Key Follow

Scales all times after the attack node. This allows you to lengthen or shorten the decay and the release of the envelope depending on the played note. For example, this allows you to create a tom that sounds longer or shorter depending on the played pitch.

At C3, the original envelope is played. With a value of 100, a note that is played one octave higher (C4) is played in half the time, and a note one octave lower (C2) in twice the time.

Negative values invert this behavior.

Headroom

Specifies the headroom for polyphonic playback. By default, Backbone uses a headroom of 0 dB. For monophonic programs, such as drum loops, leave the headroom at 0 dB. If you play polyphonically, a headroom of 6 dB is usually sufficient. The more layers and voices you play in parallel, the more headroom you might need to avoid clipping on the output.

Invert Phase

Inverts the phase of the sample.

This can be useful if you are using multiple layers and the samples are canceling each other out.

RELATED LINKS
Envelopes on page 53
Envelope Parameters on page 53

Envelopes

On the **Pitch**, **Filter**, and **Amp** pages, you can edit the envelopes. Each envelope is a multi-segment envelope with up to 128 nodes.

The **Pitch** envelope modulates the pitch of the layer.

The **Amp** envelope shapes the volume over time.

The **Filter** envelope modulates the filter cutoff frequency.

When you import a sample, all envelopes adjust to the length of the sample. By default, all envelopes play one-shot from the first to the last node.

Envelope Parameters

The envelope parameters can be found above the display.

Most of the parameters are the same for the **Pitch**, **Filter**, and **Amp** pages. Where there are differences, this is stated clearly.
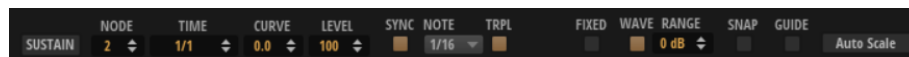
Sustain Mode

We recommend to activate this if you work with non-percussive samples that you do not play one-shot, such as bass samples. If **Sustain Mode** is activated, the envelope plays 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.

Selected Node

Shows the selected envelope node.

Time

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.

NOTE

The fraction is always reduced to the smallest possible value. 2/16 is displayed as 1/8, for example.

Curve

Allows you to adjust the curvature between two nodes from linear to logarithmic or exponential behavior.

Pitch (Pitch envelope)

Specifies the pitch offset of the envelope at the position set by the **Time** parameter.

NOTE

This value only has an effect if **Pitch Envelope Amount** is not set to 0.

Level (Filter envelope and Amp envelope)

Specifies the amplitude of the envelope at the position set by the **Time** parameter.

Sync

Allows you to synchronize the envelope to the tempo of the host application.

If **Sync** is activated, a grid is displayed in the graphical editor. You can set the resolution of the grid with the **Sync Note** parameter.

To use triplet note values, activate the **Triplets** button.

Bipolar (Pitch envelope)

If this button is activated, the pitch envelope is bipolar, which means that it allows for negative and positive values to bend the pitch.

Fixed Mode

- With **Fixed Mode** activated, only the selected nodes are moved when you move a node on the time axis.

- With **Fixed Mode** deactivated, all subsequent nodes are moved as well when you move a node.

Show Waveform

Shows the sample waveform in the envelope editor.

Sample Display Level Range

Allows you to specify the level range that is used in the graphical display. This provides you with an overview of the waveform, even for low levels.

Snap

If **Snap** is activated and you change the position of nodes, they snap to the nodes of the guide envelope that is shown in the background.

Show Guide Envelopes

If this button is activated, the two other envelopes are displayed as a reference in the background. For the filter envelope, for example, this means that the pitch and amp envelopes are shown in the background.

Auto Scale

Adapts the envelope to the length of the sample. The relative distances between the nodes are kept.

Zooming

The vertical axis of the graphical envelope editor displays the level. The horizontal axis displays the time.

CHOICES

- To zoom in or out, click the **+** or **-** buttons to the right of the scrollbar below the graphical editor.
- To zoom in or out at the current position, click in the timeline, and drag up or down.
- To toggle between full zoom and the previous zoom setting, click the **A** button to the right of the horizontal zoom slider.
- To zoom to a specific region, hold **Alt/Opt** , click and drag the mouse over the region.

Using Zoom Snapshots

Zoom snapshots save the zoom factor and the scroll position of the editor. These are restored when you load the snapshot.

To the right of the scrollbar, you can find three numbered buttons that allow you to save and load zoom snapshots.

NOTE

If you perform any manual zooming or scrolling, the zoom snapshot is deactivated.

PROCEDURE

1. To save the current state of the editor as a snapshot, **Shift** -click one of the numbered buttons to the right of the scrollbar.

2. To load a zoom snapshot, click the corresponding button. The button color changes if a snapshot is active.

Selecting Nodes

CHOICES

- To select a node, click on it in the graphical editor.

  The focused node is indicated by a frame. The value fields above the graphical envelope editor display the parameters of the focused node.
- If multiple nodes are selected, you can use the **Selected Envelope Node** value field 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 Arrow** and **Right Arrow** keys.

RELATED LINKS
Node Editing

Adjusting the Time between Nodes

The **Time** parameter specifies the period of time between two nodes. Depending on the **Sync to Host Tempo** setting, the **Time** parameter is displayed in milliseconds and seconds or in fractions of beats.

To specify the time between two nodes, do one of the following:

CHOICES

- Select two adjacent nodes and enter a new value in the **Time** field.
- Drag a node to the left or the right in the graphical envelope editor.
- 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 of the Nodes

The **Level** parameter specifies the amplitude of the selected envelope node.

To set the level of a node, do one of the following:

CHOICES

- Select a node and enter a new value in the **Level** field.
- Drag one or multiple selected nodes up or down in the graphical editor.

  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/Opt** while dragging.

Adjusting the Curve between Nodes

The **Curve** parameter allows you to adjust the curvature between two nodes from linear to logarithmic or exponential behavior.

To adjust the curve, do one of the following:

CHOICES

- Select the node or nodes that you want to adjust and enter a value in the **Curve** field. Positive values change the curvature towards logarithmic and negative values towards exponential behavior.
- Click on the curve between two nodes in the graphical envelope editor and drag up or down.

  Ctrl/Cmd-click a curve to reset it to linear.

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. From 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 **Triplets** button.

   > **NOTE**
   >
   > - Envelope nodes that do not exactly match a note value display the closest note value.
   > - Nodes that match a note value exactly 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.

Adjusting the Envelope Length to the Length of the Sample

When you change the length of the sample, you can automatically set the envelope length to the new sample length.

PROCEDURE

1. On the **Sample** page, move the **Sample End** marker to the left.

2. Open one of the envelope pages: **Pitch**, **Filter**, or **Amp**.

3. On the toolbar, activate **Show Waveform**.

   You can see that the envelope is longer than the underlying sample waveform.

4. On the toolbar, click **Scale Envelope to Length of Sample**.
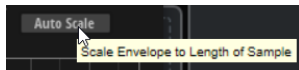
RESULT

The envelope length is modified to match the length of the sample.

> **NOTE**
>
> When you change the sample length by adjusting the **Speed** parameter on the **Resynth** page or when you loop a sample, it can be necessary to adjust the envelope length manually after applying **Scale Envelope to Length of Sample**.

Sample Export

You can export samples to render effects into your samples, to save processor power, or to apply further editing and effects to the rendered samples, for example.

You can render and export single layers or all layers.

Exporting Single Layers

You can export a single layer using drag and drop.

PROCEDURE

1. Click and hold the **Drag to Export Layer** button.

    You can find this button in the top right corner on a page that is in edit view. If the overview of all pages is shown in the **Edit** section, this button is located in the top right corner of the **Amp** page.

2. With the button pressed, drag the layer onto a track in your DAW, into a folder on your system, or onto another layer slot in Backbone.

RESULT

The layer is added as a sample at the drop position. The exported file gets the name of the layer, followed by a number that increases with each export. The folder in which the file is saved and the way the sample is rendered depends on the settings in the **Export Settings** pane.

RELATED LINKS
Export Settings on page 13
Edit View vs. Overview on page 32

Exporting All Layers

You can export the sound that is produced by all layers when a note is triggered.

PREREQUISITE

You have set up the layers to produce the sound that you want to export.

PROCEDURE

1. In the output section in the top right of the window, click **Export Settings** ⚙.

2. Set up the parameters.

3. Click **Export**.

RELATED LINKS
Output Section on page 12

Managing and Loading Files

You can manage your files using the **Load** panel.

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

Load Panel

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

To display the **Load** panel, click **Show/Hide Load Panel** on the toolbar.
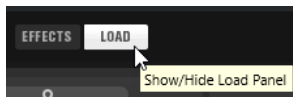
To open the **Load** panel in a separate window, click **Dock/Undock Load Panel** ↗ in the top right of the panel.

The **Load** panel contains the **Programs**, **Layers**, and **Browser** tabs.
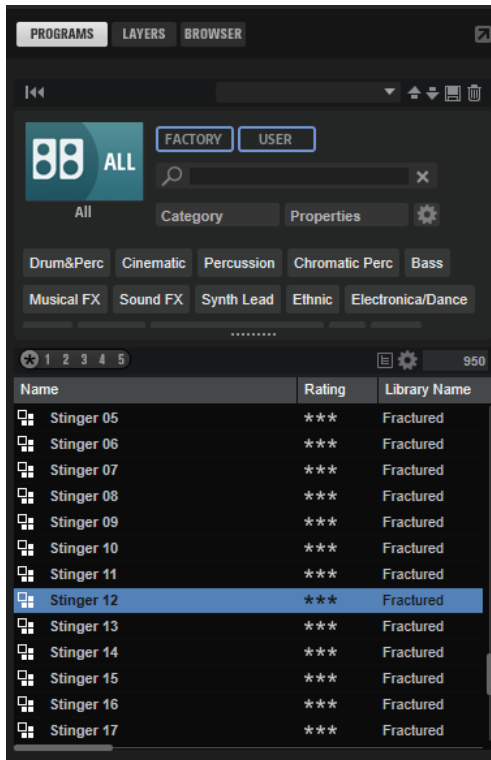
- The **Programs** tab contains the available programs that you can load.
- The **Layers** tab allows you to load individual layers into the slots.
- The **Browser** tab allows you to browse your file system for samples and for presets that you exported or that you saved to a directory that is not automatically scanned by Backbone.

NOTE

If you load a preset that references content from a license-protected library and you do not have the corresponding license or have deactivated it, the content cannot be played and a warning icon is displayed in front of the preset name.

RELATED LINKS

File Management with the Programs and Layers Tabs of the Load Panel

The **Programs** and **Layers** tabs give you access to the available programs and layers. They are based on Steinberg's **MediaBay** technology, that is, they allow you to filter the results and find specific files quickly.

Unless stated otherwise, the controls are the same for the **Programs** and **Layers** tabs.

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

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

Reset Filter

Resets all filter settings.

Preset controls
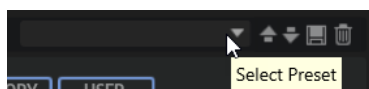
You can save, load, and delete the settings of a **MediaBay** search, which includes both the search mask at the top and the results list. This allows you to create search templates for different search scenarios, for example.

Saving the **MediaBay** with active search filters allows you to create different preset collections that can be recalled very quickly. These collections are dynamic, that is, any new presets added to your system at a later time also appear in the results list when a new search is performed.

Search Mask and Results List
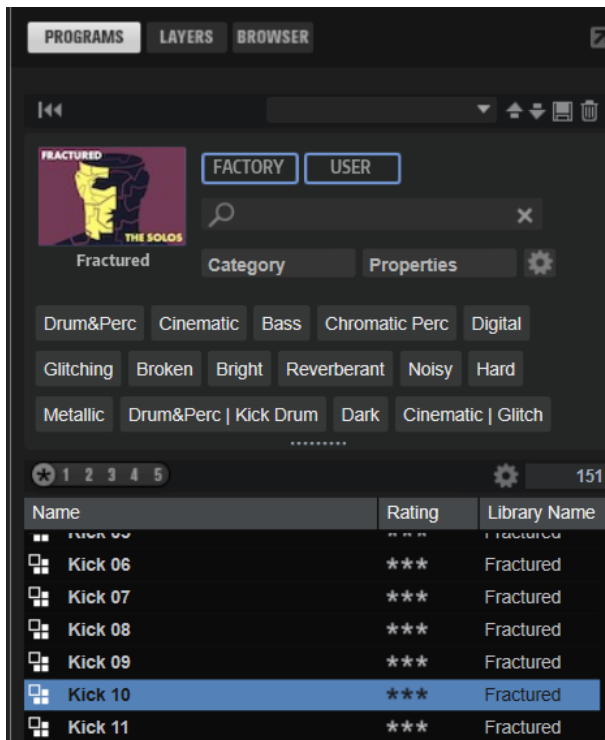
Select Library

Click the library icon on the left to open the library selector, where you can specify which library to search for content.

Factory

Activate this button to search for presets that are part of commercial or free libraries and that are installed on your system as VST Sound libraries. These libraries can be part of HALion or HALion Sonic, for example, or they can be included in expansion libraries.

User

Activate this button to search for presets that you have created and saved in the **MediaBay**.

Filter Text

In the text search field, you can enter text that is part of the name or an attribute of a preset that you are looking for. For example, if you enter **Piano**, the results list displays all presets whose name contains "Piano", or presets for which the term "Piano" is used in one of the attributes, such as the **Category** attribute **Piano** or the **Subcategory** attribute **Keyboard | E.Piano**.

Configure Attribute Menus

Allows you to add attribute menus, where you can specify attributes for your search.

The following attribute menus are available:

- **Category** opens a tree view that allows you to select a **Category** or a **Subcategory**. **Subcategory** tags are shown together with the corresponding **Category**, in the following way: (Category | Subcategory).

- **Style** opens a tree view which allows to select a **Style** or a **Substyle**. **Substyle** tags are shown together with the corresponding **Style**, in the following way: (Style | Substyle).
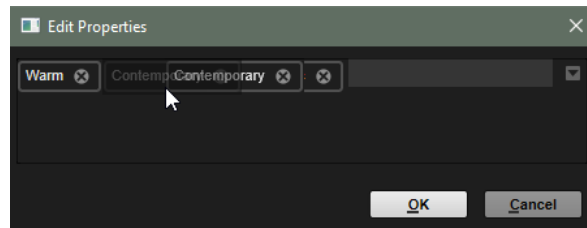
- **Properties** opens the **Properties** dialog, where you can add one or multiple **Properties** attributes.

  To search for a **Properties** attribute, enter a text string in the text field, such as **warm**, for example. When you start typing, the available properties are shown and can be selected from the list. If the entered text does not match any of the existing attribute values, all available attribute values are shown in alphabetical order. By adding multiple properties, you can narrow down the results to the ones that match both properties.

  Alternatively, click **Show All Attribute Values** ▼ next to the text field to open a list of all **Properties** attributes. You can search for matching attributes by scrolling the list. Press `Return` or click a property to add it.

  To add a new **Properties** attribute, enter the text and press `Return`.

  If you specify multiple attributes, you can change their order using drag and drop.

- **Moods** opens the **Moods** dialog, where you can add one or more **Moods** attributes.

  To search for an attribute, enter a text string in the text field, such as **energetic**, for example. When you start typing, the available properties are shown and can be selected from the list. If the entered text does not match any of the existing attribute values, all available attribute values are shown in alphabetical order. By adding multiple properties, you can narrow down the results to the ones that match both properties.

  Alternatively, click **Show All Attribute Values** ▼ next to the text field to open a list of all attribute values. You can search for matching attribute values by scrolling the list. Press `Return` or click an attribute value to add it.

  To add a new **Moods** attribute, enter the text and press `Return`.

  If you specify multiple attributes, you can change their order using drag and drop.

- **Articulations** opens the **Articulations** dialog, where you can add one or more **Articulations** attributes.

  To search for an attribute, enter a text string in the text field, such as **Decrescendo**, for example. When you start typing, the available articulations are shown and can be selected from the list. If the entered text does not match any of the existing attribute values, all available attribute values are shown in alphabetical order. By adding multiple articulations, you can narrow down the results to the ones that match both articulations.

  Alternatively, click **Show All Attribute Values** ▼ next to the text field to open a list of all **Articulations** attributes. You can search for matching attributes by scrolling the list. Press `Return` or click an attribute to add it.

  To add a new **Articulations** attribute, enter the text and press `Return`.

  If you specify multiple attributes, you can change their order using drag and drop.

- **Author** opens a list with all available authors.

- **Key** opens a list with all available keys.

- **Signature** opens a list with all available signatures.

- **Tempo** opens the **Tempo** dialog, where you can select a **Tempo** and specify a **Range** in which the tempo of the result can deviate from the set tempo. Activate the **Half-Time** ½ or **Double-Time** 2x buttons to include presets that use half or double the tempo.

Rating Filter

Allows you to limit the results list according to the rating of the presets. Use the rating slider to define the minimum rating.

Set up Result Columns

Allows you to select which attribute columns to display in the results list.

Results Counter

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

Browsing for Files

The **Programs** and **Layers** tabs allow you to browse for and load files. You can restrict the amount of files that are searched by filtering the results list or entering a search text. On the **Layers** tab, you can use the **Prelisten** controls to listen to the files.

PROCEDURE

1. Use the **Factory** and **User** buttons at the top of the window to specify whether you want to browse through the factory content or the content that you created yourself.

   You can activate both buttons to browse through the entire content.

2. Click the library icon to the left of the **Factory** and **User** buttons to open the library selector.
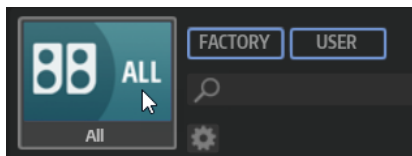
3. In the library selector, specify where you want to search for files: To select a particular library, click it. To browse through the entire content, select **All Libraries**.

   If the library that you want to use is not shown in the visible part of the selector, use the scroll bar, or enter the library name or part of the name in the search field. For example, enter "LoFi" to reduce the list to all libraries whose names contain "LoFi".
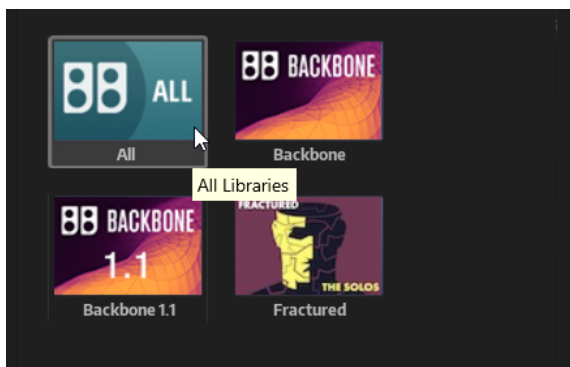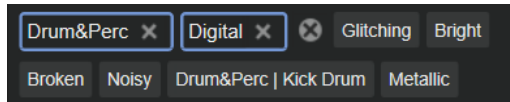

NOTE

If you enter search text, the library selector shows all libraries whose names contain the text, plus all libraries containing files whose names or attributes contain the text.

When you select a library, the text search field is cleared, and the results list shows the files contained in the library.

4. Above the results list, a list of suggested filter tags is displayed, based on the most frequently used tags. To use a suggested tag as a filter tag, click it. You can activate several filter tags simultaneously.


NOTE

Active filter tags have a blue border and are displayed to the left of the suggestions.

The list of suggested filter tags is updated with every active filter tag.

- To remove a filter tag, click its **Remove Filter** button.
- To remove all tags, click **Remove All Filters** between the filter tags and the suggestions.

5. Optional: Add attribute menus to search for specific types of presets. To add or remove a menu, click the **Configure Attribute Menus** button, and select/deselect the corresponding attribute.

 This allows you to perform a search for a specific instrument or for loop-based presets. For example, when looking for instruments, the **Category**, **Articulations**, and **Properties** attribute menus are particularly useful, whereas when looking for loop-based presets, we recommend to search for **Style**, **Tempo**, and **Signature**.

6. 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.

 While you type, the list of suggested filter tags is updated. This allows you to see in how many and in which attributes your search text is used.
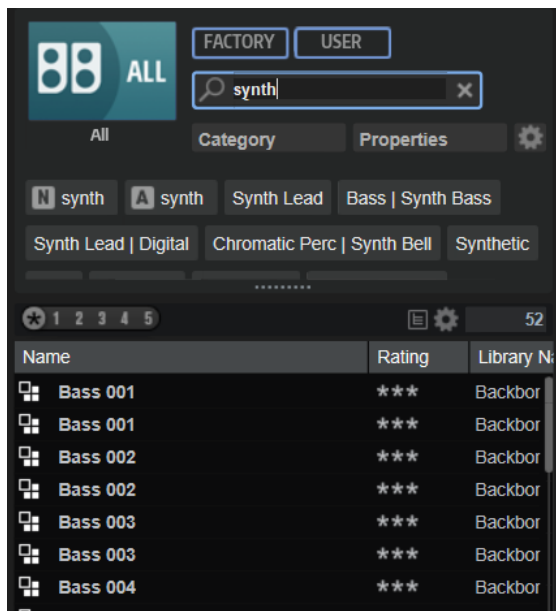

The **Name** and **All Attributes** tags are the first suggestions. To show which attribute another suggested filter tag belongs to, hover the mouse pointer over it to view its tooltip.

> **TIP**
>
> Combining tags from different attributes means that both filter criteria need to be matched to create a result. If you add multiple tags for the same attribute, the result only needs to match one of them.

7. Optional: You can set the search parameters so that they include or exclude presets with specific tags. To do so, define the **Mode** for the filter tag by right-clicking it, and selecting an option from the menu.
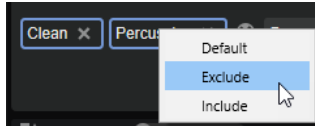
- **Default** is the standard behavior. This is indicated by a blue frame.

- **Include** can list presets, even if the filter tags prevent this. For example, if you specify **Category = Piano**, **Property = Warm** and **Name = Warm Piano (Mode = Include)**, the results list shows presets whose **Category** and **Property** attributes match, in addition to any presets whose names contain "Warm Piano". **Include** mode is indicated by a green frame around the filter tag.

- **Exclude** can exclude presets from the results list, even if their attributes match your settings. For example, if you specify **Category = Piano** and **Property = Warm (Mode = Exclude)**, only piano presets for which the **Warm** tag is not set are listed. **Exclude** mode is indicated by a red frame.

8. If you browse through the available layers on the **Layers** tab, you can use the **Prelisten** controls to listen to the files.

9. Double-click the file that you want to load.

   If you load a program, this replaces the current program.

   If you load a layer, this loads the layer into the selected slot. If the slot already contains a layer, it is replaced.

Configuring the Results List

You can specify which file attributes to display in the results list and set up the column order so that these attributes are visible without scrolling. This allows you to quickly find files with particular attributes.

CHOICES

- To define the attributes to be 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.
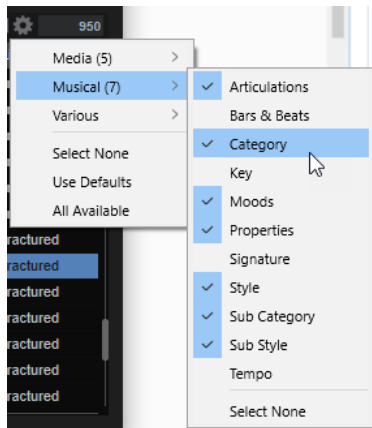
- **Select None** deselects all attributes.

- **Use Defaults** resets the results list to show the default attributes.

- **All Available** adds columns for all available attributes.

- 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.
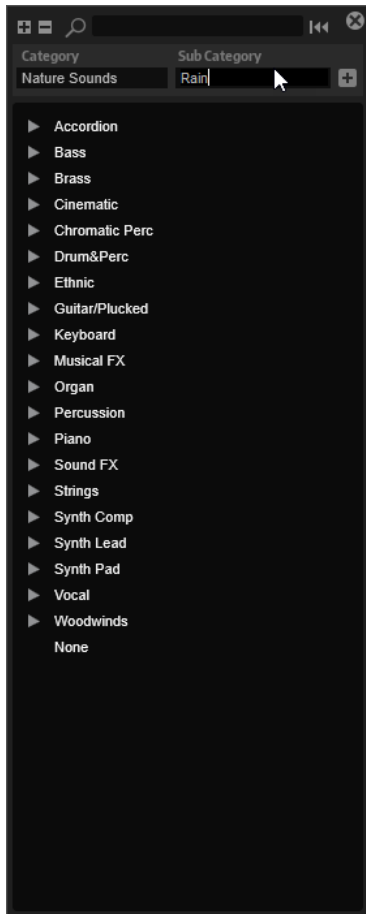
Adding Categories and Subcategories, or Styles and Substyles

If the available attributes for Categories, Subcategories, Styles, and Substyles are not sufficient to tag your programs and layers, you can add new attributes and use them instead.

PROCEDURE

1. Click the value field in the Category, Subcategory, Style, or Substyle column, depending on where you want to add the new attribute.

2. Enter the attribute that you want to add.

   You must fill out both the **Category** and **Subcategory**, or **Style** and **Substyle** text fields.

3. Click **Add** ➕ to add the new attribute.

RESULT

The new attributes are added to your program or layer.

> NOTE
>
> The attributes are saved in the program or layer, not in the plug-in or the project of your DAW. If you create new attributes without using them in a preset, they are lost when you close the plug-in or the project.

Editing Attributes in the Results List

You can add and edit attributes for your content in the results list of the **Load** panel.

PROCEDURE

1. Select the program or layer that you want to edit.

2. In the attribute column for the attribute that you want to edit, click in the value field.

   If the column is not shown, add it from the **Set Up Result Columns** menu.

3. Depending on the attribute, a menu or a dialog opens. Do one of the following:

- For the attributes Articulations, Moods, and Properties, enter the text in the value field and click **OK**.

  On entering characters, a menu opens that suggests existing attributes that begin with the entered text. Select one of the suggestions by using the arrow keys or enter the full text.

  NOTE

  You can add multiple attributes in the dialog.

- For attributes that open a menu, select the element that you want to use from the menu.

  For Category, Subcategory, Style, and Substyle, you can add new attributes to the list.

- For value or text fields, enter the value or the text and press **Return**.

  NOTE

  You can also set up attributes when saving or exporting programs.

RELATED LINKS
Editing Attributes when Saving or Exporting Programs on page 77

Layer Page Prelisten and File Info Section

The section below the results list allows you to play back the focused layer and shows the file name.
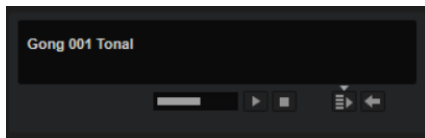
Level

Adjusts the playback level.

Play

Plays back the focused file.

Stop

Stops playback.

Auto Play

Automatically starts playback of the focused file.

**Auto Play Options**

Click the triangle above the **Auto Play** button to select an option.

- If **Always** is selected, selecting a file in the results list always triggers playback.

- If **Auto** is selected, selecting a file in the results list does not trigger playback if a sequence from the host is playing. This prevents the samples from being triggered off the beat.

Prelisten in Place

Temporarily loads the selected layer into the active slot for prelistening. During prelisten, an animation is shown in the edit section.
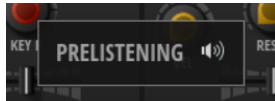
In the lower left of the section, two buttons are shown, allowing you to load ☑ the preloaded layer, or to cancel ☒ prelistening and return to the original layer.

File Management with the Browser Tab of the Load Panel

With the **Browser**, you can navigate to specific directories on your system and load files from there.

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 history, click the **Navigation History** button on the right.

Location Tree

The location tree allows you to navigate through your samples, in any folder on your system.

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

Location Tree Context Menu

Collapse Tree

Collapses the selected element in the tree.

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.

Create New folder

Creates a new folder in the selected location.

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

Shows the location of the selected file in your system.

Locations

You can save folders or directories in your system as favorite locations for quick access.

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.

 If you have not created any locations yet, this list is empty.

- To add the current folder as a favorite location, 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 the files that Backbone 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.
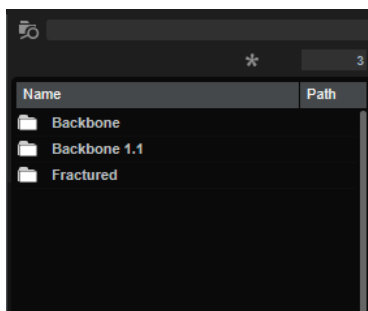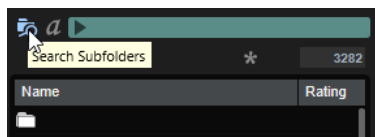

Filter by Sound Component
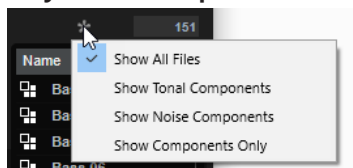
Allows you to filter the list to show only the tonal or the noise components created by the **Decompose** function, to show both the tonal and noise components, or to show all files.

Search Subfolders

- If this button is activated, the search includes all subfolders of the specified location.

  To automatically perform a new search for files when you switch between folders, activate **Auto Search** .

- If this button is deactivated, only the selected location is searched for files.

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 updates in real time, 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 Filter Text** next to the search field.

Set up Result Columns

Allows you to select which attribute columns to display in the results list.

Results Counter

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

RELATED LINKS
Configuring the Results List
Adding Categories and Subcategories, or Styles and Substyles on page 71
Sound Component Filter on page 72
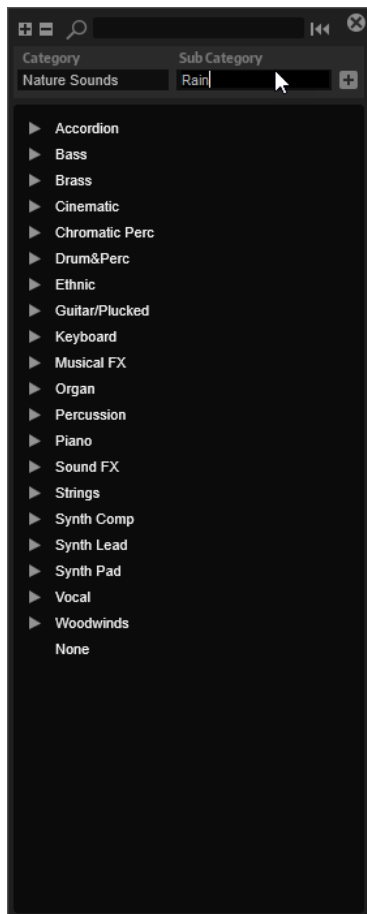Searching for Files on Your System on page 72

Adding Categories and Subcategories, or Styles and Substyles

If the available attributes for Categories, Subcategories, Styles, and Substyles are not sufficient to tag your programs and layers, you can add new attributes and use them instead.

PROCEDURE

1. Click the value field in the Category, Subcategory, Style, or Substyle column, depending on where you want to add the new attribute.

2. Enter the attribute that you want to add.

    You must fill out both the **Category** and **Subcategory**, or **Style** and **Substyle** text fields.

3. Click **Add** ⊞ to add the new attribute.

RESULT

The new attributes are added to your program or layer.

NOTE

The attributes are saved in the program or layer, not in the plug-in or the project of your DAW. If you create new attributes without using them in a preset, they are lost when you close the plug-in or the project.

Sound Component Filter

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

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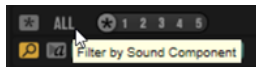
Show All Files

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

Show Tonal Components

Displays only the samples containing the tonal component. Those samples have the extension "_tonal".

Show Noise Components

Displays only the samples containing the noise component. Those samples have the extension "_noise".

Show Components Only

Displays both the noise and the tonal sample files. Other files are filtered out.

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 Subfolders** button, and enter the search text in the text field.

3. Optional: To restrict the search to the name of the file, activate **Search Names Only** on the right of the text field.

4. Optional: Click the button to the right of the search field to specify whether you want to search for programs, layers, samples, or all types.

5. To start the search, press **Return**, or click **Search/Stop Search**.

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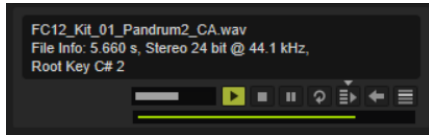
6. Double-click a result to show it in the location tree.

Prelisten and File Info Section

The section below the results list allows you to play back the focused element and shows information about the file.

Level

Adjusts the playback level.

Play

Plays back the focused file.

Stop

Stops playback. The playback cursor jumps back to the start of the file.

Pause

Pauses playback. Click again to resume playback.

Loop Playback

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

Auto Play

Automatically starts playback of the focused file.

Auto Play Options

Click the triangle above the **Auto Play** button to select an option.

● If **Always** is selected, selecting a file in the results list always triggers playback.

● If **Auto** is selected, selecting a file in the results list does not trigger playback if a sequence from the host is playing. This prevents the samples from being triggered off the beat.

Prelisten in Place

Temporarily loads the selected sample or layer for prelistening. This allows you to try out how it would sound in your current project context. During prelisten, an animation is shown in the edit section.
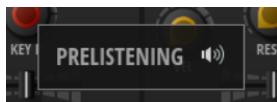
In the lower left of the section, two buttons are shown, allowing you to load the preloaded layer, or to cancel prelistening and return to the original layer.

Whether **Prelisten in Place** replaces only the sample or the entire layer depends on the selected **Replace Mode**.

Replace Mode

● **Replace Layer** loads the sample and resets the layer settings to their default values.

- **Replace Sample** ⏭ replaces the current sample and resets sample start/end, loop start/end and fade in/out. Any other settings that you made for the layer are kept.

> **NOTE**
>
> The selected **Replace Mode** is taken into account when you load the sample or layer.

Saving and Exporting Programs

The **MediaBay** is Steinberg's database to manage your content, quickly find files that you are looking for, specify attributes for your files, and much more.

With the **MediaBay** tab in the save and export dialogs, programs are written into a Backbone-specific user documents folder. This folder is scanned for content by the database. All samples that are used in your programs remain in the location from where they were added.

There can be situations where you will want to save your programs to a different location on the file system, for example, if you are cooperating with multiple users on a sound design project, where everybody works on the same source samples and saves programs to the same shared location. In this case, you can save your program via the **File System** tab. This way, you can make sure that the relation between the presets and the referenced samples remains the same for all participants.

With the functions **Export with Samples** and **Batch Export with Samples**, you can consolidate your VST 3 preset and sample files in a specific folder. This allows you to archive your files or to transfer them onto another system. The relative file paths allow the files to be loaded on another system. Note, however, that the folder structure that is created during export must not be modified afterwards.

Saving Programs

CHOICES

- To save the current program without any additional settings, click **Save/Export Programs** ⇅ and select **Save**.

  This overwrites the current program.

  > **NOTE**
  >
  > If the program has not been saved before, the **Save** dialog opens.

- To save the current program and assign **MediaBay** attributes for it, click the **Save Program** button in the program loader or click **Save/Export Programs** and select **Save As** from the pop-up menu.
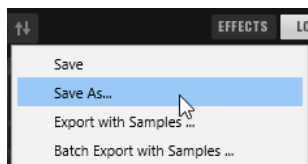
  This opens the **Save** dialog, where you can add attributes to your programs, specify a location for the saved file, and more.

RELATED LINKS

Save Dialog

You can save your programs either into the **MediaBay** database or to a location on your file system. Usually, the **MediaBay** is the best choice, because it uses the file and folder structure and the save locations that are used in other Steinberg products, so that you can be sure that your programs can be opened and edited there, too.

MediaBay Tab

Programs that are saved via the **MediaBay** tab are saved in the standard location for VST 3 presets, and therefore become available on the program loader and the **Load** panel.
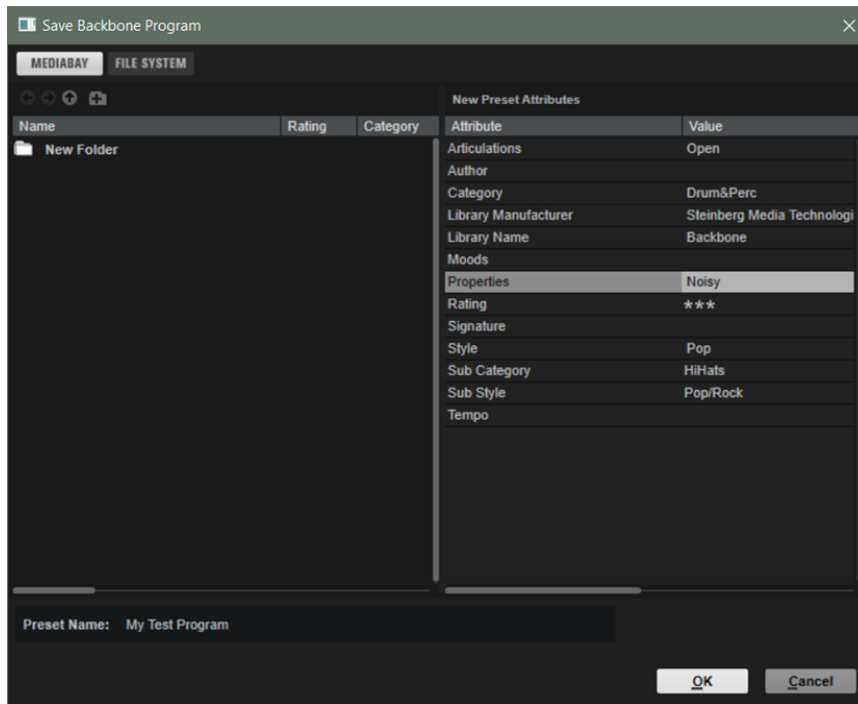
Previous Browse Location/Next Browse Location

These buttons allow you to step between the recent locations.

Browse Containing Folder

Opens the folder one step higher up in the hierarchy.

Create New Folder

Creates a new folder at the current hierarchy. This way, you can save your exported programs in different folders, for example, named after their content, musical style or instrument, creation date, etc.

Attributes Section

On the right of the dialog, you can edit the attributes.

Attribute

The **Attribute** column lists the available attributes.

Value

Double-click in the **Value** column of the selected attribute to edit the value.

File System Tab

This tab allows you to choose the folder on your system where you want to save your presets. This can be useful if you are collaborating with other musicians and everyone must be able to access and edit the files in your working directory, for example.

Programs that are saved via the **File System** tab do not become available in the MediaBay.
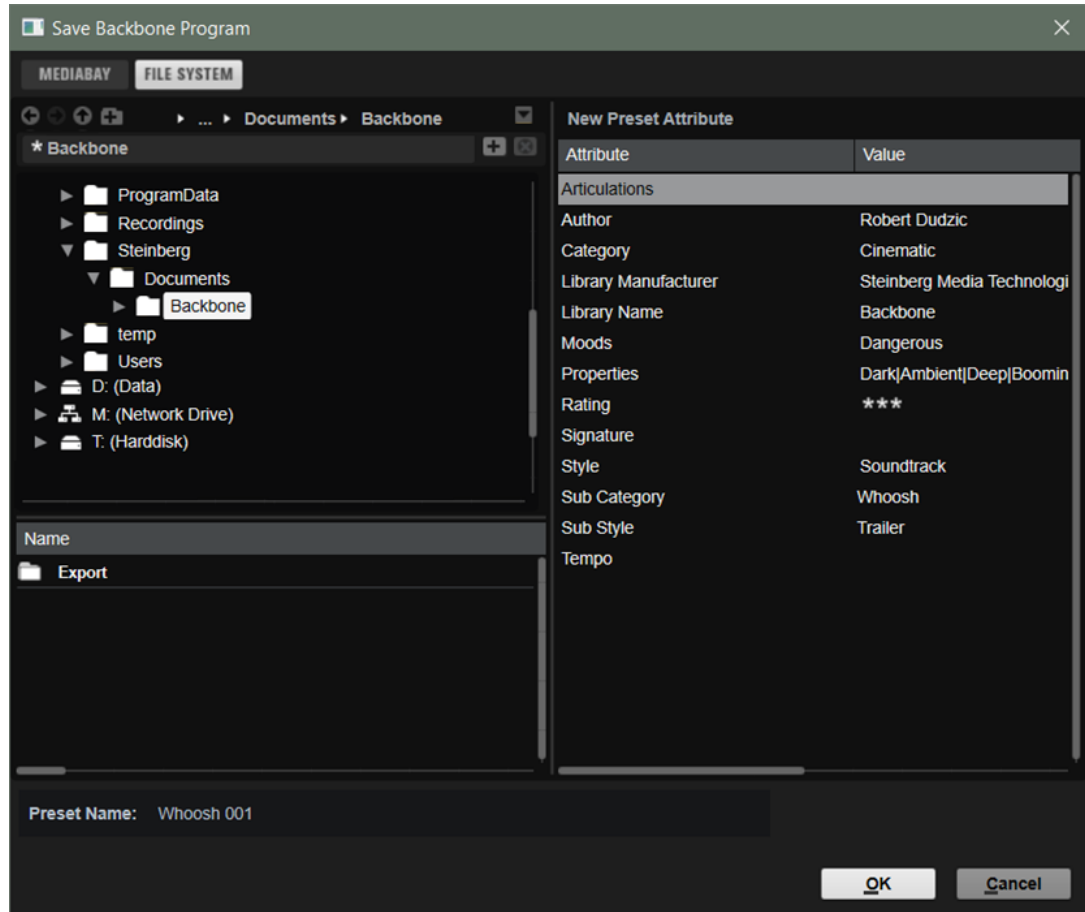
At the top of the window, the path to the current position in the folder hierarchy is shown. To navigate to one of these folders, click its name.

To specify the folder in which you want to save the program, navigate to and select it in the location tree on the left.

The file list below the location tree shows the VST presets located in the selected folder. This allows you to select a specific preset, to overwrite it with the current settings, for example.

Exporting Programs with Samples

Exporting a program together with its samples allows you to export the program and all the required samples to a folder of your choice. This makes it easier to share a program with other musicians, to transfer it to another computer, or to archive your presets and samples, for example.

PROCEDURE

1. Click **Save/Export Programs** in the program loader to open a pop-up menu and select **Export with Samples**.

2. In the dialog, specify the save location and the name for the program.

RESULT

The exported program is written into a folder named after the program. The samples are written into a "Samples" subfolder. The exported program references the samples inside the created "Samples" subfolder.

AFTER COMPLETING THIS TASK

You can transfer the program and the samples to another system. As long as you keep the exported folder structure, the samples will be loaded with the program.

Editing Attributes when Saving or Exporting Programs

When saving or exporting programs, the **MediaBay** tab allows you to make attribute settings. Attributes can be used to describe your sound using keywords. Attributes can be used on the **Load** panel and in the **MediaBay** of your Steinberg DAW. The more carefully you choose the attributes, the easier you will find specific presets that you search for.

PROCEDURE

1. Click **Save Program**.

2. In the **New Preset Attributes** section of the dialog, click in the field of the attribute value that you want to set.

3. Depending on the attribute, a menu or a dialog opens. Do one of the following:

- For the attributes Articulations, Moods, and Properties, enter the text in the value field and click **OK**.

  On entering characters, a menu opens that suggests existing attributes that begin with the entered text. Select one of the suggestions by using the arrow keys or enter the full text.

  NOTE

  You can add multiple attributes in the dialog.

- For attributes that open a menu, select the element that you want to use from the menu.

  For Category, Subcategory, Style, and Substyle, you can add new attributes to the list.

- For value or text fields, enter the value or the text and press **Return** .

4. Click **OK**.
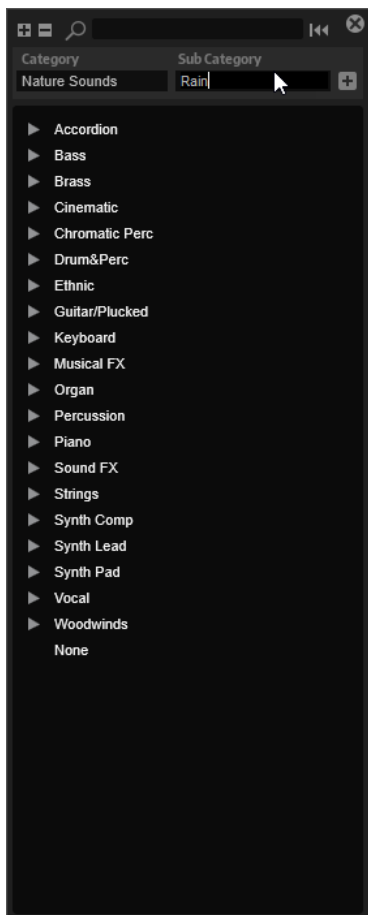
RESULT

The attribute is saved in the program.

Adding Categories and Subcategories, or Styles and Substyles

If the available attributes for Categories, Subcategories, Styles, and Substyles are not sufficient to tag your programs and layers, you can add new attributes and use them instead.

PROCEDURE

1. Click the value field in the Category, Subcategory, Style, or Substyle column, depending on where you want to add the new attribute.

2. Enter the attribute that you want to add.

   You must fill out both the **Category** and **Subcategory**, or **Style** and **Substyle** text fields.

3. Click **Add** ⊞ to add the new attribute.

RESULT

The new attributes are added to your program or layer.

> NOTE
>
> The attributes are saved in the program or layer, not in the plug-in or the project of your DAW. If you create new attributes without using them in a preset, they are lost when you close the plug-in or the project.

Batch Exporting Programs

If you have created multiple programs that you want to transfer to another system, you can use the batch export functionality.

PROCEDURE

1. Click **Save/Export Programs** in the program loader to open a pop-up menu and select **Batch Export with Samples**.

2. Add the programs that you want to export to the list.

   - Click **Add Program** to add a program to the list.

- Click **Add Folder** to add a specific folder to the list.

3. Specify a **Destination Folder** and a naming scheme for the samples.

4. Optional: Specify whether you want to trim the samples and include the fade curves in the exported files.

5. Click **OK**.

RESULT

All programs and samples are exported to the specified location.

RELATED LINKS

Batch Export Dialog

Batch exporting presets with samples allows you to export multiple programs together with their samples. In the **Batch Export** dialog, you can add programs and folders and make settings for the exported samples.

To open the dialog, click **Save/Export Programs** and select **Batch Export with Samples**.
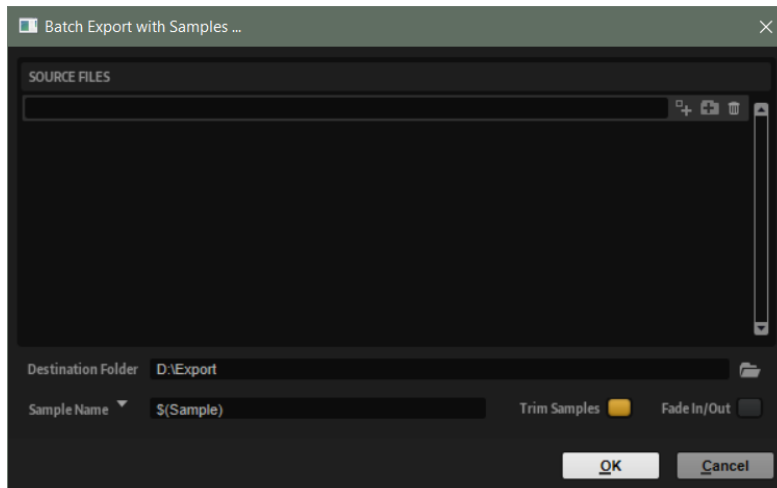
Source Files

You can add all the programs and folders that you want to export to the **Source Files** list on the left.

Add Program

Opens a dialog where you can navigate to and select programs that you want to export.

You can also add programs using drag and drop.

Add Folder

Opens a dialog where you can navigate to and select a folder that you want to export.

You can also add folders using drag and drop.

Remove Entry

Removes the selected item from the list.

Destination Folder

Allows you to specify into which folder the programs and samples are exported.

Sample Name

Allows you to use variables to define how the exported samples are named.

- **$(Sample)** uses the original file name of the sample.
- **$(SampleFolder)** uses the name of the folder of the original samples.
- **$(Layer)** uses the name of the layer.
- **$(Program)** uses the name of the program.
- **$(RootKey)** uses the MIDI note number of the root key.
- **$(RootKeyText)** uses the name of the root key.
- **$(SampleRate)** uses the sample rate of the samples.
- **$(BitDepth)** uses the bit depth of the samples.
- **$(Date)** uses the system date in the format yymmdd.
- **$(Time)** uses the system time in the format hhmm.

EXAMPLE

$(Sample)_$(RootKeyText) appends the name of the root key to each sample file name.

Trim Samples

Trims the samples to the range that is defined by the sample start/end markers.

Fade In/Out

Activate this option to render the fade in and fade out curves in the exported samples.

Working with Effects

You can load and edit effects and set up the effect routing in the **Effects** section.

Effects are saved in the program, not in the layers. If you want to render your effects into a layer, you can export it as a sample.

RELATED LINKS

Effects Section

In the **Effects** section, you can add and set up effects for the two effect busses and specify the effect routing.

To show/hide the **Effects** section, click **Show/Hide Effects** on the toolbar.

The section on the left shows the effect routing. The section on the right shows the four effect editors of the selected bus. To select the effect bus, click the **FX 1** or **FX 2** buttons in the routing section.

Routing Section

In the routing section on the left, you can load, move, and remove effects and get an overview over the effect routing.

Switch Off All Effects

Activates/Deactivates the entire **Effects** section. You can use this to bypass all effects.
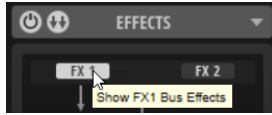
Bus Routing menu

Allows you to choose between five different routings. The signal flow of the selected routing is displayed in the routing section.

Open Menu

The **Open Menu** button on the right of the routing section header allows you to load a preset, save your changes in a new preset, or delete a user preset. These presets contain all **Effects** section settings, allowing you to save and reuse your effect chains.

Show FX 1 Bus Effects/Show FX 2 Bus Effects

These buttons allow you to determine whether the effect editors for the FX 1 bus or the FX 2 bus are shown in the editors section on the right.


Bus Routing

Backbone provides a flexible two-bus output routing. Each of the busses can host up to four effects.

The **Amp** section of each layer can be sent either exclusively to one bus or to both of them, with adjustable levels. This way, you can realize complex effect combinations and routing scenarios.

On the **Bus Routing** menu, you can choose between five routings. Click the **Bus Routing** button to open the menu.
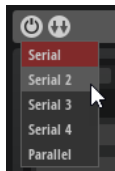
Serial

In this mode, the output of the **FX 1** bus is mixed into the **FX 2** bus. This way, you can use up to eight effects in series.

Serial 2-4

With these configurations, the output of the **FX 1** bus is mixed into the **FX 2** bus, after the first, second, or third effect of the **FX 2** bus. This allows you to use one, two, or three effects exclusively on the **FX 2** bus without processing the output signal from the **FX 1** bus.

Parallel

In this mode, the two busses are treated separately from each other and are mixed before they are sent to the plug-in output. This can be useful if you want to use different effects for the tonal and noise layers, for example.

The signal flow is shown in the routing diagram in the routing section.

> **NOTE**
>
> If **Direct Out** is activated on the **Amp** page for a layer, the layer signal is sent directly to the plug-in output, bypassing both effect busses.

RELATED LINKS
Amp Page on page 51

Using One Main Bus with an Additional AUX Bus for Send Effects

Let's say you want to add reverb to your snare drums. In this example, the FX 1 bus acts as bus for the aux effects and FX 2 is the main bus.
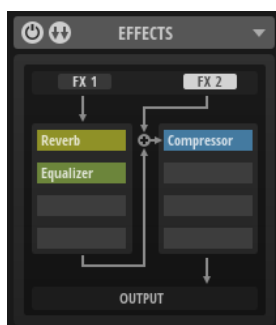
PREREQUISITE
You have added a snare drum layer.

PROCEDURE

1. On the **Bus Routing** menu, select **Serial**.

2. Click in the first effect slot of the FX 1 bus and add the Reverb effect from the **Time** submenu.

3. In the effect editor for the Reverb effect, set the **Mix** parameter of the Reverb effect to its maximum setting of 100.

4. Click in the second effect slot of the FX 1 bus and add the Equalizer effect from the **EQ/Filter** submenu.

   This way, you can process the reverb signal with the equalizer.

5. Open the **Amp** page for the layers to which you want to add the Reverb effect and use the **FX** dial to specify which portion of the signal you want to send to the Reverb effect.

6. Click in the first effect slot of the FX 2 bus and add the Compressor effect from the **Dynamics** submenu.

RESULT
The output of FX 1 is mixed with the dry layer signals and then sent into the FX 2 bus where the sum of both signals is compressed.

Using Two Independent Busses for Individual Effect Chains

Let's say you have added two layers and want to process them using different effects.

PREREQUISITE
You have added two layers.

PROCEDURE

1. On the **Bus Routing** menu, select **Parallel**.

2. Click in the first effect slot of the FX 1 bus and add the Reverb effect from the **Time** submenu.

3. Click in the first slot of the FX 2 bus and add the Delay effect from the **Time** submenu.

4. On the **Amp** page for the first layer, turn the **FX** dial fully left to send the signal to the reverb.

5. In the effect editor for the Reverb effect, adjust the **Mix** parameter to specify how much reverb you want to add.

6. On the **Amp** page for the second layer, turn the **FX** dial fully to the right to send the signal to the delay.

7. In the effect editor for the Delay effect, adjust the **Mix** parameter to specify how much delay you want to add.

RESULT

The first layer is processed with a reverb effect and the second layer with a delay.

Using Two Independent Busses with Individual Effects and Master Effects

Let's say you have decomposed a kick drum sample and want to use a distortion effect on the tonal component, add an equalizer to the noise component, and then want to compress the resulting combined signal.

PREREQUISITE

You have two layers, one containing the tonal and one the noise component of a kick drum.

PROCEDURE

1. On the **Bus Routing** menu, select **Serial 2**.

2. Click in the first slot of the FX 1 bus and select the Distortion effect from the **Distortion** submenu.

3. Click in the first slot of the FX 2 bus and select the Equalizer effect from the **EQ/Filter** submenu.

4. On the **Amp** page for the tonal kick layer, turn the **FX** dial entirely to the left to send the signal to the distortion effect.

5. Adjust the amount of distortion that you want to apply to the body of the kick signal.

6. On the **Amp** page for the noise kick layer, turn the **FX** dial entirely to the right to send the signal to the equalizer effect.

7. Use the equalizer to shape the noise layer to your liking.

8. Click in the second slot of the FX 2 bus and add a Compressor effect from the **Dynamics** submenu.

RESULT

You can now compress the mixed signal of both processed layers.
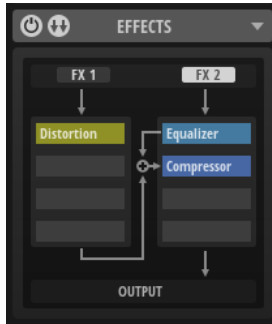
Effect Editors Section

To the right of the routing section, the four effect editors are displayed.

- Click the header of an effect editor to maximize/minimize the editor.

  This automatically resizes the other effect editors accordingly.

Each effect comes with presets that can serve as a starting point for your own effect settings. With the menu on the right of the editor, you can load presets, save your own presets, and delete unwanted user presets.

RELATED LINKS
Effects Reference on page 87

Loading Effects

You can load effects in the effect slots in the routing section or in the effect editors.

CHOICES

- To load an effect into an effect editor, move the mouse pointer over the editor until the **Select Effect** button appears, click it, and select an effect from the menu.
- To load an effect into an empty slot, click the slot and select the effect from the menu.
- To replace an effect in the effect editor, click **Open Menu**, select **Change FX**, and select another effect from the menu.
- To move an effect to another slot, drag it onto that slot.

  If the slot already contains an effect, the effect is replaced.

- To copy an effect to another slot, hold down **Alt/Opt** or **Ctrl/Cmd** and drag the effect onto another slot.

  You can also drag and drop effects between the two busses.

- To move an effect between two slots, drag it there until a line indicates the position where the effect will be inserted.

> NOTE
>
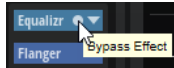> If all four slots are used, you cannot insert an effect between two slots.

Bypassing Effects

To compare the sound with and without an effect, you can bypass the effect.

PROCEDURE

● To bypass an effect, move the mouse pointer over the effect slot and click **Bypass Effect**.

Removing Effects

You can remove effects in the routing section or in the effect editors.

CHOICES

● In the routing section, move the mouse pointer over the effect slot, click **Select Effect**, and select **No FX** from the menu.

● In the header for an effect editor, click **Open Menu** and select **Change FX** > **No FX**.

Effects Reference

Backbone comes with a collection of high-quality studio effects.

The effects are sorted into the following categories: **EQ/Filter**, **Dynamics**, **Distortion**, **Modulation**, **Pan**, and **Time**.

EQ/Filter Effects

The **EQ/Filter** submenu contains the equalizer and filter effects.

Equalizer

This high-quality 4-band parametric equalizer allows you to shape the tone color, to create a brighter or darker sound, for example. All bands are fully parametric with adjustable **Gain**, **Frequency**, and **Quality** parameters. Furthermore, you can add a high-cut and a low-cut filter and edit their settings.
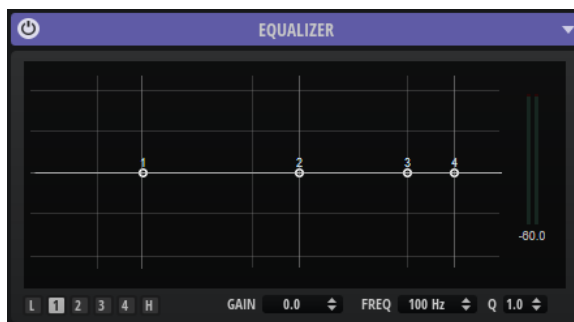
Click one of the numbered buttons to show the settings for the corresponding frequency band. The two mid-range bands act as peak filters, and the low and high bands act as shelving filters. Each frequency band offers the following controls:

On/Off

Activates/Deactivates the corresponding 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.

The buttons to the left and the right of the numbered buttons allow you to show the settings for the low-cut and the high-cut filter, respectively. For these filters, the following parameters are available:

Low-Cut On/Off

Activates/Deactivates the low-cut filter.

High-Cut On/Off

Activates/Deactivates the high-cut filter.

Slope

Sets the slope for the filter. You can choose from 6, 12, 24, 36, and 48 dB per octave.
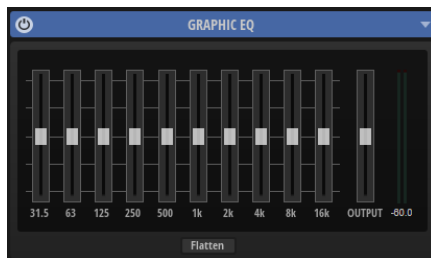
Freq

Sets the frequency for the filter.

Output meter

Allows you to monitor the output level. The peak level is shown below the meter.

To reset the peak level, click the value field.

Graphic EQ

This equalizer contains ten frequency bands that can be cut or boosted by up to 12 dB.

Bands 1-10

Control the cut or boost of the corresponding frequency band.

Output

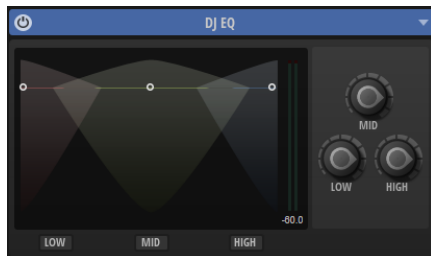Controls the overall output level of the equalizer.

The meter on the right allows you to monitor the output level. The peak level is shown below the meter. To reset the peak level, click the value field.

Flatten

Resets all frequency bands to 0 dB.

DJ EQ

DJ EQ is an easy-to-use 3-band equalizer that resembles the EQs found on typical DJ mixers. This is useful for quick sound fixes.

Low Freq/Mid Freq/High Freq

Set the amount of boost or attenuation for the low, mid, and high bands.

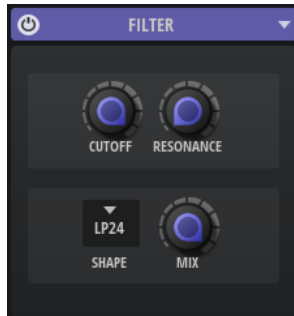You can also click and drag in the display to change these values.

Low Cut/Mid Cut/High Cut

Cut the low, mid, and high bands.

The meter on the right allows you to monitor the output level. The peak level is shown below the meter. To reset the peak level, click the value field.

Filter

Cutoff

Controls the cutoff frequency of the filter.

Resonance

Emphasizes the frequencies around the cutoff. At higher settings, the filter self-oscillates, which results in a ringing tone.

Filter Shape

- LP24, 18, 12, and 6 are low-pass filters with 24, 18, 12, and 6 dB/oct. Frequencies above the cutoff are attenuated.

- BP12 and BP24 are band-pass filters with 12 and 24 dB/oct. Frequencies below and above the cutoff are attenuated.

- HP6 + LP18 and HP6 + LP12 are a combination 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.

- HP12 + LP6 and HP18 + LP6 are a combination 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.

- HP24, 18, 12, and 6 are high-pass filters with 24, 18, 12, and 6 dB/oct. Frequencies below the cutoff are attenuated.

- BR12 and BR24 are band-reject filters with 12 and 24 dB/oct. Frequencies around the cutoff are attenuated.

- BR12 + LP6 and BR12 + LP12 are a combination 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.

- BP12 + BR12 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.

- HP6 + BR12 and HP12 + BR12 are a combination 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 + LP6 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.

- HP6 + 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.

Mix

Sets the ratio between the dry and the wet signal.

Dynamics Effects

The **Dynamics** submenu contains the compressor and limiter 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 input and output meters indicate the level before and after the compressor. The gain reduction meter in the middle indicates the current attenuation of the level. The peak level is shown below each meter. To reset the peak level, click the value field.

Threshold

Sets the threshold. Sounds that are louder than the threshold are reduced in gain. Sounds below the threshold remain unchanged.

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.

Make-Up

Raises the overall level of the 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 (**GR**) meter.

Attack

Determines how fast the effect reacts to sounds that exceed the threshold. The longer the **Attack** time, the longer it takes to reduce the gain. With longer **Attack** times, the onset of sounds exceeding the threshold passes through unprocessed.

Release

Determines how fast the Compressor effect reacts to sounds that fall below the threshold. The longer the **Release** time, the longer it takes to return to the original level.

Mix

Sets the ratio between the dry and the wet signal.

If **Mix** is set to 0%, only the wet effect signal is heard. If **Mix** is set to 100%, the output is composed in equal parts of the effect signal and the dry sound.

Limiter

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. The peak level is shown below each meter. To reset the peak level, click the value field.

Threshold

Determines the level where the limiter kicks in. Only signal levels above the set threshold are processed.

Make-Up

Raises the overall level of the sound. This can become necessary if too much gain reduction is introduced. You can see the amount of gain reduction in the gain reduction meter.

Attack

Determines how fast the effect reacts to sounds that exceed the threshold. The longer the **Attack** time, the longer it takes to reduce the gain. With longer **Attack** times, the onset of sounds exceeding the threshold passes through unprocessed.

Release

Sets the time after which the gain returns to the original level when the signal drops below the threshold.

Mix

Sets the ratio between the dry and the wet signal.

If **Mix** is set to 0%, only the wet effect signal is heard. If **Mix** is set to 100%, the output is composed in equal parts of the effect signal and the dry sound.

Distortion Effects

The **Distortion** submenu contains the distortion effects.

Distortion

Adds bright, harmonic distortion to the sound.

High-Pass Cutoff

High-pass filter with 6 dB/oct. Frequencies below the cutoff are attenuated.

Low-Pass Cutoff

Low-pass filter with 6 dB/oct. Frequencies above the cutoff are attenuated.

Hard Clip

Adds distortion to the signal.

Hard Clip Offset

Allows you to produce odd harmonics and even harmonics. The higher the setting, the more even harmonics are produced.

Input Gain

Adjusts the input level of the distortion.

Output Gain

Adjusts the output level of the distortion.

Mix

Sets the ratio between the dry and the wet signal.

Bit Crusher

Bit Red

>Bit reduction distorts the sound by means of quantization noise. Use this control to adjust the amount of quantization noise. The lower the setting, the more quantization noise is added.

Rate Red

>Rate reduction distorts the sound by means of aliasing. Use this control to adjust the amount of aliasing. The lower the setting, the more aliasing is added.

In Gain

>Adjusts the input level of the sound.

Out Gain

>Adjusts the output level of the sound.

Mix

>Sets the ratio between the dry and the wet signal.

Modulation Effects

The **Modulation** submenu contains the modulation effects, such as **Chorus**, **Flanger**, etc.

Chorus

This effect thickens and broadens the sound by means of pitch modulation.

Sync

>Allows you to set the **Rate** value in fractions of beats.

Rate

>Allows you to specify the frequency of the pitch modulation in Hertz.

Depth

>Sets the intensity of the pitch modulation.

Phase

>Widens the sound image of the effect from mono to stereo.

Mix

>Sets the ratio between the dry and the wet signal.

Flanger

This effect thickens and broadens the sound by means of pitch modulation.

Sync

Allows you to set the **Rate** value in fractions of beats.

Rate

Allows you to specify the frequency of the pitch modulation in Hertz.

Depth

Sets the intensity of the pitch modulation.

Mix

Sets the ratio between the dry and the wet signal.

Phase

Widens the sound image of the effect from mono to stereo.

Feedback

Adds resonances to the effect. This allows for jet-like sweeps of the sound.

Phaser

This effect thickens and broadens the sound by means of phase modulation.

Sync

Allows you to set the **Rate** value in fractions of beats.

Rate

Specifies the frequency of the phase modulation.

Depth

Sets the intensity of the phase modulation.

Feedback

Adds resonances to the effect. Higher settings produce a more pronounced effect.

Phase

Widens the sound image of the effect from mono to stereo.

Shift

Shifts the phase modulation upwards to higher frequencies of the spectrum.

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.

LFO Waveform and Shape

Waveform selects the basic type of waveform. **Shape** changes the characteristics of the waveform.

- **Sine** produces smooth modulation. **Shape** adds additional harmonics to the waveform.

- **Triangle** is similar to **Sine**. **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. If **Shape** is set to 50%, a square wave is produced.

- **Ramp** is similar to the **Saw** waveform. **Shape** adds a gradually increasing amount of silence before the sawtooth ramp up begins.

- **Log** produces a logarithmic modulation. **Shape** continuously changes the logarithmic curvature from negative to positive.

- **S & H 1** produces random stepped modulation, where each step is different. **Shape** puts ramps between the steps and changes the **S & H** into a smooth random signal, with the control set fully to the 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 changes the **S & H** into a smooth random signal, with the control set fully to the right.

Sine Freq

Determines the frequency of the sine oscillator.

LFO Freq

>Allows you to specify the frequency of the LFO for modulating the frequency of the sine oscillator.

LFO Depth

>Sets the intensity of the LFO modulation of the sine oscillator frequency.

Mix

>Sets the ratio between the dry and the wet signal.

Sync

>Allows you to set the **LFO Freq** value in fractions of beats.

Frequency Shifter

>A frequency shifter shifts each frequency of the input signal by a fixed amount.

Freq Coarse

>Sets the amount of frequency shift.

Freq Fine

>Allows you to fine-tune the amount of frequency shift.

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 the speed of this effect with the **Freq Fine** parameter.

L/R Coarse

>Sets an offset for the left and right channels.

>- Positive values shift the right channel upwards and the left channel downwards.
>- Negative values shift the left channel upwards and the right channel downwards.

L/R Fine

>Allows you to fine-tune the offset between the left and right channels.

>- Positive values shift the right channel upwards and the left channel downwards.
>- Negative values shift the left channel upwards and the right channel downwards.

Mix

>Sets the ratio between the dry and the wet signal.

Pan Effects

The **Pan** submenu contains the panorama effect **Stereo Pan**.

Stereo Pan

This effect allows you to set the stereo position and width of the signal.

Input Swap

Swaps the stereo channels.

Pan

Sets the pan position of the signal. The panning is available for mono and stereo input signals.

Stereo Width

Adjusts the stereo width of the signal from stereo to mono.

Time Effects

The **Time** submenu contains the delay and reverb effects.

Delay

This effect produces delays, with adjustable time, feedback, and filters.

Sync

Allows you 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 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.

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 the output of the delay is fed back to its input. Set to 0%, you hear only one echo. With a setting of 100%, the echoes are continuously repeated.

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.

Delay Mode

- **Stereo** has two delays in parallel, 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 from left to right, like a ping-pong ball, in the stereo panorama.

Low Freq

Attenuates the low frequencies of the delays.

High Freq

Attenuates the high frequencies of the delays.

Mix

Sets the ratio between the dry and the wet signal.

Reverb

This effect produces a high-quality algorithmic reverb. It 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.

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.

Main Time

Controls the overall reverb time of the tail. The higher this value, the longer the reverb tail will decay. With a setting of 100%, the reverb time is infinitely long. The **Main Time** parameter also represents the mid band of the reverb tail.

Low Time

Controls the reverb time for the low frequencies of the reverb tail. Positive values result in a longer decay for the low frequencies. Negative values result in a shorter decay.

Frequencies are affected depending on the **Low Freq** parameter.

Show Frequency Options
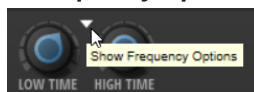
Displays the **Low Freq** and **High Freq** parameters.

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.

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.

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.

Room Size

Controls the dimensions of the simulated room. With a setting of 100%, the dimensions correspond to a cathedral or a large concert hall. With a setting of 50%, the dimensions correspond to a medium-sized room or studio. Settings below 50% simulate the dimensions of a small room or a booth.

Shape

Controls the attack of the reverb tail. With a setting of 0%, the attack is more immediate, which is a suitable setting for drums. The higher this value, the less immediate the attack.

Density

Adjusts the echo density of the reverb tail. With a setting of 100%, single reflections from walls cannot be heard. The lower this value, the more audible the single reflections.

Width

Adjusts the output of the reverb signal between mono and stereo. With a setting of 0%, the output of the reverb is mono. At 100%, it is stereo.

High Cut

Attenuates the high frequencies of the reverb tail. The lower this value, the fewer the high frequencies in the reverb tail.

Mix

Sets the ratio between the dry and the wet signal.

Automation

You can automate most of the Backbone parameters from within your host application, whether these are parameters of a layer or global effect parameters.

Backbone provides 512 automation parameters that can be addressed from within the host application.

Automation Editor

In the **Automation** editor, all assigned automation parameters are shown.
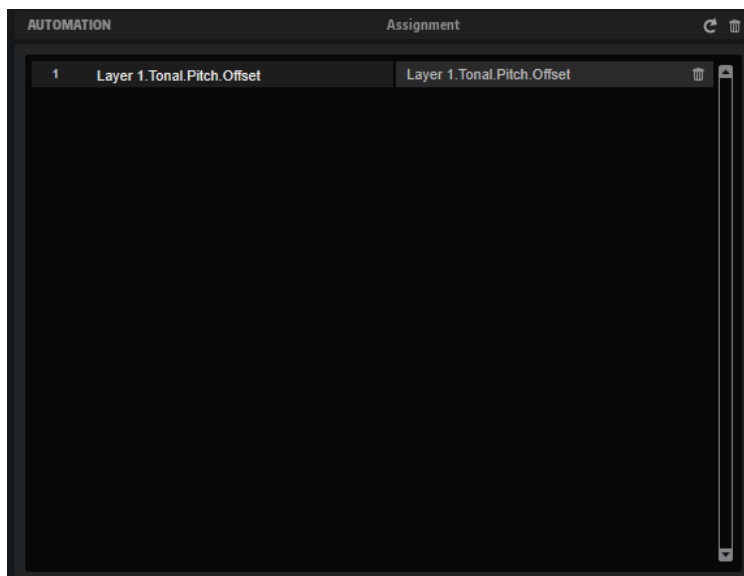
On the left, the name of the automation parameter is shown, and on the right, the name of the assigned Backbone parameter. If several parameters are assigned to the same automation parameter, they are listed below each other.

Setting Up Automation

You can assign Backbone parameters to automation parameters, and even assign multiple parameters to the same automation parameter, to control these parameters at the same time.

CHOICES

- 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 Backbone interface.

- 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 original parameter names of the program, click **Refresh All Parameter Names** on the toolbar.

MIDI Controllers

Backbone allows you to assign almost any parameter to a MIDI controller.

You can only assign one parameter at a time. Therefore, if you want to use the same MIDI controller for several layers, for example, you must assign it several times. You can set the range for each assignment separately.

MIDI Controller Editor

In the **MIDI Controller** editor, all assigned MIDI controllers are shown.

Toolbar
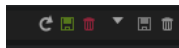
Reset MIDI Controller Assignment to Factory Default
　　Restores the factory MIDI controller assignments.

Save MIDI Controller Assignment as Default
　　Saves the current MIDI controller assignments as default.

Delete All Controller Assignments
　　Removes all MIDI controller assignments.

Select Preset
　　Allows you to select a preset.

Save Preset
　　Saves the current MIDI controller assignments as preset.

Delete Preset
　　Opens a panel where you can delete presets.

MIDI Controller Assignments List

On the left, the name of the MIDI controller is shown, and on the right, the name of the assigned Backbone parameter. If several parameters are assigned to the same MIDI controller, they are listed below each other.
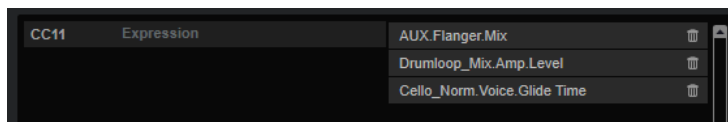
MIDI Controller Number
　　The MIDI controller number on the left allows you to change the MIDI controller for an assignment. Click the MIDI controller number to open a pop-up menu and select another controller.

Delete Assignment
　　Removes the corresponding MIDI controller assignment.

Assigning MIDI Controllers

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 to different parameters several times. However, you cannot assign different MIDI controllers to the same parameter.

Unassigning MIDI Controllers

PROCEDURE

● To remove a MIDI controller assignment, right-click the control, and select **Forget CC**.

Setting the Parameter Range

You can set the minimum and maximum values of 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**.

Index

O

P

R

S

T

Z