

Operation Manual



RETROLOGUE₂

VST Virtual Analog Synthesizer

Steinberg Documentation Team: Cristina Bachmann, Martina Becker, Katharina Blavustyak, Lillie Harris, Christina Kaboth, Dennis Martinez, Insa Mingers, Matthias Obrecht, Sabine Pfeifer

Translation: Ability InterBusiness Solutions (AIBS), Moon Chen, Jérémie Dal Santo, Rosa Freitag, GiEmme Solutions, Josep Llodra Grimalt, Vadim Kupriianov, Roland Münchow, Boris Rogowski, Sergey Tamarovsky

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Retrologue

Retrologue provides you with a highly flexible virtual analog synthesizer. It features all essential classical synthesis features that you need to create your own synthesizer sounds.



Retrologue comes with three multi-mode oscillators, a dedicated sub oscillator, and a noise generator. Oscillators 1-3 feature several modes that allow anything from basic synthesis waveforms to sync and cross modulation to multi waveforms. One oscillator can be a combination of up to eight detunable oscillator signals, which allows for very rich sounds. In addition, you can add the ring modulated signal from the main oscillators.

The **Filter** section provides 24 different filter types, including low-pass, high-pass, band-pass, and band-reject filters. The integrated filter distortion can produce a variety of distortion effects.

You can send signals from your sequencer tracks to Retrologue using the **Side-Chain** function in the **Instruments Rack**. This allows you to use the tracks as source for the oscillator mix and apply the same processing and effects to them.

The envelopes and the LFOs can be used to modulate a large number of modulation destinations, which are accessible in the modulation matrix. The matrix features 16 freely assignable modulations. For example, this allows you to create Note Expression modulation assignments that can be addressed from within the Steinberg DAW. To give the sounds the final polish, Retrologue provides an effect section that features 6 insert effects in series. With the integrated arpeggiator and step sequencer, you can create anything from sequencer lines to stepped chords.

The user interface of Retrologue is divided into 3 pages that give access to different areas of the plug-in.

- To switch between the pages, click the corresponding buttons in the plug-in function section at the top of the window.



On the **Synth** page, you can find the parameters for the oscillators, the filter and amp envelopes, the LFOs, and the modulation matrix.

The **Arp** page contains the arpeggiator.

The **FX** page allows you to edit the built-in effects and to set up the order in which the effects are processed.

Common Editing Methods

Some editing methods are the same throughout all pages and sections of Retrologue.

Knobs and Sliders

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

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

- Move the mouse over a knob or its parameter name to show the current parameter value. You can adjust the value with the mouse wheel or enter a new value manually.
- To adjust a value, click a knob or a slider and drag up and down, or use the mouse wheel. If you press **Alt/Opt** when clicking a knob, a small slider appears, allowing you to set the parameter.
- To make fine adjustments, press **Shift**, and move the knob or use the mouse wheel.
- To restore the default value for a parameter, press **Ctrl/Cmd**, and click on the control.

Buttons

Retrologue contains two different types of buttons: **On/Off** buttons and push buttons.

On/Off Buttons

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

Push Buttons

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

Value Fields

You can enter or edit values in the available value fields using your keyboard or mouse. To enter key ranges or the root key, for example, you can use an external MIDI keyboard.

To set a value, you have the following possibilities:

- Double-click in a value field, enter a new value, and press **Return**.
If the entered value exceeds the parameter range, it is automatically set to the maximum or the minimum value, respectively.
- Click in the value field, and drag up or down.
- Position the mouse over a value field, and use the mouse wheel.
- Click the up/down triangles next to the field.
- To set the parameter to its default value, **Ctrl/Cmd**-click the value field.
- To use a fader to adjust the value, **Alt/Opt**-click a value field.
- To enter musical values, such as key ranges or the root key, with your MIDI keyboard, double-click the value field, press a key on your MIDI keyboard, and press **Return**.
- To navigate to the next parameter, press **Tab**. To jump backwards to the previous parameter, press **Shift-Tab**.
If no parameter is selected inside the focused view, pressing **Tab** always jumps to the first parameter.

Presets

Throughout Retrologue, you can find controls for section and module presets. These presets store and recall the setup of specific components, such as the effects on the **FX** page, for example.

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

NOTE

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

- To load a preset, click the arrow icon and select a preset from the list.
- To step through the available presets, click **Previous Preset** /**Next Preset** , if available.
- To delete a preset, click **Delete** .

NOTE

Factory presets cannot be deleted.

Plug-in Functions Section

The plug-in functions section allows you to switch between the different pages and layers, apply global settings and functions, and obtain further information about a plug-in.



Plug-in Logo

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

Program Loader

- To load a program, click the program loader, navigate to the program in the **Load Program** dialog, and double-click the program.
- To load the previous or next program, use the left and right arrow buttons.
- To save the current program, click **Save**.

Page Buttons

Allow you to switch between the **Synth**, **Arp**, and **FX** pages.

Options

Click the **Options**  button to open the **Options** pop-up menu.

- **Show Tooltips**
Activates and deactivates the tooltips.
- **Show Value Tooltips**
Activates additional value tooltips for controls that do not have a value field. The value tooltips are shown when you use the control.
- If **Polyphonic Key Mode** is activated, multiple note-on messages for the same note can be active at the same time. This allows you to trigger the same note several times, with different parameter values, and end each note event separately.
- If **High DPI Mode** is activated, the plug-in uses high-resolution bitmaps when it is displayed with a scaling of 150% or 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 Retrologue, the scaling factor is set to 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.
- **Reset MIDI Controller to Factory Default**
Restores the factory MIDI controller assignments.
- **Save MIDI Controller as Default**
Saves the current MIDI controller assignments as default. If you add a new instance of the plug-in, the new default settings are used.

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.

Loading Programs

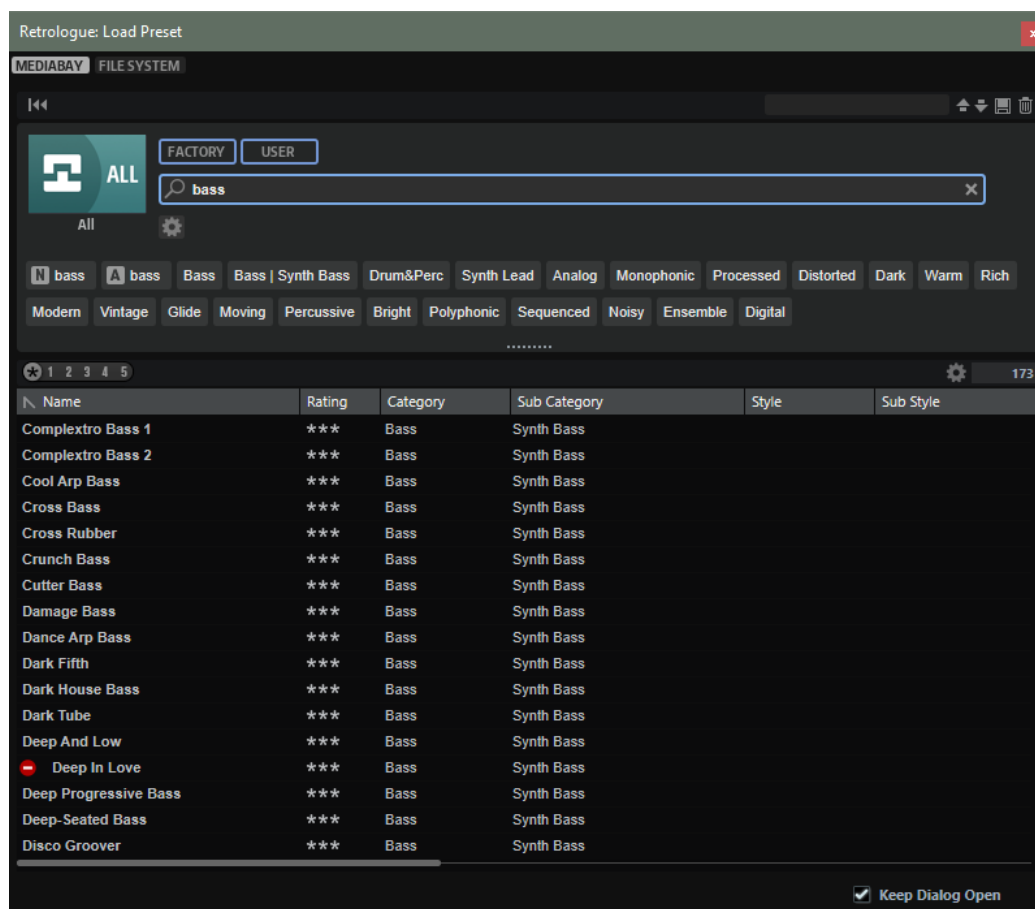
You can load programs via the **Load Program** dialog.

The **MediaBay** and the **File System** buttons at the top allow you to choose whether to use Steinberg's **MediaBay** to look for files or to search for files by browsing through the folders in your system.

Load Dialog–MediaBay Page

On the **MediaBay** page, you can search for and load files. To help you find your files more quickly, you can define a library filter and an attribute filter, the results list, and much more.

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



Reset Filter

Resets all filter settings.

Presets

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.

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.

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:

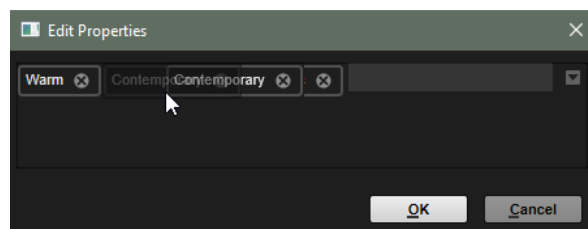
- **Category** opens a tree view that allows you to select a **Category** or a **Subcategory**. **Subcategory** tags are shown together with the corresponding **Category**, in the following way: (Category | Subcategory).
- **Style** opens a tree view which allows to select a **Style** or a **Substyle**.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

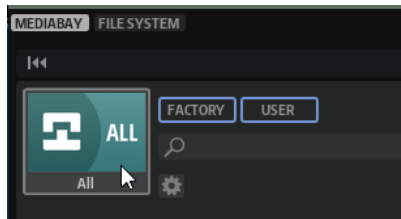
Allows you to select which attribute columns to display in the results list.

Browsing for Files

The **MediaBay** allows you to browse for and load files.

PROCEDURE

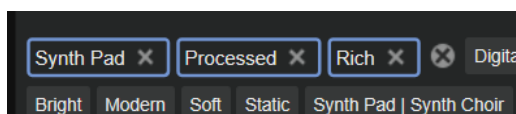
1. Use the **Factory** and **User** buttons at the top of the window to specify whether you want to browse through the factory content or the content that you created yourself.
You can activate both buttons to browse through the entire content.
2. Click the library name to open the library selector, and specify where you want to search for files: To select a particular library, click it. To browse through the entire content, select **All Libraries**.



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.

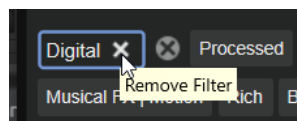
3. Above the results list, a list of suggested filter tags is displayed, based on the most frequently used tags. To use a suggested tag as a filter tag, click it. You can activate several filter tags simultaneously. The list of suggested filter tags is updated with every active filter tag.



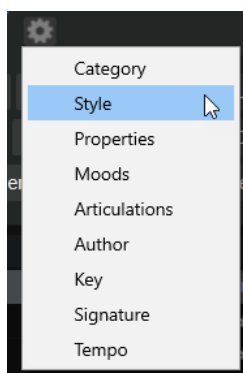
NOTE

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

- To remove a filter tag, click its **Remove Filter** button.

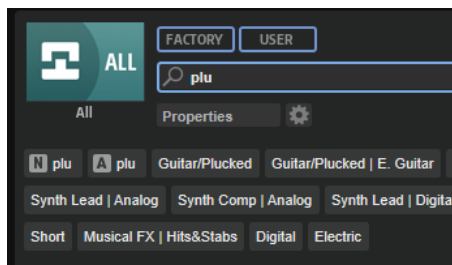


- To remove all tags, click **Remove All Filters** between the filter tags and the suggestions.
4. Optional: Configure the **MediaBay** to provide multiple attribute menus to search for specific types of presets. To add or remove a menu, click the **Configure Attribute Menus** button, and select/deselect the corresponding attribute.



5. To search for files that contain a specific text, either in their name or in any of the attributes, enter this text in the text 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.

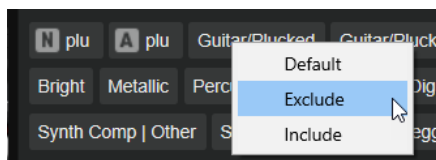


The **Name** **N** and **All Attributes** **A** tags are the first suggestions. To show which attribute another suggested filter tag belongs to, hover the mouse pointer over it to view its tooltip.

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.

- 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.

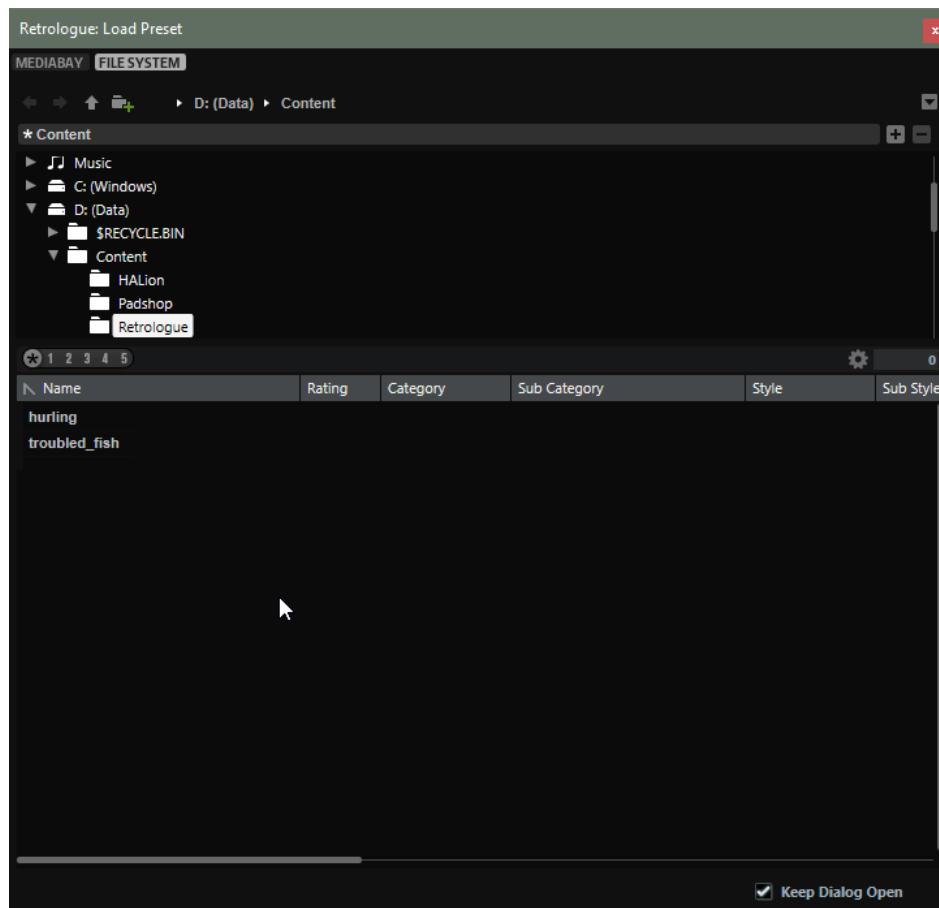


- Default** is the standard behavior. This is indicated by a blue frame.
 - Include** can list presets, even if the filter tags prevent this. For example, if you specify Category = Piano, Property = Warm and Name = Warm Piano (Mode = Include), the results list shows presets whose **Category** and **Property** 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.
- In the results list, double-click a file to load it.

Load Dialog-File System Page

On the **File System** page, you can browse for files in your system.

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

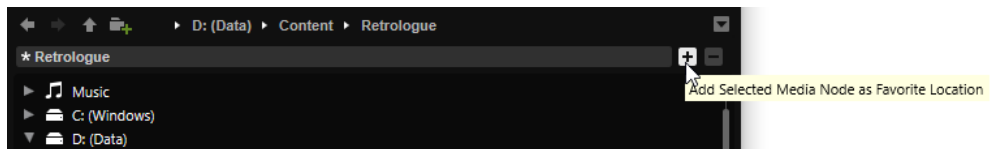


Navigation controls



- 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.

Locations



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

- 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**.

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.

Keyboard



Wheel Controls

To the left of the internal keyboard, the pitchbend wheel and the modulation wheel are located.

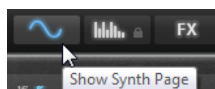
Previewing Notes Using the Keyboard

- To preview a note, click the corresponding key on the keyboard.
The vertical position where you click a key defines the velocity that is used to trigger the note. Click the lower part of a key to use the highest velocity, and the upper part to use the lowest velocity.
- To play a key and all following keys at the same velocity, for as long as you keep the mouse button pressed, hold down **Ctrl/Cmd**, and click the key on the keyboard.
- To play each note 10 times at increasing velocities between 1 and 127, hold down **Ctrl/Cmd - Alt/Opt**, and click a key.

Synth Page

On the **Synth** page, you can find the parameters for the oscillators, the filter and amp envelopes, the LFOs, and the modulation matrix.

- To show the **Synth** page, activate the **Show Synth Page** button.



Voice Section



Mono

Activates monophonic playback.

Retrigger

If this option is activated, a note that was stolen is retriggered if you still hold the stolen note when releasing the newer note. This lets you play trills by holding one note and quickly and repeatedly pressing and releasing another note, for example.

Poly

If **Mono** is deactivated, you can use this parameter to specify how many notes can be played simultaneously.

Glide

Allows you to bend the pitch between adjacent notes. You achieve the best results in **Mono** mode.

- Activate **Fingered** to glide the pitch only between notes that are played legato.
- Use the **Glide Time** parameter to specify the time that it takes to bend the pitch between 2 notes.

Voice Mode

Determines which notes are stolen during playback and whether new notes are triggered when the **Poly** setting is exceeded.

- If **Last** is selected, new notes have playback priority over the notes that were played first.
If you exceed the maximum number of notes, the notes that were played first are stolen in chronological order (first in/first out) and the new notes are triggered.
- If **First** is selected, older notes have playback priority over newer notes.
If you exceed the maximum number of notes while older notes are still being held, no notes are stolen. New notes are only triggered if a free voice is available.
- If **Low** is selected, low notes have playback priority over higher notes.
If you exceed the maximum number of notes by playing a note that is lower than the ones being held, the highest note is stolen and the new note is triggered.
If you exceed the maximum number of notes by playing a note that is higher than the ones being held, no note is stolen and no new note is triggered.
- If **High** is selected, high notes have playback priority over lower notes.
If you exceed the maximum number of notes by playing a note that is higher than the ones being held, the lowest note is stolen and the new note is triggered.
If you exceed the maximum number of notes by playing a note that is lower than the ones being held, no note is stolen and no new note is triggered.

Trigger Mode

Defines the trigger behavior for new notes.

- **Normal** triggers a new note when the previous note is stolen.
- If **Resume** is selected, the envelope is retriggered, but resumes at the level of the stolen note. The pitch is set to the new note.
- If **Legato** is selected, the envelopes keep playing. The pitch is set to the new note.

Main Section



Octave

Adjusts the pitch in octave steps.

Key Follow

Allows you to adjust the pitch modulation by MIDI note number.

- Positive values raise the pitch the higher the note that you play.
- Negative values lower the pitch the higher the note that you play.
- At a setting of 100 %, the pitch follows the played note exactly.

Random Pitch

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

Pitchbend Down/Up

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

Tune

Adjusts the main tuning of the plug-in.

Volume

Adjusts the main volume of the plug-in.

Oscillator Section

The oscillator section offers six sound sources: three main oscillators, the sub oscillator, the ring modulation, and the noise generator. To create interesting electronic spectra, you can mix any of these sound sources.



For the three main oscillators, the following settings are available:

On/Off

Activates/Deactivates the oscillator.

Wave

Allows you to choose between the waveforms sine, triangle, saw, and square.

Type

- **Single** produces a single waveform.
If the square waveform is selected, the **Shape** parameter controls the pulse width, that is, the ratio between the high and low value of the square wave. A setting of 50 % produces a pure square wave. With settings below or above 50 %, the oscillator produces rectangular waves.

- **Sync** provides different hard-sync oscillators, where each is a combination of a master and a slave oscillator. The waveform of the slave oscillator (sine, triangle, saw, or square) is reset with each full wave cycle of the master oscillator.
The **Shape** parameter adjusts the pitch of the slave oscillator, producing the typical sync sound.
- **Cross** provides a combination of two oscillators where a master oscillator is modulating the pitch of a slave oscillator (sine, triangle, saw, or square) at audio rate.
The **Shape** parameter adjusts the pitch ratio between slave and master oscillator, resulting in a sound close to frequency modulation.
- **XOR** (exclusive OR) compares two square waveforms with an **XOR** operation. Depending on the outcome of the **XOR** operation, the waveform of a third oscillator (sine, triangle, saw, or square) is reset.
The **Shape** parameter adjusts the pitch ratio of the square oscillators resulting in a sound close to ring modulation of the third oscillator.
- **Multi** is a multi oscillator that can play up to eight oscillators simultaneously. You can specify the number of oscillators in the **No.** value field. This parameter can be set continuously. Values in between 2 integer values mean that an additional oscillator is mixed in at a reduced level.
If the square waveform is selected, the **Shape** parameter controls the pulse width, that is, the ratio between the high and low value of the square wave. A setting of 50 % produces a pure square wave. With settings below or above 50 %, the oscillator produces rectangular waves.

Phase

Determines the initial phase of the oscillator when you play a note.

- If this is set to **Free Phase**, the oscillator runs freely and continuously.
- If this is set to **Random Phase**, the oscillator starts with a random phase.
- If this is set to **Fixed Phase**, you can specify a fixed start phase (0-360°) for the oscillator.

No.

If the oscillator type is set to **Multi**, this parameter determines the number of oscillators that play back simultaneously.

You can also set fractions of numbers. For example, with a setting of 2.5, you hear two oscillators at full level and a third oscillator at half level.

Detune

If the oscillator type is set to **Multi**, this parameter specifies by how many cents the additional oscillators are detuned.

For example, if you use 5 oscillators and set **Detune** to 4, you get one oscillator at the original pitch, and 4 detuned oscillators at -8, -4, +4, and +8.

Octave

Adjusts the pitch in octave steps.

Coarse

Adjusts the pitch in semitone steps.

Fine

Fine-tunes the pitch in cent steps.

Sub Oscillator

On/Off

Activates/Deactivates the sub oscillator.

Wave

Allows you to choose between three waveforms for the sub oscillator: triangle, saw, or square. The pitch of the sub oscillator is always one octave below the overall pitch. If you modulate the overall pitch, the sub oscillator follows.

Fix

If this option is activated, the sub oscillator starts with a phase of 0 each time that a note is played.

If this option is deactivated, the oscillator runs freely.

Noise Generator

On/Off

Activates/Deactivates the noise generator.

The **Noise** parameter is used for non-pitched sounds. In addition to standard white and pink noise, there are also band-pass filtered versions (BPF) of white and pink noise.

Ring Modulator

On/Off

Activates/Deactivates the ring modulator.

Ring Modulation Source 1/2

Ring modulation is produced by multiplying the signals of two oscillators. On these pop-up menus, you can select the sources for the ring modulation.

NOTE

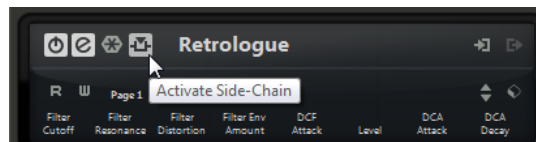
For the ring modulation to have an effect, the corresponding oscillators must be active.

Oscillator Mix

In the **Oscillator Mix** section, you can adjust the levels of the different oscillators, the noise generator, and the ring modulation.

Using Audio Input from your Steinberg DAW

If **Side-Chain** is activated in the Steinberg DAW, you can send the signals from your tracks to Retrologue.

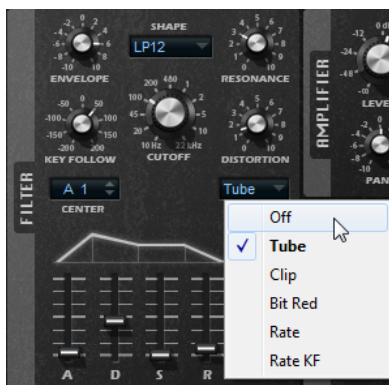


If signals are sent to Retrologue via side-chain, the **Input** control becomes available in the **Oscillator Mix** section, allowing you to adjust the level of the signals that are coming in from the tracks in the DAW.



Filter Section

The **Filter** section allows you to adjust the tone color of the sound.



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.

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.

Distortion

Adds distortion to the signal. The following distortion types are available:

- **Tube** adds warm, tube-like distortion.
- **Clip** adds bright, transistor-like distortion.
- **Bit Red** (Bit Reduction) adds digital distortion by means of quantization noise.
- **Rate** adds digital distortion by means of aliasing.
- **Rate KF** adds digital distortion by means of aliasing, and it also includes **Key Follow**. The rate reduction follows the keyboard, that is, the higher the note that you play, the higher the sample rate.
- If this is set to **Off**, no filter distortion is applied.

Envelope

Adjusts the cutoff modulation of the filter envelope. Negative values invert the modulation direction.

Key Follow

Adjusts the cutoff modulation using the note number.

- If this is set to positive values, you raise the cutoff with notes above the center key.
- If this is set to negative values, you lower the cutoff with notes above the center key.
- If this is set to 100 %, the cutoff follows the played pitch exactly.

The **Center** parameter determines the MIDI note that is used as the central position for the **Key Follow** function.

Envelope and Velocity Controls

The **A**, **D**, **S**, and **R** faders below the envelope display specify the attack, decay, sustain, and release times of the filter envelope.

The **Velocity** fader determines how much the envelope intensity depends on velocity. If the fader is set to 0, the envelope is fully applied. Higher values reduce the intensity for lower velocities.

Amplifier Section



Level

Adjusts the level of the sound.

Normally, the internal 12 dB headroom allows for polyphonic playing, without any need for level adjustments. However, if you use higher filter distortion levels, it may become necessary to reduce the level.

Pan

Sets the position of the sound in the stereo panorama.

Envelope and Velocity Controls

The **A**, **D**, **S**, and **R** faders below the envelope display specify the attack, decay, sustain, and release times of the amplifier envelope.

The **Velocity** fader determines how much the output level depends on velocity. If the fader is set to 0, the sound is always played with its full amplitude. Higher values reduce the level for lower velocities.

Modulators Section

LFO Tabs

The tabs **LFO1** and **LFO2** feature 2 monophonic LFOs, and the tabs **LFO3** and **LFO4** feature 2 polyphonic LFOs.

In this context, monophonic means that the LFOs are calculated once and feed multiple voices at the same time, whereas the polyphonic LFOs are calculated per voice.



LFO Waveform and Shape

The **Wave** control determines the basic type of waveform. The characteristics of the selected waveform are modified with the **Shape** control.

- **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.

- **S & H 1** produces randomly stepped modulation, where each step is different. **Shape** puts ramps between the steps and changes the **S & H** into a smooth random signal when fully turned right.
- **S & H 2** is similar to **S & H 1**. The steps alternate between random high and low values. **Shape** puts ramps between the steps and changes the **S & H** into a smooth random signal when fully turned right.

Phase

Sets the initial phase of the waveform when the LFO is retriggered.

Rnd (Random Phase)

If this button is activated, each note starts with a randomized start phase.

NOTE

The **Phase** control cannot be used if **Rnd** is activated.

Freq

Controls the frequency of the modulation, that is, the speed of the LFO.

Fade In

Sets the fade in time for the polyphonic LFOs.

Retrigger

Defines whether the LFO is restarted with the specified start phase when a new note is triggered. This parameter is available for the sync modes **Off** and **Tempo**.

For monophonic LFOs, the parameters work as follows:

- **Off** – The LFO is not restarted.
- **First** – The LFO is restarted when a note is triggered and no other note is held.
- **Each** – The LFO is restarted each time that a note is triggered.

For polyphonic LFOs, the parameters work as follows:

- **Off** – The LFO is not restarted.
- **On** – The LFO is restarted each time that a note is triggered. This way, the polyphonic LFOs can modulate each voice separately.

Sync Mode

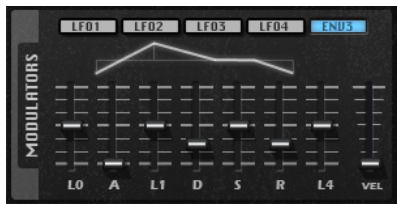
Specifies how the LFO speed is set.

- **Off** – The speed of the LFO is set in Hz.
- **Tempo** – The speed of the LFO is set in note values. The resulting rate depends on the tempo specified in the host sequencer.
- **Beat** – The speed of the LFO is set in note values. The resulting rate depends on the tempo specified in the host sequencer. In addition, the current start phase is calculated based on the current position.

Select this option to synchronize the LFO restart to the transport of the host application and align it to the beats of the project.

Env3 Tab

The **Env3** tab provides an additional third envelope that can be routed freely in the modulation matrix. This envelope is bipolar. Therefore, it is particularly suited to modulate destinations like pan or pitch, for example.



The faders below the envelope display set the following parameters:

- **L0** sets the start level.
- **A** sets the attack time.
- **L1** sets the attack level.
- **D** sets the decay time.
- **S** sets the sustain level.
- **R** sets the release time.
- **L4** sets the end level.
- **Vel** determines how much the envelope intensity depends on the velocity.

If this fader is set to 0, the envelope is fully applied. Higher values reduce the intensity for lower velocities.

Modulation Matrix

The concept of controlling one parameter by another one is called modulation. Retrologue offers many fixed assigned modulations, such as the amplitude and filter envelopes, or pitch key follow. In the modulation matrix, you can assign additional modulations.

Assigning modulations means interconnecting modulation sources, like LFOs and envelopes, with modulation destinations, like pitch, cutoff, amplitude, etc.



The modulation matrix offers you up to 16 freely assignable modulations, each with a source, an offset parameter, a modifier, and a destination with adjustable depth. All modulation sources and destinations can be assigned several times.

Click the buttons labeled **1** to **4** to switch between the available modulation slots.

Creating Modulations

You create modulations by selecting a source, a modifier, and a destination from the pop-up menus in the modulation matrix.

PROCEDURE

1. Click the modulation **Source** field and select the modulation source.
2. Optional: Specify an offset for the output of the modulation source with the **Offset** slider.
3. Optional: Click in the modulation **Modifier** field and select the parameter that you want to use to modify the modulation.
This modifier is used to scale the output of the modulation source.
4. Set the modulation intensity with the **Depth** parameter.

- Click in the modulation **Destination** field and select the parameter that you want to modulate.
-

Combining Modulation Source and Destination Using Drag and Drop

The most important modulation sources can be assigned to the most common modulation destinations using drag and drop.

If a parameter can be used as modulation source, this is indicated by a drag icon .



You can drag the filter envelope, the amplifier envelope, the LFOs, the assignable envelope Env 3, and the wheel controls of the keyboard.

- To create a modulation assignment, drag the drag icon over the parameter that you want to modulate.

If a parameter can be used as modulation destination, this is indicated by a green overlay that is displayed when you drag the modulation source on this parameter.



If you drop the modulation source, the modulation is created and the modulation matrix is updated accordingly.

NOTE

If all 16 modulation rows in the matrix are used, no further assignments can be made. In this case, you cannot assign modulations using drag and drop.

Modulation Matrix Parameters

Modulation Sources

You set up the modulation source on the Modulation Source pop-up menu.

The following sources are available:

LFO 1/2

The LFOs 1 and 2 produce cyclic modulation signals.

These LFOs are monophonic, that is, a single signal is used for all notes.

LFO 3/4

The LFOs 3 and 4 produce cyclic modulation signals.

These LFOs are polyphonic, that is, a new LFO signal is created with each new note.

Amp Envelope

The amplifier envelope. This modulation source is unipolar. The shape of the envelope determines the modulation signal.

Filter Envelope

The filter envelope. The shape of the envelope determines the modulation signal.

Env 3

A freely assignable envelope. This modulation source is bipolar. It is suited for pan or pitch modulation, for example.

Key Follow

This produces modulation in relation to the MIDI note number. For the lowest MIDI note (C-2), the value is -1, and for the highest MIDI note (G8), the value is +1.

Velocity

Note-on velocity can be used as the modulation signal. This modulation source is unipolar.

Pitchbend

The position of the pitchbend wheel can be used as the modulation signal. This modulation source is bipolar.

Modulation Wheel

The position of the modulation wheel can be used as the modulation signal. This modulation source is unipolar.

Arpeggiator

This submenu allows you to use the controller lanes of the arpeggiator as modulation sources.

Aftertouch

Aftertouch can be used as the modulation signal. This modulation source is unipolar. Some MIDI keyboards cannot send aftertouch messages. However, most sequencer software is able to produce such messages.

Quick Control

The quick controls can be used as the modulation signal. You can select quick control from the corresponding submenu.

Note Expression

This submenu lists the eight Note Expression parameters that can be used as the modulation signals.

Noise

Produces a random modulation signal. This modulation source is bipolar.

Bus 1–16

Modulations that are sent to one of the 16 busses can be reused as sources. This way, you can combine several modulations to produce more complex signals.

Offset

Allows you to specify an additional offset on the output of the modulation source.

Modulation Modifiers (Source 2)

All modulation sources can also be used as modifiers. A modifier is used to scale the output of the modulation source. A typical example is an LFO as a source and the modulation wheel as the modifier. This allows you to control the intensity of the LFO modulation using the wheel. You can find the modulation modifiers on the **Source 2** pop-up menu.

Modulation Depth

Adjusts the intensity of the modulation.

Modulation Destinations

Pitch

Modulates the pitch. For example, assign one of the LFOs to create a vibrato effect. If **Pitch** is selected, the modulation depth is set in semitones (-60 to +60).

Cutoff

Modulates the filter cutoff.

For example, to create rhythmic patterns in the spectral timbre, assign the **Step Modulator**.

Resonance

Modulates the filter resonance. Resonance changes the character of the filter.

For example, to increasingly accent the filter the harder you hit a key, assign **Velocity** to **Resonance**.

Distortion

Modulates the filter distortion.

Level

Adds to the level setting. It can be used to create level offsets using the modulation wheel, for example.

Volume 1

Modulates the gain. This modulation multiplies with the level.

Volume 2

As **Volume 1**. **Volume 1** is multiplied with **Volume 2**. This way, you can build more complex modulations.

Pan

Modulates the position of the sound in the panorama.

Osc 1/2/3 Pitch

Modulates the pitch of the corresponding oscillator.

For example, to detune an oscillator cyclically, assign one of the LFOs.

Osc 1/2/3 Level

Modulates the level of the corresponding oscillator.

For example, to fade an oscillator in and out while you play, assign the modulation wheel.

Osc 1/2/3 Shape

Modulates the shape and character of the corresponding oscillator.

For example, to change the character of an oscillator over time, assign one of the envelopes.

Osc 1/2/3 Multi Detune

Modulates the **Detune** parameter of the individual oscillator voices that are produced by the multi-oscillator mode.

Osc 1/2/3 Multi Voices

Modulates the number of oscillator voices that are produced by the multi-oscillator mode.

Sub Osc Level

Modulates the level of the sub oscillator. For example, to fade in the oscillator while you play, assign the modulation wheel.

Ring Mod Level

Modulates the level of the ring modulation effect. For example, to fade in the ring modulation while you play, assign the modulation wheel.

Noise Level

Modulates the level of the noise generator. For example, to fade in the noise generator while you play, assign the modulation wheel.

Audio Input

Modulates the level of the audio input that is received via the side-chain input of the plug-in.

This allows you to use the side-chain input as an additional source for the synthesis.

LFO 3/4 Frequency

Modulates the speed of the corresponding LFO.

For example, to control the speed of a vibrato effect while you play, assign **Aftertouch**.

LFO 3/4 Shape

Modulates the waveform of the corresponding LFO.

For example, to vary the waveform with the playing position on the keyboard, assign **Key Follow**.

Amp Attack

Modulates the attack time of the amplitude envelope. This modulation destination cannot be modulated continuously. The time is updated only when the segment starts.

Amp Decay

Modulates the decay time of the amplitude envelope. This modulation destination cannot be modulated continuously. The time is updated only when the segment starts.

Amp Sustain

Modulates the sustain level of the amplitude envelope. This modulation destination cannot be modulated continuously. The level is updated only when the segment starts.

Amp Release

Modulates the release time of the amplitude envelope. This modulation destination cannot be modulated continuously. The time is updated only when the segment starts.

Filter Attack

Modulates the attack time of the filter envelope. This modulation destination cannot be modulated continuously. The time is updated only when the segment starts.

Filter Decay

Modulates the decay time of the filter envelope. This modulation destination cannot be modulated continuously. The time is updated only when the segment starts.

Filter Sustain

Modulates the sustain level of the filter envelope. This modulation destination cannot be modulated continuously. The level is updated only when the segment starts.

Filter Release

Modulates the release time of the filter envelope. This modulation destination cannot be modulated continuously. The time is updated only when the segment starts.

Env 3 L0

Modulates the **L0** parameter of the user-definable envelope 3, that is, the level of the first envelope node. This modulation destination cannot be modulated continuously. The level is updated only when the segment starts.

Env 3 Attack

Modulates the attack time of the user-definable envelope 3. This modulation destination cannot be modulated continuously. The time is updated only when the segment starts.

Env 3 L1

Modulates the **L1** parameter of the user-definable envelope 3, that is, the level of the second envelope node. This modulation destination cannot be modulated continuously. The level is updated only when the segment starts.

Env 3 Decay

Modulates the decay time of the user-definable envelope 3. This modulation destination cannot be modulated continuously. The time is updated only when the segment starts.

Env 3 Sustain

Modulates the sustain level of the user-definable envelope 3. This modulation destination cannot be modulated continuously. The level is updated only when the segment starts.

Env 3 Release

Modulates the release time of the user-definable envelope 3. This modulation destination cannot be modulated continuously. The time is updated only when the segment starts.

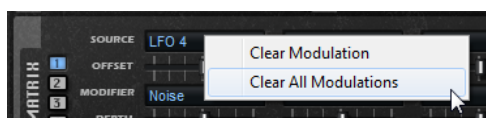
Env 3 L4

Modulates the **L4** parameter of the user-definable envelope 3, that is, the level of the last envelope node. This modulation destination cannot be modulated continuously. The level is updated only when the segment starts.

Bus 1-16

You can send any modulation to one of the 16 busses, for example, to produce more complex modulation signals. Select the bus that you want to send the signals to as a destination. To use the modulation that was sent to a bus, assign the corresponding bus as a modulation source.

Modulation Matrix Context Menu



Assign to New Automation

Assigns this modulation source as an automation parameter.

Clear Modulation

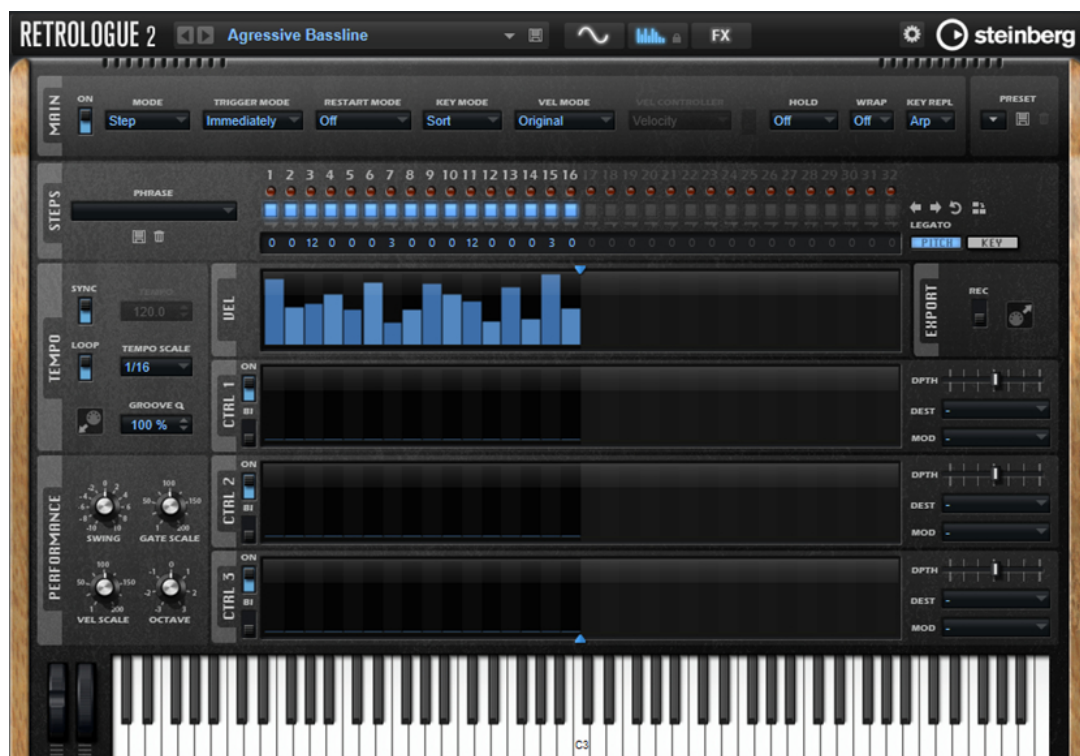
Removes the modulation data from the current slot.

Clear All Modulations

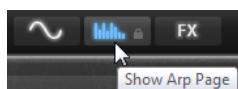
Removes all modulations from all slots in the modulation matrix.

Arp Page

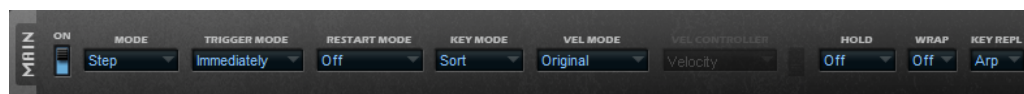
On the **Arp** page, you can find the arpeggio and phrase player of Retrologue.



- To show the **Arp** page, activate the **Show Arp Page** button.



Main Section



On/Off

Activates/Deactivates the arpeggiator.

Mode

Specifies the playback of the notes.

- If **Step** is selected, the last note that is received triggers a monophonic sequence.
- If **Chord** is selected, the notes are triggered as chords.
- If **Up** is selected, the notes are arpeggiated in ascending order.
- If **Down** is selected, the notes are arpeggiated in descending order.
- If **Up/Down 1** is selected, the notes are arpeggiated first in ascending, then in descending order.

- If **Up/Down 2** is selected, the notes are arpeggiated first in ascending, then in descending order. This mode depends on the set **Key Mode**.
If **Key Mode** is set to **Sort**, the highest and the lowest note are repeated.
If **Key Mode** is set to **As Played**, the first and the last note are repeated.
- If **Down/Up 1** is selected, the notes are arpeggiated first in descending, then in ascending order.
- If **Down/Up 2** is selected, the notes are arpeggiated first in descending, then in ascending order. This mode depends on the set **Key Mode**.
If **Key Mode** is set to **Sort**, the highest and the lowest note are repeated.
If **Key Mode** is set to **As Played**, the first and the last note are repeated.
- If **Random** is selected, the notes are arpeggiated in random order.

Trigger Mode

Determines the moment when the arpeggiator scans for new notes that you play on the keyboard.

- If **Immediately** is selected, the arpeggiator continuously scans for new notes. The phrase changes immediately, in reaction to your playing.
- If **Next Beat** is selected, the arpeggiator scans for new notes at every new beat. The phrase changes at each new beat, in reaction to your playing.
- If **Next Measure** is selected, the arpeggiator scans for new notes at the start of new measures. The phrase changes on each new measure, in reaction to your playing.

Restart Mode

- If this is set to **Off**, the phrase runs continuously and does not restart at chord or note changes.
- **New Chord** restarts the phrase on new chords.

NOTE

The phrase does not restart upon notes that are played legato.

- **New Note** restarts the phrase with each new note that you play.
- **Sync to Host** aligns the phrase with the beats and measures of your host application each time that you start the transport.

Key Mode

Determines if and how the playback of the phrase is affected by the order of the notes, as played on the keyboard.

- If **Sort** is selected, the notes are played in the order of the selected phrase, regardless of the chronological order.
- If **As Played** is selected, the notes are played in the order in which you play them on the keyboard.
- If **Direct** is selected, the phrase creates controller events instead of notes. You hear the notes that you play plus any controller events of the phrase, such as pitch bend, volume, pan, etc.

NOTE

Direct only has an effect if you have set up and activated a controller lane in the arpeggiator and if a modulation destination is assigned to it.

Vel Mode

- If **Original** is selected, the notes of the phrase play with the velocity that is saved in the phrase.
- If **Vel Controller** is selected, you can choose a velocity controller to generate or modulate the velocities of the notes.
- If **Original + Vel Controller** is selected, the phrase velocity is determined by the combination of the velocity saved in the phrase and the velocity derived from the velocity controller.

Vel Controller

If the **Vel Mode** pop-up menu is set to **Vel Controller** or **Original + Vel Ctrl.**, the **Vel Controller** pop-up menu is available. It allows you to generate or modulate the velocities of the notes using the incoming controller values.

- If **Velocity** is selected, the triggered notes inherit the velocity of the note that you play.
- If **Aftertouch** is selected, the triggered notes receive their velocity from the aftertouch controller.
- If **Poly Pressure** is selected, the triggered notes receive their velocity from the poly pressure controller. This allows you to control the velocity via the keys.
- Selecting **MIDI Controller** opens a submenu, where you can select a MIDI controller.

The value of this MIDI controller is used as the velocity for the triggered notes.

Fetch

If the **Vel Controller** pop-up menu is set to **Aftertouch**, **Poly Pressure**, or a MIDI controller, you can use the **Fetch** option to change the way that the notes are generated.

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

NOTE

Fetch is not available if the **Vel Controller** pop-up menu is set to **Velocity**.

Hold

Allows you to prevent the phrase from stopping or changing when the keys are released.

- If **Off** is selected, the phrase changes as soon as you release a key. The phrase stops immediately when you release all keys.
- If **On** is selected, the phrase plays to the end, even if the keys are released. If **Loop** is activated, the phrase is repeated continuously.
- If **Gated** is selected, the phrase starts to play when the first key is played. It plays silently in the background, even if the keys are released, and resumes playback at the current position when you press any of the keys again. This way, you can gate the playback of the phrase.

Wrap

For all modes except **Step** and **Chord**, you can use this parameter to restart the arpeggio after a specified number of steps.

NOTE

Deactivated steps are taken into account.

In **Step** and **Chord** mode, this parameter only affects the **Octaves** setting.

If the **Octaves** parameter is active, the arpeggio traverses the octaves and restarts from the original octave after the specified number of steps.

Key Replace

With this parameter, you can deactivate the **Key Select** function or specify how to replace missing keys.

For example, if **Key Select** is set to 1 - 2 - 3 - 4 and you play a chord with 3 notes, key 4 is considered missing.

- **Off** deactivates **Key Replace** and **Key Select**. The selected arpeggio plays back without modifications.
- **Arp** replaces the missing keys with the note that the arpeggio would normally play.
- **Rest** does not replace any missing keys. The arpeggio inserts a rest instead.
- **1st** replaces the missing keys with the first note in the note buffer.
- **Last** replaces the missing keys with the last note in the note buffer.
- **All** replaces the missing keys with all notes in the note buffer. The notes are played as a chord.

Steps Section



Phrase

To load a phrase, select it from the **Phrase** pop-up menu.

Step LEDs

The step LEDs light up when the corresponding step is played.

Step On/Off buttons

Activate/Deactivate the steps.

Legato buttons

The **Legato** buttons below the step buttons allow you to introduce a legato between two steps.

- To create a legato, click the **Legato** button below the first step, so that a small arrow is shown.

Show Pitch Row

Displays the **Transpose** value fields under the steps, which allow you to enter individual transpose values for the steps.

Show Key Row

Displays the **Key Select** value fields under the steps, which allow you to specify which key in the note buffer to play for each step.

Key Select

The arpeggiator scans the keyboard and writes the keys that are pressed into a note buffer.

Depending on the selected **Key Mode**, this note buffer is sorted either by pitch or in the order in which you play the keys.

Key Select allows you to play back a defined key from the note buffer. You can set up **Key Select** for each step individually, which allows you to create very elaborate phrases.

NOTE

Key Select cannot be used in **Step** or **Chord** mode.

- To access the **Key Select** values of the steps, click **KEY** on the right.



- To switch between the available **Key Select** values for a step, click the value and drag up/down, or use the scroll wheel.

The following options are available:

- P** (Phrase) plays the note of the user phrase, according to the selected mode, for example, **Up**, **Down**, **Up/Down 1**, etc.
- The settings **1 - 8** play the corresponding keys from the note list. Which key is played depends on the **Key Mode** setting. For example, if **Key Mode** is set to **Sort**, the setting **1** plays the lowest key.
- L** (Last) always plays the last key from the note buffer. Depending on the **Key Mode**, this is the highest note or the last note in the note buffer.
- A** (All) plays all keys from the note buffer as a chord.

Step Editing

The height of a step represents its value.

You can edit the steps in the following way:

- To activate all steps, select **Enable All Steps** from the context menu.
- To adjust a value, click a step, and drag up or down.
- To adjust multiple steps, click and draw a curve.
- To adjust the velocity of all steps relatively, **Shift**-click and drag.
- To draw a ramp with steps, hold down **Alt/Opt**, and draw a line.
- To draw symmetric ramps at the beginning and the end of the sequence, hold down **Alt/Opt - Shift**, and draw a line.
- To reset the velocity of a step to 127, **Ctrl/Cmd**-click the step.
- To reset the velocity of all steps to 127, hold **Ctrl/Cmd - Shift**, and click a step.
- To introduce a legato between two steps, activate **Step Legato** for the first of these steps, so that a small arrow is shown.

If **Legato** is activated, the **Gate Scale** parameter is not taken into account.

- To transpose a step, click in the **Step Transpose** field, and enter the number of semitones for the transposition.

Adjusting the Phrase

- To shift the rhythm of the phrase, click **Shift Phrase Right**  or **Shift Phrase Left** .
- If you shift the rhythm of the phrase to the left, the first step is moved to the end. If you shift the phrase to the right, the last step is moved to the beginning.
- To reverse the phrase, click **Reverse Phrase** .
- To duplicate short phrases, click **Duplicate Phrase** .

NOTE

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

Vel and Ctrl Sections

The **Vel** section is where you set up the steps of the arpeggio and specify their velocities. In the **Ctrl** sections, you can edit three MIDI controller sequences for the phrase.

The MIDI controllers 110, 111, and 112 from the three controller lanes are sent to the modulation destinations. When you export a recorded sequence, these controller values are also exported. This means that once you add the exported MIDI sequence to the sequencer, you can deactivate the arpeggiator and play the notes and controller values using the sequencer.

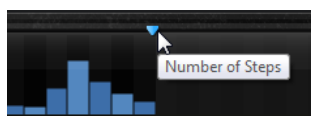
NOTE

Even if you deactivate the arpeggiator in Retrologue, its controller lanes are still available in the modulation matrix and can be used to modify the modulation using the incoming MIDI controller messages.

Specifying the Pattern Length



- To specify the number of steps for the pattern, drag the **Number of Steps** handle in the **Vel** section to the right or the left.



Activating Steps

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

- To activate a step, activate its **On/Off** button in the **Steps** section or click it in the **Vel** section.

Editing Steps

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

- To activate all steps, select **Enable All Steps** from the context menu.
- To adjust a value, click a step, and drag up or down.
- To adjust multiple steps, click and draw a curve.
- To adjust the velocity of all steps relatively, **Shift**-click and drag.
- To draw a ramp with steps, hold down **Alt/Opt**, and draw a line.
- To draw symmetric ramps at the beginning and the end of the sequence, hold down **Shift-Alt/Opt**, and draw a line.
- To transpose a step, click in the field below it, and enter the number of semitones for the transposition.

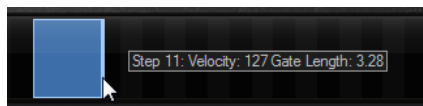
NOTE

You can only transpose steps if **Show Pitch Row** is activated.

- To reset the velocity of a step to 127, **Ctrl/Cmd**-click the step.
- To reset the velocity of all steps to 127, hold **Shift-Ctrl/Cmd**, and click a step.
- To introduce a legato between two steps, click the number below the first of these steps, so that a small arrow is shown.

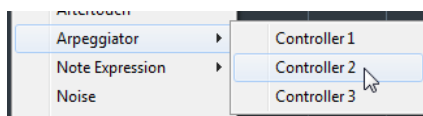
If **Legato** is activated, the **Gate Scale** parameter is not taken into account.

For velocity steps, the width of a step represents its gate length.



- To adjust the gate length of a step, drag its right border.
- To adjust the gate length of all steps, hold down **Shift**, and drag the right border of a step. You can only adjust the length this way until a step reaches the next step. If you increase the gate length of a step so that it overlaps with the following step, the latter step is deactivated.
- To reset the length of a step to 1, **Ctrl/Cmd**-click its highlighted right border.
- To reset the length of all steps, hold down **Shift-Ctrl/Cmd**, and click on a highlighted right border.
- To fill the gaps between consecutive steps, select **Fill Gap** or **Fill All Gaps** from the context menu.

The 3 MIDI controller lanes send the MIDI controllers 110, 111, and 112. By selecting an arp controller lane as a source in the modulation matrix, you can modulate any of the destinations with the MIDI controller sequence.



- To assign a controller, open the **MIDI Controller** pop-up menu, and select the controller, or use the corresponding control on your hardware.

Controller Lane Parameters

Bi

This button switches the modulation signal to bipolar, to modulate destinations like pitch or pan, for example.

Depth

Adjusts the intensity of the influence of the controller lane on the specified modulation destination.

Dest

Specifies the destination that is modulated by the controller lane.

Mod

Allows you to specify a second source that is used to scale the modulation intensity. For example, select the modulation wheel to control the intensity.

Tempo Section

Sync

Synchronizes the phrase to the tempo of your host application.

NOTE

In addition, you can set **Restart Mode** to **Sync to Host**. This aligns the phrase with the beats and measures of your host application.

Loop

Allows you to play the phrase in a loop.

Tempo Scale

Defines the rate at which notes are triggered, that is, the speed at which the phrase is running. In addition to the **Tempo** parameter, this gives you further control over the playback speed. You can specify a value in fractions of beats. You can also set dotted and triplet note values.

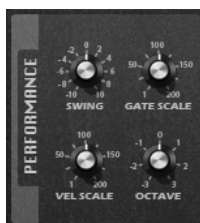
For example, if you change the **Tempo Scale** setting from 1/16 to 1/8, the speed is cut in half. If you set it to 1/32, the speed is doubled.

Groove Q

To adapt the timing of a phrase to an external MIDI file, you can drop this MIDI file on the **Groove Quantize** drop field.

The **Groove Quantize Depth** parameter to the right of the drop field determines how accurately the phrase follows the timing of the MIDI file.

Performance Section



Swing

Shifts the timing of notes on even-numbered beats, which results in a “swing feeling”. Negative values shift the timing backward, and the notes are played earlier. Positive values shift the timing forward, and the notes are played later.

Gate Scale

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

Vel Scale

Allows you to raise or lower the note-on velocities of the phrase. At a value of 100%, the notes are played with their original velocity.

Octaves

Extends the phrase playback to include higher or lower octaves. Positive settings extend the playback to higher octaves, and negative settings to lower octaves. For example, a value of +1 first plays the phrase in the octave range that you originally played. Then, it repeats the phrase one octave higher.

Export Section

This section contains the MIDI export functions. You can export the phrases created with the arpeggiator by recording them and then dragging them onto a track in your DAW.



Record Output

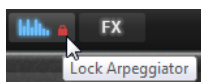
Allows you to record the MIDI output of the arpeggiator.

Drag MIDI Phrase to Host Sequencer

Allows you to drag the recorded MIDI phrase to your host sequencer.

Locking the Arp Page

You can lock the **Arp** page to play the same arpeggio for different sounds.



- To lock the **Arp** page, click the padlock icon on the **Arp** page button. Now, you can switch presets to try out different sounds.

FX Page

Retrologue features 6 insert effects in series: a resonator, a phaser, modulation effects, a delay, a reverb, and an equalizer.

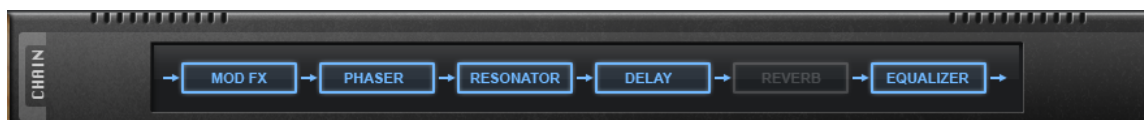
- To show the **FX** page, activate the **Show FX Page** button.



Chain Section

In the **Chain** section of the **FX** page, you can see and edit the routing of the effects.

The **Chain** section contains a segment for each effect section that is available on the **FX** page.



- To change the order of the effect chain, drag the segments to new positions.
- To activate/deactivate an effect, click the corresponding segment in the chain.

Resonator

The Resonator effect comes with 14 predefined filter shapes that determine the basic sound character. In addition to this, three LFOs can be used to modulate each filter individually, which allows for adding extra motion to the sound.

The sound of the human voice or of acoustic instruments is characterized by distinctive formant regions, that is, by resonances in the frequency spectrum that are typical for a particular sound. For example, the vowel “ah” (as in father) sung by a male singer has three characteristic formants: F1 = 570 Hz, F2 = 840 Hz, and F3 = 2410 Hz. The Resonator effect allows you to induce such formant regions to a sound by using three filters that are connected in parallel. You can specify the positions and levels of the formant regions by adjusting the **Cutoff**, **Resonance**, and **Gain** parameters of the filters.

Resonator Shape

Defines the basic sound character of the effect. Each shape is a unique combination of different filter types for the low, mid, and high frequency bands.

Option	Filter Low/Mid/High
Low-Pass 1	LP6/LP6/LP6
Low-Pass 2	LP12/LP12/LP12
Band-Pass 1	BP12/(-1)BP12/BP12*
Band-Pass 2	BP12/BP12/BP12
High-Pass 1	HP6/HP6/HP6
High-Pass 2	HP12/HP12/HP12
Peak 1	LP6/(-1)BP12/HP6*
Peak 2	LP6/BP12/HP6
Bat 1	HP12/BP12/LP12
Bat 2	HP6/BP12/LP6
Wings 1	LP6/BR12/HP6
Wings 2	HP12/BR12/LP12
Wings 3	LP6/(-1)BR12/HP6*
Wings 4	HP12/(-1)BR12/LP12*

*(-1) means that the phase is inverted

Mix

Sets the ratio between the dry and the wet signal.

Filter Page



Cutoff

Adjusts the cutoff frequency of the filter, that is, the center frequency of the formant region.

Resonance

Adjusts the resonance of the filter. The resonance determines how much the formant region is emphasized. With higher settings, the filter self-oscillates, which results in a ringing tone.

Gain

Adjusts the input gain of the filter. The gain determines the level of the formant region.

LFO Modulation Source

Allows you to select the LFO that modulates the cutoff.

LFO Modulation Depth

Adjusts the cutoff modulation of the LFO.

Arp Modulation Source

Allows you to select a controller lane from the **Arp** page as modulation source. This determines which MIDI controller is used to modulate the cutoff.

Arp Modulation Depth

Specifies the intensity of the controller lane modulation. This adjusts the cutoff modulation from the MIDI controller.

LFO Page



LFO Wave Shape

Waveform selects the basic type of waveform. **Shape** changes the characteristics of the waveform.

- **Sine** produces smooth modulation, suitable for vibrato or tremolo. **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 generated.
- **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.

Spread

For each channel of the effect, there is a separate LFO signal. This parameter spreads the phase of the LFO signals across the different channels.

For example, if the effect is used in stereo, positive values shift the LFO phase forward on the left channel and backward on the right channel.

Sync

Allows you to set the **Freq** parameter in fractions of beats.

Freq

Determines the frequency of the cutoff modulation.

Phaser and Modulation FX

The phaser effect and the modulation effects share the same window section. To show the settings for one of these effects, click the corresponding label at the top of the section.

Phaser



Rate

Specifies the frequency of the phase modulation.

Sync

Allows you to set the **Rate** value in fractions of beats.

Depth

Sets the intensity of the phase modulation.

Shift

Shifts the phase modulation upwards to higher frequencies of the spectrum.

Phase

Widens the sound image of the effect from mono to stereo.

Feedback

Adds resonances to the effect. Higher settings produce a more pronounced effect.

Low Cut

Attenuates the low frequencies.

High Cut

Attenuates the high frequencies.

Mix

Sets the ratio between the dry and the wet signal.

Modulation Effects

On the **Type** pop-up menu, you can specify which modulation effect to use: **Chorus**, **Flanger**, or **Ensemble**.

For **Flanger** and **Chorus**, the following parameters are available:



Rate

Specifies the frequency of the pitch modulation in Hertz.

Sync

Allows you to set the **Rate** value in fractions of beats.

Depth

Sets the intensity of the pitch modulation.

Phase

Widens the sound image of the effect from mono to stereo.

Feedback

Adds resonances to the effect.

Mix

Sets the ratio between the dry and the wet signal.

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



Rate

Sets the frequency of the LFO.

Sync

Allows you to set the **Rate** value in fractions of beats.

Depth

Sets the intensity of the delay time modulation by the LFO.

Shimmer

Sets the intensity of a secondary faster delay time modulation.

Shimmer Rate

Determines the relation between the speed of the primary and the secondary delay modulation. For example, at a value of 10, the secondary modulation is 10 times faster.

Delay



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.

Mix

Sets the ratio between the dry and the wet signal.

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.

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 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.

High Freq

Attenuates the high frequencies of the delays.

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.

Reverb



Mix

Sets the ratio between the dry and the wet signal.

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.

Which frequencies are affected depends on the **High Freq** parameter.

High Freq

Sets the cross-over frequency between the mid and the high band of the reverb tail. You can offset the reverb time for frequencies above this value from the main reverb time with the **High Time** parameter.

Low Time

Controls the reverb time for the low frequencies of the reverb tail. With positive values, the decay time of the low frequencies is longer. With negative values, it is shorter.

Which frequencies are affected depends on the **Low Freq** parameter.

Low Freq

Sets the cross-over frequency between the low and the mid band of the reverb tail. The reverb time for frequencies below this value can be offset from the main reverb time with the **Low Time** parameter.

Predelay

Determines how much time passes before the reverb is applied. This allows you to simulate larger rooms by increasing the time it takes for the first reflections to reach the listener.

Room Size

Controls the dimensions of the simulated room. At a setting of 100 %, the dimensions correspond to a cathedral or a large concert hall. At a setting of 50 %, the dimensions correspond to a medium-sized room or studio. Settings below 50 % simulate the dimensions of small rooms or a booth.

High Cut

Attenuates the high frequencies of the reverb tail. The lower this value, the less high frequencies are contained in the reverb tail.

Chorus On/Off

Activates/Deactivates the chorus effect.

Chorusing Rate

Specifies the frequency of the pitch modulation.

Chorusing Depth

Sets the intensity of the pitch modulation.

Equalizer Section

The **Equalizer** section contains a 4-band parametric equalizer.



With the four frequency bands, you can shape the tone color, to create a brighter or darker sound, for example. The two mid-range bands act as peak filters, and the low and high bands act as shelving filters. All bands are fully parametric with adjustable gain, frequency, and Q factor. Each frequency band offers the following controls:

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.

Quick Controls

Retrologue provides a predefined set of 8 quick controls that can be controlled directly from within your Steinberg DAW.

By default, these quick controls are assigned to the following parameters:

- 1 is assigned to **Filter Cutoff**.
- 2 is assigned to **Resonance**.
- 3 is assigned to **Distortion**.
- 4 is assigned to **Filter Envelope**.
- 5 is assigned to **Filter Attack**.
- 6 is assigned to **Filter Decay**.
- 7 is assigned to **Amp Attack**.
- 8 is assigned to **Amp Decay**.

NOTE

You can also change the default quick controls assignments. For more information, see the **Operation Manual** of your Steinberg DAW.

MIDI Controllers

Most of the parameters in Retrologue can be adjusted via MIDI controllers.

The MIDI controller assignments are saved globally for the plug-in, with one exception: The mod wheel assignment is saved with each preset. This allows you to control effect parameters using the mod wheel, which would otherwise not be controllable, because they are not available as modulation destinations in the modulation matrix.

NOTE

- Volume and pan are assigned to controllers 7 and 10 by default, and are therefore always available.
 - If you use Retrologue in a Steinberg DAW, the MIDI controller assignments are saved with the project.
-

Assigning MIDI Controllers

PROCEDURE

1. Right-click the control that you want to control remotely.
2. On the context menu, select **Learn CC**.

NOTE

The mod wheel cannot be assigned using the **Learn** function.

3. On your MIDI keyboard or controller, use the potentiometer, fader, or button.

NOTE

You can assign the same MIDI controller several times to different parameters. However, you cannot assign different MIDI controllers to the same parameter.

Removing a MIDI Controller Assignment

PROCEDURE

- To remove a MIDI controller assignment, right-click the corresponding control and select **Forget CC**.
-

Parameter Range

You can set the parameter range for each parameter assignment by defining the minimum and the maximum value.

- To define the minimum value, set the parameter to the value, right-click the control, and select **Set Minimum**.
- To define the maximum value, set the parameter to the value, right-click the control, and select **Set Maximum**.

Assigning the Mod Wheel

PROCEDURE

1. Right-click the control for which you want to assign the mod wheel.
 2. On the **Modulation Wheel** submenu, select **Enable Mod Wheel**.
 3. Set the minimum and maximum values for the mod wheel using the **Set Minimum** and **Set Maximum** commands.
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