

## Introduction

This manual contains complete documentation for FabFilter Volcano 2 in printer-friendly format. All information in this manual is also accessible via the Help button in FabFilter Volcano's user interface.

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## About FabFilter Volcano 2

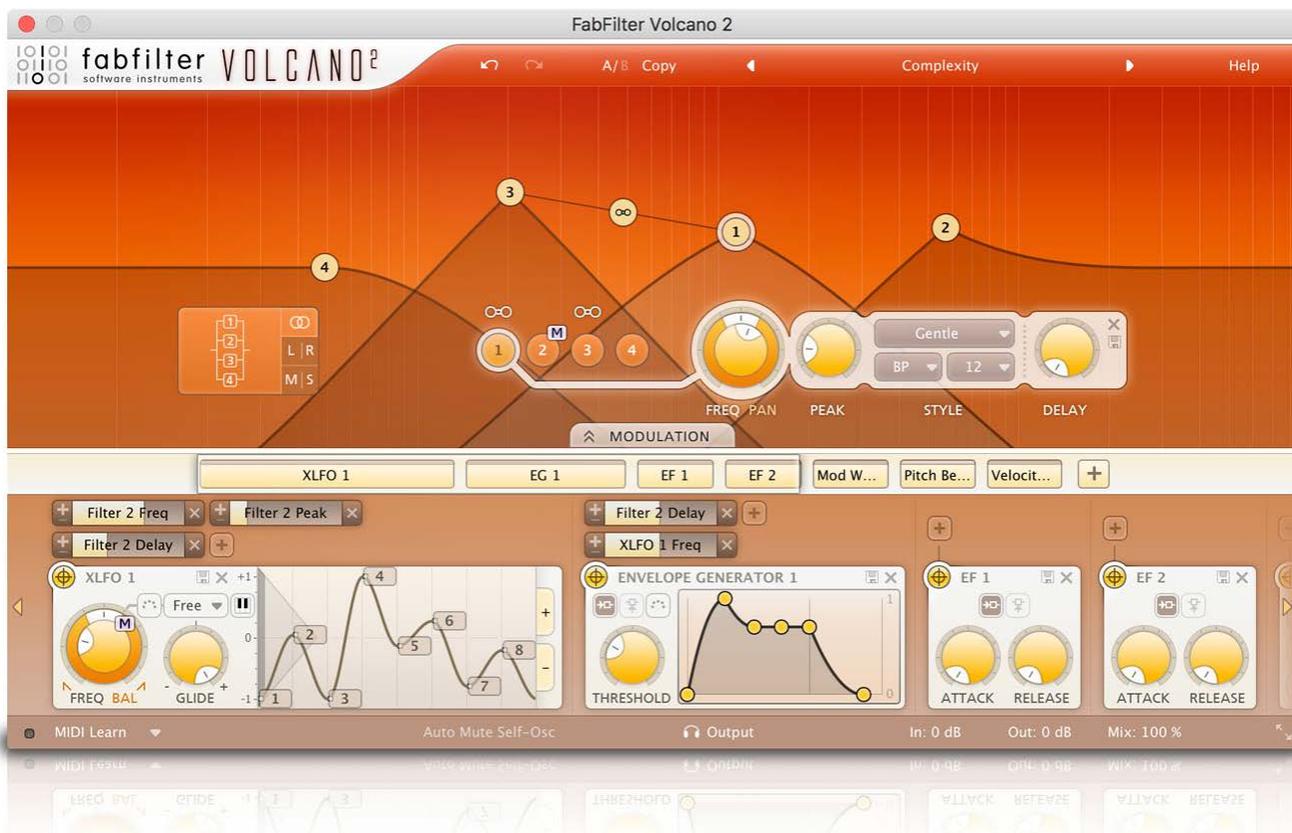
Volcano 2 is more than just an update of Volcano 1. The original idea of high quality filters being modulated with several sources is still present but Volcano 2 has been redesigned from the ground up. Now it is not only capable of high quality filtering effects, but it can even be used for phasing, flanging, chorus and many other cool effects!

### Bigger than ever... and easier-to-use than ever!

Of course, the new version of Volcano brings a lot of new features. To start with, you now get [four full-featured filters](#) which can be routed in almost any possible way (including [Per-Channel](#) and [Mid-Side](#)). Then, the real fun starts with our totally re-designed [drag-and-drop modulation system](#) with a 24 slot modulation matrix. And instead of the two simple LFOs and the single Envelope Generator in Volcano 1, you now get all the [XY Controller](#), [XLFOs](#), [Envelope Generators](#), [Envelope Followers](#) and [MIDI Sources](#) you need! Of course, the new version also has a [side-chain input](#), which can be used to trigger the Envelope Generators or feed the Envelope Followers. Volcano 2 also features our [improved MIDI Learn](#) system, which makes it easy to associate your controllers to Volcano's parameters.

### What-you-use-is-what-you-see

Volcano 2 introduces a revolutionary new interface concept: [what-you-use-is-what-you-see](#). The idea is simple yet powerful: do you want another filter? Just add one! Do you want an Envelope Follower? Just add one and start modulating things! At all times, the interface only contains the filters, modulation sources and slots that you are actually using. This results in an intuitive user interface that experienced producers and novices alike will embrace.



### Modulation madness

Volcano 2 brings new and improved modulation sources and because of our improved interface, you don't have to worry about how many sources you have: there are enough sources to keep you busy for a long time!

Our new XLFO offers you anything from a simple sine wave to a fully programmable 16-step sequencer. The Envelope Generators and Envelope Followers can make use of the plug-in's side-chain signal, and the new MIDI modulation sources let you modulate parameters using any form of MIDI data.

### Finally

If you have spent some time with Volcano 2, you will find use for it in any kind of project. The best way to discover what you can do with it is to explore the presets. Find out what a variety of effects you can create, and use them as a starting point for your own explorations.

FabFilter Volcano 2 is available in VST, VST3, AU (Audio Units), AAX Native and AudioSuite formats (all both 64-bit and 32-bit), as well as RTAS (32-bit only), for Mac OS X and Windows.

#### Windows requirements:

32-bit: Windows 10, 8, 7, Vista or XP  
64-bit: Windows 10, 8, 7 or Vista (x64)  
VST 2/3 host or Pro Tools

#### Mac OS X requirements:

32-bit: OS X 10.6 or higher  
64-bit: OS X 10.6 or higher  
AU or VST 2/3 host or Pro Tools

Next: [Quick start](#)

**See Also**

[Using FabFilter Volcano 2](#)

[Upgrading to Volcano 2](#)

[VST plug-in versions](#)

## Quick start

The installer will copy the FabFilter Volcano 2 plug-in into the common VST, VST 3, AU (OS X only) and Pro Tools plug-in folders on your computer. On Mac OS X, the global plug-in folders in /Library/Audio/Plug-Ins are used.

In most cases, your host will then recognize the plugin automatically. However, if the instructions below do not work, see [Manual installation](#) instead.

- **Cubase**

Choose an empty insert slot, for example in the Mixer, and select FabFilter Volcano 2 from the menu that appears. To use the MIDI features in Volcano 2, create a new MIDI track and set its output to the Volcano 2 instance you have just created. (The VST 3 version of Volcano 2 can be found in the Filter section.)

- **Logic Pro**

Choose an empty insert slot on one of your audio tracks, instrument tracks or buses and select FabFilter Volcano 2 from the pop-up menu. You will find FabFilter Volcano 2 in the *Audio Units* -> *FabFilter* section (named FF Volcano 2).

- **Ableton Live**

In Session view, select the track you would like to place FabFilter Volcano 2 on, for example by clicking the track name. At the left top of Ableton Live's interface, click on the Plug-in Device Browser icon (third icon from the top). From the plug-ins list, double-click FabFilter/FabFilter Volcano 2, or drag it onto the track.

- **Pro Tools**

Choose an empty insert slot on one of your audio tracks, instrument tracks or buses and select FabFilter Volcano 2 from the pop-up menu in the Effect section.

Use the Presets button to try different settings from the many factory presets that are bundled with FabFilter Volcano 2. Have fun!

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Next: [FabFilter Volcano 2 overview](#)

### See Also

[VST plug-in versions](#)

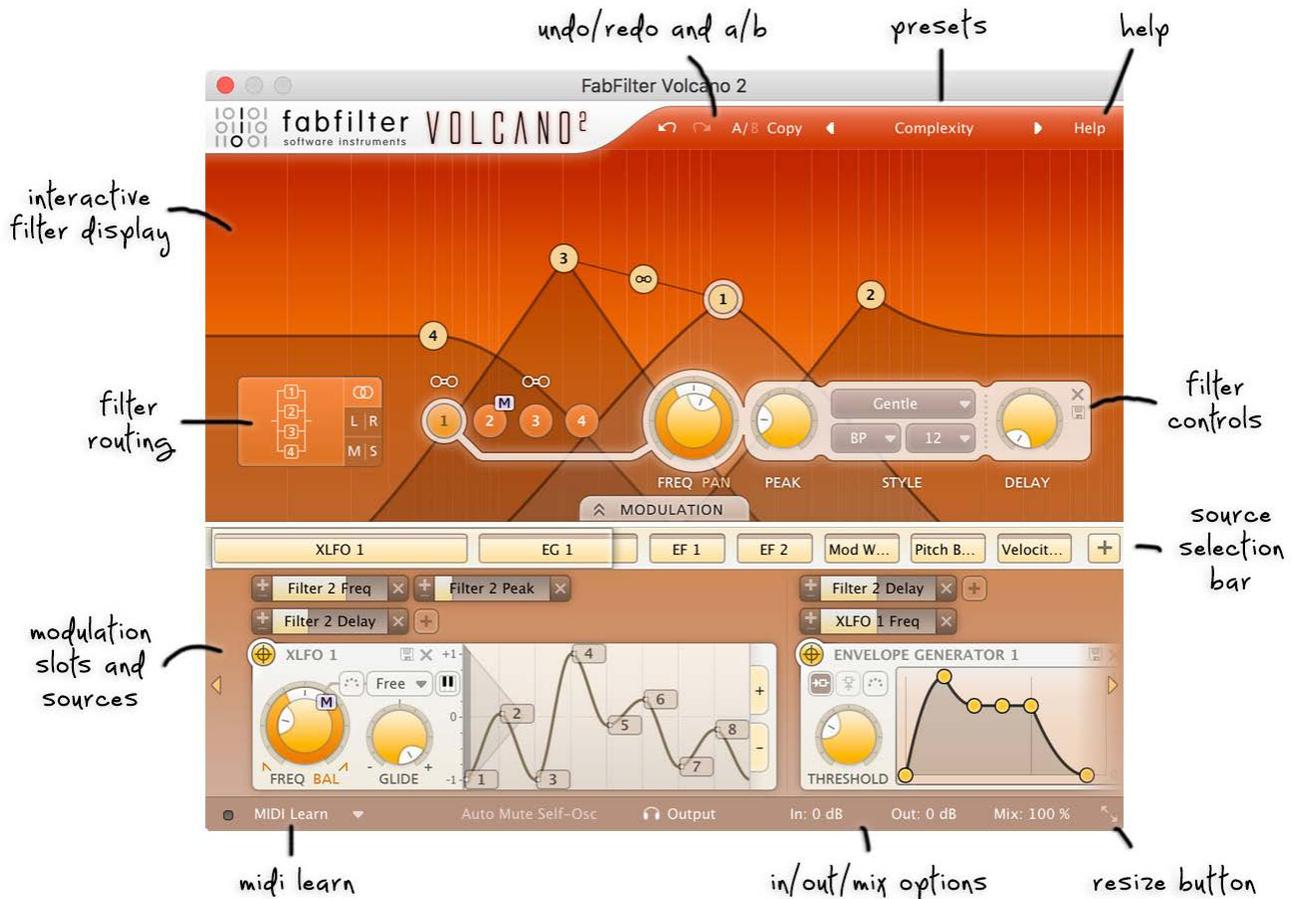
[Upgrading to Volcano 2](#)

[Overview](#)

[Loading presets](#)

## Overview

Volcano's interface is divided into horizontal sections:



### • Presets, undo and A/B

The [Undo, Redo, A/B and Copy](#) buttons at the top of the plug-in interface enable you to undo your changes and switch between different states of the plug-in. With the [preset buttons](#), you can easily browse through the factory presets or save your own settings so you can re-use them in other songs.

### • Interactive filter display

This is the graphic representation of the filter settings which allows you to drag all filters individually or simultaneously and control the filter settings with key combinations. See [Interactive filter display](#).

### • Filter controls

At the bottom of the display, the [filter controls](#) provide full control over all filter parameters. The filters offer a choice of low-pass, high-pass and band-pass modes and come with 11 algorithms that offer different filter characteristics. Each filter has a special delay option with short delay times up to 30 ms, creating all kinds of stereo effects. At the left of the filter controls, the [routing button](#) selects the routing of the four filters.

### • Modulation button

The modulation button shows or hides the entire modulation section at the bottom of the interface. FabFilter Volcano 2 offers virtually unlimited modulation possibilities, but all this power might be a bit intimidating. That's why the modulation section is hidden by default, and you can look 'under the hood' when you want to tweak a preset or design your own.

### • Source selection bar

The source selection bar shows all modulation sources at a glance and lets you easily scroll around and create new sources. FabFilter Volcano 2 offers [XLFO](#), [Envelope Generator \(EG\)](#), [Envelope Follower \(EF\)](#), [MIDI](#) and [XY Controller sources](#). See also [Modulation](#).

### • Modulation slots and sources

The bottom section contains the modulation sources. The modulation section in Volcano 2 is fully modular — but without the cables! We found a simple way to show you everything that is modulating, and what is modulated by what. Above each modulation source, the modulation slots show exactly what targets are modulated by this source and let you adjust the amount of modulation. You can very easily set up modulation connections with [drag-and-drop](#). All in all, we think we made sound design easier and more fun!

### • MIDI Learn, monitoring and input/output/mix

The bottom bar contains the [MIDI Learn](#) feature which sets up any MIDI controller to control any plug-in parameter. Next, we find various output options and mix buttons. See [Output controls](#).

### • Resize

The resize button in the lower-right corner lets you choose between normal and wide interface layouts. The wide layout provides more space for the modulation sources at the bottom of the interface. Most hosts support dynamic resizing of the interface; otherwise just close and re-open the interface window.

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*Next:* [What-you-use-is-what-you-see](#)

**See Also**

[About FabFilter Volcano 2](#)

[Support](#)

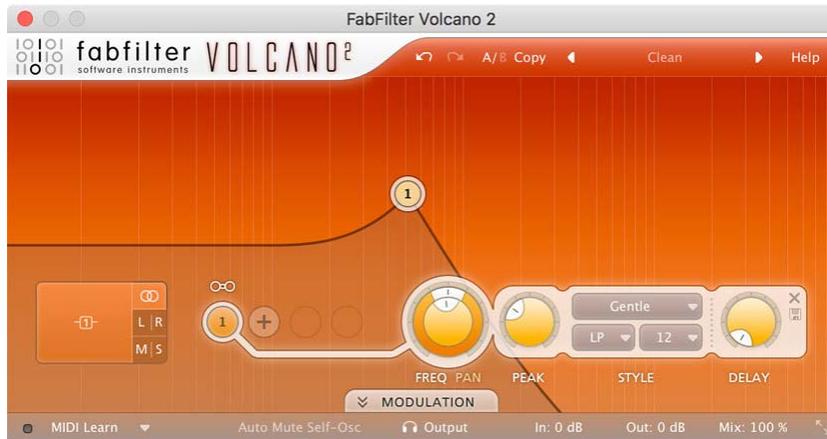
## What-you-use-is-what-you-see

Most of the times an impressive feature list results in an impressively difficult-to-use interface, full of controls for parameters you might never even use.

For almost every plug-in developer one of the greatest challenges when making such a complex full-featured plug-in is to design an interface that is easy-to-use. And we think we did it! FabFilter introduces a revolutionary new interface concept: What-you-use-is-what-you-see.

The idea is simple yet powerful. Do you want another [filter](#)? Just add one! Do you want an [envelope follower](#)? Just add one and start modulating things! At all times, the interface only contains the filters, modulation sources and slots that you are actually using. Of course there is a limit to the number of sources you can create, but in practice it feels like you can create as many sources as you will ever need.

This results in an intuitive user interface that experienced producers and novices alike will embrace. To give you an idea, a simple preset with just one low pass filter and the modulation section hidden looks like this:



... a more complex preset with two filters and modulation using our new XLFO and an Envelope Generator looks like this:



... and a very complex preset, with four filters and a lot of modulation sources and modulation, looks like this:



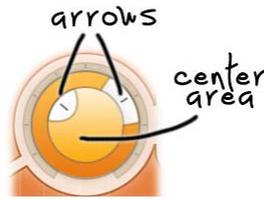
To help you understand even the most complex presets, modulation slots are grouped with each source. Each component, knob or controller that is being modulated is marked with a little M button. Simply click the M to highlight the modulation source and slots responsible for the modulation. See also [Modulation](#).

Next: [Knobs](#)

See Also  
[Modulation](#)  
[Overview](#)

## Knobs

It is easy to control FabFilter Volcano 2's parameters with the large round knobs. They will light up when you move the mouse cursor around to indicate that you can adjust them. The moment you move the mouse cursor over a knob, a parameter value display will pop up, which shows the name and the current value of the parameter.



All knobs support four ways of control:

1. **Vertical mode**

Click on the center area of a knob and drag up or down to rotate it. The knob reacts to the speed with which you are dragging, so if you move the mouse slowly, you make precise adjustments.

2. **Rotate mode**

Grab the arrow of the knob and drag it around. By moving the mouse cursor further away from the knob while dragging it, you can make precise adjustments.

3. **Mouse wheel mode**

Perhaps the easiest way to make adjustments is by using the mouse wheel when you hover over a knob. This mode works for all the knobs and possible panning rings. (On Windows, you might need to click in the plug-in interface first to make sure it is the active window.)

4. **Text entry mode**

Double-click a knob to enter an exact value using the keyboard.

### Tips

- To **reset** a knob to its default position, hold down the *Ctrl* key (Windows) or *Command* key (Mac OS X) and click the knob once. Note: In Pro Tools, Volcano 2 uses the default Pro Tools keyboard shortcut for reset: *Alt*+click.
- To **fine-tune** a value when using vertical drag mode or the mouse wheel, hold down the *Shift* key while dragging or moving the mouse wheel. Note: In Pro Tools, Volcano 2 uses the default Pro Tools keyboard shortcut for fine tune: *Ctrl*+drag on Windows or *Command*+drag on OS X.
- There are several **handy shortcuts in text entry mode**. With frequency values, you can type e.g. '1k' to set the value to 1000 Hz, and also 'A4' for 440 Hz, or even strings like 'C#3+13'. With dB values, you can type e.g. '2x' to get +6 dB (the value that corresponds to two times louder). With all values, you can also type a percentage (e.g. '50%' will put a knob exactly in the middle position).
- Sometimes, knobs in our plug-in interfaces are **linked**: these be adjusted simultaneously by holding down the *Alt* key (*Shift* key in Pro Tools) while dragging on one of them. For example, an output level and input level setting of a plug-in could be adjusted simultaneously (in the opposite direction) this way.

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Next: [Filters](#)

### See Also

[Support](#)

## Filters

Volcano 2 comes with four multi-mode stereo filters, which can be routed in almost every possible way, even per-channel and mid-side. Every filter can be switched between low-pass, high-pass, and band-pass responses with 12, 24 and 48 dB/octave slopes and a staggering amount of eleven different high-quality filter characteristics that define the unique sound and overdrive of the filter. They range from smooth with moderate overdrive to raw, self-oscillating and over-the-top! All [characteristics](#) have been tuned very carefully, using our state-of-the-art FabFilter filter technology.



One set of [filter controls](#) is shared among all filters, which shows the parameters of the active filter.

- To **activate** a filter, click one of the numbered filter buttons. The button for the currently active filter lights up and is connected visually with the filter controls section.
- To **bypass** the active filter, click its filter button again. The first click activates the filter; once it is active, the filter button enables and disables the filter. When a filter is bypassed, the [filter controls](#) will look disabled, but can still be used to adjust the filter.
- To **add** a filter, click the + button next to the last filter button. The newly added filter will copy most of its settings from the currently active filter.
- To **remove** a filter, activate it and then click the Remove button X at the top right of the filter controls section. If there is only one filter left, you cannot remove it.
- Click the Presets button  to save the current filter and routing settings, or to access previously saved **section presets**. Note that this affects all filters and the routing, not just the active filter. See also [Section presets](#).

In the filters section, we applied our new [what-you-use-is-what-you-see](#) concept: you only get filter buttons for filters that you are actually using at the moment. Even the Routing button only contains the routing options available for the current number of filters!

When using [L/R or M/S configuration](#), the amount of filters will always be 2 or 4. So when adding or deleting filters just one click will add or delete 2 filters automatically.

You can use the filters individually or combine filter characteristics to create your own sounds in any way imaginable. To experience the full potential of Volcano 2's filters, try it on some signals with rich harmonics (synth sounds, distorted guitar or complete mixes are good sources for filtering).

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Next: [Filter parameters](#)

### See Also

[Interactive filter display](#)  
[Modulation](#)

## Filter parameters

Volcano 2 contains up to four independent multi-mode filters. You control the parameters of the [active filter](#) with the following settings:



- **Frequency**

The filter frequency is adjustable over the entire audio range. The Frequency controls the center or cut-off frequency of the active filter and can be controlled in real time, either manually or via external devices.

- **Pan**

The Pan ring around the Frequency knob lets you filter the left and right channels differently. It works as a stereo balance setting for the center frequency of the filter. For example, when you turn the Pan knob to the left, the left channel will be filtered with a lower center frequency, and the right channel will be filtered with a higher center frequency. You can use this to create various stereo filtering effects, especially in combination with modulation.

- **Peak**

The Peak knob adjusts the resonance of the active filter. A little resonance will cause the filter to create warmer and more characteristic tones. At maximum resonance, the filter will self-oscillate with most filter characteristics. (The Auto Mute Self-Osc option in the bottom bar will help to keep this manageable. See [Output controls](#).)

- **Characteristic**

FabFilter Volcano 2 lets you choose between 11 different filter characteristics:

1. *FabFilter One*, the original filter characteristic taken from our award-winning FabFilter One synthesizer
2. *Smooth*, like the cream in your coffee
3. *Raw*, a filter with lots of overdrive and exhibits a character of its own. Great for distortion guitar sounds
4. *Hard*, moderately distorting filter, with a nice clean whistle
5. *Hollow*, juicy moderate distortion with fairly much low-end self-oscillation
6. *Extreme*, for more wild sonic ideas
7. *Gentle*, a more smooth and clean general purpose characteristic
8. *Tube*, with a warmer sound and nice overdrive, great for synth sounds
9. *Metal*, with a rough, sharper sound and distortion
10. *Easy Going*, a softer version of the *Tube* filter
11. *Clean*, linear behavior with no clipping distortion at all

- **Response**

The response of each filter can be set to either Low Pass, High Pass, or Band Pass. In Low Pass mode, the filter will pass through frequencies lower than the center frequency. In High Pass mode, frequencies higher than the center frequency will be passed through. In Band Pass mode, only the frequencies around the cut-off frequency will be passed through.

- **Slope**

The slope switch sets the steepness of the filter, which controls how aggressively the frequencies around the center frequency are filtered. You can choose between 12 dB/octave, 24 dB/octave or 48 dB/octave settings. For example, if the response is set to Low Pass, more high frequencies will be passed above the cutoff frequency using at 12 dB/octave than at 48 dB/octave. But let your ears decide! Just listen to the sound as you move the filter around and see if you like it...

- **Delay**

Each filter has a delay function that will, well yes, delay the sound passing through. This feature will add some more wobblyness to your sounds! For example the creation of comb-filter effects (chorus/flanging). These effects occur when 2 or more signals are added together while the delay time is changing of at least 1 of the signals. You can set it up by using an [XLFO](#) sending a simple sine wave to modulate the delay time of a filter. Use slow XLFO rates to create the classic flanging effect. In this case the Stereo configuration works best.

Or how about some crazy stereo effects using the "Haas" effect. Mr. Haas found out that time differences are very important for your stereo perception. So when the left channel is delayed we will hear it coming from the right speaker. More about this in [this Wikipedia article](#).

To set this up start with 2 filters and select the *L/R* configuration with the [routing button](#). The schematic diagram will show us the filter 1 is used for the left channel and filter 2 is used for the right channel. If you raise the delay of filter 1 it will sound like the sound is panned to the right purely based on delay times, not volume. Now reset the delay time (both filters) to 0 and take a new XLFO to modulate the delay time of both filters and inverse 1 of the [Modulation Slot](#). Now you will hear the stereo image move from left to right. Sweet innit! From here you can add more filters with different settings and pan them differently and it will create some truly blissful stereo effects.

The delay offers so many extra sound design opportunities that we strongly suggest that you take some time to experiment with it.

**Tip:** When you make changes to filter parameters that are [modulation targets](#) (cut-off frequency, peak, pan and delay), the [modulation](#)

[\\_slots](#) that use that target are automatically shown. You can return to view all connections by using the *Show All Slots* button that appears on the left in the modulation slots bar.

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Next: [Interactive filter display](#)

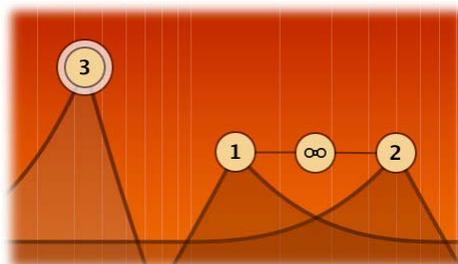
**See Also**

[Filters](#)

[Modulation](#)

## Interactive filter display

The interactive filter display gives an overview of the filter parameters and makes it very easy to adjust multiple filter parameters simultaneously. The vertical lines in the background represent a logarithmic scale that correspond to the actual filter frequencies.



- Drag a **filter dot** to adjust the *Frequency* and *Peak* parameters for that filter. The [active filter](#) will have a light colored ring around its filter dot in the display (filter 2 in the screen shot above).
- Drag the **link dot** (between filter 1 and 3 in the screen shot above) to adjust all linked filters simultaneously. To link filters, click on the **link buttons** that appear when the mouse is just above the filter buttons. For example, you can set them up as 4 resonant band-pass filters and sweep the cutoffs simultaneously. This configuration will give you access to all manner of 'vocal' sounds, as well as even more dramatic formant-based timbres.
- **Shift+click** a filter dot to toggle between the different filter slopes.
- **Ctrl+click** (**Command+click** on Mac) a filter dot to toggle between the different filter responses.
- When holding down the **Alt** key while dragging a filter dot, the other linked filters will change accordingly, as if you were dragging the link dot.
- Holding down both the **Alt+Ctrl** keys (**Alt+Command** keys on Mac) while dragging a filter dot will adjust all linked filters while fixing the link dot in the center, so the other linked filters will 'mirror' the changes.

### Tips

- Of course, all changes made in the filter display can be automated!
- You can connect a MIDI controller to either the frequency or the peak adjustment of the link dot with the [MIDI Learn](#) feature.

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Next: [Routing](#)

### See Also

[Filters](#)  
[Filter parameters](#)

## Routing

Volcano 2 lets you route the four available filters in almost any way you can think of. There are 3 basic routing configurations: Stereo, L/R or M/S. By clicking the main routing button, the routing possibilities are presented for each configuration depending on the amount of filters used.



The three buttons at the right of the routing button switch between the main routing configurations:

- **Stereo**  
In this default mode, both the left and the right channel pass through all filters. You can use the Pan rings to introduce differences in cutoff frequencies for each output channel and thus create beautiful stereo effects.
- **Left/Right**  
In this case the left and right channel will go through different filters. This allows for more extreme settings and stereo effects. If there are two filters, the left channel will go only through filter 1, and the right channel will only go through filter 2. If there are four filters, filter 1 and 2 are used by the left channel, and filter 3 and 4 are used by the right channel.
- **Mid/Side**  
This is the icing on the cake, never seen before in a filter plug-in. Now the signal is split into a Mid and a Side channel using the sum and difference of the left and right channels. Each signal is sent through different filters (as in L/R mode) after which it is reconstructed into the normal left and right channels. The Mid/Side concept has its origin in stereo microphone techniques using two microphones (more about that [here on Wikipedia](#)) but also gives us many options to process a stereo audio signal.

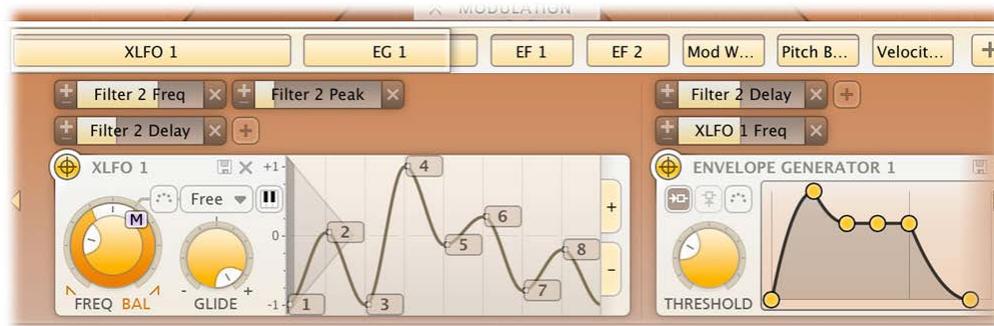
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Next: [Modulation](#)

See Also  
[Filters](#)

## Modulation

The real fun with Volcano 2 starts with the incredible modulation options. Almost any parameter can be modulated. These are called **modulation targets**. They can be modulated by any of the available **modulation sources**: [XY controllers](#), [XLFOs](#), [envelope generators](#), [envelope followers](#) and [MIDI sources](#). The modulation signal always flows via a **modulation slot** that allows you to vary the extent of modulation.



Use the **Modulation button** at the top to show or hide the entire modulation section, which consists of the following elements:

- **Source selection bar**

The source selection bar shows a schematic overview of all modulation sources at all times. Simply click on a source button here to scroll the source into view. The highlighted section of the bar shows the currently visible part, and it can be dragged to scroll the sources as well. The top segment of each source button lights up according to the modulation signal it is currently sending.

- **Modulation slots**

As said before: every modulation source uses a modulation slot to send its signal to the target. Volcano 2 always groups all modulation slots above the source that they're connected to. Each slot displays the destination, graphically shows the amount, and you can quickly turn it on or off, or reverse its output.

- **Modulation sources**

The modulation sources are organized in a horizontally scrolling strip below the source selection bar. There are 5 different kinds of sources available: The [XLFO](#) can generate almost any waveform you can imagine and can be synchronized to the host tempo. The [Envelope generator](#) is of the usual ADSR kind and triggered by audio or MIDI. The [Envelope follower](#) will follow the loudness of the incoming audio or side-chain signal. The [MIDI source](#) transforms any incoming MIDI data into a modulation signal. Finally, the [XY controller](#) lets you modulate two targets using horizontal and vertical mouse movements.

To **add** a modulation source, click the + button in the source selection bar.

To **delete** a modulation source, click the remove button X in the top right corner in the source interface. When a source is deleted, modulation slots that use that source will also be deleted automatically.

**Tip:** You can scroll the modulation source section with the mouse wheel. On Windows, most mouse wheels only work vertically, but you can hold down the *Ctrl* and *Shift* keys for horizontal scrolling in that case.

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Next: [Drag-and-drop modulation slots](#)

### See Also

[Filters](#)  
[Overview](#)

## Drag-and-drop modulation slots

One of the best features of FabFilter Volcano 2 is undoubtedly the ability to set up modulation connections with drag-and-drop. There is no need to search through long drop-down menus containing dozens of sources and targets or to find your way in cluttered and obscure matrix views. This simple method of making modulation connections makes sound designing become fun, easy and, above all: fast. So how does it work?

Grab a source...



First, grab the source drag button that you would like to use as a modulation signal, for example XLFO 3. The moment you click on the source drag button, the interface dims and all modulation targets are highlighted.

... drag it to a target...



The moment you start dragging, you will see a line from the source drag button to the icon that you are dragging. If you hover the mouse over filter buttons or source selection buttons they will automatically be activated. The mouse cursor will snap to any available modulation target.

... and drop it.



Now drop the icon on the highlighted knob of the parameter that you would like to modulate, for example the *Filter 1 Cut-off* knob. That's all there is to it!

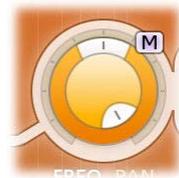
If you wish, you can also **add a slot manually** using the small plus button above each modulation source. You can also modulate slot level knobs, which makes incredibly complex modulation setups possible. To **sort the slots** click the + button in the source selection bar and select *Sort Slots* from the menu that pops up.



Once a slot has been added, you can edit it:

- Use the Level slider to adjust the amount of modulation. Like with [knobs](#), hold down *Shift* for fine-tuning; hold down *Alt* to adjust all slot levels for the same source; *Ctrl-click* (Windows) or *Command-click* (OS X) to reset the level to the default value.
- To the left of the Level slider, you can invert the modulation signal with the +/- button.
- When you hover over the slider on the left an on/off button appears. Use this to temporarily disable the slot. On the right a menu is accessible that gives direct access to all available modulation targets.
- To delete the slot, click the Remove button **X** to the right of the Level slider.

Our what-you-use-is-what-you-see interface makes complex programming very easy. Volcano 2 uses **dynamic slot highlighting** to visualize all the sources that modulate a specific target. When a parameter is modulated a small **modulation indicator "M"** appears:



Click the **M** modulator indicator to highlight all slots that modulate this target. In the source selection bar the sources that modulate the target are also highlighted.

This feature makes programming so much more fun because it's easy to see what is happening inside a patch. To return to the normal interface click anywhere on the interface background or click the Modulation Indicator again.

When a modulation indicator appears next to a [filter button](#) or [envelope generator](#), this means one or more parameters are modulated.

When you click that indicator it will highlight all slots that modulate a target of the component or envelope generator.

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Next: [XLFO](#)

**See Also**

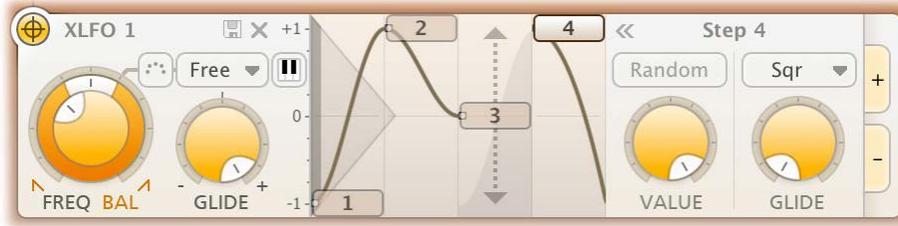
[Modulation](#)

[What-you-use-is-what-you-see](#)

## XLFO

The XLFO is like a classic LFO but it can do so much more! It can also be used as a 16 step sequencer with an individual glide parameter for every step. The display shows the waveform that is used by the XLFO. Steps can be freely added or deleted to shape the funkiest of waveforms. But there is more... This XLFO can also be used as arpeggiator! The values can be equally be distributed over 2 octaves, so when connecting it to any pitch parameter, it will function like an arpeggiator. We couldn't make it more funky!

To add an XLFO as a modulation source, click the + button in the [source selection bar](#) and click **New XLFO**.



At the left of the XLFO interface, you find the global parameters that affect the entire waveform:

- **Frequency**

The frequency knob sets the time it takes for 1 cycle of the waveform to complete. This knob is a modulation target, so you could let one XLFO modulate the frequency of another XLFO. The XLFO can be synchronized to the tempo of the plug-in host or set to run free. With the options at the top-right corner of the frequency button you can choose the different settings:

- Free running mode will allow values from 0.0 to 500 Hz, so the minimum cycle length is 0.002 seconds.
- When using any of the synchronized cycle lengths (16 to 1/64, measured in bars) the frequency knob changes into the **Offset** knob. It now acts like a cycle length multiplier and therefore is capable of changing the cycle length relative to the host tempo, from half to two times the host tempo. Click the dots around the knob to jump to certain predefined offsets for dotted and triplet synchronization.

- **Balance**

The outer ring of the frequency knob adjusts the time balance of the first and last halves of the step sequence. For example, when turned to the left, the first half of the wave form is generated more quickly than the last half.

- **MIDI sync**

The XLFO can be restarted at any point using MIDI if the MIDI sync option is enabled at the top-right corner of the frequency knob. When activated a note-on MIDI message (e.g. pressing a key) will restart the cycle of the waveform (to the point set by the Phase offset slider).

- **Snap**

This function makes it possible to use the XLFO as an arpeggiator. When you enable Snap, a small piano keyboard appears, the range of the XLFO turns into 2 octaves, and steps "snap" to notes on the piano keyboard. Now when you modulate the filter frequency, turn the slot level to maximum, and the total amount of modulation will exactly correspond to 2 octaves. With [filter](#) frequency parameters, you will hear individual notes if used with high filter peak settings.

- **Glide**

The global Glide knob acts like an overall glide offset. The amount of glide determines the point within a step at which the XLFO starts to interpolate to the value of the next step. The global Glide value is added to the glide value for individual steps to arrive at the final glide value for each step. The final glide value is limited between 0 (no interpolation) and 1 (full interpolation). Because the global Glide value can range from -1 to 1 it can completely overrule the individual step glide values at the extreme settings. It is also a modulation target which allows for very cool effects.

- **Phase offset**

In the step editor you can see a triangular shape. The vertical line of the shape indicates the beginning of each cycle. You can move this triangular shape, and thus change the beginning of a XLFO cycle. This phase offset is a modulation target, so when the XLFO frequency is set to 0, you can use another modulator to cycle through the different steps.

**Tip:** Like with [knobs](#), you can *Ctrl/Command*-click on the phase offset slider to reset it.

At the top right of the global settings, the Presets button  provides access to the XLFO [section presets](#). The Remove button  deletes the XLFO source. By default, the XLFO starts with two steps that make a sine wave. You can customize this by overwriting the predefined **Default** section preset.

## Editing Steps

You can shape the waveform of the XLFO in almost any way you want by editing the individual steps.

- Drag a step up or down to **change the value** for the step.
- Click a step to **select** it.
- Hold down *Ctrl* (*Command* on Mac) and click a step to **select multiple steps**. Hold down *Shift* and click a step to **select a consecutive range** of steps.
- Click next to a step to **deselect** all steps.
- Click the + button at the end of all steps to **add** a new step. The new step is added to the right of the selected step, or at the end of all steps.
- Click the - button at the end of all steps to **remove** the selected steps. If no steps are selected, the last step is removed.

If one or more steps are selected, the XLFO expands to show the **step interface** where the parameters for the selected steps can be

edited:

- **Random**

The Random button enables random values for this step. If enabled, the XLFO will use a new random value for the step each time it encounters it. The display also changes to show that the value is chosen at random (see step 3 in the screen shot above).

- **Value**

The Value knob adjusts the value of step. This is the same as dragging the step up and down, except that with multiple selected steps, the value of all steps is set to the same value. In contrast, when you drag multiple selected steps, the relative distance is kept the same.

- **Curve**

The Curve button selects the curve that is used to interpolate to the next step when the final glide value is higher than 0: Linear, Sqr, Sqrt and Sine.

- **Glide**

The Glide knob sets the per-step glide value. This is combined with the global glide value to determine at which point the XLFO starts to interpolate towards the next step.

To start exploring the many sound shaping possibilities start with a XLFO that [modulates](#) a Delay Time or Filter Frequency knob to make the sound change over time. You'll be amazed by the many possibilities. Have a look at the presets to see the XLFO in many different setups to get an idea of what it can do for you and start creating your own sequences to funkify your life!

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Next: [Envelope generator](#)

**See Also**

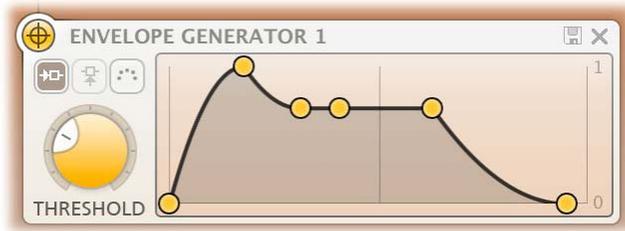
[Modulation](#)

[Drag-and-drop modulation slots](#)

[What-you-use-is-what-you-see](#)

## Envelope generator

The envelope generator (EG) generates an ADSR envelope. The envelope being the way in which the level changes with time and is controlled by the *Attack*, *Decay*, *Sustain* and *Release* parameters. Its function is to modulate a parameter over time, based on MIDI input or the amplitude of the input signal or side chain signal.



To add an envelope generator as a modulation source, click the + button in the [source selection bar](#) and click **New Envelope Generator**.

The following EG parameters are available (hold the mouse over a control point in the EG display to see which parameter it affects):

- **Trigger**

The EG can be triggered by three different kinds of input: MIDI note events, the main input signal, or the signal from the side-chain input. When MIDI is selected, the Threshold knob is hidden. Depending on the type and amplitude of the incoming signal you need to adjust the threshold for optimal functioning. Look at the top segment of the source button for the EG to see when it is in the triggered (Attack-Decay-Sustain) state. See also [VST plug-in versions](#).

- **Delay**

The time it takes for the attack to start after the key is pressed (or triggered when the side-chain signal exceeds the threshold).

- **Attack**

The Attack portion of the envelope is the time taken for the amplitude to reach maximum value. Slow attack is commonly part of sounds called pads. But for percussive sounds the attack time should be as short as possible.

- **Decay**

After the sound has reached its maximum level, it starts to decay until it reaches a level known as the Sustain level at a rate set by the Decay time setting.

- **Sustain**

This is the level reached after the decay time. The EG will hold this level as long as a key is pressed. Note that this parameter specifies a volume level rather than a time period.

- **Hold**

Once the key is released, the value will remain at the sustain level for a time set by the hold parameter.

- **Release**

After the hold time the sound resumes its decay, this time at a new rate determined by the Release setting.

### Tips

- When adjusting the EG control points, you can hold down the *Shift* key to fine-tune a setting, just like with regular [knobs](#).
- To let a sustain pedal control the EG, you can hook it up to the Hold setting. The recommended way to do this is via a [MIDI source](#).

At the top right of the EG interface, the Presets button  provides access to the EG [section presets](#). The Remove button  deletes the envelope generator. You can customize the default EG settings (used when creating a new EG) by overwriting the predefined **Default** section preset.

---

Next: [Envelope follower](#)

### See Also

- [Modulation](#)
- [Drag-and-drop modulation slots](#)
- [What-you-use-is-what-you-see](#)

## Envelope follower

The envelope follower modulation source will output an envelope similar to the side-chain signal. The amplitude of the positive peaks of the input signal is measured and the outer shape (= envelope) is the output signal of the modulation source. You can set the *Attack* and *Release* parameters to 'smooth out the bumps'.

To add an envelope follower as a modulation source, click the + button in the [source selection bar](#) and click **New Envelope Follower**.



The two buttons at the top of the EF source interface select which signal is used to trigger on: the main input signal or the signal from the side-chain input. See also [VST plug-in versions](#).

At the top right of the source interface, the Presets button  provides access to the EF [section presets](#). The Remove button  deletes the envelope follower. You can customize the default EF settings (used when creating a new EF) by overwriting the predefined **Default** section preset.

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Next: [MIDI source](#)

### See Also

[Modulation](#)

[Drag-and-drop modulation slots](#)

[What-you-use-is-what-you-see](#)

## MIDI source

The MIDI source is a powerful modulation source if you want more control over Volcano 2 using a MIDI keyboard or MIDI control knobs. Note that you first need to route data from a MIDI track to Volcano in your host.

To add a MIDI source as a modulation source, click the + button in the [source selection bar](#) and click **New MIDI Source**.



- **MIDI Input**

Normally the MIDI source lets you use MIDI input such as velocity, pitch bend and modulation wheel to influence any parameter that can be modulated.

- **Controller number**

... but when you set the input selection to Controller, it lets you use any MIDI controller as a modulation source.

- **Response curve**

The response curve can be adjusted to get the desired control over the MIDI source output. For example, when used with velocity as MIDI source the linear, exponential, logarithmic, square, square root or sine curves make great dynamic differences.

Using a MIDI source is different from [MIDI Learn](#) because there is no direct control of a knob via MIDI but it uses a modulation slot instead. This way you can add modulation to an already modulated destination. Or you can use the full rotation of a knob while actually modulating a smaller range. This can be a good way to control say, the filter cut-off frequency or EG attack for which you sometimes want to make small changes with great precision.

At the top right of the source interface, the Presets button  provides access to the MIDI source [section presets](#). The Remove button  deletes the MIDI source. You can customize the default MIDI source settings (used when creating a new MIDI source) by overwriting the predefined **Default** section preset.

### Tips

- When modulating [filter frequency](#) with pitch bend, the default slot level value corresponds to +/- one note of modulation (you can reset to the default value by *Ctrl/Command*-clicking the slot level). The maximum slot level corresponds to +/- one octave.
- To let a sustain pedal control an [envelope generator](#), use a MIDI source. Set the input to Controller, and the controller number to 64. Now, [drag](#) the source drag button for the MIDI source to the hold control point of the envelope generator, and set the slot level to maximum. Of course, you can also set up more sophisticated behavior of the sustain pedal, for example by modulation the release setting instead of hold: the possibilities are endless.
- The VST 3 version of FabFilter Volcano 2 doesn't support per-note aftertouch modulation.

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Next: [XY Controller](#)

### See Also

[Modulation](#)  
[Drag-and-drop modulation slots](#)  
[What-you-use-is-what-you-see](#)  
[MIDI learn](#)

## XY Controller

The XY Controller makes for more tweaking fun. It's a classic, and we didn't dare to leave it out! It can control two parameters with one mouse movement. When browsing presets don't forget to listen to the sound mangling possibilities provided by these controllers.

To add an XY controller as a modulation source, click the + button in the source selection bar and click **New XY Controller**.



Because the XY controller has two "outputs", it also has two source drag buttons labeled X and Y. The slots for the XY controller are grouped in two rows, with the X-slots at the top. For example, in the screen shot above, the X axis controls the output panning, while the Y axis controls the level.

The Remove button **X** deletes the XY Controller.

### Tips

- To reset the XY Controller to its default position, hold down the *Ctrl* key (Windows) or *Command* key (OS X) and click once.
- When you want to adjust only one parameter on one axis, holding *Shift* will make it easier to do so while keeping the other parameter constant.
- With [MIDI learn](#), you can set up a hardware MIDI controller to control the XY controller. So if your MIDI controller has XY-functionality you can directly control Volcano 2.

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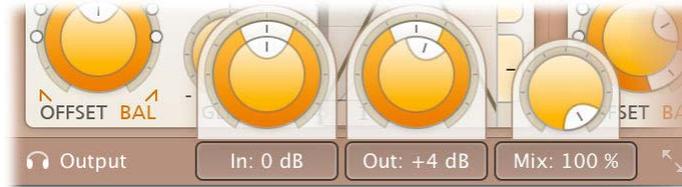
Next: [Output controls](#)

### See Also

[Support](#)

## Output controls

Besides the [MIDI learn](#) button, the bottom bar controls various options and settings for the output signal of Volcano 2.



- **Auto Mute Self-Osc**

The Auto Mute Self-Osc option reduces the resonance of the filters if there is no incoming audio signal. Depending on the filter characteristic you can push the filter into self-oscillation with increasing peak values. The auto-mute feature will make higher peak settings possible while the filters will not be howling continuously when you stop playback in your host.

- **Audition**

The audition switch (recognizable by its headphones icon) lets you listen to either the normal output signal (default setting), the input signal (bypassing the entire plug-in) or the side chain signal. When setting up side chaining in your host this is very useful to confirm that the correct side chain signal is routed to the plug-in.

- **Input**

The input button shows the current input gain and lets you adjust it from -36 dB to +36 dB. To change the gain, simply drag the button up and down. For precise adjustments or to change the panning, click the input button once to open a pop-up window with the actual input/pan knobs. Click the button again to let the pop-up window disappear. The input and pan knobs are also [modulation targets](#).

- **Output**

The output button shows the current output gain, also adjustable from -36 dB to +36 dB. It works the same as the input button and is also a modulation target. Note that you can overdrive the filters by increasing the input gain and reducing the output gain at the same time.

- **Mix**

You can use the mix button to mix some of the original (dry, unprocessed) input signal back into the output signal, reducing the amount of filtered (wet) signal. Like the input and output buttons, this is also a modulation target.

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Next: [MIDI learn](#)

### See Also

[Overview](#)  
[Modulation](#)

## MIDI Learn

Controlling FabFilter Volcano 2's parameters directly with MIDI is very easy using the MIDI Learn feature. With MIDI Learn, you can associate any MIDI controller with any parameter.



Click the **MIDI Learn** button in the bottom bar to enter MIDI Learn mode. The interface dims and the parameters that can be controlled are highlighted. Each parameter has a small text balloon that displays the associated controller number. Now do the following to associate a controller number with a parameter:

1. Touch the control of the desired parameter in the interface that you wish to control. A red square will mark the chosen parameter.
2. Adjust the slider or knob on your MIDI keyboard or MIDI controller that you want to associate with that parameter.

That's it! The parameter will now be controlled with the MIDI controller. You can now go back to step 1 to associate a different parameter. Note that there is no warning when you associate a different knob with a controller number that is already used. It will just be replaced.

To exit MIDI Learn mode, click the MIDI Learn button again, or click Close at the top of the interface.

Click the small menu drop-down button next to the MIDI Learn button to access the **MIDI Learn menu**:

- **Enable MIDI**  
This globally turns MIDI control of parameters on or off: useful in hosts that automatically send all MIDI events on a track to all effect plug-ins associated with that track as well.
- **Clear**  
This submenu shows all parameter associations and lets you delete individual associations or clear all associations in one step.
- **Revert**  
Reverts to the last saved MIDI mapping (or the state when the plug-in was started).
- **Save**  
Saves the current MIDI mapping so Revert will go back to this state. The current mapping is automatically saved when closing the plug-in.

## Routing MIDI to effect plug-ins

For MIDI Learn to work properly, the plug-in need to actually receive MIDI of course. Depending on your host, it can be quite difficult to route MIDI data to effect plug-ins. Here's how to do it in the most important hosts:

- **Logic Pro**  
Instead of adding FabFilter Volcano 2 to one of the insert slots, create a new **Instrument Track**, and click on the Instrument slot. Then choose **AU MIDI-controlled Effects** > FabFilter > FF Volcano 2. Now, the plug-in receives MIDI. To get audio into the plug-in, click the '**Side Chain**' drop down menu in Logic's plug-in header and choose the actual input track. Next, you can mute that original track, so you only hear the audio through the plug-in. The only downside is that plug-ins with an external side-chain cannot use it anymore.
- **Cubase**  
Simply create a new **MIDI track** and set its output to the Volcano 2 instance you would like to control via MIDI.
- **Pro Tools**  
Create a new **MIDI track**. From the MIDI input drop down menu, choose your MIDI device (if not already selected) and from the

MIDI output drop down menu, choose FabFilter Volcano 2 -> channel 1 for the instance you would like to control.

- **Ableton Live**

First of all, create a new **MIDI track**. From the 'MIDI from' drop down menu, choose your MIDI device (if not already selected). Then, in the 'MIDI to' drop down menu, choose the Audio track that has FabFilter Volcano 2 on it. NOTE: only the first plug-in on any track can receive MIDI!

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Next: [Undo, redo, A/B switch](#)

**See Also**

[Overview](#)

## Undo, redo, A/B switch

The Undo and Redo buttons at the top of the FabFilter Volcano 2 interface enable you to easily undo changes you made to the plug-in. With the A/B feature, you can quickly switch between two different states of the plug-in.



- The **Undo** button at the left will undo the last change. Every change to the plug-in (such as dragging a knob or selecting a new preset) creates a new state in the undo history. The Undo button steps back through the history to restore the previous states of the plug-in.
- The **Redo** button cancels the last undo command. It steps forward through the history until you are back at the most recent plug-in state.
- The **A/B** button switches from A to B and back. Before switching, the current state of the plug-in is saved, so if you click this button twice, you are back at the first state. The button highlights the currently selected state (A or B). In the example above, the A state is active.
- The **Copy** button copies the active state to the inactive state. This marks the current state of the plug-in and allows you to go back to it easily with the A/B button. After clicking Copy, the button disables itself to show that both states are equal, so there is nothing to copy anymore.

### Notes

- If the plug-in parameters are changed without using the plug-in interface, for example with MIDI or automation, no new undo states are recorded.
- The Undo and Redo buttons will disable themselves if there is nothing to undo or redo.

---

Next: [Loading presets](#)

### See Also

[Overview](#)

## Loading presets

The included presets give a great overview of what you can do with FabFilter Volcano 2. You can either use the presets as they are, or tweak them further to create your own unique effects.

- To load a preset, click the preset button. The presets menu will appear with all available presets. Click a menu item to load that preset. The currently selected preset is highlighted with check marks.
- To explore the presets one by one, click on the little arrow buttons to the left and right of the main preset button. This will load the previous or next preset in the menu.

The preset button shows the name of the current preset. If you have changed the preset by adjusting one or more parameters, the name is dimmed to indicate that this is not the original preset anymore.

### Tips

- The **Default Setting** preset is loaded automatically when FabFilter Volcano 2 is started. To change the default settings, simply overwrite this preset by clicking **Options > Save As Default** in the presets menu.
- Some factory presets use [envelope generators](#). You may need to adjust their threshold parameters (depending on the level of the input signal) to get the desired effect.
- To open a preset outside the [presets folder](#), click **Options > Open Other Preset**. This might be useful if someone sends you a preset by e-mail, for example.
- If somehow the factory presets are lost or not installed properly, click **Options > Restore Factory Presets** in the preset menu to restore them.

---

## MIDI Program Change and Bank Select

Loading a presets can also be done via MIDI, using Bank Select and Program Change messages. Click **Options > Enable MIDI Program Changes** in the preset menu to enable or disable this feature. When enabled, the corresponding bank/program numbers are shown in front of the preset name (for example: *(2/65) My Preset*). This means that you can load that preset by first sending a Bank Select message to select bank 2 and then sending a Program Change message to select program 65.

**Important:** All the presets in your preset folder are numbered automatically, starting with bank 0 and program 0. This way, you are able to access any of the presets via MIDI. However, this also means that when you add new presets to the menu, bank/program numbers of other presets might change. Be aware of this when recording program changes in a session!

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## Compatibility with Volcano 1.x

All presets created with Volcano 1.x can be loaded in Volcano 2. If Volcano 1.x is also installed on your computer, your Volcano 1 presets will be accessible via the **V1 Preset Folder** submenu in the preset menu. You can read more about compatibility between Volcano 1.x and Volcano 2 in [Upgrading to Volcano 2](#). Please take some time to read it if you are planning to replace Volcano 1 instances with Volcano 2 instances in your songs.

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Next: [Saving presets](#)

### See Also

[Overview](#)  
[Quick Start](#)

## Saving presets

You can easily extend the included presets with new settings to build your own library of presets for FabFilter Volcano 2 that you can reuse in various projects. This is also a good way to copy settings across multiple instances of FabFilter Volcano 2 in a session.

To save the current setting as a preset, click the preset button, and then click *Save As*. A standard Save dialog will appear. Type a name for the new preset and click *Save* to finish.

In the Save dialog, you can also rename and delete existing presets and create a new folder to store presets in. New folders will show up as new categories in the preset menu. (On Mac OS X, this should be done with the Finder.)

See [How presets are stored](#) to determine the preset folder location and learn more about factory presets.

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*Next:* [Section presets](#)

### See Also

[Loading presets](#)

[Using FabFilter Volcano 2](#)

## Section presets

You can save your own unique settings for different components of the plug-in using section presets. This way you can reuse certain common settings to customize Volcano to your own needs. To load and save section presets, click the Presets button  in a section. This will display a presets menu for that section. FabFilter Volcano 2 comes with a basic selection of section presets, but we encourage you to save your own presets to build a custom library of sound building blocks.

Supported sections are:

- The combined filter section, including routing and routing mode
- XLFO
- Envelope generator
- Envelope follower
- MIDI source

When you add a new modulation source, it loads its **Default** section preset. You can customize the initial settings by just overwriting that preset using the save dialog.

Section presets are stored in the *Application Data* folder (Windows) or *Application Support* folder (OS X) for the current user. For example, the full path to the presets for the filter section on Windows XP is *C:\Documents and Settings\. You cannot change the section preset paths.*

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Next: [How presets are stored](#)

### See Also

[Loading presets](#)  
[Overview](#)

## How presets are stored

Presets for FabFilter Volcano 2 are stored in separate files with the .ffp extension (for FabFilter Preset). All presets reside in subfolders in the main preset folder. The subfolders will show up as separate categories in the preset menu. You can also further divide the subfolders into categories.

You can manage the preset files just like other files on your computer. The easiest way to do this is in the Save dialog that appears if you are saving a preset. The preset menu will automatically reload itself with the changes when the dialog is closed.

Furthermore it is very easy to share your newly created presets with other users since FabFilter presets use the same file format on both Windows and Mac OS X.

The default location of the main preset folder is *My Documents\FabFilter\Volcano 2* for Windows, and *~/Library/Audio/Presets/FabFilter/FabFilter Volcano 2* for Mac OS X. To change this location, first copy all presets to the desired new location, and then click **Options > Change Preset Folder** in the preset menu and select the new folder.

## Restoring factory presets

If you have accidentally lost the factory presets, you can easily restore them by clicking **Options > Restore Factory Presets** in the preset menu. This will install all factory presets again.

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Next: [Purchasing FabFilter Volcano 2](#)

### See Also

[Saving presets](#)

[Overview](#)

## Purchasing FabFilter Volcano 2

Once you have downloaded and installed the evaluation copy of the FabFilter Volcano 2, you may evaluate it during 30 days. Every time you start the plug-in, you will see the following dialog:



While there are still days left, you can click **Evaluate** to start working with the plugin. If you want to keep using FabFilter Volcano 2 after the evaluation period, you must buy a copy in the online FabFilter Shop by clicking the **Buy Now** button in the evaluation dialog.

- [Go to the FabFilter Shop and purchase FabFilter Volcano 2 now](#) 

We accept credit cards from all major companies, check payments, wire payments, and PayPal. The FabFilter Shop uses secure connections and encryption: therefore your personal information is completely safe.

Within a few minutes after you have purchased your copy, you will receive an e-mail containing your personal license key. You use this license key to turn the evaluation copy into a fully registered version without the evaluation dialog and the 30-day trial restriction.

**Note:** If the evaluation period has expired but you didn't have the chance to properly evaluate the plug-in, you can request a new evaluation period by contacting us at [info@fabfilter.com](mailto:info@fabfilter.com) .

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Next: [Entering your license key](#)

### See Also

[Support](#)

[License agreement](#)

## Entering your license key

After you have purchased FabFilter Volcano 2 in the online [FabFilter Shop](#), you will immediately receive an e-mail containing your personal license key. This license key will turn the evaluation version into a fully registered plug-in.

- Start FabFilter Volcano 2 and click **Enter License** in the evaluation dialog, or click Enter License on the Help menu if the plug-in is already running.
- Copy the license information from the e-mail you have received and paste it into the text field. Make sure that you are copying the entire license key including the *Product* and *Licensee* lines! If you are not sure what text to copy, just copy and paste the whole e-mail.



After you have entered your license information, you will need to restart the plug-in host, so make sure you save your settings if needed. From now on, you will be able to use FabFilter Volcano 2 for an unlimited period of time with full support via e-mail.

### Tips

- After your purchase, you can always retrieve your license key again by logging into your [personal FabFilter account](#). Here you can also keep track of all your orders and take advantage of great discounts when buying other FabFilter plug-ins!
- To deauthorize your license key and remove it from the computer, click **Deauthorize** on the Help menu. If you temporarily needed to install your license on another computer, or if you have transferred your license to someone else, this is the way to deinstall your personal license key safely.

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Next: [Support](#)

### See Also

[Purchasing FabFilter Volcano 2](#)  
[Support](#)  
[License agreement](#)

## Support

If you need help with problems or questions, and the help file does not provide an answer, please visit the support pages on our web site.

- [Go to FabFilter Support](#) 

From here, you have direct access to the customer support forum, very useful tutorial videos for all FabFilter plug-ins, online and PDF versions of all our help files, and a section with extra downloads (such as presets, controller templates, older plug-in versions).

For sales-related questions and technical support, you can also contact FabFilter directly at [info@fabfilter.com](mailto:info@fabfilter.com).

### Reporting a bug

If you have encountered a bug in FabFilter Volcano 2, first of all make sure that you are using the latest version of the plug-in, which you can find at [www.fabfilter.com/download](http://www.fabfilter.com/download) . You can easily check the version of FabFilter Volcano 2 that you are using by clicking Help > About in the plug-in interface. If the bug is still present in the latest version, please send us an e-mail at [info@fabfilter.com](mailto:info@fabfilter.com) and include as much technical information as possible: operation system and version, host software and version, steps to reproduce the bug, etc. Thanks in advance!

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Next: [Upgrading to Volcano 2](#)

### See Also

[Overview](#)

[About FabFilter](#)

## Upgrading to Volcano 2

Upgrading from Volcano 1.x to Volcano 2 is safe and easy: installing Volcano 2 will not replace or delete the previous Volcano 1.x plug-in. Both versions will co-exist and can both be used at the same time. This ensures that you can open old songs that use Volcano 1.x without problems!

### Volcano 1.x presets

All presets created with Volcano 1.x can be loaded in Volcano 2. If you upgraded from Volcano 1 to the new version, your original Volcano 1 presets will be accessible via the **V1 Preset Folder** item in the preset menu. See also [Loading presets](#).

### Replacing a Volcano 1.x instance by Volcano 2

If you are working on a song and want to replace a Volcano 1 instance with the new Volcano 2, we advise you to do the following:

- First, save the current setting of the Volcano 1.x instance as a FabFilter preset in the Volcano 1 preset folder.
- Then, remove the Volcano 1 instance and add Volcano 2 in its place.
- Finally, load the V1 preset that you just created into Volcano 2 via the preset menu.

### Automation

Because the feature set of Volcano 2 has changed drastically, any automation data that has been written by a Volcano 1 instance **cannot be read correctly** by Volcano 2.

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Next: [Manual installation](#)

#### See Also

[Overview](#)

[Support](#)

## Manual installation

When installing FabFilter Volcano 2, the installation program will try to copy the plug-in into the appropriate plug-ins folders, and in most cases your host will recognize FabFilter Volcano 2 automatically. Otherwise, please follow these instructions:

### Windows

On Windows, most hosts have their own VST plug-ins folder. So if you are using Windows and your host does not recognize FabFilter Volcano 2, you need to locate the proper plug-ins folder for your host first (it is usually shown in the Preferences or similar dialog). Then, copy the file *FabFilter Volcano 2.dll* from *C:\Program Files\FabFilter\Volcano 2* (or *C:\Program Files (x86)\FabFilter\Volcano 2* if you are using a 32-bit host on 64-bit Windows) to the plug-ins folder that you have found and restart the host so it can reload all its plug-ins. For the AAX version of Volcano 2, copy the *FabFilter Volcano 2.aaxplugin* folder to the common Pro Tools AAX plug-in folder on your computer; for the RTAS version of Volcano 2, copy the *FabFilter Volcano 2.dpm* and *FabFilter Volcano 2.dpm.rsr* files to the Pro Tools RTAS plug-in folder on your computer.

You can simply uninstall plug-ins or bundles via the Control Panel.

### Mac OS X

On Mac OS X, plug-ins are installed in the standard plug-in folders in the system Library folder. These are the *only* possible correct locations:

- Audio Units: */Library/Audio/Plug-Ins/Components*
- VST/VST3: */Library/Audio/Plug-Ins/VST* and */Library/Audio/Plug-Ins/VST3*
- RTAS: */Library/Application Support/Digidesign/Plug-Ins*
- AAX: */Library/Application Support/Avid/Audio/Plug-Ins*

Note: AU and VST/VST3 plug-ins may be placed in the user's Library folders under *~/Library/Audio/Plug-Ins* as well.

To uninstall the plug-ins from your Mac, you can just delete the specific FabFilter plug-in files at the above locations. Finally, if you really want to delete all data written by our plug-ins, you can remove the following folders/files from your user *~/Library* as well:

- *~/Library/Audio/Presets/FabFilter/FabFilter Volcano 2*
- *~/Library/Application Support/FabFilter/Volcano 2*
- *~/Library/Preferences/com.fabfilter.Volcano.2.plist*

**Note:** Since OS X 10.7 (Lion), the system and user Library folders are marked as hidden by default. To make them visible again in Finder, open Terminal (found in */Applications/Utilities*) and enter the following commands:

```
chflags nohidden /Library
chflags nohidden ~/Library
```

If you still have problems, contact [FabFilter Support](#) .

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Next: [VST plug-in versions](#)

### See Also

[Quick start](#)

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## VST plug-in versions

FabFilter Volcano 2 is available in both VST 2 and the new VST 3 formats. They can be installed and used both at the same time. The VST 3 format can only be used by hosts that support it, for example Steinberg's Cubase 5. It has the advantage of easy side-chaining, while in VST 2 it can be quite a hassle to get this to work properly. On the other hand, the VST 2 format is compatible with more different hosts and it has more thorough MIDI support (i.e. polyphonic aftertouch).

## VST 2

For the VST 2 format, there are four versions of the FabFilter Volcano 2 plug-in that form all combinations of mono/stereo and with or without [external side chain input](#):

- *FabFilter Volcano 2* (stereo without side chain)
- *FabFilter Volcano 2 (SC)* (stereo with side chain)
- *FabFilter Volcano 2 (Mono)* (mono without side chain)
- *FabFilter Volcano 2 (Mono SC)* (mono with side chain).

The default VST plug-in does not have external side chain support because some hosts (e.g. Steinberg WaveLab) will not work correctly otherwise.

The external side chain feature in FabFilter Volcano 2 (SC) works well in **Ableton Live 6** and in **Tracktion 2** (use Tracktion's Rack feature to be able to route the side chain input).

With **Steinberg Cubase**, do the following to use an external side chain input:

1. Create a Group Channel track with Quadro configuration (in the More... menu).
2. Open the VST Connections window. In the Group/FX tab, locate the group bus you just created and right-click it to create child buses for the Stereo and Stereo (Ls Rs) parts.
3. In the Mixer, insert FabFilter Volcano 2 (SC) in the group channel track.
4. You can now route the input audio signal track to the Stereo child bus. The side chain track must be routed to the Stereo (Ls Rs) child bus. (The routing settings are found at the top of each channel.)
5. Use Volcano 2's [monitoring feature](#) in the bottom bar to confirm that everything is routed as you want it.

**Note:** In earlier versions of Cubase, the Group/FX tab is missing from the VST Connections window. In this case, you must pan the input track to the front of the quadro bus, and the side chain track to the rear of the quadro bus. If you are using Cubase 4, make sure you have upgraded to at least version 4.02 to get everything to work.

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Next: [External side chaining](#)

### See Also

[Quick start](#)

[Manual installation](#)

## External side chaining

FabFilter Volcano 2 offers the possibility of feeding an external signal to its side chain, so that you can make it trigger on a different signal than the audio it is actually processing. Feeding a signal to a plug-in's side-chain inputs works slightly different in various hosts. This topic describes the procedure for some of the most popular hosts around: [Cubase](#), [Logic Pro](#), [Ableton Live](#) and [Pro Tools](#).

To explain how it works, we use a scenario with two tracks. The first one contains the audio that we want to process with Volcano 2, which we'll call the *main track* from now. The second track contains the audio that we want to route to Volcano 2's external side-chain input and use as trigger signal. We'll call this track the *side chain track*.

After setting up everything according to the instructions below for your host, you can check whether everything is routed correctly: play the audio and enable FabFilter Volcano 2's Audition button to listen to the side-chain signal. Afterwards, disable the Audition mode again. Any [envelope generators](#) or [envelope followers](#) that are set to trigger on the external side chain, will now respond to the side chain signal.

### Cubase

- Open Cubase and create a new empty project.
- Add two audio tracks that we'll use as main track and side chain track.
- Add audio files on both the main track and the side chain track. You can simply drag audio files from a Finder/Explorer window onto a track.
- Open the Mixer. In the main track, click on an empty insert slot and select the VST 3 version of FabFilter Volcano 2 in the Filter menu (note the VST 3 icon which looks like ///).
- Open FabFilter Volcano 2's interface and set up an [envelope generator](#) or [envelope follower](#), triggered by the external side chain signal.
- In the plug-in header, click on the Activate Side-Chain button (right of the R/W buttons) to enable the external side chain in Cubase.
- At the top of the Mixer, set the output for the side chain track to the side-chain input of FabFilter Volcano 2.

### Logic Pro

- Open Logic Pro and create a new empty project via File > New...
- Add two audio tracks (via Track > New...) that we'll use as main track and side chain track.
- Add audio files on both the main track and the side chain track. You can simply drag audio files from a Finder/Explorer window onto a track.
- Select the main track and add Volcano 2 in the first Insert effect slot.
- Open FabFilter Volcano 2's interface and set up an [envelope generator](#) or [envelope follower](#), triggered by the external side chain signal.
- In the right top corner of the plug-in interface header, in the 'Side Chain' menu, choose the side chain track. Now, the signal from the side chain track is sent to FabFilter Volcano 2's external side-chain input.

### Ableton Live

- Open Ableton Live and start with an empty arrangement. We'll use Track 1 as the side chain track and Track 2 as the main track.
- From the folder menu's on at the left top of Ableton Live's interface, drag different audio clips to the first empty slots of Track 1 and Track 2.
- From the VST (or Audio Units) plug-in menu, also at the left top of Ableton Live's interface, drag FabFilter Volcano 2 onto Track 2, the main track.
- Open FabFilter Volcano 2's interface and set up an [envelope generator](#) or [envelope follower](#), triggered by the external side chain signal.
- In Track 1 (the side chain track) in the 'Audio To' menu select 'Track 2' instead of the default 'Master'. Now, an extra menu appears right below: choose 'FF Volcano 2 3/4' instead of the default 'Track In' to route the track's signal to FabFilter Volcano 2's external side chain inputs.
- **Note:** In the scenario above, you won't hear Track 1 (the side-chain signal) anymore, since its audio is only routed to Volcano 2's side-chain inputs. To avoid this, use one additional track (e.g. Track 3), choose 'Track 1' from its 'Audio From' dropdown menu, and in the 'Audio To' menu select 'Track 2' instead of the default 'Master'. Now, from the extra menu below choose 'FF Volcano 2 3/4'. Of course, you can now leave Track 1's 'Audio To' setting to the original 'Master' so you will still hear the signal.

### Pro Tools

- Open Pro Tools and start a new empty session.
- Create two audio tracks that we'll use as main track and side chain track. Add audio files to both track.
- Open the Mix window to display the tracks with their Insert slots and Sends slots.
- In the first 'Sends' slot of the side chain track, choose 'Bus 1'. The track view for Bus 1 will open: set its level slider to 0.0 dB so the bus actually produces audio!
- In the first 'Inserts' slot of the main track, choose Effect > FabFilter Volcano 2.
- Open FabFilter Volcano 2's interface and set up an [envelope generator](#) or [envelope follower](#), triggered by the external side chain signal.

- Now, in the 'Key Input' menu of the plug-in interface (just above the FabFilter logo), choose bus > Bus 1 instead of the default 'no key input'. Now, the audio from the side chain track is routed to Volcano 2's external side chain input via Bus 1.
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Next: [License agreement](#)

**See Also**

[Input/output controls](#)

# FabFilter Software License Agreement

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## 3. VST plugin technology

VST is a trademark of Steinberg Soft- und Hardware GmbH.

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Next: [Acknowledgements](#)

### See Also

[Purchase FabFilter Volcano 2](#)

[Support](#)

## Acknowledgements

Credits go to Gijs van Klooster for writing this help file. You can visit Gijs' web site at [www.redhouse.nl](http://www.redhouse.nl) .

FabFilter Volcano 2 comes with a large library of presets. Some of these were created by external sound designers:

- bManic (BM)
- Ouroboros (O)

Visit the [FabFilter sound designers page](#)  to read more about each sound designer.

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*Next:* [About FabFilter](#)

### See Also

[Purchase FabFilter Volcano 2](#)

[Support](#)

## About FabFilter

Beautiful sound. Fantastic workflow. These are the foundations of FabFilter. We create powerful audio plug-ins with superb sound quality and innovative interfaces.

### A unique perspective

At FabFilter, we make the best possible tools for music production and audio processing. To achieve this, we continually rethink and challenge industry standards: we've never been afraid of reinventing the wheel. Considering every little detail, we tune our algorithms and interfaces until they sound perfect, look amazing and feel great to work with.

### It's the sound that counts

Above everything else, you need superb sound quality. That's why we put a lot of effort into developing unique audio processing algorithms, ranging from our famous resonating filters to transparent high-end EQ and dynamics processing.

### Innovative interfaces, great design

Every FabFilter plug-in has an easy-to-use, well-designed interface aimed at providing unsurpassed workflow. Our plug-ins focus on the task you're performing at that specific moment: they expose the features you need, when you need them. And because of our special attention to design, you'll be delighted every time you open a FabFilter plug-in.

### Don't take our word for it

We always set the highest standard for sound quality, usability and design to make truly great products that raise the bar on what audio software can do. That's why we're very happy with the praise we've received from users and press alike:

"In the decade since the release of its first plug-in, One, FabFilter has made an indelible mark on the music production landscape." — Computer Music magazine

"While many other software developers are busy trying to model hardware, FabFilter is leaving them in the dust by being visionaries and reaching into the future. FabFilter stuff is just on another level." — Jeff Sanders

"FabFilter has an enviable reputation for making easy-to-use, powerful tools." — Music Tech magazine

*FabFilter was founded in 2002 by Frederik Slijkerman and Floris Klinkert, and is based in Amsterdam, The Netherlands.*

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### See Also

[Support](#)

[FabFilter web site](#) 