oeksound

spiff

adaptive transient processor

User Manual

Contents

Thank you for using spiff!

spiff is an adaptive transient tool that cuts or boosts only the frequencies that make up the transient material, keeping the rest of the audio signal intact.

spiff was originally designed to attenuate or remove sharp clicks, such as mouth noises on vocal recordings. These clicks could be a byproduct of excessive compression, treble boost, bad microphone choice, or just an unwanted part of the performance. **spiff** has been carefully tweaked to work well on vocal tracks, as it introduces minimal artefacts leaving the rest of the signal intact. Thanks to this, it turned out to be an equally useful tool on almost any sound source.

It is recommended that you read through the manual to understand all the details around **spiff**, but here is a **quick-start** tip if you want to get right to it:

Quick Start

When you have added **spiff** to a channel with audio material, start by turning on **delta**, and turn up the **depth** a bit to hear what **spiff** is reacting to. Decide if you want to **cut** or **boost** this. Next, adjust the **sensitivity** and **decay** controls until you have focused on the part of the transient material you want to control. Use the **side-chain EQ** to filter out frequencies you don't want to process, or boost frequencies you want to process more. Adjust the **sharpness** and **decay lf/hf** values to taste (they can often be left to default value). Turn off **delta** monitoring and adjust **depth** again. **Bypass** to hear what **spiff** has added or removed and **trim** the output signal to match the original volume. When cutting, a good rule of thumb is to place **spiff** as the last insert of the channel for smoothest results. When boosting, **spiff** usually works best early in the signal chain, before any compressors, limiters or saturators.

Cut and Boost modes

spiff can be used to either **cut** or **boost** transient material. Cuts or boosts are applied on frequencies that form the transients. So if you apply **spiff** to a kick drum, it won't boost the boxy frequencies around 300Hz unless there actually is transient information at 300Hz.


Parameters

The largest of the knobs is **depth**, which determines how much processing is being applied: more depth results in bigger cuts or boosts. **spiff** is **input-level independent** so you can put it anywhere in your signal chain and it will always work according to the **depth** value, regardless of the gain staging.

sensitivity controls how **spiff** detects transients. Higher values means it detects more transients. Lower values mean it only detects louder transients. Easy to remember as more or less sensitive. For corrective use in the cut mode, you might want to set this value pretty low. The best way to hear what sensitivity does is to first enable the delta mode, crank the depth and then adjust sensitivity to taste.

sharpness controls the bandwidth (or q) of all separate cuts or boosts **spiff** performs. Lower values sound more natural on percussive material (like drums), while higher values work well on harmonic material with a wide frequency range, like piano, for example.
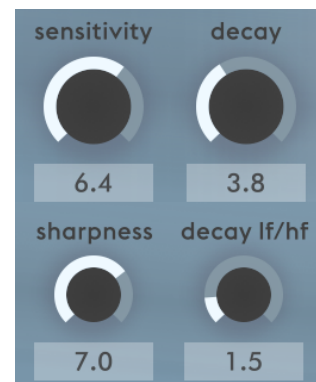
decay refers to the time it takes for a cut or boost to recover back to its starting point. A higher value means longer decay time back to initial level. When set to 0, only the very short part of the transient is adjusted. Increasing decay applies more processing to the tail after the initial transient. For most practical use cases, values lower than 5 produce the most natural results. Higher values can be very useful for creative abuse!

decay lf/hf (low frequency / high frequency) is used to adjust the relative difference in decay time between low and high frequencies. Lower values mean that low frequencies have a longer decay time than high frequencies. Higher values mean high frequencies take longer to recover than low

frequencies. In the centre, the decay time is equal across the whole frequency range. Values lower than 5 tend to sound the most transparent.

Graph and EQ

**spiff** uses a real time graph to show you what part of the signal is being processed.

The frequencies being affected can be controlled with the EQ section of **spiff**. Please note, that this is not actually an EQ, but rather, a weighting for the processing. You can think of it as a side-chain EQ.

Dragging a band upwards increases the relative amount of processing for that band. . By using the high- and lowpass filters you can make **spiff** ignore the areas above and below specific frequencies.
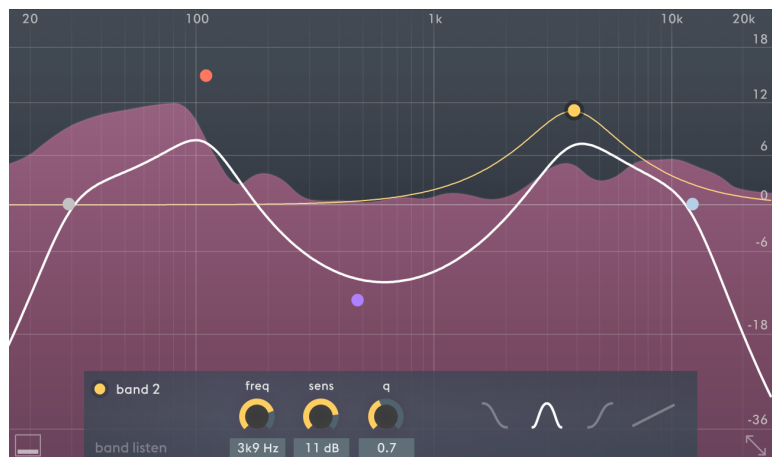
In the example above, **spiff** is used in boost mode (shown by the pink color). **spiff** is dialed to boost more around 100Hz and 4kHz using the red and yellow bands. Broad cut with the purple band makes **spiff** boost less in the mid-range. The filters makes **spiff** ignore frequencies below 30Hz and over 11kHZ.

spiff has five **bands** that let you control the EQ. You can **choose a band by clicking on the corresponding node**. Adjust the band parameters by dragging the nodes on the graph or by using the knobs below. You can adjust the **width** of a band by holding a modifier key and dragging up/down; the modifier key is *Cmd* on Mac and *Ctrl* on Windows.
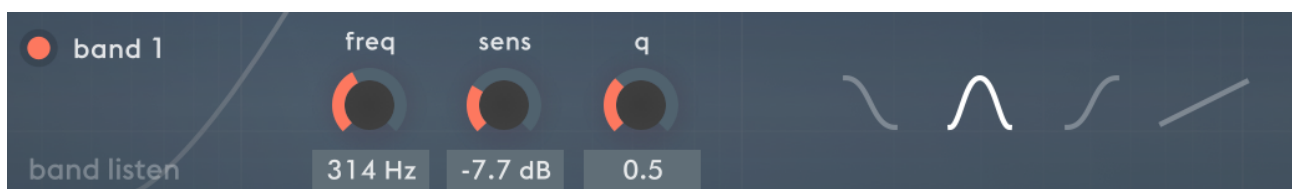

The red, yellow and purple bands can be set to parametric, shelf or tilt shelf mode. You can set the slope in db/oct of the **grey** and light blue filters from the controls below.

Multiple bands may be selected for editing by either dragging a box around the nodes or by holding **shift** while selecting nodes.

You can also bypass a band by double-clicking on the node, or by clicking on the toggle on the left-hand side of the control area, labeled "band 1" on the screenshot.

If you wish, you can disable the band control area from showing by clicking the icon left of the area.

Band Listen
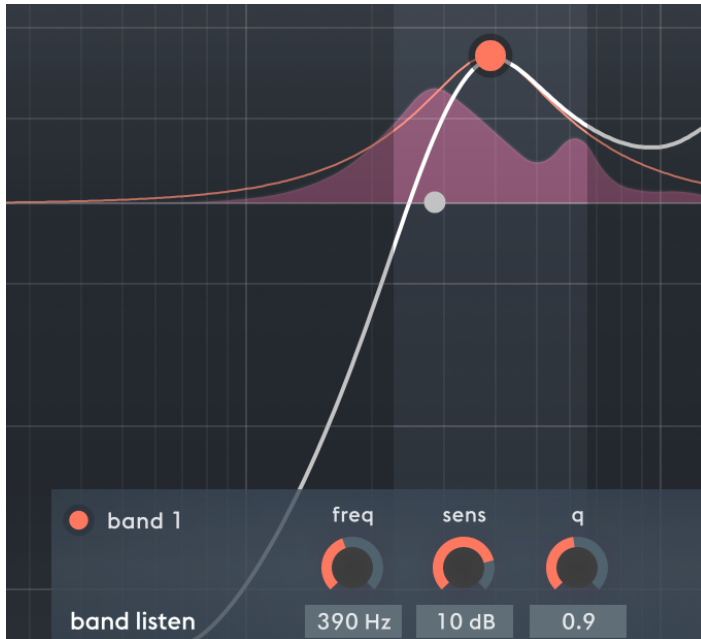
The **band listen** button lets you monitor the delta signal on the frequency area that the selected band affects. By sweeping over the frequency spectrum with **band listen** enabled you quickly find the part of the signal you want to process. **Band listen** can also be momentarily enabled by holding the *Alt*-key while dragging a node.

Output Stage

The output stage part of the screen lets you adjust the **monitoring** and levels. With the **mix** parameter you can combine the original dry signal together with the processed one. You could for example apply heavy processing with **spiff** and then mix some dry signal back in for a more transparent result. With wet on 100%, only the processed signal gets to the output, and with 0% only the dry one gets out. The **mix** parameter also works **while delta is enabled**, making it possible to blend the dry signal with the delta.

trim is the make-up gain control for the processed signal to compensate for any changes in level that **spiff** introduces. It affects only the wet part of the mix.

delta toggle presents you with the delta (or difference) signal between the wet and the dry signal. This is useful for monitoring the part of the signal that **spiff** is affecting. With this you can get an insight into what **spiff** is reacting to, and adjust accordingly.

bypass toggle is a soft bypass for quick A/B comparison without glitches that some platforms and DAWs might introduce when bypassing a plug-in. Please note that **spiff** continues to compute the output, so bypassing with this control won't save you any processing power. To disable the plug-in you should always deactivate it from the host.

| mix |
| 100 % |
| trim |
| 0.0 dB |
| ○ delta |
| ○ bypass |
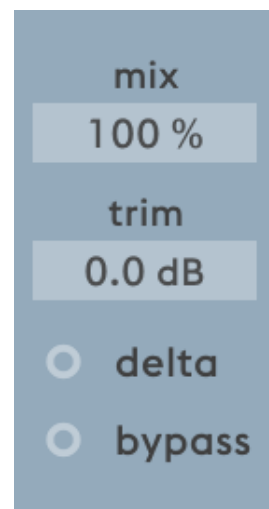
Stereo and Mid/Side Controls
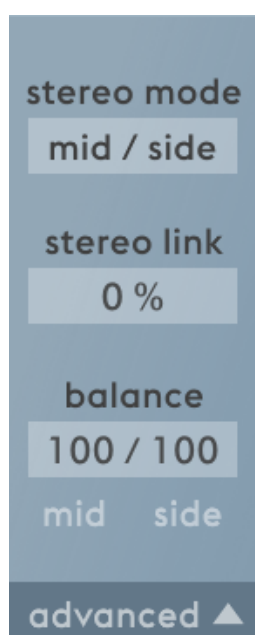
When running as a stereo instance, **spiff** can control the link of the two channels with these parameters.

stereo mode determines if you control the left and right channel separately or the mid and side channels separately.

stereo link on 100% will combine the side-chain signals and apply the same reduction for both channels. **stereo link** on 0% will make **spiff** act as two mono instances (dual mono).

balance refers to the amount of processing applied to each channel. When adjusted to either extremes the value window will change to show what channel is being processed (left only, right only, mid only or side only). At 100 / 0 only the mid (or left) channel is processed. At the centre position, 100 / 100, both channels are processed equally, and when set on 0 / 100 only the side (or right) channel is processed.

| stereo mode |
| mid / side |
| stereo link |
| 0 % |
| balance |
| 100 / 100 |
| mid   side |
| advanced ▲ |

Advanced Parameters

Clicking the **advanced** bar presents you with the advanced options.

If you need more fidelity than on the default configuration, you can add **oversampling** and **resolution** to the process. They should be reserved for master bus or mastering applications, when the sound material being processed is very complex. As a rule of thumb, the default settings are probably fine for individual tracks. You can evaluate this easily with the **delta** toggle.

resolution determines the time resolution of the processing. With increased resolution, **spiff** updates its internal settings more often.

oversample calculates the reduction filter in higher resolution. Higher values result in a smoother frequency response and better accuracy especially at lower frequencies.

Please note, that for both oversampling and resolution the **higher settings can be extremely demanding on the cpu!**

window sets the tradeoff between time and frequency resolution. The **small window** setting has **minimal ringing** and is great for detecting super fast transients. As a tradeoff, it has worse lower frequency handling. Small window great for transparent cut settings, such as click removal. **Large window** on the other hand rings more, but sounds smoother. Large window shines on complex and polyphonic sources, such as piano. **Medium window** is a tradeoff between the two and a good generic setting. If in doubt, you can always go with this one.

phase mode selects between **linear phase** and **minimum phase** processing. **Linear phase** mode is recommended for surgical cuts, especially when combined together with the small window. As it happens, linear phase may introduce audible pre-ring, especially if used to process the low frequencies. **Minimum phase** mode eliminates the pre-ring. It can be better for boosts, and often sounds more natural, but is less accurate. **Minimum phase** mode is also a bit heavier on the cpu.

Toolbar

Preset menu

spiff comes with a selection of factory presets. By clicking the name of the preset, a menu opens with an additional container for your own presets. Clicking on a preset or navigating to one with the arrow keys instantly loads it, but you can return to your previously selected settings by pressing the "Cancel" button at the top of the menu. You can also navigate to the next and previous presets using the arrow buttons on the left side of the preset name in the toolbar.

Please note, that for compatibility reasons **spiff** doesn't reveal its presets to the host's native preset menu in some DAWs.

Set your default starting point

If you want to use a custom preset for when you open a new instance of **spiff** instead of the factory default preset, the preset menu's "save as default" will do just this. Please note that the option to load a user default preset is not present before it's saved for the first time.
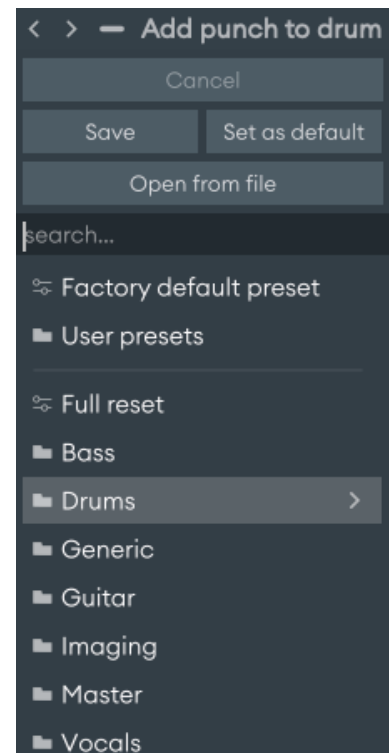
Searching presets

You can search for presets either by name or by tags. The provided factory presets have tags added to them to describe use cases that the presets could apply to. Also the artist presets can be searched by using only the initials of the artist.
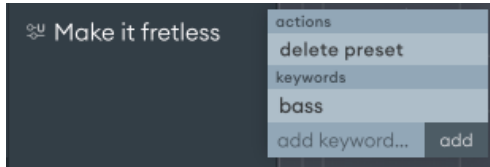
Loading presets

Presets can be loaded from the preset menu (on the right) by either clicking a preset or by navigating with the arrow keys. Clicking outside the menu closes it. While the preset menu is open, you can reset the parameters to the initial state that you had before opening the menu i.e. to discard the loaded preset by clicking Cancel. The preset menu only displays factory presets and presets in the users preset folder, but presets can also be loaded from an arbitrary location on your computer by clicking on the "Open from file" button on the top of the menu.
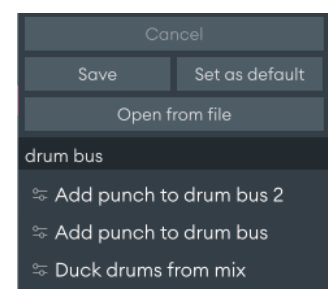
Saving presets and adding tags

You can save presets that are useful to you by opening the preset menu and clicking "Save". This will let you choose a location and a name for the preset to save. Use the default location for the plug-in to find your presets!

You can add tags to your saved presets by clicking with the right mouse button on the preset name and using the context menu that opens. Write the tag to be included in the user preset on where it says "add keyword" and click on add.

Deleting presets

Presets can be deleted via the context menu, which can be opened by right-clicking on your saved preset. Alternatively you can use a file explorer and navigate to the plug-in default location and remove the files.

Importing presets

The presets are saved as .preset files in the default location for the application (See the miscellaneous section for paths). All **spiff** presets work on both mac and windows and can be shared between users by putting the files into the aforementioned default location.

Grouping user presets

You can group your own presets by navigating to the default location with a file explorer and grouping the preset files into folders. These are parsed into the preset menu when the menu is opened.

Undo and redo

Undo has a predetermined amount of maximum steps which are exclusive to both A and B states.

> NOTE: If you're using Logic Pro, please only use the undo/redo system of **spiff**. Using Logic's built-in one might yield unexpected results especially when used together with A/B states.

Comparing settings with A/B switching

On the toolbar, in the right corner, there are three buttons as shown on the right. These buttons are from left to right:

**A/B Switch**, **A/B Copy** and **Configurations**.

You can compare two different sets of settings by clicking the A/B switch button. All changes in the settings are set for the highlighted and underscored state (a or b).

You can copy the settings in the currently open state to the other by clicking the A->B copy button.

Help menu

The help menu contains various useful resources and is accessed by clicking on the question mark icon in the toolbar. The different options in the menu are summarised below:
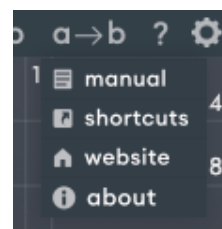
- **manual**
  Opens this manual as a PDF file.

- **shortcuts**
  Displays a window containing a reference of all the different keyboard shortcuts that are supported in the user interface.

- **website**
  Opens the oeksound website in the default web browser.

- **about**
  Displays a window with information about the plug-in including its version and format.

Configuration menu

You can open the global configuration menu by clicking on the cog wheel icon at the right end of the toolbar. From this menu a bunch of settings can be configured that affect all instances of **spiff**. The different settings are explained in detail next.

Disable OpenGL graphics

OpenGL graphics mode is the fastest and prettiest option for most computer setups. Disabling it is intended as a fallback feature for only an unfortunate few that might have issues with the graphics rendering. For example, those
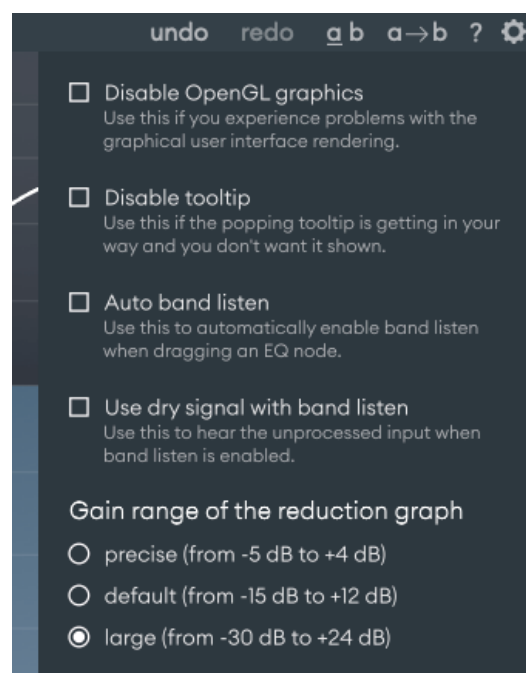
that run **spiff** on specific older hardware with Windows 7 and their unrepaired driver issues.

Disable tooltip

By default, a tooltip is displayed in the top left corner of the graph area showing relevant information about the interface according to what is under the mouse cursor. This function can be turned off, however, by enabling the "Disable tooltip" setting.

Auto band listen

When enabled, band listen mode will automatically turn on when dragging one of the EQ nodes. This is useful if you always want to hear the delta or dry signal when moving EQ nodes around to know exactly which frequencies your change is affecting.

Use dry signal with band listen

By default, **spiff** will output the delta signal of a band's frequency range when band listen mode is engaged. When this setting is enabled, however, the dry signal will be passed through instead.

Display range of the reduction graph

spiff offers three options to choose from for the reduction graph's (in blue or red depending on the mode) range of display. This changes the range of visualising the effective reduction between precise and large. Changing this setting sets the blue/red dB labels accordingly - shown in the figure on the right.

Version update checks

spiff automatically checks for new plug-in versions in the background.

When a new version is available, a little exclamation mark will be displayed on the configuration menu button. Information about a possible update is shown on the bottom of the configuration menu.

Updates are provided for good reasons such as bug fixes and performance improvements, and we always ensure that presets are backward compatible for all **spiff** versions to come. We take great care to procure that things don't break between updates.
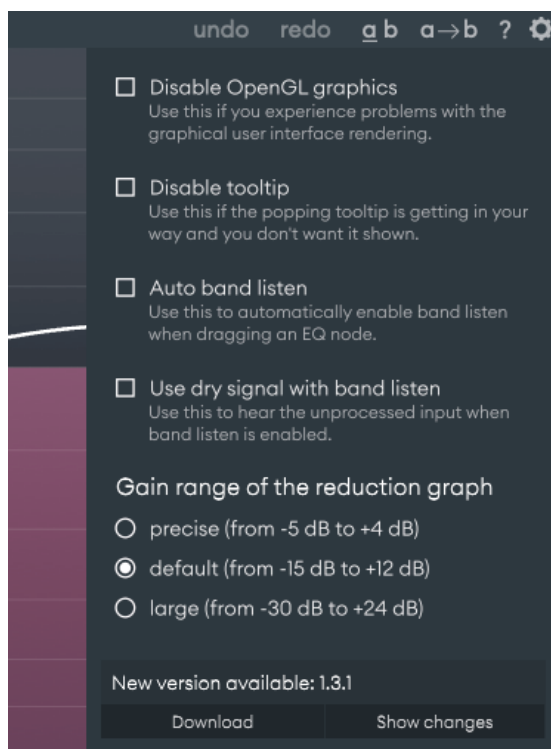
Paths for presets and uninstallation

MacOS

User presets:
`/Users/<username>/Documents/oeksound/spiff/Presets`

Configuration file:
`/Library/Application Support/oeksound/spiff/config.xml`

The uninstaller is located next to the installer in the downloaded .dmg file.

Windows

User presets:
`C:\Users\<username>\Documents\oeksound\spiff\Presets`

Configuration file:
`C:\ProgramData\oeksound\spiff\config.xml`

Uninstaller:
`C:\ProgramData\oeksound\spiff\unins000.exe`

FAQ and Support

You can find our FAQ section on our website:
oeksound.com/support

If our FAQ doesn't answer your question, or if you find a bug, don't hesitate to email us at:
support@oeksound.com

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