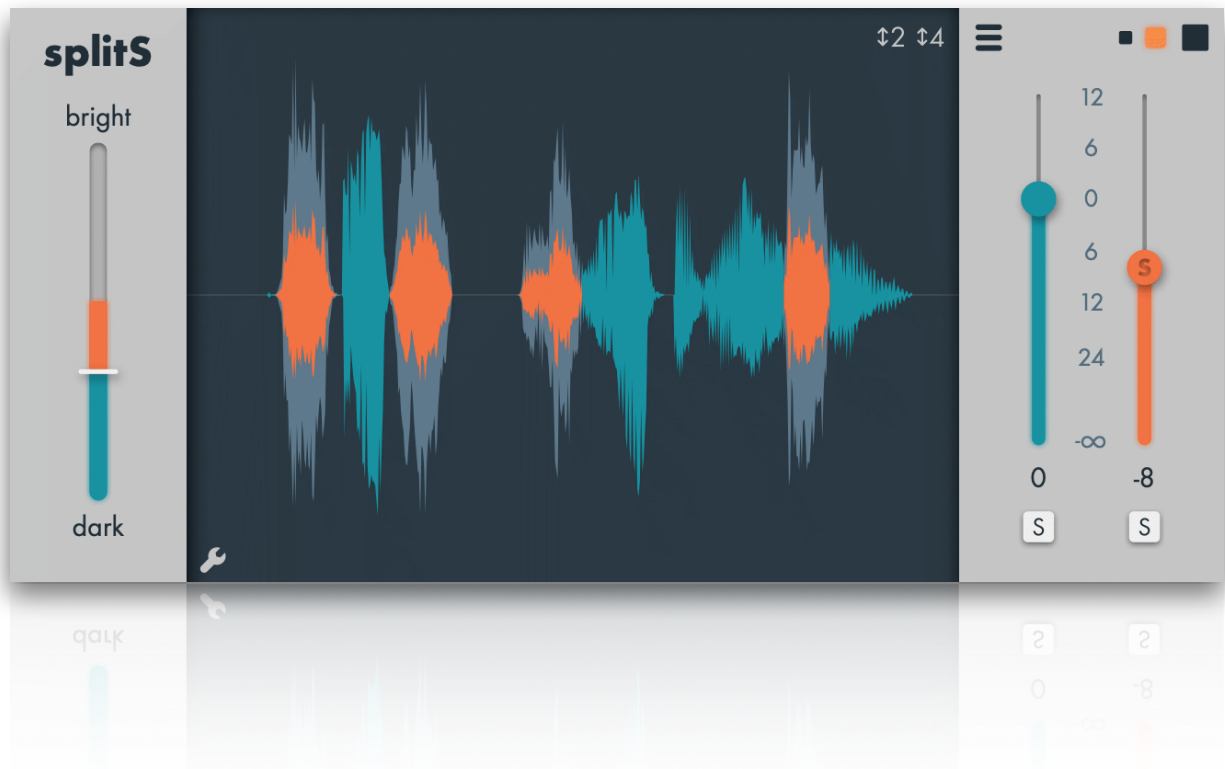
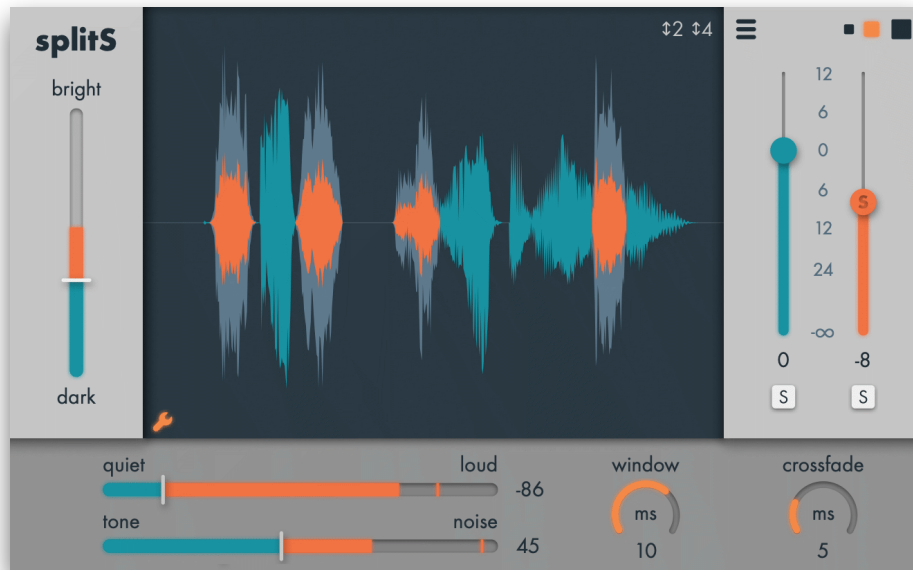


splitS User Manual

splitS is not a de-esser



Introduction



While de-essers and dynamic EQs can be very useful, they are rarely sufficient for effectively managing sibilance in vocal recordings.

Producers and engineers alike commonly find themselves spending long hours manually editing these problematic sounds. While often unavoidable, this method is very time-consuming and diverts attention from what really matters.

splitS is here to give you your time back!

splitS is not a de-esser, but rather a straightforward mixer that allows you to balance sibilances, and separate a vocal track between *sibilance* and *non-sibilance* in a *split* of a second. The signal is left **absolutely intact** if no volume change is applied, as the cut between sibilance and non-sibilance is made on the full range signal.

No compression, no EQ, no crossover.

splitS was developed in close collaboration with Swiss mixer Thomas "Mister T." Gloor

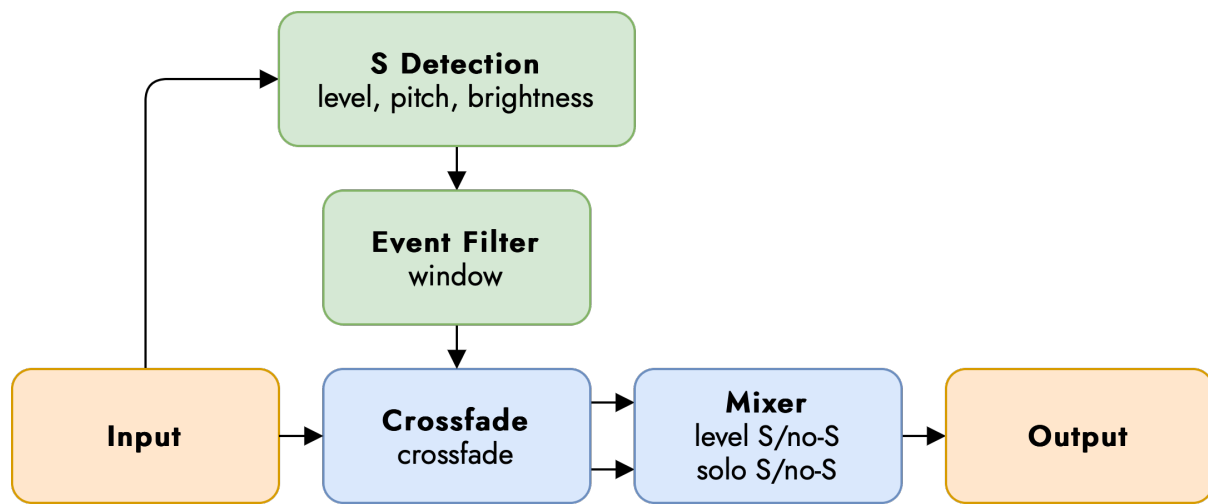
How Does It Work?

splitS consists of a detection algorithm and a crossfade/mixer section.

Detection works by calculating the input level, looking for the presence of pitch using autocorrelation, and by measuring the signal brightness using spectral analysis.

If all **three thresholds are exceeded**, the input is marked to go to the **S channel**.

The control signal is filtered to remove short events (using the *Window* setting) and then used to split the input audio into two channels using cosine-based crossfades. The two channels **sum perfectly to the original**. The final mixer allows for different mixes and soloing the *S channel* or everything else.

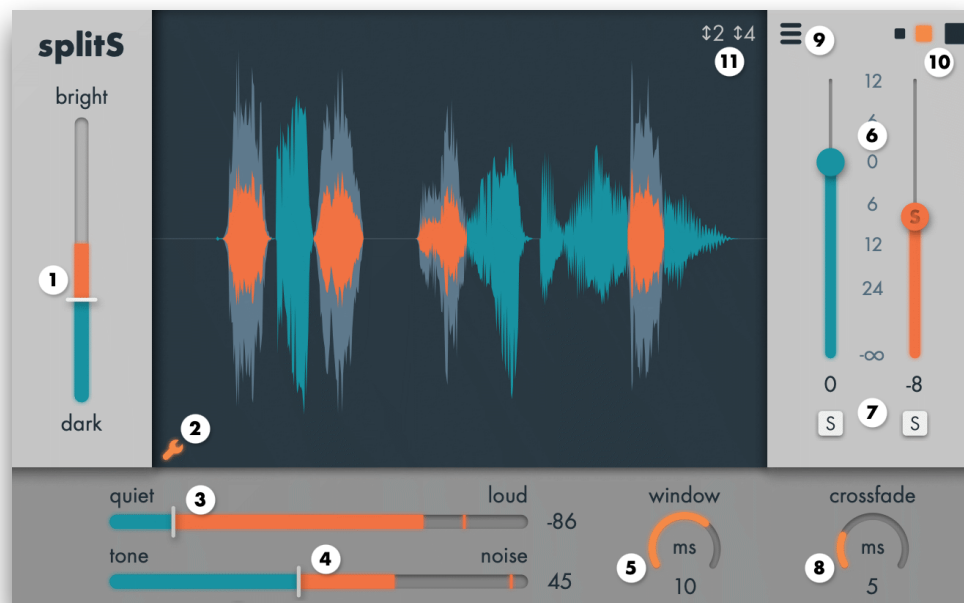


splitS Signal Flow

Keyboard Shortcuts & Modifiers

Function	[Mac/Win] Shortcut
Undo	[Cmd/Ctrl] - Z
Redo	[Cmd/Ctrl] - Y, [Cmd/Ctrl] - [Shift] - Z
Reset a parameter to its default value	[Option/Alt] - click, double-click
High-resolution value changes	[Cmd/Ctrl] while dragging
Snap to round values	[Shift] while dragging
Numerical Editing	Click on parameter value, confirm by pressing [Enter], abort using [Esc]
Parameter Increment/Decrement	Arrow Keys after clicking a control

Parameter Description



1 - Dark/Bright

The meter shows how **bright** the signal currently is.

The brightness detection parameter allows to set the **brightness threshold** to be exceeded for the signal to be routed to the **S channel**.

Any portion of the signal that is below the brightness value will be routed to the **Non-S channel**.

Adjust the slider to match the overall brightness of the track.

2 - Expert panel

Click this icon to access the expert panel.

3 - Quiet/Loud

The meter shows how **loud** the signal currently is.

The quiet/loud parameter allows to set the **level threshold** to be exceeded for the signal to be routed to the **S channel**.

Any portion of the signal that is **below** the **quiet/loud** value will be routed to the **Non-S channel**.

Adjust the slider to exclude low level information from being routed to the S channel.

4 - Tone/Noise

The meter shows how **tonal or noisy** the signal currently is.

The tone/noise parameter allows to define the noisiness above which the signal gets routed to the **S channel**.

Any portion of the signal that is **below** the **tone/noise** value will be routed to the **Non-S channel**.

Low values will help include sibilant sounds that carry a clear ringing tone.

5 - Window

The **window** parameter allows to set the minimum duration of an **S** event.

Once the signal has exceeded all three thresholds, it is filtered to exclude events shorter than the window value.

6 - Faders

The **Non-S** and **S faders** allow to apply gain changes to either channel.

7 - Solo buttons

The **Non-S** and **S solo buttons** allow to hear either channel in solo, post fader.

8 - Crossfade

The duration of the **crossfade** applied at each transition between the **S** and **Non-S channel**.

9 - Preset menu button

Click this icon to access splitS presets and option menu.

10 - UI size

Choose the size of the splitS user interface.

11 - Display zoom

Set the waveform display zoom factor to 2 or 4.

Using splitS

Here is a little walkthrough to get you started.

1. Insert **splitS** on a vocal track, and solo it.
2. Click the **Non-S channel solo button** to listen to the vocal *without* sibilances. There should be no sibilances while listening.
3. Click the **S channel solo button** to listen to the sibilance only. There should not be any non-sibilant sounds while listening.
4. Adjust the volume of the **S fader** to taste!

splitS default setting was found to work in a majority of cases, but if needed, adjust the parameters as described below

1. Press play in your DAW and adjust the display using the **↑2** or **↑4** buttons located top right of the **central display** to ensure a large enough representation of the track.
2. If some sibilances can be heard in the **Non-S channel**, try lowering dark/bright slider on the left hand-side, listen to the **Non-S channel** solo'd and repeat until no sibilants are heard.
This can be caused by a recording that lacks top end or has too much low end.
3. If some more resonating sibilants can be heard in the **Non-S channel**, click the **wrench icon** located bottom left of the **central display** to open the expert panel. Then try lowering the **tone/noise** slider until these sounds aren't heard anymore.
4. Click the **S channel solo button** on the right-hand side to listen to the sibilances only and make sure the **S channel** includes all sibilances, including the resonating ones.
5. If some background noise (headphone bleed for example) can be heard in the **S channel**, go to the expert panel and adjust the **quiet/loud** slider until the background noise isn't heard in the **S channel** anymore.
6. If there are very fast cuts between the **S channel** and the **Non-S channel**, try setting the **window** knob to a longer value, to exclude very short events.
Listen to either channels to verify.

7. If the cuts between the **S channel** and the **Non-S channel** are too abrupt, try setting the **Crossfade** knob to a longer value.
Be careful as long values might induce “bleed” from a channel to another.

8. Adjust the volume of the **S fader** to taste!

Workflows, Tips & Tricks

splitS can be used in several different ways. Here are a couple workflows to get you started.

splitS as an Insert on a Track

1. Insert **splitS** on a vocal track and set up the detection as described under the “Using **splitS**” section of this manual.
2. Adjust the level of the *S channel* to match the track you are mixing, and freely automate the level of the **S channel** or any other parameter.

splitS as an Insert on Two Tracks

1. Insert **splitS** on a vocal track and set up the detection as described under the “Using **splitS**” section of this manual.
2. Solo the **Non-S channel**.
3. Duplicate the audio track and copy **splitS** from the first track onto the new track.
4. Solo the **S channel**.

You can now freely adjust each sibilance at will, without having to commit immediately to the settings you are using.

Keep in mind that if you adjust the settings, you will have to ensure that both instances of **splitS** are set the same way!

splitS Rendered on Two Tracks

Some engineers like to separate their vocal tracks into *sibilant* and *non-sibilant* tracks, sometimes using two channels of a stereo compressor to be able to fine tune compression and minimize artifacts. The process is very time consuming.

You can still benefit from the advantages of this method without losing time using **splitS**! Simply proceed as follows:

1. Insert **splitS** on a vocal track and set up the detection as described under the “Using **splitS**” section of this manual.
2. Adjust the level of the **S channel** to get the sibilances roughly where you want them.
3. Duplicate the track twice to get three identical tracks.

4. Rename the first duplicate to clearly indicate it only contains the **Non-s signal**
Example: MY TRACK-nos
5. Rename the second duplicate to clearly indicate it only contains the **S signal**
Example: MY TRACK-s
6. Use your DAW's local rendering function on the two duplicates
7. Inactivate the original track.

You can now freely adjust each sibilance at will. Be it volume, EQ, distortion. Everything is possible!

splitS for Background Vocals

When mixing a vocal stacks, the piling up of sibilance can become overwhelming. In most cases, if there is a vocal track in the center of the stereo field providing the sibilance information, the brain doesn't notice if it is missing in layering tracks.

You can leverage this psycho-acoustic effect using **splitS**! Simply proceed as follows:

1. Insert **splitS** on each track of the vocal stack and set up the detection as described under the "Using **splitS**" section of this manual.
2. Solo the **Non-S channel** on each instance of **splitS**.
3. If needed, re-introduce a bit of the *S channel* to make the stack sound natural.

splitS to Clean up Effect Sends

To prevent bright reverbs sounding too washy, or to avoid a sibilance to be repeated too loudly by the feedback loop of a delay, engineers often use de-essers, dynamic EQs or filters.

While this solution works and has become a habit for many, it can sometimes cause the effect to feel "disconnected" from the source track. For example, removing too much top end from a vocal entering a reverb can sound unnatural, because the sibilances might sound less effected.

To prevent this, proceed as follows:

1. Insert **splitS** in your plugin chain *before* the effect plugin.
2. Lower the **S channel** until the effect stops sounding more "washty" when a sibilance occurs, making sure it doesn't sound "disconnected" from the source.

Keep in mind that **splitS** was created with vocal processing in mind. Results might not be optimal if different instruments are being sent to the same effect.

Multi-Out Operation

splitS can output multiple streams of audio in some hosts. It produces the mix on the first output, the **NOS** signal on the second and the **S** signal on the third. The signals are affected by mixer levels and solo buttons.

This allows to use **splitS** as a signal splitter, and other effects can be used on the different signals independently.

How this is set up depends on the DAW used. Please consult your DAW manual to figure out how multi-out/multi-bus audio routing is set up for insert slots.

As an insert plugin with multiple output buses is unconventional, not all DAWs can handle it. Currently, this feature is enabled for the following hosts/formats:

- Pro Tools AAX
- Reaper VST3/AU
- Ableton Live VST3/AU
- Bitwig Studio VST3/AU

SoundFlow Package

You can take your experience using **splitS** up a notch using the automation platform **SoundFlow**. **SoundFlow** allows users to create macros and write JavaScript scripts to automate their DAW and make their workflow simpler.

We provide you with a *free* automation package to enhance your use of **splitS**. It is available through the **SoundFlow** store!

Please note that at the time this manual is being written, the package is only designed for Pro Tools.

Package Installation

Follow these steps to install the **splitS** package:

If you are new to SoundFlow, you will need to setup a SoundFlow account, and install SoundFlow on your computer, using the installer available in your SoundFlow account.

1. Open the SoundFlow menu by clicking the icon top-right of your screen.
2. Click on "Install apps & packages".
3. In the search bar located top left of the SoundFlow Store window, search for

splitS by apulSoft - Official package

4. Click on Install.

Script Description

The **splitS** SoundFlow package consists of 2 main scripts and a set of 4 scripts meant to work together

1. **splitS - Insert to AudioSuite for selected tracks**

Convert the first active instance of splitS inserted on the selected track to its AudioSuite counterpart, render onto a new playlist and inactivate the splitS insert.

Works for all selected tracks.

2. splitS - Render Non-S and S on new tracks

Duplicate the selected track twice, render the *Non-S channel* on the first duplicate, render the *S channel* on the second duplicate, and inactivate the original track.

Works for all selected tracks.

3. splitS - AudioSuite utilities

These 4 scripts are mean't to be used together.

3a. Insert to AudioSuite capture (detection settings)

Copy the detection settings of the instance of splitS present on the selected track and copies it to it's AudioSuite counterpart.

If alt is pressed when launching the script, the **S fader** will be the same as in the insert version.

3b. splitS - S Level -1

Decrement the value of the S fader by 1 dB

3c. splitS - S Level +1

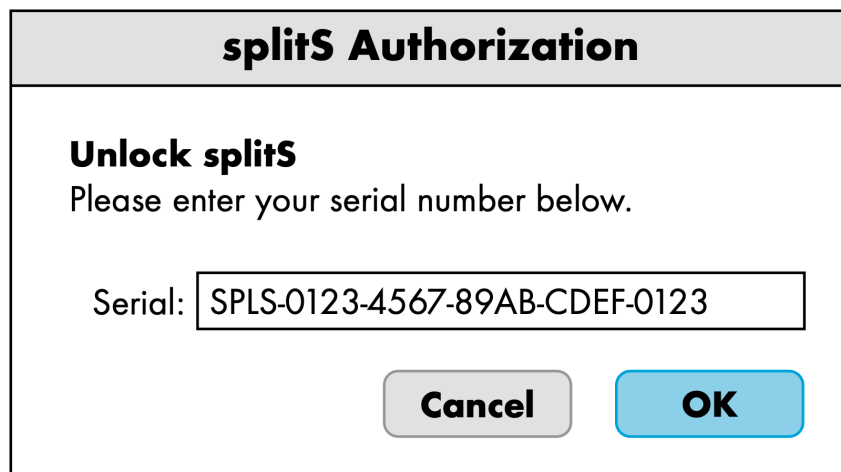
Increment the value of the S fader by 1 dB

3d. splitS - render splitS AudioSuite

Render the currently opened splitS AudioSuite window

Unlocking the Full Version

When you open the splitS interface in demo mode, a welcome dialog with a **enter serial..** button is displayed. Click this button open the serial entry dialog. The same dialog can be reached using the bottommost entry in the presets/option menu.



The image shows a dialog box titled "splitS Authorization". Inside the dialog, the text "Unlock splitS" is followed by the instruction "Please enter your serial number below." Below this is a text input field with the label "Serial:" and the value "SPLS-0123-4567-89AB-CDEF-0123". At the bottom of the dialog are two buttons: "Cancel" and "OK".

Enter the serial exactly as received and click **OK.** to unlock the full version.

In case the serial is not accepted, check the following things:

- The serial needs to be a splitS serial consisting of **SPLS** followed by 5 sections of 4 hexadecimal digits (0-9, A-F).
- If copy/paste was used, try typing manually as copy/paste sometimes copies more than was intended (white spaces, tab stops, etc).

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"Malter demo" video shot by Malter - Music by Malter

"apulSoft" title screen by Matthias Hillebrand-Gonzalez

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