

• G E N A R T S

S A P P H I R E ◊ P L U G ◊ I N S

User's Guide

Version 2021.0 for
OpenFx Host Products

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Preface

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Introduction

Sapphire Plug-ins for OFX is a package of image processing and synthesis effects for use with Open FX compatible products such as Nuke, Toxic, Fusion, Baselight, and Film Master. It includes over 250 plug-ins, each with many options and parameters which can be adjusted and animated for an unlimited range of results. Sapphire LensFlare Plug-ins for OFX is a package of two LensFlare Plug-ins for OFX for use with Open FX compatible products such as Nuke, Toxic, Fusion, Baselight, and Film Master.

This document corresponds to version 2021.0 of 20-nov-2020. For updated information please check www.borisfx.com. Also see our [support page](#) for help with technical issues.



What's New In This Version

New Effects:

- S_UltraGlow – Brand new effect for Sapphire 2021, S_UltraGlow total revamp of the classic S_Glow with control over the hotspot of the glow as well as the falloff.
- S_UltraZap – Brand new effect for Sapphire 2021, S_UltraZap improves upon the classic S_Zap with the ability to animate Zap along a spline and looping behavior as well as improved color controls and a new workflow.

New Features:

- Metal for Mac OS. Over 60 effects have improved speed from an all new metal implementation
- Improved LensFlare Designer:
 - ◆ Lens Flare ability to offset elements off axis.
 - ◆ Reactive speed for elements..
 - ◆ Performance and stability improvements.
- Improved Mocha:
 - ◆ Adjust track.

Known Issues:

- Preset Browser: UltraZap, UltraGlow, and S_Effect may have cropped thumbnails in the preset browser.
- Mac OS, Big Sur: if you open mocha and then open the preset browser, the preset browser will fail and generate an error. If this happens, the host will have to be restarted to fix the preset browser.
- Resolve: After loading a preset in UltraZap, the widgets will appear squished in the bottom left hand corner.
- Windows: start menu icons are generic icons instead of BorisFX/Sapphire icons.
- UltraZap: On an open spline zap may do unexpected things when mixing vary-endpoint and looping parameters.
- UltraZap: On an open spline zap may do unexpected things when mixing vary-endpoint and looping parameters.
- S_Effect on Mac OS: CSI Zoomed Magnification preset intermittently fails to load.
- S_ZComp: The preset browser can't open unless an input is connected to the DepthB input.
- Deinterlace Auto fails to find a pattern on many clips.
- If the Preset Browser is launched multiple times in rapid succession inside the Sapphire Effect Builder, selection may not work in the preset browser. If this happens close the Preset Browser and re-open it.
- Mocha: The Mocha UI does not correctly locate the default OCIO config file shipped with Sapphire. To use the default OCIO config file shipped with Sapphire, use the OCIO environment variable to locate said the config file.
- Resolve: Point widgets may respond slowly in Premiere after a Mocha point track has been created.
- Flame: Effects with an internal animation such as MuzzleFlash or Zap may not animate correctly on a constant node. The workaround is to render the constant or animate an unused parameter.

- Baselight: Sapphire 2020 does not yet work with Baselight on Centos 6.4.

Compatibility Notes:

In v2019, LensFlares using MultiSpot and MultiStreak elements would look different inside the Flare Designer across operating systems. In v2019.5 this was fixed, but as a result LensFlares may look different from v2019 when loaded through the Flare Designer. Old projects will continue to look the same as they did in v2019 when loaded into the host or rendered, but may look different after loading in the Flare Designer.

Color Management with OpenColorIO

OpenColorIO (OCIO), is the open-source color management solution from Sony Picture Imageworks, Sapphire 2020 can apply and read a color profile to provide consistent colors across internal applications, such as the Preset Browser, Flare Designer, and Effect and Transition Builder. The Flare Designer and Builder applications now feature an OCIO panel to confidently manage the color output to any monitor. Also, Sapphire 2020 features a new effect called S_OCIOTransform, which allows Sapphire to apply an OCIO transform inside of any application, bringing OCIO Color Management to many applications that have yet to adopt the OCIO standard.

All OpenColorIO information below applies both to Color Management within the Sapphire Preset Browser, Sapphire Effect and Transition Builder, and Sapphire Flare Designer as well as to the new OCIOTransform effect in Sapphire 2020.

To use OpenColorIO in Sapphire, there are three ways to specify the OpenColorIO configuration file.

- By default, Sapphire will use the config.ocio file found in Sapphire's installation directory.
- To set OCIO system wide, set the OCIO environment variable to point to the desired config.ocio. This will ensure that all host applications and plugins that use OCIO will use the same OCIO settings.
 - ◆ We strongly suggest working with an IT department or IT professional to help setup environment variables, as there can be underlying conflicts with pre-existing settings.
 - ◆ Windows:
 - ◊ Open "File Explorer"
 - ◊ Right-click on "This PC" and select "Properties"
 - ◊ On the left, navigate to "Advanced system settings"
 - ◊ At the bottom, click on "Environment Variables"
 - ◊ In the top section labelled "User variables for...", click "New"
 - ◊ In the dialog that pops up, enter "OCIO" in the "Variable name" box, and the full path to the config.ocio file in the "Variable value" box.
 - ◆ Mac OS:
 - ◊ Open a Terminal – This can be found using Spotlight
 - ◊ Type: "launchctl setenv OCIO /full/macOS/pathway/config.ocio" (without quotes). Note: this will not remain set after a reboot.
 - ◊ To set the environment variable so that it persists through a reboot, the above command needs to be called through a .plist file in /Library/LaunchDaemons.
 - ◆ Linux:
 - ◊ To set the OCIO environment variable for all users of the computer, add "export OCIO /full/linux/pathway/config.ocio" (without quotes) to /etc/profile, replacing "full/linux/pathway/config.ocio" with the path full path for the desired config.ocio.
 - ◊ To set the OCIO environment variable for the current user only, add "export OCIO /full/linux/pathway/config.ocio" (without quotes) to ~/.profile, replacing "/full/linux/pathway/config.ocio" with the path full path for the desired config.ocio.
- To set OCIO for Sapphire only, set the ocio_config flag inside the s_config file that shipped with Sapphire and can be found in the Sapphire installation directory.
 - ◆ Windows: C:\Program Files\GenArts\SapphireOFX\s_config.text
 - ◆ Mac OS: /Applications/GenArtsSapphireOFX/config/s_config.text

- ◆ Linux: /usr/genarts/SapphireOFX/s_config.text

Loading a Plug-in

When Sapphire Plug-ins have been installed and the host application has been restarted, the new plug-ins should appear in the host application's effects menus just like any other effects.

On Nuke: click on the Boris FX Sapphire icon in the toolbar on the left-hand side of the screen. Select the desired Sapphire effects category, and click on an effect to add it to your project. Alternatively, you can right-click anywhere the Node Graph window and go to Sapphire → Sapphire Category Name → Effect Name in the context menu.

On Fusion: in the Tools menu, select Sapphire and the desired Sapphire effects category, then click on an effect to add it to your Composition. Alternatively, you can right-click directly in the Comp Window and select Add Tool → Sapphire → Sapphire Category Name → Effect Name.

On Baselight: using the Insert Menu, select the OFX Filter menu and select the desired Sapphire effects category. Then click on an effect to apply it to the currently selected clip. Instead of using the OFX Filter menu, you can alternatively use the OFX Transition menu to select amongst only transitions, or the OFX Source menu to select just generators.

Browsing and Selecting Presets

You can load and save presets for effects using the **Load Preset** and **Save Preset** buttons near the top of the effect control window in all Sapphire effects.

Loading:

In the preset browser you'll see all the presets available for the current plug-in, both Boris FX-supplied presets and the ones you've created yourself. You can filter by tags on the left side to quickly find the look you're interested in.

The main top window shows the preset on your footage (unless the plug-in can't access the AE layer for some reason, in which case you'll see a poster frame) and various information about the preset.

At the bottom you see all the presets; you can enlarge or shrink them with the slider at the bottom. You can also switch to a table view there, as well as viewing the preset on your source, over black, or over the sample footage. You can also see the source all by itself for comparison.

Saving:

Clicking **Save Preset** brings up the Save Preset dialog. Here you can name the preset, and add various other information. Particularly important is the tagging system; you can apply as many tags as you want to your presets. You can even create new tags. Tags are grouped into categories, so all the color names appear under Colors, for instance.

You can create new categories as well, by typing into the Category drop-down menu after clicking Add New Tag.... Boris FX recommends sticking to the shipped categories when possible, for compatibility. But adding your own tags within categories (new color names, for example) is encouraged.

More Info:

While the preset browser, save dialog, or flare designer are open, the main AE window will be unresponsive. This is normal. Close the preset browser or flare designer and AE will wake up again.

Certain parameters, like Lens Flare hotspot, are not saved in presets; we thought it would be less than useful for the flares to jump around as you load presets.

It may take a few seconds to load the preset browser if a plug-in has many presets. Be patient.

The Preset Browser has a "Use Static Thumbnails" checkbox in certain effects. When checked, the thumbnails use a pre-rendered image to improve performance. If "Use Static Thumbnails" is not checked, the thumbnails will render on the footage the Sapphire effect has been applied to back in the host.

If playing through the preview window in the Preset Browser, Flare Editor, or Effect Builder, is using too much memory, "Render on Still" is available in the view menu. This will reduce the memory usage of the preview window by rendering all frames using the same host frame.

The preset browser may be configured to load presets from and/or save presets to user specified locations. The load location and save location may be different. If the locations are different, load will show presets from both the load location and the save location. Save will only use the specified save location.

There are three options for setting the load and save paths:

1. To set load and save paths per user, use the "Browser Settings" dialog. To do this: open the preset browser, go to the Edit menu and select "Browser Settings".
2. To set the load and save paths for all users of the machine, use the INI file. To do this, edit the sapphire-app-settings.ini file in the Sapphire directory:
 - ◆ Windows: C:\Program Files\GenArts\SapphireOFX\sapphire-app-settings.ini
 - ◆ MacOS: /Applications/GenArtsSapphireOFX/config/sapphire-app-settings.ini
 - ◆ Linux: /usr/genarts/SapphireOFX/sapphire-app-settings.ini
3. To set the load and save paths in a script, use the Sapphire environment variables:
SAPPHIRE_LOAD_PRESET_PATH and SAPPHIRE_SAVE_PRESET_PATH.

Note: Values set in environment variables will override the INI file. Values set in the "Browser Settings" dialog will override both.

Editing and Designing Lens Flares and other elements

Clicking **Edit Lens** in LensFlare, or **Edit Style** in Glare or Flashbulbs, opens up the Lens Flare Designer.

The Flare Designer lets you completely customize a lens flare. You can add or remove elements, copy them, customize how each element looks, and even how it reacts to the center or edge of the image. You can also interactively move the flare around to see how it will look as it moves.

All the panels of the Flare Designer are movable, so you can adjust the user interface itself to suit your work flow. The main panels are the view window, where you see the flare you're working on, the Elements panel which lists all the elements of the flare, and the Properties panel, which lets you adjust the properties of the currently selected element (or elements). There's also a toolbar of element templates at the top.

View Panel

The main view window is where you see how your flare will look; you can click and drag to move the flare around. You can see it over the background or just over black, adjust the gamma, and Solo only the selected elements. **Use Plug-in Settings** makes the flare designer import the plug-in settings currently active in the host app. If you have that selected, the flare will look the same back in the host app when you're done designing it. On the other hand, if you want to create a "reusable" flare preset, it's probably a good idea to un-check Use Plug-in Settings so the flare will look good with default settings in the plug-in.

Elements Panel

The Elements panel shows you all the elements, with thumbnails. If you mouse over them, an overlay shows where they are in the main view window. When you click on an element to select it, it also flashes brighter in the main window to help you find the element you're looking for. Clicking **Identify** in the Properties panel does the same flashing.

To add new elements, just click the element template picture in the top toolbar. You can then rename the element, move it in the list by dragging and dropping, or hide it by un-checking the checkbox.

To delete an elements, select it and click the trash can icon at the bottom of the Elements panel, or click Delete. There is full undo, so feel free to experiment!

You can also duplicate an element using standard copy/paste operations, or select it and click the two pages icon at the bottom of the Elements panel. You can then adjust the copy's parameters in the Parameters panel.

The gear-looking element is the "advanced element" type; it has lots of controls and is very customizable, but it's recommended for advanced users only. The other types get you most of the same looks with simpler parameters.

Along with all the standard element types, you can import your own images to use as elements. Click the picture frame to import an image file. The image data will become part of the flare, so it doesn't need to keep a reference to the original file.

To combine two flares into one, or add many elements at once, you can import another flare into your current flare; this will add all the other flare's elements to your current flare. You can also just open that flare, which replaces your current flare with that one. To import and add to your flare, use Insert Flare (down-right pointing arrow in the toolbar), or File... Insert Flare. To import and replace, use Open Flare (folder icon in the toolbar), or use File... Open Flare.

Parameters Panel

The Parameters panel is where you adjust all the details of a single element -- or multiple elements together, if you select multiple elements in the Elements panel. (Use Shift-click or Control-click to select multiple elements.)

There are a few common control types. Sliders with numbers to the left control numeric params; you can drag the slider thumb, but you can also drag in the number text field to increase or decrease the value. You can also click in the number field and type any value you want.

Color controls are just a swatch of color; click to bring up a standard color picker.

Some elements have a Gradient; there's a special gradient control to adjust those. The stops are below the color swatch; you can drag them left and right to move them. Drag down to delete. Click in the color gradient to add a stop there. Control-drag to "stretch" neighboring colors, and shift-drag to push neighboring colors. The triangles above the color gradient allow you to control the interpolation of the colors between stops. Ring Thickness lets you easily turn a spot or fan of rays into a ring; turning Ring Thickness down from 1 hollows out the center. This lets you still have fine control of the colors within the ring, even if it's very thin.

Different element types will have various parameters you can adjust, but here are some common ones:

Position

Where the element occurs, along the line between the hotspot and pivot point. Position 1.0 is at the hotspot, 0.0 is at the pivot. Note that you don't have to stay in that range; you can use any value you like. Bigger than 1 will be past the hotspot, and less than zero will look like a reflection because it's on the other side of the pivot point.

Size

How big the image is.

Rel Width, Rel Height

Use these to squash and stretch.

Rotate

Rotates the element around, in degrees.

There's a Reset button at the bottom of the Parameters panel to reset the current element(s) to all default settings. That's undoable too.

More Information

If you open the flare designer from the plug-in, you can just click OK to close the window when you're done; your current flare will be used in your project and saved with it. But you can do more than that; you can save the flare definition to disk

separately, so you can recall it later, or use it in other flares. You can also open the flare designer directly from the Start menu or Applications folder to create flares independent of your host product. In this case, use File...Save Lens As... to save the flare definition. That dialog will allow you to name the lens and tag it so it's easy to find later.

Note that saving a lens this way does *not* save your plug-in settings; it only saves the lens flare definition itself (the things you can change in the flare designer). You can save a preset in the host application to save everything — the flare and all the regular plug-in parameters.

While the preset browser, save dialog, or flare designer are open, the main AE window will be unresponsive. This is normal. Close the preset browser or flare designer and AE will wake up again.

Using Mocha in Sapphire

What is Mocha?

Mocha is a planar tracking and masking utility that can save time on the most difficult motion tracking and masking shots. It tracks the entire area of the mask, not just individual points, to significantly reduce the tedium of manual keyframing.

Mocha looks for 3-d planes in the image: pixels that move together. Screens and signs are clear candidates, but Mocha can also track faces. It can handle objects obscured by foreground elements, and can track unlimited layers all at once.

There's a lot more to Mocha than we can explain here; there are plenty of tutorials online at <http://borisfx.com>.

In Sapphire, Mocha works as a mask for the effect, similarly to the mask input, but with all the tracking features of Mocha. For instance, in S_DistortRGB, the mask affects the amount of RGB distortion. In S_Glow, the mask masks out the areas you want to emit glowing light, without chopping off the smooth edges of the glow.

How to use it

1. Apply a Sapphire effect

Most Sapphire effects now feature Mocha planar tracking integrated within the effect. Certain effects were omitted because utilizing a mask made no logical sense; for example, none of the S_Transition effects incorporate S_Mocha, and the Z_effects which require a Z_depth matte to work were also skipped.

2. Click **Edit Mocha** to launch Mocha

When you click the **Edit Mocha** button, you will launch the Mocha UI, which will allow you to create and track a mask for use back with the selected Sapphire effect in your host application.

3. Create a spline

You can create a shape to track within Mocha utilizing either an X-spline or Bezier splines. X-splines are recommended for most uses.

Draw one or more splines around the planar areas you would like to track.

4. Track it

You can use backwards and forward tracking from whatever frame you're parked on. You can often get a great result with default settings, but if you're getting a lot of drifts, try increasing the **Min K Pixels Used**.

5. Save and exit back to host

For your mask to appear back in your host application, YOU MUST SAVE AND EXIT. If you exit without saving, all your current work will be lost. Always save and exit!

6. Adjust in Sapphire

You can make additional fine tuning adjustments after tracking in Mocha by opening the "Mocha" pulldown in your selected Sapphire effect. Additional softness and position/scale parameters can be found here, as well as checkboxes for soloing/hiding/inverting the Mocha mask.

7. Moving masks between effects

Sometimes you track a shot with Mocha in one Sapphire effect and would like to reuse the track in a different effect. The simplest way is to export it from the first effect and re-import into the second effect.

1. go into Mocha with **Edit Mocha**, then File > Export to export the Mocha project to a file.
2. Exit Mocha and delete the old effect.
3. Apply the new effect, **Edit Mocha**, and File > Merge the project from the file you saved.

Alternatively, if you want to share a Mocha mask with several effects, track the mask in a simple Sapphire effect such as S_HueSatBright. In there, select **Show Mocha Only**. Then use that as the Mask input to the effects where you want the mask used. (Exactly how to do this varies with host app.) Since the Mocha mask acts just like a regular mask input, this will allow you to update the mask once and all the other effects will use it.

Resetting Parameters to Defaults

Host products should provide a way to reset all of a plug-in's parameters to their default values by clicking on a **Reset** button or selecting **Reset** from a context menu.

On Nuke: right-click on the properties panel and in the Context menu select Reset Knobs to Default. You can also choose Revert Knobs, which will undo all changes since you opened the properties panel.

On Toxik: press the Reset button on the right side of the parameters window.

On Fusion: right-click on the effect icon in the Comp, and choose Settings -> Load Default.

On Baselight: in the Edit menu, click on Reset Parameters.

On Film Master: press the Reset Effect button (which looks like a circle with a red dot in the center and a small white left-pointing triangle on the right).

On Scratch: press the Reset button located on the right side of the screen under the bin. To reset an individual parameter, click on that parameter's value/slider and in the resulting dialog, click on the "R" button.

Online Documentation

In OFX, all Sapphire Plug-ins include an **Help** button at the bottom of the plug-in parameters. Push this button to bring up a window showing the current version of Sapphire Plug-ins, your license status, some documentation about the current plug-in, and links to more detailed HTML documentation.

Online documentation is normally installed along with your software and can also be accessed directly.

On Windows: go to Start -> All Programs -> GenArts Sapphire OFX -> Online Help (HTML) or (PDF).

On Mac: go to the Applications/GenArtsSapphireOFX folder and double click on Online Help.html or .pdf.

On Linux: go to the RedHat Applications menu and select GenArts Sapphire OFX -> Sapphire Online Help (HTML) or (PDF).

GPU Acceleration

Many effects can use the GPU to speed up rendering. This requires an NVIDIA graphics card which supports CUDA, such as a GeForce 280 or 285, or Quadro FX 5600 or 5800. If a suitable GPU is found, a GPU Enable button will appear in the Help dialog. GPU acceleration is enabled by default if it's available, but if you experience performance or stability problems, you can turn it off by deselecting the GPU Enable button.

If a plug-in is unable to render on the GPU, it will automatically fall back to the CPU and continue processing. The GPU status, including the type of error, is displayed in the Help dialog.

On machines with more than one GPU that supports CUDA, you can select which GPU Sapphire Plug-ins will use by changing the value of `use_gpu` in the `s_config.text` file.

About Motion Blur

Many Sapphire Plug-ins can simulate motion blur by rendering the effect at multiple times and averaging the results together. Motion blur is controlled by three parameters:

- **Enable Motion Blur** turns motion blur on or off.
- **Shutter Angle** controls the amount of time that the simulated shutter is open, and thus the overall amount of motion blur. The default value of 180 degrees will blur over an interval of half a frame, which is a common setting for real cameras. A value of 360 degrees will blur over an entire frame, which is the maximum amount of motion blur possible with a real camera. Values above 360 degrees will produce unrealistic results in which the motion of adjacent frames overlaps.
- **Samples** controls the number of individual renders that are averaged together. Increasing the number of samples will give smoother results, but will also increase render times. If too few samples are used, there can be visible aliasing or ghosting artifacts. Faster motion will require more samples to avoid artifacts.

About Mask Inputs

Many Sapphire Plug-ins accept an optional Mask input clip. Typically, this input can be used to provide more detailed control for where the effect should be applied and where it should not be applied.

Glint, Glow, Glare, and Rays, for example, take the main Source input and also an optional Mask input. For these, the source input is multiplied by the mask *before* generating the glints (or glows, glares), so where the mask is black no glints are generated, and where it is white they are generated as usual. This method prevents the glints or glows themselves from being partially cropped by the mask. In addition these effects use the RGB colors of the Mask input to selectively colorize the resulting glows, glints, or glares. The red areas of the mask will produce red glows, glints, or glares, and so on.

In Blur effects, the areas which are masked out are never blurred, so they do not blur into the masked-in regions. If a mask were instead applied afterward, the pixels behind the mask would be blurred over the edge of the mask and into the final image. As an example, say you have a clip with white text over a black background. If you put that clip into both the Source and Mask inputs of Blur, the black background will *not* be blurred into the text, since the black pixels are all masked out.

Some OFX host products, such as Toxik and Fusion, have their own native masking inputs on every effect. These inputs simply composite the original source over the normal result where the mask is black. The plug-in doesn't use that input in its processing.

In Fusion, the native masking input is called Effect Mask and it's blue to distinguish it from the Sapphire Mask input, which is white. In Toxik, the native Masking input is always last and is colored black, whereas the Sapphire Mask input is gray like other inputs.

About Alpha Channel Processing

All Sapphire Plug-ins can handle RGBA inputs, and the Alpha of RGBA inputs is handled in one of three ways, depending on the effect:

1. Alpha is processed as just another input channel like R, G, and B. Effects in this category include: AutoPaint, Mosaic, Blur, BlurMotion, RackDefocus, all Wipes, all Dissolves, Distort, DistortBlur, DistortChroma, all Kaleidoscopes, all Warps, Shake, and MathOps.
2. Alpha is copied from the first input to the output. In this case the effect doesn't use the Alpha channel, but it is passed through unchanged from the first input to the output. Effects in this category include: BandPass, BlurChroma, ClampChroma, DuoTone, EdgeDetect, Embosses, Etching, HalfTones, Hotspots, DistortRGB, Monochrome, Pseudo_Color, Psykos, Sharpen, Sketch, Sparkles, Streaks, Threshold, and Zebrafy.
3. Some other effects pass the input Alpha channel through, and also add some opacity where the effects are applied. An Affect Alpha parameter is included in these effects which allows adjusting the amount that the alpha channel is affected. The effects in this category are: LensFlare, all Glows, all Glints, Glare, EdgeRays, Rays, and all Zaps.

Some OFX host products, such as Nuke and Fusion, represent RGBA images in pre-multiplied format, where the RGB are assumed to be scaled by the opacity. Other hosts such as Toxik, Baselight, and Film Master represent RGBA in non-premultiplied or straight format. Sapphire effects use pre-multiplied format internally, and will automatically convert as needed depending on the host product's format. The Affect Alpha parameter which is available in most lighting effects tends to be less necessary in hosts that use pre-multiplied RGBA format, and it defaults to 0.0 for these hosts, but defaults to 1.0 for hosts that use straight RGBA format.

About Pixel Aspect Ratios

For some image formats, the digital form of the image is scaled non-uniformly to produce the final viewed picture. For example NTSC resolution is normally 720x486 with an aspect ratio of 1.481. However, the final NTSC picture has an aspect ratio of 4/3 or 1.333. Thus the original digital image is scaled in the horizontal direction by a factor of 0.9 and shapes rendered as circles can end up squashed slightly into ovals. The original pixels are effectively rectangular shaped instead of squares, and have an aspect ratio of $1.481/1.333 = 1.111$. (Or $1.333/1.481 = 0.9$ if the inverse ratio is used.)

OFX allows you to adjust the pixel aspect ratio in the Composition Settings menu, and Sapphire Plug-ins read this value to give the appropriately scaled results.

If necessary, you can override the pixel aspect ratio for *all* Sapphire Plug-ins by changing the value of force_pixel_aspect_ratio in the s_config.text file.

The pixel aspect ratio makes no difference for basic pixel processing effects such as color processing or compositing.

Customizing Plug-ins

A number of parameters are available that can be adjusted to customize the behavior of all Sapphire plug-ins. You can disable multi-processing, force the pixel aspect ratio, or specify lookup tables for more accurate processing of log format images. A facility is also included with Sapphire Plug-ins that allows users with some programming experience to define and customize new plug-ins. For additional information on these, or to modify a parameter, see the s_config.text file.

On Mac the config file is: /Applications/GenArtsSapphireOFX/config/s_config.text

On Windows the config file is: C:\Program Files\GenArts\SapphireOFX\s_config.text.

On Linux the config file is: /usr/genarts/SapphireOFX/s_config.text.

Custom Lens Flare types can also be made by editing the s_lensflares.text file, in the same directory as the config file above. New flare types will automatically appear in the menu of the S_LensFlare plug-in.

Known Problems

1. Resolve: Several effects don't blur correctly in Resolve. We've identified the issue and are working with Blackmagic to fix the problem. The list of effects and parameters with this issue are:
 - ◆ Motion Blur in FilmRoll
 - ◆ Motion Blur in StripSlideTranition
 - ◆ Blur Amount in SwishPan
 - ◆ Motion Blur in Swish3d
 - ◆ Motion Blur in WhipLash
 - ◆ Blur as a result of Z-Dist, Shift, or Rotate in BlurMotionCurves
2. Trimming clips from the head may invalidate the Mocha track.
3. Any S_Effect saved with an earlier version containing WarpDrops will render incorrectly after installing Sapphire 11. The effect can be fixed by clicking "Edit Effect" to open Builder, and then clicking "OK" to update the effect to Sapphire 11.
4. Mocha tracking in Resolve is only supported in Resolve 14 Studio and Resolve 12.5 Studio, not the free versions.
5. Nuke: Mocha mask creation on effects connected to generators (color wheel, checkerboard etc.) only works if you move the playhead to the end of the generator clip.
6. Vegas Studio Pro: Mocha mask creation in an effect applied as "Insert generated media" works, but frame numbers look too large in Mocha. However when exiting Mocha, the animated mask has the proper speed and duration.
7. Vegas Studio Pro: Mocha UI will always start at the beginning of the clip, regardless of where the playhead is in the host.
8. Silhouette: Mocha tracking is not supported
9. In LensFlareAutoTrack the hotspot may move around if the resolution changes and the hotspot_shift parameter is set to any value other than zero. If using the hotspot_shift parameter always work in full resolution.
10. Baselight: Mocha tracking will appear to work in the UI, but rendering will fail.

Acknowledgements

We are grateful to our many customers who have made suggestions and taken time to beta test this software. The software for JpegDamage is based in part on the work of the Independent JPEG Group.

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This product includes cryptographic software written by Eric Young (eay@cryptsoft.com). This product includes software written by Tim Hudson (tjh@cryptsoft.com).

Effects

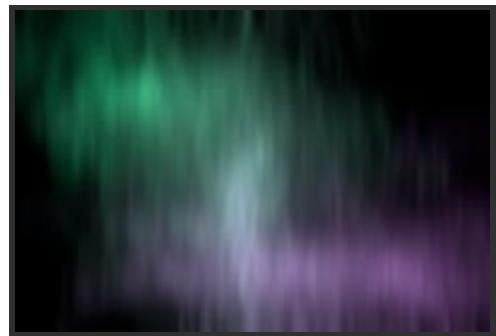
The remainder of this User's Guide contains information about each effect in the Sapphire Plug-ins package. The effects are listed in alphabetical order by plug-in name.

Each effect's documentation describes the functionality of the effect, its inputs and parameters, and contains an example picture. This same documentation for each effect is also available directly from the Plug-in interface by clicking on the **Help** button while using any effect.

S_Aurora

Generates a two colored swirl of light along a user controlled spline reminiscent of the Aurora Borealis (Northern Lights).

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to use as background.

Mask: *Optional.* Defines the area where aurora should be rendered.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Start: *X & Y, Default: [-0.7 0.4], Range: any.*

The starting point of the Aurora.

Start Uses Mocha: *Check-box, Default: off.*

Controls whether the starting point is controlled by the Start parameter or follows the Start point track from Mocha.

Smooth Start Track: *Integer, Default: 0, Range: 0 or greater.*

Controls how many points to average when stabilizing the Mocha point track.

Point 1 Enable: *Check-box, Default: off.*

Turns on or off the first control point.

Control Point 1: *X & Y, Default: [-0.33 0.4], Range: any.*

First spline control point.

Point1 Uses Mocha: *Check-box, Default: off.*

Controls whether point 1 is controlled by the Control Point 1 parameter or follows the Control Point 1 track from Mocha.

Smooth Point1 Track: *Integer, Default: 0, Range: 0 or greater.*

Controls how many points to average when stabilizing the Mocha point track.

Point 2 Enable: *Check-box, Default: on.*

Turns on or off the second control point.

Control Point 2: *X & Y, Default: [0.04 0.2], Range: any.*

Second spline control point.

Point2 Uses Mocha: *Check-box, Default: off.*

Controls whether point 2 is controlled by the Control Point 2 parameter or follows the Control Point 2 track from Mocha.

Smooth Point2 Track: *Integer, Default: 0, Range: 0 or greater.*

Controls how many points to average when stabilizing the Mocha point track.

Point 3 Enable: *Check-box, Default: on.*

Turns on or off the third control point.

Control Point 3: *X & Y, Default: [-0.1 -0.4], Range: any.*

Third spline control point.

Point3 Uses Mocha: *Check-box, Default: off.*

Controls whether point 3 is controlled by the Control Point 3 parameter or follows the Control Point 3 track from Mocha.

Smooth Point3 Track: *Integer, Default: 0, Range: 0 or greater.*

Controls how many points to average when stabilizing the Mocha point track.

Point 4 Enable: *Check-box, Default: off.*

Turns on or off the fourth control point.

Control Point 4: *X & Y*, *Default:* [0.45 –0.33], *Range:* any.

Fourth spline control point.

Point4 Uses Mocha: *Check-box*, *Default:* off.

Controls whether point 4 is controlled by the Control Point 4 parameter or follows the Control Point 4 track from Mocha.

Smooth Point4 Track: *Integer*, *Default:* 0, *Range:* 0 or greater.

Controls how many points to average when stabilizing the Mocha point track.

End: *X & Y*, *Default:* [0.8 –0.5], *Range:* any.

The ending point of the Aurora.

End Uses Mocha: *Check-box*, *Default:* off.

Controls whether the end point is controlled by the End parameter or follows the End point track from Mocha.

Smooth End Track: *Integer*, *Default:* 0, *Range:* 0 or greater.

Controls how many points to average when stabilizing the Mocha point track.

Start Color: *Default rgb:* [0 0.8 0.3].

Sets the color at the starting control point.

End Color: *Default rgb:* [0.6 0.2 0.8].

Sets the color at the ending control point.

Color Phase: *Default:* 0, *Range:* 0 or greater.

Adjusts the phase of the gradient between Start Color and End Color. Use this to animate the movement of the colors along the Aurora.

Stroke Size: *Default:* 0.25, *Range:* 0 or greater.

Influences the width of the Aurora along the spline. This parameter controls the size of the underlying color gradient before it's distorted.

Brightness: *Default:* 0.3, *Range:* 0 or greater.

Scales the brightness of the Aurora.

Softness: *Default:* 0.075, *Range:* 0 or greater.

The amount of blur applied to the Aurora. Set to 0 to get a colored point cloud.

Softness Rel Y: *Default:* 10, *Range:* 0 or greater.

The relative vertical amount of softness.

Swirl Complexity: *Integer*, *Default:* 3, *Range:* 1 or greater.

Specifies how many layers should be rendered in the Aurora. The more layers rendered, the more complex pattern generated along the spline.

Swirl Magnitude: *Default:* 0.7, *Range:* 0 or greater.

The magnitude or amplitude of the swirls along the spline. Setting this to 0 will render a color gradient along the spline.

Magnitude Rel Y: *Default:* 1.25, *Range:* 0 or greater.

The relative vertical magnitude of the swirls.

Swirl Frequency: *Default:* 2, *Range:* 0 to 50.

The frequency of the swirls along the spline.

Frequency Rel Y: *Default:* 10, *Range:* 0 or greater.

The relative vertical frequency along the spline.

Swirl Speed X: *Default: 0.1, Range: any.*
The speed at which the swirls move horizontally.

Swirl Speed Y: *Default: 0, Range: any.*
The speed at which the swirls move vertically.

Light Brightness: *Default: 1, Range: 0 or greater.*
Lights a circular area of the Aurora. Set to 0 to disable the light. Increase value to increase the intensity of the light.

Light Pos: *X & Y, Default: [-0.3 –0.5], Range: any.*
The position of the center of the light.

Light Color: *Default rgb: [1 1 1].*
The color of the light.

Ambient Light: *Default: 1, Range: 0 or greater.*
The level of illumination outside the light.

Light Radius: *Default: 1, Range: 0 or greater.*
Distance from the center of the light to the edge of the brightest section.

Light Softness: *Default: 2, Range: 0 or greater.*
How quickly the edge of the light should taper off to darkness.

Seed: *Default: 0.123, Range: 0 or greater.*
Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Bg Brightness: *Default: 1, Range: 0 or greater.*
Scales the brightness of the Background input.

Combine: *Popup menu, Default: Screen.*
Determines how the Aurora is combined with the source image.

Screen: the Aurora is blended with the source using a screen operation.

Add: the Aurora is added to the source.

Aurora Only: gives the Aurora with no source.

Affect Alpha: *Default: 0, Range: 0 or greater.*
If this value is positive the output Alpha channel will include some opacity from the aurora. The maximum of the red, green, and blue light leak brightness is scaled by this value and combined with the Background Alpha at each pixel.

Mask Use: *Popup menu, Default: Luma.*
Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*
Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*
If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Spline: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Start parameter.

Show Light Pos: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Light Pos parameter.

See Also:

[NightSky](#)

[Clouds](#)

[Zap](#)

[Zap](#)

[ZapTo](#)

[ZapFrom](#)

[Sapphire](#)

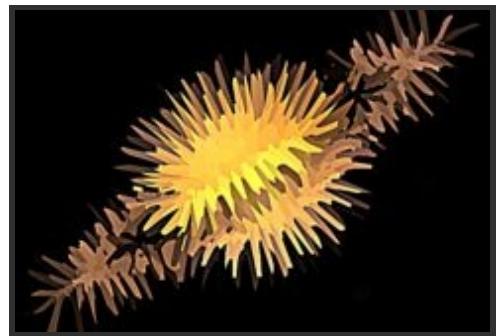
[Plug-ins](#)

[Introduction](#)

S_AutoPaint

Generates a 'paint-brushed' version of the source clip. Use the Frequency and Stroke Length parameters to adjust the density and shape of the brush strokes. You can set Jitter Frames to 1 if you want to re-randomize the brush stroke pattern for each frame.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Style: *Popup menu, Default: Van Gogh.*
Selects the style of brush strokes.

Van Gogh: the stroke directions align with the edges found within the image.
Hairy Paint: the strokes are perpendicular to the edges within the image.
Pointalize: the strokes are cellular pointy shapes with no direction.

Frequency: *Default: 50, Range: 0.1 or greater.*
The density of brush strokes in the frame. Increase for smaller strokes.

Stroke Length: *Default: 2, Range: any.*
Determines the length of the brush strokes along the directions of edges in the source clip. If this is negative you can switch from VanGogh to HairyPaint styles and vice versa.

Stroke Align: *Default: 0.2, Range: 0 or greater.*
Increase to smooth out the directions of the strokes so nearby strokes are more parallel.

Smooth Colors: *Default: 0, Range: 0 or greater.*
Blurs the source by this amount before generating the brush strokes. Increase to cause the colors of nearby strokes to be more consistent.

Seed: *Default: 0, Range: 0 or greater.*
Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Jitter Frames: *Integer, Default: 0, Range: 0 or greater.*
If this is 0, the locations of the strokes will remain the same for every frame processed. If it is 1, the locations of the strokes are re-randomized for each frame. If it is 2, they are re-randomized every second frame, and so on.

Sharpen: *Default: 1, Range: any.*
The amount of post-process sharpening applied.

Sharpen Width: *Default: 0.1, Range: 0 or greater.*
The width at which to apply the post-process sharpening filter, relative to the stroke sizes. Higher values affect wider areas from the edges, lower values only affect areas near sharp edges.

Mix With Source: *Default: 0, Range: 0 to 1.*
Interpolates between the result (0) and the original source (1).

Mask Use: *Popup menu, Default: Luma.*
Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.
Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*
Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[Sketch](#)

[Etching](#)

[Sapphire](#)

[HalfTone](#)

[Plug-ins](#)

[HalfToneColor](#)

[Introduction](#)

[Mosaic](#)

[FlysEyeHex](#)

[Sharpen](#)

S_BandPass

Generates an X-ray-like effect using a band-pass filter. Two blurs are performed with different widths, and the result is the difference scaled and offset by a gray value. Frequencies above and below the cutoffs are attenuated, leaving only the middle band of frequencies.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* *Union*.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

- Union:** Uses the area covered by both masks together.
- Intersect:** Uses the area that overlaps between the two masks.
- Mocha Only:** Ignore the Input Mask and only use the Mocha Mask.

Blur Amount1: *Default:* 0.112, *Range:* 0 or greater.
The width for the first blur. Sets the low frequency cutoff. This parameter can be adjusted using the Blur Amount1 Widget.

Blur Amount2: *Default:* 0.224, *Range:* 0 or greater.
The width for the second blur. Sets the high frequency cutoff. This parameter can be adjusted using the Blur Amount2 Widget.

Blur Rel: *X & Y*, *Default:* [1 1], *Range:* 0 or greater.
The relative horizontal and vertical blur widths. Set Blur Rel X to 0 for a vertical-only blur, or set Blur Rel Y to 0 for a horizontal-only blur. This parameter can be adjusted using the Blur Amount1 Widget.

Brightness: *Default:* 3, *Range:* any.
Scales the brightness of the result.

Saturation: *Default:* 1, *Range:* any.
Scales the color saturation. Increase for more intense colors. Set to 0 for monochrome.

Offset Dark: *Default:* 0.5, *Range:* any.
Adds this gray value to the darker regions of the result. This can be negative to increase contrast.

Mask Use: *Popup menu*, *Default:* *Luma*.
Determines how the Mask input channels are used to make a monochrome mask.

- Luma:** the luminance of the RGB channels is used.
- Alpha:** only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.
Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.
If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Blur Amount1: *Check-box*, *Default:* on.
Turns on or off the screen user interface for adjusting the Blur Amount1 parameter.

Show Blur Amount2: *Check-box*, *Default:* on.
Turns on or off the screen user interface for adjusting the Blur Amount2 parameter.

See Also:

EdgeDetect	Sapphire
EdgesInDirection	Plug-ins
EdgeColorize	Introduction

Sharpen

Emboss

Blur

S_Beauty

Applies smoothing, color correction, soft focus, and glow to skin regions. Skin regions are determined in one of four ways depending on the value of Enable Skin Detection and whether a second input is provided:

1. Enable Skin Detection **OFF**, no second input: effect applies to the entire image.
2. Enable Skin Detection **ON**, no second input: an internal mask is generated using the specified Skin Color, Luma and Chroma Range parameters.
3. Enable Skin Detection **OFF**, second input provided: The second input is used as an external mask. Effect applies to bright areas of the mask (to apply to dark areas, see the Invert Mask parameter).
4. Enable Skin Detection **ON**, second input provided: An internal mask is generated and multiplied by the external mask.



In the Sapphire Blur+Sharpen effects submenu.

Inputs:

Source: The clip to be processed.

Mask: *Optional.* Garbage mask to combine with internal skin detection.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*
The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*
Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*
Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Enable Skin Detection: *Check-box, Default: on.*
Generate internal mask of skin regions based on Skin Color, Luma and Chroma Range, etc. When disabled, effect applies uniformly to masked input (see description above for full details).

Skin Color: *Default rgb: [0.556 0.37 0.257].*
Representative skin color to use during detection. This parameter can be adjusted using the Skin Color Widget.

Luma Range: *Default: 0.4, Range: 0 or greater.*
Difference in luma from Skin Color to consider skin.

Chroma Range: *Default: 0.15, Range: 0 or greater.*
Difference in chroma from Skin Color to consider skin. This parameter can be adjusted using the Chroma Range Widget.

Rel Orange: *Default: 1, Range: 0 to 1.*
Relative amount of orange in Chroma Range. The orange axis is along the human skin tone line common to all the human races, and is also known as the I-line in vectorscope terminology. Reducing this parameter can help eliminate blond or red hair (and similar highlights in other hair colors), some red/orange/yellow sports uniforms, warm backgrounds, etc. from the skin mask.

Rel Purple: *Default: 0.6, Range: 0 to 1.*
Relative amount of purple in Chroma Range. The purple axis is perpendicular to the orange axis, and is thus most un-skin-like. In most cases this parameter can be made smaller to eliminate lips, eyes, clothing, and jewelry from the skin mask. Increase this parameter to add purple and green shades to the skin detect mask, for example eye shadow, bad lighting, or alien skin tones (i.e. non-human).

Range Softness: *Default: 0.75, Range: 0 to 1.*
Controls the softness of the skin detection mask. A value of one means only pixels that exactly match Skin Color will produce a mask value of one with each other pixel's mask value being proportional to its distance from Skin Color. A value of zero means a hard mask where all pixels within the luma/chroma range of the Skin Color will produce a mask value of one.

Clip White: *Default: 1, Range: 0 to 1.*
Skin detection mask values greater than this value will be set to one.

Clip Black: *Default: 0, Range: 0 to 1.*
Skin detection mask values less than this value will be set to zero.

Post Blur: *Default: 0, Range: 0 or greater.*

Blur the skin detection mask by this amount.

Show: *Popup menu, Default: Final.*

Selects the type of output.

Final: Show the final output.

Skin Detect Mask: Show the mask generated by the internal skin detector.

With Garbage Mask: Show the combined result of the input garbage mask and the internal skin detector mask.

Skin: Show result of applying skin detection mask to source.

Skin with Garbage Mask: Show the result of applying the combined input garbage mask and the internal skin detector mask to the Source.

Show Color Helper: *Check-box, Default: off.*

Display an interactive overlay to help set Skin Color, Chroma Range, Rel Orange, and Rel Purple. The overlay shows all possible colors that match the brightness (luma) of the Skin Color parameter. Orange is in the upper left corner, and purple is in the upper right (this orientation is similar to a traditional broadcast vectorscope). Colors matching the skin detection algorithm are highlighted. Changing Skin Color will move the highlighted region, adjusting Chroma Range changes the size of the highlighted region, and adjusting Rel Orange/Purple stretches the region along the diagonals of the square.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Suppress BG: *Check-box, Default: off.*

Only apply Beauty to the region specified by Face Center and related params.

Face Center: *X & Y, Default: [0 0], Range: any.*

Center position of face region when Suppress BG is enabled. This parameter can be adjusted using the Face Center Widget.

Face Softness: *Default: 0.1, Range: 0 or greater.*

Makes the face region softer when Suppress BG is enabled. This will provide a smoother transition from the face region to the background, but also possibly reduce the strength of Beauty in the face region.

Face Radius: *Default: 0.4, Range: 0 or greater.*

Size of face region when Suppress BG is enabled. This parameter can be adjusted using the Face Radius Widget.

Face Rel Height: *Default: 1.33, Range: 0.05 or greater.*

Relative height of face region when Suppress BG is enabled.

Face Rotate: *Default: 0, Range: any.*

Rotation of face region when Suppress BG is enabled. This parameter can be adjusted using the Face Rotate Widget.

Show Face Widget: *Check-box, Default: off.*

Display an interactive overlay to assist in placing and sizing the face region.

Pore Size: *Default:* 0.01, *Range:* 0 or greater.

Features smaller than this size (pores, etc.) will be preserved even when blurring.

Blur Amount: *Default:* 0.02, *Range:* 0 or greater.

Scales the width of the blur.

Edge Threshold: *Default:* 0.1, *Range:* 0 or greater.

Color regions separate by an edge larger than this value will not blur into each other.

Soft Shadows: *Default:* 0.2, *Range:* -1 to 1.

Positive values reduce the appearance of shadows, while negative values make shadows more pronounced. Reducing shadows can make the subject look younger, while darkening shadows will make them look older.

Shadow Thresh: *Default:* 0.6, *Range:* 0 or greater.

Dark regions less than this value will be enhanced/reduced by Soften Shadows.

Reduce Shine: *Default:* 0, *Range:* 0 to 1.

Darken bright, shiny areas. The darkening process can lead to a lack of color, use Shine Saturation to bring back a natural skin tone in the affected region.

Shine Saturation: *Default:* 1, *Range:* 0 or greater.

Scales the color saturation in bright regions. Useful for adding a natural skin tone to shiny areas that required darkening.

Shine Thresh: *Default:* 0.9, *Range:* 0 or greater.

Regions brighter than this value will be affected by Reduce Shine.

Hue Shift: *Default:* 0, *Range:* any.

Shifts the hue of the source colors, in revolutions from red to green to blue to red.

Saturation: *Default:* 1.1, *Range:* -2 to 8.

Scales the color saturation of the result. Increase for more intense colors. Set to 0 for monochrome. You can also invert the chroma of the result by making this negative.

Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the result.

Tint: *Default* *rgb:* [1 1 1].

Scales the result by this color, thus tinting the lighter regions.

Soft Focus: *Default:* 0, *Range:* 0 or greater.

Scales the width of the soft focus blur.

Glow Brightness: *Default:* 0.1, *Range:* 0 or greater.

Scales the brightness of the skin glow.

Glow Color: *Default* *rgb:* [1 1 1].

Scales the color the skin glow.

Glow Threshold: *Default:* 0.2, *Range:* 0 or greater.

Glows are generated from locations in the skin regions that are brighter than this value. A value of 0.9 causes glows at only the brightest spots. A value of 0 causes glows for every non-black area.

Glow Width: *Default:* 0.1, *Range:* 0 or greater.

Scales the skin glow distance.

Mix With Source: *Default:* 0, *Range:* 0 to 1.

Interpolates between the blurred result (0) and the original source (1). 0.1 can give a nice misty effect since it mixes

only a little of the source in.

See Also:

[EdgeAwareBlur](#)

[HueSatBright](#)

[SoftFocus](#)

[Glow](#)

[RackDefocus](#)

[DefocusPrism](#)

[EdgeBlur](#)

[BandPass](#)

[BlurMotion](#)

[Sapphire](#)

[Plug-ins](#)

[Introduction](#)

S_BleachBypass

Simulates a film process in which silver is not removed from the negative. The result has increased contrast and reduced color saturation.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Amount: *Default: 1, Range: 0 or greater.*

Controls the intensity of the effect by interpolating between the original source and the result.

Soft Focus: *Default: 0, Range: 0 or greater.*

If positive, a soft focus effect is also applied. Increase for a broader soft focus look.

Sharpen: *Default: 0, Range: any.*

The amount of post-process sharpening applied.

Saturation: *Default: 1, Range: 0 to 10.*

Scales the color saturation. Increase for more intense colors. Set to 0 for monochrome.

Scale Lights: *Default: 1, Range: 0 or greater.*

Scales the result by this value. Increase for a brighter result.

Offset Dark: *Default: 0, Range: -8 to 2.*

Adds this gray value to the darker regions of the result. This can be negative to increase contrast.

Grain Parameters:

Grain Amp: *Default: 0, Range: 0 or greater.*

Scales the amplitude of the film grain that is added to the result. Set this to 0 to disable all grain.

Grain Amp Red: *Default: 0.9, Range: 0 or greater.*

Scales the red grain amplitude.

Grain Amp Green: *Default: 1, Range: 0 or greater.*

Scales the green grain amplitude.

Grain Amp Blue: *Default: 1.6, Range: 0 or greater.*

Scales the blue grain amplitude. Note that grain is added and subtracted from the image, so for example, increasing Grain Amp Blue will amplify both the blue and yellow speckles.

Grain Amp Dark: *Default: 0.2, Range: 0 to 2.*

The relative amount of grain applied to the darkest regions of the image, per channel. This defaults to less than 1.0 because dark areas usually have less grain than midtones.

Grain Amp Bright: *Default: 0, Range: 0 to 2.*

The relative amount of grain applied to the brightest regions of the image, per channel. This defaults to zero because bright areas usually have less grain than midtones. Note that highly saturated colors can be affected by both Grain Amp Dark and Grain Amp Bright because they are dark in some color channels and bright in others.

Grain Blur: *Default: 0, Range: 0 or greater.*

The grain is smoothed by this amount. Increase for coarser grain.

Grain Blur Red: *Default: 1, Range: 0 or greater.*

The relative blur amount for the red grain.

Grain Blur Green: *Default: 0.9, Range: 0 or greater.*

The relative blur amount for the green grain.

Grain Blur Blue: *Default: 1.2, Range: 0 or greater.*

The relative blur amount for the blue grain.

Grain Mono: *Check-box, Default: off.*

When enabled, the same grain pattern is used for the red, green, and blue channels. To make truly monochrome grain you should also set Grain Amp Red/Green/Blue equal to each other, make sure Midtone Pos Red/Green/Blue are equal, and if GrainBlur is positive also set Grain Blur Red/Green/Blue equal

Grain Seed: *Default: 0, Range: 0 or greater.*

Initializes the random number generator for the grain generation. The actual seed value is not significant, but different seeds give different grain patterns and the same value should give a repeatable pattern.

Other Parameters:

Scale Colors: *Default rgb: [1 1 1].*

Scales the color of the result. For example, if it is yellow [1 1 0], the blue of the result will be 0.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[FilmEffect](#)

[Sapphire](#)

[FilmDamage](#)

[Plug-ins](#)

[Solarize](#)

[Introduction](#)

[Grain](#)

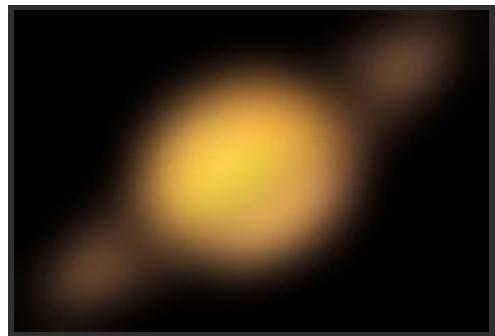
[VintageColor2Strip](#)

[VintageColor3Strip](#)

S_Blr

Blurs the source clip by an arbitrary amount using a gaussian, triangle, or box filter. This effect should render quickly even with very large Width values. Use the Blur Rel X and Y parameters for a more horizontal or vertical blur direction.

In the Sapphire Blur+Sharpen effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* If provided, the blur is only performed on regions of the source clip specified by the bright areas of this input. Pixels outside this mask are not blurred, and do not contribute to the resulting blurred pixels within it. This input can be affected using the Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Effect: *Popup menu, Default: Blur Color.*

Selects between full color or monochrome result.

Blur Color: blurs all the channels of the source input.

Blur Mono: makes the source monochrome and then blurs the resulting single channel (faster).

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.
The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.
Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.
Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Blur Amount: *Default:* 0.4, *Range:* 0 or greater.
Scales the width of the blur. This parameter can be adjusted using the Blur Amount Widget.

Blur Rel: *X & Y*, *Default:* [1 1], *Range:* 0 or greater.
The relative horizontal and vertical blur widths. Set Blur Rel X to 0 for a vertical-only blur, or set Blur Rel Y to 0 for a horizontal-only blur. This parameter can be adjusted using the Blur Amount Widget.

Brightness: *Default:* 1, *Range:* 0 or greater.
Scales the brightness of the result.

Scale Opacity: *Default:* 1, *Range:* 0 or greater.
Scales the opacity (alpha channel) of the result.

Offset Dark: *Default:* 0, *Range:* any.
Adds this gray value to the darker regions of the result. This can be negative to increase contrast.

Mix With Source: *Default:* 0, *Range:* 0 to 1.
Interpolates between the blurred result (0) and the original source (1). 0.1 can give a nice misty effect since it mixes only a little of the source in.

Filter: *Popup menu*, *Default:* Gauss.
The type of convolution filter to blur with.

Box: uses a rectangular shaped filter.
Triangle: smoother, uses a pyramid shaped filter.
Gauss: smoothest, uses a gaussian shaped filter.

Subpixel: *Check-box*, *Default:* on.
Enables blurring by subpixel amounts. Use this for smoother animation of the Blur Amount or Blur Rel parameters.

Soft Borders: *Check-box*, *Default:* off.
If enabled, transparent borders are added to the input image before processing. This allows the result to include soft edges beyond the original image size. When off, the effect only occurs within the frame and the result will retain an edge at the borders.

Invert Mask: *Check-box*, *Default:* off.
If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Show Blur Amount: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the blur amount parameters.

See Also:

[BlurChannels](#)

[BlurChroma](#)

[RackDefocus](#)

[DefocusPrism](#)

[EdgeBlur](#)

[BandPass](#)

[BlurMotion](#)

[Sapphire](#)

[Plug-ins](#)

[Introduction](#)

S_BlrChannels

Blurs each channel of the source clip by an arbitrary amount using a gaussian, triangle, or box filter. This effect should render quickly even with very large Width values. Use the Blur Rel X and Y parameters for a more horizontal or vertical blur direction.

In the Sapphire Blur+Sharpen effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* If provided, the blur is only performed on regions of the source clip specified by the bright areas of this input. Pixels outside this mask are not blurred, and do not contribute to the resulting blurred pixels within it. This input can be affected using the Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Blur Amount: *Default: 0.4, Range: 0 or greater.*

Scales the width of the blur for all channels. This parameter can be adjusted using the Blur Amount Widget.

Blur Red: *Default: 0, Range: 0 or greater.*

The blur width of the red channel, relative to Blur Amount. This parameter can be adjusted using the Blur Amount Widget.

Blur Green: *Default: 0.5, Range: 0 or greater.*

The blur width of the green channel, relative to Blur Amount. This parameter can be adjusted using the Blur Amount Widget.

Blur Blue: *Default: 1, Range: 0 or greater.*

The blur width of the blue channel, relative to Blur Amount. This parameter can be adjusted using the Blur Amount Widget.

Blur Alpha: *Default: 0, Range: 0 or greater.*

The blur width of the alpha channel if present, relative to Blur Amount. This parameter can be adjusted using the Blur Amount Widget.

Blur Rel: *X & Y, Default: [1 1], Range: 0 or greater.*

The relative horizontal and vertical blur widths. Set Blur Rel X to 0 for a vertical-only blur, or set Blur Rel Y to 0 for a horizontal-only blur. This parameter can be adjusted using the Blur Amount Widget.

Brightness: *Default: 1, Range: 0 or greater.*

Scales the brightness of the result.

Scale Red: *Default: 1, Range: 0 or greater.*

Scales the blurred red channel.

Scale Green: *Default: 1, Range: 0 or greater.*

Scales the blurred green channel.

Scale Blue: *Default: 1, Range: 0 or greater.*

Scales the blurred blue channel.

Scale Alpha: *Default: 1, Range: 0 or greater.*

Scales the blurred alpha channel, if present.

Offset Dark: *Default: 0, Range: -8 to 2.*

Adds this gray value to the darker regions of the result. This can be negative to increase contrast.

Offset Red: *Default: 0, Range: -8 to 2.*

Adds this value to the red channel of the result.

Offset Green: *Default: 0, Range: -8 to 2.*

Adds this value to the green channel of the result.

Offset Blue: *Default: 0, Range: -8 to 2.*

Adds this value to the blue channel of the result.

Offset Alpha: *Default: 0, Range: -8 to 2.*

Adds this value to the alpha channel of the result, if present.

Mix With Source: *Default: 0, Range: 0 to 1.*

Interpolates between the blurred result (0) and the original source (1). 0.1 can give a nice misty effect since it mixes only a little of the source in.

Filter: *Popup menu, Default: Gauss.*

The type of convolution filter to blur with.

Box: uses a rectangular shaped filter.

Triangle: smoother, uses a pyramid shaped filter.

Gauss: smoothest, uses a gaussian shaped filter.

Subpixel: *Check-box, Default: on.*

Enables blurring by subpixel amounts. Use this for smoother animation of any of the blur amount parameters.

Soft Borders: *Check-box, Default: off.*

If enabled, transparent borders are added to the input image before processing. This allows the result to include soft edges beyond the original image size. When off, the effect only occurs within the frame and the result will retain an edge at the borders.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Show Blur Amount: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the blur amount parameters.

See Also:

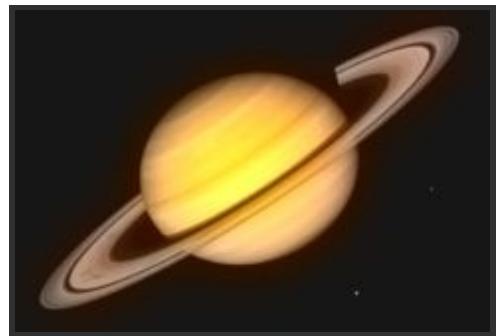
[RackDefocus](#)
[Glow](#)

[Sapphire Plug-ins](#)
[Introduction](#)

S_BlrChroma

Separates the source into luminance and chrominance components, blurs the chrominance and/or the luminance independently, and recombines them. You can also scale the luma and chroma independently to enhance or remove either.

In the Sapphire Blur+Sharpen effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* If provided, the blur is only performed on regions of the source clip specified by the bright areas of this input. Pixels outside this mask are not blurred, and do not contribute to the resulting blurred pixels within it. This input can be affected using the Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Blur Chroma: *Default:* 0.4, *Range:* 0 or greater.

The amount to blur the chrominance. This parameter can be adjusted using the Blur Chroma Widget.

Blur Luminance: *Default:* 0, *Range:* 0 or greater.

The amount to blur the luminance. This parameter can be adjusted using the Blur Luminance Widget.

Blur Rel: X & Y, *Default:* [1 1], *Range:* 0 or greater.

The relative horizontal and vertical blur widths. Set Blur Rel X to 0 for a vertical-only blur, or set Blur Rel Y to 0 for a horizontal-only blur. This parameter can be adjusted using the Blur Chroma Widget.

Scale Chroma: *Default:* 1, *Range:* 0 or greater.

Scales the chrominance by this amount. Increase for more intense colors, decrease for muted colors.

Scale Luminance: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the result.

Offset Result: *Default:* 0, *Range:* any.

Adds this gray value to the result (or subtracts if negative). 0 has no effect, .5 is middle gray, and 1 is white.

Mix With Source: *Default:* 0, *Range:* 0 to 1.

Interpolates between the blurred result (0) and the original source (1). 0.1 can give a nice misty effect since it mixes only a little of the source in.

Filter: *Popup menu*, *Default:* Gauss.

The type of convolution filter to blur with.

Box: uses a rectangular shaped filter.

Triangle: smoother, uses a pyramid shaped filter.

Gauss: smoothest, uses a gaussian shaped filter.

Subpixel: *Check-box*, *Default:* on.

Enables blurring by subpixel amounts. Use this for smoother animation of the Blur Chroma or Blur Luminance parameters.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu*, *Default:* Luma.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Show Blur Chroma: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Blur Chroma parameter.

Show Blur Luminance: *Check-box, Default:* on.

Turns on or off the screen user interface for adjusting the Blur Luminance parameter.

See Also:

[RackDefocus](#)

[DefocusPrism](#)

[WarpChroma](#)

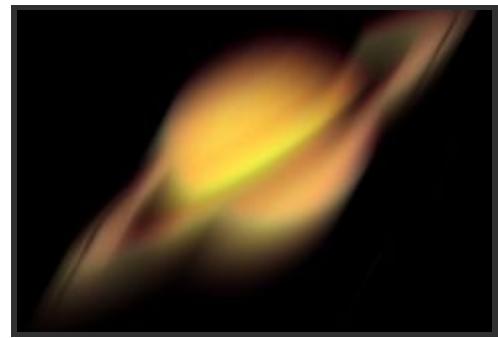
[Sapphire Plug-ins](#)

[Introduction](#)

S_BlrDirectional

Blurs the source clip in a given direction using a gaussian, triangle, or box filter. It can also blur each channel by different amounts.

In the Sapphire Blur+Sharpen effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* If provided, the blur is only performed on regions of the source clip specified by the bright areas of this input. Pixels outside this mask are not blurred, and do not contribute to the resulting blurred pixels within it. This input can be affected using the Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Blur Amount: *Default:* 0.4, *Range:* 0 or greater.
Scales the width of the blur. This parameter can be adjusted using the Blur Amount Widget.

Angle: *Default:* 45, *Range:* any.
The direction of the blur. An angle of 0 produces a horizontal blur, and an angle of 90 produces a vertical blur. This parameter can be adjusted using the Angle Widget.

Shift: *Default:* 0, *Range:* any.
Shifts the image in the direction of the blur. A negative shift amount shifts the image in the opposite direction.

Bias: *Default:* 0.5, *Range:* 0 to 1.
Varies the weight of the pixels along the path of the blur, which gives the appearance of trails or streaks in a single direction. A value of 0.5 weights all pixels evenly. A value of 1 causes the weight to increase toward the direction of the blur, while a value of 0 has the opposite effect.

Blur Red: *Default:* 1, *Range:* 0 or greater.
The blur width of the red channel, relative to Blur Amount.

Blur Green: *Default:* 1, *Range:* 0 or greater.
The blur width of the green channel, relative to Blur Amount.

Blur Blue: *Default:* 1, *Range:* 0 or greater.
The blur width of the blue channel, relative to Blur Amount.

Shift Red: *Default:* 0, *Range:* any.
Additional amount to shift the red color channel.

Shift Green: *Default:* 0, *Range:* any.
Additional amount to shift the green color channel.

Shift Blue: *Default:* 0, *Range:* any.
Additional amount to shift the blue color channel.

Brightness: *Default:* 1, *Range:* 0 or greater.
Scales the brightness of the result.

Offset Dark: *Default:* 0, *Range:* -8 to 2.
Adds this gray value to the darker regions of the result. This can be negative to increase contrast.

Mix With Source: *Default:* 0, *Range:* 0 to 1.
Interpolates between the blurred result (0) and the original source (1). 0.1 can give a nice misty effect since it mixes only a little of the source in.

Filter: *Popup menu*, *Default:* Box.
The type of convolution filter to blur with.

Box: uses a rectangular shaped filter.
Triangle: smoother, uses a pyramid shaped filter.

Gauss: smoothest, uses a gaussian shaped filter.

Edge Mode: *Popup menu, Default: Reflect.*

Determines the behavior when accessing areas outside the source image.

Transparent: Areas outside the source image are treated as transparent, which can produce transparency around the edges of the image. Select this for fastest rendering.

Repeat: Repeats the last pixel outside the border of the image.

Reflect: Reflects the image outside the border.

Soft Borders: *Check-box, Default: off.*

If enabled, transparent borders are added to the input image before processing. This allows the result to include soft edges beyond the original image size. When off, the effect only occurs within the frame and the result will retain an edge at the borders.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Show Blur Amount: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the blur amount parameters.

Show Angle: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Angle parameter.

See Also:

[Blur](#)

[BlurChannels](#)

[BlurChroma](#)

[RackDefocus](#)

[DefocusPrism](#)

[EdgeBlur](#)

[BandPass](#)

[BlurMotion](#)

[Sapphire](#)

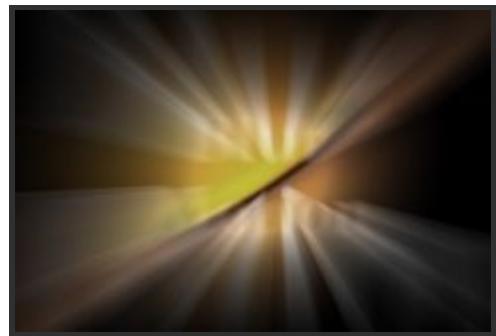
[Plug-ins](#)

[Introduction](#)

S_BluMoCurves

Performs a motion blur and optionally transforms the source clip using the animated curves of the Z Dist, Rotate and Shift parameters. If these parameters are constant, no motion blur will occur.

In the Sapphire Blur+Sharpen effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* If provided, the amount of motion blur is scaled by this input for each destination pixel. This input can be affected using the Blur Mask, Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Effect: *Popup menu, Default: Transform and Blur.*

Allows disabling of the transformation.

Transform and Blur: transforms the Source as well as blurring.

Blur Only: this can be useful if the motions have already occurred. The curves are used only to apply the corresponding motion blur in place, and no transformation is performed.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Center: *X & Y*, *Default:* [0 0], *Range:* any.

The center of rotation and zooming, in screen coordinates relative to the center of the frame. The shift values should be zero for this location to make sense. This parameter can be adjusted using the Center Widget.

Z Dist: *Default:* 1, *Range:* 0.001 or greater.

The 'distance' of the image from the camera, about the Center position. The rate of change of this parameter is also used for the motion blur. Values greater than 1.0 move it farther away and make it smaller. Values less than 1.0 move the image closer and enlarge it. This parameter can be adjusted using the Transform Widget.

Rotate: *Default:* 0, *Range:* any.

Rotates the image by this amount in degrees, about the Center. The rate of change of this parameter is also used for the motion blur. Note that for high rotation speeds, the motion blur will become less accurate. This parameter can be adjusted using the Transform Widget.

Shift: *X & Y*, *Default:* [0 0], *Range:* any.

Translates the source image by this amount. The rate of change of this parameter is also used for the motion blur. It is in screen coordinates for easy use with tracker data. This parameter can be adjusted using the Transform Widget.

Shutter Duration: *Default:* 1, *Range:* 0 or greater.

The amount of time, in frames, to apply the motion blur over. Larger values cause more blurring, smaller values cause less. The curves are sampled at plus and minus half of this value.

Shutter Shift: *Default:* 0, *Range:* any.

The time-shift in frames of the motion blur. If the Shutter Speed is 1.0 and Shutter Shift is 0, the blur is calculated between the current frame -.5 and +.5. If the Shutter Shift is instead .5 then the motion blur would be calculated between the current frame and the next frame.

Exposure Bias: *Default:* 0.5, *Range:* 0 to 1.

Determines the variable amount of exposure along the path between the From and To transformations. A value of 0 causes more exposure at the From end, 0.5 causes equal exposure along the path, and 1.0 causes more exposure at the To end. If you have bright spots on a dark background, a 0 value would cause the processed spots to be brighter at the From end and dark at the To end, and a 1.0 value would cause the opposite.

Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the result.

Wrap: *X & Y*, *Popup menu*, *Default:* [No No].

Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Blur Res: *Popup menu, Default: Full.*

Selects the resolution factor for the motion blur. This is similar to the general 'Res' factor parameter, but does a better job of averaging down to lower resolution and interpolating back up to the result. Higher resolutions give better quality, lower resolutions give faster processing.

Full: Full resolution is used.

Half: The motion blurring is performed at half resolution.

Quarter: The motion blurring is performed at quarter resolution.

Subpixel: *Check-box, Default: on.*

If enabled, uses a better quality but slightly slower method for performing the blur.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Crop Input Parameters: *Default: 0, Range: 0 or greater.*

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

Show Center: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Center parameter.

Show Transform: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Z Dist and Rotate parameters.

Show Shift: *Check-box, Default: off.*

Turns on or off the screen user interface for adjusting the Center parameter.

See Also:

[BlurMotion](#)

[Sapphire Plug-ins](#)

[Blur](#)

[Introduction](#)

[Streaks](#)

[WarpRepeat](#)

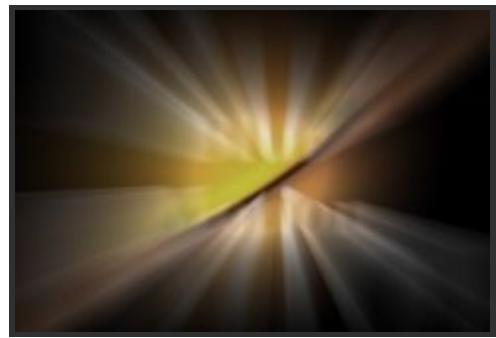
[WarpChroma](#)

[EdgeRays](#)

S_BlrMotion

Performs a motion blur of the source clip between the specified From and To transformations. This can be used to perform radial zoom blurs, rotate blurs, directional blurs, or any combination of these. The From and To parameters do not refer to time. They describe the two transformations in space that determine the style of blur applied to each frame.

In the Sapphire Blur+Sharpen effects submenu.



Inputs:

Source: The clip to be processed.

Matte: *Optional.* If provided, the amount of motion blur is scaled by this input for each destination pixel. This input can be affected using the Blur Matte, Invert Matte, or Matte Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Effect: *Popup menu, Default: Blur Color.*

Selects between full color or monochrome result.

Blur Color: blurs all the channels of the source input.

Blur Mono: makes the source monochrome and then blurs the resulting single channel (faster).

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*
The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*
Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*
Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Center: *X & Y, Default: [0 0], Range: any.*
The center of rotation and zooming, in screen coordinates relative to the center of the frame. The shift values should be zero for this location to make sense. This parameter can be adjusted using the Center Widget.

From Z Dist: *Default: 1, Range: 0.001 or greater.*
The 'distance' of the From transformation. This zooms about the Center location when Shift is 0. Increase to zoom out, decrease to zoom in. This parameter can be adjusted using the From Transfm Widget.

From Rotate: *Default: 0, Range: any.*
The rotation angle of the From transformation, in degrees, about the center. This parameter can be adjusted using the From Transfm Widget.

From Shift: *X & Y, Default: [0 0], Range: any.*
The horizontal and vertical translations of the From transformation. This can be used for directional motion. If it is non-zero the center location becomes less meaningful. This parameter can be adjusted using the From Transfm Widget.

To Z Dist: *Default: 0.8, Range: 0.001 or greater.*
The 'distance' of the To transformation. Increase to zoom out, or decrease to zoom in. This parameter can be adjusted using the To Transform Widget.

To Rotate: *Default: 0, Range: any.*
The rotation angle of the To transformation, in degrees, about the center. Note that if the From and To Rotate angles are very different, the interpolation between them will become less accurate. This parameter can be adjusted using the To Transform Widget.

To Shift: *X & Y, Default: [0 0], Range: any.*
The horizontal and vertical translations of the To transformation. This can be used for directional motion. If it is non-zero the center location becomes less meaningful. This parameter can be adjusted using the To Transform Widget.

Exposure Bias: *Default: 0.5, Range: 0 to 1.*
Determines the variable amount of exposure along the path between the From and To transformations. A value of 0 causes more exposure at the From end, 0.5 causes equal exposure along the path, and 1.0 causes more exposure at the To end. If you have bright spots on a dark background, a 0 value would cause the processed spots to be brighter at the From end and dark at the To end, and a 1.0 value would cause the opposite.

Brightness: *Default: 1, Range: 0 or greater.*
Scales the brightness of the result.

Wrap: *X & Y, Popup menu, Default: [No No].*

Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Blur Res: *Popup menu, Default: Full.*

Selects the resolution factor for the motion blur. This is similar to the general 'Res' factor parameter, but does a better job of averaging down to lower resolution and interpolating back up to the result. Higher resolutions give better quality, lower resolutions give faster processing.

Full: Full resolution is used.

Half: The motion blurring is performed at half resolution.

Quarter: The motion blurring is performed at quarter resolution.

Subpixel: *Check-box, Default: on.*

If enabled, uses a better quality but slightly slower method for performing the blur.

Blur Mask: *Default: 0, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Crop Input Parameters: *Default: 0, Range: 0 or greater.*

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

Show Center: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Center parameter.

Show From Transfm: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the From Z Dist and From Rotate parameters.

Show To Transform: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the To Z Dist and To Rotate parameters.

Show From Shift: *Check-box, Default: off.*

Turns on or off the screen user interface for adjusting the Center parameter.

Show To Shift: *Check-box, Default: off.*

Turns on or off the screen user interface for adjusting the Center parameter.

See Also:

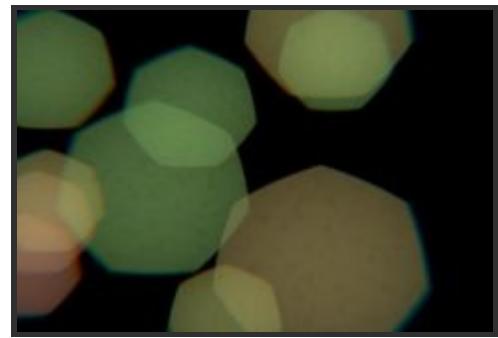
[BlurMoCurves](#)
[Blur](#)
[Streaks](#)
[WarpRepeat](#)
[WarpChroma](#)
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S_BokehLights

Generates random, defocused lights that move around the screen.

In the Sapphire Lighting effects submenu.



Inputs:

Source: *Optional.* The clip to be processed.

Mask: *Optional.* The color of each light is scaled by the color of this clip at the center of the light. A black and white mask can be used to create lights that are obscured by foreground objects. A color mask will colorize the lights, which can give the appearance of the lights passing behind a partially-transparent object.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Brightness: *Default: 0.5, Range: 0 or greater.*
The overall brightness of the lights.

Color: *Default rgb: [1 1 0.3].*
The overall color of the lights.

Vary Hue: *Default: 0, Range: 0 to 1.*
Randomly varies the hue of each light.

Vary Saturation: *Default: 0, Range: 0 to 1.*
Randomly varies the saturation of each light.

Vary Brightness: *Default: 1, Range: 0 to 1.*
Randomly varies the brightness of each light.

Size: *Default: 0.3, Range: 0 or greater.*
The overall size of the defocused lights. This parameter can be adjusted using the Size Widget.

Rel Height: *Default: 1, Range: 0.01 or greater.*
The relative height of the iris shape. If it is not 1, circles become ellipses, etc.

Vary Size: *Default: 0.2, Range: 0 or greater.*
Randomly varies the size of the lights, to simulate lights that are at different distances from the camera.

Softness: *Default: 0.01, Range: 0.001 or greater.*
The softness of the light sources. Increase this for blurrier lights.

Lights: *Integer, Default: 30, Range: 0 or greater.*
The number of lights.

Drift Speed: *Default: 0.2, Range: 0 or greater.*
The speed at which lights move around the screen.

Drift Distance: *Default: 0.5, Range: 0 or greater.*
The maximum distance that each light will move.

Drift Size Speed: *Default: 0.1, Range: 0 or greater.*
The speed at which lights change their size.

Drift Size Distance: *Default: 0.3, Range: 0 or greater.*
The maximum amount by which each light's size will change.

Drift Smoothness: *Default: 0.65, Range: 0 to 1.*
Controls the amount of high frequency variation in each light's motion. Increase this for a gentle drifting motion. Decrease for a jerky shaking motion.

Shift Speed: *X & Y, Default: [0 0], Range: any.*
Translation speed of the lights. If non-zero, the result is automatically animated to shift at this rate. The result of

animated Speed values may not be intuitive, so for variable speed motion it is usually best to set this to 0 and animate the Shift Start values instead.

Shift Start: *X & Y*, *Default:* [0 0], *Range:* any.

Translation offset of the lights.

Use Source Color: *Default:* 0.25, *Range:* 0 to 1.

Scales the lights by a smoothed version of the Source clip. Increase this to help the lights blend with the background.

Smooth Source Color: *Default:* 0.4, *Range:* 0 or greater.

The amount to blur the Source clip before scaling the lights. Has no effect if Use Source Color is zero.

Shape: *Popup menu*, *Default:* 7 sides.

Determines the shape of the simulated camera iris.

Circle: round.

3 sides: triangle.

4 sides: square.

5 sides: pentagon.

6 sides: hexagon.

7 sides: etc.

Roundness: *Default:* 0.3, *Range:* any.

Modifies the shape of the simulated camera iris. A value of 1 produces a circle; 0 gives a flat-sided polygon with a number of sides given by the Shape parameter. Less than 0 causes the sides to squeeze inward giving a star shape, while a value greater than 1 causes the corners to squeeze inward, giving a flowery shape. Has no effect if the Shape is set to Circle.

Rotate: *Default:* 0, *Range:* any.

Rotates the iris shape.

Bokeh: *Default:* 0.5, *Range:* any.

Softens the outer edge of the iris shape, which gives a softer look to the defocused highlights. A negative value darkens the center of the iris shape, producing a ring-like defocus shape.

Lens Noise: *Default:* 0.5, *Range:* 0 or greater.

Increase to add noise to the iris shape, dirtying up the defocus a little. Can make the result more realistic. Turn up past 1 for a more stylistic result.

Noise Freq: *Default:* 20, *Range:* 0.01 or greater.

The frequency of the added noise. Ignored if Lens Noise is zero.

Noise Freq Rel X: *Default:* 1, *Range:* 0.01 or greater.

The relative horizontal frequency of the added iris noise. Increase to stretch it vertically or decrease to stretch it horizontally.

Chroma Distort: *Default:* 0.05, *Range:* any.

Adds some chromatic aberration around the edges of the image; red and blue wavelengths of light refract differently in real lenses, producing fringes of color where the rays strike the lens at oblique angles.

Color Fringing: *Default:* 0, *Range:* any.

Color Fringing produces rings of color around every object in the image by varying the focal distance for each color channel. It gives a different style of chromatic aberration from Chroma Distort because it's not just in the image corners.

Flicker Amp: *Default:* 0.2, *Range:* 0 or greater.

The amount of random flickering of the lights.

Flicker Speed: *Default: 0.5, Range: 0 or greater.*

The speed of random flickering.

Flicker Randomness: *Default: 0.7, Range: 0 to 1.*

Controls the variability of the flicker. When set to zero, the lights will flicker constantly, with a small amount of random variation. At higher values, the flickering will have longer steady spells, with the occasional large spike.

Seed: *Default: 0.123, Range: 0 or greater.*

Initializes the random number generator for light positioning, size, and color variation. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Combine: *Popup menu, Default: Screen.*

Determines how the lights are combined with the Source clip.

Screen: performs a blend function which can help prevent overly bright results.

Add: the lights are added to the source.

Lights Only: gives only the lights with no background.

Affect Alpha: *Default: 0, Range: 0 or greater.*

If this value is positive the output Alpha channel will include some opacity from the lights. The maximum of the red, green, and blue light brightness is scaled by this value and combined with the Source Alpha at each pixel.

Blur Mask: *Default: 0, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Type: *Popup menu, Default: Luma.*

This setting is ignored unless the Mask input is provided.

Luma: uses the luminance of the Mask input to scale the brightness of the lights.

Color: uses the RGB channels of the Mask input to scale the colors of the lights.

Alpha: uses the alpha channel of the Mask input to scale the brightness of the lights.

Show Size: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Size parameter.

See Also:

[RackDefocus](#)
[DefocusPrism](#)

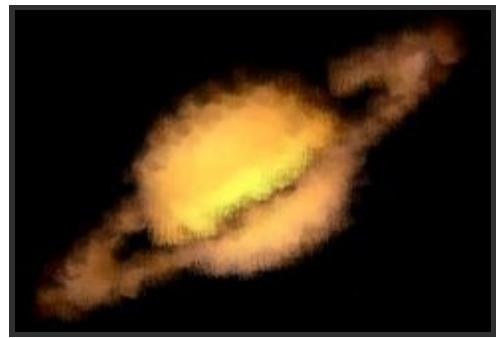
[RackDfComp](#)
[Blur](#)
[BlurChannels](#)
[BlurChroma](#)
[ZDefocus](#)
[Convolve](#)

[Sapphire](#)
[Plug-ins](#)
[Introduction](#)

S_Brush:Chalk

Simulates the look of a chalk drawing by layering brush strokes of different sizes and directions. This effect can be used with one of the following brushes: felt tip, splat, water color, stipple, pencil, pastel, sponge, splodge, round, or cubes. In addition, there are controls for adjusting shape, size, orientation, density, lighting, and shading.

In the Sapphire Stylize effects submenu.
In the S_Brush Plugin.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* If provided, the source brush colors are scaled by this input. A monochrome mask can be used to choose a subset of Source areas that will generate brushes. A color mask can be used to selectively adjust the brush colors in different regions. The mask is applied to the source before the brushes are generated so it will not clip the resulting brushes.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Mask Use: *Popup menu*, *Default:* Luma.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Shape: *Popup menu*, *Default:* Match To Style.

The shape of the brush.

Match To Style: use the brush shape that matches the current paint style. Round matches to Oil and Sponge matches to Chalk.

Felt Tip: an opaque, triangular shape.

Splat: a shape of sparsely packed fine dots.

Water Color: a coarse, blobby shape.

Stipple: a soft, rectangular shape with holes.

Pencil: a long, thin shape.

Pastel: a long, funnel shape, like a comet.

Sponge: a very coarse, rectangular shape.

Splodge: a soft, misty, rectangular shape.

Round: a soft oval shape with coarse trails, like a jellyfish.

Cubes: a square shape.

Max Size: *Default:* 1.5, *Range:* 0 to 10.

Sets the maximum brush size. No brushes will be larger than this size.

Size Range: *Default:* 0.01, *Range:* 0 to 1.

Scales the range of the brush sizes measured from the maximum brush size.

Angle: *Default:* 60, *Range:* 0 to 360.

Rotates the orientation of the brushes.

Vary Angle: *Default:* 20, *Range:* 0 to 360.

Randomly rotates the brushes up to this amount in one direction.

Contour Alignment: *Default:* 0.5, *Range:* 0 to 1.

Interpolates between the brush stroke direction being fully aligned to the angle param (0) and the contours of the original source (1). Vary angle offsets the stroke in both directions from this interpolated direction.

Layers: *Integer*, *Default*: 3, *Range*: 1 to 5.

The number of layers to paint.

Density: *Default*: 80, *Range*: 1 to 100.

Sets the overall density of brush strokes per layer.

Rel X Density: *Default*: 1, *Range*: 0 or greater.

Scales the density of brush strokes in the X-direction.

Rel Y Density: *Default*: 0.8, *Range*: 0 or greater.

Scales the density of brush strokes in the Y-direction.

Vary Position: *Default*: 1, *Range*: 0 to 10.

Shifts the brush positions randomly in all directions. A value of zero places all the brushes on a regular grid.

Contrast: *Default*: 0.05, *Range*: 0 to 10.

Scales the contrast of the individual brushes.

Chalkiness: *Default*: 0.6, *Range*: 0 to 1.

Scales the details of the brush from a sparsely drawn, coarse stroke to a fully drawn, smooth stroke.

Blending: *Default*: 0.6, *Range*: 0 to 1.

Scales the transparency of the individual brushes, causing layered brushes to look blended.

Smooth Colors: *Default*: 0.08, *Range*: 0 to 1.

Blurs the source to smooth the color palette and help reduce some brush stroke jitter.

Use Source Color: *Default*: 0.8, *Range*: 0 to 1.

Interpolates between the paint color param (0) and the original source color (1).

Paint Color: *Default* `rgb: [1 1 1]`.

The paint color to use.

Bg Opacity: *Default*: 1, *Range*: 0 to 1.

Scales the opacity of the background before combining with the brushes. If 0, the result will contain only the brush image over alpha.

Seed: *Default*: 0.123, *Range*: 0 or greater.

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Crop To Source Alpha: *Check-box*, *Default*: off.

Crops the effect to the bounds of the source alpha.

Soft Borders: *Check-box*, *Default*: off.

If enabled, transparent borders are added to the input image before processing. This allows the result to include soft edges beyond the original image size. When off, the effect only occurs within the frame and the result will retain an edge at the borders.

See Also:

[BrushOil](#)

[Sapphire](#)

[Cartoon](#)

[Plug-ins](#)

[CartoonPaint](#)

[Introduction](#)

[Posterize](#)

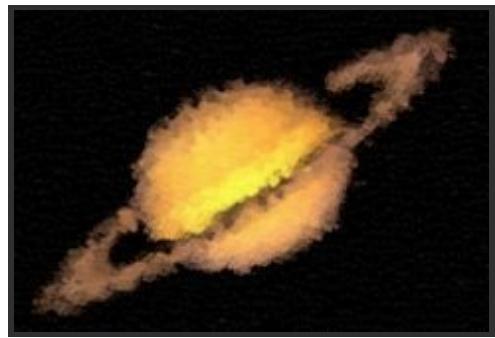
[AutoPaint](#)

Sketch
Crosshatch

S_Brush:Oil

Simulates the look of an oil painting by layering brush strokes of different sizes and directions. This effect can be used with one of the following brushes: felt tip, splat, water color, stipple, pencil, pastel, sponge, splodge, round, or cubes. In addition, there are controls for adjusting shape, size, orientation, density, lighting, and shading.

In the Sapphire Stylize effects submenu.
In the S_Brush Plugin.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* If provided, the source brush colors are scaled by this input. A monochrome mask can be used to choose a subset of Source areas that will generate brushes. A color mask can be used to selectively adjust the brush colors in different regions. The mask is applied to the source before the brushes are generated so it will not clip the resulting brushes.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Mask Use: *Popup menu*, *Default:* Luma.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Shape: *Popup menu*, *Default:* Match To Style.

The shape of the brush.

Match To Style: use the brush shape that matches the current paint style. Round matches to Oil and Sponge matches to Chalk.

Felt Tip: an opaque, triangular shape.

Splat: a shape of sparsely packed fine dots.

Water Color: a coarse, blobby shape.

Stipple: a soft, rectangular shape with holes.

Pencil: a long, thin shape.

Pastel: a long, funnel shape, like a comet.

Sponge: a very coarse, rectangular shape.

Splodge: a soft, misty, rectangular shape.

Round: a soft oval shape with coarse trails, like a jellyfish.

Cubes: a square shape.

Max Size: *Default:* 1.5, *Range:* 0 to 10.

Sets the maximum brush size. No brushes will be larger than this size.

Size Range: *Default:* 0.01, *Range:* 0 to 1.

Scales the range of the brush sizes measured from the maximum brush size.

Angle: *Default:* 60, *Range:* 0 to 360.

Rotates the orientation of the brushes.

Vary Angle: *Default:* 20, *Range:* 0 to 360.

Randomly rotates the brushes up to this amount in one direction.

Contour Alignment: *Default:* 0.5, *Range:* 0 to 1.

Interpolates between the brush stroke direction being fully aligned to the angle param (0) and the contours of the original source (1). Vary angle offsets the stroke in both directions from this interpolated direction.

Layers: *Integer*, *Default*: 3, *Range*: 1 to 5.

The number of layers to paint.

Density: *Default*: 80, *Range*: 1 to 100.

Sets the overall density of brush strokes per layer.

Rel X Density: *Default*: 1, *Range*: 0 or greater.

Scales the density of brush strokes in the X-direction.

Rel Y Density: *Default*: 0.8, *Range*: 0 or greater.

Scales the density of brush strokes in the Y-direction.

Vary Position: *Default*: 1, *Range*: 0 to 10.

Shifts the brush positions randomly in all directions. A value of zero places all the brushes on a regular grid.

Roughness: *Default*: 0.5, *Range*: 0 to 10.

Scales the intensity of the highlights on the paint, similar to increasing the thickness of paint.

Intensity: *Default*: 1, *Range*: 0 to 10.

Scales the saturation of the brush opacity, growing the perimeter of the brush.

Deterioration: *Default*: 0, *Range*: 0 to 10.

Scales the shadows created by roughness, similar to cracking or peeling paint.

Smooth Colors: *Default*: 0.08, *Range*: 0 to 1.

Blurs the source to smooth the color palette and help reduce some brush stroke jitter.

Use Source Color: *Default*: 0.8, *Range*: 0 to 1.

Interpolates between the paint color param (0) and the original source color (1).

Paint Color: *Default* `rgb: [1 1 1]`.

The paint color to use.

Bg Opacity: *Default*: 1, *Range*: 0 to 1.

Scales the opacity of the background before combining with the brushes. If 0, the result will contain only the brush image over alpha.

Seed: *Default*: 0.123, *Range*: 0 or greater.

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Crop To Source Alpha: *Check-box*, *Default*: off.

Crops the effect to the bounds of the source alpha.

Soft Borders: *Check-box*, *Default*: off.

If enabled, transparent borders are added to the input image before processing. This allows the result to include soft edges beyond the original image size. When off, the effect only occurs within the frame and the result will retain an edge at the borders.

See Also:

[BrushChalk](#)

[Sapphire](#)

[Cartoon](#)

[Plug-ins](#)

[CartoonPaint](#)

[Introduction](#)

[Posterize](#)

[AutoPaint](#)

Sketch
Crosshatch

S_CardFlip

Transitions between two clips by sliding or spinning the outgoing clip to reveal the incoming clip behind it. The Amount parameter should be animated to control the transition speed. Adjusting Revolutions and Shift will give different kinds of transitions.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Amount: *Default: 0, Range: -0.5 to 1.5.*

Determines the transition ratio between the From and To inputs, and would normally be animated from 0 to 1 to perform a complete transition. The curve controlling this parameter can be adjusted for more detailed control over the timing of the wipe.

Slow In: *Default: 0.5, Range: 0 to 1.*

If positive, causes the transition to start more gradually.

Slow Out: *Default: 0.5, Range: 0 to 1.*

If positive, causes the transition to end more gradually.

Revolutions: *Integer, Default: 1, Range: 0 or greater.*

The number of times the clip should flip over during the transition. Set this to 1 for a simple flip, 2 or more for a spinning transition, and 0 for a slide/shuffle.

Spin Direction: *Popup menu, Default: Left.*

The direction of spin.

Left: horizontal spin to the left.

Right: horizontal spin to the right.

Up: vertical spin upward.

Down: vertical spin downward.

Shift: *Default: 0, Range: 0 or greater.*

Slides the clips horizontally or vertically away from each other during the first half of the transition, then toward each other in the second half. Both clips end in the same position in which they started. Set to a value or 1 or greater to prevent the clips from overlapping at the mid-point of the transition.

Shift Direction: *Popup menu, Default: Left.*

The direction of shifting.

Left: The outgoing clip shifts left and the incoming clip shifts right.

Right: The outgoing clip shifts right and the incoming clip shifts left.

Up: The outgoing clip shifts up and the incoming clip shifts down.

Down: The outgoing clip shifts down and the incoming clip shifts up.

Perspective Amount: *Default: 1, Range: 0.25 to 4.*

Controls the amount of lens telescoping while the clips are flipping over. Increase for more 3D perspective.

Shadow Color: *Default rgb: [0 0 0].*

The color of the drop shadow cast from the front clip onto the back clip.

Shadow Opacity: *Default: 2, Range: 0 or greater.*

The opacity of the shadow, use values near 0 for subtle transparent shadows, or values near 1.0 for stronger shadows.

Shadow Blur: *Default: 0.088, Range: 0 or greater.*

Determines the softness of the shadow.

Shadow Shift: *X & Y, Default: [0 0], Range: any.*

The horizontal and vertical offset of the shadow.

See general info for [Motion Blur](#)

See Also:

[Swish3D](#)

[WarpTransform](#)

[DropShadow](#)

[Sapphire Plug-ins](#)

[Introduction](#)

S_Cartoon

Generates a version of the source clip with a cartoon look. Finds the edges in the image and draws new outlines for those edges. Smooths the colors of the areas between the edges, and optionally posterizes the colors into fewer color values.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Edge Width: *Default:* 0.02, *Range:* 0 or greater.
The width of the outlined edges. Increase for thicker outlines.

Edge Strength: *Default:* 2, *Range:* 0 or greater.
Scales the strength of the outlined edges by this amount. Increase for heavier edges.

Edge Threshold: *Default:* 0.1, *Range:* 0 or greater.
Subtracts this value from outline image. Increase to remove unwanted noise and minor edges.

Edge Color: *Default* *rgb:* [0 0 0].
Outline the edges of the clip in this color.

Suppress Small Edges: *Default:* 0.5, *Range:* 0 or greater.
Increase this value to remove smaller edges while keeping the larger edges.

Edge Sharpen: *Default:* 0, *Range:* 0 or greater.
Amount to sharpen the outlines. Increase this value for sharper sides to the edges.

Smooth: *Default:* 0.1, *Range:* 0 or greater.
The amount to blur the colors in the non-edge regions.

Posterize Parameters:

Posterize Amount: *Default:* 0, *Range:* 0 to 1.
If positive, generates a posterized look by limiting the number of colors in the result. Increase this for fewer and larger regions of solid colors. Decrease for more colors and more steps between colors.

Posterize Smooth: *Default:* 0.1, *Range:* 0 to 1.
Amount to smooth the edges between color regions when posterizing. Increase this value to reduce aliasing between the colored areas. If set to 1, the areas will be completely smoothed together and no posterize effect will occur.

Posterize Phase: *Default:* 0, *Range:* any.
Amount to shift color boundaries when posterizing. Adjust this to fine-tune the location of the edges between the color regions. A phase of 1 is equivalent to 0.

Color Correct Parameters:

Saturation: *Default:* 1, *Range:* any.
Scales the color saturation. Increase for more intense colors. Set to 0 for monochrome.

Scale Lights: *Default:* 1, *Range:* 0 or greater.
Scales the result by this value. Increase for a brighter result.

Tint Lights: *Default* *rgb:* [1 1 1].
Scales the result by this color, thus tinting the lighter regions.

Tint Dark: *Default* *rgb:* [0 0 0].
Adds this color to the darker regions of the source.

Offset Dark: *Default:* 0, *Range:* any.

Adds this gray value to the darker regions of the source. This can be negative to increase contrast.

Mix With Source: *Default:* 0, *Range:* 0 to 1.

Interpolates between the result (0) and the original source (1).

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[CartoonPaint](#)

[Posterize](#)

[AutoPaint](#)

[Sketch](#)

[Sapphire](#)

[Plug-ins](#)

[Introduction](#)

S_CartoonPaint

Auto-generates a version of the source clip with a cartoon paint-brushed look. Finds the edges in the image and draws new outlines for those edges. Replaces the colors of the areas between the edges with paint brush shapes.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Edge Width: *Default: 0.02, Range: 0 or greater.*
The width of the outlined edges. Increase for thicker outlines.

Edge Strength: *Default: 2, Range: 0 or greater.*
Scales the strength of the outlined edges by this amount. Increase for heavier edges.

Edge Threshold: *Default: 0.1, Range: 0 or greater.*
Subtracts this value from outline image. Increase to remove unwanted noise and minor edges.

Edge Color: *Default rgb: [0 0 0].*
Outline the edges of the clip in this color.

Suppress Small Edges: *Default: 0.5, Range: 0 or greater.*
Increase this value to remove smaller edges while keeping the larger edges.

Edge Sharpen: *Default: 0, Range: 0 or greater.*
Amount to sharpen the outlines. Increase this value for sharper sides to the edges.

Paint Parameters:

Frequency: *Default: 50, Range: 0.3 or greater.*
The density of brush strokes in the frame. Increase for smaller strokes.

Stroke Length: *Default: 2, Range: any.*
Determines the length of the brush strokes along the directions of edges in the source clip. If this is negative you can switch from VanGogh to HairyPaint styles and vice versa.

Stroke Align: *Default: 0.2, Range: 0 or greater.*
Increase to smooth out the directions of the strokes so nearby strokes are more parallel.

Smooth Colors: *Default: 0, Range: 0 or greater.*
Blurs the source by this amount before generating the brush strokes. Increase to cause the colors of nearby strokes to be more consistent.

Seed: *Default: 0, Range: 0 or greater.*
Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Jitter Frames: *Integer, Default: 0, Range: 0 or greater.*
If this is 0, the locations of the strokes will remain the same for every frame processed. If it is 1, the locations of the strokes are re-randomized for each frame. If it is 2, they are re-randomized every second frame, and so on.

Posterize Parameters:

Posterize Amount: *Default: 0, Range: 0 to 1.*
If positive, generates a posterized look by limiting the number of colors in the result. Increase this for fewer and larger regions of solid colors. Decrease for more colors and more steps between colors.

Posterize Smooth: *Default: 0.1, Range: 0 to 1.*

Amount to smooth the edges between color regions when posterizing. Increase this value to reduce aliasing between the colored areas. If set to 1, the areas will be completely smoothed together and no posterize effect will occur.

Posterize Phase: *Default: 0, Range: any.*

Amount to shift color boundaries when posterizing. Adjust this to fine-tune the location of the edges between the color regions. A phase of 1 is equivalent to 0.

Color Correct Parameters:

Saturation: *Default: 1, Range: any.*

Scales the color saturation. Increase for more intense colors. Set to 0 for monochrome.

Scale Lights: *Default: 1, Range: 0 or greater.*

Scales the result by this value. Increase for a brighter result.

Offset Dark: *Default: 0, Range: any.*

Adds this gray value to the darker regions of the source. This can be negative to increase contrast.

Tint Lights: *Default rgb: [1 1 1].*

Scales the result by this color, thus tinting the lighter regions.

Tint Dark: *Default rgb: [0 0 0].*

Adds this color to the darker regions of the source.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[Cartoon](#)

[Posterize](#)

[AutoPaint](#)

[Sketch](#)

[Sapphire](#)

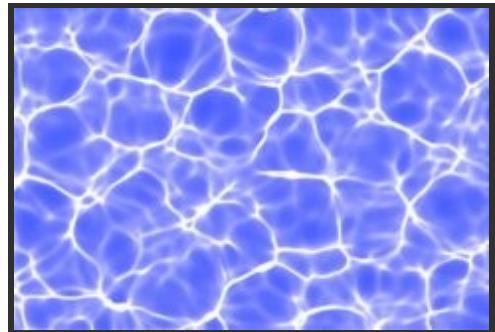
[Plug-ins](#)

[Introduction](#)

S_Caustics

Simulates the patterns created when light rays are reflected or refracted by a curved surface. Caustics can often be seen at the bottom of a swimming pool in bright sunlight or on objects viewed underwater.

In the Sapphire Render effects submenu.



Inputs:

Source: *Optional.* The clip to be processed.

Bumps: *Optional.* The clip to use as height map.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Ray Focus: *Default: 15, Range: 0 to 50.*
Alter this to bring the caustic pattern into focus.

Ray Density: *Integer, Default: 2, Range: 1 to 5.*
Increasing this value will increase the quality of the caustic pattern.

Ray Blur: *Default: 0.02, Range: 0 to 0.5.*
Softens the caustic pattern.

Frequency: *Default: 3, Range: 0.01 to 20.*
The frequency of the caustic pattern. Increase for more and smaller elements, or decrease for fewer and larger.

Complexity: *Default: 2.5, Range: 0 to 5.*
The complexity of the caustic pattern. Increase for more high frequency components within the caustic pattern

Shift: *X & Y, Default: [0 0], Range: any.*
Translation of the caustic pattern. This parameter can be adjusted using the Shift Widget.

Speed: *Default: 1, Range: 0 to 10.*
Animation speed of the caustic pattern.

Seed: *Default: 0.123, Range: 0 or greater.*
Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Blur Bump Image: *Default: 0, Range: 0 to 1.*
The blur applied to the height map

Brightness1: *Default: 0.5, Range: 0 or greater.*
Scales the brightness of Color1. Increase for more contrast.

Color1: *Default rgb: [1 1 1].*
The color of the 'brighter' parts of the texture. The colors of the result are determined by an interpolation between Color0 and Color1.

Color0: *Default rgb: [0 0.05 1].*
The color of the 'darker' parts of the texture.

Offset0: *Default: 0, Range: any.*
Adds this value to color0. Decrease to a negative value for more contrast.

Bg Brightness: *Default: 1, Range: 0 or greater.*
Scales the brightness of the Background input.

Bg Combine: *Popup menu, Default: Screen.*
Determines how the texture is combined with the Background.

Caustic Only: gives only the caustic texture with no Background.

Mult: the texture is multiplied by the Background.

Add: the texture is added to the Background.

Screen: the texture is blended with the Background using a screen operation.

Difference: the result is the difference between the texture and Background.

Overlay: the texture is combined with the Background using an overlay function.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Shift: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Shift parameter.

See Also:

[Sapphire Plug-ins Introduction](#)

S_ChannelSwitcher

Reorders the RGBA channels of the source clip. Allows mapping any source channel into any output channel, with scaling and offset for each output channel.

In the Sapphire Adjust effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

- Union:** Uses the area covered by both masks together.
- Intersect:** Uses the area that overlaps between the two masks.
- Mocha Only:** Ignore the Input Mask and only use the Mocha Mask.

Red <=: *Popup menu, Default: Red.*
Selects which channel of the source to use as the output red channel.

- Red:** Use the red input channel as the source for this output channel.
- Green:** Use the green input channel as the source for this output channel.
- Blue:** Use the blue input channel as the source for this output channel.
- Alpha:** Use the alpha input channel as the source for this output channel. If the input has no alpha, uses 1 (fully on).
- Luma:** Use the input luminance as the source for this output channel.
- 1:** Use a constant 1 value (fully on) as the source for this output channel.
- 0:** Use a constant 0 value (fully off) as the source for this output channel.

Green <=: *Popup menu, Default: Green.*
Selects which channel of the source to use as the output green channel.

Blue <=: *Popup menu, Default: Blue.*
Selects which channel of the source to use as the output blue channel.

Alpha <=: *Popup menu, Default: Alpha.*
Selects which channel of the source to use as the output alpha channel.

Scale Lights Red: *Default: 1, Range: any.*
Scales the brightness of the output red channel by this amount.

Scale Lights Green: *Default: 1, Range: any.*
Scales the brightness of the output green channel by this amount.

Scale Lights Blue: *Default: 1, Range: any.*
Scales the brightness of the output blue channel by this amount.

Scale Lights Alpha: *Default: 1, Range: any.*
Scales the brightness of the output alpha channel by this amount.

Offset Dark Red: *Default: 0, Range: any.*
Adds this value to the darker regions of the red output channel. This can be negative to increase contrast.

Offset Dark Green: *Default: 0, Range: any.*
Adds this value to the darker regions of the green output channel. This can be negative to increase contrast.

Offset Dark Blue: *Default: 0, Range: any.*
Adds this value to the darker regions of the blue output channel. This can be negative to increase contrast.

Offset Dark Alpha: *Default: 0, Range: any.*
Adds this value to the darker regions of the alpha output channel. This can be negative to increase contrast.

Output Premult: *Check-box, Default: off.*
If enabled, the output RGB is scaled by the output alpha. Where the output alpha is zero, the final RGB output will be zero.

Mix With Source: *Default:* 0, *Range:* 0 to 1.

Interpolates between the result (0) and the original source (1).

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[HueSatBright](#)

[Monochrome](#)

[ClampChroma](#)

[PseudoColor](#)

[DuoTone](#)

[TriTone](#)

[QuadTone](#)

[Tint](#)

[Threshold](#)

[Hotspots](#)

[Gamma](#)

[Solarize](#)

[ShowBadColors](#)

[Invert](#)

[Sapphire Plug-ins](#)

[Introduction](#)

S_ClampChroma

Reduces the chrominance of the input clip if necessary so it is not above a specified maximum. This effect can be used to make 'broadcast safe' colors. It also can be used to scale the chrominance, clamp the luminance, or scale the luminance.

In the Sapphire Adjust effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Clamp Chroma: *Default: 0.5, Range: 0 to 1.*
The maximum chrominance value. 1 is fully saturated and 0 is with no color. Source chrominance values below this will not be affected, but those above it will be reduced to it.

Scale Chroma: *Default: 1, Range: 0 or greater.*
Scales the chrominance of all pixels. If this is 1 it will have no effect.

Clamp Luma: *Default: 1, Range: 0 to 1.*
The maximum luminance value. Source pixels brighter than this limit will be reduced to it. Values below it will not be affected. If this is 1 it will have no effect.

Scale Luma: *Default: 1, Range: 0 or greater.*
Scales the brightness of all pixels. If this is 1 it will have no effect.

Mask Use: *Popup menu, Default: Luma.*
Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.
Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*
Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*
If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

HueSatBright	BlurChroma
Monochrome	Sapphire
PseudoColor	Plug-ins
DuoTone	Introduction
TriTone	
QuadTone	
Tint	
Threshold	
Hotspots	
Gamma	
Solarize	
ChannelSwitcher	
ShowBadColors	
Invert	

S_Clouds

Generates a procedural noise texture. Use the Frequency parameter to zoom in and out of the texture. The Shift Speed parameters cause the texture to automatically translate over time.

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to combine the clouds image with. This may be ignored if the Combine option is set to Clouds Only.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

- Union:** Uses the area covered by both masks together.
- Intersect:** Uses the area that overlaps between the two masks.
- Mocha Only:** Ignore the Input Mask and only use the Mocha Mask.

Frequency: *Default: 2, Range: 0.01 or greater.*
The spatial frequency of the clouds. Increase to zoom out, decrease to zoom in. Very high values of Frequency are clamped internally so the grain size is no smaller than a few pixels. If you want even finer grain use S_Grain or S_Clouds:Perspective instead.

Frequency Rel X: *Default: 0.4, Range: 0.01 or greater.*
The relative horizontal frequency of the texture. Increase to stretch it vertically or decrease to stretch it horizontally.

Octaves: *Integer, Default: 8, Range: 1 to 10.*
The number of summed layers of noise. Each octave is twice the frequency and half the amplitude of the previous. A single octave gives a smooth texture. Adding octaves makes the result approach a fractal (1/f) noise texture.

Seed: *Default: 0.234, Range: 0 or greater.*
Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Boiling Mode: *Check-box, Default: off.*
When enabled, the clouds will boil, or evolve, over time. This mode takes slightly more computation but usually looks better.

Boil Details: *Default: 0.55, Range: 0 to 1.*
Increases or decreases the amount of fine detail in the clouds. Decrease to get a smoother look, increase to get a more high-frequency, noisy look. Only used when Boiling Mode is enabled.

Boil Speed: *Default: 1, Range: any.*
Sets the speed of the cloud boiling. Zero gives no boiling at all. Only used when Boiling Mode is enabled.

Shift Start: *X & Y, Default: [0 0], Range: any.*
Translation offset of the texture. Since the texture is procedurally generated it can be shifted with no repeating units or seams occurring. This parameter can be adjusted using the Shift Start Widget.

Shift Speed: *X & Y, Default: [0.5 0], Range: any.*
Translation speed of the texture. If non-zero, the result is automatically animated to shift at this rate. The result of animated Speed values may not be intuitive, so for variable speed motion it is usually best to set this to 0 and animate the Shift Start values instead.

Brightness1: *Default: 1, Range: 0 or greater.*
Scales the brightness of Color1. Increase for more contrast.

Color1: *Default rgb: [1 1 1].*
The color of the 'brighter' parts of the texture. The colors of the result are determined by an interpolation between Color0 and Color1.

Color0: *Default rgb: [0 0 0].*
The color of the 'darker' parts of the texture.

Offset0: *Default: 0, Range: any.*
Adds this value to color0. Decrease to a negative value for more contrast.

Bg Brightness: *Default:* 1, *Range:* 0 or greater.

The background brightness is scaled by this value before being combined with the clouds.

Combine: *Popup menu, Default: Screen.*

Determines how the texture is combined with the Background.

Clouds Only: gives only the clouds texture with no Background.

Mult: the texture is multiplied by the Background.

Add: the texture is added to the Background.

Screen: the texture is blended with the Background using a screen operation.

Difference: the result is the difference between the texture and Background.

Overlay: the texture is combined with the Background using an overlay function.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Shift Start: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Shift Start parameter.

See Also:

[CloudsPerspective](#)

[Grain](#)

[CloudsVortex](#)

[Sapphire Plug-ins](#)

[CloudsMultColor](#)

[Introduction](#)

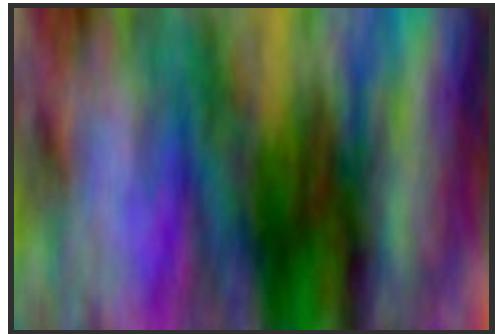
[CloudsColorSmooth](#)

[CloudsPsyko](#)

S_CloudsColorSmooth

Generates a full color clouds texture. Procedural noise texture is independently generated for each of the red, green, and blue output channels. The Shift Speed parameters cause the texture to automatically translate over time.

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to combine the clouds image with. This may be ignored if the Combine option is set to Clouds Only.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Frequency: *Default: 8, Range: 0.01 or greater.*

The spatial frequency of the clouds. Increase to zoom out, decrease to zoom in. Very high values of Frequency are clamped internally so the grain size is no smaller than a few pixels. If you want even finer grain use S_Grain or S_Clouds:Perspective instead.

Frequency Rel X: *Default: 0.2, Range: 0.01 or greater.*

The relative horizontal frequency of the texture. Increase to stretch it vertically or decrease to stretch it horizontally.

Octaves: *Integer, Default: 1, Range: 1 to 10.*

The number of summed layers of noise. Each octave is twice the frequency and half the amplitude of the previous. A single octave gives a smooth texture. Adding octaves makes the result approach a fractal (1/f) noise texture.

Seed: *Default: 0.6, Range: 0 or greater.*

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Shift Start: *X & Y, Default: [0 0], Range: any.*

Translation offset of the texture. Since the texture is procedurally generated it can be shifted with no repeating units or seams occurring. This parameter can be adjusted using the Shift Start Widget.

Shift Speed: *X & Y, Default: [0.5 0], Range: any.*

Translation speed of the texture. If non-zero, the result is automatically animated to shift at this rate. The result of animated Speed values may not be intuitive, so for variable speed motion it is usually best to set this to 0 and animate the Shift Start values instead.

Brightness: *Default: 1, Range: 0 or greater.*

Scales the brightness of the result.

Scale Colors: *Default rgb: [1 1 1].*

Scales the color of the result. For example, if it is yellow [1 1 0], the blue of the result will be 0.

Saturation: *Default: 1, Range: 0 to 10.*

Scales the color saturation. Increase for more intense colors. Set to 0 for monochrome.

Offset: *Default: 0, Range: -8 to 2.*

Adds this gray value to the result (or subtracts if negative). 0 has no effect, .5 is middle gray, and 1 is white.

Bg Brightness: *Default: 1, Range: 0 or greater.*

The background brightness is scaled by this value before being combined with the clouds.

Combine: *Popup menu, Default: Screen.*

Determines how the texture is combined with the Background.

Clouds Only: gives only the clouds texture with no Background.

Mult: the texture is multiplied by the Background.

Add: the texture is added to the Background.

Screen: the texture is blended with the Background using a screen operation.

Difference: the result is the difference between the texture and Background.

Overlay: the texture is combined with the Background using an overlay function.

Mask Use: *Popup menu*, *Default: Luma*.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater*.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off*.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Shift Start: *Check-box, Default: on*.

Turns on or off the screen user interface for adjusting the Shift Start parameter.

See Also:

[Clouds](#)

[Grain](#)

[CloudsPerspective](#)

[Sapphire Plug-ins](#)

[CloudsVortex](#)

[Introduction](#)

[CloudsMultColor](#)

[CloudsPsyko](#)

S_CloudsMultColor

Generates a procedural noise texture like S_Clouds and tints the colors using an additional color noise texture. The Shift Speed parameters cause the texture to automatically translate over time.

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to combine the clouds image with. This may be ignored if the Combine option is set to Clouds Only.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Frequency: *Default: 2, Range: 0.01 or greater.*
The spatial frequency of the clouds. Increase to zoom out, decrease to zoom in. Very high values of Frequency are clamped internally so the grain size is no smaller than a few pixels. If you want even finer grain use S_Grain or S_Clouds:Perspective instead.

Frequency Rel X: *Default: 0.4, Range: 0.01 or greater.*
The relative horizontal frequency of the texture. Increase to stretch it vertically or decrease to stretch it horizontally.

Octaves: *Integer, Default: 8, Range: 1 to 10.*
The number of summed layers of noise. Each octave is twice the frequency and half the amplitude of the previous. A single octave gives a smooth texture. Adding octaves makes the result approach a fractal (1/f) noise texture.

Seed: *Default: 0.234, Range: 0 or greater.*
Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Boiling Mode: *Check-box, Default: off.*
When enabled, the clouds will boil, or evolve, over time. This mode takes slightly more computation but usually looks better.

Boil Details: *Default: 0.55, Range: 0 to 1.*
Increases or decreases the amount of fine detail in the clouds. Decrease to get a smoother look, increase to get a more high-frequency, noisy look. Only used when Boiling Mode is enabled.

Boil Speed: *Default: 1, Range: any.*
Sets the speed of the cloud boiling. Zero gives no boiling at all. Only used when Boiling Mode is enabled.

Color Amount: *Default: 0.5, Range: 0 or greater.*
The amplitude of the color tinting.

Color Freq: *Default: 1, Range: 0.01 or greater.*
The frequency of the colors. Increase for finer color variation, decrease for softer color changes.

Color Freq Relx: *Default: 0.4, Range: 0.01 or greater.*
The relative horizontal frequency of the colors. Increase to stretch vertically, decrease to stretch horizontally.

Color Octaves: *Integer, Default: 1, Range: 1 to 10.*
The number of octaves of color noise to include. Each octave is twice the frequency and half the amplitude of the previous.

Color Seed: *Default: 0.345, Range: 0 or greater.*
The random number generator seed to use for the color noise. The actual seed value is not significant, but different values give different results.

Shift Start: *X & Y, Default: [0 0], Range: any.*
Translation offset of the texture. Since the texture is procedurally generated it can be shifted with no repeating units or seams occurring. This parameter can be adjusted using the Shift Start Widget.

Shift Speed: *X & Y*, *Default:* [0.5 0], *Range:* any.

Translation speed of the texture. If non-zero, the result is automatically animated to shift at this rate. The result of animated Speed values may not be intuitive, so for variable speed motion it is usually best to set this to 0 and animate the Shift Start values instead.

Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the result.

Color: *Default rgb:* [1 1 1].

Scales the color of the result.

Color Noise Color: *Default rgb:* [1 1 1].

Scales the color of the noise used for tinting.

Offset: *Default:* 0, *Range:* any.

Adds this gray value to the result (or subtracts if negative). 0 has no effect, .5 is middle gray, and 1 is white.

Bg Brightness: *Default:* 1, *Range:* 0 or greater.

The background brightness is scaled by this value before being combined with the clouds.

Combine: *Popup menu, Default: Screen.*

Determines how the texture is combined with the Background.

Clouds Only: gives only the clouds texture with no Background.

Mult: the texture is multiplied by the Background.

Add: the texture is added to the Background.

Screen: the texture is blended with the Background using a screen operation.

Difference: the result is the difference between the texture and Background.

Overlay: the texture is combined with the Background using an overlay function.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Shift Start: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Shift Start parameter.

See Also:

[Clouds](#)

[Grain](#)

[CloudsPerspective](#)

[Sapphire Plug-ins](#)

[CloudsVortex](#)

[Introduction](#)

[CloudsColorSmooth](#)

[CloudsPsyko](#)

S_CloudsPerspective

Generates a procedural noise texture transformed onto a 3D plane with perspective. Adjust the Latitude, Swing, and Roll parameters to rotate the image on various axes, each axis, and use the Frequency parameter to zoom in and out of the texture. Shift Speed causes the texture to automatically translate over time.

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to combine the texture image with. This may be ignored if the Combine option is set to Texture Only.

Mask: *Optional.* If provided, the amplitude of warping is scaled by the values of this input clip. Gray values internally scale the warping amplitude rather than simply cross-fading between the effect and the original source to allow more continuous results at the mask edges and more detailed control over the warping amounts. This input can be affected using the Blur Mask, Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.
Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.
Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Frequency: *Default:* 2, *Range:* 0.01 or greater.
The spatial frequency of the texture. Increase to zoom out, decrease to zoom in.

Frequency Rel X: *Default:* 0.4, *Range:* 0.01 or greater.
The relative horizontal frequency of the texture. Increase to stretch it vertically or decrease to stretch it horizontally.

Octaves: *Integer*, *Default:* 6, *Range:* 1 to 10.
The number of summed layers of noise. Each octave is twice the frequency and half the amplitude of the previous. A single octave gives a smooth texture. Adding octaves makes the result approach a fractal (1/f) noise texture.

Seed: *Default:* 0.234, *Range:* 0 or greater.
Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Z Dist: *Default:* 1, *Range:* 0.001 or greater.
Scales the 'distance' of the image. Values greater than 1.0 move it farther away and make it smaller. Values less than 1.0 move the image closer and enlarge it.

Latitude: *Default:* -35, *Range:* -80 to 80.
Positive latitude tilts the image down and negative tilts it up. Keep latitude in the range of around -35 to 35 degrees to avoid aliasing towards the horizon.

Swing: *Default:* 0, *Range:* any.
Rotation of the image in degrees in its initial frame.

Roll: *Default:* 0, *Range:* any.
Tilts the result from side to side, in counter-clockwise degrees.

Tele Lens Width: *Default:* 1, *Range:* 0.2 to 3.
The amount of lens telescoping. Increase to zoom in with less perspective, decrease for a wider viewing angle with more perspective.

Boiling Mode: *Check-box*, *Default:* off.
When enabled, the clouds will boil, or evolve, over time. This mode takes slightly more computation but usually looks better.

Boil Details: *Default:* 0.55, *Range:* 0 to 1.
Increases or decreases the amount of fine detail in the clouds. Decrease to get a smoother look, increase to get a more high-frequency, noisy look. Only used when Boiling Mode is enabled.

Boil Speed: *Default:* 1, *Range:* any.
Sets the speed of the cloud boiling. Zero gives no boiling at all. Only used when Boiling Mode is enabled.

Shift Start: *X & Y*, *Default:* [0 0], *Range:* any.

Translation offset of the clouds in their initial plane. This parameter can be adjusted using the Shift Start Widget.

Shift Speed: *X & Y*, *Default:* [0.5 0], *Range:* any.

Translation speed of the texture. If non-zero, the result is automatically animated to shift at this rate. The result of animated Speed values may not be intuitive, so for variable speed motion it is usually best to set this to 0 and animate the Shift Start values instead.

Brightness1: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of Color1. Increase for more contrast.

Color1: *Default rgb:* [1 1 1].

The color of the 'brighter' parts of the texture. The colors of the result are determined by an interpolation between Color0 and Color1.

Color0: *Default rgb:* [0 0 0].

The color of the 'darker' parts of the texture.

Offset0: *Default:* 0, *Range:* any.

Adds this value to color0. Decrease to a negative value for more contrast.

Bg Brightness: *Default:* 1, *Range:* 0 or greater.

The background brightness is scaled by this value before being combined with the texture.

Combine: *Popup menu, Default: Screen.*

Determines how the texture is combined with the Background.

Clouds Only: gives only the clouds texture with no Background.

Mult: the texture is multiplied by the Background.

Add: the texture is added to the Background.

Screen: the texture is blended with the Background using a screen operation.

Difference: the result is the difference between the texture and Background.

Overlay: the texture is combined with the Background using an overlay function.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Shift Start: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Shift Start parameter.

See Also:

[Clouds](#)

[WarpPerspective](#)

[CloudsVortex](#)

[Sapphire](#)

[CloudsMultColor](#)

[Plug-ins](#)

CloudsColorSmooth

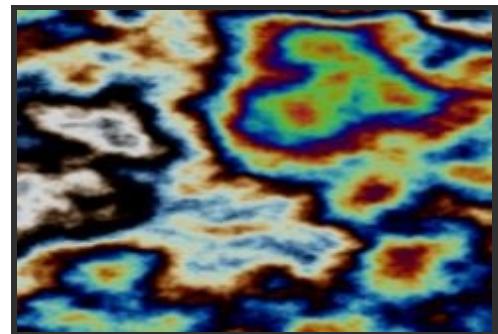
CloudsPsyko

Introduction

S_CloudsPsyko

Generates a procedural noise texture, and passes this through a colorizing process. The Shift Speed parameters cause the pattern to automatically translate over time, and Phase Speed causes the colors to rotate over time.

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to combine the clouds image with. This may be ignored if the Combine option is set to Clouds Only.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Frequency: *Default: 2, Range: 0.01 or greater.*
The spatial frequency of the clouds. Increase to zoom out, decrease to zoom in. Very high values of Frequency are clamped internally so the grain size is no smaller than a few pixels. If you want even finer grain use S_Grain or S_Clouds:Perspective instead.

Frequency Rel X: *Default: 0.4, Range: 0.01 or greater.*
The relative horizontal frequency of the texture. Increase to stretch it vertically or decrease to stretch it horizontally.

Octaves: *Integer, Default: 8, Range: 1 to 10.*
The number of summed layers of noise. Each octave is twice the frequency and half the amplitude of the previous. A single octave gives a smooth texture. Adding octaves makes the result approach a fractal (1/f) noise texture.

Seed: *Default: 0.23, Range: 0 or greater.*
Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Boiling Mode: *Check-box, Default: off.*
When enabled, the clouds will boil, or evolve, over time. This mode takes slightly more computation but usually looks better.

Boil Details: *Default: 0.55, Range: 0 to 1.*
Increases or decreases the amount of fine detail in the clouds. Decrease to get a smoother look, increase to get a more high-frequency, noisy look. Only used when Boiling Mode is enabled.

Boil Speed: *Default: 1, Range: any.*
Sets the speed of the cloud boiling. Zero gives no boiling at all. Only used when Boiling Mode is enabled.

Color Freq: *Default: 4, Range: 0.01 or greater.*
The frequency of the color pattern. Increase for a busier texture with more cycles through the spectrum.

Freq Red: *Default: 1, Range: 0 or greater.*
The frequency of the red color component. Increase for more cycles in the red channel.

Freq Green: *Default: 1.1, Range: 0 or greater.*
The frequency of the green color component. Increase for more cycles in the green channel.

Freq Blue: *Default: 1.2, Range: 0 or greater.*
The frequency of the blue color component. Increase for more cycles in the blue channel.

Shift Start: *X & Y, Default: [0 0], Range: any.*
Translation offset of the texture. Since the texture is procedurally generated it can be shifted with no repeating units or seams occurring. This parameter can be adjusted using the Shift Start Widget.

Shift Speed: *X & Y, Default: [0.5 0], Range: any.*
Translation speed of the texture. If non-zero, the result is automatically animated to shift at this rate. The result of animated Speed values may not be intuitive, so for variable speed motion it is usually best to set this to 0 and animate the Shift Start values instead.

Phase Start: *Default: -0.5, Range: any.*

The phase offset of the color patterns.

Phase Speed: *Default: 0.3, Range: any.*

The phase speed of the color patterns. If non-zero, the phase is automatically animated to give the color pattern a boiling look.

Brightness: *Default: 1, Range: 0 or greater.*

Scales the brightness of the result.

Scale Color: *Default rgb: [1 1 1].*

Scales the color of the result. For example, if it is yellow [1 1 0], the blue of the result will be 0.

Saturation: *Default: 1, Range: 0 or greater.*

Scales the strength of the colors. Increase for more intense colors, or decrease for muted colors.

Offset: *Default: 0, Range: any.*

Adds this gray value to the result (or subtracts if negative). 0 has no effect, .5 is middle gray, and 1 is white.

Bg Brightness: *Default: 1, Range: 0 or greater.*

The background brightness is scaled by this value before being combined with the clouds.

Combine: *Popup menu, Default: Screen.*

Determines how the texture is combined with the Background.

Clouds Only: gives only the clouds texture with no Background.

Mult: the texture is multiplied by the Background.

Add: the texture is added to the Background.

Screen: the texture is blended with the Background using a screen operation.

Difference: the result is the difference between the texture and Background.

Overlay: the texture is combined with the Background using an overlay function.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Shift Start: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Shift Start parameter.

See Also:

[Clouds](#)

[ZebrafyColor](#)

[Sapphire](#)

[CloudsPerspective](#)

[PseudoColor](#)

[Plug-ins](#)

[CloudsVortex](#)

[PsykoBlobs](#)

[Introduction](#)

[CloudsMultColor](#)

[PsykoStripes](#)

[CloudsColorSmooth](#)

S_CloudsVortex

Generates a procedural noise texture twisting into a vortex. The Vortex Speed parameter causes the amount of vortex rotation to automatically animate over time.

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to combine the texture image with. This may be ignored if the Combine option is set to Texture Only.

Mask: *Optional.* If provided, the amplitude of warping is scaled by the values of this input clip. Gray values internally scale the warping amplitude rather than simply cross-fading between the effect and the original source to allow more continuous results at the mask edges and more detailed control over the warping amounts. This input can be affected using the Blur Mask, Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Frequency: *Default:* 2, *Range:* 0.01 or greater.

The spatial frequency of the texture. Increase to zoom out, decrease to zoom in.

Frequency Rel X: *Default:* 1, *Range:* 0.01 or greater.

The relative horizontal frequency of the texture. Increase to stretch it vertically or decrease to stretch it horizontally.

Octaves: *Integer*, *Default:* 6, *Range:* 1 to 10.

The number of summed layers of noise. Each octave is twice the frequency and half the amplitude of the previous. A single octave gives a smooth texture. Adding octaves makes the result approach a fractal (1/f) noise texture.

Seed: *Default:* 0.234, *Range:* 0 or greater.

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Center: *X & Y*, *Default:* [0 0], *Range:* any.

The center of the vortex, in screen coordinates relative to the center of the frame. This parameter can be adjusted using the Center Widget.

Z Dist: *Default:* 1, *Range:* 0.001 or greater.

Scales the 'distance' of the image. Values greater than 1.0 move it farther away and make it smaller. Values less than 1.0 move the image closer and enlarge it.

Latitude: *Default:* 30, *Range:* -80 to 80.

Positive latitude tilts the image down and negative tilts it up. Keep latitude in the range of around -35 to 35 degrees to avoid aliasing towards the horizon.

Boiling Mode: *Check-box*, *Default:* off.

When enabled, the clouds will boil, or evolve, over time. This mode takes slightly more computation but usually looks better.

Boil Details: *Default:* 0.55, *Range:* 0 to 1.

Increases or decreases the amount of fine detail in the clouds. Decrease to get a smoother look, increase to get a more high-frequency, noisy look. Only used when Boiling Mode is enabled.

Boil Speed: *Default:* 1, *Range:* any.

Sets the speed of the cloud boiling. Zero gives no boiling at all. Only used when Boiling Mode is enabled.

Vortex Start: *Default:* 72, *Range:* any.

The amount of vortex rotation, in approximate counter-clockwise degrees at the edge of the frame.

Vortex Speed: *Default:* 30, *Range:* any.

The speed of the vortex rotation, in approximate degrees per second at the edge of the frame. If non-zero, the

vortexing is automatically animated at this rate.

Angle Offset: *Default:* 0, *Range:* any.

If non-zero, a rotation is combined with the vortex. Make negative to rotate the inner and outer regions in opposite directions.

Inner Radius: *Default:* 0.04, *Range:* 0 or greater.

The radius from the center at which the vortexing is phased in. This can be used to reduce excessive distortion and aliasing at the very center of the vortex.

Brightness1: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of Color1. Increase for more contrast.

Color1: *Default* *rgb:* [1 1 1].

The color of the 'brighter' parts of the texture. The colors of the result are determined by an interpolation between Color0 and Color1.

Color0: *Default* *rgb:* [0 0 0].

The color of the 'darker' parts of the texture.

Offset0: *Default:* 0, *Range:* any.

Adds this value to color0. Decrease to a negative value for more contrast.

Bg Brightness: *Default:* 1, *Range:* 0 or greater.

The background brightness is scaled by this value before being combined with the texture.

Combine: *Popup menu*, *Default:* Screen.

Determines how the texture is combined with the Background.

Clouds Only: gives only the clouds texture with no Background.

Mult: the texture is multiplied by the Background.

Add: the texture is added to the Background.

Screen: the texture is blended with the Background using a screen operation.

Difference: the result is the difference between the texture and Background.

Overlay: the texture is combined with the Background using an overlay function.

Mask Use: *Popup menu*, *Default:* Luma.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Center: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Center parameter.

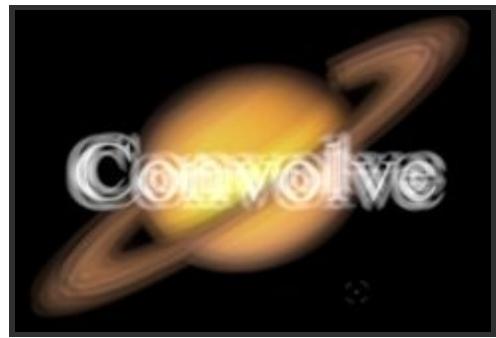
See Also:

[Clouds](#)
[CloudsPerspective](#)
[CloudsMultColor](#)
[CloudsColorSmooth](#)
[CloudsPsyko](#)

[WarpVortex](#)
[Sapphire Plug-ins](#)
[Introduction](#)

S_Convolve

Convolves a source image with a kernel. Convolution is a mathematical operator which uses one image, the kernel, as a filter shape for another image (the source). Convolution effectively stamps a copy of the kernel at each point of the source, using the source's brightness at that point. The effect is that a copy of the kernel will appear over all the bright spots of the source. A kernel image shaped like a circle or polygon will give an effect similar to RackDefocus; a kernel image shaped like a starburst can give something like Glare.



In the Sapphire Blur+Sharpen effects submenu.

Inputs:

Source: The clip to be processed.

Kernel: *Optional.* The filter kernel or shape for the convolution. This should normally be all black around the edges (outside the specified Kernel Crop region), with a non-black central part. A larger shape normally produces blurrier results. Only the part of the kernel within the two Kernel Crop params is considered; the part outside that boundary is ignored.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Kernel Size: *Default: 1, Range: 0 or greater.*

Kernel Size resizes the kernel larger or smaller. 1.0 is the original size. This parameter can be adjusted using the Kernel Size Widget.

Kernel Rel Width: *Default: 1, Range: 0 or greater.*

Increase to make the kernel fatter or wider without changing its height. Decrease to shrink it horizontally, making it thinner.

Kernel Rel Height: *Default: 1, Range: 0 or greater.*

Increase to make the kernel taller without changing its weight. Decrease to shrink it vertically, making it flatter.

Kernel Center: *X & Y, Default: [0 0], Range: any.*

The center point of the kernel; if you think of convolution as repeated stamping of the kernel at each point of the source, the center is where the stamp aligns with the source pixels it's stamped over. If you move the center to the right in the kernel, the whole result image will move to the left, and similarly up and down. This parameter is ignored if AutoCenter is on. It may be helpful to turn on Show Kernel while adjusting this parameter. Note that if Autocenter is off, the center point is always included in the kernel no matter what this param is set to. This parameter can be adjusted using the Kernel Center Widget.

Autocenter: *Check-box, Default: on.*

Automatically finds the center of the kernel image. Turning this on makes the effect ignore the Kernel Center

parameter.

Use Color Kernel: *Check-box, Default: off.*

Use each color channel of the kernel independently. Turn this on if your kernel is not just black and white and you want the colors of the kernel to be used in the convolution. Turn off for fastest rendering.

Show Kernel: *Check-box, Default: off.*

Show the kernel over the result, for easier adjustment of kernel parameters. Turn this off for final rendering.

Use Gamma: *Default: 1, Range: 0.1 or greater.*

Values above 1 cause highlights in the source clip to keep their brightness after the convolution filter is applied.

Boost Highlights: *Default: 0, Range: 0 or greater.*

The amount to increase the luma of the highlights in the source clip. Increase this parameter to blow out the highlights without affecting the darks or mid-tones.

Hilight Threshold: *Default: 0.9, Range: 0 or greater.*

The minimum luma value for highlights. Pixels brighter than this will be brightened according to the Boost Highlights parameter.

Brightness: *Default: 1, Range: 0 to 1e+05.*

Scales the brightness of the result.

Chroma Distort: *Default: 0, Range: any.*

Adds some chromatic aberration around the edges of the image; red and blue wavelengths of light refract differently in real lenses, producing fringes of color where the rays strike the lens at oblique angles.

Threshold: *Default: 0, Range: 0 or greater.*

Any source value below this will be treated as black. When combining the convolved result with the original, you can increase this value to only convolve bright areas of the source. Typically when using this parameter, you will also set Combine to Screen or Add to get a glare-like effect.

Threshold Add Color: *Default *rgb*: [0 0 0].*

This can be used to raise the threshold on a specific color and thereby reduce the convolved result generated on areas of the source clip containing that color.

Combine: *Popup menu, Default: Convolve Only.*

Determines how the convolved image is combined with the original source.

Convolve Only: Only show the convolved image. Use this option for a blur or defocus-like effect

Screen: Screen the convolved image with the original source. Use this option for a glow or glare-like effect.

Add: Add the convolved image to the original source.

Difference: Show the difference between the convolved image and the source.

Mix With Source: *Default: 0, Range: 0 to 1.*

Interpolates between the convolved result (0) and the original source (1). 0.1 can give a nice misty effect since it mixes only a little of the source in.

Edge Mode: *X & Y, Popup menu, Default: [Transparent Transparent].*

Determines the behavior when accessing areas outside the source image.

Transparent: Areas outside the source image are treated as transparent, which can produce transparency around the edges of the image. Select this for fastest rendering.

Repeat: Repeats the last pixel outside the border of the image.

Reflect: Reflects the image outside the border.

Kernel Threshold: *Default: 0.001, Range: 0 or greater.*

Any kernel value below this will be treated as black. It's important for the edges of the kernel image to be completely black, or the result will have a grayish cast to it. If your kernel image may have a little noise in the black areas, turn up threshold a little to remove that background noise.

Clamp Below Thresh: *Check-box, Default: on.*

When turned on, values below the threshold are clamped to zero. This usually gives the best result. For certain special cases with partially-negative kernels, turning this off gives you additional flexibility in designing your kernel.

Kernel Crop1: *X & Y, Default: [-0.997 -0.747], Range: any.*

The upper left corner of the kernel area. Parts of the kernel image outside the rectangle defined by Kernel Crop1 and Kernel Crop2 are assumed to be black. Making this area smaller to avoid processing the kernel's black edges can speed up the convolution somewhat. It may be helpful to turn on Show Kernel while adjusting this parameter. Note that if Autocenter is off, the center point is always included in the kernel no matter what this param is set to.

Kernel Crop2: *X & Y, Default: [0.997 0.747], Range: any.*

The lower right corner of the kernel area.

Autoscale Mode: *Popup menu, Default: Max Channel.*

In convolution, either a larger or brighter kernel will make the result image brighter. The kernel must be auto-scaled or normalized so the result is, on average, as bright as the input. The autoscaling can be done in several ways, each of which is best in certain circumstances. With a monochrome kernel or with Color Kernel turned off, Max Channel, Luma, and Indep Channels all give the same result.

Max Channel: Autoscales the kernel by summing the elements of each channel, and using whichever is brightest as the overall kernel scale factor. This normalizes a dim kernel to full brightness, and generally preserves the color of the kernel, but allows brightness variations in the dimmer channels to show in the result.

Luma: Autoscales the kernel by summing the luminances of each kernel pixel. This method preserves changes in the kernel's hue, but normalizes the luma, so a brighter or darker kernel will have no effect. Use the Scale parameter to adjust the result brightness.

Indep Channels: Independently normalizes each color channel of the kernel. A colored kernel will give a white/gray result with this method. Use this method if your kernel channels are independent of each other (i.e. different things going on in each of R, G, and B) but you want normalized results in each channel.

Count Nonzero: Count how many kernel pixels are nonzero (brighter than black), but otherwise ignore how bright they are. This method is best if you want variations in kernel hue and luma to show up in the result. But blurring the kernel will give a dimmer result, since there will be more nonzero pixels.

Kernel Size: Ignore the pixel *values* entirely; only use the size of the kernel rectangle to auto-scale. Use this if you want all kernel variations to show up in the result, but don't use it if you intend to animate Kernel Crop1 and Crop2, as that would affect the result's brightness.

Soft Borders: *Check-box, Default: off.*

If enabled, transparent borders are added to the input image before processing. This allows the result to include soft edges beyond the original image size. When off, the effect only occurs within the frame and the result will retain an edge at the borders.

Show Kernel Size: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Kernel Size parameter.

Show Kernel Center: *Check-box, Default: off.*

Turns on or off the screen user interface for adjusting the Kernel Center parameter.

Show Kernel Crop: *Check-box, Default: off.*

Turns on or off the screen user interface for adjusting the Kernel Crop1 parameter.

See Also:

[RackDefocus](#)
[DefocusPrism](#)

[RackDfComp](#)
[Blur](#)
[BlurChannels](#)
[BlurChroma](#)
[ZDefocus](#)

[Sapphire](#)
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S_ConvolveComp

Convolves front and back images with a kernel, and composites them using a matte. Convolution is a mathematical operator which uses one image, the kernel, as a filter shape for another image (the source). Convolution effectively stamps a copy of the kernel at each point of the source, using the source's brightness at that point. The effect is that a copy of the kernel will appear over all the bright spots of the source. A kernel image shaped like a circle or polygon will give an effect similar to RackDefocusComp; a kernel image shaped like a starburst can give something like GlareComp.

The kernel size can vary between front and back so either or both can be blurred.

In the Sapphire Blur+Sharpen effects submenu.



Inputs:

Foreground: The clip to use as foreground.

Background: The clip to use as background.

Matte: *Optional.* The alpha channel of this input specifies the opacities of the Foreground input. If this input is not provided, the alpha channel of the Foreground input is used instead. This input can be affected by the Invert Matte or Matte Use parameters.

Kernel: *Optional.* The filter kernel or shape for the convolution. This should normally be all black around the edges (outside the specified Kernel Crop region), with a non-black central part. A larger shape normally produces blurrier results. Only the part of the kernel within the two Kernel Crop params is considered; the part outside that boundary is ignored.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Size Front: *Default:* 1, *Range:* 0 or greater.

Size Front resizes the kernel larger or smaller when convolving the Front clip. 1.0 is the original size. This parameter can be adjusted using the Size Front Widget.

Size Back: *Default:* 0, *Range:* 0 or greater.

Size Back resizes the kernel larger or smaller when convolving the Back clip. This parameter can be adjusted using the Size Back Widget.

Size Rel X: *Default:* 1, *Range:* 0 or greater.

Increase to make the kernel fatter or wider without changing its height. Decrease to shrink it horizontally, making it thinner.

Size Rel Y: *Default:* 1, *Range:* 0 or greater.

Increase to make the kernel taller without changing its weight. Decrease to shrink it vertically, making it flatter.

Kernel Center: *X & Y*, *Default:* [0 0], *Range:* any.

The center point of the kernel; if you think of convolution as repeated stamping of the kernel at each point of the source, the center is where the stamp aligns with the source pixels it's stamped over. If you move the center to the right in the kernel, the whole result image will move to the left, and similarly up and down. This parameter is ignored if AutoCenter is on. It may be helpful to turn on Show Kernel while adjusting this parameter. Note that if Autocenter is off, the center point is always included in the kernel no matter what this param is set to. This parameter can be adjusted using the Kernel Center Widget.

Autocenter: *Check-box*, *Default:* on.

Automatically finds the center of the kernel image. Turning this on makes the effect ignore the Kernel Center parameter.

Use Color Kernel: *Check-box*, *Default:* off.

Use each color channel of the kernel independently. Turn this on if your kernel is not just black and white and you want the colors of the kernel to be used in the convolution. Turn off for fastest rendering.

Show Kernel: *Check-box*, *Default:* off.

Show the kernel over the result, for easier adjustment of kernel parameters. Turn this off for final rendering.

Use Gamma: *Default:* 1, *Range:* 0.1 or greater.

Values above 1 cause highlights in the source clip to keep their brightness after the convolution filter is applied.

Matte Gamma: *Default:* 1, *Range:* 0.1 or greater.

The gamma value to use for the defocus of the Matte.

Boost Highlights: *Default:* 0, *Range:* 0 or greater.

The amount to increase the luma of the highlights in the source clip. Increase this parameter to blow out the highlights without affecting the darks or mid-tones.

Hilight Threshold: *Default:* 0.9, *Range:* 0 or greater.

The minimum luma value for highlights. Pixels brighter than this will be brightened according to the Boost Highlights parameter.

Comp Premult: *Check-box*, *Default:* on.

Disable this if you have provided a separate Matte input and the Foreground pixel values have not been pre-multiplied by this Matte.

Front Brightness: *Default:* 1, *Range:* 0 or greater.

Scale the brightness of the convolved Front clip.

Front Opacity: *Default:* 1, *Range:* 0 to 1.

Scale the opacity of the front clip before compositing over the back.

Front Threshold: *Default:* 0, *Range:* 0 or greater.

In the Front clip, any source value below this will be treated as black. When combining the convolved result with the original, you can increase this value to only convolve bright areas of the source. Typically when using this parameter, you will also set Combine to Screen or Add to get a glare-like effect.

Threshold Add Color: *Default* *rgb:* [0 0 0].

This can be used to raise the threshold on a specific color and thereby reduce the convolved result generated on areas of the source clip containing that color.

Back Brightness: *Default:* 1, *Range:* 0 or greater.

Scale the brightness of the convolved Back clip.

Combine: *Popup menu*, *Default:* *Convolve Only*.

Determines how the front, back, and convolved images are combined.

Convolve Only: Convolve the Front and Back and composite them together. Use this option for a blur or defocus-like effect

Screen: Composite the Front over the convolved back, then screen with the convolved front. Use this option for a glow or glare-like effect.

Add: Composite the Front over the convolved back, then add the convolved front.

Difference: Composite the Front over the convolved back, then show the difference with the convolved front.

Edge Mode: *X & Y, Popup menu*, *Default:* [*Transparent* *Transparent*].

Determines the behavior when accessing areas outside the source image.

Transparent: Areas outside the source image are treated as transparent, which can produce transparency around the edges of the image. Select this for fastest rendering.

Repeat: Repeats the last pixel outside the border of the image.

Reflect: Reflects the image outside the border.

Kernel Threshold: *Default:* 0.001, *Range:* 0 or greater.

Any kernel value below this will be treated as black. It's important for the edges of the kernel image to be completely black, or the result will have a grayish cast to it. If your kernel image may have a little noise in the black areas, turn up threshold a little to remove that background noise.

Clamp Below Thresh: *Check-box*, *Default:* on.

When turned on, values below the threshold are clamped to zero. This usually gives the best result. For certain special cases with partially-negative kernels, turning this off gives you additional flexibility in designing your kernel.

Kernel Crop1: *X & Y*, *Default:* [-0.997 -0.747], *Range:* any.

The upper left corner of the kernel area. Parts of the kernel image outside the rectangle defined by Kernel Crop1 and Kernel Crop2 are assumed to be black. Making this area smaller to avoid processing the kernel's black edges can speed up the convolution somewhat. It may be helpful to turn on Show Kernel while adjusting this parameter. Note that if Autocenter is off, the center point is always included in the kernel no matter what this param is set to.

Kernel Crop2: *X & Y*, *Default:* [0.997 0.747], *Range:* any.

The lower right corner of the kernel area.

Autoscale Mode: *Popup menu*, *Default:* Max Channel.

In convolution, either a larger or brighter kernel will make the result image brighter. The kernel must be auto-scaled or normalized so the result is, on average, as bright as the input. The autoscaling can be done in several ways, each of which is best in certain circumstances. With a monochrome kernel or with Color Kernel turned off, Max Channel, Luma, and Indep Channels all give the same result.

Max Channel: Autoscales the kernel by summing the elements of each channel, and using whichever is brightest as the overall kernel scale factor. This normalizes a dim kernel to full brightness, and generally preserves the color of the kernel, but allows brightness variations in the dimmer channels to show in the result.

Luma: Autoscales the kernel by summing the luminances of each kernel pixel. This method preserves changes in the kernel's hue, but normalizes the luma, so a brighter or darker kernel will have no effect. Use the Scale parameter to adjust the result brightness.

Indep Channels: Independently normalizes each color channel of the kernel. A colored kernel will give a white/gray result with this method. Use this method if your kernel channels are independent of each other (i.e. different things going on in each of R, G, and B) but you want normalized results in each channel.

Count Nonzero: Count how many kernel pixels are nonzero (brighter than black), but otherwise ignore how bright they are. This method is best if you want variations in kernel hue and luma to show up in the result. But blurring the kernel will give a dimmer result, since there will be more nonzero pixels.

Kernel Size: Ignore the pixel *values* entirely; only use the size of the kernel rectangle to auto-scale. Use this if you want all kernel variations to show up in the result, but don't use it if you intend to animate Kernel Crop1 and Crop2, as that would affect the result's brightness.

Matte Use: *Popup menu*, *Default:* Alpha.

Determines how the Matte input channels are used to make a monochrome matte.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Invert Matte: *Check-box*, *Default:* off.

If enabled, the black and white of the matte are inverted before use.

Soft Borders: *Check-box*, *Default:* off.

If enabled, transparent borders are added to the input image before processing. This allows the result to include soft edges beyond the original image size. When off, the effect only occurs within the frame and the result will retain an edge at the borders.

Show Size Front: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Size Front parameter.

Show Size Back: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Size Back parameter.

Show Kernel Center: *Check-box*, *Default:* off.

Turns on or off the screen user interface for adjusting the Kernel Center parameter.

Show Kernel Crop: *Check-box*, *Default:* off.

Turns on or off the screen user interface for adjusting the Kernel Crop1 parameter.

See Also:

[RackDefocus](#)

[DefocusPrism](#)

[RackDfComp](#)

[Blur](#)

[BlurChannels](#)

[BlurChroma](#)

[ZDefocus](#)

[Convolve](#)

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S_Crosshatch

Simulates a pen-sketch crosshatched look using overlapping strokes. The source is divided into four bands based on luma; each band from dark to light gets a different pattern of strokes.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Effect: *Popup menu, Default: CrosshatchPencil.*

Selects pencil or chalk modes.

CrosshatchPencil: Simulates dark pencil or pen strokes on white paper.

CrosshatchChalk: Simulates white chalk strokes on dark paper.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Stroke Frequency: *Default:* 100, *Range:* 1 to 500.

Increase for smaller, finer strokes; decrease for broader strokes.

Stroke Length: *Default:* 10, *Range:* 0.1 or greater.

Average length of the strokes, compared to their width.

Stroke Strength: *Default:* 0.55, *Range:* 0 to 1.

Overall size and strength; decrease for fewer, smaller strokes. At zero, strokes will vanish. Increase for bolder, more overlapping strokes. At one, there will be strokes everywhere, so you won't see the stroke pattern.

Stroke Softness: *Default:* 0.1, *Range:* 0.001 to 1.

Softness of the edges of each stroke. Decrease for hard-edged pen strokes; increase for a softer chalk-like look.

Stroke Angle: *Default:* 45, *Range:* any.

Angle of the strokes, in degrees; zero makes strokes horizontal and vertical.

Stroke Shift: *X & Y*, *Default:* [0 0], *Range:* any.

Shift the overall stroke pattern; this can help match the stroke pattern to overall camera movement in the clip.

Animate Speed: *Default:* 1, *Range:* 0 to 5.

Strokes normally change subtly over time; this controls the speed of that animation. Set to zero for static strokes that don't move.

Threshold Dark: *Default:* 0.15, *Range:* 0 to 1.

The darkest areas get double overlapping strokes (or pure black in chalk mode); source areas with luma darker than this threshold are considered in the darkest band and get those double strokes. Increasing this (or any threshold) will darken the overall result since more of the image will fall into the darkest band.

Threshold Mids: *Default:* 0.35, *Range:* 0 to 1.

Midtones are divided into darker-mids and brighter-mids; this threshold sets the luma value that separates those two bands. The darker mids get darker and denser strokes.

Threshold Bright: *Default:* 0.6, *Range:* 0 to 1.

The brightest areas get the lightest strokes (normally just white, unless you are in chalk mode); areas brighter than this threshold are considered brights.

Thresholds Add: *Default:* 0, *Range:* any.

This adds or subtracts from all the thresholds; increase to darken the overall result (because it raises the thresholds), decrease to lighten the overall result (because it lowers the thresholds).

Mix Threshold: *Default:* 0.005, *Range:* 0 to 0.1.

Softens the borders between the dark/mid/light luma bands.

Strokes Use Source: *Default: 0, Range: 0 to 1.*

Increase to use more of the source color to color the strokes. Zero means use the stroke color; one means use the color of the underlying source clip. In between strokes, the background color shows through; if you have Back Style set to Source the strokes will disappear when this is set to one.

Stroke Color: *Default rgb: [0 0 0].*

The color to use for the strokes. In pencil mode this defaults to black; in chalk mode, it defaults to white.

Posterize Amount: *Default: 0, Range: 0 to 1.*

Posterizes the source, giving a more cartoony look with areas of solid color. This only has an effect when using the source to colorize the strokes or when using the source as the background.

Posterize Smooth: *Default: 0, Range: 0 to 1.*

When posterizing, smooth the edges of the solid-color areas. This avoids aliasing and usually looks better.

Posterize Phase: *Default: 0, Range: any.*

Adjusts the phase of the posterization. Use this to position the areas of flat color and avoid edges in the middle of areas you'd like to keep flat.

Edge Strength: *Default: 0, Range: 0 or greater.*

Adds cartoon-like edges to the look.

Edge Width: *Default: 0.002, Range: 0 or greater.*

Adjusts the width of the edge strokes; increasing this also softens the edges.

Edge Threshold: *Default: 0.5, Range: 0 or greater.*

Increase this to remove minor, insignificant edge strokes, giving a bolder look.

Edge Color: *Default rgb: [0 0 0].*

Sets the color for the edge strokes.

Suppress Small Edges: *Default: 0.5, Range: 0 or greater.*

Increase to suppress small, minor edges.

Edge Sharpen: *Default: 0, Range: 0 or greater.*

Sharpens the edge strokes.

Back Style: *Popup menu, Default: Solid Color.*

What to use as the background, underneath the pen strokes.

Source: Use the source as the background. This gives a much more colorful look, as if the strokes are drawn over the original clip. You may want to adjust Stroke Color when using this.

Solid Color: Use the specified Solid Color background.

Solid Color: *Default rgb: [1 1 1].*

The color to use for the the background, when in Solid Color mode.

Pre Blur Bg: *Default: 0, Range: 0 or greater.*

Blur the source before using it as background, or to color the strokes. This can help reduce sparkling due to a noisy or grainy source.

Use Source Alpha: *Default: 1, Range: 0 to 1.*

Cut out the strokes using the alpha of the source. At one, strokes are suppressed where the source alpha is zero; that is, they are cut out by the alpha. At zero, the strokes are drawn everywhere, even where the source alpha is zero. Set to zero if you want the stroke texture everywhere in the frame. When the source is fully opaque, this has no effect.

Saturation: *Default: 1, Range: 0 or greater.*

Increase or decrease the overall saturation of the output.

Scale Lights: *Default: 1, Range: 0 or greater.*
Scales the brightness of the result by this amount.

Offset Dark: *Default: 0, Range: any.*
Adds this gray value to the darker regions of the source. This can be negative to increase contrast.

Tint Lights: *Default rgb: [1 1 1].*
Scales the result by this color, thus tinting the lighter regions.

Tint Dark: *Default rgb: [0 0 0].*
Adds this color to the darker regions of the result.

Mix With Source: *Default: 0, Range: 0 to 1.*
Interpolates between the result (when set to 0) and the original source (when set to 1). 0.7 can give a nice effect by blending some of the source in with the strokes.

Seed: *Default: 0.123, Range: 0 or greater.*
Initialize the random number generator for the strokes. Different values give different random stroke patterns.

Mask Use: *Popup menu, Default: Luma.*
Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.
Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*
Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*
If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

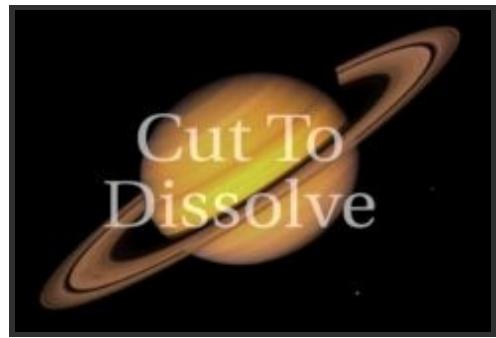
See Also:

[Sketch](#)
[AutoPaint](#)
[Cartoon](#)

[Sapphire](#)
[Plug-ins](#)
[Introduction](#)

S_CutToDissolve

Turns a cut within a single clip into a dissolve. No heads or tails are required; just set the cut point (frame) and CutToDissolve creates a dissolve around that point. Note that this effect does not take two clips; just a single clip already containing a cut. The Cut Point param is key to making it work; whatever frames are on either side of that will be treated as the cut, and the dissolve will be created around them.



In the Sapphire Time effects submenu.

Inputs:

Source: The clip to be processed.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Cut Point: *Integer, Default: 5, Range: 2 or greater.*

The frame where the cut happens. Press the Find Cut pushbutton to automatically find the cut frame.

Find Cut: *Push-button.*

Press this button to automatically search through the clip and attempt to find a cut, starting at the current Cut Frame. The frame number will be stored in Cut Point above. If no cuts are found within a few seconds, the search will stop. Click Find Cut again to continue searching.

Dissolve Length: *Integer, Default: 6, Range: 2 or greater.*

The total length of the dissolve. Half will be on the left side of the cut, half on the right side.

Slow In Out: *Default: 2, Range: 0.1 to 10.*

Set to 0 for a linear dissolve, increase to 2 for a more subtle slow-in-out transition.

Gamma: *Default: 1, Range: 0.1 to 10.*

Set to 1 for a video dissolve, increase a little for a more filmic look.

Show: *Popup menu, Default: Result.*

This can help you find the cut frame; set it to Cut Frames to see a split-screen view of the last outgoing frame and first incoming, based on Cut Point. You can also use it to only show one side or the other, with the interpolated dissolve frames.

Result: Show the result clip, containing the dissolve.

Cut Frames: Show a split-screen of the two cut frames, no matter where the play head currently is.

A: Show the A (outgoing) side of the cut: as if the B side were black.

B: Show the B (incoming) side of the cut: as if the A side were black.

Split For Cut: *Default: 0, Range: -1 to 1.*

Where to split the split-screen view of the Cut Point, when in Show:Cut Frames mode. Normally this has no effect.

See Also:

[Dissolve](#)

[Sapphire](#)

[Plug-ins](#)

[Introduction](#)

S_Deband

Removes banding artifacts from a clip by diffusing pixels across the banded areas, while keeping the original edges intact. To use this effect, first select Show:Edges and adjust the edge threshold until the banding edges just disappear, leaving only the desired real edges. Then select Show:Result to see the result. If you still see some banding, increase Diffuse Threshold and/or Diffuse Radius.



In the Sapphire Blur+Sharpen effects submenu.

Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Edge Threshold: *Default: 2, Range: 0 to 255.*

The amount by which adjacent pixels must differ to constitute a real desired edge. A value of 1.0 represents the smallest possible difference at 8 bits. This parameter should be set high enough that none of the bands appear as edges, but low enough that all the real edges are still detected.

Grow Edges: *Default: 0, Range: 0 or greater.*

Amount to grow the detected edges in approximate pixels. Increasing this parameter can prevent diffusion in areas that are near edges, but not on an edge.

Show: *Popup menu, Default: Result.*

Selects the type of output.

Result: Shows the final result.

Edges: Shows the edges of the image, where adjacent pixels differ by more than Edge Threshold. Use this mode to help fine-tune the edge detection parameters.

Diffuse Threshold: *Default: 1, Range: 0 or greater.*

The maximum color difference allowed when diffusing pixels. This parameter is automatically scaled by the edge threshold. Increasing it can give better results when there is a gradient within the bands. Decreasing it will reduce diffusion in areas where there are no edges.

Diffuse Radius: *Default: 12, Range: 0 or greater.*

The maximum radius of pixel diffusion, in approximate pixels. A larger value will remove banding more effectively in large areas with uniform colors, while a smaller value will give a better result in areas with many small color regions.

Pre Blur: *Default: 0, Range: 0 or greater.*

Blurs the source before diffusing pixels.

Post Blur: *Default: 0.5, Range: 0 or greater.*

Blurs the result after diffusing pixels. Use this parameter to reduce noisiness in the result.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

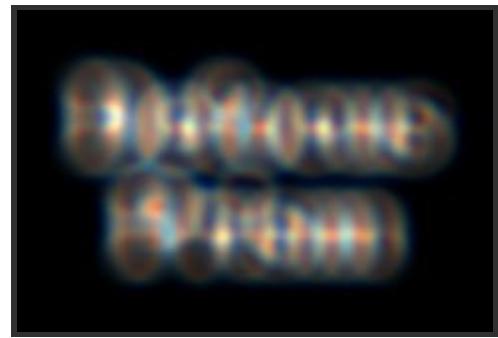
[GrainRemove](#)

[Sapphire](#)
[Plug-ins](#)
[Introduction](#)

S_DefocusPrism

Defocuses the color channels of the source clip into rings of different widths.

In the Sapphire Blur+Sharpen effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Defocus Width: *Default: 0.088, Range: 0 or greater.*

The width of the defocus. This parameter can be adjusted using the Defocus Width Widget.

Rel Height: *Default: 1, Range: 0.01 or greater.*

The relative height of the iris shape. If it is not 1, circles become ellipses, etc.

Shape: *Popup menu, Default: Circle.*

Determines the shape of the simulated camera iris.

Circle: round.

3 sides: triangle.

4 sides: square.

5 sides: pentagon.

6 sides: hexagon.

7 sides: etc.

Show Shape: *Check-box, Default: off.*

Show the iris shape instead of the defocused image.

Roundness: *Default: 0, Range: any.*

Modifies the shape of the simulated camera iris. A value of 1 produces a circle; 0 gives a flat-sided polygon with a number of sides given by the Shape parameter. Less than 0 causes the sides to squeeze inward giving a star shape, while a value greater than 1 causes the corners to squeeze inward, giving a flowery shape. Has no effect if the Shape is set to Circle.

Rotate: *Default: 0, Range: any.*

Rotates the iris shape.

Bokeh: *Default: 0, Range: any.*

Softens the outer edge of the iris shape, which gives a softer look to the defocused highlights. A negative value darkens the center of the iris shape, producing a ring-like defocus shape.

Lens Noise: *Default: 0, Range: 0 or greater.*

Increase to add noise to the iris shape, dirtying up the defocus a little. Can make the result more realistic. Turn up past 1 for a more stylistic result.

Noise Freq: *Default: 40, Range: 0.01 or greater.*

The frequency of the added noise. Ignored if Lens Noise is zero.

Noise Freq Rel X: *Default: 1, Range: 0.01 or greater.*

The relative horizontal frequency of the added iris noise. Increase to stretch it vertically or decrease to stretch it horizontally.

Noise Seed: *Default: 0.123, Range: 0 or greater.*

The seed value for the added noise. To make the noise appear different on each frame, animate this to be different on each frame. The actual value doesn't matter; only that it's different.

Gauss Blur: *Default: 0, Range: 0 or greater.*

If positive, a gaussian blur is also applied which smooths out the edges of the shapes. This might also darken the highlights because Gamma is not considered in the gaussian blur.

Use Gamma: *Default:* 1, *Range:* 0.1 or greater.

Values above 1 cause highlights in the source clip to keep their brightness after the defocus is applied.

Boost Highlights: *Default:* 0, *Range:* 0 or greater.

The amount to increase the luma of the highlights in the source clip. Increase this parameter to blow out the highlights without affecting the darks or mid-tones.

Hilight Threshold: *Default:* 0.9, *Range:* 0 or greater.

The minimum luma value for highlights. Pixels brighter than this will be brightened according to the Boost Highlights parameter.

Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the result.

Offset Dark: *Default:* 0, *Range:* any.

Adds this gray value to the darker regions of the result. This can be negative to increase contrast.

Scale Color: *Default* *rgb:* [1 1 1].

Scales the color of the result. For example, if it is yellow [1 1 0], the blue of the result will be 0.

Chroma Sep: *Default:* 0.3, *Range:* -1 to 1.

The amount of separation between the three color channel rings.

Chroma Ringthick: *Default:* 0.3, *Range:* 0.01 or greater.

The thickness of each of the three color channel rings.

Chroma Distort: *Default:* 0, *Range:* any.

Adds some chromatic aberration around the edges of the image; red and blue wavelengths of light refract differently in real lenses, producing fringes of color where the rays strike the lens at oblique angles.

Mix With Source: *Default:* 0, *Range:* 0 to 1.

Interpolates between the defocused result and the original source. Set this to 1 for the original source.

Edge Mode: *Popup menu, Default: Reflect.*

Determines the behavior when accessing areas outside the source image.

Transparent: Areas outside the source image are treated as transparent, which can produce transparency around the edges of the image. Select this for fastest rendering.

Repeat: Repeats the last pixel outside the border of the image.

Reflect: Reflects the image outside the border.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Defocus Width: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Defocus Width parameter.

See Also:

[RackDefocus](#)

[RackDfComp](#)

[Sapphire](#)

[Blur](#)

[Plug-ins](#)

[BlurChannels](#)

[Introduction](#)

[BlurChroma](#)

[WarpChroma](#)

[Convolve](#)

S_DeinterlaceAuto

Can automatically detect an interlaced pulldown pattern, and deinterlace or reinterlace a clip. To deinterlace, first click on the Find Pattern button. If the effect fails to find a pattern, move to a frame with plenty of motion and click Find Pattern again. If the pulldown pattern seems longer than usual, increase the Max Pattern Fields accordingly. Once the pattern is found, the plug-in will output progressive frames. To reinterlace back to the original pattern, copy the node (or create a new node and copy the pattern parameters). Then change the mode to Reinterlace and connect the progressive footage to the Source input. The plug-in will output reinterlaced frames using the original pulldown pattern. Note that the output of this effect may be longer or shorter than the input clip, depending on the pattern.

In the Sapphire Time effects submenu.



Inputs:

Source: The clip to be processed.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Effect: *Popup menu, Default: Deinterlace.*

Switches between Deinterlace and Reinterlace modes.

Deinterlace: Convert interlaced source footage into unique progressive frames, using the specified pattern.

Reinterlace: Convert progressive source footage into interlaced frames using the specified pattern.

Find Pattern: *Push-button.*

Clicking on this will search for a pulldown pattern in the source clip, starting at the current frame. This fills in parameter values for the Pattern, Pattern Phase, and optionally the Field Dominance.

Detect Dominance: *Check-box, Default: on.*

If enabled, Find Pattern will also automatically set the Field Dominance value. Otherwise Field Dominance can be set manually and will remain as is.

Pattern: *Default: 0.*

Describes the pulldown pattern found in the clip. This pattern refers to the source clip when deinterlacing, but when reinterlacing it describes the desired pattern to recreate in the destination clip. Thus the pattern should remain the same for deinterlace and reinterlace. The pattern shows how many fields comprise each progressive frame. A pattern of '3 2' indicates a typical 3:2 pulldown pattern. A pattern of just '1' would indicate all fields are unique. A pattern of just '2' indicates normal progressive frames with no interlacing, and causes the result clip to equal the source clip. Negative values in a pattern indicate out-of-order fields that match a previous progressive frame. Note that a problem with Toxik 2008 causes this Pattern string parameter to be invisible to the user.

Pattern Phase: *Integer, Default: 0, Range: any.*

Shows the field number of the clip where the pattern begins. This parameter is set automatically when the Find Pattern button is clicked.

Field Dominance: *Popup menu, Default: 1.*

The field dominance of the source footage. This is set automatically by Find Pattern if Detect Dominance is enabled.

1: Field 1 occurs first in time, then field 2.

2: Field 2 occurs first in time, then field 1.

Max Pattern Fields: *Integer, Default: 10, Range: 5 to 100.*

The maximum number of fields expected in the repeating pulldown pattern. Decreasing this value will cause it to inspect fewer frames and speed up the pattern finding. Increasing it will allow the detection of longer pulldown patterns.

See Also:

[FieldRemove](#)

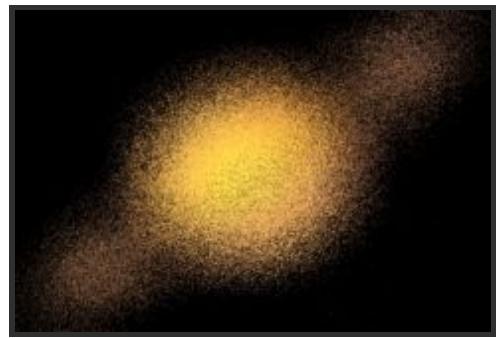
[Sapphire Plug-ins](#)

[Introduction](#)

S_Diffuse

Scrambles the pixels of the source input within an area determined by the Diffuse Amount. Use the Blur Rel X and Y parameters for a more horizontal or vertical diffuse direction. The pixelated look of this effect depends on the image resolution, so it is recommended to test your final resolution before processing.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* If provided, this determines which areas of the image receive diffusing pixels. Gray values internally scale the Diffuse Amount parameter rather than simply cross-fading between the effect and the original source. This can allow more continuous results at the mask edges and more detailed control over the diffusion amounts. This input can be affected using the Blur Mask, Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Diffuse Amount: *Default:* 0.2, *Range:* 0 or greater.

The amplitude of the pixel diffusion process. This parameter can be adjusted using the Diffuse Amount Widget.

Rel Amount: *X & Y*, *Default:* [1 1], *Range:* 0 or greater.

Scales the relative horizontal and vertical amounts of diffusion. This parameter can be adjusted using the Diffuse Amount Widget.

Wrap: *X & Y*, *Popup menu*, *Default:* [Reflect Reflect].

Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Blur Mask: *Default:* 0, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can be used to soften the edges of the mask and provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is connected.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu*, *Default:* Luma.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Crop Input Parameters: *Default:* 0, *Range:* 0 or greater.

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

Show Diffuse Amount: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Diffuse Amount parameter.

See Also:

[WipeDiffuse](#)
[DissolveDiffuse](#)
[GrainStatic](#)
[Grain](#)
[FilmEffect](#)

[Sapphire](#)
[Plug-ins](#)
[Introduction](#)

S_DigitalDamage

Simulates bad digital TV transmission with many options, including freeze-frames, shifting and flowing blocks, various kinds of blocky noise, and pixelization. Can give looks similar to MPEG stream errors, digital dropouts, and satellite feed data corruption.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* *Union*.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Intensity: *Default:* 1, *Range:* 0 or greater.
Overall spatial intensity of the damage. Turn up to get more damage on each frame.

Time Intensity: *Default:* 1, *Range:* 0 or greater.
Temporal intensity. Normally, not all damage types are applied to each frame. Turning this up will damage more frames with each damage type.

Damage Size: *Default:* 1, *Range:* 0.001 or greater.
Turn up to increase the average size of the damage areas.

Damage Size Rel X: *Default:* 1, *Range:* 0.001 or greater.
Turn up to elongate the damage areas horizontally. This doesn't stretch the image, just changes the aspect ratio of the damage areas and noise patterns.

Seed: *Default:* 1.23, *Range:* 0 or greater.
Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Freeze: *Check-box*, *Default:* on.
Enable freeze-frame damage.

Freeze Threshold: *Default:* 0.09, *Range:* 0 to 1.
Decrease for more frozen areas on each frame.

Freeze Saturation: *Default:* 2.5, *Range:* 0 or greater.
Boost the saturation of frozen areas, for a more damaged look.

Freeze Quality: *Default:* 0.1, *Range:* 0 or greater.
Reduce to give the frozen areas a JPEG-quantized look.

Freeze Errs: *Default:* 0.05, *Range:* 0 or greater.
Adds JPEG quantization errors to the frozen areas.

Freeze Frames: *Integer*, *Default:* 10, *Range:* 0 to 20.
Freeze every N frames. This doesn't freeze the whole image, but when there is freeze-damage present, it uses every Nth frame. Turn this up for a more extreme look. Turn it to 1 to get no freezing.

Freeze Blink Freq: *Default:* 15, *Range:* 0.1 or greater.
Controls how fast this type of damage blinks on and off.

Freeze Always: *Default:* 0.3, *Range:* 0 to 1.
Controls how often this type of damage occurs.

Shift: *Check-box*, *Default:* on.
Enable block-shifting damage.

Shift Amount: *Default:* 0.1, *Range:* 0 or greater.
Controls the intensity or amount of the block-shifting damage.

Shift Threshold: *Default: 0.3, Range: 0 to 1.*
Decrease for more block-shifted areas on each frame.

Shift Blink Freq: *Default: 10, Range: 0.1 or greater.*
Controls how fast this type of damage blinks on and off.

Shift Always: *Default: 0.3, Range: 0 to 1.*
Controls how often this type of damage occurs.

Brights Noise: *Check-box, Default: on.*
Enable noise that appears in the bright areas of the image.

Brights Threshold: *Default: 0.6, Range: 0 to 1.*
Areas brighter than this will be subject to brights-noise.

Brights Band Threshold: *Default: 0.4, Range: 0 to 1.*
This damage type occurs in bands; increase this param to make more damage bands, and thus increase the amount of overall damage.

Brights Band Freq: *Default: 6, Range: 0.1 or greater.*
Controls the average height of the damage bands; decrease for larger bands, increase for shorter, finer bands.

Brights Blink Freq: *Default: 10, Range: 0.1 or greater.*
Controls how fast this type of damage blinks on and off.

Brights Always: *Default: 0.23, Range: 0 to 1.*
Controls how often this type of damage occurs.

Pixelate: *Check-box, Default: on.*
Enable pixelation damage.

Pixelate Frequency: *Default: 40, Range: 1 or greater.*
Controls the size of the blocky pixels. Increase for more, smaller pixels; decrease for fewer, larger pixels.

Pixelate Hold: *Default: 0.95, Range: 0 to 1.*
Controls how the pixelate damage areas move. Increase to make the damage areas stay in one place over more frames; decrease to make it more random.

Pixelate Threshold: *Default: 0.1, Range: 0 to 1.*
Decrease for more overall pixelation per frame; increase for less.

Pixelate Overdrive: *Default: 1.6, Range: 0 or greater.*
Pixelate damage can invert and distort the damaged area; increase this param to make it look more damaged.

Pixelate Blink Freq: *Default: 10, Range: 0.1 or greater.*
Controls how fast this type of damage blinks on and off.

Pixelate Always: *Default: 0.15, Range: 0 to 1.*
Controls how often this type of damage occurs.

Block Noise: *Check-box, Default: on.*
Enable blocky-noise damage; this is commonly seen with bad satellite TV transmission. Bands and blocks of noise overlay and interact with the source footage.

Blocks Intensity: *Default: 1, Range: 0 or greater.*
Increase the intensity of the block damage.

Blocks Threshold: *Default: 0.4, Range: 0 to 1.*

Decrease for more overall damage per frame; increase for less.

Blocks Softness: *Default:* 0.2, *Range:* 0 or greater.

This param softens the damage pattern as it's increased.

Blocks Chroma: *Default:* 0.95, *Range:* 0 to 1.

Increase to overdrive the chroma of the block noise and make it look more damaged.

Blocks Blink Freq: *Default:* 10, *Range:* 0.1 or greater.

Controls how fast this type of damage blinks on and off.

Blocks Always: *Default:* 0.15, *Range:* 0 to 1.

Controls how often this type of damage occurs.

Blocks Affect Alpha: *Default:* 0, *Range:* 0 or greater.

Controls whether the blocky noise affects the alpha channel of the output. Normally you should set this to zero when using on a text layer or a key, so the blocks don't appear all over the image in the final result, but stay within the text.

Invert: *Check-box*, *Default:* on.

Enable image-inverting damage that inverts and recolors bands of the image.

Invert Threshold: *Default:* 0.35, *Range:* 0 to 1.

Decrease for more overall damage per frame; increase for less.

Invert Darken: *Default:* 0.4, *Range:* 0 or greater.

Increase to darken the inverted areas more; makes them stand out more and look more damaged.

Invert Pattern Freq: *Default:* 2, *Range:* 0.1 or greater.

Controls the spatial frequency of the invert damage pattern. Increase to make the inverted area pattern finer; decrease for larger areas of damage.

Invert Blink Freq: *Default:* 10, *Range:* 0.1 or greater.

Controls how fast this type of damage blinks on and off.

Invert Always: *Default:* 0.21, *Range:* 0 to 1.

Controls how often this type of damage occurs.

Flow: *Check-box*, *Default:* on.

Enable image-flow damage, similar to MPEG loss of I frames. Areas of the image sometimes freeze and start moving as a block.

Flow Block Freq: *Default:* 4, *Range:* 0.1 or greater.

Controls the spatial frequency of the flow damage pattern. Increase to make the flow areas smaller; decrease for larger areas of damage.

Flow Damage Amount: *Default:* 1, *Range:* 0 or greater.

Controls the amount of chroma damage in the flowed areas.

Flow Threshold: *Default:* 0.6, *Range:* 0 to 1.

Decrease for more overall damage per frame; increase for less.

Flow Speed: *Default:* 1, *Range:* 0 or greater.

Controls the motion speed of the flowed areas.

Flow Blink Freq: *Default:* 8, *Range:* 0.1 or greater.

Controls how fast this type of damage blinks on and off.

Flow Always: *Default:* 0.2, *Range:* 0 to 1.
Controls how often this type of damage occurs.

Mask Use: *Popup menu, Default: Luma.*
Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.
Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.
Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default:* off.
If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

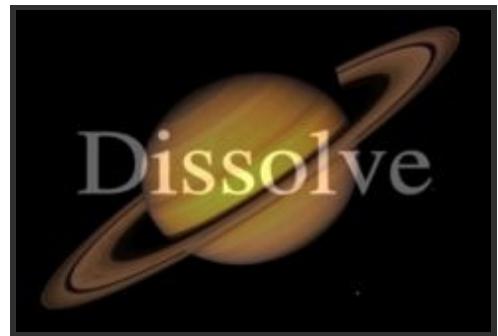
[TVDamage](#)
[FilmDamage](#)
[JpegDamage](#)

[Sapphire](#)
[Plug-ins](#)
[Introduction](#)

S_Dissolve

A basic cross fade between two input clips.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Dissolve Amount: *Default: 0, Range: -0.5 to 1.5.*

The transition ratio between the From and To inputs. A value of 0 gives only the From input and a value of 1 gives only the To input. By default this parameter automatically animates from 0 to 1 to perform a complete transition.

Dissolve Speed: *Default: 1, Range: 1 or greater.*

The speed of the dissolve between the From and To clips. When set to 1, the dissolve takes place over the entire duration of the effect. When set higher, the dissolve is shorter, although the glow ramp-up and ramp-down still takes the entire duration. Setting this to 10 can make the transition snappier and more like a flash-frame cut.

Slow In: *Default: 0.2, Range: 0 to 1.*

If positive, causes the transition to start more gradually.

Slow Out: *Default: 0.2, Range: 0 to 1.*

If positive, causes the transition to end more gradually.

See Also:

[DissolveBlur](#)

[Sapphire Plug-ins](#)

[DissolveBubble](#)

[Introduction](#)

[DissolveDiffuse](#)

[DissolveFilm](#)

[DissolveGlow](#)

[DissolveLuma](#)

[DissolvePuddle](#)

[DissolveSpeckle](#)

[DissolveStatic](#)

[DissolveVortex](#)

[DissolveWaves](#)

S_DissolveAutoPaint

Fade in a 'paint-brushed' version of the starting clip. Decrease the complexity of the painting until it is just a few colors, then transition to a 'paint-brushed' version of the second clip which then grows in color and complexity until the second clip fades in.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Dissolve Amount: *Default: 0, Range: -0.5 to 1.*

The transition ratio between the From and To inputs. A value of 0 gives only the From input and a value of 1 gives only the To input. By default this parameter automatically animates from 0 to 1 to perform a complete transition.

Dissolve Speed: *Default: 3, Range: 1 or greater.*

The speed of the dissolve between the From and To clips. When set to 1, the dissolve takes place over the entire duration of the effect. When set higher, the dissolve is shorter, although the glow ramp-up and ramp-down still takes the entire duration. Setting this to 10 can make the transition snappier and more like a flash-frame cut.

Paint Fade: *Default: 0.25, Range: 0 to 1.*

How much time the transition should take at the ends of the transition to fade the painted look in over the starting clip.

Style: *Popup menu, Default: Van Gogh.*

Selects the style of brush strokes.

Van Gogh: the stroke directions align with the edges found within the image.

Hairy Paint: the strokes are perpendicular to the edges within the image.

Pointalize: the strokes are cellular pointy shapes with no direction.

Min Brush Size: *Default: 0.04, Range: 0.0025 to 1.*

The size of the paint brush in the middle of the transition.

Max Brush Size: *Default: 0.4, Range: 0.0025 to 1.*

The size of the paint brush at the beginning and end of the transition.

Stroke Length: *Default: 2, Range: any.*

Determines the length of the brush strokes along the directions of edges in the source clip. If this is negative you can switch from VanGogh to HairyPaint styles and vice versa.

Stroke Align: *Default: 0.2, Range: 0 or greater.*

Increase to smooth out the directions of the strokes so nearby strokes are more parallel.

Smooth Colors: *Default: 0, Range: 0 or greater.*

Blurs the source by this amount before generating the brush strokes. Increase to cause the colors of nearby strokes to be more consistent.

Seed: *Default: 0, Range: 0 or greater.*

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Jitter Frames: *Integer, Default: 0, Range: 0 or greater.*

If this is 0, the locations of the strokes will remain the same for every frame processed. If it is 1, the locations of the strokes are re-randomized for each frame. If it is 2, they are re-randomized every second frame, and so on.

Sharpen: *Default: 1, Range: -10 or greater.*

The amount of post-process sharpening applied.

Sharpen Width: *Default: 0.2, Range: 0 or greater.*

The width at which to apply the post-process sharpening filter, relative to the stroke sizes. Higher values affect wider areas from the edges, lower values only affect areas near sharp edges.

See Also:

[AutoPaint](#)

[Sketch](#)

[Etching](#)

[HalfTone](#)

[HalfToneColor](#)

[Mosaic](#)

[Sapphire](#)

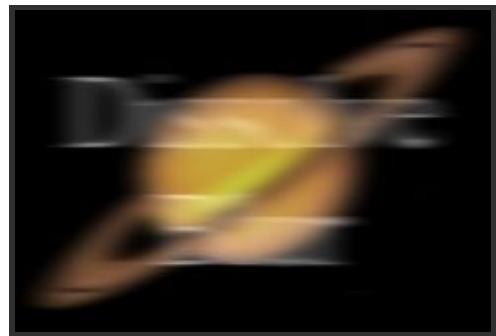
[Plug-ins](#)

[Introduction](#)

S_DissolveBlur

Transitions between two input clips while blurring each. The first clip is blurred and faded out while the second clip is unblurred and faded in. The Dissolve Amount parameter should be animated to control the transition speed.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Dissolve Amount: *Default: 0, Range: -0.5 to 1.5.*

The transition ratio between the From and To inputs. A value of 0 gives only the From input and a value of 1 gives only the To input. By default this parameter automatically animates from 0 to 1 to perform a complete transition.

Blur Amount: *Default: 2, Range: 0 or greater.*

Scales the width of the blur.

Blur Rel: *X & Y, Default: [1 0], Range: 0 or greater.*

The relative horizontal and vertical blur widths. Set Blur Rel X to 0 for a vertical-only blur, or set Blur Rel Y to 0 for a horizontal-only blur.

Blur Rel From: *Default: 1, Range: 0 or greater.*

Scales the amount of blur applied to the first clip. Set to 0 to fade out with no blur.

Blur Rel To: *Default: 1, Range: 0 or greater.*

Scales the amount of blur applied to the second clip. Set to 0 to fade in with no blur.

Blur Filter: *Popup menu, Default: Gauss.*

The type of convolution filter to blur with.

Box: uses a rectangular shaped filter.

Triangle: smoother, uses a pyramid shaped filter.

Gauss: smoothest, uses a gaussian shaped filter.

See Also:

[DissolveBubble](#)
[DissolveDiffuse](#)

[Blur](#)
[Sapphire Plug-ins](#)

[DissolveFilm](#)
[DissolveGlow](#)
[DissolveLuma](#)
[DissolvePuddle](#)
[DissolveSpeckle](#)
[DissolveStatic](#)
[DissolveVortex](#)
[DissolveWaves](#)

[Introduction](#)

S_DissolveBubble

Transitions between two input clips using a bubble warping function. The first clip is warped away and faded out while the second clip is unwarped into place and faded in. The Dissolve Amount parameter should be animated to control the transition speed.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Dissolve Amount: *Default: 0, Range: -0.5 to 1.5.*

The transition ratio between the From and To inputs. A value of 0 gives only the From input and a value of 1 gives only the To input. By default this parameter automatically animates from 0 to 1 to perform a complete transition.

Frequency: *Default: 8, Range: 0.01 or greater.*

The frequency of the bubble warping pattern. Increase for smaller bubbles, decrease for larger.

Frequency Rel Y: *Default: 1, Range: 0.01 or greater.*

The relative vertical frequency of the bubbles. Decrease for taller bubbles, increase for wider ones.

Octaves: *Integer, Default: 1, Range: 1 to 10.*

The number of summed layers of noise. Each octave is twice the frequency and half the amplitude of the previous. A single octave gives a smooth texture. Adding octaves makes the result approach a fractal (1/f) noise texture.

Seed: *Default: 0.23, Range: 0 or greater.*

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Amplitude: *Default: 1, Range: any.*

Scales the amount of warping distortion.

Rel Amp2: *Default: -1, Range: any.*

The relative amplitude of the second input clip warping distortion. If this is positive instead of negative, the clip will be unwarped from the opposite direction.

Slow In: *Default: 0.5, Range: 0 to 1.*

If positive, causes the transition to start more gradually.

Slow Out: *Default: 0.5, Range: 0 to 1.*

If positive, causes the transition to end more gradually.

Wrap: *X & Y*, *Popup menu*, *Default:* [Reflect Reflect].

Determines the method for accessing outside the borders of the source images.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Filter: *Check-box*, *Default:* on.

The type of convolution filter to blur with.

Crop Input Parameters: *Default:* 0, *Range:* 0 or greater.

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

See Also:

[DissolveBlur](#)

[WarpBubble](#)

[Sapphire](#)

[DissolveDiffuse](#)

[WipeBubble](#)

[Plug-ins](#)

[DissolveFilm](#)

[Introduction](#)

[DissolveGlow](#)

[DissolveLuma](#)

[DissolvePuddle](#)

[DissolveSpeckle](#)

[DissolveStatic](#)

[DissolveVortex](#)

[DissolveWaves](#)

S_DissolveDefocus

Transitions between two input clips while defocusing each. The first clip is defocused and faded out while the second clip is brought into focus and faded in. The Dissolve Amount parameter should be animated to control the transition speed.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Dissolve Amount: *Default: 0, Range: -0.5 to 1.5.*

The transition ratio between the From and To inputs. A value of 0 gives only the From input and a value of 1 gives only the To input. By default this parameter automatically animates from 0 to 1 to perform a complete transition.

Defocus Width: *Default: 0.8, Range: 0 or greater.*

The width of the defocus.

Defocus Rel From: *Default: 1, Range: 0 or greater.*

Scales the amount of defocus applied to the first clip. Set to 0 to fade out with no defocus.

Defocus Rel To: *Default: 1, Range: 0 or greater.*

Scales the amount of defocus applied to the second clip. Set to 0 to fade in with no defocus.

Rel Height: *Default: 1, Range: 0.01 or greater.*

The relative height of the iris shape. If it is not 1, circles become ellipses, etc.

Shape: *Popup menu, Default: Circle.*

Determines the shape of the simulated camera iris.

Circle: round.

3 sides: triangle.

4 sides: square.

5 sides: pentagon.

6 sides: hexagon.

7 sides: etc.

Show Shape: *Check-box, Default: off.*

Show the iris shape instead of the defocused image.

Roundness: *Default:* 0, *Range:* any.

Modifies the shape of the simulated camera iris. A value of 1 produces a circle; 0 gives a flat-sided polygon with a number of sides given by the Shape parameter. Less than 0 causes the sides to squeeze inward giving a star shape, while a value greater than 1 causes the corners to squeeze inward, giving a flowery shape. Has no effect if the Shape is set to Circle.

Rotate: *Default:* 0, *Range:* any.

Rotates the iris shape.

Bokeh: *Default:* 0, *Range:* any.

Softens the outer edge of the iris shape, which gives a softer look to the defocused highlights. A negative value darkens the center of the iris shape, producing a ring-like defocus shape.

Lens Noise: *Default:* 0, *Range:* 0 or greater.

Increase to add noise to the iris shape, dirtying up the defocus a little. Can make the result more realistic. Turn up past 1 for a more stylistic result.

Noise Freq: *Default:* 40, *Range:* 0.01 or greater.

The spatial frequency of the noise.

Noise Freq Rel X: *Default:* 1, *Range:* 0.01 or greater.

The relative horizontal frequency of the added iris noise. Increase to stretch it vertically or decrease to stretch it horizontally.

Noise Seed: *Default:* 0.123, *Range:* 0 or greater.

The seed value for the added noise. To make the noise appear different on each frame, animate this to be different on each frame. The actual value doesn't matter; only that it's different.

Use Gamma: *Default:* 1, *Range:* 0.1 or greater.

Values above 1 cause highlights in the source clip to keep their brightness after the defocus is applied.

Boost Highlights: *Default:* 0, *Range:* 0 or greater.

The amount to increase the luma of the highlights in the source clip. Increase this parameter to blow out the highlights without affecting the darks or mid-tones.

Hilight Threshold: *Default:* 0.9, *Range:* 0 or greater.

The minimum luma value for highlights. Pixels brighter than this will be brightened according to the Boost Highlights parameter.

Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the result.

Edge Mode: *Popup menu, Default: Reflect.*

Determines the behavior when accessing areas outside the source image.

Transparent: Areas outside the source image are treated as transparent, which can produce transparency around the edges of the image. Select this for fastest rendering.

Repeat: Repeats the last pixel outside the border of the image.

Reflect: Reflects the image outside the border.

Show Defocus Width: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Defocus Width parameter.

See Also:

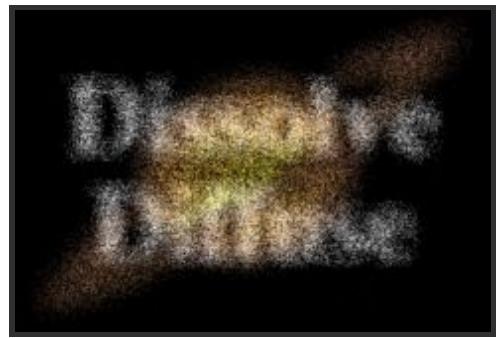
[DissolveBlur](#)
[DissolveBubble](#)
[DissolveDiffuse](#)
[DissolveFilm](#)
[DissolveGlow](#)
[DissolveLuma](#)
[DissolvePuddle](#)
[DissolveSpeckle](#)
[DissolveStatic](#)
[DissolveVortex](#)
[DissolveWaves](#)

[RackDefocus](#)
[DefocusPrism](#)
[Convolve](#)

[Sapphire](#)
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S_DissolveDiffuse

Transitions between two input clips by scrambling the pixels of the inputs within an area determined by Max Amount. The first clip is diffused away while the second clip is diffused into place. The Dissolve Amount parameter should be animated to control the transition speed. The pixelated look of this effect depends on the image resolution, so it is recommended to test your final resolution before processing.



In the Sapphire Transitions effects submenu.

Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Dissolve Amount: *Default: 0, Range: -0.5 to 1.5.*

Scales the magnitudes of the diffusion distances.

Max Amount: *Default: 0.2, Range: 0 or greater.*

Scales the magnitudes of the diffusion distances.

Rel Amount: *X & Y, Default: [1 1], Range: 0 or greater.*

Scales the relative horizontal and vertical amounts of diffusion.

Wrap: *X & Y, Popup menu, Default: [Reflect Reflect].*

Determines the method for accessing outside the borders of the source images.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Crop Input Parameters: *Default: 0, Range: 0 or greater.*

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

Show Max Amount: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Max Amount parameter.

See Also:

[DissolveBlur](#)
[DissolveBubble](#)
[DissolveFilm](#)
[DissolveGlow](#)
[DissolveLuma](#)
[DissolvePuddle](#)
[DissolveSpeckle](#)
[DissolveStatic](#)
[DissolveVortex](#)
[DissolveWaves](#)

[Diffuse](#)
[WipeDiffuse](#)

[Sapphire](#)
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S_DissolveDigitalDamage

Transitions between two input clips using a dissolve while applying DigitalDamage to the dissolved clips. The Dissolve Amount parameter should be animated to control the transition speed.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Dissolve Amount: *Default: 0, Range: -0.5 to 1.5.*

The transition ratio between the From and To inputs. A value of 0 gives only the From input and a value of 1 gives only the To input. By default this parameter automatically animates from 0 to 1 to perform a complete transition.

Dissolve Speed: *Default: 1, Range: 1 or greater.*

The speed of the dissolve between the From and To clips. When set to 1, the dissolve takes place over the entire duration of the effect. When set higher, the dissolve is shorter, although the digital damage ramp-up and ramp-down still takes the entire duration. Setting this to 10 can make the transition snappier and more like a flash-frame cut.

Slow In: *Default: 0.2, Range: 0 to 1.*

If positive, causes the transition to start more gradually.

Slow Out: *Default: 0.2, Range: 0 to 1.*

If positive, causes the transition to end more gradually.

Intensity: *Default: 1, Range: 0 or greater.*

Overall spatial intensity of the damage. Turn up to get more damage on each frame.

Time Intensity: *Default: 1, Range: 0 or greater.*

Temporal intensity. Normally, not all damage types are applied to each frame. Turning this up will damage more frames with each damage type.

Damage Size: *Default: 1, Range: 0.001 or greater.*

Turn up to increase the average size of the damage areas.

Damage Size Rel X: *Default: 1, Range: 0.001 or greater.*

Turn up to elongate the damage areas horizontally. This doesn't stretch the image, just changes the aspect ratio of the damage areas and noise patterns.

Seed: *Default:* 1.23, *Range:* 0 or greater.

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Freeze: *Check-box*, *Default:* on.

Enable freeze-frame damage.

Freeze Threshold: *Default:* 0.09, *Range:* 0 to 1.

Decrease for more frozen areas on each frame.

Freeze Saturation: *Default:* 2.5, *Range:* 0 or greater.

Boost the saturation of frozen areas, for a more damaged look.

Freeze Quality: *Default:* 0.1, *Range:* 0 or greater.

Reduce to give the frozen areas a JPEG-quantized look.

Freeze Errs: *Default:* 0.05, *Range:* 0 or greater.

Adds JPEG quantization errors to the frozen areas.

Freeze Frames: *Integer*, *Default:* 10, *Range:* 0 to 20.

Freeze every N frames. This doesn't freeze the whole image, but when there is freeze-damage present, it uses every Nth frame. Turn this up for a more extreme look. Turn it to 1 to get no freezing.

Freeze Blink Freq: *Default:* 15, *Range:* 0.1 or greater.

Controls how fast this type of damage blinks on and off.

Freeze Always: *Default:* 0.3, *Range:* 0 to 1.

Controls how often this type of damage occurs.

Shift: *Check-box*, *Default:* on.

Enable block-shifting damage.

Shift Amount: *Default:* 0.1, *Range:* 0 or greater.

Controls the intensity or amount of the block-shifting damage.

Shift Threshold: *Default:* 0.3, *Range:* 0 to 1.

Decrease for more block-shifted areas on each frame.

Shift Blink Freq: *Default:* 10, *Range:* 0.1 or greater.

Controls how fast this type of damage blinks on and off.

Shift Always: *Default:* 0.3, *Range:* 0 to 1.

Controls how often this type of damage occurs.

Brights Noise: *Check-box*, *Default:* on.

Enable noise that appears in the bright areas of the image.

Brights Threshold: *Default:* 0.6, *Range:* 0 to 1.

Areas brighter than this will be subject to brights-noise.

Brights Band Threshold: *Default:* 0.4, *Range:* 0 to 1.

This damage type occurs in bands; increase this param to make more damage bands, and thus increase the amount of overall damage.

Brights Band Freq: *Default:* 6, *Range:* 0.1 or greater.

Controls the average height of the damage bands; decrease for larger bands, increase for shorter, finer bands.

Brights Blink Freq: *Default:* 10, *Range:* 0.1 or greater.

Controls how fast this type of damage blinks on and off.

Brights Always: *Default:* 0.23, *Range:* 0 to 1.

Controls how often this type of damage occurs.

Pixelate: *Check-box*, *Default:* on.

Enable pixelation damage.

Pixelate Frequency: *Default:* 40, *Range:* 1 or greater.

Controls the size of the blocky pixels. Increase for more, smaller pixels; decrease for fewer, larger pixels.

Pixelate Hold: *Default:* 0.95, *Range:* 0 to 1.

Controls how the pixelate damage areas move. Increase to make the damage areas stay in one place over more frames; decrease to make it more random.

Pixelate Threshold: *Default:* 0.1, *Range:* 0 to 1.

Decrease for more overall pixelation per frame; increase for less.

Pixelate Overdrive: *Default:* 1.6, *Range:* 0 or greater.

Pixelate damage can invert and distort the damaged area; increase this param to make it look more damaged.

Pixelate Blink Freq: *Default:* 10, *Range:* 0.1 or greater.

Controls how fast this type of damage blinks on and off.

Pixelate Always: *Default:* 0.15, *Range:* 0 to 1.

Controls how often this type of damage occurs.

Block Noise: *Check-box*, *Default:* on.

Enable blocky-noise damage; this is commonly seen with bad satellite TV transmission. Bands and blocks of noise overlay and interact with the source footage.

Blocks Intensity: *Default:* 1, *Range:* 0 or greater.

Increase the intensity of the block damage.

Blocks Threshold: *Default:* 0.4, *Range:* 0 to 1.

Decrease for more overall damage per frame; increase for less.

Blocks Softness: *Default:* 0.2, *Range:* 0 or greater.

This param softens the damage pattern as it's increased.

Blocks Chroma: *Default:* 0.95, *Range:* 0 to 1.

Increase to overdrive the chroma of the block noise and make it look more damaged.

Blocks Blink Freq: *Default:* 10, *Range:* 0.1 or greater.

Controls how fast this type of damage blinks on and off.

Blocks Always: *Default:* 0.15, *Range:* 0 to 1.

Controls how often this type of damage occurs.

Blocks Affect Alpha: *Default:* 0, *Range:* 0 or greater.

Controls whether the blocky noise affects the alpha channel of the output. Normally you should set this to zero when using on a text layer or a key, so the blocks don't appear all over the image in the final result, but stay within the text.

Invert: *Check-box*, *Default:* on.

Enable image-inverting damage that inverts and recolors bands of the image.

Invert Threshold: *Default:* 0.35, *Range:* 0 to 1.

Decrease for more overall damage per frame; increase for less.

Invert Darken: *Default:* 0.4, *Range:* 0 or greater.

Increase to darken the inverted areas more; makes them stand out more and look more damaged.

Invert Pattern Freq: *Default:* 2, *Range:* 0.1 or greater.

Controls the spatial frequency of the invert damage pattern. Increase to make the inverted area pattern finer; decrease for larger areas of damage.

Invert Blink Freq: *Default:* 10, *Range:* 0.1 or greater.

Controls how fast this type of damage blinks on and off.

Invert Always: *Default:* 0.21, *Range:* 0 to 1.

Controls how often this type of damage occurs.

Flow: *Check-box*, *Default:* on.

Enable image-flow damage, similar to MPEG loss of I frames. Areas of the image sometimes freeze and start moving as a block.

Flow Block Freq: *Default:* 4, *Range:* 0.1 or greater.

Controls the spatial frequency of the flow damage pattern. Increase to make the flow areas smaller; decrease for larger areas of damage.

Flow Damage Amount: *Default:* 1, *Range:* 0 or greater.

Controls the amount of chroma damage in the flowed areas.

Flow Threshold: *Default:* 0.6, *Range:* 0 to 1.

Decrease for more overall damage per frame; increase for less.

Flow Speed: *Default:* 1, *Range:* 0 or greater.

Controls the motion speed of the flowed areas.

Flow Blink Freq: *Default:* 8, *Range:* 0.1 or greater.

Controls how fast this type of damage blinks on and off.

Flow Always: *Default:* 0.2, *Range:* 0 to 1.

Controls how often this type of damage occurs.

See Also:

[TVDamage](#)

[Sapphire](#)

[FilmDamage](#)

[Plug-ins](#)

[JpegDamage](#)

[Introduction](#)

S_DissolveDistort

Transitions between two input clips while distorting each using the gradient of the other. The first clip is warped away and faded out while the second clip is unwarped into place and faded in. The Dissolve Amount parameter should be animated to control the transition speed.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Dissolve Amount: *Default: 0, Range: -0.5 to 1.5.*

The transition ratio between the From and To inputs. A value of 0 gives only the From input and a value of 1 gives only the To input. By default this parameter automatically animates from 0 to 1 to perform a complete transition.

Amplitude: *Default: 1, Range: any.*

Scales the amount of distortion applied to both input clips. This can also be negative to turn expansions into contractions and vice versa.

Rel Amp From: *Default: 1, Range: any.*

Scales the relative distortion amplitude of the From clip.

Rel Amp To: *Default: -1, Range: any.*

Scales the relative distortion amplitude of the To clip.

Smoothness: *Default: 0.25, Range: 0 or greater.*

Smooths the distortions by this amount. Increase for large scale distortion, decrease for finer detailed distortion.

Rotate Warp Dir: *Default: 0, Range: any.*

Rotates the direction of the distortion. This can cause areas of similar brightness to be twisted instead of just expanded or shrunk.

Slow In: *Default: 0.2, Range: 0 to 1.*

If positive, causes the transition to start more gradually.

Slow Out: *Default: 0.2, Range: 0 to 1.*

If positive, causes the transition to end more gradually.

Wrap: *X & Y, Popup menu, Default: [Reflect Reflect].*

Determines the method for accessing outside the borders of the source images.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Filter: *Check-box*, **Default:** on.

If enabled, the image is adaptively filtered when it is resampled. This gives a better quality result when parts of the image are warped smaller.

See Also:

[DissolveBlur](#)

[Distort](#)

[DissolveBubble](#)

[Sapphire Plug-ins](#)

[DissolveDiffuse](#)

[Introduction](#)

[DissolveFilm](#)

[DissolveGlow](#)

[DissolveLuma](#)

[DissolvePuddle](#)

[DissolveSpeckle](#)

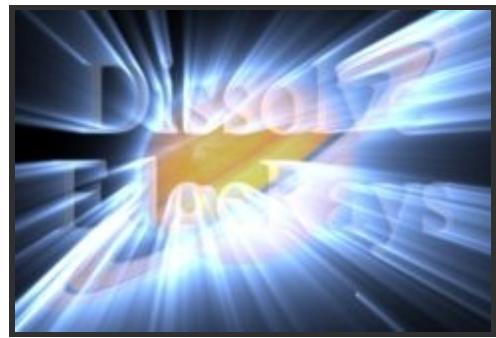
[DissolveStatic](#)

[DissolveVortex](#)

[DissolveWaves](#)

S_DissolveEdgeRays

Transitions between two input clips using animated edge rays. The clips dissolve into each other, and edge rays are added to the result. The edge rays ramp up and down over the duration of the effect. The edge rays animate by moving the origin of the edge rays across the screen along a line. The Dissolve Amount parameter should be animated to control the transition speed.



In the Sapphire Transitions effects submenu.

Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Dissolve Amount: *Default: 0, Range: -0.5 to 1.5.*

The transition ratio between the From and To inputs. A value of 0 gives only the From input and a value of 1 gives only the To input. By default this parameter automatically animates from 0 to 1 to perform a complete transition.

Dissolve Speed: *Default: 3, Range: 1 or greater.*

The speed of the dissolve between the From and To clips. When set to 1, the dissolve takes place over the entire duration of the effect. When set higher, the dissolve is shorter, although the edge rays ramp-up and ramp-down still takes the entire duration. Setting this to 10 can make the transition snappier and more like a flash-frame cut.

Rays Center: *X & Y, Default: [0 0], Range: any.*

The location from which the rays beam outwards at the midpoint of the transition.

Rays Center Speed: *Default: 0.2, Range: 0 to 2.*

The speed at which the rays center moves across the screen.

Rays Center Angle: *Default: 0, Range: any.*

The angle at which the rays center moves across the screen.

Rays Length: *Default: 0.75, Range: 2 or less.*

The maximum length of the rays at the midpoint of the transition.

Length Red: *Default: 1, Range: 0 or greater.*

The relative length of the red channel of the rays. Adjust this, along with Length Green and Length Blue, to create color fringing effects.

Length Green: *Default: 1, Range: 0 or greater.*

The relative length of the green channel of the rays.

Length Blue: *Default:* 1, *Range:* 0 or greater.
The relative length of the blue channel of the rays.

Reverse Rays: *Default:* 0, *Range:* 0 or greater.
Extend rays inward as well as outward. The length of the reversed rays is controlled by Rays Length as well as this parameter.

Rays Shrink: *Default:* 0, *Range:* 0 to 1.
The fraction by which the length of the rays is reduced at the beginning and end of the transition.

Rays Brightness: *Default:* 8, *Range:* 0 or greater.
The maximum brightness of the rays at the midpoint of the transition.

Rays Fade: *Default:* 1, *Range:* 0 to 1.
The fraction by which the rays brightness is reduced at the beginning and end of the transition.

Rays Color: *Default* *rgb:* [1 1 1].
Scales the color of the ray beams.

Enable Dark Rays: *Check-box*, *Default:* off.
Allow rays to darken the source as well as brighten it. If enabled, a dark Rays Color will cause rays to darken the source. A bright Rays Color will brighten the source as usual.

Bias Outer Bright: *Default:* 0, *Range:* 0 to 1.
Determines the variable amount of brightness along the rays. This is normally near 0 so the rays fade away at their outer ends, 0.5 causes equal brightness along the rays, and 1.0 causes maximum brightness at the ends.

Rays Res: *Popup menu*, *Default:* *Full*.
Selects the resolution factor for the rays. Higher resolutions give sharper rays, lower resolutions give smoother rays and faster processing. This 'Res' factor only affects the rays: the background is still combined with the rays at full resolution.

Full: Full resolution is used.
Half: The rays are calculated at half resolution.
Quarter: The rays are calculated at quarter resolution.

Show: *Popup menu*, *Default:* *Result*.
Selects between output options.

Result: outputs the rays over the Background.
Edges: outputs only the edge image. This can be useful during the adjustment of the edge or shimmer parameters.

Edge Thickness: *Default:* 0.022, *Range:* 0 or greater.
The thickness of the edges which generate the rays.

Edge Brightness: *Default:* 1, *Range:* 0 or greater.
Scales the brightness of the edges which generate the rays.

Edge Subpixel: *Check-box*, *Default:* on.
Enables subpixel Edge Thickness amounts. Turn this on if you are animating Edge Thickness or if you want finer control of small values.

Shimmer Amp: *Default:* 0.5, *Range:* 0 or greater.
Modulates the ray source image with this amount of noise texture to give the rays a shimmering look.

Shimmer Freq: *Default:* 40, *Range:* 0.01 or greater.
The frequency of the shimmer texture. Increase for a finer grained shimmer effect, decrease for larger, softer

shimmer. This has no effect unless Shimmer Amp is positive.

Shimmer Seed: *Default:* 0.123, *Range:* 0 or greater.

Used to initialize the random number generator for the shimmer texture. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Shimmer Shift: *X & Y*, *Default:* [0 0], *Range:* any.

Translation of the shimmer texture. This has no effect unless Shimmer Amp is positive.

Shimmer Speed: *X & Y*, *Default:* [0 0], *Range:* any.

Translation speed of the shimmer texture. If non-zero, the shimmering is automatically animated to shift at this rate.

Atmosphere Amp: *Default:* 0, *Range:* 0 or greater.

Atmosphere gives the effect of rays shining through a dusty atmosphere and picking up light or getting shadowed. This parameter adjusts the amount, or amplitude, of the atmospheric effect. Zero gives smooth rays, higher values give more dusty look.

Atmosphere Freq: *Default:* 1, *Range:* 0.1 to 20.

Controls the spatial frequency of the atmospheric noise. Turn this up higher to get finer details, turn down for broader overall variation.

Atmosphere Detail: *Default:* 0.6, *Range:* 0 to 1.

Controls the amount of fine detail in the atmosphere simulation. Decrease to get smoother atmosphere, increase for a more crunchy or grainy look.

Atmosphere Speed: *Default:* 1, *Range:* any.

The cloudy noise in the atmosphere evolves over time like real dust clouds; this parameter controls how fast the cloud pattern changes over time. Set to zero for a static pattern.

Affect Alpha: *Default:* 0, *Range:* 0 or greater.

If this value is positive the output Alpha channel will include some opacity from the rays. The maximum of the red, green, and blue ray brightness is scaled by this value and combined with the background Alpha at each pixel.

Rays From Alpha: *Default:* 0, *Range:* 0 to 1.

Set to 1 to generate rays from the edges of the source's alpha channel instead of its RGB channels. This will typically reduce the rays generated from internal edges. Values between 0 and 1 interpolate between using the RGB and the Alpha.

Source Opacity: *Default:* 1, *Range:* 0 to 1.

Scales the opacity of the Source input when combined with the rays. This does not affect the generation of the rays themselves.

Show Rays Center: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Rays Center parameter.

Show Rays Center Angle: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Rays Center parameter.

See Also:

[DissolveBlur](#)

[DissolveBubble](#)

[DissolveDiffuse](#)

[DissolveFilm](#)

[DissolveGlow](#)

[DissolveLuma](#)

[EdgeRays](#)

[Sapphire Plug-ins](#)

[Introduction](#)

[DissolvePuddle](#)

[DissolveSpeckle](#)

[DissolveStatic](#)

[DissolveVortex](#)

[DissolveWaves](#)

S_DissolveFilm

Transitions between two input clips using a film dissolve with selectable gamma. Film dissolve preserves the highlights in the clips longer compared to a regular dissolve. The Dissolve Amount parameter should be animated to control the transition speed.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Dissolve Amount: *Default: 0, Range: -0.5 to 1.5.*

The transition ratio between the From and To inputs. A value of 0 gives only the From input and a value of 1 gives only the To input. By default this parameter automatically animates from 0 to 1 to perform a complete transition.

Gamma: *Default: 2, Range: 0.1 or greater.*

The film gamma to use for the dissolve. Higher values preserve more highlights.

See Also:

[DissolveBlur](#)

[DissolveBubble](#)

[DissolveDiffuse](#)

[DissolveGlow](#)

[DissolveLuma](#)

[DissolvePuddle](#)

[DissolveSpeckle](#)

[DissolveStatic](#)

[DissolveVortex](#)

[DissolveWaves](#)

[Sapphire Plug-ins](#)

[Introduction](#)

S_DissolveFlashbulbs

Simulates lots of flashbulbs going off while dissolving between two clips. With many small flashes, can look like a stadium scene. With a few large flashes, works well on a celebrity red carpet clip.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Dissolve Amount: *Default: 0, Range: -0.5 to 1.*

The transition ratio between the From and To inputs. A value of 0 gives only the From input and a value of 1 gives only the To input. By default this parameter automatically animates from 0 to 1 to perform a complete transition.

Dissolve Speed: *Default: 3, Range: 1 or greater.*

The speed of the dissolve between the From and To clips. When set to 1, the dissolve takes place over the entire duration of the effect. When set higher, the dissolve is shorter, although the flashbulb ramp-up and ramp-down still takes the entire duration. Setting this to 10 can make the transition snappier and more like a quick cut.

Flash Style: *Default: 0, Range: 0 or greater.*

Style of flashbulb to use. Several styles are available, or you can try some of the glares for a different look.

Max Flashes: *Default: 20, Range: 0 or greater.*

Maximum number of flashes per frame, in the middle of the dissolve.

Flash Randomness: *Default: 0.2, Range: 0 to 1.*

Increase to get more flashes on some frames (up to the values of Flashes) and fewer on others.

Flash Size: *Default: 0.4, Range: 0 or greater.*

Average size of flashes.

Flash Rel Height: *Default: 1, Range: 0 or greater.*

Use to squash or stretch flashes.

Brightness: *Default: 3, Range: 0 or greater.*

Overall brightness of the flashes.

Vary Brightness: *Default: 0.2, Range: 0 to 1.*

Increase to vary the brightness of each flashbulb in each frame.

Flash Gamma: *Default:* 1, *Range:* 0.1 or greater.

Brightens or darkens the midtones of the flashes. Can give a round, hard-edged look, or make the flashes more soft and subtle.

Hold Frames: *Integer*, *Default:* 1, *Range:* 0 or greater.

Each flash trails off slightly in time, to simulate persistence of vision as well as the effect of the filament cooling off in old-time flashbulbs. Hold Frames controls how long that trail lasts.

Flash Decay Rate: *Default:* 0.1, *Range:* 0 to 1.

How quickly the flashes decay over the Hold Frames time. Increase to make them stay on screen brighter, for longer; decrease to make them disappear quickly. Note that you may have to increase Hold Frames to see long-lived flash trails.

Combine: *Popup menu*, *Default:* Add.

Determines how the flash image is combined with the background.

Screen: blends the flashes with the background, which can help prevent overly bright results.

Add: causes the flash image to be added to the background.

Seed: *Default:* 0.1, *Range:* 0 or greater.

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Affect Alpha: *Default:* 0, *Range:* 0 or greater.

If this value is positive the output Alpha channel will include some opacity from the flashes. The maximum of the red, green, and blue flash brightness is scaled by this value and combined with the background Alpha at each pixel.

Show Flash Size: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Flash Size parameter.

See Also:

[Flashbulbs](#)

[Sapphire](#)

[Plug-ins](#)

[Introduction](#)

S_DissolveGlare

Transitions between two input clips using animated glares. The clips dissolve into each other, and glares are added to the result. The glare size and brightness ramps up and down over the duration of the effect.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Dissolve Amount: *Default: 0, Range: -0.5 to 1.5.*

The transition ratio between the From and To inputs. A value of 0 gives only the From input and a value of 1 gives only the To input. By default this parameter automatically animates from 0 to 1 to perform a complete transition.

Dissolve Speed: *Default: 3, Range: 1 or greater.*

The speed of the dissolve between the From and To clips. When set to 1, the dissolve takes place over the entire duration of the effect. When set higher, the dissolve is shorter, although the edge rays ramp-up and ramp-down still takes the entire duration. Setting this to 10 can make the transition snappier and more like a flash-frame cut.

Size: *Default: 2.4, Range: 0 or greater.*

Scales the size of the glares.

Rel Height: *Default: 1, Range: 0 or greater.*

Scales the vertical dimension of the glares, making them elliptical instead of circular.

Style: *Default: 0, Range: 0 or greater.*

The style of glare to apply. Custom glare types can also be made, or existing types modified, by editing the "s_glares.text" file.

Convolve: *Check-box, Default: off.*

Determines the method for applying the glares to the Background.

Threshold: *Default: 0.5, Range: 0 or greater.*

Dissolves are generated from locations in the source clip that are brighter than this value. A value of 0.9 causes dissolves at only the brightest spots. A value of 0 causes dissolves for every non-black area.

Threshold Add Color: *Default rgb: [0 0 0].*

This can be used to raise the threshold on a specific color and thereby reduce the dissolves generated on areas of the source clip containing that color.

Threshold Blur: *Default:* 0, *Range:* 0 or greater.

Increase to smooth out the areas creating dissolves. This can be used to eliminate dissolves generated from small speckles or to simply soften the dissolves. Increasing this may put more highlights below the threshold and darken the resulting dissolves, but you can decrease the Threshold parameter to compensate.

Brightness: *Default:* 3, *Range:* 0 or greater.

Scales the brightness of all the dissolves.

Scale Colors: *Default* *rgb:* [1 1 1].

Scales the color of the dissolves. The colors and brightnesses of the dissolves are also affected by the Source and Mask inputs.

Saturation: *Default:* 1, *Range:* -2 to 8.

Scales the color saturation of the glare elements. Increase for more intense colors. Set to 0 for monochrome glares.

Rotate: *Default:* 0, *Range:* any.

Rotates the ray elements of the glares, if any, in degrees.

Rays Num Scale: *Default:* 1, *Range:* 0 or greater.

Increases or decreases the number of rays.

Rays Length: *Default:* 1, *Range:* 0 or greater.

Adjusts the length of the rays without changing their thickness.

Rays Thickness: *Default:* 1, *Range:* 0 or greater.

Adjusts the thickness of the individual rays.

Blur Glare: *Default:* 0, *Range:* 0 or greater.

The glare is blurred by this amount before being combined with the background.

Hue Shift: *Default:* 0, *Range:* any.

Shifts the hue of the glare, in revolutions from red to green to blue to red.

Glare Res: *Popup menu*, *Default:* Full.

Selects the resolution factor for the glares. Higher resolutions give sharper glares, lower resolutions give smoother glares and faster processing. This 'Res' factor only affects the glares: the background is still combined with the glares at full resolution.

Full: Full resolution is used.

Half: The glares are calculated at half resolution.

Quarter: The glares are calculated at quarter resolution.

Affect Alpha: *Default:* 0, *Range:* 0 or greater.

If this value is positive the output Alpha channel will include some opacity from the dissolves. The maximum of the red, green, and blue dissolve brightness is scaled by this value and combined with the background Alpha at each pixel.

Glare From Alpha: *Default:* 0, *Range:* 0 to 1.

Set to 1 to generate dissolves from the alpha channel of the source input instead of the RGB channels. In this case the dissolves will not pick up color from the source and will typically be brighter. Values between 0 and 1 interpolate between using the RGB and the Alpha.

Expand Borders: *Check-box*, *Default:* off.

If enabled, transparent borders are added to the input image before processing. This allows the result to include soft edges beyond the original image size. When off, the effect only occurs within the frame and the result will retain an edge at the borders.

Show Size: *Check-box*, *Default:* on.

Turns on or off the screen user interface widget for adjusting the Size and Rel Height parameters.

See Also:

[DissolveBlur](#)

[DissolveBubble](#)

[DissolveDiffuse](#)

[DissolveFilm](#)

[DissolveGlow](#)

[DissolveLuma](#)

[DissolvePuddle](#)

[DissolveSpeckle](#)

[DissolveStatic](#)

[DissolveVortex](#)

[DissolveWaves](#)

[Glare](#)

[Sapphire Plug-ins](#)

[Introduction](#)

S_DissolveGlint

Transitions between two input clips using a bright glowing glint. The clips dissolve into each other, while each one gets a glint which ramps up and down over the duration of the effect. The Dissolve Amount parameter should be animated to control the transition speed.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Dissolve Amount: *Default: 0, Range: -0.5 to 1.5.*

The transition ratio between the From and To inputs. A value of 0 gives only the From input and a value of 1 gives only the To input. By default this parameter automatically animates from 0 to 1 to perform a complete transition.

Dissolve Speed: *Default: 3, Range: 1 or greater.*

The speed of the dissolve between the From and To clips. When set to 1, the dissolve takes place over the entire duration of the effect. When set higher, the dissolve is shorter, although the glint ramp-up and ramp-down still takes the entire duration. Setting this to 10 can make the transition snappier and more like a flash-frame cut.

Glint Brightness: *Default: 1.5, Range: 0 or greater.*

The maximum brightness of the glint in the middle of the transition.

Glint Threshold: *Default: 0.7, Range: 0 or greater.*

Glints are generated from locations in the From and To clips there are brighter than this value. A value of 0.9 causes glints at only the brightest spots. A value of 0 causes glints for every non-black area.

Glint Threshold Blur: *Default: 0.0896, Range: 0 or greater.*

Increase to smooth out the areas creating glints. This can be used to eliminate glints generated from small speckles or to simply soften the glints. Increasing this may put more highlights below the threshold and darken the resulting glints, but you can decrease the Threshold parameter to compensate.

Glint Scale Colors: *Default rgb: [1 1 1].*

Scales the color of the glints. The colors and brightnesses of the glints are also affected by the From and To inputs.

Brightness X: *Default: 1, Range: 0 or greater.*

Scales the brightness of the horizontal glint rays.

Brightness Y: *Default: 1, Range: 0 or greater.*

Scales the brightness of the vertical glint rays.

Brightness Diag1: *Default: 1, Range: 0 or greater.*
Scales the brightness of the diagonal rays from top right to bottom left.

Brightness Diag2: *Default: 1, Range: 0 or greater.*
Scales the brightness of the diagonal rays from top left to bottom right.

Glint Size: *Default: 2, Range: 0 or greater.*
The maximum size of the glint at the middle of the transition.

Glint Shrink: *Default: 0.8, Range: 0 to 1.*
The fraction by which the glint size is reduced at the beginning and end of the transition.

Size X: *Default: 1, Range: 0 or greater.*
Scales the length of the horizontal glint rays.

Size Y: *Default: 1, Range: 0 or greater.*
Scales the length of the vertical glint rays.

Size Diag1: *Default: 0.75, Range: 0 or greater.*
Scales the length of the diagonal rays from top right to bottom left.

Size Diag2: *Default: 0.75, Range: 0 or greater.*
Scales the length of the diagonal rays from top left to bottom right.

Size Red: *Default: 0.5, Range: 0 or greater.*
Scales the length of the red component of the rays. If the red, green, and blue sizes are equal the glints will be uniform in color and will match the color of the source clip. If they are not equal, the glint colors can vary along the lengths of the rays.

Size Green: *Default: 1, Range: 0 or greater.*
Scales the length of the green component of the rays.

Size Blue: *Default: 1.5, Range: 0 or greater.*
Scales the length of the blue component of the rays.

Rel From Parameters:

Rel From Brightness: *Default: 1, Range: 0 or greater.*
Relative brightness of the glint on the outgoing (From) clip.

Rel From Size: *Default: 1, Range: 0 or greater.*
Relative size of the glint on the outgoing (From) clip.

From Offset Threshold: *Default: 0, Range: any.*
Extra threshold to apply to the glint on the outgoing (From) clip.

Rel From Color: *Default rgb: [1 1 1].*
Relative color of the glint on the outgoing (From) clip.

Rel To Parameters:

Rel To Brightness: *Default: 1, Range: 0 or greater.*
Relative brightness of the glint on the incoming (To) clip.

Rel To Size: *Default: 1, Range: 0 or greater.*
Relative size of the glint on the incoming (To) clip.

To Offset Threshold: *Default: 0, Range: any.*

Extra threshold to apply to the glint on the incoming (To) clip.

Rel To Color: *Default rgb: [1 1 1].*

Relative color of the glint on the incoming (To) clip.

Affect Alpha: *Default: 0, Range: 0 or greater.*

If this value is positive the output Alpha channel will include some opacity from the dissolves. The maximum of the red, green, and blue dissolve brightness is scaled by this value and combined with the background Alpha at each pixel.

Expand Borders: *Check-box, Default: off.*

If enabled, transparent borders are added to the input image before processing. This allows the result to include soft edges beyond the original image size. When off, the effect only occurs within the frame and the result will retain an edge at the borders.

Show Glint Size: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Glint Size parameter.

See Also:

[Glint](#)

[Sapphire](#)

[GlintRainbow](#)

[Plug-ins](#)

[DissolveGlintRainbow](#)

[Introduction](#)

S_DissolveGlintRainbow

Transitions between two input clips using a bright glowing glint. The clips dissolve into each other, while each one gets a glint which ramps up and down over the duration of the effect. The Dissolve Amount parameter should be animated to control the transition speed.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Dissolve Amount: *Default: 0, Range: -0.5 to 1.5.*

The transition ratio between the From and To inputs. A value of 0 gives only the From input and a value of 1 gives only the To input. By default this parameter automatically animates from 0 to 1 to perform a complete transition.

Dissolve Speed: *Default: 3, Range: 1 or greater.*

The speed of the dissolve between the From and To clips. When set to 1, the dissolve takes place over the entire duration of the effect. When set higher, the dissolve is shorter, although the glint ramp-up and ramp-down still takes the entire duration. Setting this to 10 can make the transition snappier and more like a flash-frame cut.

Glint Brightness: *Default: 1.5, Range: 0 or greater.*

The maximum brightness of the glint in the middle of the transition.

Glint Threshold: *Default: 0.7, Range: 0 or greater.*

Glints are generated from locations in the From and To clips there are brighter than this value. A value of 0.9 causes glints at only the brightest spots. A value of 0 causes glints for every non-black area.

Glint Threshold Blur: *Default: 0.0896, Range: 0 or greater.*

Increase to smooth out the areas creating glints. This can be used to eliminate glints generated from small speckles or to simply soften the glints. Increasing this may put more highlights below the threshold and darken the resulting glints, but you can decrease the Threshold parameter to compensate.

Glint Scale Colors: *Default rgb: [1 1 1].*

Scales the color of the glints. The colors and brightnesses of the glints are also affected by the From and To inputs.

Brightness X: *Default: 1, Range: 0 or greater.*

Scales the brightness of the horizontal glint rays.

Brightness Y: *Default: 1, Range: 0 or greater.*

Scales the brightness of the vertical glint rays.

Brightness Diag1: *Default: 1, Range: 0 or greater.*
Scales the brightness of the diagonal rays from top right to bottom left.

Brightness Diag2: *Default: 1, Range: 0 or greater.*
Scales the brightness of the diagonal rays from top left to bottom right.

Glint Size: *Default: 2, Range: 0 or greater.*
The maximum size of the glint at the middle of the transition.

Glint Shrink: *Default: 0.8, Range: 0 to 1.*
The fraction by which the glint size is reduced at the beginning and end of the transition.

Size X: *Default: 1, Range: 0 or greater.*
Scales the length of the horizontal glint rays.

Size Y: *Default: 1, Range: 0 or greater.*
Scales the length of the vertical glint rays.

Size Diag1: *Default: 0.75, Range: 0 or greater.*
Scales the length of the diagonal rays from top right to bottom left.

Size Diag2: *Default: 0.75, Range: 0 or greater.*
Scales the length of the diagonal rays from top left to bottom right.

Shift Out: *Default: 1, Range: any.*
Shifts the glint rays outwards from their source highlights by this amount relative to the glint size.

Shift Red: *Default: 0.3, Range: any.*
Shifts the red component of the glints in or out relative to the blue. The green is centered between blue and red for a complete spectrum.

Shift Blue: *Default: -0.3, Range: any.*
Shifts the blue component of the glints in or out relative to the red and green. This can be used with Shift Red to adjust the range of hues in the glints.

Rel From Parameters:

Rel From Brightness: *Default: 1, Range: 0 or greater.*
Relative brightness of the glint on the outgoing (From) clip.

Rel From Size: *Default: 1, Range: 0 or greater.*
Relative size of the glint on the outgoing (From) clip.

From Offset Threshold: *Default: 0, Range: any.*
Extra threshold to apply to the glint on the outgoing (From) clip.

Rel From Color: *Default rgb: [1 1 1].*
Relative color of the glint on the outgoing (From) clip.

Rel To Parameters:

Rel To Brightness: *Default: 1, Range: 0 or greater.*
Relative brightness of the glint on the incoming (To) clip.

Rel To Size: *Default: 1, Range: 0 or greater.*
Relative size of the glint on the incoming (To) clip.

To Offset Threshold: *Default: 0, Range: any.*

Extra threshold to apply to the glint on the incoming (To) clip.

Rel To Color: *Default rgb: [1 1 1].*

Relative color of the glint on the incoming (To) clip.

Affect Alpha: *Default: 0, Range: 0 or greater.*

If this value is positive the output Alpha channel will include some opacity from the dissolves. The maximum of the red, green, and blue dissolve brightness is scaled by this value and combined with the background Alpha at each pixel.

Expand Borders: *Check-box, Default: off.*

If enabled, transparent borders are added to the input image before processing. This allows the result to include soft edges beyond the original image size. When off, the effect only occurs within the frame and the result will retain an edge at the borders.

Show Glint Size: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Glint Size parameter.

See Also:

[DissolveGlint](#)

[Glint](#)

[GlintRainbow](#)

[Sapphire](#)

[Plug-ins](#)

[Introduction](#)

S_DissolveGlow

Transitions between two input clips using a bright glowing flash. The clips dissolve into each other, while each one gets a glow which ramps up and down over the duration of the effect. The Dissolve Amount parameter should be animated to control the transition speed.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Dissolve Amount: *Default: 0, Range: -0.5 to 1.5.*

The transition ratio between the From and To inputs. A value of 0 gives only the From input and a value of 1 gives only the To input. By default this parameter automatically animates from 0 to 1 to perform a complete transition.

Dissolve Speed: *Default: 3, Range: 1 or greater.*

The speed of the dissolve between the From and To clips. When set to 1, the dissolve takes place over the entire duration of the effect. When set higher, the dissolve is shorter, although the glow ramp-up and ramp-down still takes the entire duration. Setting this to 10 can make the transition snappier and more like a flash-frame cut.

Glow Brightness: *Default: 6, Range: 0 or greater.*

Overall maximum brightness of the glow.

Glow Threshold: *Default: 0.2, Range: 0 or greater.*

Parts of the source clip that are brighter than this value get glowed. A value of 0.9 makes only the brightest spots glow. A value of 0 makes every non-black area glow.

Glow Color: *Default rgb: [1 1 1].*

Overall color of the glow.

Glow Width: *Default: 0.4, Range: 0 or greater.*

The width of the glow. This and all the width parameters can be adjusted with the Width widget. Note that a zero glow width still enhances the bright areas; set the glow brightness parameter to zero if you want to pass the sources through unchanged.

Width X: *Default: 1, Range: 0 or greater.*

Scales the horizontal glow width. Set to 0 for vertical only.

Width Y: *Default: 1, Range: 0 or greater.*

Scales the vertical glow width. Set to 0 for horizontal only.

Width Red: *Default:* 1, *Range:* 0 or greater.

Scales the red glow width. If the red, green, and blue widths are equal, the glows will match the color of the source clip. If they are not equal, the glows will vary in color with distance.

Width Green: *Default:* 1.2, *Range:* 0 or greater.

Scales the green glow width.

Width Blue: *Default:* 1.4, *Range:* 0 or greater.

Scales the blue glow width.

Rel From Brightness: *Default:* 1, *Range:* 0 or greater.

Relative brightness of the glow on the outgoing (From) clip.

Rel From Width: *Default:* 1, *Range:* 0 or greater.

Relative width of the glow on the outgoing (From) clip.

From Offset Threshold: *Default:* 0, *Range:* any.

Extra threshold to apply to the glow on the outgoing (From) clip.

Rel From Color: *Default* *rgb:* [1 1 1].

Relative color of the glow on the outgoing (From) clip.

Rel To Brightness: *Default:* 1, *Range:* 0 or greater.

Relative brightness of the glow on the incoming (To) clip.

Rel To Width: *Default:* 1, *Range:* 0 or greater.

Relative brightness of the glow on the incoming (To) clip.

To Offset Threshold: *Default:* 0, *Range:* any.

Extra threshold to apply to the glow on the incoming (To) clip.

Rel To Color: *Default* *rgb:* [1 1 1].

Relative color of the glow on the incoming (To) clip.

Show Glow Width: *Check-box, Default:* on.

Turns on or off the screen user interface for adjusting the Glow Width parameter.

See Also:

[DissolveBlur](#)

[Sapphire Plug-ins](#)

[DissolveBubble](#)

[Introduction](#)

[DissolveDiffuse](#)

[DissolveFilm](#)

[DissolveLuma](#)

[DissolvePuddle](#)

[DissolveSpeckle](#)

[DissolveStatic](#)

[DissolveVortex](#)

[DissolveWaves](#)

S_DissolveLensFlare

Transitions between two input clips using an animated lens flare. The clips dissolve into each other, while a lens flare moves along a straight line. The lens flare grows and shrinks over the duration of the effect. The Dissolve Amount parameter should be animated to control the transition speed.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Dissolve Amount: *Default: 0, Range: -0.5 to 1.5.*

The transition ratio between the From and To inputs. A value of 0 gives only the From input and a value of 1 gives only the To input. By default this parameter automatically animates from 0 to 1 to perform a complete transition.

Dissolve Speed: *Default: 3, Range: 1 or greater.*

The speed of the dissolve between the From and To clips. When set to 1, the dissolve takes place over the entire duration of the effect. When set higher, the dissolve is shorter, although the lens flare still changes size and brightness over the entire duration. Setting this to 10 can make the transition snappier and more like a flash-frame cut.

Hotspot Center: *X & Y, Default: [0 0], Range: any.*

The location through which the brightest spot of the flare passes at the center of the transition.

Hotspot Speed: *Default: 1, Range: 0 to 2.*

The speed at which the flare sweeps across the screen. Set this to zero to make the lens flare grow and shrink in place.

Hotspot Angle: *Default: -25, Range: any.*

The angle at which the flare sweeps across the screen.

Pivot: *X & Y, Default: [0 0], Range: any.*

The elements of the flare will be in a line between the Hotspot and the Pivot locations. The Pivot location is in screen coordinates.

Flare Brightness: *Default: 8, Range: 0 or greater.*

The maximum brightness of the flare at the center of the transition.

Flare Fade: *Default: 1, Range: 0 to 1.*

The fraction by which the brightness is reduced at the beginning and end of the transition.

Flare Width: *Default:* 2.5, *Range:* 0 or greater.
The maximum width of the flare at the center of the transition.

Flare Shrink: *Default:* 0.5, *Range:* 0 to 1.
The fraction by which the flare width is reduced at the beginning and end of the transition.

Rel Heights: *Default:* 1, *Range:* 0 or greater.
Scales the vertical dimension of all the flare elements, making them elliptical instead of circular. This can also be adjusted using the Scale Widths Widget.

Lens: *Default:* 0, *Range:* 0 or greater.
The type of lens flare to apply. Custom lens flare types can also be made, or existing types modified, by editing the "s_lensflares.text" file.

Flare Details Parameters:

Rays Rotate: *Default:* 0, *Range:* any.
Rotates the ray elements of the lens flare, if any, in counter-clockwise degrees.

Color: *Default* *rgb:* [1 1 1].
Scales the color of all flare elements.

Gamma: *Default:* 1, *Range:* 0.1 or greater.
Increasing gamma brightens the flare, and especially boosts the darker elements.

Saturation: *Default:* 1, *Range:* any.
Scales the color saturation of the flare elements. Increase for more intense colors. Set to 0 for a monochrome lens flare.

Hue Shift: *Default:* 0, *Range:* any.
Shifts the hue of the flare, in revolutions from red to green to blue to red.

Hotspot Color: *Default* *rgb:* [1 1 1].
Scales the color of the hotspot elements only.

Hotspot Brightness: *Default:* 1, *Range:* 0 or greater.
Scales the brightness of the hotspot elements only.

Rays Brightness: *Default:* 1, *Range:* 0 or greater.
Scales the brightness of the ray elements only.

Rays Num Scale: *Default:* 1, *Range:* 0 or greater.
Increases or decreases the number of rays.

Rays Length: *Default:* 1, *Range:* 0 or greater.
Adjusts the length of the rays without changing their thickness, or changing the size of the other flare elements.

Rays Thickness: *Default:* 1, *Range:* 0 or greater.
Adjusts the thickness of the individual rays within the flare.

Other Brightness: *Default:* 1, *Range:* 0 or greater.
Scales the brightness of all flare elements that are NOT at the hotspot location.

Other Width: *Default:* 1, *Range:* 0 or greater.
Scales the width of all flare elements that are NOT at the hotspot location.

Other Color: *Default* *rgb:* [1 1 1].
Scales the color of all flare elements that are NOT at the hotspot location.

Blur Flare: *Default: 0, Range: 0 or greater.*

If positive, the flare image is blurred by this amount before being combined with the background.

Other Parameters:

Scale Source: *Default: 1, Range: 0 or greater.*

Scales the brightness of the source clip before combining with the flare. If 0, the result will contain only the flare image over black.

Combine: *Popup menu, Default: Screen.*

Determines how the flare image is combined with the Background.

Screen: performs a blend function which can help prevent overly bright results.

Add: causes the flare image to be added to the background.

Tint Bg Whites: *Check-box, Default: off.*

If this is enabled, the chroma of the flare is added only after the result is clamped to the maximum brightness. This allows the color of the flare image to still be visible even over bright white backgrounds. For the majority of backgrounds there will be no observable difference.

Affect Alpha: *Default: 0, Range: 0 or greater.*

If this value is positive the output Alpha channel will include some opacity from the flare. The maximum of the red, green, and blue flare brightness is scaled by this value and combined with the Background Alpha at each pixel.

Show Flare Width: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Hotspot Center parameter.

Show Hotspot Center: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Hotspot Center parameter.

Show Hotspot Angle: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Hotspot Center parameter.

Show Rays Rotate: *Check-box, Default: off.*

Turns on or off the screen user interface for adjusting the Hotspot Center parameter.

Show Pivot: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Pivot parameter.

See general info for [Motion Blur](#)

See Also:

[DissolveBlur](#)

[DissolveBubble](#)

[DissolveDiffuse](#)

[DissolveFilm](#)

[DissolveGlow](#)

[DissolveLuma](#)

[DissolvePuddle](#)

[DissolveSpeckle](#)

[DissolveStatic](#)

[DissolveVortex](#)

[DissolveWaves](#)

[LensFlare](#)

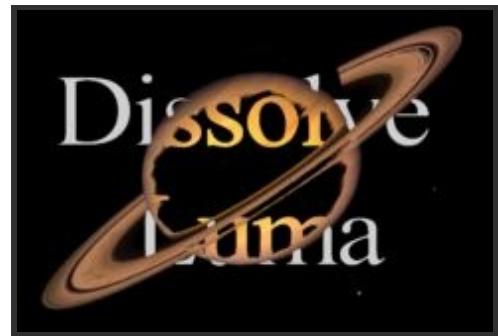
[Sapphire Plug-ins](#)

[Introduction](#)

S_DissolveLuma

Transitions between two input clips using a pattern derived from their luminances. One clip often appears to emerge through the other. The Dissolve Amount parameter should be animated to control the transition speed.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Dissolve Amount: *Default: 0, Range: -0.5 to 1.5.*

The transition ratio between the From and To inputs. A value of 0 gives only the From input and a value of 1 gives only the To input. By default this parameter automatically animates from 0 to 1 to perform a complete transition.

Softness: *Default: 0.1, Range: 0 to 1.*

Increase for softer and slower transitions.

Use Luma Of: *Popup menu, Default: Difference.*

Determines how the transition pattern is generated from the clips' luminance values.

Difference: similar areas transition first, different areas last.

Subtract: areas where the first clip is brighter transition first, and areas where the second clip is brighter transition last.

Mult: areas where both images are bright transition first, and areas where either is dark are last.

Screen: areas where either image is bright transition first, and areas where both are dark transition last.

Foreground: dark areas of the first clip disappear first, bright areas last.

Background: bright areas of the second clip appear first, dark areas last.

Invert Pattern: *Check-box, Default: off.*

If enabled, the transition pattern is reversed in time.

Smooth Pattern: *Default: 0, Range: 0 or greater.*

If positive, a blur is applied to the transition pattern. This can reduce noise and give clearer edges to transition lines.

See Also:

[DissolveBlur](#)
[DissolveBubble](#)

[Sapphire Plug-ins](#)
[Introduction](#)

[DissolveDiffuse](#)

[DissolveFilm](#)

[DissolveGlow](#)

[DissolvePuddle](#)

[DissolveSpeckle](#)

[DissolveStatic](#)

[DissolveVortex](#)

[DissolveWaves](#)

S_DissolvePixelSort

Transitions between two input clips while sorting the dissolve result.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Effect: *Popup menu, Default: DissolvePixelSortLinear.*

Selects between several sort patterns.

DissolvePixelSortLinear:

DissolvePixelSortRadial:

DissolvePixelSortCircular:

Dissolve Amt: *Default: 0, Range: -0.5 to 1.5.*

The transition ratio between the From and To inputs. A value of 0 gives only the From input and a value of 1 gives only the To input. By default this parameter automatically animates from 0 to 1 to perform a complete transition.

Dissolve Speed: *Default: 5, Range: 1 or greater.*

The speed of the dissolve between the From and To clips. When set to 1, the dissolve takes place over the entire duration of the effect. When set higher, the dissolve is shorter, although the pixel sort ramp-up and ramp-down still takes the entire duration. Setting this to 10 can make the transition snappier and more like a flash-frame cut.

Max Percentage: *Default: 1, Range: 0 or greater.*

The threshold at the point in the transition of the maximum or full sort. Set to 1 for maximum sort at the height of the transition.

Sort Angle: *Default: 0, Range: any.*

The angle to sort parallel lines at in Linear mode.

Center: *X & Y, Default: [0 0], Range: any.*

The center in Radial mode.

Start Angle: *Default: 0, Range: any.*

The angle to start sorting in Radial mode.

Degrees Sorted: *Default: 360, Range: 0 to 360.*

How many degrees around the center should be sorted in Radial mode.

Inner Radius: *Default:* 0, *Range:* 0 or greater.
The radius of unsorted pixels around the center in Radial mode.

Ray Length: *Default:* 1, *Range:* 0 or greater.
The length of the sorted pixel chunks in Radial mode.

Vary Radius: *Default:* 0, *Range:* 0 to 1.
How much to vary the starting pixel of the radiating lines in Radial mode.

Start Angle: *Default:* 0, *Range:* any.
The angle to start sorting in Circular mode.

Degrees Sorted: *Default:* 360, *Range:* 0 to 360.
How many degrees around the center should be sorted in Circular mode.

Circle Center: *X & Y*, *Default:* [0 0], *Range:* any.
The center of the concentric circles in Circular mode.

Vary Start: *Default:* 0, *Range:* 0 to 1.
How much to vary the start in Circular mode.

Inner Radius: *Default:* 0, *Range:* 0 or greater.
The minimum circle to sort in Circular mode.

Thickness: *Default:* 1, *Range:* 0 or greater.
The number of concentric circles to sort in Circular mode.

Sort Direction: *Popup menu*, *Default:* sort above threshold.
Controls whether pixels over the threshold or under the threshold will be sorted.

sort below threshold: Sort pixels with a value lower than the threshold.
sort above threshold: Sort pixels with a value higher than the threshold.

Reverse Sort Direction: *Check-box*, *Default:* off.
Determines whether to sort the pixels in an ascending or descending order.

Randomly Restart Sort: *Default:* 100, *Range:* 0 to 1000.
How often to break up the sorted pixel chunks.

Sort Type: *Popup menu*, *Default:* monochrome.
Determines how to analyze the colors of the pixels for sorting.

monochrome: Sort on the monochrome value of the pixels.
average: Sort on the average value of the color channels in the pixels.
minimum: Sort on the smallest channel in the pixels.
maximum: Sort on the largest channel in the pixels.
red: Sort on the red channel in the pixels.
green: Sort on the green channel in the pixels.
blue: Sort on the blue channel in the pixels.
hue: Sort on the hue of the pixels.
saturation: Sort on the saturation of the pixels.
brightness: Sort on the brightness of the pixels.

Seed: *Default:* 0.273, *Range:* 0 or greater.
Initializes the random number generator for the sort restarts.

Soften Threshold Mask: *Default:* 0.1, *Range:* 0 or greater.
Blur the mask generated by thresholding the image.

Mix With Dissolve: *Default: 0, Range: 0 to 1.*

Softens the look of the pixel sort by interpolating the raw dissolve with the pixel sorted result.

Show: *Popup menu, Default: Result.*

Selects the output option.

Result: Shows the result of the pixel sort.

Raw Sort Values: Shows the values the pixel sort will use for sorting.

Threshold Mask: Shows the mask of pixels to sort based on the threshold parameter.

Random Restart Noise: Shows the pixels that will cause the sort lines to restart.

Combined Mask: Shows the threshold mask combined with the input mask.

See Also:

[JpegDamage](#)

[Sapphire](#)

[TVDamage](#)

[Plug-ins](#)

[FilmDamage](#)

[Introduction](#)

S_DissolvePuddle

Transitions between two input clips while warping by a circular pattern of waves. The first clip is warped away and faded out while the second clip is unwarped into place and faded in. The Dissolve Amount parameter should be animated to control the transition speed.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Dissolve Amount: *Default: 0, Range: -0.5 to 1.5.*

The transition ratio between the From and To inputs. A value of 0 gives only the From input and a value of 1 gives only the To input. By default this parameter automatically animates from 0 to 1 to perform a complete transition.

Center: X & Y, *Default: [0 0], Range: any.*

The location of the puddle center in screen coordinates relative to the center of the frame. This parameter can be set by enabling and moving the Center Widget. Note that moving the puddle center can also cause the puddle size to change so that the current value of Wipe Amt remains correct.

Frequency: *Default: 5, Range: 0.01 or greater.*

The frequency of the puddle pattern. Increase for more and smaller elements, or decrease for fewer and larger.

Rel Height: *Default: 0.75, Range: 0.01 or greater.*

The relative height of the concentric wave pattern.

Amplitude: *Default: 0.2, Range: any.*

Scales the amount of warping distortion.

Rel Amp2: *Default: -1, Range: any.*

The relative amplitude of the second input clip warping distortion. If this is positive instead of negative, the clip will be unwarped from the opposite direction.

Rotate Puddle: *Default: 0, Range: any.*

Rotates the puddle pattern by this many counter-clockwise degrees after the Rel Height stretching has been applied. This has no effect when Rel Height is 1.

Phase Start: *Default: 0, Range: any.*

The phase shift of the waves.

Phase Speed: *Default:* 1, *Range:* any.

The speed of the waves. If this is positive the waves automatically travel outwards from the center at this rate.

Inner Radius: *Default:* 0, *Range:* any.

The distance from the puddle center where the wave distortion is phased in. No waves are generated inside this radius.

Inner Softness: *Default:* 0.1, *Range:* 0.0056 or greater.

The width of the region at the Inner Radius over which the wave distortion is phased in.

Outer Radius: *Default:* 1.4, *Range:* 0 or greater.

The distance from the puddle center where the wave distortion is phased out. No waves are generated outside this radius.

Outer Softness: *Default:* 0.42, *Range:* 0.0056 or greater.

The width of the region at the Outer Radius over which the wave distortion is phased out.

Slow In: *Default:* 0.2, *Range:* 0 to 1.

If positive, causes the transition to start more gradually.

Slow Out: *Default:* 0.2, *Range:* 0 to 1.

If positive, causes the transition to end more gradually.

Wrap: *X & Y, Popup menu, Default:* [Reflect Reflect].

Determines the method for accessing outside the borders of the source images.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Filter: *Check-box, Default:* on.

If enabled, the image is adaptively filtered when it is resampled. This gives a better quality result when parts of the image are warped smaller.

Crop Input Parameters: *Default:* 0, *Range:* 0 or greater.

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

Show Outer Radius: *Check-box, Default:* on.

Turns on or off the screen user interface for adjusting the Center parameter.

Show Inner Radius: *Check-box, Default:* on.

Turns on or off the screen interface parameter for adjusting the Inner Radius. The value of the Inner Radius parameter must first be positive for this widget to be visible.

Show Center: *Check-box, Default:* on.

Turns on or off the screen user interface for adjusting the Center parameter.

Show Rotate Puddle: *Check-box, Default:* on.

Turns on or off the screen user interface for adjusting the Center parameter.

Show Frequency: *Check-box, Default:* on.

Turns on or off the screen user interface for adjusting the Center parameter.

See Also:

[DissolveBlur](#)
[DissolveBubble](#)
[DissolveDiffuse](#)
[DissolveFilm](#)
[DissolveGlow](#)
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S_DissolveRays

Transitions between two input clips using animated rays. The clips dissolve into each other, and rays are added to the result. The rays ramp up and down over the duration of the effect. The rays animate by moving the origin of the rays across the screen along a line. The Dissolve Amount parameter should be animated to control the transition speed.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Effect: *Popup menu, Default: Light Rays.*

Selects between light and dark rays.

Light Rays: Generates beams of light emitting from the bright areas of the source.

Dark Rays: Generates beams of darkness emitting from the dark areas of the source.

Dissolve Amount: *Default: 0, Range: -0.5 to 1.5.*

The transition ratio between the From and To inputs. A value of 0 gives only the From input and a value of 1 gives only the To input. By default this parameter automatically animates from 0 to 1 to perform a complete transition.

Dissolve Speed: *Default: 3, Range: 1 or greater.*

The speed of the dissolve between the From and To clips. When set to 1, the dissolve takes place over the entire duration of the effect. When set higher, the dissolve is shorter, although the edge rays ramp-up and ramp-down still takes the entire duration. Setting this to 10 can make the transition snappier and more like a flash-frame cut.

Rays Center: *X & Y, Default: [0 0], Range: any.*

The location from which the rays beam outwards at the midpoint of the transition.

Rays Center Speed: *Default: 0.2, Range: 0 to 2.*

The speed at which the rays center moves across the screen.

Rays Center Angle: *Default: 0, Range: any.*

The angle at which the rays center moves across the screen.

Rays Length: *Default: 0.75, Range: 2 or less.*

The maximum length of the rays at the midpoint of the transition.

Length Red: *Default: 1, Range: 0 or greater.*

The relative length of the red channel of the rays. Adjust this, along with Length Green and Length Blue, to create

color fringing effects.

Length Green: *Default:* 1, *Range:* 0 or greater.
The relative length of the green channel of the rays.

Length Blue: *Default:* 1, *Range:* 0 or greater.
The relative length of the blue channel of the rays.

Reverse Rays: *Default:* 0, *Range:* 0 or greater.
Extend rays inward as well as outward. The length of the reversed rays is controlled by Rays Length as well as this parameter.

Rays Shrink: *Default:* 0, *Range:* 0 to 1.
The fraction by which the length of the rays is reduced at the beginning and end of the transition.

Rays Brightness: *Default:* 8, *Range:* 0 or greater.
The maximum brightness of the rays at the midpoint of the transition.

Rays Darkness: *Default:* 8, *Range:* 0 or greater.
Scales the intensity of the dark ray beams.

Rays Fade: *Default:* 1, *Range:* 0 to 1.
The fraction by which the rays brightness is reduced at the beginning and end of the transition.

Rays Color: *Default* *rgb:* [1 1 1].
Scales the color of the ray beams.

Rays Color Dark: *Default* *rgb:* [0 0 0].
Scales the color of the dark ray beams.

Bias Outer Bright: *Default:* 0, *Range:* 0 to 1.
Determines the variable amount of brightness along the rays. This is normally near 0 so the rays fade away at their outer ends, 0.5 causes equal brightness along the rays, and 1.0 causes maximum brightness at the ends.

Rays Res: *Popup menu, Default: Full.*
Selects the resolution factor for the rays. Higher resolutions give sharper rays, lower resolutions give smoother rays and faster processing. This 'Res' factor only affects the rays: the background is still combined with the rays at full resolution.

Full: Full resolution is used.
Half: The rays are calculated at half resolution.
Quarter: The rays are calculated at quarter resolution.

Threshold: *Default:* 0.5, *Range:* 0 or greater.
Dissolve are generated from locations in the source clip that are brighter than this value. A value of 0.9 causes dissolve at only the brightest spots. A value of 0 causes dissolve for every non-black area.

Threshold Add Color: *Default* *rgb:* [0 0 0].
This can be used to raise the threshold on a specific color and thereby reduce the dissolve generated on areas of the source clip containing that color.

Shimmer Amp: *Default:* 0.5, *Range:* 0 or greater.
Modulates the ray source image with this amount of noise texture to give the rays a shimmering look.

Shimmer Freq: *Default:* 40, *Range:* 0.1 or greater.
The frequency of the shimmer texture. Increase for a finer grained shimmer effect, decrease for larger, softer shimmer. This has no effect unless Shimmer Amp is positive.

Shimmer Seed: *Default:* 0.123, *Range:* 0 or greater.

Used to initialize the random number generator for the shimmer texture. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Shimmer Shift: *X & Y*, *Default:* [0 0], *Range:* any.

Translation of the shimmer texture. This has no effect unless Shimmer Amp is positive.

Shimmer Speed: *X & Y*, *Default:* [0 0], *Range:* any.

Translation speed of the shimmer texture. If non-zero, the shimmering is automatically animated to shift at this rate.

Atmosphere Amp: *Default:* 0, *Range:* 0 or greater.

Atmosphere gives the effect of rays shining through a dusty atmosphere and picking up light or getting shadowed. This parameter adjusts the amount, or amplitude, of the atmospheric effect. Zero gives smooth rays, higher values give more dusty look.

Atmosphere Freq: *Default:* 1, *Range:* 0.1 to 20.

Controls the spatial frequency of the atmospheric noise. Turn this up higher to get finer details, turn down for broader overall variation.

Atmosphere Detail: *Default:* 0.6, *Range:* 0 to 1.

Controls the amount of fine detail in the atmosphere simulation. Decrease to get smoother atmosphere, increase for a more crunchy or grainy look.

Atmosphere Speed: *Default:* 1, *Range:* any.

The cloudy noise in the atmosphere evolves over time like real dust clouds; this parameter controls how fast the cloud pattern changes over time. Set to zero for a static pattern.

Affect Alpha: *Default:* 0, *Range:* 0 or greater.

If this value is positive the output Alpha channel will include some opacity from the rays. The maximum of the red, green, and blue ray brightness is scaled by this value and combined with the background Alpha at each pixel.

Rays From Alpha: *Default:* 0, *Range:* 0 to 1.

Set to 1 to generate rays from the edges of the source's alpha channel instead of its RGB channels. This will typically reduce the rays generated from internal edges. Values between 0 and 1 interpolate between using the RGB and the Alpha.

Source Opacity: *Default:* 1, *Range:* 0 to 1.

Scales the opacity of the Source input when combined with the rays. This does not affect the generation of the rays themselves.

Use Source Chroma: *Default:* 1, *Range:* 0 or greater.

If this is 1, the chroma of the Source input affects the chroma of the resulting rays. If it is 0, only the brightness of the Source input affects the brightness of the rays, and the rendering speed should also be faster. Values between 0 and 1 interpolate between these two options.

Show Rays Center: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Rays Center parameter.

Show Rays Center Angle: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Rays Center parameter.

See Also:

[DissolveBlur](#)

[DissolveBubble](#)

[DissolveDiffuse](#)

[Rays](#)

[Sapphire Plug-ins](#)

[Introduction](#)

[DissolveFilm](#)
[DissolveGlow](#)
[DissolveLuma](#)
[DissolvePuddle](#)
[DissolveSpeckle](#)
[DissolveStatic](#)
[DissolveVortex](#)
[DissolveWaves](#)

S_DissolveShake

Transitions between two clips by applying a shaking motion to them, along with a quick dissolve. The shaking uses translation, zooming, and/or rotation. It is random but repeatable, so with the same parameters the same shaking motion is generated each time. Turn on Motion Blur and adjust the Mo Blur Length for different amounts of blur. Adjust the Amplitude and Frequency for different shaking speeds and amounts. The Rand parameters give detailed control of the random non-periodic shaking, and the Wave parameters adjust the regular periodic shaking. The X, Y, Z, and Tilt parameters control the horizontal, vertical, zoom, and rotation amounts of shaking respectively.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Dissolve Amount: *Default: 0, Range: -0.5 to 1.*

The transition ratio between the From and To inputs. A value of 0 gives only the From input and a value of 1 gives only the To input. By default this parameter automatically animates from 0 to 1 to perform a complete transition.

Dissolve Speed: *Default: 3, Range: 1 or greater.*

The speed of the dissolve between the From and To clips. When set to 1, the dissolve takes place over the entire duration of the effect. When set higher, the dissolve is shorter, although the shaking still takes place over the entire duration.

Amplitude: *Default: 3, Range: 0 or greater.*

Scales the amplitude of the shaking motion.

Frequency: *Default: 10, Range: 0 or greater.*

Increase for faster shaking, decrease for slower shaking. (Be careful if you animate frequency values because the resulting shake frequency is also affected by the rate of change of the value.)

Motion Blur: *Check-box, Default: on.*

Options for motion blur of the shaking motion.

Mo Blur Length: *Default: 0.5, Range: 0 or greater.*

Scales the amount of motion blur. Use around .5 when processing on fields or 1.0 for frames to give realistic motion blur. This parameter has no effect if Motion Blur is *No*.

Seed: *Default:* 0, *Range:* 0 or greater.

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Wrap: *X & Y, Popup menu, Default: [Reflect Reflect].*

Determines the method for accessing outside the borders of the source images.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

X Shake Parameters:

X Rand Amp: *Default:* 0.2, *Range:* 0 or greater.

Amplitude of horizontal random shaking.

X Rand Freq: *Default:* 1, *Range:* 0 or greater.

Frequency of horizontal random shaking.

X Wave Amp: *Default:* 0, *Range:* 0 or greater.

Amplitude of horizontal regular wave shaking.

X Wave Freq: *Default:* 0.5, *Range:* 0 or greater.

Frequency of horizontal regular wave shaking, in cycles per second.

X Phase: *Default:* 0, *Range:* any.

Time shift of the horizontal shaking.

Y Shake Parameters:

Y Rand Amp: *Default:* 0.1, *Range:* 0 or greater.

Amplitude of the vertical random shaking.

Y Rand Freq: *Default:* 1, *Range:* 0 or greater.

Frequency of the vertical random shaking.

Y Wave Amp: *Default:* 0, *Range:* 0 or greater.

Amplitude of the vertical regular wave shaking.

Y Wave Freq: *Default:* 0.5, *Range:* 0 or greater.

Frequency of the vertical regular wave shaking, in cycles per second.

Y Phase: *Default:* 0, *Range:* any.

Time shift of the vertical shaking.

Z Shake Parameters:

Z Rand Amp: *Default:* 0, *Range:* 0 or greater.

Amplitude of the zoom random shaking.

Z Rand Freq: *Default:* 1, *Range:* 0 or greater.

Frequency of the zoom random shaking.

Z Wave Amp: *Default:* 0, *Range:* 0 or greater.

Amplitude of the zoom regular wave shaking.

Z Wave Freq: *Default:* 0.5, *Range:* 0 or greater.

Frequency of the zoom regular wave shaking, in cycles per second.

Z Phase: *Default:* 0, *Range:* any.
Time shift of the zoom shaking.

Tilt Shake Parameters:

Tilt Rand Amp: *Default:* 0, *Range:* 0 or greater.
Amplitude of the rotational random shaking, in degrees.

Tilt Rand Freq: *Default:* 1, *Range:* 0 or greater.
Frequency of the rotational random shaking.

Tilt Wave Amp: *Default:* 0, *Range:* 0 or greater.
Amplitude of the rotational regular wave shaking, in degrees.

Tilt Wave Freq: *Default:* 0.5, *Range:* 0 or greater.
Frequency of the rotational regular wave shaking, in cycles per second.

Tilt Phase: *Default:* 0, *Range:* any.
Time shift of the rotational shaking.

Red Amplitude: *Default:* 1, *Range:* 0 or greater.
The relative amount of shaking in the red channel. Changing this value from the default will cause the red channel to move more or less than the other color channels, resulting in a color fringing or channel separation look.

Green Amplitude: *Default:* 1, *Range:* 0 or greater.
The relative amount of shaking in the green channel.

Blue Amplitude: *Default:* 1, *Range:* 0 or greater.
The relative amount of shaking in the blue channel.

Red Phase: *Default:* 0, *Range:* any.
The relative phase of the red channel. Positive values will move the red channel ahead of the others in time, causing it to move first and the other channels to follow. Negative values have the opposite effect, causing the red channel to lag behind the others. Small values usually produce the best looks.

Green Phase: *Default:* 0, *Range:* any.
The relative phase of the green channel.

Blue Phase: *Default:* 0, *Range:* any.
The relative phase of the blue channel.

RGB Randomness: *Default:* 0, *Range:* 0 or greater.
The amount of random motion in each color channel. Turn up this parameter to cause all three color channels to move randomly on different paths, independent of the overall shaking. This motion is scaled by X Rand Amp, Y Rand Amp, Z Rand Amp, and Tilt Rand Amp.

Channels Parameters:

RGB Frequency: *Default:* 2, *Range:* 0 or greater.
The frequency of the random color channel shaking.

See Also:

[Shake](#)
[WarpTransform](#)
[BlurMotion](#)

[Flicker](#)
[WarpTransform](#)
[BlurMotion](#)

[Sapphire](#)
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BlurMoCurves

S_DissolveSpeckle

Transition between two input clips using a speckled noise pattern. The Dissolve Amount parameter should be animated to control the transition speed.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Dissolve Amount: *Default: 0, Range: -0.5 to 1.5.*

The transition ratio between the From and To inputs. A value of 0 gives only the From input and a value of 1 gives only the To input. By default this parameter automatically animates from 0 to 1 to perform a complete transition.

Frequency: *Default: 40, Range: 0.01 or greater.*

The frequency of the speckle pattern. Increase for smaller speckles, decrease for larger.

Frequency Rel Y: *Default: 1, Range: 0.01 or greater.*

The relative vertical frequency of the speckles pattern. Increase for wider speckles, decrease for taller speckles.

Octaves: *Integer, Default: 1, Range: 1 to 10.*

The number of summed layers of noise. Each octave is twice the frequency and half the amplitude of the previous. A single octave gives a smooth texture. Adding octaves makes the result approach a fractal (1/f) noise texture.

Edge Softness: *Default: 0, Range: 0 or greater.*

The width of the transition edges. Larger values will cause softer, less visible edges in the wipe pattern.

Seed: *Default: 0.23, Range: 0 or greater.*

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

See Also:

[DissolveBlur](#)

[DissolveBubble](#)

[DissolveDiffuse](#)

[DissolveFilm](#)

[DissolveGlow](#)

[DissolveLuma](#)

[Sapphire Plug-ins](#)

[Introduction](#)

[DissolvePuddle](#)

[DissolveStatic](#)

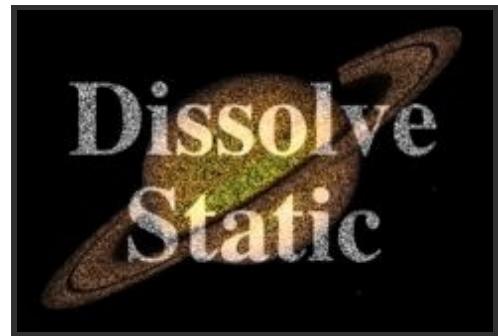
[DissolveVortex](#)

[DissolveWaves](#)

S_DissolveStatic

Transitions between two input clips using random pixel static. The Dissolve Amount parameter should be animated to control the transition speed. The pixelated look of this effect depends on the image resolution, so it is recommended to test your final resolution before processing.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Dissolve Amount: *Default: 0, Range: -0.5 to 1.5.*

The transition ratio between the From and To inputs. A value of 0 gives only the From input and a value of 1 gives only the To input. By default this parameter automatically animates from 0 to 1 to perform a complete transition.

See Also:

[DissolveBlur](#)

[DissolveBubble](#)

[DissolveDiffuse](#)

[DissolveFilm](#)

[DissolveGlow](#)

[DissolveLuma](#)

[DissolvePuddle](#)

[DissolveSpeckle](#)

[DissolveVortex](#)

[DissolveWaves](#)

[GrainStatic](#)

[FilmEffect](#)

[Sapphire](#)

[Plug-ins](#)

[Introduction](#)

S_DissolveTiles

Transitions between two input clips while breaking each up into tiles and scrambling them. The first clip breaks apart and spreads out while the second clip coalesces behind the first. The Dissolve Amount parameter should be animated to control the transition speed.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Dissolve Amount: *Default: 0, Range: -0.5 to 1.5.*

The transition ratio between the From and To inputs. A value of 0 gives only the From input and a value of 1 gives only the To input. By default this parameter automatically animates from 0 to 1 to perform a complete transition.

Scramble Speed: *Default: 2, Range: any.*

The amount each input should be scrambled at the edges of the transition. The incoming clip is scrambled by this amount at the beginning of the transition, and the outgoing clip is scrambled by this amount at the end. Setting this to zero will result in no tiling on either clip.

Scramble Rel: *X & Y, Default: [1 1], Range: 0 or greater.*

The relative amounts of horizontal and vertical scrambling.

Scramble Rel From: *Default: 1, Range: any.*

The relative amount of scrambling in the outgoing clip. Set this to zero if the outgoing clip shouldn't be scrambled at all.

Scramble Rel To: *Default: -1, Range: any.*

The relative amount of scrambling in the incoming clip. Set this to zero if the incoming clip shouldn't be scrambled at all.

Slow In: *Default: 0.2, Range: 0 to 1.*

If positive, causes the transition to start more gradually.

Slow Out: *Default: 0.2, Range: 0 to 1.*

If positive, causes the transition to end more gradually.

Tiles: *Default: 10, Range: 1 or greater.*

How many tiles across the image. Increase for many tiny tiles; decrease for a few large ones.

Tile Rel Width: *Default:* 1, *Range:* 0.01 or greater.
Scales the height of each tile.

Tile Rel Height: *Default:* 1, *Range:* 0.01 or greater.
Scales the width of each tile.

Dissolve Delay: *Default:* 0.6, *Range:* 0 to 1.

The delay before cross-dissolving between the From and To clips. If this is set to 1, the outgoing clip does not fade at all. If set to 0, the outgoing and incoming clips will dissolve smoothly throughout the transition.

Combine: *Popup menu, Default: From Over To.*

By default the outgoing From clip scrambles away, revealing the To clip scrambling in underneath it. Set this to To Over From to have the To clip scramble in on top of the From clip. Adjusting Scramble Rel From and Scramble Rel To along with this can give nice results.

From Over To: Composites the From (outgoing) clip over the To (incoming) clip, which reveals the To clip as the From clip scrambles away. Works well with default settings or with Scramble Rel To set to zero.

To Over From: Composites the To (incoming) clip over the From (outgoing) clip, which scrambles the To clip in over the From clip. Works well with default settings or with Scramble Rel From set to zero.

Rotate Warp Dir: *Default:* 0, *Range:* any.

Rotates the warping direction by this many degrees. Animate to rotate the tiles around for an interesting effect.

Seed: *Default:* 0.5, *Range:* 0 or greater.

Used to initialize the random number generator for tiling the clips. The actual seed value is not significant, but different values will give different results.

See general info for [Motion Blur](#)

See Also:

[DissolveBlur](#)

[DissolveBubble](#)

[DissolveDiffuse](#)

[DissolveFilm](#)

[DissolveGlow](#)

[DissolveLuma](#)

[DissolvePuddle](#)

[DissolveSpeckle](#)

[DissolveStatic](#)

[DissolveVortex](#)

[DissolveWaves](#)

[TileScramble](#)

[Sapphire](#)

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[Introduction](#)

S_DissolveVortex

Transitions between two input clips using a vortex warping function. The first clip is warped away and faded out while the second clip is unwarped into place and faded in. The Dissolve Amount parameter should be animated to control the transition speed.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Dissolve Amount: *Default: 0, Range: -0.5 to 1.5.*

The transition ratio between the From and To inputs. A value of 0 gives only the From input and a value of 1 gives only the To input. By default this parameter automatically animates from 0 to 1 to perform a complete transition.

Center: X & Y, *Default: [0 0], Range: any.*

The location of the vortex center in screen coordinates relative to the center of the frame. This parameter can be set by enabling and moving the Center Widget. Note that moving the vortex center can also cause the vortex size to change so that the current value of Wipe Amt remains correct.

Vortex Amount: *Default: 72, Range: any.*

The amount of vortex rotation, in approximate degrees at the edge of the frame.

Rel Amount2: *Default: -1, Range: any.*

The relative amount of the second clip vortex rotation. If this is positive instead of negative the second clip will be unvortexed from the opposite direction.

Rotate Amount: *Default: 0, Range: any.*

If non-zero, a rotation is also added to the warping. Make negative to rotate the inner and outer regions in different directions.

Inner Radius: *Default: 0.04, Range: 0 or greater.*

The radius from the center at which the vortexing is phased in. This can be used to reduce excessive distortion and aliasing at the very center of the vortex.

Slow In: *Default: 0.5, Range: 0 to 1.*

If positive, causes the transition to start more gradually.

Slow Out: *Default: 0.5, Range: 0 to 1.*

If positive, causes the transition to end more gradually.

Wrap: *X & Y*, *Popup menu*, *Default:* [Reflect Reflect].

Determines the method for accessing outside the borders of the source images.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Filter: *Check-box*, *Default:* on.

If enabled, the image is adaptively filtered when it is resampled. This gives a better quality result when parts of the image are warped smaller.

Crop Input Parameters: *Default:* 0, *Range:* 0 or greater.

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

Show Center: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Center parameter.

See Also:

[DissolveBlur](#)

[DissolveBubble](#)

[DissolveDiffuse](#)

[DissolveFilm](#)

[DissolveGlow](#)

[DissolveLuma](#)

[DissolvePuddle](#)

[DissolveSpeckle](#)

[DissolveStatic](#)

[DissolveWaves](#)

[WarpVortex](#)

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S_DissolveWaves

Transitions between two input clips using a waves warping function. The first clip is warped away and faded out while the second clip is unwarped into place and faded in. The Dissolve Amount parameter should be animated to control the transition speed.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Dissolve Amount: *Default: 0, Range: -0.5 to 1.5.*

The transition ratio between the From and To inputs. A value of 0 gives only the From input and a value of 1 gives only the To input. By default this parameter automatically animates from 0 to 1 to perform a complete transition.

Frequency: *Default: 3, Range: 0.01 or greater.*

The frequency of the waves pattern. Increase for more and smaller elements, or decrease for fewer and larger.

Amplitude: *Default: 0.3, Range: any.*

Scales the amount of warping distortion.

Rel Amp2: *Default: -1, Range: any.*

The relative amplitude of the second input clip warping distortion. If this is positive instead of negative, the clip will be unwarped from the opposite direction.

Angle: *Default: 45, Range: any.*

The rotation of the overall waves pattern used for the wipe, in counter-clockwise degrees.

Displace Angle: *Default: 90, Range: any.*

The warping direction in degrees relative to the angle of the waves. 0 gives compression-expansion waves, and 90 gives side to side waves.

Phase Start: *Default: 0, Range: any.*

The phase shift of the waves. The wave pattern is translated in the direction of Angle by this amount.

Phase Speed: *Default: 0, Range: any.*

The phase speed of the waves. If this is non-zero the wave pattern automatically travels at this rate.

Slow In: *Default: 0.5, Range: 0 to 1.*

If positive, causes the transition to start more gradually.

Slow Out: *Default: 0.5, Range: 0 to 1.*

If positive, causes the transition to end more gradually.

Wrap: *X & Y, Popup menu, Default: [Reflect Reflect].*

Determines the method for accessing outside the borders of the source images.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Filter: *Check-box, Default: on.*

If enabled, the image is adaptively filtered when it is resampled. This gives a better quality result when parts of the image are warped smaller.

Crop Input Parameters: *Default: 0, Range: 0 or greater.*

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

See Also:

[DissolveBlur](#)

[DissolveBubble](#)

[DissolveDiffuse](#)

[DissolveFilm](#)

[DissolveGlow](#)

[DissolveLuma](#)

[DissolvePuddle](#)

[DissolveSpeckle](#)

[DissolveStatic](#)

[DissolveVortex](#)

[WarpWaves](#)

[Sapphire Plug-ins](#)

[Introduction](#)

S_DissolveZap

Transition between two clips using animated lightning bolts. The clips dissolve into each other, while the lightning grows. The Dissolve Amount parameter should be animated to control the transition speed.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Dissolve Amount: *Default: 0, Range: -0.5 to 1.*

The transition ratio between the From and To inputs. A value of 0 gives only the From input and a value of 1 gives only the To input. By default this parameter automatically animates from 0 to 1 to perform a complete transition.

Dissolve Speed: *Default: 5, Range: 1 or greater.*

The speed of the dissolve between the From and To clips. When set to 1, the dissolve takes place over the entire duration of the effect. When set higher, the dissolve is shorter, although the lightning bolts still change size and brightness over the entire duration. Setting this to 10 can make the transition snappier and more like a flash-frame cut.

Max Bolts: *Integer, Default: 35, Range: 1 to 500.*

The maximum number of lightning bolts at the midpoint of the transition.

Start: *X & Y, Default: [0 0], Range: any.*

The starting point of the bolts.

End: *X & Y, Default: [0 0], Range: any.*

The end point of the bolts. This parameter can be adjusted using the End Widget.

Vary Endpoint: *Default: 1.4, Range: 0 or greater.*

Offsets the End location by a random amount within a circle of this radius. If Max Bolts is greater than 1, this can be useful to spread out the different End points.

Bolt Width: *Default: 0.112, Range: 0 or greater.*

The width of the lightning bolts.

Branchiness: *Default: 5, Range: 0 to 20.*

Scales the number of additional bolts that branch from the main bolt. Set this to 0 for basic bolts with no extra branches.

Zap Bright: *Default: 1, Range: 0 or greater.*
Scales the brightness of the lightning bolts.

Zap Color: *Default rgb: [1 1 1].*
The color of the lightning. If you want to keep the lightning bolt itself bright white, you can still affect the perceived color by adjusting the Glow Color instead.

Zap Glow Bright: *Default: 2, Range: 0 or greater.*
Scales the brightness of the glow applied to the lightning.

Zap Glow Color: *Default rgb: [0.5 0.5 1].*
The color of the glow applied to the lightning.

Zap Glow Width: *Default: 0.224, Range: 0 or greater.*
The width of the glow applied to the lightning.

Bg Glow Bright: *Default: 8, Range: 0 or greater.*
Scales the brightness of the background glow at the midpoint of the transition.

Bg Glow Color: *Default rgb: [1 1 1].*
Scales of the color of the background glow at the midpoint of the transition. The colors and brightness of the glow is also affected by the inputs.

Bg Glow Width: *Default: 0.4, Range: 0 or greater.*
Scales the background glow distance at the midpoint of the transition. Note that a zero glow width still enhances bright areas; set the brightness parameter to zero if you want no background glow.

Start Offset: *Default: 0, Range: 0 or greater.*
The offset from the start point to begin drawing the bolts. This can be useful for animating a lightning strike.

Length: *Default: 1, Range: 0 or greater.*
The length of the bolts, beginning at Start Offset. If less than 1, the bolts will not be drawn all the way from start to end. This can be useful for animating a lightning strike.

Rand Seed: *Default: 0, Range: 0 or greater.*
Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different random lightning bolts, and the same value should give a repeatable result.

Show Start: *Check-box, Default: on.*
Turns on or off the screen user interface for adjusting the Start parameter.

Show End: *Check-box, Default: on.*
Turns on or off the screen user interface for adjusting the End parameter.

See general info for [Motion Blur](#)

See Also:

[DissolveGlow](#)
[DissolveEdgeRays](#)
[DissolveLensFlare](#)

[Zap](#)
[Sapphire](#)
[Plug-ins](#)
[Introduction](#)

S_Distort

Warps the source input clip using the gradient of the Lens input clip. This can generate optical glass-like effects as if the source clip were being viewed through an arbitrarily shaped lens. It is best demonstrated when the lens image contains just a few bold shapes or a simple texture.

In the Sapphire Distort effects submenu.



Inputs:

Source: The clip to be processed.

Lens: *Optional.* Distorts the source using the brightness values of this input clip.

Mask: *Optional.* If provided, the amount of lens distortion is scaled by this input, so the Source is unaffected where the Mask is black. This input can be affected using the Blur Mask, Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Amount: *Default: 1, Range: any.*

The severity of the lens distortions. Make negative to invert the direction of the distortions.

Fine: *Check-box, Default: off.*

If enabled, the warping amount is reduced by a factor of 100. This mode is meant to allow subtle expansion or contraction of the source image near the edges of its matte given as the Lens input.

Blur Lens: *Default: 0.4, Range: 0 or greater.*

Smooths out the edges in the lens image by this amount before using it.

Rotate Warp Dir: *Default: 0, Range: any.*

Rotates the warping direction by this many degrees. If non-zero, this can add some unusual twisting effects to the lens distortion.

Amount Rel: *X & Y, Default: [1 1], Range: 0 or greater.*

The relative amounts of horizontal and vertical distortion. This has no effect unless Amount is positive.

Wrap: *X & Y, Popup menu, Default: [Reflect Reflect].*

Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Filter: *Check-box, Default: on.*

If enabled, the image is adaptively filtered when it is resampled. This gives a better quality result when parts of the image are warped smaller.

Blur Mask: *Default: 0, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Crop Input Parameters: *Default: 0, Range: 0 or greater.*

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be

transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

See Also:

[DistortBlur](#)

[DistortChroma](#)

[DistortRGB](#)

[EmbossDistort](#)

[WarpFishEye](#)

[Sapphire](#)

[Plug-ins](#)

[Introduction](#)

S_DistortBlur

Blurs the source input clip in the direction of the gradient of the Lens input clip. It is best demonstrated when the lens image contains just a few simple shapes.

In the Sapphire Distort effects submenu.



Inputs:

Source: The clip to be processed.

Lens: *Optional.* Distorts the source using the brightness values of this input clip.

Mask: *Optional.* If provided, the amount of lens distortion is scaled by this input, so the Source is unaffected where the Mask is black. This input can be affected using the Blur Mask, Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Blur Amount: *Default: 1, Range: 0 or greater.*

The magnitude of the blur distortions.

Warp Amount: *Default: 0, Range: any.*

Adds some additional non-blurred lens distortion if non-zero.

Blur Lens: *Default: 0.4, Range: 0 or greater.*

Smooths out the edges in the lens image by this amount before using it.

Rotate Blur Dir: *Default: 0, Range: any.*

Rotates the blurring direction by this many degrees. If non-zero, this can add some unusual twisting effects to the blurring.

Amount Rel: *X & Y, Default: [1 1], Range: 0 or greater.*

The relative amounts of horizontal and vertical distortion. This has no effect unless Amount is positive.

Wrap: *X & Y, Popup menu, Default: [Reflect Reflect].*

Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Subpixel: *Check-box, Default: on.*

If enabled, uses a better quality but slightly slower method for performing the blur.

Blur Mask: *Default: 0, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Crop Input Parameters: *Default: 0, Range: 0 or greater.*

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

See Also:

[Distort](#)
[DistortChroma](#)
[DistortRGB](#)

[Blur](#)
[BlurMotion](#)

[Sapphire](#)
[Plug-ins](#)
[Introduction](#)

S_DistortChroma

Warps the chrominance of the source input by different amounts using the gradient of the Lens input clip. This can generate optical glass-like effects as if the source clip were being viewed through an arbitrarily shaped or textured prism. It is best demonstrated when the lens image contains just a few simple bold shapes.

In the Sapphire Distort effects submenu.



Inputs:

Source: The clip to be processed.

Lens: *Optional.* Distorts the source using the brightness values of this input clip.

Mask: *Optional.* If provided, the amount of lens distortion is scaled by this input, so the Source is unaffected where the Mask is black. This input can be affected using the Blur Mask, Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Amount: *Default:* 1, *Range:* any.

The severity of the lens distortions. Make negative to invert the direction of the distortions.

Blur Lens: *Default:* 0.4, *Range:* 0 or greater.

Smooths out the edges in the lens image by this amount before using it.

Rotate Warp Dir: *Default:* 0, *Range:* any.

Rotates the warping direction by this many degrees. If non-zero, this can add some unusual twisting effects to the lens distortion.

Warp Red: *Default:* 0.5, *Range:* any.

The magnitude of lens distortion for the red end of the spectrum. Make negative to invert the direction of the red distortions.

Warp Blue: *Default:* 1, *Range:* any.

The magnitude of lens distortion for the blue end of the spectrum. Make negative to invert the direction of the blue distortions.

Steps: *Integer*, *Default:* 8, *Range:* 3 to 100.

The number of color samples along the spectrum to include. More steps give a smoother result, but require more time to process.

Color1: *Default rgb:* [1 0 0].

The color at the 'red' end of the spectrum.

Color2: *Default rgb:* [0 1 0].

The color in the middle of the spectrum.

Color3: *Default rgb:* [0 0 1].

The color at the 'blue' end of the spectrum.

White Balance: *Check-box*, *Default:* off.

When enabled, the three colors are adjusted internally so they sum to white. In this case, the colors of unwarped regions are not affected and the average color of the result remains the same.

Amount Rel: *X & Y*, *Default:* [1 1], *Range:* 0 or greater.

The relative amounts of horizontal and vertical distortion. This has no effect unless Amount is positive.

Wrap: *X & Y*, *Popup menu*, *Default:* [Reflect Reflect].

Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Filter: *Check-box*, *Default:* on.

If enabled, the image is adaptively filtered when it is resampled. This gives a better quality result when parts of the image are warped smaller.

Blur Mask: *Default:* 0, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu*, *Default:* Luma.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Crop Input Parameters: *Default:* 0, *Range:* 0 or greater.

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

See Also:

[Distort](#)

[DistortBlur](#)

[DistortRGB](#)

[EmbossGlass](#)

[WarpChroma](#)

[Sapphire](#)

[Plug-ins](#)

[Introduction](#)

S_DistortRGB

Wraps the red, green, and blue color channels of the source input by different amounts using the gradient of the Lens input clip. It is best demonstrated when the lens image contains just a few simple bold shapes.

In the Sapphire Distort effects submenu.



Inputs:

Source: The clip to be processed.

Lens: *Optional.* Distorts the source using the brightness values of this input clip.

Mask: *Optional.* If provided, the amount of lens distortion is scaled by this input, so the Source is unaffected where the Mask is black. This input can be affected using the Blur Mask, Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Amount: *Default: 1, Range: any.*

Scales the magnitude of the lens distortion for all channels. Make negative to invert the direction of the distortions.

Blur Lens: *Default: 0.4, Range: 0 or greater.*

Smooths out the edges in the lens image by this amount before using it.

Rotate Warp Dir: *Default: 0, Range: any.*

Rotates the warping direction by this many degrees. If non-zero, this can add some unusual twisting effects to the lens distortion.

Warp Red: *Default: 0.5, Range: any.*

Scales the amount of lens distortion for the red channel. Negate to invert the direction.

Warp Green: *Default: 0.75, Range: any.*

Scales the amount of lens distortion for the green channel. Negate to invert the direction.

Warp Blue: *Default: 1, Range: any.*

Scales the amount of lens distortion for the blue channel. Negate to invert the direction.

Amount Rel: *X & Y, Default: [1 1], Range: 0 or greater.*

The relative amounts of horizontal and vertical distortion. This has no effect unless Amount is positive.

Wrap: *X & Y, Popup menu, Default: [Reflect Reflect].*

Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Filter: *Check-box, Default: on.*

If enabled, the image is adaptively filtered when it is resampled. This gives a better quality result when parts of the image are warped smaller.

Blur Mask: *Default: 0, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Crop Input Parameters: *Default:* 0, *Range:* 0 or greater.

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

See Also:

[Distort](#)

[EmbossGlass](#)

[Sapphire](#)

[DistortBlur](#)

[WarpChroma](#)

[Plug-ins](#)

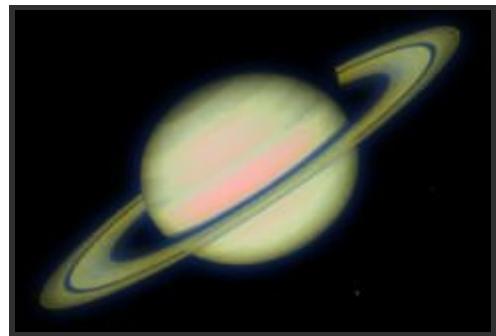
[DistortChroma](#)

[Introduction](#)

S_DogVision

Generates a dual color-channel version of the input image, as might be perceived by the limited color vision system of dogs. Humans have three color receptors (for red, green, and blue) while dogs have only two receptors (for yellow and blue).

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Channels: *Popup menu, Default: Yellow–Blue.*
Selects which two complementary color channels to use.

Yellow–Blue: the result is made using yellow and blue.
Cyan–Red: the result is made using cyan and red.
Magenta–Green: the result is made using magenta and purple.

Rotate Channels: *Default: 0, Range: any.*
Allows hue shifting the two color channels selected above. Note that when this is non-zero, the channels may no longer match the name selected.

Blur Channel1: *Default: 0, Range: 0 or greater.*
Smooths the first color channel by this amount.

Blur Channel2: *Default: 0, Range: 0 or greater.*
Smooths the second color channel by this amount.

Mix Original: *Default: 0, Range: any.*
Interpolates between the 2-color result and the original source. Set this to 1 for the original, or use negative values to exaggerate the dog vision effect.

Brightness: *Default: 1, Range: 0 or greater.*
Scales the brightness of the result.

Offset Dark: *Default: 0, Range: -8 to 2.*
Adds this gray value to the darker regions of the result. This can be negative to increase contrast.

Saturation: *Default: 1, Range: -2 to 8.*
Scales the color saturation. Increase for more intense colors. Set to 0 for monochrome.

Weight Source R: *Default: 1, Range: any.*
Scales the red of the input clip before processing.

Weight Source G: *Default: 1, Range: any.*
Scales the green of the input clip before processing.

Weight Source B: *Default: 1, Range: any.*
Scales the blue of the input clip before processing.

Mask Use: *Popup menu, Default: Luma.*
Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.
Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*
Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[HueSatBright](#)

[Monochrome](#)

[PseudoColor](#)

[DuoTone](#)

[Tint](#)

[Solarize](#)

[Sapphire](#)

[Plug-ins](#)

[Introduction](#)

S_DropShadow

Generates a shadow on the Background clip using the alpha channel of the Foreground or an optional Matte, then composites the Foreground over the Background to give the final result.

In the Sapphire Lighting effects submenu.



Inputs:

Foreground: The clip to use as foreground, and the alpha channel of this clip is used as the matte to generate the shadow.

Background: *Optional.* The shadow is drawn onto this Background clip.

Matte: *Optional.* If this is provided, its alpha channel is used instead of the Foreground to generate the shadow. This input can be affected by the Invert Matte or Matte Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Shadow Color: *Default* *rgb:* [0 0 0].

The color of the shadow.

Shadow Opacity: *Default:* 1, *Range:* 0 or greater.

The opacity of the shadow, use values near 0 for subtle transparent shadows, or values near 1.0 for stronger shadows.

Shadow Blur: *Default:* 0.1, *Range:* 0 or greater.

Determines the softness of the shadow. This parameter can be adjusted using the Shift Widget.

Shift: *X & Y*, *Default:* [0.042 –0.042], *Range:* any.

The horizontal and vertical offset of the shadow. This parameter can be adjusted using the Shift Widget.

Fg Opacity: *Default:* 1, *Range:* 0 to 1.

Scales the opacity of the Foreground without affecting the shadow. Lowering this can be used to fade out the Foreground, or setting it to zero prevents the Foreground from being composited over the result at all.

Expand Borders: *Check-box*, *Default:* on.

If enabled, transparent borders are added to the input image before processing. This allows the result to include soft edges beyond the original image size. When off, the effect only occurs within the frame and the result will retain an edge at the borders.

Comp Premult: *Check-box*, *Default:* on.

Disable this if you have provided a separate Matte input and the Foreground pixel values have not been pre-multiplied by this Matte.

Matte Use: *Popup menu*, *Default:* Alpha.

Determines which Foreground or Matte input channels are used to make the shadow.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Invert Matte: *Check-box*, *Default:* off.

If enabled, the black and white of the Foreground alpha channel are inverted before use.

Show Shift: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Shadow Blur parameter.

See Also:

[Blur](#)

[Sapphire Plug-ins Introduction](#)

S_DuoTone

Performs an interpolation between two specified colors using the brightness of the source clip.

In the Sapphire Adjust effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Color1: *Default rgb: [1 0.9 0.8].*

The color to use at the brighter source regions.

Color0: *Default rgb: [0 0 0.2].*

The color to use at the darker source regions.

Invert: *Check-box, Default: off.*

If enabled, the resulting texture colors are inverted. This is similar to swapping Color0 and Color1.

Threshold: *Default: 0.5, Range: any.*

The source brightness value to use as the mid-point of the color interpolation. This is often a middle gray around 0.5.

Softness: *Default: 1, Range: 0.001 or greater.*

The source brightness distance over which to perform the Color0 to Color1 interpolation. Decrease for sharper transitions between the two colors.

Mix With Source: *Default: 0, Range: 0 to 1.*

Interpolates between the result (0) and the original source (1).

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

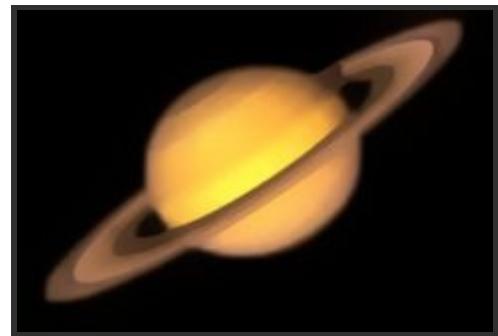
See Also:[HueSatBright](#)[Sapphire](#)[Monochrome](#)[Plug-ins](#)[ClampChroma](#)[Introduction](#)[PseudoColor](#)[TriTone](#)[QuadTone](#)[Tint](#)[Threshold](#)[Hotspots](#)[Gamma](#)[Solarize](#)[ChannelSwitcher](#)[ShowBadColors](#)

Invert

S_EdgeAwareBlur

Blur regions of similar color while preserving edges between regions of different colors.

In the Sapphire Blur+Sharpen effects submenu.



Inputs:

Source: The clip to be processed.

Edge_Source: *Optional.* Image used to compute edge strength. Defaults to the Source, but a different image of the same size can be supplied for artistic effects.

Mask: *Optional.* If provided, the blur is only performed on regions of the source clip specified by the bright areas of this input. Pixels outside this mask are not blurred, and do not contribute to the resulting blurred pixels within it. This input can be affected using the Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* *Union*.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Blur Amount: *Default:* 0.4, *Range:* 0 or greater.

Scales the width of the blur. This parameter can be adjusted using the Blur Amount Widget.

Blur Rel: *X & Y*, *Default:* [1 1], *Range:* 0 or greater.

The relative horizontal and vertical blur widths. Set Blur Rel X to 0 for a vertical-only blur, or set Blur Rel Y to 0 for a horizontal-only blur. This parameter can be adjusted using the Blur Amount Widget.

Edge Threshold: *Default:* 0.1, *Range:* 0 or greater.

Color regions separate by an edge larger than this value will not blur into each other.

Edge Smooth: *Default:* 0, *Range:* 0 or greater.

Blur the Edge Source by this amount before calculating edge strength.

Use Alpha Edges: *Check-box*, *Default:* off.

Include the alpha channel when calculating edge strength.

Blur Type: *Popup menu*, *Default:* *Sharp Edges*.

Determines the style of blur effect.

Sharp Edges: Reinforces strong edges, producing a watercolor- or cartoon-like effect.

Soft Edges: Doesn't emphasize edges, producing a more natural blur effect.

Softer Edges: Blurs pixels near edges a little, producing a soft-focus-like effect.

Filter: *Popup menu*, *Default:* *Gauss*.

The type of convolution filter to blur with.

Box: uses a rectangular shaped filter.

Triangle: smoother, uses a pyramid shaped filter.

Gauss: smoothest, uses a gaussian shaped filter.

Smooth: repeatedly applies gaussian filter to eliminate artifacts from edges.

Subpixel: *Check-box*, *Default:* on.

Enables blurring by subpixel amounts. Use this for smoother animation of the Blur Amount or Blur Rel parameters. Only effects the Sharp Edges blur type.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu*, *Default:* *Luma*.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Show Blur Amount: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the blur amount parameters.

See Also:

[Blur](#)
[EdgeDetect](#)

[RackDefocus](#)
[DefocusPrism](#)
[EdgeBlur](#)
[BandPass](#)
[BlurMotion](#)

[Sapphire](#)
[Plug-ins](#)
[Introduction](#)

S_EdgeBlur

Finds the edges within the Matte clip, and blurs the Source clip at those edges. Use the Show Edges option to view which areas will receive the blur while adjusting the edge parameters. Then adjust Blur Width to control the amount of blur.

In the Sapphire Blur+Sharpen effects submenu.



Inputs:

Source: The clip to be processed.

Matte: *Optional.* The clip used to determine the edge locations where the Source should be blurred. If this input is not connected, the main Source clip is used instead to determine the edges.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Blur Width: *Default:* 0.112, *Range:* 0 or greater.
The width of the blur. This should normally not be much greater than the Edge Width. This parameter can be adjusted using the Blur Width Widget.

Edge Width: *Default:* 0.112, *Range:* 0 or greater.
The width of the edge area to blur within.

Edge Strength: *Default:* 0.5, *Range:* 0 or greater.
The strength of the edges determines the amount of the blurred source that replaces the edges.

Edge Threshold: *Default:* 0, *Range:* 0 or greater.
Determines which edges are blurred. Increase to remove minor edges or speckles.

Show: *Popup menu*, *Default:* *Result*.
Selects between output options.

Result: outputs the Source image with blurred edges.
Edges: outputs only the edge image. This can be useful during the adjustment of the edge parameters.

Subpixel: *Check-box*, *Default:* on.
Enables blurring by subpixel amounts. Use this for smoother animation of the Blur Width or Edge Width parameters.

Matte Use: *Popup menu*, *Default:* *Luma*.
Determines how the Matte input channels are used to make a monochrome matte.

Luma: the luminance of the RGB channels is used.
Alpha: only the Alpha channel is used.

Show Blur Width: *Check-box*, *Default:* on.
Turns on or off the screen user interface for adjusting the Blur Width parameter.

See Also:

Blur	Sapphire Plug-ins
EdgeFlash	Introduction
EdgeDetect	

S_EdgeColorize

Assigns different colors to the edges of the source clip depending on their direction. Increase the Edge Smooth parameter for thicker edges.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Edge Smooth: *Default: 0.0224, Range: 0 or greater.*

Increase for thicker and smoother edges.

Subpixel Smooth: *Check-box, Default: on.*

Enables smoothing the edges by subpixel amounts. Use this for smoother animation of the Edge Smooth parameter.

Brightness: *Default: 1, Range: 0 or greater.*

Scales the edge colors by this amount.

Rotate Colors: *Default: 0, Range: any.*

Causes the Top, Left, Right, and Bottom colors to be rotated to different edge directions, in counter-clockwise degrees.

Background: *Default rgb: [0 0 0].*

The color to use as a background.

Top: *Default rgb: [1 0.85 0.5].*

The color of upwards facing edges.

Right: *Default rgb: [0 0.1 0.5].*

The color of right facing edges.

Bottom: *Default rgb: [0.3 0.3 0.3].*

The color of downwards facing edges.

Left: *Default rgb: [0.5 0 0].*

The color of left facing edges.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:[EdgeDetect](#)[BandPass](#)[Sapphire](#)[EdgesInDirection](#)[Sharpen](#)[Plug-ins](#)[EdgeDetectDouble](#)[Emboss](#)[Introduction](#)

S_EdgeDetect

Finds the edges within the source clip. Increase the Edge Smooth parameter for thicker edges. Select Mono or Chroma mode to show only edges in Luminance or Chroma.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Effect: *Popup menu, Default: RGB Edges.*

Selects between variations of the effect.

RGB Edges: full color edges are found.

Chroma Edges: luminance edges are ignored, and only the edges in the Source's chrominance are found. This option can sometimes be helpful for use with matte extraction.

Mono Edges: finds the luminance edges only and gives a monochrome result.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Edge Smooth: *Default:* 0.0224, *Range:* 0 or greater.

Increase for thicker and smoother edges.

Subpixel Smooth: *Check-box*, *Default:* on.

Enables smoothing the edges by subpixel amounts. Use this for smoother animation of the Edge Smooth parameter.

Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the result.

Saturation: *Default:* 1, *Range:* -2 to 8.

Scales the color saturation of the result. Increase for more intense colors. Set to 0 for monochrome.

Threshold: *Default:* 0, *Range:* 0 or greater.

Subtracts this value from the result. Increase to remove unwanted noise from minor edges.

Weight Red: *Default:* 1, *Range:* 0 or greater.

Scale the edges of the red source channel.

Weight Green: *Default:* 1, *Range:* 0 or greater.

Scale the edges of the green source channel.

Weight Blue: *Default:* 1, *Range:* 0 or greater.

Scale the edges of the blue source channel.

Mask Use: *Popup menu*, *Default:* Luma.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[EdgesInDirection](#)
[EdgeDetectDouble](#)
[EdgeColorize](#)

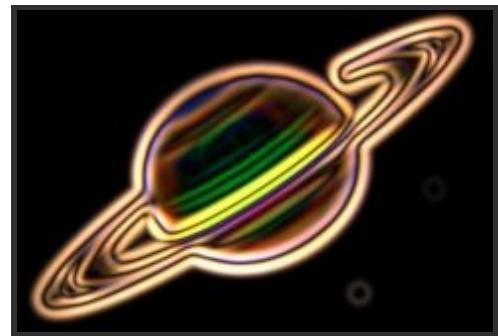
[BandPass](#)
[Sharpen](#)
[Emboss](#)

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S_EdgeDetectDouble

Performs an edge detect operation twice giving a double stranded edge effect. Increase the Edge Smooth parameters for thicker edges.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Edge Smooth1: *Default: 0.088, Range: 0 or greater.*

Increase for smoother edges for the first edge–detect.

Edge Smooth2: *Default: 0, Range: 0 or greater.*

Increase for smoother edges for the second edge–detect.

Subpixel Smooth: *Check–box, Default: on.*

Enables smoothing the edges by subpixel amounts. Use this for smoother animation of the Edge Smooth parameter.

Brightness1: *Default: 1, Range: 0 or greater.*

Scales the brightness of the initial edges.

Brightness2: *Default: 1.5, Range: 0 or greater.*

Scales the brightness of the result.

Saturation: *Default: 1, Range: 0 or greater.*

Scales the color saturation of the result. Increase for more intense colors. Set to 0 for monochrome.

Threshold1: *Default: 0, Range: 0 or greater.*

Subtract this value from the initial edges.

Threshold2: *Default: 0, Range: 0 or greater.*

Subtracts this value from the result. Increase to remove unwanted noise from minor edges.

Show: *Popup menu, Default: Result.*

Selects the output option.

Edges1 Only: shows just the first edge–detect. This can be useful for adjusting the Edge1 parameters without performing the second edge–detect.

Result: shows the result of the double edge–detect.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check–box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:[EdgeDetect](#)[EdgesInDirection](#)[BandPass](#)[Sharpen](#)[Sapphire](#)[Plug–ins](#)

S_EdgeFlash

Adds a glow from the Front clip onto the Back clip, and vice versa, then composites the Front over the Back. This can be used to make a composite look more natural with light flashing between the layers as if exposed on film together.

In the Sapphire Composite effects submenu.



Inputs:

Foreground: The clip to use as foreground.

Background: The clip to use as background.

Matte: *Optional.* The alpha channel of this input specifies the opacities of the Foreground input. If this input is not provided, the alpha channel of the Foreground input is used instead. This input can be affected by the Invert Matte or Matte Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Effect: *Popup menu, Default: Original.*

Select which processing method to use

Original: The original method

LightWrap: An improved method that handles some edge conditions better

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*
The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*
Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*
Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Fg Flash Amp: *Default: 0.8, Range: 0 or greater.*
The amount of flashing from the Front onto the Back.

Bg Flash Amp: *Default: 0.8, Range: 0 or greater.*
The amount of flashing from the Front onto the Back.

Flash Width: *Default: 0.088, Range: 0 or greater.*
The width of the flashing. This parameter can be adjusted using the Flash Width Widget.

Fg Lights: *Default: 1, Range: any.*
Scales the Front input by this value. Increase for a brighter result

Fg Dark: *Default: 0, Range: any.*
Adds this gray value to the darker regions of the Front input. This can be negative to increase contrast.

Fg Saturation: *Default: 1, Range: 0 or greater.*
Scales the color saturation of the Front input. Increase for more intense colors. Set to 0 for monochrome.

Bg Lights: *Default: 1, Range: any.*
Scales the Back input by this value. Increase for a brighter result

Bg Dark: *Default: 0, Range: any.*
Adds this gray value to the darker regions of the Back input. This can be negative to increase contrast.

Bg Saturation: *Default: 1, Range: 0 or greater.*
Scales the color saturation of the Back input. Increase for more intense colors. Set to 0 for monochrome.

Output: *Popup menu, Default: Comp.*
Selects between different output options.

Foreground: outputs only the Front clip with flashing from the Back.
Background: outputs only the Back clip with flashing from the Front.
Comp: flashes both, composites the Front over the Back, and outputs the result.

Subpixel Widths: *Check-box, Default: off.*
Enables flashing by subpixel amounts. Use this for smoother animation of the flash width.

Comp Premult: *Check-box, Default: on.*
Disable this if you have provided a separate Matte input and the Foreground pixel values have not been

pre-multiplied by this Matte.

Matte Use: *Popup menu, Default: Alpha.*

Determines how the Matte input channels are used to make a monochrome matte.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Invert Matte: *Check-box, Default: off.*

If enabled, the black and white of the output matte are inverted.

Shrink- Grow+: *Default: 0, Range: any.*

Amount to grow the matte edges in approximate pixels, or shrink if negative.

Edge Softness: *Default: 1, Range: 0.01 or greater.*

The resulting softness of the edges.

Post Blur: *Default: 0, Range: 0 or greater.*

If positive, the result is blurred by this amount. This is an alternative method for softening the edges.

Noise Amplitude: *Default: 0, Range: 0 or greater.*

The amount of noise texture to add to the edges.

Noise Width: *Default: 0.0224, Range: 0 or greater.*

The width of the area at the matte edges where the noise is included. This has no effect unless Noise Amplitude is positive

Frequency: *Default: 100, Range: 0.1 or greater.*

The frequency of the noise. Increase for finer grain noise, decrease for coarser noise. This has no effect unless Noise Amplitude is positive.

Octaves: *Integer, Default: 1, Range: 1 to 10.*

The number of summed layers of noise. Each octave is twice the frequency and half the magnitude of the previous. This has no effect unless Noise Amplitude is positive.

Seed: *Default: 0.23, Range: 0 or greater.*

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Noise Shift: *X & Y, Default: [0 0], Range: any.*

The horizontal and vertical translation of the noise texture.

Show Flash Width: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Flash Width parameter.

See Also:

[MatteOps](#)

[Blur](#)

[Sapphire](#)

[MatteOpsComp](#)

[EdgeBlur](#)

[Plug-ins](#)

[EdgeDetect](#)

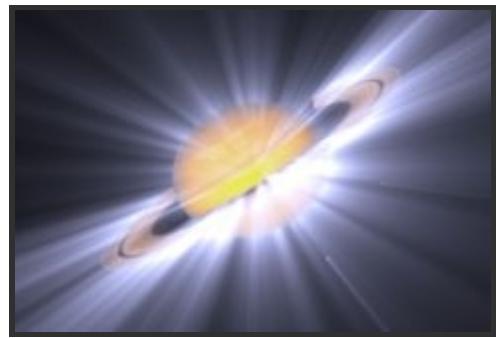
[Introduction](#)

[Glow](#)

S_EdgeRays

Generates beams of light emitting from the edges of an input clip. You can provide a Matte input to selectively scale the colors of the rays. If Matte Type is set to Color, you can also use the Matte input to colorize the rays differently in different regions. Set the Rays Res parameter to 1/2 for faster rendering with slightly softer rays.

In the Sapphire Lighting effects submenu.



Inputs:

Source: The clip to be processed.

Background: *Optional.* The clip to use as background.

Mask: *Optional.* If provided, the ray colors are scaled by this input. A monochrome mask can be used to choose a subset of areas that will generate rays. If the Mask Type is set to Color, a color mask input can be used to selectively adjust the ray colors in different regions. This input can optionally be blurred or inverted using the Blur Mask or Invert Mask parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Center: *X & Y*, *Default:* [0 0], *Range:* any.

The location from which the rays beam outwards. This parameter can be adjusted using the Center Widget.

Center Uses Mocha: *Check-box*, *Default:* off.

Controls whether the center is controlled by the Center parameter or follows the Center tracked inside of Mocha.

Smooth Center Track: *Integer*, *Default:* 0, *Range:* 0 or greater.

Controls how many points to average when stabilizing the Mocha point track.

Rays Length: *Default:* 0.25, *Range:* -5 to 1.

The length of the rays. A length of 1.0 gives rays that continue forever, although they may still fade out as they go. To make the rays look longer you can also increase the Bias Outer Bright parameter. If Rays Length is negative the rays can beam inwards instead of outwards. Note that processing times increase for longer rays. This parameter can be adjusted using the Center Widget.

Length Red: *Default:* 1, *Range:* 0 or greater.

The relative length of the red channel of the rays. Adjust this, along with Length Green and Length Blue, to create color fringing effects.

Length Green: *Default:* 1, *Range:* 0 or greater.

The relative length of the green channel of the rays.

Length Blue: *Default:* 1, *Range:* 0 or greater.

The relative length of the blue channel of the rays.

Reverse Rays: *Default:* 0, *Range:* 0 to 5.

Extend rays inward as well as outward. The length of the reversed rays is controlled by Rays Length as well as this parameter.

Rays Brightness: *Default:* 2, *Range:* 0 or greater.

Scales the brightness of the ray beams.

Rays Color: *Default* *rgb:* [1 1 1].

Scales the color of the ray beams.

Enable Dark Rays: *Check-box*, *Default:* off.

Allow rays to darken the source as well as brighten it. If enabled, a dark Rays Color will cause rays to darken the source. A bright Rays Color will brighten the source as usual.

Bias Outer Bright: *Default:* 0, *Range:* 0 to 1.

Determines the variable amount of brightness along the rays. This is normally near 0 so the rays fade away at their outer ends, 0.5 causes equal brightness along the rays, and 1.0 causes maximum brightness at the ends.

Rays Res: *Popup menu, Default: Full.*

Selects the resolution factor for the rays. Higher resolutions give sharper rays, lower resolutions give smoother rays and faster processing. This 'Res' factor only affects the rays: the background is still combined with the rays at full resolution.

Full: Full resolution is used.

Half: The rays are calculated at half resolution.

Quarter: The rays are calculated at quarter resolution.

Show: *Popup menu, Default: Result.*

Selects between output options.

Result: outputs the rays over the Background.

Edges: outputs only the edge image. This can be useful during the adjustment of the edge or shimmer parameters.

Rays: outputs only the image of rays on a black background.

Edge Thickness: *Default: 0.022, Range: 0 or greater.*

The thickness of the edges which generate the rays.

Edge Brightness: *Default: 1, Range: 0 or greater.*

Scales the brightness of the edges which generate the rays.

Edge Subpixel: *Check-box, Default: on.*

Enables subpixel Edge Thickness amounts. Turn this on if you are animating Edge Thickness or if you want finer control of small values.

Shimmer Amp: *Default: 0.5, Range: 0 or greater.*

Modulates the ray source image with this amount of noise texture to give the rays a shimmering look.

Shimmer Freq: *Default: 40, Range: 0.1 or greater.*

The frequency of the shimmer texture. Increase for a finer grained shimmer effect, decrease for larger, softer shimmer. This has no effect unless Shimmer Amp is positive.

Shimmer Seed: *Default: 0.123, Range: 0 or greater.*

Used to initialize the random number generator for the shimmer texture. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Shimmer Shift: *X & Y, Default: [0 0], Range: any.*

Translation of the shimmer texture. This has no effect unless Shimmer Amp is positive.

Shimmer Speed: *X & Y, Default: [0 0], Range: any.*

Translation speed of the shimmer texture. If non-zero, the shimmering is automatically animated to shift at this rate.

Atmosphere Amp: *Default: 0, Range: 0 or greater.*

Atmosphere gives the effect of rays shining through a dusty atmosphere and picking up light or getting shadowed. This parameter adjusts the amount, or amplitude, of the atmospheric effect. Zero gives smooth rays, higher values give more dusty look.

Atmosphere Freq: *Default: 1, Range: 0.1 to 20.*

Controls the spatial frequency of the atmospheric noise. Turn this up higher to get finer details, turn down for broader overall variation.

Atmosphere Detail: *Default: 0.6, Range: 0 to 1.*

Controls the amount of fine detail in the atmosphere simulation. Decrease to get smoother atmosphere, increase for a more crunchy or grainy look.

Atmosphere Speed: *Default: 1, Range: any.*

The cloudy noise in the atmosphere evolves over time like real dust clouds; this parameter controls how fast the cloud pattern changes over time. Set to zero for a static pattern.

Affect Alpha: *Default: 0, Range: 0 or greater.*

If this value is positive the output Alpha channel will include some opacity from the rays. The maximum of the red, green, and blue ray brightness is scaled by this value and combined with the background Alpha at each pixel.

Rays From Alpha: *Default: 0, Range: 0 to 1.*

Set to 1 to generate rays from the edges of the source's alpha channel instead of its RGB channels. This will typically reduce the rays generated from internal edges. Values between 0 and 1 interpolate between using the RGB and the Alpha.

Rays Under Source: *Default: 0, Range: 0 to 1.*

Set to 1 to composite the Source input over the rays.

Source Opacity: *Default: 1, Range: 0 to 1.*

Scales the opacity of the Source input when combined with the rays. This does not affect the generation of the rays themselves.

Bg Brightness: *Default: 1, Range: 0 or greater.*

Scales the brightness of the background before combining with the rays. This parameter only has an effect if the background input is provided.

Mask Type: *Popup menu, Default: Luma.*

This setting is ignored unless the Mask input is provided.

Luma: uses the luminance of the Mask input to scale the brightness of the rays.

Color: uses the RGB channels of the Mask input to scale the colors of the rays.

Alpha: uses the alpha channel of the Mask input to scale the brightness of the rays.

Blur Mask: *Default: 0, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Center: *Check-box, Default: on.*

Turns on or off the screen user interface widget for adjusting the Center and Rays Length parameters.

See Also:

[Rays](#)

[Streaks](#)

[BlurMotion](#)

[WarpChroma](#)

[EdgeDetect](#)

[Glow](#)

[DissolveEdgeRays](#)

[Sapphire](#)

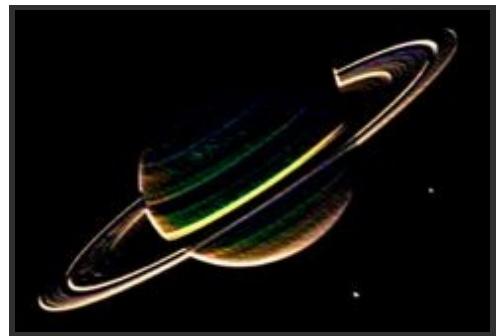
[Plug-ins](#)

[Introduction](#)

S_EdgesInDirection

Finds the edges of the source input that are aligned in a specified direction. Increase the Edge Smooth parameter for thicker edges.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Edge Smooth: *Default: 0.0224, Range: 0 or greater.*

Increase for thicker and smoother edges.

Subpixel Smooth: *Check-box, Default: on.*

Enables smoothing the edges by subpixel amounts. Use this for smoother animation of the Edge Smooth parameter.

Brightness: *Default: 1, Range: 0 or greater.*

Scales the brightness of the result.

Saturation: *Default: 1, Range: -2 to 10.*

Scales the color saturation of the result. Increase for more intense colors. Set to 0 for monochrome.

Offset Color: *Default rgb: [0 0 0].*

The color to add to the result. Make this gray to allow the darker side of edges away from the given Direction to also be visible.

Direction: *X & Y, Default: [0.389 0.361], Range: any.*

Edges are found which are perpendicular to this direction vector. This parameter can be adjusted using the Direction Widget.

Bidirectional: *Check-box, Default: off.*

If enabled, edges towards and away from the Direction vector are treated equally.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Direction: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Direction parameter.

See Also:

[EdgeDetect](#)

[BandPass](#)

[Sapphire](#)

[EdgeDetectDouble](#)

[Sharpen](#)

[Plug-ins](#)

[EdgeColorize](#)

[Emboss](#)

[Introduction](#)

S_Effect

An Effect Builder which lets you combine multiple Sapphire effects and load presets from any effect. Click Load Preset or Edit Effect to get started.

In the Sapphire Builder effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Background: *Optional.* The clip to use as background.

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Edit Effect: *Push-button.*

Brings up the Effect Builder to modify this effect.

See Also:

[Sapphire Plug-ins Introduction](#)

S_Emboss

Embosses the Source clip using the brightness of the Bumps input as a relief map. Increase the Bumps Smooth parameter for bolder bumps, and adjust the Light Dir to illuminate the bumps from different angles.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Bumps: *Optional.* The bump map for the emboss. Only the luminance of this input is used.

Mask: *Optional.* If provided, the emboss is applied only at the areas specified by this input. This input can be affected using the Blur Mask, Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Light Dir: *X & Y*, *Default:* [-0.5 0.361], *Range:* any.

The direction vector for the light source. Surface shading is calculated using light from this direction shining onto the Bumps input. This parameter can be adjusted using the Light Dir Widget.

Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the result.

Light Color: *Default* *rgb:* [1 1 1].

The color of the light source that creates the embossed result.

Bumps Scale: *Default:* 1, *Range:* any.

Scales the amplitude of the bump map.

Bumps Threshold: *Default:* 0, *Range:* 0 or greater.

This value is subtracted from the Bumps input before it is used.

Bumps Smooth: *Default:* 0, *Range:* 0 or greater.

If positive, the Bumps input is blurred by this amount before being used. Increase for a softer emboss effect.

Subpixel Smooth: *Check-box*, *Default:* on.

If enabled, the amount of pre-smoothing of the Bumps input is performed at subpixel accuracy. It can be helpful if Bumps Smooth is very small or is being animated. This parameter has no effect unless Bumps Smooth is positive.

Blur Mask: *Default:* 0, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu*, *Default:* Luma.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Show Light Dir: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Light Dir parameter.

See Also:

[EmbossShiny](#)
[EmbossDistort](#)
[EmbossGlass](#)

[Distort](#)
[EdgesInDirection](#)

[Sapphire](#)
[Plug-ins](#)
[Introduction](#)

S_EmbossDistort

Embosses and warps the Source clip using the Bumps input as a relief map and also distorts the result using the Bumps as a 'lens' image. Increase the Bumps Smooth parameter for bolder bumps, and adjust the Light Dir to illuminate the bumps from different angles.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Bumps: *Optional.* The bump map and lens source for the emboss.

Mask: *Optional.* If provided, the emboss is applied only at the areas specified by this input. This input can be affected using the Blur Mask, Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Light Dir: *X & Y*, *Default:* [-0.5 0.361], *Range:* any.

The direction vector for the light source. Surface shading is calculated using light from this direction shining onto the Bumps input. This parameter can be adjusted using the Light Dir Widget.

Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the result.

Light Color: *Default* *rgb:* [1 1 1].

The color of the light source that creates the embossed result.

Bumps Scale: *Default:* 1, *Range:* any.

Scales the amplitude of the bump map.

Bumps Threshold: *Default:* 0, *Range:* 0 or greater.

This value is subtracted from the Bumps input before it is used.

Bumps Smooth: *Default:* 0.1, *Range:* 0 or greater.

If positive, the Bumps input is blurred by this amount before being used. Increase for a softer emboss effect.

Subpixel Smooth: *Check-box*, *Default:* on.

If enabled, the amount of pre-smoothing of the Bumps input is performed at subpixel accuracy. It can be helpful if Bumps Smooth is very small or is being animated. This parameter has no effect unless Bumps Smooth is positive.

Hilight Brightness: *Default:* 0.5, *Range:* 0 to 1.

Scales the brightness of the specular highlights.

Hilight Size: *Default:* 0.5, *Range:* 0.1 or greater.

Adjusts the size of the specular highlights.

Distort Amount: *Default:* 1, *Range:* any.

The severity of the lens warping distortion. Make negative to invert the direction of the distortions.

Filter: *Check-box*, *Default:* on.

If enabled, the image is adaptively filtered when it is resampled. This gives a better quality result when parts of the image are warped smaller.

Wrap: *X & Y*, *Popup menu*, *Default:* [Reflect Reflect].

Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Blur Mask: *Default:* 0, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and

unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu*, *Default:* Luma.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Crop Input Parameters: *Default:* 0, *Range:* 0 or greater.

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

Show Light Dir: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Light Dir parameter.

See Also:

[Emboss](#)
[EmbossShiny](#)
[EmbossGlass](#)

[Distort](#)
[Sapphire](#)
[Plug-ins](#)
[Introduction](#)

S_EmbossGlass

The Source is embossed and warped using the Bumps input as a relief map and lens image. A chrominance distortion is also performed, separating the spectrum for a 'prismatic' look. Increase the Bumps Smooth parameter for bolder bumps, and adjust the Light Dir to illuminate the bumps from different angles.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Bumps: *Optional.* The bump map and lens source for the emboss.

Mask: *Optional.* If provided, the emboss is applied only at the areas specified by this input. This input can be affected using the Blur Mask, Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Light Dir: *X & Y*, *Default:* [-0.5 0.361], *Range:* any.

The direction vector for the light source. Surface shading is calculated using light from this direction shining onto the Bumps input. This parameter can be adjusted using the Light Dir Widget.

Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the result.

Light Color: *Default* *rgb:* [1 1 1].

The color of the light source that creates the embossed result.

Bumps Scale: *Default:* 1, *Range:* any.

Scales the amplitude of the bump map.

Bumps Threshold: *Default:* 0, *Range:* 0 or greater.

This value is subtracted from the Bumps input before it is used.

Bumps Smooth: *Default:* 0.1, *Range:* 0 or greater.

If positive, the Bumps input is blurred by this amount before being used. Increase for a softer emboss effect.

Subpixel Smooth: *Check-box*, *Default:* on.

If enabled, the amount of pre-smoothing of the Bumps input is performed at subpixel accuracy. It can be helpful if Bumps Smooth is very small or is being animated. This parameter has no effect unless Bumps Smooth is positive.

Hilight Brightness: *Default:* 0.5, *Range:* 0 to 1.

Scales the brightness of the specular highlights.

Hilight Size: *Default:* 0.5, *Range:* 0.1 or greater.

Adjusts the size of the specular highlights.

Distort Amount: *Default:* 1, *Range:* any.

The severity of the lens warping distortion. Make negative to invert the direction of the distortions.

Filter: *Check-box*, *Default:* on.

If enabled, the image is adaptively filtered when it is resampled. This gives a better quality result when parts of the image are warped smaller.

Wrap: *X & Y*, *Popup menu*, *Default:* [Reflect Reflect].

Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Warp Red: *Default:* 0.5, *Range:* any.

The magnitude of lens distortion for the red end of the spectrum. Make negative to invert the direction of the red

distortions.

Warp Blue: *Default:* 1, *Range:* any.

The magnitude of lens distortion for the blue end of the spectrum. Make negative to invert the direction of the blue distortions.

Steps: *Integer*, *Default:* 5, *Range:* 3 to 100.

The number of color samples along the spectrum to include. More steps give a smoother result, but require more time to process.

Blur Mask: *Default:* 0, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu*, *Default:* Luma.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Crop Input Parameters: *Default:* 0, *Range:* 0 or greater.

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

Show Light Dir: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Light Dir parameter.

See Also:

[Emboss](#)

[DistortChroma](#)

[EmbossShiny](#)

[Sapphire Plug-ins](#)

[EmbossDistort](#)

[Introduction](#)

S_EmbossShiny

Embosses the Source clip using the Bumps input as a relief map. A lighting model is used which includes highlights from specular reflections. Increase the Bumps Smooth parameter for bolder bumps, and adjust the Light Dir to illuminate the bumps from different angles.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Bumps: *Optional.* The bump map for the emboss. Only the luminance of this input is used.

Mask: *Optional.* If provided, the emboss is applied only at the areas specified by this input. This input can be affected using the Blur Mask, Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* *Union*.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Light Dir: *X & Y*, *Default:* [-0.5 0.361], *Range:* any.

The direction vector for the light source. Surface shading is calculated using light from this direction shining onto the Bumps input. This parameter can be adjusted using the Light Dir Widget.

Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the result.

Light Color: *Default* *rgb*: [1 1 1].

The color of the light source that creates the embossed result.

Bumps Scale: *Default:* 1, *Range:* any.

Scales the amplitude of the bump map.

Bumps Threshold: *Default:* 0, *Range:* 0 or greater.

This value is subtracted from the Bumps input before it is used.

Bumps Smooth: *Default:* 0.01, *Range:* 0 or greater.

If positive, the Bumps input is blurred by this amount before being used. Increase for a softer emboss effect.

Subpixel Smooth: *Check-box*, *Default:* on.

If enabled, the amount of pre-smoothing of the Bumps input is performed at subpixel accuracy. It can be helpful if Bumps Smooth is very small or is being animated. This parameter has no effect unless Bumps Smooth is positive.

Hilight Brightness: *Default:* 0.8, *Range:* 0 to 1.

Scales the brightness of the specular highlights.

Hilight Size: *Default:* 0.5, *Range:* 0.1 or greater.

Adjusts the size of the specular highlights.

Blur Mask: *Default:* 0, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu*, *Default:* *Luma*.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Show Light Dir: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Light Dir parameter.

See Also:

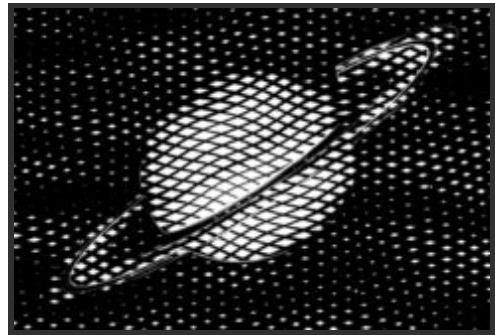
[Emboss](#)
[EmbossDistort](#)
[EmbossGlass](#)

[TextureNoiseEmboss](#)
[Sapphire Plug-ins](#)
[Introduction](#)

S_Etching

Generates a version of the source clip using two sets of black and white lines of varying thickness to give an 'etching' or 'lithograph' look. Use the Smooth Source parameter to remove some details and make the lines more evenly shaped. Use the Lines Frequency parameter to adjust the density of all lines.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Lines Frequency: *Default: 50, Range: 0 or greater.*
The frequency of the etched lines. Increase for a finer line pattern, decrease for fewer lines.

Lines1 Frequency: *Default: 1, Range: 0 or greater.*
Scales the frequency of the first set of etched lines. Increase for a finer line pattern, decrease for fewer lines.

Lines2 Frequency: *Default: 1, Range: 0 or greater.*
Scales the frequency of the second set of etched lines.

Lines Angle: *Default: 0, Range: any.*
Rotation of the etched lines pattern in counter-clockwise degrees.

Lines1 Angle: *Default: 30, Range: any.*
The relative angle of the first set of etched lines in counter-clockwise degrees.

Lines2 Angle: *Default: -20, Range: any.*
The relative angle of the second set of etched lines in counter-clockwise degrees.

Lines Shift: *X & Y, Default: [0 0], Range: any.*
Shifts the pattern of lines. This location will also be the center of rotation when the line angle parameters are adjusted. This parameter can be adjusted using the Lines Shift Widget.

Lines Sharpness: *Default: 4, Range: 0 or greater.*
The sharpness of the etched lines. Decrease for softer edges.

Lines Add Width: *Default: 0, Range: any.*
Increase for thicker lines.

Smooth Source: *Default: 0, Range: 0 or greater.*
If positive, the source is blurred by this amount before the etching is applied.

Color1: *Default rgb: [1 1 1].*
The 'brighter' color of the lines pattern.

Color0: *Default rgb: [0 0 0].*
The 'darker' color of the lines pattern.

Wave Amp: *Default: 0.1, Range: 0 or greater.*
The amplitude of the waviness of the sets of etched lines.

Wave Frequency: *Default: 2, Range: 0 or greater.*
The frequency of the waviness of the etched lines. Increase for more waves.

Warp Amp: *Default: 0.04, Range: any.*
The amount the output is warped using the source brightness.

Warp Smooth: *Default: 0.044, Range: 0 or greater.*
The smoothness of the warping. This has no effect if Warp Amp is 0.

Edges Scale: *Default:* 0.5, *Range:* 0 or greater.

Adjusts the amount of source edges to be included in the result. If positive, edges in the source image are found and added to the etching pattern.

Edges Threshold: *Default:* 0.3, *Range:* 0 or greater.

Determines which edges are included in the result. Increase to remove minor edges and speckles. This has no effect unless Edges Scale is positive.

Edges Width: *Default:* 0, *Range:* 0 or greater.

The width of the edges added to the result. Increase for wider edges. This has no effect unless Edges Scale is positive.

Edges Sharpness: *Default:* 3, *Range:* 0 or greater.

Increase for sharper edges, decrease for softer edges. This has no effect unless Edges Scale is positive.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Lines Shift: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Lines Shift parameter.

See Also:

[ScanLines](#)

[AutoPaint](#)

[Sketch](#)

[Mosaic](#)

[FlysEyeHex](#)

[JpegDamage](#)

[Sapphire Plug-ins](#)

[Introduction](#)

S_Feedback

The previous frames of the input clip are transformed and combined with the current frame to give a variety of effects inspired by video feedback. The output of each processed frame is stored and then combined with the next frame. The feedback is reinitialized whenever any non-consecutive frame is processed: either the first frame, reprocessing a given frame, or jumping to another frame. You must process multiple frames of a clip in a row to observe the effect, and clearing your image cache before rendering may sometimes be necessary.



In the Sapphire Time effects submenu.

Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Prev Brightness: *Default: 0.8, Range: 0 or greater.*

For each frame, the previous output is scaled by this amount before it is combined with the new input frame.

Normally this value should be less than 1.0 which causes previous frames to fade out over time. A value of 1.0 causes no fading, and values greater than 1.0 cause previous frames to become brighter over time.

Prev Color: *Default rgb: [1 1 1].*

For each frame, the previous output is scaled by this color before it is combined with the new input frame. This is similar to Prev Brightness but affects the colors of the previous frames instead of just the brightness.

Prev Hue Shift: *Default: 0, Range: any.*

Shifts the hue of the previous frames' colors, for each new frame.

Combine New: *Popup menu, Default: Ave.*

Selects the method for combining previous frames with the current frame.

Ave: The current frame is averaged with the previous output, smearing moving objects out over time. The output is scaled by Fade and the input is scaled by 1.0–Fade for a weighted average, so Fade must be less than 1.0 for this to work properly. Unlike the other combine options, Ave should never affect the brightness of stationary objects in the clip.

Max: The colors of the current frame and previous frames are combined with a maximum function. This makes the output frame at least as bright as the current frame, and will make brighter 'trails' for example if you have bright objects moving on a dark background.

Screen: The colors of the current frame and previous frames are combined with a blend function. This can be used to accumulate the colors of a moving clip. However, non-black regions will become brighter with each frame.

Add: The colors of the current frame and previous frames are added. This can also be used to accumulate the colors of a moving clip, with the non-black regions becoming brighter at each frame.

Over: The current frame is composited over the previous frames using its Alpha channel. This uses pre-multiplied compositing, so where the alpha is black the Source image should normally also be black. If the input clip contains no Alpha channel, the luminance is used instead.

Under: The current frame is composited under the previous frames.

Min: The colors of the current frame and previous frames are combined with a minimum function. This makes the output frame no brighter than the current frame, and will often fade quickly to a black frame.

New Color: *Default rgb: [1 1 1].*

Scales the color of the current frame. Set this to the complement of Old Color to offset overly colored trails.

New Opacity: *Default:* 1, *Range:* 0 to 10.

Scales the opacity and brightness of the current frame.

Blur Amount: *Default:* 0, *Range:* 0 or greater.

The previous frames are blurred by this amount for each new frame. This has no effect unless it is positive.

Diffuse Amount: *Default:* 0, *Range:* 0 or greater.

The previous frames are passed through a pixel-diffusion process of this magnitude, for each new frame. This has no effect unless it is positive.

Amount Rel: *X & Y*, *Default:* [1 1], *Range:* 0 or greater.

The relative amounts of horizontal and vertical blurring and/or diffusing. This has no effect unless Blur Amount or Diffuse Amount are positive.

Center: *X & Y*, *Default:* [0 0], *Range:* any.

The center position for rotation and scaling, in screen coordinates relative to the center of the frame. This parameter can be adjusted using the Center Widget.

Z Dist: *Default:* 0.95, *Range:* 0.001 to 10.

For each new frame, the 'distance' of the previous frames is scaled by this amount. This causes zooming during the feedback process. Values greater than 1.0 zoom out and make the previous frames smaller, and values less than 1.0 zoom in and enlarge them. This parameter can be adjusted using the Transform Widget.

Rotate: *Default:* 3, *Range:* any.

For each new frame, the amount of rotation in degrees to apply to the previous frames. This parameter can be adjusted using the Transform Widget.

Shift: *X & Y*, *Default:* [0 0], *Range:* any.

Shifts the previous frames by this amount for each new frame. If this is non-zero the Center location is less meaningful. This parameter can be adjusted using the Transform Widget.

Wrap: *X & Y*, *Popup menu*, *Default:* [No No].

Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Mask Use: *Popup menu*, *Default:* Luma.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Center: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Center parameter.

Show Transform: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Z Dist and Rotate parameters.

Show Shift: Check-box, Default: off.

Turns on or off the screen user interface for adjusting the Center parameter.

See Also:

[Trails](#)

[TrailsDiffuse](#)

[FeedbackDistort](#)

[TimeAverage](#)

[NearestColor](#)

[FeedbackBubble](#)

[WarpRepeat](#)

[WarpChroma](#)

[Sapphire](#)

[Plug-ins](#)

[Introduction](#)

S_FeedbackBubble

Similar to Feedback, previous frames are combined with the current frame while distorting by a bubble pattern. The feedback is reinitialized whenever any non-consecutive frame is processed: either the first frame, reprocessing a given frame, or jumping to another frame. You must process multiple frames of a clip in a row to observe the effect, and clearing your image cache before rendering may sometimes be necessary.

In the Sapphire Time effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Prev Brightness: *Default: 0.8, Range: 0 or greater.*

For each frame, the previous output is scaled by this amount before it is combined with the new input frame.

Normally this value should be less than 1.0 which causes previous frames to fade out over time. A value of 1.0 causes no fading, and values greater than 1.0 cause previous frames to become brighter over time.

Prev Color: *Default rgb: [1 1 1].*

For each frame, the previous output is scaled by this color before it is combined with the new input frame. This is similar to Prev Brightness but affects the colors of the previous frames instead of just the brightness.

Prev Hue Shift: *Default: 0, Range: any.*

Shifts the hue of the previous frames' colors, for each new frame.

Combine New: *Popup menu, Default: Ave.*

Selects the method for combining previous frames with the current frame.

Ave: The current frame is averaged with the previous output, smearing moving objects out over time. The output is scaled by Fade and the input is scaled by 1.0–Fade for a weighted average, so Fade must be less than 1.0 for this to work properly. Unlike the other combine options, Ave should never affect the brightness of stationary objects in the clip.

Max: The colors of the current frame and previous frames are combined with a maximum function. This makes the output frame at least as bright as the current frame, and will make brighter 'trails' for example if you have bright objects moving on a dark background.

Screen: The colors of the current frame and previous frames are combined with a blend function. This can be used to accumulate the colors of a moving clip. However, non-black regions will become brighter with each frame.

Add: The colors of the current frame and previous frames are added. This can also be used to accumulate the colors of a moving clip, with the non-black regions becoming brighter at each frame.

Over: The current frame is composited over the previous frames using its Alpha channel. This uses pre-multiplied compositing, so where the alpha is black the Source image should normally also be black. If the input clip contains no Alpha channel, the luminance is used instead.

Under: The current frame is composited under the previous frames.

Min: The colors of the current frame and previous frames are combined with a minimum function. This makes the output frame no brighter than the current frame, and will often fade quickly to a black frame.

New Color: *Default rgb: [1 1 1].*

Scales the color of the current frame. Set this to the complement of Old Color to offset overly colored trails.

New Opacity: *Default:* 1, *Range:* 0 to 10.

Scales the opacity and brightness of the current frame.

Bubble Amount: *Default:* 0.05, *Range:* any.

The amplitude of the noise pattern used to create the distortion.

Bubble Freq: *Default:* 16, *Range:* 0.01 or greater.

The spatial frequency of the initial noise pattern. Increase to zoom out, decrease to zoom in.

Bubble Freq Rel X: *Default:* 1, *Range:* 0.01 or greater.

The relative horizontal frequency of the noise pattern. Increase to stretch it vertically or decrease to stretch it horizontally.

Bubble Shift: *X & Y*, *Default:* [0 0], *Range:* any.

The horizontal and vertical translation of the noise pattern.

Bubble Shift Speed: *X & Y*, *Default:* [0 –0.07], *Range:* any.

If non-zero, the bubble pattern is automatically animated to shift at this speed.

Bubble Octaves: *Integer*, *Default:* 1, *Range:* 1 to 10.

The number of summed layers of noise. Each octave is twice the frequency and half the amplitude of the previous. A single octave gives a smooth texture. Adding octaves makes the result approach a fractal (1/f) noise texture.

Bubble Seed: *Default:* 0.123, *Range:* 0 or greater.

Used to initialize the random number generator for the noise pattern. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Blur Amount: *Default:* 0, *Range:* 0 or greater.

The previous frames are blurred by this amount for each new frame. This has no effect unless it is positive.

Diffuse Amount: *Default:* 0, *Range:* 0 or greater.

The previous frames are passed through a pixel-diffusion process of this magnitude, for each new frame. This has no effect unless it is positive.

Amount Rel: *X & Y*, *Default:* [1 1], *Range:* 0 or greater.

The relative amounts of horizontal and vertical blurring and/or diffusing. This has no effect unless Blur Amount or Diffuse Amount are positive.

Center: *X & Y*, *Default:* [0 0], *Range:* any.

The center position for rotation and scaling, in screen coordinates relative to the center of the frame. This parameter can be adjusted using the Center Widget.

Z Dist: *Default:* 0.95, *Range:* 0.001 to 10.

For each new frame, the 'distance' of the previous frames is scaled by this amount. This causes zooming during the feedback process. Values greater than 1.0 zoom out and make the previous frames smaller, and values less than 1.0 zoom in and enlarge them. This parameter can be adjusted using the Transform Widget.

Rotate: *Default:* 0, *Range:* any.

For each new frame, the amount of rotation in degrees to apply to the previous frames. This parameter can be adjusted using the Transform Widget.

Shift: *X & Y*, *Default:* [0 0], *Range:* any.

Shifts the previous frames by this amount for each new frame. If this is non-zero the Center location is less meaningful. This parameter can be adjusted using the Shift Widget.

Wrap: *X & Y*, *Popup menu*, *Default:* [No No].

Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Shift: *Check-box, Default: off.*

Turns on or off the screen user interface for adjusting the Center parameter.

Show Transform: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Z Dist and Rotate parameters.

Show Center: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Center parameter.

See Also:

[Feedback](#)

[WarpRepeat](#)

[Sapphire](#)

[Trails](#)

[WarpChroma](#)

[Plug-ins](#)

[TrailsDiffuse](#)

[Introduction](#)

[FeedbackDistort](#)

[TimeAverage](#)

[NearestColor](#)

S_FeedbackDistort

The previous frames of the input clip are distorted by the gradient of a given Lens input clip and combined with the current frame to give a variety of possible effects. The output of each processed frame is stored and then combined with the next frame. The feedback is reinitialized whenever any non-consecutive frame is processed, either the first frame, reprocessing a given frame, or jumping to another frame. You must process multiple frames of a clip in a row to observe the effect, and clearing your image cache before rendering may sometimes be necessary.



In the Sapphire Time effects submenu.

Inputs:

Source: The clip to be processed.

Lens: *Optional.* Distorts the previous frames using the brightness values of this input clip.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Prev Brightness: *Default:* 0.8, *Range:* 0 or greater.

For each frame, the previous output is scaled by this amount before it is combined with the new input frame.

Normally this value should be less than 1.0 which causes previous frames to fade out over time. A value of 1.0 causes no fading, and values greater than 1.0 cause previous frames to become brighter over time.

Prev Color: *Default* *rgb:* [1 1 1].

For each frame, the previous output is scaled by this color before it is combined with the new input frame. This is similar to Prev Brightness but affects the colors of the previous frames instead of just the brightness.

Prev Hue Shift: *Default:* 0, *Range:* any.

Shifts the hue of the previous frames' colors, for each new frame.

Combine New: *Popup menu*, *Default:* Ave.

Selects the method for combining previous frames with the current frame.

Ave: The current frame is averaged with the previous output, smearing moving objects out over time. The output is scaled by Fade and the input is scaled by 1.0–Fade for a weighted average, so Fade must be less than 1.0 for this to work properly. Unlike the other combine options, Ave should never affect the brightness of stationary objects in the clip.

Max: The colors of the current frame and previous frames are combined with a maximum function. This makes the output frame at least as bright as the current frame, and will make brighter 'trails' for example if you have bright objects moving on a dark background.

Screen: The colors of the current frame and previous frames are combined with a blend function. This can be used to accumulate the colors of a moving clip. However, non-black regions will become brighter with each frame.

Add: The colors of the current frame and previous frames are added. This can also be used to accumulate the colors of a moving clip, with the non-black regions becoming brighter at each frame.

Over: The current frame is composited over the previous frames using its Alpha channel. This uses pre-multiplied compositing, so where the alpha is black the Source image should normally also be black. If the input clip contains no Alpha channel, the luminance is used instead.

Under: The current frame is composited under the previous frames.

Min: The colors of the current frame and previous frames are combined with a minimum function. This makes the output frame no brighter than the current frame, and will often fade quickly to a black frame.

New Color: *Default* *rgb: [1 1 1]*.

Scales the color of the current frame. Set this to the complement of Old Color to offset overly colored trails.

New Opacity: *Default: 1, Range: 0 to 10.*

Scales the opacity and brightness of the current frame.

Distort Amount: *Default: 0.1, Range: any.*

The severity of the feedback distortions. Make negative to invert the direction of the distortions.

Blur Lens: *Default: 0.08, Range: 0 or greater.*

Smooths the lens image by this amount before using it. Increase this for smoother more continuous feedback directions.

Rotate Distort: *Default: 90, Range: any.*

Rotates the distortion direction by this many degrees. If non-zero, this can create some twisting distortions.

Blur Amount: *Default: 0, Range: 0 or greater.*

The previous frames are blurred by this amount for each new frame. This has no effect unless it is positive.

Diffuse Amount: *Default: 0, Range: 0 or greater.*

The previous frames are passed through a pixel-diffusion process of this magnitude, for each new frame. This has no effect unless it is positive.

Amount Rel: *X & Y, Default: [1 1], Range: 0 or greater.*

The relative amounts of horizontal and vertical blurring and/or diffusing. This has no effect unless Blur Amount or Diffuse Amount are positive.

Center: *X & Y, Default: [0 0], Range: any.*

The center position for rotation and scaling, in screen coordinates relative to the center of the frame. This parameter can be adjusted using the Center Widget.

Z Dist: *Default: 1, Range: 0.001 to 10.*

For each new frame, the 'distance' of the previous frames is scaled by this amount. This causes zooming during the feedback process. Values greater than 1.0 zoom out and make the previous frames smaller, and values less than 1.0 zoom in and enlarge them. This parameter can be adjusted using the Transform Widget.

Rotate: *Default: 0, Range: -90 or greater.*

For each new frame, the amount of rotation in degrees to apply to the previous frames. This parameter can be adjusted using the Transform Widget.

Shift: *X & Y, Default: [0 0], Range: any.*

Shifts the previous frames by this amount for each new frame. If this is non-zero the Center location is less meaningful. This parameter can be adjusted using the Shift Widget.

Wrap: *X & Y, Popup menu, Default: [No No].*

Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Shift: *Check-box*, *Default:* off.

Turns on or off the screen user interface for adjusting the Center parameter.

Show Transform: *Check-box*, *Default:* off.

Turns on or off the screen user interface for adjusting the Z Dist and Rotate parameters.

Show Center: *Check-box*, *Default:* off.

Turns on or off the screen user interface for adjusting the Center parameter.

See Also:

[Feedback](#)

[WarpRepeat](#)

[Sapphire](#)

[Trails](#)

[WarpChroma](#)

[Plug-ins](#)

[TrailsDiffuse](#)

[Introduction](#)

[TimeAverage](#)

[NearestColor](#)

[FeedbackBubble](#)

S_FieldRemove

Adaptively removes video field interlacing artifacts from areas with motion, without blurring the stationary parts of the image. A 'Motion Matte' is generated internally and the moving areas are deinterlaced with the usual loss of vertical resolution, but the stationary areas are not deinterlaced and should remain sharp.

In the Sapphire Time effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mode: *Popup menu, Default: Same Speed.*

Selects speed-change options.

Same Speed: No change in speed.

NTSC to Film: Converts 60 field/sec input to 24 frame/sec output. Every 5 frames of input are converted to 4 frames of output, so in this mode only 4/5 of your output clip will be useful.

Half Speed: Every field of input is converted to one frame of output. In this mode, you should normally first pad your input clip to make it twice as long, so the correct number of output frames will be generated.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*
The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*
Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*
Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Scale Mo Matte: *Default: 4, Range: 0 or greater.*
Increase to remove more field artifacts, or decrease to remove fewer and keep the image sharper.

Threshold Matte: *Default: 0.05, Range: 0 or greater.*
This value is subtracted from the Motion Matte and can be increased to reduce unwanted deinterlacing due just to noise.

Blur Mo Matte: *Default: 0.112, Range: 0 or greater.*
Determines how much the Motion Matte is smoothed out to avoid sharp transitions between the interlaced and deinterlaced areas.

Show: *Popup menu, Default: Result.*
Selects the output option.

Result: output the deinterlaced result normally.
MotionMatte: this allows viewing the Motion Matte itself, and can be helpful when adjusting the other parameters above.

Use Field: *Popup menu, Default: Lower.*
Selects which field to preserve in areas with field artifacts. This parameter only has an affect when using Same Speed mode.

Lower: keeps the lower field.
Upper: keeps the upper field.
Merge: Uses the average of both fields.

Field Dominance: *Popup menu, Default: Lower First.*
Selects the ordering of the output fields. This parameter only has an affect when NOT using Same Speed mode.

Lower First: The lower field is first in time.
Upper First: The upper field is first in time.

Mask Use: *Popup menu, Default: Luma.*
Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.
Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[GetFrame](#)

[DeinterlaceAuto](#)

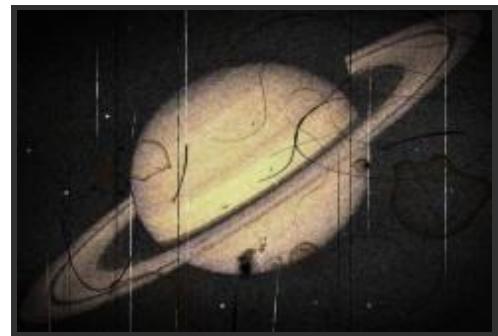
[Sapphire Plug-ins](#)

[Introduction](#)

S_FilmDamage

Simulates damaged film with many options, including dust, hairs, stains, scratches, defocusing, flicker, and shake. Each option has a master control and a set of detailed controls for adjusting the look of that type of damage.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

- Union:** Uses the area covered by both masks together.
- Intersect:** Uses the area that overlaps between the two masks.
- Mocha Only:** Ignore the Input Mask and only use the Mocha Mask.

Grain Parameters:

Grain Amp: *Default: 0.1, Range: 0 to 2.*
Scales the amplitude of the film grain that is added to the result. Set this to 0 to disable all grain.

Grain Amp Red: *Default: 0.9, Range: 0 or greater.*
Scales the red grain amplitude.

Grain Amp Green: *Default: 1, Range: 0 or greater.*
Scales the green grain amplitude.

Grain Amp Blue: *Default: 1.6, Range: 0 or greater.*
Scales the blue grain amplitude. Note that grain is added and subtracted from the image, so for example, increasing Grain Amp Blue will amplify both the blue and yellow speckles.

Grain Amp Dark: *Default: 0.2, Range: 0 to 2.*
The relative amount of grain applied to the darkest regions of the image, per channel. This defaults to less than 1.0 because dark areas usually have less grain than midtones.

Grain Amp Bright: *Default: 0, Range: 0 to 2.*
The relative amount of grain applied to the brightest regions of the image, per channel. This defaults to zero because bright areas usually have less grain than midtones. Note that highly saturated colors can be affected by both Grain Amp Dark and Grain Amp Bright because they are dark in some color channels and bright in others.

Grain Blur: *Default: 0, Range: 0 or greater.*
The grain is smoothed by this amount. Increase for coarser grain.

Grain Blur Red: *Default: 1, Range: 0 or greater.*
The relative blur amount for the red grain.

Grain Blur Green: *Default: 0.9, Range: 0 or greater.*
The relative blur amount for the green grain.

Grain Blur Blue: *Default: 1.2, Range: 0 or greater.*
The relative blur amount for the blue grain.

Grain Mono: *Check-box, Default: off.*
When enabled, the same grain pattern is used for the red, green, and blue channels. To make truly monochrome grain you should also set Grain Amp Red/Green/Blue equal to each other, make sure Midtone Pos Red/Green/Blue are equal, and if GrainBlur is positive also set Grain Blur Red/Green/Blue equal

Grain Hold: *Popup menu, Default: Frame.*
Indicates how often a new grain pattern should be generated. You will probably only notice a difference between these options if Grain Blur is positive to make the grain size larger than one pixel.

- Field:** holds the grain pattern for one field.
- Frame:** holds the grain pattern for one frame (2 fields).

3:2 Pulldown at 0: holds the grain in a 3:2 pulldown pattern with the first pulldown frame at 0. These options are appropriate if your clip was created at 24 fps but is now in 30 fps pulldown form. They will not make sense if your clip is 24P. A 3:2 pulldown pattern repeats every 5 frames, so if frame 1:00:23 is the first frame with field artifacts after three normal frames, then you should specify 3 as the first pulldown frame.

3:2 Pulldown at 1: holds the grain in a 3:2 pulldown pattern with the first pulldown frame at 1.

3:2 Pulldown at 2: holds the grain in a 3:2 pulldown pattern with the first pulldown frame at 2.

3:2 Pulldown at 3: holds the grain in a 3:2 pulldown pattern with the first pulldown frame at 3.

3:2 Pulldown at 4: holds the grain in a 3:2 pulldown pattern with the first pulldown frame at 4.

Color Correct Parameters:

Saturation: *Default:* 1, *Range:* any.

Scales the color saturation. Increase for more intense colors. Set to 0 for monochrome.

Scale Lights: *Default:* 1, *Range:* 0 or greater.

Scales the result by this gray value. Increase for a brighter result.

Offset Dark: *Default:* 0, *Range:* any.

Adds this gray value to the darker regions of the source. This can be negative to increase contrast.

Tint Lights: *Default* *rgb:* [1 1 1].

Scales the result by this color, thus tinting the lighter regions.

Tint Dark: *Default* *rgb:* [0 0 0].

Adds this color to the darker regions of the source.

Stains Parameters:

Stain Density: *Default:* 0.2, *Range:* 0 or greater.

The number of stains on each frame. A fractional value is treated as the probability of a single stain appearing on any given frame.

Vary Stain Density: *Default:* 0.2, *Range:* 0 or greater.

Amount to vary the stain density from frame to frame.

Stain Print: *Default:* 1, *Range:* 0 to 1.

Relative density of stains on the print.

Stain Negative: *Default:* 0, *Range:* 0 to 1.

Relative density of stains on the negative.

Stain Size: *Default:* 1, *Range:* 0 or greater.

Scales the width and height of stains.

Vary Stain Size: *Default:* 0.5, *Range:* 0 or greater.

Amount to vary the size from one stain to the next.

Stain Opacity: *Default:* 0.5, *Range:* 0 to 1.

Scales the opacity of the stains.

Vary Stain Opacity: *Default:* 0.5, *Range:* 0 or greater.

Amount to vary opacity from one stain to the next.

Vary Stain Brightness: *Default:* 0, *Range:* 0 or greater.

Amount to vary brightness from one stain to the next.

Vary Stain Color: *Default: 0, Range: 0 or greater.*

Amount of additional, random color variation for each stain. If this parameter is greater than zero, stain colors can vary outside the range defined by color1 and color2.

Stain Color1: *Default rgb: [0 0 0].*

Beginning of the range of colors for stains.

Stain Color2: *Default rgb: [0.25 0.125 0].*

End of the range of colors for stains. Each stain will have a random color between color1 and color2.

Dust Parameters:

Dust Density: *Default: 30, Range: 0 or greater.*

The average number of dust pieces on each frame. A fractional value is treated as the probability of a single dust speck appearing on any given frame.

Vary Dust Density: *Default: 0.2, Range: 0 or greater.*

Amount to vary the dust density from frame to frame.

Dust On Print: *Default: 1, Range: 0 to 1.*

Relative density of dust on the print.

Dust On Negative: *Default: 0, Range: 0 to 1.*

Relative density of dust on the negative.

Dust Size: *Default: 1, Range: 0 or greater.*

Scales the width and height of dust.

Vary Dust Size: *Default: 0.5, Range: 0 or greater.*

Amount to vary the size from one piece of dust to the next.

Dust Opacity: *Default: 0.8, Range: 0 to 1.*

Scales the opacity of the dust.

Vary Dust Opacity: *Default: 0.5, Range: 0 or greater.*

Amount to vary opacity from one piece of dust to the next.

Vary Dust Brightness: *Default: 0, Range: 0 or greater.*

Amount to vary brightness from one piece of dust to the next.

Vary Dust Color: *Default: 0, Range: 0 or greater.*

Amount of additional, random color variation for each piece of dust. If this parameter is greater than zero, dust colors can vary outside the range defined by color1 and color2.

Dust Color1: *Default rgb: [0 0 0].*

Beginning of the range of colors for dust.

Dust Color2: *Default rgb: [0 0 0].*

End of the range of colors for dust. Each piece of dust will have a random color between color1 and color2.

Hairs Parameters:

Hairs: *Default: 2, Range: 0 or greater.*

Number of hairs stuck in the projector gate.

Hair Persistence: *Default: 3, Range: 0.1 or greater.*

Controls the length of time that hairs persist, and the frequency with which new hairs appear. Increase this value for long-lived hairs, and decrease it to get new hairs more often.

Hair Wiggle Amp: *Default: 0.1, Range: 0 or greater.*
Controls the amount of random movement and stretching that each hair exhibits.

Hair Wiggle Freq: *Default: 1, Range: 0 or greater.*
Controls the frequency of the hair wiggle.

Hair Opacity: *Default: 1, Range: 0 to 1.*
Scales the opacity of the hairs.

Hair Size: *Default: 1, Range: 0 or greater.*
Scales the width and height of the hairs.

Vary Hair Size: *Default: 1, Range: 0 or greater.*
Amount to vary the size from one hair to the next.

Hair Color: *Default rgb: [0 0 0].*
The color of the hairs.

Scratches Parameters:

Scratches: *Integer, Default: 5, Range: 0 or greater.*
Controls the number of scratches on each frame, on average.

Black Scratches: *Default: 1, Range: 0 to 1.*
Number of black scratches, relative to the Scratches parameter value.

White Scratches: *Default: 0.1, Range: 0 to 1.*
Number of white scratches, relative to the Scratches parameter value.

Black Scratch Length: *Default: 10, Range: 0 or greater.*
The length of the black scratches in frames, on average.

White Scratch Length: *Default: 2, Range: 0 or greater.*
The length of the white scratches in frames, on average.

Scratch Width: *Default: 0.15, Range: 0 or greater.*
Width of the average scratch, in approximate NTSC-sized pixels.

Vary Scratches Width: *Default: 1, Range: 0 to 1.*
If this is 0 all the scratches will be the same width. Increase to let each scratch have its own width.

Scratches Taper: *Default: 0.1, Range: 0 to 1.*
Controls the pointiness of the ends of each scratch. Larger value makes a longer taper on each end.

Scratch Opacity: *Default: 1, Range: 0 to 1.*
Maximum opacity of the scratches. Setting this to 0 will fade the scratches out.

Scratch Roughness: *Default: 1, Range: 0 or greater.*
Amount to roughen the edges of each scratch to simulate the random character of a real scratch.

Scratch Rough Freq: *Default: 150, Range: 0.01 or greater.*
Sets the frequency of the roughness on the scratch edges.

Gaps: *Default: 0.28, Range: 0 to 1.*
Like real analog scratches, the dust particle creating the scratch sometimes rolls around and the scratch 'skips'. This controls how much that happens.

Gaps Freq: *Default:* 120, *Range:* 0 or greater.

How often do the scratch gaps occur.

Scratch Area Center: *Default:* 0, *Range:* any.

The center coordinate of the area of the screen covered by the scratches. 0 is in the middle of the screen, -1 is the left edge, and 1 is the right edge.

Scratch Area Width: *Default:* 1, *Range:* 0 or greater.

The width of the area of the screen covered by scratches. 1 means the scratches cover the full screen area. To get scratches only in one strip, adjust scratch area width smaller.

Weave Amount: *Default:* 1, *Range:* 0 or greater.

How much does each scratch weave around on the screen, on average. This is in frame-widths, so 1.0 will let a scratch wander all over the screen. If set to zero, the scratches will all be straight vertical.

Weave Frequency: *Default:* 0.1, *Range:* 0.01 or greater.

How fast do the scratches weave around on the screen, in cycles per frame. Normally less than one.

Shake Parameters:

Shake Amplitude: *Default:* 0, *Range:* 0 or greater.

Amount of vertical shaking to add.

Shake Frequency: *Default:* 1, *Range:* 0 or greater.

Scales the frequency of the shaking. Increase for faster shaking with more frequent hops and changes in direction.

Shake Juminess: *Default:* 1, *Range:* 0 or greater.

Amount of large-scale, jumpy shaking.

Shake Random: *Default:* 0.1, *Range:* 0 or greater.

Amount of small-scale, random shaking.

Shake Always: *Default:* 0.5, *Range:* 0 to 1.

Controls how often shaking occurs. If set to 1, the clip shakes constantly. If set to 0, the clip never shakes. Values in between cause the clip to shake some of the time, and to stay still at other times.

Interframe Border Height: *Default:* 0.1, *Range:* 0 or greater.

Size of the black bar in between frames (the unexposed part of the film).

Shake Time Offset: *Default:* 0, *Range:* any.

Offsets the shake pattern in time. Adjust this value to control the exact time when shaking occurs.

Shake Motion Blur: *Default:* 0.1, *Range:* 0 or greater.

Blurs the result proportionally to the amount of shaking.

Flicker Parameters:

Flicker: *Default:* 0.2, *Range:* 0 or greater.

Scales the colors of the source clip by different amounts over time for a flickering effect. The pattern of flickering can be random, a periodic wave, or a combination of the two.

Flicker Rand Amp: *Default:* 1, *Range:* 0 or greater.

The amplitude of random brightness flickering.

Flicker Rand Freq: *Default:* 10, *Range:* 0 or greater.

The frequency of the random flickering. Increase for more variation between frames. Decrease for slower flickering.

Flicker Wave Amp: *Default: 0, Range: 0 or greater.*

The amplitude of periodic wave flickering.

Flicker Wave Freq: *Default: 5, Range: 0 or greater.*

The frequency of the wave flickering. Increase for faster flickering, decrease for slower. This has no effect if Wave Amp is 0.

Defocus Parameters:

Defocus: *Default: 0, Range: 0 or greater.*

Blurs the source clip by different amounts over time to simulate focus problems in the projector. The pattern of defocus can be random, a periodic wave, or a combination of the two.

Defocus Rand Amp: *Default: 1, Range: 0 or greater.*

The amplitude of defocusing that changes randomly over time.

Defocus Rand Freq: *Default: 10, Range: 0 or greater.*

Scales the frequency of the random defocus. Increase for more variation between frames. Decrease for slower defocus changes over time.

Defocus Wave Amp: *Default: 0, Range: 0 or greater.*

The amplitude of periodic wave defocus.

Defocus Wave Freq: *Default: 5, Range: 0 or greater.*

The frequency of the wave defocus. Increase for more variation between frames.

Vignette Parameters:

Vignette Darkness: *Default: 0.1, Range: 0 to 1.*

Vignetting is darkening of the image towards the corners and sides of the image. This parameter controls how much the outer corners of the screen should be darkened (vignetted). 0 gives no vignetting, 1 gives maximum darkening.

Vignette Radius: *Default: 1, Range: 0 or greater.*

Distance from the center to apply the vignette.

Vignette Edge Softness: *Default: 0.5, Range: 0 or greater.*

The width of the vignette's soft edge. Larger values give softer, less visible edges.

Vignette Rel Height: *Default: 0.75, Range: 0.1 or greater.*

Controls the aspect ratio of the vignette ellipse. This should normally be set to the aspect ratio of the image, e.g. .75 for NTSC.

Other Parameters:

Seed: *Default: 0.123, Range: 0 or greater.*

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[TVDamage](#)

[DigitalDamage](#)

[FilmEffect](#)

[BleachBypass](#)

[VintageColor2Strip](#)

[Vignette](#)

[Flicker](#)

[JpegDamage](#)

[ScanLines](#)

[FlickerRemove](#)

[FlickerMatch](#)

[Shake](#)

[HueSatBright](#)

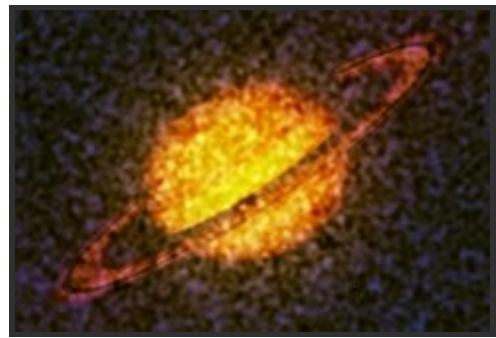
[Sapphire](#)

[Plug-ins](#)

[Introduction](#)

S_FilmEffect

Provides a physically accurate model of film exposure and processing to make your video footage look like it was shot on particular film stocks. It can remove field artifacts, perform color correction for specific film types, add film grain, and apply glow or soft focus effects. The color correction and grain can be selectively disabled using the Scale CC and Grain Amp parameters.



In the Sapphire Stylize effects submenu.

Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Neg Film: *Popup menu, Default: Kodak 5245.*

Selects the negative film stock.

None: Ignore any effect of negative film. This is not normally useful unless you also select None for the print film to disable both.

Kodak 5245: Eastman EXR 50D, low speed, daylight balanced, very fine grain.

Kodak 5246: Kodak VISION 250D, higher contrast, medium speed, daylight balanced, fine grain.

Kodak 5248: Eastman EXR 100T, medium speed, tungsten light balanced, very fine grain.

Kodak 5274: Kodak VISION 200T, medium speed, tungsten light balanced, fine grain.

Kodak 5277: Kodak VISION 320T, lower contrast, medium speed, tungsten light balanced, medium-fine grain.

Kodak 5279: Kodak VISION 500T, high speed, tungsten light balanced, somewhat grainy.

Kodak 5284: Kodak VISION Expression 500T, lower contrast, high speed, tungsten light balanced, medium grain.

Kodak 5289: Kodak VISION 800T, very fast, tungsten light balanced, grainy.

Kodak 5293: Eastman EXR 200T, reduced contrast, tungsten light balanced, medium grain.

Kodak 5298: Eastman EXR 500T, high speed, tungsten light balanced, grainy.

K SFX200T: Special effects film, medium grain.

Kodak 5217: Kodak Vision2 200T, tungsten light balanced, fine grain.

Kodak 5218: Kodak Vision2 500T, tungsten light balanced, fine grain.

Print Film: *Popup menu, Default: Kodak 2383.*

Selects the print film stock.

None: Ignore any effect of the print film. This causes the negative to be output directly. If the negative film is also set to None, the color correction and grain are disabled.

Kodak 2383: Kodak VISION Color Print Film, rich blacks.

Kodak 2393: Kodak VISION Premier Color Print Film, rich blacks, some grain.

Kodak 2395: Kodak VISION Color Teleprint Film, low contrast.

Kodak 5386: Eastman EXR Color Print Film (discontinued by Kodak, replaced by 2383).

Kodak 5285 Rev: Ektachrome 100D Reversal film, daylight balanced, high contrast and grainy. Note that the negative film is ignored when using reversal film.

Kodak 7270 Rev: Kodachrome 40 Movie Film, tungsten balanced reversal film, high contrast and somewhat grainy. Note that the negative film is ignored when using reversal film.

Blur Input: *Default: 0, Range: 0 or greater.*

The input is smoothed by this amount. This can be used to remove video noise or compression artifacts before processing.

Color Correct Parameters:

Scale CC: *Default: 1, Range: 0 to 5.*

Scales the amount of color correction performed due to the film types, gamma values, and exposure values. Set to 0 to disable color correction. If you increase this above 1.0 it exaggerates the color correction, which normally increases the contrast.

Input Gamma: *Default:* 2.2, *Range:* 0.1 or greater.

The gamma that your original clip was shot for. For video this is normally 2.2; for synthetic computer graphics it may be less.

Output Gamma: *Default:* 2.2, *Range:* 0.1 or greater.

The intended viewing gamma of the output.

Neg Exposure: *Default:* 0, *Range:* any.

Adjusts the simulated exposure of the negative film, in stops. Increase for over-exposed and brighter.

Print Exposure: *Default:* 0, *Range:* any.

Adjusts the simulated exposure of the print film, in stops. Increase for over-exposed and darker.

Print Lights Red: *Default:* 25, *Range:* 0 to 50.

Adjusts the red exposure of the print film, in printer light points. 1 light point is 1/12 stop. Increase to over-expose red and give a more cyan result.

Print Lights Green: *Default:* 25, *Range:* 0 to 50.

Adjusts the green exposure of the print film, in printer light points. 1 light point is 1/12 stop. Increase to over-expose green and give a more magenta result.

Print Lights Blue: *Default:* 25, *Range:* 0 to 50.

Adjusts the blue exposure of the print film, in printer light points. 1 light point is 1/12 stop. Increase to over-expose blue and give a more yellow result.

Scale Brights: *Default:* 1, *Range:* 0 or greater.

Scales the bright areas of the final result after the other color correction, glow, and grain are applied. (This parameter is not affected by Scale CC.)

Offset Dark: *Default:* 0, *Range:* -8 to 2.

Adds this gray value to the darker regions of the final result after the other color correction, glow, and grain are applied. This can be negative to increase contrast. (This parameter is not affected by Scale CC.)

Glow Parameters:

Glow Brightness: *Default:* 0, *Range:* 0 or greater.

If positive, the image is combined with a blurred version of itself to give a glowing look. Increase for a brighter glow.

Glow Soft Focus: *Default:* 0, *Range:* 0 to 1.

If positive, the image is mixed with a blurred version of itself to give a soft focus look. The effect of this parameter is similar to Glow Brightness, but this does not brighten the overall result. Increase this to mix in more of the blurred version and less of the original. If this is 1 and Glow Brightness is 0 you will get only the blurred version.

Glow Width: *Default:* 0.224, *Range:* 0 or greater.

The width of the blur used by the glow and/or soft focus.

Glow Width Red: *Default:* 1, *Range:* 0 or greater.

The relative glow width for the red channel.

Glow Width Green: *Default:* 1, *Range:* 0 or greater.

The relative glow width for the green channel.

Glow Width Blue: *Default:* 1, *Range:* 0 or greater.

The relative glow width for the blue channel.

Grain Parameters:

Grain Amp: *Default:* 1, *Range:* 0 or greater.

Scales the amplitude of the film grain that is added to the result. Set this to 0 to disable all grain.

Grain Amp Red: *Default:* 0.9, *Range:* 0 or greater.

Scales the red grain amplitude.

Grain Amp Green: *Default:* 1, *Range:* 0 or greater.

Scales the green grain amplitude.

Grain Amp Blue: *Default:* 1.6, *Range:* 0 or greater.

Scales the blue grain amplitude. Note that grain is added and subtracted from the image, so for example, increasing Grain Amp Blue will amplify both the blue and yellow speckles.

Grain Amp Dark: *Default:* 0.2, *Range:* 0 to 2.

The relative amount of grain applied to the darkest regions of the image, per channel. This defaults to less than 1.0 because dark areas usually have less grain than midtones.

Grain Amp Bright: *Default:* 0, *Range:* 0 to 2.

The relative amount of grain applied to the brightest regions of the image, per channel. This defaults to zero because bright areas usually have less grain than midtones. Note that highly saturated colors can be affected by both Grain Amp Dark and Grain Amp Bright because they are dark in some color channels and bright in others.

Midtone Pos Red: *Default:* 0.5, *Range:* 0 to 1.

The position of the midtones in the red channel that will normally receive the maximum amount of grain. The red grain amplitude is interpolated from Grain Amp Dark at black, up to 1.0 at this midtone position, then down to Grain Amp Bright at white. This whole curve is then scaled by the Grain Amp Red parameter.

Midtone Pos Green: *Default:* 0.5, *Range:* 0 to 1.

The position of the midtones in the green channel that will normally receive the maximum amount of grain. The green grain amplitude is interpolated from Grain Amp Dark at black, up to 1.0 at this midtone position, then down to Grain Amp Bright at white. This whole curve is then scaled by the Grain Amp Green parameter.

Midtone Pos Blue: *Default:* 0.5, *Range:* 0 to 1.

The position of the midtones in the blue channel that will normally receive the maximum amount of grain. The blue grain amplitude is interpolated from Grain Amp Dark at black, up to 1.0 at this midtone position, then down to Grain Amp Bright at white. This whole curve is then scaled by the Grain Amp Blue parameter.

Grain Blur: *Default:* 0, *Range:* 0 or greater.

The grain is smoothed by this amount. Increase for coarser grain.

Grain Blur Red: *Default:* 1, *Range:* 0 or greater.

The relative blur amount for the red grain.

Grain Blur Green: *Default:* 0.9, *Range:* 0 or greater.

The relative blur amount for the green grain.

Grain Blur Blue: *Default:* 1.2, *Range:* 0 or greater.

The relative blur amount for the blue grain.

Grain Mono: *Check-box, Default:* off.

When enabled, the same grain pattern is used for the red, green, and blue channels. To make truly monochrome grain you should also set Grain Amp Red/Green/Blue equal to each other, make sure Midtone Pos Red/Green/Blue are equal, and if GrainBlur is positive also set Grain Blur Red/Green/Blue equal

Grain Hold: *Popup menu, Default:* Frame.

Indicates how often a new grain pattern should be generated. You will probably only notice a difference between

these options if Grain Blur is positive to make the grain size larger than one pixel.

Field: holds the grain pattern for one field.

Frame: holds the grain pattern for one frame (2 fields).

3:2 Stutter at 0: holds the grain in a 3:2 pulldown pattern with the first pulldown frame at 0. These options are appropriate if your clip was created at 24 fps but is now in 30 fps pulldown form. They will not make sense if your clip is 24P. A 3:2 pulldown pattern repeats every 5 frames, so if frame 1:00:23 is the first frame with field artifacts after three normal frames, then you should specify 3 as the first pulldown frame.

3:2 Stutter at 1: holds the grain in a 3:2 pulldown pattern with the first pulldown frame at 1.

3:2 Stutter at 2: holds the grain in a 3:2 pulldown pattern with the first pulldown frame at 2.

3:2 Stutter at 3: holds the grain in a 3:2 pulldown pattern with the first pulldown frame at 3.

3:2 Stutter at 4: holds the grain in a 3:2 pulldown pattern with the first pulldown frame at 4.

Grain Seed: *Default:* 0.123, *Range:* 0 or greater.

Initializes the random number generator for the grain generation. The actual seed value is not significant, but different seeds give different grain patterns and the same value should give a repeatable pattern.

Vignette Parameters:

Vignette Darkness: *Default:* 0, *Range:* 0 to 1.

Vignetting is darkening of the image towards the corners and sides of the image. This parameter controls how much the outer corners of the screen should be darkened (vignetted). 0 gives no vignetting, 1 gives maximum darkening.

Vignette Radius: *Default:* 1, *Range:* 0 or greater.

Distance from the center to apply the vignette.

Vignette Edge Softness: *Default:* 0.5, *Range:* 0 or greater.

The width of the vignette's soft edge. Larger values give softer, less visible edges.

Vignette Rel Height: *Default:* 0.75, *Range:* 0.1 or greater.

Controls the aspect ratio of the vignette ellipse. This should normally be set to the aspect ratio of the image, e.g. .75 for NTSC.

Field Parameters:

Fields: *Popup menu, Default: As Is.*

Allows removing field artifacts from the input clip. This is useful if you want the clip to look like it was shot on frames instead of fields. You can show a single field, merge the two together, or simulate a 3:2 pulldown stutter pattern.

As Is: leaves the fields unchanged.

Keep Lower Only: shows the lower field only, removes the upper field.

Keep Upper Only: shows the upper field only, removes the lower field.

Merge Fields: blends both fields together to remove interlacing artifacts.

3:2 Stutter at 0: Simulates a temporal stutter effect as if the clip had been transferred from 24P to NTSC video using 3:2 pulldown, with the first pulldown frame at 0. If you are using this option with non-zero Grain Blur, you may want to also set Grain Hold to the corresponding value.

3:2 Stutter at 1: Simulates a 3:2 pulldown effect with the first pulldown frame at 1.

3:2 Stutter at 2: Simulates a 3:2 pulldown effect with the first pulldown frame at 2.

3:2 Stutter at 3: Simulates a 3:2 pulldown effect with the first pulldown frame at 3.

3:2 Stutter at 4: Simulates a 3:2 pulldown effect with the first pulldown frame at 4.

Field Dominance: *Popup menu, Default: Lower First.*

Specifies which field should come first in time when simulating 3:2 pulldown patterns. This is only used if a 3:2 stutter option is selected in the Fields and/or the Grain Hold options.

Lower First: the lower field is first in time.

Upper First: the upper field is first in time.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[FilmDamage](#)

[BleachBypass](#)

[Grain](#)

[GrainStatic](#)

[Diffuse](#)

[FieldRemove](#)

[Sapphire Plug-ins](#)

[Introduction](#)

S_FilmRoll

Transitions between two clips by rolling one off screen vertically while rolling the other on, while applying various film damage effects such as shaking, stains, scratches, and flicker.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Amount: *Default: 0, Range: -0.5 to 1.5.*

Determines the transition ratio between the From and To inputs, and would normally be animated from 0 to 1 to perform a complete transition. The curve controlling this parameter can be adjusted for more detailed control over the timing of the wipe.

Slow In: *Default: 0.5, Range: 0 or greater.*

If positive, causes the transition to start more gradually.

Slow Out: *Default: 0.5, Range: 0 or greater.*

If positive, causes the transition to end more gradually.

Roll Speed: *Integer, Default: 1, Range: any.*

The amount of vertical rolling, in screen heights. The clips will move this distance over the full course of the transition, ending with the To clip in its normal position.

Motion Blur: *Default: 0.5, Range: 0 or greater.*

Blurs the result proportionally to the amount of shaking.

Border Height: *Default: 0.1, Range: 0 or greater.*

The height of the border that appears between the From and To clips as they are rolling.

Glow Brightness: *Default: 0.5, Range: 0 or greater.*

Adjusts the peak amount of glow. Glow will automatically fall off to zero at the beginning and end of the effect, to provide a smooth transition.

Glow Width: *Default: 0.224, Range: 0 or greater.*

The width of the glowing border.

Damage Amount: *Default: 2, Range: 0 or greater.*

Adjusts the peak amount of all damage effects. Increase for a more damaged look, or decrease for a cleaner look. The damage will automatically fall off at the beginning and end of the transition. Individual damage types can also

be adjusted with their respective parameters, such as Stain Density, Hairs, Scratches, etc.

Stains Parameters:

Stain Density: *Default: 2, Range: 0 to 500.*

The number of stains on each frame. A fractional value is treated as the probability of a single stain appearing on any given frame.

Vary Stain Density: *Default: 0.2, Range: 0 or greater.*

Amount to vary the stain density from frame to frame.

Stain Print: *Default: 1, Range: 0 to 1.*

Relative density of stains on the print.

Stain Negative: *Default: 0, Range: 0 to 1.*

Relative density of stains on the negative.

Stain Size: *Default: 1, Range: 0 or greater.*

Scales the width and height of stains.

Vary Stain Size: *Default: 0.5, Range: 0 or greater.*

Amount to vary the size from one stain to the next.

Stain Opacity: *Default: 0.5, Range: 0 to 1.*

Scales the opacity of the stains.

Vary Stain Opacity: *Default: 0.5, Range: 0 or greater.*

Amount to vary opacity from one stain to the next.

Vary Stain Brightness: *Default: 0, Range: 0 or greater.*

Amount to vary brightness from one stain to the next.

Vary Stain Color: *Default: 0, Range: 0 or greater.*

Amount of additional, random color variation for each stain. If this parameter is greater than zero, stain colors can vary outside the range defined by color1 and color2.

Stain Color1: *Default rgb: [0 0 0].*

Beginning of the range of colors for stains.

Stain Color2: *Default rgb: [0.25 0.125 0].*

End of the range of colors for stains. Each stain will have a random color between color1 and color2.

Dust Parameters:

Dust Density: *Default: 60, Range: 0 or greater.*

The average number of dust pieces on each frame. A fractional value is treated as the probability of a single dust speck appearing on any given frame.

Vary Dust Density: *Default: 0.2, Range: 0 or greater.*

Amount to vary the dust density from frame to frame.

Dust On Print: *Default: 1, Range: 0 to 1.*

Relative density of dust on the print.

Dust On Negative: *Default: 0, Range: 0 to 1.*

Relative density of dust on the negative.

Dust Size: *Default: 1, Range: 0 or greater.*

Scales the width and height of dust.

Vary Dust Size: *Default: 0.5, Range: 0 or greater.*

Amount to vary the size from one piece of dust to the next.

Dust Opacity: *Default: 0.8, Range: 0 to 1.*

Scales the opacity of the dust.

Vary Dust Opacity: *Default: 0.5, Range: 0 or greater.*

Amount to vary opacity from one piece of dust to the next.

Vary Dust Brightness: *Default: 0, Range: 0 or greater.*

Amount to vary brightness from one piece of dust to the next.

Vary Dust Color: *Default: 0, Range: 0 or greater.*

Amount of additional, random color variation for each piece of dust. If this parameter is greater than zero, dust colors can vary outside the range defined by color1 and color2.

Dust Color1: *Default rgb: [0 0 0].*

Beginning of the range of colors for dust.

Dust Color2: *Default rgb: [0 0 0].*

End of the range of colors for dust. Each piece of dust will have a random color between color1 and color2.

Hairs Parameters:

Hairs: *Default: 2, Range: 0 or greater.*

Number of hairs stuck in the projector gate.

Hair Persistence: *Default: 3, Range: 0.1 or greater.*

Controls the length of time that hairs persist, and the frequency with which new hairs appear. Increase this value for long-lived hairs, and decrease it to get new hairs more often.

Hair Wiggle Amp: *Default: 0.1, Range: 0 or greater.*

Controls the amount of random movement and stretching that each hair exhibits.

Hair Wiggle Freq: *Default: 1, Range: 0 or greater.*

Controls the frequency of the hair wiggle.

Hair Opacity: *Default: 1, Range: 0 to 1.*

Scales the opacity of the hairs.

Hair Size: *Default: 1, Range: 0 or greater.*

Scales the width and height of the hairs.

Vary Hair Size: *Default: 1, Range: 0 or greater.*

Amount to vary the size from one hair to the next.

Hair Color: *Default rgb: [0 0 0].*

The color of the hairs.

Scratches Parameters:

Scratches: *Integer, Default: 5, Range: 0 or greater.*

Controls the number of scratches on each frame, on average.

Black Scratches: *Default:* 1, *Range:* 0 to 1.
Number of black scratches, relative to the Scratches parameter value.

White Scratches: *Default:* 0.1, *Range:* 0 to 1.
Number of white scratches, relative to the Scratches parameter value.

Black Scratch Length: *Default:* 10, *Range:* 0 or greater.
The length of the black scratches in frames, on average.

White Scratch Length: *Default:* 2, *Range:* 0 or greater.
The length of the white scratches in frames, on average.

Scratch Width: *Default:* 0.15, *Range:* 0 or greater.
Width of the average scratch, in approximate NTSC-sized pixels.

Vary Scratches Width: *Default:* 1, *Range:* 0 to 1.
If this is 0 all the scratches will be the same width. Increase to let each scratch have its own width.

Scratches Taper: *Default:* 0.1, *Range:* 0 to 1.
Controls the pointiness of the ends of each scratch. Larger value makes a longer taper on each end.

Scratch Opacity: *Default:* 1, *Range:* 0 to 1.
Maximum opacity of the scratches. Setting this to 0 will fade the scratches out.

Scratch Roughness: *Default:* 1, *Range:* 0 or greater.
Amount to roughen the edges of each scratch to simulate the random character of a real scratch.

Scratch Roughness Freq: *Default:* 150, *Range:* 0.01 or greater.
Sets the frequency of the roughness on the scratch edges.

Gaps: *Default:* 0.28, *Range:* 0 to 1.
Like real analog scratches, the dust particle creating the scratch sometimes rolls around and the scratch 'skips'. This controls how much that happens.

Gaps Freq: *Default:* 120, *Range:* 0 or greater.
How often do the scratch gaps occur.

Scratch Area Center: *Default:* 0, *Range:* -2 or greater.
The center coordinate of the area of the screen covered by the scratches. 0 is in the middle of the screen, -1 is the left edge, and 1 is the right edge.

Scratch Area Width: *Default:* 1, *Range:* 0 or greater.
The width of the area of the screen covered by scratches. 1 means the scratches cover the full screen area. To get scratches only in one strip, adjust scratch area width smaller.

Weave Amount: *Default:* 1, *Range:* 0 or greater.
How much does each scratch weave around on the screen, on average. This is in frame-widths, so 1.0 will let a scratch wander all over the screen. If set to zero, the scratches will all be straight vertical.

Weave Frequency: *Default:* 0.1, *Range:* 0.01 or greater.
How fast do the scratches weave around on the screen, in cycles per frame. Normally less than one.

Shake Parameters:

Shake Amplitude: *Default:* 0.2, *Range:* 0 or greater.
Amount of vertical shaking to add.

Shake Frequency: *Default:* 1, *Range:* 0 or greater.

Scales the frequency of the shaking. Increase for faster shaking with more frequent hops and changes in direction.

Shake Jumpiness: *Default:* 1, *Range:* 0 or greater.

Amount of large-scale, jumpy shaking.

Shake Random: *Default:* 0.1, *Range:* 0 or greater.

Amount of small-scale, random shaking.

Shake Time Offset: *Default:* 0, *Range:* any.

Offsets the shake pattern in time. Adjust this value to control the exact time when shaking occurs.

Vignette Parameters:

Vignette Darkness: *Default:* 0.5, *Range:* 0 to 1.

Vignetting is darkening of the image towards the corners and sides of the image. This parameter controls how much the outer corners of the screen should be darkened (vignetted). 0 gives no vignetting, 1 gives maximum darkening.

Vignette Radius: *Default:* 1, *Range:* 0 or greater.

Distance from the center to apply the vignette.

Vignette Edge Softness: *Default:* 0.5, *Range:* 0 or greater.

The width of the vignette's soft edge. Larger values give softer, less visible edges.

Vignette Rel Height: *Default:* 0.75, *Range:* 0.1 or greater.

Controls the aspect ratio of the vignette ellipse. This should normally be set to the aspect ratio of the image, e.g. .75 for NTSC.

Flicker Parameters:

Flicker: *Default:* 1, *Range:* 0 or greater.

Scales the colors of the source clip by different amounts over time for a flickering effect. The pattern of flickering can be random, a periodic wave, or a combination of the two.

Flicker Rand Amp: *Default:* 1, *Range:* 0 or greater.

The amplitude of random brightness flickering.

Flicker Rand Freq: *Default:* 10, *Range:* 0 or greater.

The frequency of the random flickering. Increase for more variation between frames. Decrease for slower flickering.

Flicker Wave Amp: *Default:* 0, *Range:* 0 or greater.

The amplitude of periodic wave flickering.

Flicker Wave Freq: *Default:* 5, *Range:* 0 or greater.

The frequency of the wave flickering. Increase for faster flickering, decrease for slower. This has no effect if Wave Amp is 0.

Defocus Parameters:

Defocus: *Default:* 0.5, *Range:* 0 or greater.

Blurs the source clip by different amounts over time to simulate focus problems in the projector. The pattern of defocus can be random, a periodic wave, or a combination of the two.

Defocus Rand Amp: *Default:* 1, *Range:* 0 or greater.

The amplitude of defocusing that changes randomly over time.

Defocus Rand Freq: *Default:* 10, *Range:* 0 or greater.

Scales the frequency of the random defocus. Increase for more variation between frames. Decrease for slower

defocus changes over time.

Defocus Wave Amp: *Default:* 0, *Range:* 0 or greater.

The amplitude of periodic wave defocus.

Defocus Wave Freq: *Default:* 5, *Range:* 0 or greater.

The frequency of the wave defocus. Increase for more variation between frames.

Other Parameters:

Seed: *Default:* 0.123, *Range:* 0 or greater.

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

See Also:

[SwishPan](#)

[Swish3D](#)

[FilmDamage](#)

[TVChannelChange](#)

[FlickerRemove](#)

[FlickerMatch](#)

[Shake](#)

[HueSatBright](#)

[Sapphire](#)

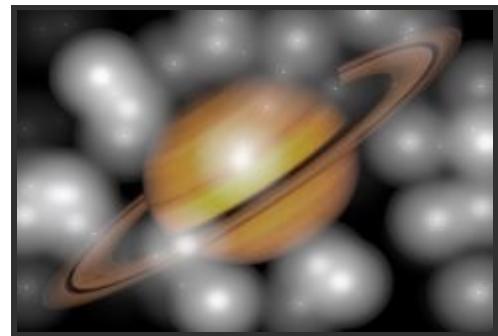
[Plug-ins](#)

[Introduction](#)

S_Flashbulbs

Simulates lots of flashbulbs going off. With many small flashes, can look like a stadium scene. With a few large flashes, works well on a celebrity red carpet clip.

In the Sapphire Lighting effects submenu.



Inputs:

Background: *Optional.* The clip to use as background.

Mask: *Optional.* Used to restrict the flares to a certain area of the image. Areas where this is white will get flashbulbs; black areas will be get no flashes.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Flash Style: *Default: 0, Range: 0 or greater.*
Style of flashbulb to use. Several styles are available, or you can try some of the glares for a different look.

Brightness: *Default: 5, Range: 0 or greater.*
Overall brightness of the flashes.

Vary Brightness: *Default: 0.2, Range: 0 to 1.*
Increase to vary the brightness of each flashbulb in each frame.

Flashes: *Integer, Default: 2, Range: 0 or greater.*
Approximate number of flashes per frame.

Flash Randomness: *Default: 0.5, Range: 0 to 1.*
Increase to get more flashes on some frames (up to the values of Flashes) and fewer on others.

Flash Size: *Default: 1, Range: 0 or greater.*
Average size of flashes. This parameter can be adjusted using the Flash Size Widget.

Flash Size Rel: *X & Y, Default: [1 1], Range: 0 or greater.*
Use to squash or stretch flashes. This parameter can be adjusted using the Flash Size Widget.

Flash Gamma: *Default: 1, Range: 0.1 or greater.*

Brightens or darkens the midtones of the flashes. Can give a round, hard-edged look, or make the flashes more soft

and subtle.

Hold Frames: *Integer, Default: 1, Range: 0 or greater.*

Each flash trails off slightly in time, to simulate persistence of vision as well as the effect of the filament cooling off

in old-time flashbulbs. Hold Frames controls how long that trail lasts.

Flash Decay Rate: *Default: 0.1, Range: 0 to 1.*
How quickly the flashes decay over the Hold Frames time. Increase to make them stay on screen brighter, for longer; decrease to make them disappear quickly. Note that you may have to increase Hold Frames to see long-lived flash trails.

Bg Brightness: *Default: 1, Range: 0 or greater.*
Scales the brightness of the background before combining with the flashbulbs. If 0, the result will contain only the flashbulbs image over black.

Combine: *Popup menu, Default: Add.*
Determines how the flash image is combined with the background.

Screen: blends the flashes with the background, which can help prevent overly bright results.
Add: causes the flash image to be added to the background.
Flashes Only: shows the flashes over a transparent black background.

Seed: *Default: 0.1, Range: 0 or greater.*
Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Affect Alpha: *Default:* 0, *Range:* 0 or greater.

If this value is positive the output Alpha channel will include some opacity from the flashes. The maximum of the red, green, and blue flash brightness is scaled by this value and combined with the background Alpha at each pixel.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu*, *Default:* Luma.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Show Flash Size: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Flash Size parameter.

See Also:

[DissolveFlashbulbs](#)

[Sapphire Plug-ins](#)

[Introduction](#)

S_Flicker

Scales the colors of the source clip by different amounts over time for a flickering effect. The pattern of flickering can be random, a periodic wave, or a combination of the two.

In the Sapphire Time effects submenu.



Inputs:

Source: The clip to be processed.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Amplitude: *Default: 0.2, Range: 0 or greater.*

Scales the amplitude of all flickering.

Rand Luma Amp: *Default: 1, Range: 0 or greater.*

The amplitude of smooth but random flickering affecting the brightness.

Rand Color Amp: *Default: 0, Range: 0 or greater.*

The amplitude of random flickering affecting the color channels independently.

Rand Freq: *Default: 30, Range: 0 or greater.*

The frequency of the random flickering. Increase for more variation between frames. Decrease for slower flickering.

Wave Amp: *Default: 0, Range: 0 or greater.*

The amplitude of periodic wave flickering.

Wave Freq: *Default: 5, Range: 0 or greater.*

The frequency of the wave flickering. Increase for faster flickering, decrease for slower. This has no effect if Wave Amp is 0.

Wave R Phase: *Default: 0, Range: any.*

Shifts the wave pattern in time, for the red channel.

Wave G Phase: *Default: 0, Range: any.*

Shifts the wave pattern in time, for the green channel.

Wave B Phase: *Default: 0, Range: any.*

Shifts the wave pattern in time, for the blue channel.

Red Amp: *Default: 1, Range: 0 or greater.*

Scales the amount of flicker applied to the red channel.

Green Amp: *Default: 1, Range: 0 or greater.*

Scales the amount of flicker applied to the green channel.

Blue Amp: *Default:* 1, *Range:* 0 or greater.
Scales the amount of flicker applied to the blue channel.

Brightness: *Default:* 1, *Range:* 0 or greater.
Scales the brightness of the result.

Seed: *Default:* 0.123, *Range:* 0 or greater.
Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

See Also:

[FlickerRemove](#)
[FlickerMatch](#)
[Shake](#)
[HueSatBright](#)

[Sapphire Plug-ins](#)
[Introduction](#)

S_FlickerMatch

Adds flicker to the Source clip using the flicker from a second Match clip. For example, a clip can be brightened in synchrony with a flashing light in another clip. To use this effect, first position the corners of the rectangle over an area of the Match clip which has brightness changes you want to copy. A middle or light gray area is best for this. Then select a frame where you want the Source brightness unchanged, and hit the Set Match Level button. When other frames are processed, the Source brightness will be scaled by the average Match brightness within the rectangle, relative to the Match Level.

In the Sapphire Time effects submenu.



Inputs:

Source: The clip to add flicker to.

Match: The clip to copy flicker from.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Rect Corner1: *X & Y, Default: [-0.583 -0.441], Range: any.*

The upper left corner of the rectangle which is used to measure the flicker, in screen coordinates.

Rect Corner2: *X & Y, Default: [0.583 0.441], Range: any.*

The lower right corner of the rectangle which is used to measure the flicker, in screen coordinates.

Match Level: *Default: 0.5, Range: 0.01 or greater.*

The average Match brightness in the rectangle for which the Source input is unchanged.

Set Match Level: *Push-button.*

Pressing this button sets the Match Level parameter to the average Match clip brightness in the rectangle at the current frame. It causes the output to equal the Source at this frame.

Show Rect: *Check-box, Default: on.*

Turns on or off the screen user interface widget for adjusting the Rect Corner corner parameters.

See Also:

[FlickerMatchColor](#)

[FlickerRemove](#)

[Sapphire](#)

[FlickerRemoveColor](#)

[Plug-ins](#)

[FlickerRemoveMatte](#)

[Introduction](#)

[FlickerRmMatteColor](#)

[FlickerMatchMatte](#)

FlickerMchMatteColor
Flicker

S_FlickerMatchMatte

Adds flicker to the Source clip using the flicker from a second Match clip, in the areas specified by a Matte. To use this effect, select a frame where you want the Source brightness unchanged, and hit the Set Match Level button. When other frames are processed, the Source brightness will be scaled by the average Match brightness within the Matte, relative to the Match Level.

In the Sapphire Time effects submenu.

Flicker Match

Inputs:

Source: The clip to add flicker to.

Match: The clip to copy flicker from.

Matte: *Optional.* This clip specifies which Source areas to measure the flicker from. If this input is not provided, the Alpha of the Match input is used as the Matte instead. It can be inverted with the Invert Matte parameter.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Match Level: *Default: 0.5, Range: 0.01 or greater.*

The average Match brightness in the Matte for which the Source input is unchanged.

Set Match Level: *Push-button.*

Pressing this button sets the Match Level parameter to the average Match clip brightness within the Matte at the current frame. It causes the output to equal the Source at this frame.

Matte Use: *Popup menu, Default: Alpha.*

Determines how the Matte input channels are used to make a monochrome matte.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Invert Matte: *Check-box, Default: off.*

If enabled, the black and white of the matte are inverted before use.

See Also:

[FlickerMchMatteColor](#)

[FlickerRemove](#)

[Sapphire](#)

[FlickerRemoveColor](#)

[Plug-ins](#)

[FlickerRemoveMatte](#)

[Introduction](#)

FlickerRmMatteColor

FlickerMatch

FlickerMatchColor

Flicker

S_FlickerMatchColor

Adds color changes to the Source clip using the color changes from a second Match clip. Similar to FlickerMatch but the process is applied to each color channel. To use this effect, first position the corners of the rectangle over an area of the Match clip which has color changes you want to copy. A middle or light gray area is best for this. Then select a frame for which you want the Source color unchanged, and hit the Set Match Level button. When you process other frames, the Source colors will be scaled by the average Match color within the rectangle, relative to the Match Color.



In the Sapphire Time effects submenu.

Inputs:

Source: The clip to add color changes to.

Match: The clip to copy color changes from.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Rect Corner1: *X & Y, Default: [-0.583 -0.441], Range: any.*

The upper left corner of the rectangle which is used to measure the flicker, in screen coordinates.

Rect Corner2: *X & Y, Default: [0.583 0.441], Range: any.*

The lower right corner of the rectangle which is used to measure the flicker, in screen coordinates.

Match Color: *Default rgb: [0.5 0.5 0.5].*

The average Match color in the rectangle for which the Source input is unchanged.

Set Match Color: *Push-button.*

Pressing this button sets the Match Color parameter to the average Match clip color in the rectangle at the current frame. It causes the output to equal the Source at this frame.

Show Rect: *Check-box, Default: on.*

Turns on or off the screen user interface widget for adjusting the Rect Corner corner parameters.

See Also:

[FlickerMatch](#)

[FlickerRemove](#)

[Sapphire](#)

[FlickerRemoveColor](#)

[Plug-ins](#)

[FlickerRemoveMatte](#)

[Introduction](#)

[FlickerRmMatteColor](#)

[FlickerMatchMatte](#)

FlickerMchMatteColor
Flicker

S_FlickerMchMatteColor

Adds color changes to the Source clip using the color changes from a second Match clip, in the areas specified by a Matte. To use this effect, select a frame where you want the Source color unchanged, and hit the Set Match Color button. When other frames are processed, the Source color will be scaled by the average Match color within the Matte, relative to the Match Color.



In the Sapphire Time effects submenu.

Inputs:

Source: The clip to add flicker to.

Match: The clip to copy flicker from.

Matte: *Optional.* This clip specifies which Source areas to measure the flicker from. If this input is not provided, the Alpha of the Match input is used as the Matte instead. It can be inverted with the Invert Matte parameter.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Match Color: *Default rgb: [0.5 0.5 0.5].*

The average Match color in the Matte for which the Source input is unchanged.

Set Match Color: *Push-button.*

Pressing this button sets the Match Color parameter to the average Match clip color within the Matte at the current frame. It causes the output to equal the Source at this frame.

Matte Use: *Popup menu, Default: Alpha.*

Determines how the Matte input channels are used to make a monochrome matte.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Invert Matte: *Check-box, Default: off.*

If enabled, the black and white of the matte are inverted before use.

See Also:

[FlickerMatchMatte](#)

[FlickerRemove](#)

[Sapphire](#)

[FlickerRemoveColor](#)

[Plug-ins](#)

[FlickerRemoveMatte](#)

[Introduction](#)

FlickerRmMatteColor

FlickerMatch

FlickerMatchColor

Flicker

S_FlickerRemove

Removes temporal flickering from the Source clip. For example, old footage with uneven exposure times can be smoothed out with this effect. To use this effect, first position the corners of the rectangle over an area where the average brightness should remain constant. A middle or light gray area is best for this. Then select a Source frame that has the desired brightness within the rectangle, and hit the Set Hold Level button. When other frames are processed, their brightness will be scaled so the average brightness within the rectangle is equal to the Hold Level. You can keyframe different Hold Level values over time to account for desirable brightness changes.

In the Sapphire Time effects submenu.

Flicker Remove

Inputs:

Source: The clip to remove flicker from.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Rect Corner1: *X & Y, Default: [-0.583 -0.441], Range: any.*

The upper left corner of the rectangle which is used to measure the flicker, in screen coordinates.

Rect Corner2: *X & Y, Default: [0.583 0.441], Range: any.*

The lower right corner of the rectangle which is used to measure the flicker, in screen coordinates.

Hold Level: *Default: 0.5, Range: 0.01 or greater.*

The requested average output brightness for the area within the rectangle.

Set Hold Level: *Push-button.*

Pressing this button has a side effect of setting the Hold Level parameter to the average Source brightness in the rectangle at the current frame. It causes the output to equal the Source at this frame. This button retains no value itself, and is turned back off immediately after being pushed.

Show Rect: *Check-box, Default: on.*

Turns on or off the screen user interface widget for adjusting the Rect Corner corner parameters.

See Also:

[FlickerRemoveColor](#)

[FlickerRemoveMatte](#)

[Sapphire](#)

[FlickerRmMatteColor](#)

[Plug-ins](#)

[FlickerMatch](#)

[Introduction](#)

[FlickerMatchColor](#)

[FlickerMatchMatte](#)

FlickerMchMatteColor
Flicker

S_FlickerRemoveMatte

Removes temporal flickering from the Source clip using a Matte clip to specify the area where the average brightness should remain constant. To use this effect, select a Source frame that has the desired brightness within the Matte, and hit the Set Hold Level button. When other frames are processed, their brightness will be scaled so the average brightness within the Matte is equal to the Hold Level. You can keyframe different Hold Level values over time to account for desirable brightness changes.

Flicker Remove

In the Sapphire Time effects submenu.

Inputs:

Source: The clip to remove flicker from.

Matte: *Optional.* This clip specifies which Source areas to measure the flicker from. If this input is not provided, the Alpha of the Source input is used as the Matte instead. It can be inverted with the Invert Matte parameter.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* *Union*.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Hold Level: *Default:* 0.5, *Range:* 0.01 or greater.

The requested average output brightness for the area within the Matte.

Set Hold Level: *Push-button*.

Pressing this button has a side effect of setting the Hold Level parameter to the average Source brightness within the Matte at the current frame. It causes the output to equal the Source at this frame. This button retains no value itself, and is turned back off immediately after being pushed.

Matte Use: *Popup menu*, *Default:* *Alpha*.

Determines how the Matte input channels are used to make a monochrome matte.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Invert Matte: *Check-box*, *Default:* off.

If enabled, the black and white of the matte are inverted before use.

See Also:

[FlickerRmMatteColor](#)

[FlickerRemove](#)

[Sapphire](#)

[FlickerRemoveColor](#)

[Plug-ins](#)

[FlickerMatch](#)

[Introduction](#)

[FlickerMatchColor](#)

[FlickerMatchMatte](#)

[FlickerMchMatteColor](#)

[Flicker](#)

S_FlickerRemoveColor

Removes temporal color changes from the Source clip. Similar to FlickerRemove but the process is applied to each color channel. To use this effect, first position the corners of the rectangle over an area where the average color should remain constant. A middle or light gray area is best for this. Then select a Source frame that has the desired color within the rectangle, and hit the Set Hold Color button. When other frames are processed, their colors will be scaled so the average color within the rectangle is equal to the Hold Color.



In the Sapphire Time effects submenu.

Inputs:

Source: The clip to remove color changes from.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Rect Corner1: *X & Y, Default: [-0.583 -0.441], Range: any.*

The upper left corner of the rectangle which is used to measure the flicker, in screen coordinates.

Rect Corner2: *X & Y, Default: [0.583 0.441], Range: any.*

The lower right corner of the rectangle which is used to measure the flicker, in screen coordinates.

Hold Color: *Default rgb: [0.5 0.5 0.5].*

The requested average output color for the area within the rectangle.

Set Hold Color: *Push-button.*

Pressing this button has a side effect of setting the Hold Color parameter to the average Source color in the rectangle at the current frame. It causes the output to equal the Source at this frame. This button retains no value itself, and is turned back off immediately after being pushed.

Show Rect: *Check-box, Default: on.*

Turns on or off the screen user interface widget for adjusting the Rect Corner corner parameters.

See Also:

[FlickerRemove](#)

[FlickerRemoveMatte](#)

[Sapphire](#)

[FlickerRmMatteColor](#)

[Plug-ins](#)

[FlickerMatch](#)

[Introduction](#)

[FlickerMatchColor](#)

[FlickerMatchMatte](#)

[FlickerMchMatteColor](#)

[Flicker](#)

S_FlickerRmMatteColor

Removes temporal color changes from the Source clip using a Matte clip to specify the area where the average color should remain constant. To use this effect, select a Source frame that has the desired color within the Matte, and hit the Set Hold Color button. When other frames are processed, their color will be scaled so the average color within the Matte is equal to the Hold Color.



In the Sapphire Time effects submenu.

Inputs:

Source: The clip to remove color changes from.

Matte: *Optional.* This clip specifies which Source areas to measure the flicker from. If this input is not provided, the Alpha of the Source input is used as the Matte instead. It can be inverted with the Invert Matte parameter.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default: off*.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default: off*.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default: Union*.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Hold Color: *Default rgb: [0.5 0.5 0.5]*.

The requested average output color for the area within the Matte.

Set Hold Color: *Push-button*.

Pressing this button has a side effect of setting the Hold Color parameter to the average Source color within the Matte at the current frame. It causes the output to equal the Source at this frame. This button retains no value itself, and is turned back off immediately after being pushed.

Matte Use: *Popup menu*, *Default: Alpha*.

Determines how the Matte input channels are used to make a monochrome matte.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Invert Matte: *Check-box*, *Default: off*.

If enabled, the black and white of the matte are inverted before use.

See Also:

[FlickerRemoveMatte](#)

[FlickerRemove](#)

[Sapphire](#)

[FlickerRemoveColor](#)

[Plug-ins](#)

[FlickerMatch](#)

[Introduction](#)

[FlickerMatchColor](#)

[FlickerMatchMatte](#)

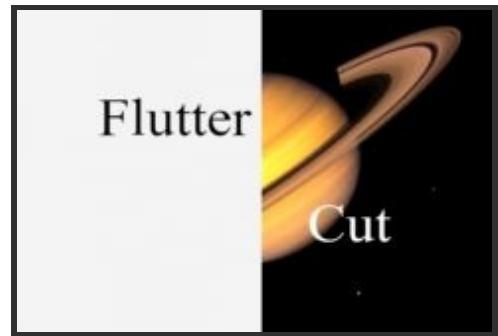
[FlickerMchMatteColor](#)

[Flicker](#)

S_FlutterCut

Transitions between two clips by rapidly cutting back and forth between them, optionally inserting solid colored or inverted frames as well. The cuts of each clip can get longer or shorter over the length of the transition.

In the Sapphire Transitions effects submenu.



Inputs:

From: Starts the transition with this clip.

To: Ends the transition with this clip.

Parameters:

Load Preset: Push-button.

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: Push-button.

Brings up the Preset Save dialog to save a preset for this effect.

From Start Frames: Integer, Default: 2, Range: 1 or greater.

The number of frames of the From clip in the first cycle of the transition.

From End Frames: Integer, Default: 2, Range: 1 or greater.

The number of frames of the From clip in the last cycle of the transition.

From Acceleration: Default: 1, Range: 1 or greater.

The speed at which cut lengths change. When set to 1, the lengths will change gradually between From Start Frames and From End Frames, reaching the final value on the last cycle. As the value increases, the cut length will change more quickly and reach its final value more quickly.

To Start Frames: Integer, Default: 2, Range: 1 or greater.

The number of frames of the To clip in the first cycle of the transition.

To End Frames: Integer, Default: 2, Range: 1 or greater.

The number of frames of the To clip in the last cycle of the transition.

To Acceleration: Default: 1, Range: 1 or greater.

The speed at which cut lengths change. When set to 1, the lengths will change gradually between To Start Frames and To End Frames, reaching the final value on the last cycle. As the value increases, the cut length will change more quickly and reach its final value more quickly.

Colored Frames Parameters:

Color1: Default rgb: [0 0 0].

A solid color added to the pattern.

Color1 Frames: Integer, Default: 0, Range: 0 or greater.

The number of Color 1 frames in each cycle. This stays constant throughout the transition.

Color1 Position: *Popup menu, Default: After Both.*

The position of the Color 1 frames within the pattern.

Before From: at the beginning of the cycle, before the From clip.

After From: in the middle of the cycle, between the From and To clips.

After To: at the end of the cycle, after the To clip.

After Both: in the middle of the cycle, and again at the end (but not at the very end of the transition, after the last cycle).

Color2: *Default rgb: [1 1 1].*

Another solid color added to the pattern.

Color2 Frames: *Integer, Default: 0, Range: 0 or greater.*

The number of Color 2 frames in each cycle. This stays constant throughout the transition.

Color2 Position: *Popup menu, Default: After Both.*

The position of the Color 2 frames within the pattern.

Before From: at the beginning of the cycle, before the From clip.

After From: in the middle of the cycle, between the From and To clips.

After To: at the end of the cycle, after the To clip.

After Both: in the middle of the cycle, and again at the end (but not at the very end of the transition, after the last cycle).

Invert Parameters:

Invert: *Popup menu, Default: None.*

Invert some frames.

None: nothing is inverted

From Clip: only frames from the From clip are inverted.

To Clip: only frames to the To clip are inverted.

Both Clips: frames from the From and To clips are inverted, but solid color frames are not.

Custom Pattern: overlays a custom pattern of inverted frames over the From/To/color pattern. The pattern of inverted frames is controlled by Invert Length, Normal Before, and Normal After.

Invert Pattern Parameters:

Invert Length: *Integer, Default: 1, Range: 0 or greater.*

The number of consecutive frames to invert. The cycle of inverted frames is controlled by this parameter, Normal Before, and Normal After, and is independent of the From/To/Color cycle. Has no effect unless Invert is set to Custom Pattern.

Normal Before: *Integer, Default: 1, Range: 0 or greater.*

Leave this number of normal, non-inverted frames before each group of inverted frames. Has no effect unless Invert is set to Custom Pattern.

Normal After: *Integer, Default: 0, Range: 0 or greater.*

Leave this number of normal, non-inverted frames after each group of inverted frames. Has no effect unless Invert is set to Custom Pattern.

See Also:

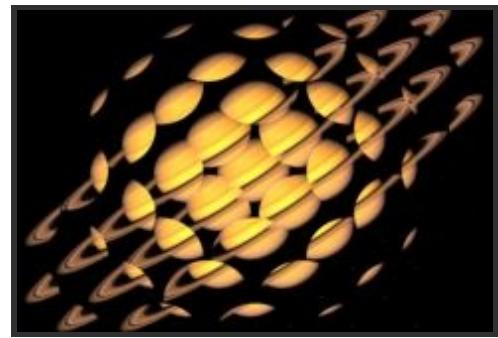
[TVChannelChange](#)

[Sapphire Plug-ins](#)
[Introduction](#)

S_FlysEyeCircles

Breaks the image into circle shaped tiles and transforms the image within each shape, to create a fly's eye view effect. The Overlap options allow the circles to be combined in different ways where they overlap. The 'Inside' parameters transform the Source image before it is tiled into the pattern, and the 'Tile' parameters transform the entire fly's eye pattern.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Tile Frequency: *Default: 12, Range: 0.1 or greater.*
The frequency of the tile pattern, increase for more smaller tiles. This parameter can be adjusted using the Tile Freq Widget.

Tile Rel Height: *Default: 1, Range: 0.01 or greater.*
The relative height of the tile shapes, increase for taller tiles.

Tile Shift: *X & Y, Default: [0 0], Range: any.*
Translates the tile pattern. This parameter can be adjusted using the Tile Shift Widget.

Circle Overlap: *Popup menu, Default: Ave.*
Determines the method used to combine the overlapping regions of the circles.

Ave: uses a weighted average across the overlapping region for a smooth transition.
Screen: uses a screen operation.
Max: uses the lighter.
Min: uses the darker.
Mult: uses a multiply operation.

Circle Radius: *Default: 1, Range: 0 to 1.*
The radius of the circles relative to each other. If this is less than 1.0 you will get empty spaces between the circles. The color of these empty spaces will be either transparent, black, or white depending on the combine mode.

Edge Softness: *Default: 0, Range: 0 to 1.*
The softness of the edges of the circles. If this is increased, it may also be necessary to lower the Circle Radius to avoid rectangular artifacts where the soft edges overlap.

Inside Zdist: *Default: 2, Range: 0 or greater.*
Determines the zoom factor of the image inside each tile. Values greater than 1 zoom out, values less than 1 zoom in. If this is 1, Inside Rotate is 0, and Overall Zdist is 1, the result should be the same as the input image.

Inside Rotate: *Default: 0, Range: any.*
The rotation angle of the image inside each tile, in degrees.

Overall Zdist: *Default: 1, Range: any.*
Creates an overall zooming effect by making each tile look toward or away from the image center. Decrease to zoom in, increase to zoom out. When 0 all tiles should contain identical images.

Wrap: *Popup menu, Default: Reflect.*
Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.
Tile: repeats a copy of the image.
Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Filter: *Check-box, Default: on.*
If enabled, the Source image is resampled using pixel averaging. This removes aliasing and gives a higher quality result especially when Inside Zdist is large. It may not be necessary if your input image is smooth or Inside Zdist is

small.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Crop Input Parameters: *Default: 0, Range: 0 or greater.*

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

Show Tile Freq: *Check-box, Default: off.*

Turns on or off the screen user interface for adjusting the Tile Frequency parameter.

Show Tile Shift: *Check-box, Default: off.*

Turns on or off the screen user interface for adjusting the Tile Shift parameter.

See Also:

[FlysEyeHex](#)
[FlysEyeRect](#)

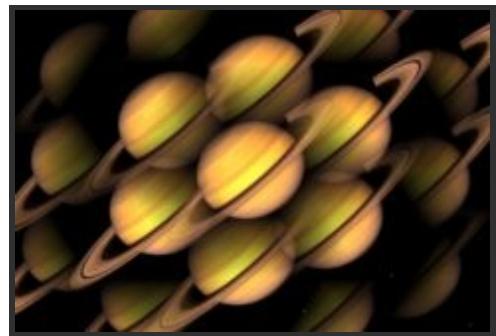
[Mosaic](#)
[HalfTone](#)
[ScanLines](#)
[JpegDamage](#)
[AutoPaint](#)

[Sapphire](#)
[Plug-ins](#)
[Introduction](#)

S_FlysEyeHex

Breaks the image into hexagon shaped tiles and transforms the image within each shape, to create a fly's eye view effect. Increase Edge Softness for a smoother overlap between the tiles. The 'Inside' parameters transform the Source image before it is tiled into the pattern, and the 'Tile' parameters transform the entire fly's eye pattern.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Tile Frequency: *Default:* 12, *Range:* 0.1 or greater.
The frequency of the tile pattern, increase for more smaller tiles. This parameter can be adjusted using the Tile Freq Widget.

Tile Rel Height: *Default:* 1, *Range:* 0.01 or greater.
The relative height of the tile shapes, increase for taller tiles.

Tile Shift: X & Y, *Default:* [0 0], *Range:* any.
Translates the tile pattern. This parameter can be adjusted using the Tile Shift Widget.

Tile Rotate: *Default:* 0, *Range:* any.
The rotation angle of the tile pattern, in degrees.

Edge Softness: *Default:* 0, *Range:* 0 to 1.
The softness of the edges between the tile shapes. Increase for smoother blending between the shapes.

Inside Zdist: *Default:* 2, *Range:* 0 or greater.
Determines the zoom factor of the image inside each tile. Values greater than 1 zoom out, values less than 1 zoom in. If this is 1, Inside Rotate is 0, and Overall Zdist is 1, the result should be the same as the input image.

Inside Rotate: *Default:* 0, *Range:* any.
The rotation angle of the image inside each tile, in degrees.

Overall Zdist: *Default:* 1, *Range:* any.
Creates an overall zooming effect by making each tile look toward or away from the image center. Decrease to zoom in, increase to zoom out. When 0 all tiles should contain identical images.

Wrap: *Popup menu*, *Default:* Reflect.
Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.
Tile: repeats a copy of the image.
Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Filter: *Check-box*, *Default:* on.
If enabled, the Source image is resampled using pixel averaging. This removes aliasing and gives a higher quality result especially when Inside Zdist is large. It may not be necessary if your input image is smooth or Inside Zdist is small.

Mask Use: *Popup menu*, *Default:* Luma.
Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.
Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.
Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Crop Input Parameters: *Default:* 0, *Range:* 0 or greater.

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

Show Tile Freq: *Check-box*, *Default:* off.

Turns on or off the screen user interface for adjusting the Tile Frequency parameter.

Show Tile Shift: *Check-box*, *Default:* off.

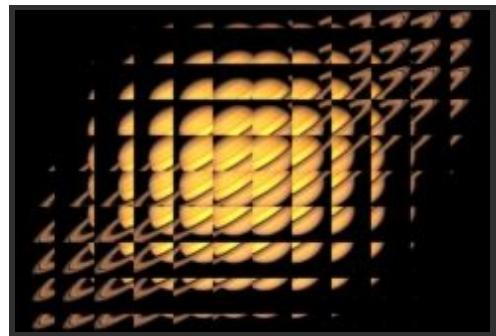
Turns on or off the screen user interface for adjusting the Tile Shift parameter.

See Also:[FlysEyeRect](#)[Mosaic](#)[Sapphire](#)[FlysEyeCircles](#)[HalfTone](#)[Plug-ins](#)[ScanLines](#)[Introduction](#)[JpegDamage](#)[AutoPaint](#)

S_FlysEyeRect

Breaks the image into rectangle shaped tiles and transforms the image within each shape, to create a fly's eye view effect. The 'Inside' parameters transform the Source image before it is tiled into the pattern, and the 'Tile' parameters transform the entire fly's eye pattern.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Tile Frequency: *Default: 12, Range: 0.1 or greater.*
The frequency of the tile pattern, increase for more smaller tiles. This parameter can be adjusted using the Tile Freq Widget.

Tile Rel Height: *Default: 1, Range: 0.01 or greater.*
The relative height of the tile shapes, increase for taller tiles.

Tile Shift: *X & Y, Default: [0 0], Range: any.*
Translates the tile pattern. This parameter can be adjusted using the Tile Shift Widget.

Inside Zdist: *Default: 2, Range: 0 or greater.*
Determines the zoom factor of the image inside each tile. Values greater than 1 zoom out, values less than 1 zoom in. If this is 1, Inside Rotate is 0, and Overall Zdist is 1, the result should be the same as the input image.

Inside Rotate: *Default: 0, Range: any.*
The rotation angle of the image inside each tile, in degrees.

Overall Zdist: *Default: 1, Range: any.*
Creates an overall zooming effect by making each tile look toward or away from the image center. Decrease to zoom in, increase to zoom out. When 0 all tiles should contain identical images.

Wrap: *Popup menu, Default: Reflect.*
Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.
Tile: repeats a copy of the image.
Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Filter: *Check-box, Default: on.*
If enabled, the Source image is resampled using pixel averaging. This removes aliasing and gives a higher quality result especially when Inside Zdist is large. It may not be necessary if your input image is smooth or Inside Zdist is small.

Mask Use: *Popup menu, Default: Luma.*
Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.
Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*
Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*
If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Crop Input Parameters: *Default: 0, Range: 0 or greater.*

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

Show Tile Freq: *Check-box, Default: off.*

Turns on or off the screen user interface for adjusting the Tile Frequency parameter.

Show Tile Shift: *Check-box, Default: off.*

Turns on or off the screen user interface for adjusting the Tile Shift parameter.

See Also:

[FlysEyeHex](#)

[FlysEyeCircles](#)

[Mosaic](#)

[HalfTone](#)

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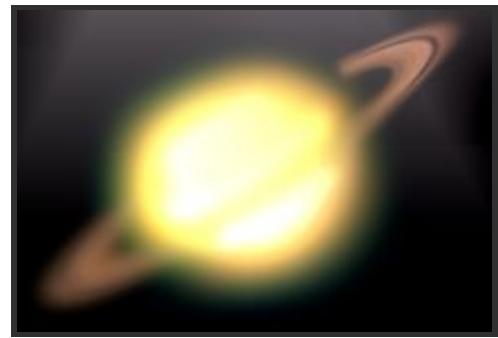
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S_FreeLens

Generates a distorted, defocused and light leaked version of the source clip to simulate the in-camera technique of holding a detached lens in front of the camera and moving it to create focus and light effects.

In the Sapphire Blur+Sharpen effects submenu.



Inputs:

Source: The clip to process.

Matte: *Optional.* If provided, the effect is only applied on regions of the source clip specified by the bright areas of this input. Pixels outside this matte are not affected, and do not contribute to the resulting affected pixels within it. This input can be affected using the Invert Matte, or Matte Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Shift: *X & Y*, *Default:* [0 0], *Range:* 2 or less.
Offsets the lens horizontally or vertically. Note that the image moves opposite to the lens motion. This parameter can be adjusted using the Tilt X Widget.

Tilt X: *Default:* 12.5, *Range:* -45 to 45.
Rotates the lens left or right about a vertical axis. This parameter can be adjusted using the Tilt X Widget.

Tilt Y: *Default:* 0, *Range:* -45 to 45.
Rotates the lens up or down about a horizontal axis. You can use Tilt X and Tilt Y together to rotate about an arbitrary diagonal axis. This parameter can be adjusted using the Tilt X Widget.

Distance: *Default:* 0, *Range:* -0.3 to 0.5.
Moves the lens away from or toward the camera. This parameter can be adjusted using the Distance Widget.

Rotate Highlights: *Default:* 0, *Range:* -180 to 180.
Rotates the lens about the line of sight. In a real lens this would rotate the iris, so the rotation is perceived as a rotation of any defocus highlights in the image.

Perspective Amount: *Default:* 1, *Range:* 0.25 to 4.
Controls the amount of lens telescoping while applying Tilt X and Tilt Y. Increase for more 3D perspective.

Wrap: *X & Y*, *Popup menu*, *Default:* [Reflect Reflect].
Determines the method for accessing outside the borders of the source images.

No: gives black beyond the borders.
Tile: repeats a copy of the image.
Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Filter: *Check-box*, *Default:* on.
If enabled, the image is adaptively filtered when it is resampled. This gives a better quality result when parts of the image are warped smaller.

Defocus Width: *Default:* 0.104, *Range:* 0 or greater.
Scales the overall amount of defocus blur and highlights.

Focal Point Offset: *X & Y*, *Default:* [0 0], *Range:* 2 or less.
Offsets the location of best focus in the image. This parameter can be adjusted using the Focal Point Offset Widget.

Focal Uses Mocha: *Check-box*, *Default:* off.
Controls whether the focal point is controlled by the Focal Point Offset parameter or follows the Focal Point Offset tracked inside of Mocha.

Smooth Focal Track: *Integer*, *Default:* 0, *Range:* 0 or greater.
Controls how many points to average when stabilizing the Mocha point track.

Chroma Distort: *Default:* 0, *Range:* any.
Adds some chromatic aberration around the edges of the image; red and blue wavelengths of light refract differently in real lenses, producing fringes of color where the rays strike the lens at oblique angles.

Rel Height: *Default:* 1, *Range:* 0.01 or greater.
The relative height of the iris shape. If it is not 1, circles become ellipses, etc.

Show: *Popup menu, Default: Result.*
Selects the type of output.

Result: Shows the final output.
DepthMap: Shows the depth map generated for the current lens position and orientation.
Shape: Shows the iris shape.

Highlight Shape: *Popup menu, Default: 6 sides.*
Determines the shape of the simulated camera iris.

Circle: round.
3 sides: triangle.
4 sides: square.
5 sides: pentagon.
6 sides: hexagon.
7 sides: seven-sided polygon.
8 sides: eight-sided polygon.
9 sides: nine-sided polygon.
10 sides: ten-sided polygon.
11 sides: eleven-sided polygon.
12 sides: twelve-sided polygon.

Highlight Roundness: *Default: 0, Range: any.*
Modifies the shape of the simulated camera iris. A value of 1 produces a circle; 0 gives a flat-sided polygon with a number of sides given by the Shape parameter. Less than 0 causes the sides to squeeze inward giving a star shape, while a value greater than 1 causes the corners to squeeze inward, giving a flowery shape. Has no effect if the Shape is set to Circle.

Boost Highlights: *Default: 1, Range: 0 or greater.*
The amount to increase the luma of the highlights in the source clip. Increase this parameter to blow out the highlights without affecting the darks or mid-tones.

Highlight Threshold: *Default: 0.9, Range: 0 or greater.*
The minimum luma value for highlights. Pixels brighter than this will be brightened according to the Boost Highlights parameter.

Distortion: *Check-box, Default: on.*
Enables distortion.

Link Distortion To Lens: *Check-box, Default: on.*
Controls whether distortion is adjusted by the lens or set manually.

Distortion Amount: *Default: 0, Range: -0.15 to 0.15.*
Distorts the image radially for barrel or pincushion

Scale Width: *Default: 1, Range: 0 or greater.*
Scales the distortion in the horizontal direction

Scale Height: *Default: 1, Range: 0 or greater.*
Scales the distortion in the vertical direction

Light Leak: *Check-box, Default: on.*
Enables light leak.

Link Leak To Lens: *Check-box, Default: on.*

Controls whether light leak is adjusted by the lens or set manually.

Leak Intensity: *Default:* 0, *Range:* any.

Scales the intensity of the light leak elements.

Leak Rel Height: *Default:* 2, *Range:* 0 or greater.

Controls the aspect ratio of the light leak elements.

Leak Size: *Default:* 0.35, *Range:* 0 or greater.

Scales the width and height of the light leak elements.

Vary Size: *Default:* 1, *Range:* 0 or greater.

Amount to vary the size from one light leak element to the next.

Light Leak Hotspot: *X & Y*, *Default:* [-0.5 0.25], *Range:* any.

Positions the start of the line of light leak elements. This parameter can be adjusted using the Light Leak Hotspot Widget.

Light Leak Pivot: *X & Y*, *Default:* [0 0.25], *Range:* any.

Positions the end of the line of light leak elements. This parameter can be adjusted using the Light Leak Pivot Widget.

Leak Roundness: *Default:* 0.7, *Range:* -1 to 1.

Rounds the corners of the light leak element.

Sides: *Integer*, *Default:* 4, *Range:* 3 to 16.

Controls how many edges there are for each light leak element.

Copies: *Integer*, *Default:* 5, *Range:* 1 to 34.

Controls how many light leak elements there are.

Spread: *Default:* 4, *Range:* 0 or greater.

Controls how far apart the light leak elements are.

Outer Color: *Default* *rgb:* [1 0.8 1].

Controls the color at the outer edge of each light leak element.

Mid Color: *Default* *rgb:* [1 0.9 1].

Controls the color midway from the center to the outer edge of each light leak element.

Center Color: *Default* *rgb:* [1 1 1].

Controls the color at the center of each light leak element.

Midpoint: *Default:* 0.5, *Range:* 0 to 1.

Moves the location of the Mid Color between the center and outer of each light leak element. Set to 0 to place the Mid Color at the center, or 1 to place it at the edge.

Softness: *Default:* 4, *Range:* 0 or greater.

Blurs the color gradient of each light leak element. Increase for a smoother gradient, or decrease for sharper bands of color.

Glow Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the glow which is applied to the entire image after combining the light leak with the background.

Glow Width: *Default:* 0.4, *Range:* 0 or greater.

The width of the glow. Increase for a softer glow and decrease for a sharper, brighter glow.

Glow Threshold: *Default:* 0.8, *Range:* 0 or greater.
Parts of the image that are brighter than this value get glowed.

Shake: *Check-box*, *Default:* on.
Enables shake.

Shake Mode: *Popup menu*, *Default:* Normal.
Controls the type of shaking.

Normal: A steady camera shake.

Twitchy: Periods of stillness interrupted by bursts of rapid shaking.

Jumpy: Sudden jumps from one place to another, with slower drifting in between.

Jump Drift: *Default:* 0.3, *Range:* 0 to 1.
In Jumpy mode, controls the speed of movement in between jumps.

Jump Center Bias: *Default:* 0, *Range:* 0 or greater.
In Jumpy mode, adjusts the likelihood that each jump will reset the image to its original position. If set to zero, every jump is random. If set to one, every jump will go back to the center.

Twitch Stillness: *Default:* 0.7, *Range:* 0 to 1.
In Twitchy mode, adjusts the fraction of the time that the image is still. Increase for more frequent shaking.

Twitch Frequency: *Default:* 2, *Range:* 0 or greater.
In Twitchy mode, controls the length of the periods of movement and stillness. Increase for shorter, more frequent bursts of movement.

Amplitude: *Default:* 1, *Range:* 0 or greater.
Scales the amplitude of the shaking motion.

Frequency: *Default:* 8, *Range:* 0 or greater.
Increase for faster shaking, decrease for slower shaking. (Be careful if you animate frequency values because the resulting shake frequency is also affected by the rate of change of the value.)

Phase: *Default:* 0, *Range:* any.
Time shift of the shaking motions. (If you animate this value, its rate of change will also affect the apparent frequency.)

Motion Blur: *Check-box*, *Default:* on.
Options for motion blur of the shaking motion.

Mo Blur Length: *Default:* 1, *Range:* 0 or greater.
Scales the amount of motion blur. Use around .5 when processing on fields or 1.0 for frames to give realistic motion blur. This parameter has no effect if Motion Blur is No.

Blur Res: *Popup menu*, *Default:* Full.
Selects the resolution factor for the motion blur. Higher resolutions give better quality, lower resolutions give faster processing.

Full: Full resolution is used.

Half: The motion blurring is performed at half resolution.

Quarter: The motion blurring is performed at quarter resolution.

Seed: *Default:* 0, *Range:* 0 or greater.
Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

X Rand Amp: *Default:* 0, *Range:* 0 or greater.

Amplitude of horizontal random shaking.

X Rand Freq: *Default:* 1, *Range:* 0 or greater.
Frequency of horizontal random shaking.

Y Rand Amp: *Default:* 0, *Range:* 0 or greater.
Amplitude of the vertical random shaking.

Y Rand Freq: *Default:* 1, *Range:* 0 or greater.
Frequency of the vertical random shaking.

Tilt X Rand Amp: *Default:* 0, *Range:* 0 or greater.
Amplitude of horizontal angular random shaking.

Tilt X Rand Freq: *Default:* 1, *Range:* 0 or greater.
Frequency of horizontal angular random shaking.

Tilt Y Rand Amp: *Default:* 0, *Range:* 0 or greater.
Amplitude of vertical angular random shaking.

Tilt Y Rand Freq: *Default:* 1, *Range:* 0 or greater.
Frequency of vertical angular random shaking.

Distance Rand Amp: *Default:* 0, *Range:* 0 or greater.
Amplitude of zoom random shaking.

Distance Rand Freq: *Default:* 1, *Range:* 0 or greater.
Frequency of zoom random shaking.

Leak Int Rand Amp: *Default:* 0, *Range:* 0 or greater.
Amplitude of leak intensity random shaking.

Leak Int Rand Freq: *Default:* 1, *Range:* 0 or greater.
Frequency of leak intensity random shaking.

Vignette: *Check-box*, *Default:* on.
Enables vignette.

Link Vig To Lens: *Check-box*, *Default:* on.
Controls whether vignette is adjusted by the lens or set manually.

Vig Intensity: *Default:* 0.2, *Range:* 0 or greater.
The opacity of the vignette; animate to 0 to fade the vignette out.

Vig Center: *X & Y*, *Default:* [0 0], *Range:* any.
The center of rotation and zooming, in screen coordinates relative to the center of the frame. The shift values should be zero for this location to make sense. This parameter can be adjusted using the Vig Center Widget.

Vig Squareness: *Default:* 0, *Range:* 0 to 1.
Determines how square the vignette shape is. Set to 1.0 for a square or rectangle shape. Set to 0 for a circle or ellipse. Values in between give rectangles with rounded corners by varying amounts.

Vig Radius: *Default:* 1.5, *Range:* 0 or greater.
Distance from the center to apply the vignette.

Vig Rel Height: *Default:* 1, *Range:* 0.05 or greater.
The relative height of the iris shape. If it is not 1, circles become ellipses, etc.

Vig Rel Width: *Default:* 1, *Range:* 0.05 or greater.

The relative horizontal size of the vignette shape. Increase for a wider shape, decrease for a taller one.

Vig Rotate: *Default:* 0, *Range:* any.

Rotates the iris shape.

Vig Edge Softness: *Default:* 0.46, *Range:* 0 or greater.

The width of the vignette's soft edge. Larger values give softer, less visible edges.

Vig Smooth Curve: *Default:* 1, *Range:* 0 to 1.

If zero, a linear gradient is used across the screen in the soft edge area. Increase this value to use a smoother 'S' shaped curve for interpolation which can reduce the visual perception of the gradient's start and end locations.

Vig Color: *Default* `rgb: [0 0 0]`.

The color of the vignette.

Vig Blur Amount: *Default:* 0, *Range:* 0 or greater.

Blurs the borders of the image in addition to darkening them.

Vig Blur Inside: *Check-box, Default:* off.

If checked, the center (undarkened) area of the image is blurred instead of the border.

Vig Source Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the source clip. To see only the vignette, set this to zero.

Vig Combine: *Popup menu, Default: Mult.*

Determines how the vignette is combined with the Source.

Composite: composites the vignette over the source clip.

Mult: the vignette color is multiplied by the source clip. If the Color is not black, this will selectively colorize the vignette area.

Add: the vignette color is added to the source clip. This will have no effect if the vignette color is black.

Screen: the vignette color is combined with the source clip using a screen operation. This will have no effect if the vignette color is black.

Subtract Inv: the inverse of the vignette color is subtracted from the source clip. Inverse means white for black, yellow for blue, and so on. This mode looks similar to Mult, but a bit more severe; it crushes the blacks and leaves the highlights more. This will have no effect if the vignette color is white.

Vignette Only: shows the vignette pattern without the source clip. The output will be white where the amount of vignetting is greatest (e.g. where the source clip would be darkened completely).

Vignette Only Inv: shows the inverted vignette pattern without the source clip. The output will be white where there is no vignetting (e.g. where the source clip would not be darkened at all).

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Distance: *Check-box, Default:* on.

Turns on or off the screen user interface for adjusting the Shift parameter.

Show Tilt X: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Shift parameter.

Show Focal Point Offset: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Focal Point Offset parameter.

Show Light Leak Hotspot: *Check-box*, *Default:* off.

Turns on or off the screen user interface for adjusting the Light Leak Hotspot parameter.

Show Light Leak Pivot: *Check-box*, *Default:* off.

Turns on or off the screen user interface for adjusting the Light Leak Pivot parameter.

Show Vig Center: *Check-box*, *Default:* off.

Turns on or off the screen user interface for adjusting the Vig Center parameter.

See Also:

[BlurMotion](#)

[Sapphire Plug-ins](#)

[LightLeak](#)

[Introduction](#)

[RackDefocus](#)

[Shake](#)

[Vignette](#)

S_FreezeFrame

Freezes motion for each duration of Freeze Frames. For example if Freeze Frames is 5 and the source frames are:

1 2 3 4 5 6 7 8 9 10 11... the output frames would be:
1 1 1 1 6 6 6 6 11...

In the Sapphire Time effects submenu.

Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Freeze Frames: *Integer, Default: 5, Range: 1 or greater.*

The number of frames for each hold.

Frame Start: *Integer, Default: 0, Range: 0 or greater.*

The offset of the start and stop frames for each freeze. For example if this were 3, the output frames would be:

1 1 3 3 3 3 8 8 8 8 ...

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

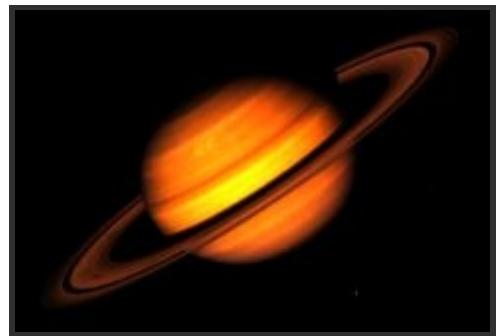
[GetFrame](#)
[TimeWarpRGB](#)
[MotionDetect](#)
[TimeSlice](#)
[JitterFrames](#)
[RandomEdits](#)
[ReverseEdits](#)
[ReverseClip](#)

[Sapphire Plug-ins](#)
[Introduction](#)

S_Gamma

Applies a gamma correction to the input clip. The red, green, and blue channels can be adjusted independently. From Gamma just causes the inverse effect of adjusting Gamma.

In the Sapphire Adjust effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Gamma: *Default: 1, Range: 0.1 or greater.*
Values greater than 1.0 make the mid-tones brighter, values less than 1.0 make them darker, 1.0 leaves the input unchanged.

Gamma Red: *Default: 1, Range: 0.1 or greater.*
Brightens or darkens the red mid-tones.

Gamma Green: *Default: 1, Range: 0.1 or greater.*
Brightens or darkens the green mid-tones.

Gamma Blue: *Default: 1, Range: 0.1 or greater.*
Brightens or darkens the blue mid-tones.

From Gamma: *Default: 1, Range: 0.1 or greater.*
Divides the Gamma by this value before processing. This can be useful if your image was correct at this gamma, but needs to be adjusted from this to a new gamma.

From Gamma Red: *Default: 1, Range: 0.1 or greater.*
Darkens or brightens the red mid-tones.

From Gamma Green: *Default: 1, Range: 0.1 or greater.*
Darkens or brightens the green mid-tones.

From Gamma Blue: *Default: 1, Range: 0.1 or greater.*
Darkens or brightens the blue mid-tones.

Scale Lights: *Default: 1, Range: 0 or greater.*
Scales the brightness by this amount after the gamma correction. Increase for a brighter result.

Scale Lights Red: *Default: 1, Range: 0 or greater.*
Scales the red by this amount after the gamma correction.

Scale Lights Green: *Default: 1, Range: 0 or greater.*
Scales the red by this amount after the gamma correction.

Scale Lights Blue: *Default: 1, Range: 0 or greater.*
Scales the red by this amount after the gamma correction.

Offset Dark: *Default: 0, Range: -8 to 2.*
Adds this gray value to the darker regions after the gamma correction. This can be negative to increase contrast.

Offset Dark Red: *Default: 0, Range: -8 to 2.*
Adds this red value to the darker red regions after the gamma correction. This can be negative to increase contrast.

Offset Dark Green: *Default: 0, Range: -8 to 2.*
Adds this green value to the darker green regions after the gamma correction. This can be negative to increase contrast.

Offset Dark Blue: *Default: 0, Range: -8 to 2.*

Adds this blue value to the darker blue regions after the gamma correction. This can be negative to increase contrast.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[HueSatBright](#)

[Monochrome](#)

[ClampChroma](#)

[PseudoColor](#)

[DuoTone](#)

[TriTone](#)

[QuadTone](#)

[Tint](#)

[Threshold](#)

[Hotspots](#)

[Solarize](#)

[ChannelSwitcher](#)

[ShowBadColors](#)

[Invert](#)

[DissolveFilm](#)

[Sapphire Plug-ins](#)

[Introduction](#)

S_GetFrame

Retrieves a specified frame from the source clip for each destination frame. This is meant to be used by animating the value of Get Frame to speed up, slow down, or reverse the input clip in an arbitrary way as desired.

In the Sapphire Time effects submenu.

Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Get Frame: *Default: 0, Range: 0 or greater.*

The frame number of the source clip to access. This parameter should be animated to control the desired changes in motion. (If the Get Frame parameter is not animated it will just give a single still frame of that number for the entire clip.)

Interp Frames: *Check-box, Default: off.*

Selects the method to use for non-integer frame number references. If disabled, the nearest integer frame number is used with no interpolation. If enabled, it performs a weighted interpolation between the two nearest integer frame numbers and usually gives smoother results for slow motions.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:[TimeWarpRGB](#)[MotionDetect](#)[TimeSlice](#)[FreezeFrame](#)[JitterFrames](#)[RandomEdits](#)[ReverseEdits](#)[ReverseClip](#)[Sapphire Plug-ins](#)[Introduction](#)

S_Glare

Composites rainbow halos and/or glint-like rays at locations where the Source clip is brighter than the threshold. Lower the threshold parameter to produce glares in more areas. Use the Style menu to select different glare types. Set the Glare Res parameter to 1/2 for faster rendering with slightly softer glares. Use the Convolve option for smoother results. Glares are best observed on dark images with a few bright spots.



In the Sapphire Lighting effects submenu.

Inputs:

Source: The input clip that determines the glare locations and colors.

Background: *Optional.* The clip to combine the glares with. If no background is given, the Source is also used as the Background.

Mask: *Optional.* If provided, the source glare colors are scaled by this input. A monochrome mask can be used to choose a subset of Source areas that will generate glares. A color mask can be used to selectively adjust the glare colors in different regions. The mask is applied to the source before the glares are generated so it will not clip the resulting glares.

Parameters:

Load Preset: *Push-button.*
Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*
Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*
Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*
Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*
Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*
If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*
Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*
The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*
The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*
Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*
Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Style: *Default: 0, Range: 0 or greater.*
The style of glare to apply. Custom glare types can also be made, or existing types modified, by editing the "s_glares.text" file.

Convolve: *Check-box, Default: off.*
Determines the method for applying the glares to the Background.

Brightness: *Default: 1, Range: 0 or greater.*
Scales the brightness of all the glares.

Scale Colors: *Default rgb: [1 1 1].*
Scales the color of the glares. The colors and brightnesses of the glares are also affected by the Source and Mask inputs.

Saturation: *Default: 1, Range: -2 to 8.*
Scales the color saturation of the glare elements. Increase for more intense colors. Set to 0 for monochrome glares.

Threshold: *Default: 0.8, Range: 0 or greater.*
Glares are generated from locations in the source clip that are brighter than this value. A value of 0.9 causes glares at only the brightest spots. A value of 0 causes glares for every non-black area.

Threshold Add Color: *Default rgb: [0 0 0].*
This can be used to raise the threshold on a specific color and thereby reduce the glares generated on areas of the source clip containing that color.

Threshold Blur: *Default: 0.0896, Range: 0 or greater.*
Increase to smooth out the areas creating glares. This can be used to eliminate glares generated from small speckles or to simply soften the glares. Increasing this may put more highlights below the threshold and darken the resulting glares, but you can decrease the Threshold parameter to compensate.

Size: *Default: 0.8, Range: 0 or greater.*
Scales the size of the glares. This parameter can be adjusted using the Size Widget.

Rel Height: *Default: 1, Range: 0 or greater.*
Scales the vertical dimension of the glares, making them elliptical instead of circular.

Rotate: *Default: 0, Range: any.*
Rotates the ray elements of the glares, if any, in degrees.

Rays Num Scale: *Default:* 1, *Range:* 0 or greater.

Increases or decreases the number of rays.

Rays Length: *Default:* 1, *Range:* 0 or greater.

Adjusts the length of the rays without changing their thickness.

Rays Thickness: *Default:* 1, *Range:* 0 or greater.

Adjusts the thickness of the individual rays.

Blur Glare: *Default:* 0, *Range:* 0 or greater.

The glare is blurred by this amount before being combined with the background.

Hue Shift: *Default:* 0, *Range:* -1 to 1.

Shifts the hue of the glare, in revolutions from red to green to blue to red.

Glare Res: *Popup menu, Default: Full.*

Selects the resolution factor for the glares. Higher resolutions give sharper glares, lower resolutions give smoother glares and faster processing. This 'Res' factor only affects the glares: the background is still combined with the glares at full resolution.

Full: Full resolution is used.

Half: The glares are calculated at half resolution.

Quarter: The glares are calculated at quarter resolution.

Affect Alpha: *Default:* 0, *Range:* 0 or greater.

If this value is positive the output Alpha channel will include some opacity from the glares. The maximum of the red, green, and blue glare brightness is scaled by this value and combined with the background Alpha at each pixel.

Glare From Alpha: *Default:* 0, *Range:* 0 to 1.

Set to 1 to generate glares from the alpha channel of the source input instead of the RGB channels. In this case the glares will not pick up color from the source and will typically be brighter. Values between 0 and 1 interpolate between using the RGB and the Alpha.

Glare Under Source: *Default:* 0, *Range:* 0 to 1.

Set to 1 to composite the Source input over the glares.

Source Opacity: *Default:* 1, *Range:* 0 to 1.

Scales the opacity of the Source input when combined with the glares. This does not affect the generation of the glares themselves.

Bg Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the background. This parameter only has an effect if the background input is provided, and is visible due to a partially transparent Source image or a reduced Source Opacity parameter value.

Expand Borders: *Check-box, Default: off.*

If enabled, transparent borders are added to the input image before processing. This allows the result to include soft edges beyond the original image size. When off, the effect only occurs within the frame and the result will retain an edge at the borders.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Type: *Popup menu, Default: Luma.*

This setting is ignored unless the Mask input is provided.

Luma: uses the luminance of the Mask input to scale the brightness of the glares.

Color: uses the RGB channels of the Mask input to scale the colors of the glares.

Alpha: uses the alpha channel of the Mask input to scale the brightness of the glares.

Show Size: *Check-box, Default:* on.

Turns on or off the screen user interface widget for adjusting the Size and Rel Height parameters.

See Also:

[Glint](#) [Sapphire Plug-ins](#)
[Glow](#) [Introduction](#)
[LensFlare](#)
[Convolve](#)

S_Glint

Generates star shaped glints at locations where the Source clip is brighter than the threshold. Lower the threshold parameter to produce glints in more areas. Adjust the size and brightness parameters to make different types of glints. Glints are best observed on dark images with a few bright spots.

In the Sapphire Lighting effects submenu.



Inputs:

Source: The input clip that determines the glint locations and colors.

Background: *Optional.* The clip to combine the glints with. If no background is given, the Source is also used as the Background.

Mask: *Optional.* If provided, the source glint colors are scaled by this input. A monochrome mask can be used to choose a subset of Source areas that will generate glints. A color mask can be used to selectively adjust the glint colors in different regions. The mask is applied to the source before the glints are generated so it will not clip the resulting glints.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*
The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*
Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*
Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Brightness: *Default: 1, Range: 0 or greater.*
Scales the brightness of all the glints.

Scale Colors: *Default rgb: [1 1 1].*
Scales the color of the glints. The colors and brightnesses of the glints are also affected by the Source and Mask inputs.

Brightness X: *Default: 1, Range: 0 or greater.*
Scales the brightness of the horizontal glint rays.

Brightness Y: *Default: 1, Range: 0 or greater.*
Scales the brightness of the vertical glint rays.

Brightness Diag1: *Default: 1, Range: 0 or greater.*
Scales the brightness of the diagonal rays from top right to bottom left.

Brightness Diag2: *Default: 1, Range: 0 or greater.*
Scales the brightness of the diagonal rays from top left to bottom right.

Threshold: *Default: 0.7, Range: 0 or greater.*
Glints are generated from locations in the source clip that are brighter than this value. A value of 0.9 causes glints at only the brightest spots. A value of 0 causes glints for every non-black area.

Threshold Add Color: *Default rgb: [0 0 0].*
This can be used to raise the threshold on a specific color and thereby reduce the glints generated on areas of the source clip containing that color.

Threshold Blur: *Default: 0.0896, Range: 0 or greater.*
Increase to smooth out the areas creating glints. This can be used to eliminate glints generated from small speckles or to simply soften the glints. Increasing this may put more highlights below the threshold and darken the resulting glints, but you can decrease the Threshold parameter to compensate.

Size: *Default: 2, Range: 0 or greater.*
Scales the length of all glint rays. This and all the size parameters can be adjusted using the Size Widget. Note that a zero glint size still enhances the bright areas; set the brightness parameter to zero if you want to pass the Source through unchanged.

Size X: *Default: 1, Range: 0 or greater.*
Scales the length of the horizontal glint rays.

Size Y: *Default: 1, Range: 0 or greater.*
Scales the length of the vertical glint rays.

Size Diag1: *Default: 0.75, Range: 0 or greater.*
Scales the length of the diagonal rays from top right to bottom left.

Size Diag2: *Default: 0.75, Range: 0 or greater.*
Scales the length of the diagonal rays from top left to bottom right.

Size Red: *Default: 0.5, Range: 0 or greater.*
Scales the length of the red component of the rays. If the red, green, and blue sizes are equal the glints will be uniform in color and will match the color of the source clip. If they are not equal, the glint colors can vary along the lengths of the rays.

Size Green: *Default: 1, Range: 0 or greater.*
Scales the length of the green component of the rays.

Size Blue: *Default: 1.5, Range: 0 or greater.*
Scales the length of the blue component of the rays.

Blur Glint: *Default: 0, Range: 0 or greater.*
The glints are blurred by this amount before being combined with the background.

Hue Shift: *Default: 0, Range: -1 to 1.*
Shifts the hue of the glint, in revolutions from red to green to blue to red.

Affect Alpha: *Default: 0, Range: 0 or greater.*
If this value is positive the output Alpha channel will include some opacity from the glints. The maximum of the red, green, and blue glint brightness is scaled by this value and combined with the background Alpha at each pixel.

Glint From Alpha: *Default: 0, Range: 0 to 1.*
Set to 1 to generate glints from the alpha channel of the source input instead of the RGB channels. In this case the glints will not pick up color from the source and will typically be brighter. Values between 0 and 1 interpolate between using the RGB and the Alpha.

Glint Under Source: *Default: 0, Range: 0 to 1.*
Set to 1 to composite the Source input over the glints.

Source Opacity: *Default: 1, Range: 0 to 1.*
Scales the opacity of the Source input when combined with the glints. This does not affect the generation of the glints themselves.

Bg Brightness: *Default: 1, Range: 0 or greater.*
Scales the brightness of the background. This parameter only has an effect if the background input is provided, and is visible due to a partially transparent Source image or a reduced Source Opacity parameter value.

Expand Borders: *Check-box, Default: off.*
If enabled, transparent borders are added to the input image before processing. This allows the result to include soft edges beyond the original image size. When off, the effect only occurs within the frame and the result will retain an edge at the borders.

Invert Mask: *Check-box, Default: off.*
If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Type: *Popup menu, Default: Luma.*
This setting is ignored unless the Mask input is provided.

Luma: uses the luminance of the Mask input to scale the brightness of the glints.

Color: uses the RGB channels of the Mask input to scale the colors of the glints.

Alpha: uses the alpha channel of the Mask input to scale the brightness of the glints.

Show Size: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the size parameters.

See Also:

[GlintRainbow](#)

[DissolveGlint](#)

[Glare](#)

[Sparkles](#)

[Glow](#)

[Sapphire](#)

[Plug-ins](#)

[Introduction](#)

S_GlintRainbow

Generates star shaped rainbow colored glints at locations where the Source clip is brighter than the threshold. Lower the threshold parameter to produce glints in more areas. Adjust the Shift Out, Size, and Brightness parameters to make different types of glints. Glints are best observed on dark images with a few bright spots.

In the Sapphire Lighting effects submenu.



Inputs:

Source: The input clip that determines the glint locations and colors.

Background: *Optional.* The clip to combine the glints with. If no background is given, the Source is also used as the Background.

Mask: *Optional.* If provided, the source glint colors are scaled by this input. A monochrome mask can be used to choose a subset of Source areas that will generate glints. A color mask can be used to selectively adjust the glint colors in different regions. The mask is applied to the source before the glints are generated so it will not clip the resulting glints.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*
The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*
Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*
Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Brightness: *Default: 1, Range: 0 or greater.*
Scales the brightness of all the glints.

Scale Colors: *Default rgb: [1 1 1].*
Scales the color of the glints. The colors and brightnesses of the glints are also affected by the Source and Mask inputs.

Brightness X: *Default: 1, Range: 0 or greater.*
Scales the brightness of the horizontal glint rays.

Brightness Y: *Default: 1, Range: 0 or greater.*
Scales the brightness of the vertical glint rays.

Brightness Diag1: *Default: 1, Range: 0 or greater.*
Scales the brightness of the diagonal rays from top right to bottom left.

Brightness Diag2: *Default: 1, Range: 0 or greater.*
Scales the brightness of the diagonal rays from top left to bottom right.

Threshold: *Default: 0.7, Range: 0 or greater.*
Glints are generated from locations in the source clip that are brighter than this value. A value of 0.9 causes glints at only the brightest spots. A value of 0 causes glints for every non-black area.

Threshold Add Color: *Default rgb: [0 0 0].*
This can be used to raise the threshold on a specific color and thereby reduce the glints generated on areas of the source clip containing that color.

Threshold Blur: *Default: 0.0896, Range: 0 or greater.*
Increase to smooth out the areas creating glints. This can be used to eliminate glints generated from small speckles or to simply soften the glints. Increasing this may put more highlights below the threshold and darken the resulting glints, but you can decrease the Threshold parameter to compensate.

Size: *Default: 2, Range: 0 or greater.*
Scales the length of all glint rays. This and all the size parameters can be adjusted using the Size Widget. Note that a zero glint size still enhances the bright areas; set the brightness parameter to zero if you want to pass the Source through unchanged.

Size X: *Default: 1, Range: 0 or greater.*
Scales the length of the horizontal glint rays.

Size Y: *Default:* 1, *Range:* 0 or greater.
Scales the length of the vertical glint rays.

Size Diag1: *Default:* 0.75, *Range:* 0 or greater.
Scales the length of the diagonal rays from top right to bottom left.

Size Diag2: *Default:* 0.75, *Range:* 0 or greater.
Scales the length of the diagonal rays from top left to bottom right.

Shift Out: *Default:* 1, *Range:* any.
Shifts the glint rays outwards from their source highlights by this amount relative to the glint size.

Shift Red: *Default:* 0.3, *Range:* any.
Shifts the red component of the glints in or out relative to the blue. The green is centered between blue and red for a complete spectrum.

Shift Blue: *Default:* -0.3, *Range:* any.
Shifts the blue component of the glints in or out relative to the red and green. This can be used with Shift Red to adjust the range of hues in the glints.

Blur Glint: *Default:* 0, *Range:* 0 or greater.
The glints are blurred by this amount before being combined with the background.

Hue Shift: *Default:* 0, *Range:* any.
Shifts the hue of the glint, in revolutions from red to green to blue to red.

Affect Alpha: *Default:* 0, *Range:* 0 or greater.
If this value is positive the output Alpha channel will include some opacity from the glints. The maximum of the red, green, and blue glint brightness is scaled by this value and combined with the background Alpha at each pixel.

Glint From Alpha: *Default:* 0, *Range:* 0 to 1.
Set to 1 to generate glints from the alpha channel of the source input instead of the RGB channels. In this case the glints will not pick up color from the source and will typically be brighter. Values between 0 and 1 interpolate between using the RGB and the Alpha.

Glint Under Source: *Default:* 0, *Range:* 0 to 1.
Set to 1 to composite the Source input over the glints.

Source Opacity: *Default:* 1, *Range:* 0 to 1.
Scales the opacity of the Source input when combined with the glints. This does not affect the generation of the glints themselves.

Bg Brightness: *Default:* 1, *Range:* 0 or greater.
Scales the brightness of the background. This parameter only has an effect if the background input is provided, and is visible due to a partially transparent Source image or a reduced Source Opacity parameter value.

Expand Borders: *Check-box*, *Default:* off.
If enabled, transparent borders are added to the input image before processing. This allows the result to include soft edges beyond the original image size. When off, the effect only occurs within the frame and the result will retain an edge at the borders.

Invert Mask: *Check-box*, *Default:* off.
If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Type: *Popup menu*, *Default:* Luma.
This setting is ignored unless the Mask input is provided.

Luma: uses the luminance of the Mask input to scale the brightness of the glints.

Color: uses the RGB channels of the Mask input to scale the colors of the glints.

Alpha: uses the alpha channel of the Mask input to scale the brightness of the glints.

Show Size: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the size parameters.

See Also:

[Glint](#)
[DissolveGlint](#)

[Glare](#)
[Sparkles](#)
[Glow](#)

[Sapphire](#)
[Plug-ins](#)
[Introduction](#)

S_Glow

Generates glowing light from areas of the source clip that are brighter than the given threshold. Raise the threshold parameter to produce glows in fewer areas. Adjust the Width RGB parameters to make glows with different color falloffs, and adjust the Width XY parameters to make horizontal or vertical glows.

In the Sapphire Lighting effects submenu.



Inputs:

Source: The input clip that determines the glow locations and colors.

Background: *Optional.* The clip to combine the glows with. If no background is given, the Source is also used as the Background.

Mask: *Optional.* If provided, the source glow colors are scaled by this input. A monochrome mask can be used to choose a subset of Source areas that will generate glows. A color mask can be used to selectively adjust the glow colors in different regions. The mask is applied to the source before the glows are generated so it will not clip the resulting glows.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*
The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*
Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*
Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Brightness: *Default: 2, Range: 0 or greater.*
Scales the brightness of all the glows.

Color: *Default rgb: [1 1 1].*
Scales the color of the glows. The colors and brightnesses of the glows are also affected by the Source and Mask inputs.

Threshold: *Default: 0.5, Range: 0 or greater.*
Glowes are generated from locations in the source clip that are brighter than this value. A value of 0.9 causes glowes at only the brightest spots. A value of 0 causes glowes for every non-black area.

Threshold Add Color: *Default rgb: [0 0 0].*
This can be used to raise the threshold on a specific color and thereby reduce the glowes generated on areas of the source clip containing that color.

Glow Width: *Default: 0.4, Range: 0 or greater.*
Scales the glow distance. This and all the width parameters can be adjusted using the Width Widget. Note that a zero glow width still enhances the bright areas; set the brightness parameter to zero if you want to pass the Source through unchanged.

Width X: *Default: 1, Range: 0 or greater.*
Scales the horizontal glow width. Set to 0 for vertical only.

Width Y: *Default: 1, Range: 0 or greater.*
Scales the vertical glow width. Set to 0 for horizontal only.

Width Red: *Default: 1, Range: 0 or greater.*
Scales the red glow width. If the red, green, and blue widths are equal, the glowes will match the color of the source clip. If they are not equal, the glowes will vary in color with distance.

Width Green: *Default: 1.2, Range: 0 or greater.*
Scales the green glow width.

Width Blue: *Default: 1.4, Range: 0 or greater.*
Scales the blue glow width.

Subpixel: *Check-box, Default: on.*
Enables glowing by subpixel widths. Use this for smoother animation of the Width parameters.

Show: *Popup menu, Default: Result.*

Selects the type of output

Result: Shows the final result of combining the glow, source, and background.

Threshold: Shows the thresholded image that is used to generate the glow.

Affect Alpha: *Default: 0, Range: 0 or greater.*

If this value is positive the output Alpha channel will include some opacity from the glows. The maximum of the red, green, and blue glow brightness is scaled by this value and combined with the background Alpha at each pixel.

Glow From Alpha: *Default: 0, Range: 0 to 1.*

Set to 1 to generate glows from the alpha channel of the source input instead of the RGB channels. In this case the glows will not pick up color from the source and will typically be brighter. Values between 0 and 1 interpolate between using the RGB and the Alpha.

Glow Under Source: *Default: 0, Range: 0 to 1.*

Set to 1 to composite the Source input over the glows.

Light Background: *Default: 0, Range: 0 to 1.*

Increase this to give a look of the glow casting light onto the background image. To see this more clearly you can also lower the Scale Background parameter or raise the Brightness parameter.

Source Opacity: *Default: 1, Range: 0 to 1.*

Scales the opacity of the Source input when combined with the glows. This does not affect the generation of the glows themselves.

Combine: *Popup menu, Default: Screen.*

Determines how the glow is combined with the Source or Background. This parameter has no effect if Light BG is set to 1.

Mult: the source or background is multiplied by the glow.

Add: the glow is added to the source or background.

Screen: the glow is blended with the source or background using a screen operation.

Difference: the result is the difference between the glow and the source or background.

Overlay: the glow is combined with the source or background using an overlay function.

Edge Mode: *Popup menu, Default: Reflect.*

Determines the behavior when accessing areas outside the source image.

Transparent: Areas outside the source image are treated as transparent, which can produce transparency around the edges of the image. Select this for fastest rendering.

Reflect: Reflects the image outside the border.

Bg Brightness: *Default: 1, Range: 0 or greater.*

Scales the brightness of the background. This parameter only has an effect if the background input is provided, and is visible due to a partially transparent Source image or a reduced Source Opacity parameter value.

Expand Borders: *Check-box, Default: off.*

If enabled, transparent borders are added to the input image before processing. This allows the result to include soft edges beyond the original image size. When off, the effect only occurs within the frame and the result will retain an edge at the borders.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Atmosphere Amp: *Default: 0, Range: 0 or greater.*

Atmosphere gives the effect of the glow shining through a dusty atmosphere and picking up light or getting

shadowed. This parameter adjusts the amount, or amplitude, of the atmospheric effect. Zero gives a smooth glow, higher values give more dusty look.

Atmosphere Freq: *Default:* 1, *Range:* 0.1 to 20.

Controls the spatial frequency of the atmospheric noise. Turn this up higher to get finer details, turn down for broader overall variation.

Atmosphere Detail: *Default:* 0.6, *Range:* 0 to 1.

Controls the amount of fine detail in the atmosphere simulation. Decrease to get smoother atmosphere, increase for a more crunchy or grainy look.

Atmosphere Seed: *Default:* 0.123, *Range:* 0 or greater.

Used to initialize the random number generator for the atmospheric noise. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Atmosphere Speed: *Default:* 1, *Range:* any.

The cloudy noise in the atmosphere evolves over time like real dust clouds; this parameter controls how fast the cloud pattern changes over time. Set to zero for a static pattern.

Show Glow Width: *Check-box, Default:* on.

Turns on or off the screen user interface for adjusting the Glow Width parameter.

See Also:

[GlowDist](#)
[GlowRainbow](#)
[GlowAura](#)
[GlowRings](#)
[GlowDarks](#)
[GlowOrthicon](#)
[GlowEdges](#)
[GlowNoise](#)

[Glint](#)
[Sapphire](#)
[Plug-ins](#)
[Introduction](#)

S_GlowAura

Generates radial colored aura lines following the gradient of the source clip. Raise the threshold parameter to produce glows in fewer areas. Adjust the Width, Frequency, Phase, and Twist parameters to make glows with different aura patterns.

In the Sapphire Lighting effects submenu.



Inputs:

Source: The input clip that determines the glow locations and directions.

Background: *Optional.* The clip to combine the glows with. If no background is given, the Source is also used as the Background.

Mask: *Optional.* If provided, the source glow colors are scaled by this input. A monochrome mask can be used to choose a subset of Source areas that will generate glows. A color mask can be used to selectively adjust the glow colors in different regions. The mask is applied to the source before the glows are generated so it will not clip the resulting glows.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*
The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*
Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*
Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Brightness: *Default: 0.8, Range: 0 or greater.*
Scales the brightness of the glows.

Color: *Default rgb: [1 1 1].*
Scales the color of the glows.

Outer Brightness: *Default: 1, Range: 0 or greater.*
Scales the brightness of the glows at further distances from the source.

Glow Saturation: *Default: 1, Range: any.*
Scales the saturation of the glow colors. Increase for more intense colors. Set to 0 for monochrome.

Threshold: *Default: 0, Range: 0 or greater.*
Glow will be generated from locations in the source clip that are brighter than this value. A value of 0.9 causes glows at only the brightest spots. A value of 0 causes glows on every non-black area.

Threshold Add Color: *Default rgb: [0 0 0].*
This can be used to raise the threshold on a specific color and thereby reduce the glows generated on areas of the source clip containing that color.

Glow Width: *Default: 0.4, Range: 0 or greater.*
Scales the glow distance. This parameter can be adjusted using the Width Widget. Note that a zero glow width still enhances the bright areas; set the brightness parameter to zero if you want to pass the Source through unchanged.

Subpixel: *Check-box, Default: on.*
Enables glowing by subpixel widths. Use this for smoother animation of the Width parameters.

Frequency: *Default: 8, Range: 0 or greater.*
The frequency of the color pattern. Increase for more cycles through the spectrum.

Frequency Red: *Default: 1, Range: 0 or greater.*
Scales the red frequency.

Frequency Green: *Default: 1, Range: 0 or greater.*
Scales the green frequency.

Frequency Blue: *Default: 1, Range: 0 or greater.*
Scales the blue frequency.

Phase: *Default: 0, Range: any.*

Shifts the color pattern.

Phase Speed: *Default: 1, Range: any.*

If non-zero, the color phase is automatically animated at this speed, causing the color pattern to flow over time.

Phase Red: *Default: 0.2, Range: any.*

Shifts the red phase.

Phase Green: *Default: 0.1, Range: any.*

Shifts the green phase.

Phase Blue: *Default: 0, Range: any.*

Shifts the blue phase.

Twist: *Default: 1, Range: any.*

Adjusts the spiral direction of the radial lines.

Show: *Popup menu, Default: Result.*

Selects the type of output

Result: Shows the final result of combining the glow, source, and background.

Threshold: Shows the thresholded image that is used to generate the glow.

Affect Alpha: *Default: 0, Range: 0 or greater.*

If this value is positive the output Alpha channel will include some opacity from the glows. The maximum of the red, green, and blue glow brightness is scaled by this value and combined with the background Alpha at each pixel.

Glow From Alpha: *Default: 0, Range: 0 to 1.*

Set to 1 to generate glows from the alpha channel of the source input instead of the RGB channels. In this case the glows will not pick up color from the source and will typically be brighter. Values between 0 and 1 interpolate between using the RGB and the Alpha.

Glow Under Source: *Default: 0, Range: 0 to 1.*

Set to 1 to composite the Source input over the glows.

Light Background: *Default: 0, Range: 0 to 1.*

Increase this to give a look of the glow casting light onto the background image. To see this more clearly you can also lower the Scale Background parameter or raise the Brightness parameter.

Source Opacity: *Default: 1, Range: 0 to 1.*

Scales the opacity of the Source input when combined with the glows. This does not affect the generation of the glows themselves.

Combine: *Popup menu, Default: Screen.*

Determines how the glow is combined with the Source or Background. This parameter has no effect if Light BG is set to 1.

Mult: the source or background is multiplied by the glow.

Add: the glow is added to the source or background.

Screen: the glow is blended with the source or background using a screen operation.

Difference: the result is the difference between the glow and the source or background.

Overlay: the glow is combined with the source or background using an overlay function.

Bg Brightness: *Default: 1, Range: 0 or greater.*

Scales the brightness of the background. This parameter only has an effect if the background input is provided, and is visible due to a partially transparent Source image or a reduced Source Opacity parameter value.

Expand Borders: *Check-box*, *Default*: off.

If enabled, transparent borders are added to the input image before processing. This allows the result to include soft edges beyond the original image size. When off, the effect only occurs within the frame and the result will retain an edge at the borders.

Invert Mask: *Check-box*, *Default*: off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Glow Width: *Check-box*, *Default*: on.

Turns on or off the screen user interface for adjusting the Glow Width parameter.

See Also:

[Glow](#)

[GlowDist](#)

[GlowRainbow](#)

[GlowRings](#)

[GlowDarks](#)

[GlowOrthicon](#)

[GlowEdges](#)

[GlowNoise](#)

[Glint](#)

[PsykoStripes](#)

[PseudoColor](#)

[Sapphire](#)

[Plug-ins](#)

[Introduction](#)

S_GlowDarks

Areas of the source clip darker than the given threshold are blurred and combined with the input clip to give a deep smoky look. Adjust the Darkness, Width, and Threshold parameters to give different types of looks.

In the Sapphire Lighting effects submenu.



Inputs:

Source: The input clip that determines the glow locations and colors.

Background: *Optional.* The clip to combine the glows with. If no background is given, the Source is also used as the Background.

Mask: *Optional.* If provided, the source glow colors are scaled by this input. A monochrome mask can be used to choose a subset of Source areas that will generate glows. A color mask can be used to selectively adjust the glow colors in different regions. The mask is applied to the source before the glows are generated so it will not clip the resulting glows.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*
The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*
Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*
Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Darkness: *Default: 0.5, Range: 0 or greater.*
The magnitude of the dark glows.

Threshold: *Default: 0.5, Range: 0 or greater.*
Dark glows will be generated from locations in the source clip that are darker than this value. A value of 0.1 causes glows at only the darkest areas. A value of 1.0 causes glows on every non-white area.

Glow Saturation: *Default: 1, Range: -2 to 8.*
Scales the saturation of the dark colors. Increase for more intense colors.

Glow Width: *Default: 1, Range: 0 or greater.*
Scales the glow distance. This and all the width parameters can be adjusted using the Width Widget. Note that a zero glow width still affects the dark areas; set the darkness parameter to zero if you want to pass the Source through unchanged.

Width X: *Default: 1, Range: 0 or greater.*
Scales the horizontal glow width. Set to 0 for vertical only.

Width Y: *Default: 1, Range: 0 or greater.*
Scales the vertical glow width. Set to 0 for horizontal only.

Subpixel: *Check-box, Default: on.*
Enables glowing by subpixel widths. Use this for smoother animation of the Width parameters.

Show: *Popup menu, Default: Result.*
Selects the type of output

Result: Shows the final result of combining the glow, source, and background.
Darks: Outputs the dark areas of the source which will generate the glow. Colors are inverted, so darks will appear bright and vice versa.

Glow From Alpha: *Default: 0, Range: 0 to 1.*
Set to 1 to generate glows from the alpha channel of the source input instead of the RGB channels. In this case the glows will not pick up color from the source and will typically be brighter. Values between 0 and 1 interpolate between using the RGB and the Alpha.

Glow Under Source: *Default: 0, Range: 0 to 1.*
Set to 1 to composite the Source input over the glows.

Source Opacity: *Default:* 1, *Range:* 0 to 1.

Scales the opacity of the Source input when combined with the glows. This does not affect the generation of the glows themselves.

Bg Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the background input clip.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Atmosphere Amp: *Default:* 0, *Range:* 0 or greater.

Atmosphere gives the effect of the glow shining through a dusty atmosphere and picking up light or getting shadowed. This parameter adjusts the amount, or amplitude, of the atmospheric effect. Zero gives a smooth glow, higher values give more dusty look.

Atmosphere Freq: *Default:* 1, *Range:* 0.1 to 20.

Controls the spatial frequency of the atmospheric noise. Turn this up higher to get finer details, turn down for broader overall variation.

Atmosphere Detail: *Default:* 0.6, *Range:* 0 to 1.

Controls the amount of fine detail in the atmosphere simulation. Decrease to get smoother atmosphere, increase for a more crunchy or grainy look.

Atmosphere Seed: *Default:* 0.123, *Range:* 0 or greater.

Used to initialize the random number generator for the atmospheric noise. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Atmosphere Speed: *Default:* 1, *Range:* any.

The cloudy noise in the atmosphere evolves over time like real dust clouds; this parameter controls how fast the cloud pattern changes over time. Set to zero for a static pattern.

Show Glow Width: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Glow Width parameter.

See Also:

[Glow](#)

[Glint](#)

[GlowDist](#)

[Sapphire](#)

[GlowRainbow](#)

[Plug-ins](#)

[GlowAura](#)

[Introduction](#)

[GlowRings](#)

[GlowOrthicon](#)

[GlowEdges](#)

[GlowNoise](#)

S_GlowDist

Generates glows based on the distances from the edges of the source input. Any edges in the input image, where the brightness crosses the given threshold value, will generate an equally bright glow into the darker side of the edges. This is best observed when used on images with dark backgrounds.

In the Sapphire Lighting effects submenu.



Inputs:

Source: The input clip that determines the glow locations and colors.

Background: *Optional.* The clip to combine the glows with. If no background is given, the Source is also used as the Background.

Mask: *Optional.* If provided, the source glow colors are scaled by this input. A monochrome mask can be used to choose a subset of Source areas that will generate glows. A color mask can be used to selectively adjust the glow colors in different regions. The mask is applied to the source before the glows are generated so it will not clip the resulting glows.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*
The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*
Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*
Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Brightness: *Default: 0.8, Range: 0 or greater.*
Scales the brightness of the glows.

Color: *Default rgb: [1 1 1].*
Scales the color of the glows.

Threshold: *Default: 0.5, Range: 0 or greater.*
Glowes are generated at the edges of areas in the source clip that are brighter than this value. A value of 0.9 causes glowes from only the brightest spots. A value of 0 causes glowes for every non-black area.

Threshold Add Color: *Default rgb: [0 0 0].*
This can be used to raise the threshold on a specific color and thereby reduce the glowes generated on areas of the source clip containing that color.

Glow Width: *Default: 0.1, Range: 0 or greater.*
Scales the glow distance. This and all the width parameters can be adjusted using the Width Widget. Note that a zero glow width still enhances the bright areas; set the brightness parameter to zero if you want to pass the Source through unchanged.

Width Red: *Default: 1, Range: 0 or greater.*
Scales the red glow distance. If the red, green, and blue widths are equal, the glowes will be a single color given by the Color parameter. If they are not equal, the glowes will vary in color with distance.

Width Green: *Default: 1.2, Range: 0 or greater.*
Scales the green glow width.

Width Blue: *Default: 1.4, Range: 0 or greater.*
Scales the blue glow width.

Show: *Popup menu, Default: Result.*
Selects the type of output

Result: Shows the final result of combining the glow, source, and background.
Threshold: Shows the thresholded image that is used to generate the glow.

Affect Alpha: *Default: 0, Range: 0 or greater.*
If this value is positive the output Alpha channel will include some opacity from the glowes. The maximum of the red, green, and blue glow brightness is scaled by this value and combined with the background Alpha at each pixel.

Glow From Alpha: *Default: 0, Range: 0 to 1.*

Set to 1 to generate glows from the alpha channel of the source input instead of the RGB channels. In this case the glows will not pick up color from the source and will typically be brighter. Values between 0 and 1 interpolate between using the RGB and the Alpha.

Glow Under Source: *Default: 0, Range: 0 to 1.*

Set to 1 to composite the Source input over the glows.

Light Background: *Default: 0, Range: 0 to 1.*

Increase this to give a look of the glow casting light onto the background image. To see this more clearly you can also lower the Scale Background parameter or raise the Brightness parameter.

Source Opacity: *Default: 1, Range: 0 to 1.*

Scales the opacity of the Source input when combined with the glows. This does not affect the generation of the glows themselves.

Combine: *Popup menu, Default: Screen.*

Determines how the glow is combined with the Source or Background. This parameter has no effect if Light BG is set to 1.

Mult: the source or background is multiplied by the glow.

Add: the glow is added to the source or background.

Screen: the glow is blended with the source or background using a screen operation.

Difference: the result is the difference between the glow and the source or background.

Overlay: the glow is combined with the source or background using an overlay function.

Bg Brightness: *Default: 1, Range: 0 or greater.*

Scales the brightness of the background. This parameter only has an effect if the background input is provided, and is visible due to a partially transparent Source image or a reduced Source Opacity parameter value.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Glow Width: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Glow Width parameter.

See Also:

[Glow](#)

[Glint](#)

[GlowRainbow](#)

[Sapphire](#)

[GlowAura](#)

[Plug-ins](#)

[GlowRings](#)

[Introduction](#)

[GlowDarks](#)

[GlowOrthicon](#)

[GlowEdges](#)

[GlowNoise](#)

S_GlowEdges

Creates glowing light from the edges of the source clip. This differs from the default Glow in that small or thin objects generate as much glow around their edges as large objects. Also the glow colors are not affected by the colors of the source clip.

In the Sapphire Lighting effects submenu.



Inputs:

Source: Edges are extracted from this input clip to determine the glow locations.

Background: *Optional.* The clip to combine the glows with. If no background is given, the Source is also used as the Background.

Mask: *Optional.* If provided, the source glow colors are scaled by this input. A monochrome mask can be used to choose a subset of Source areas that will generate glows. A color mask can be used to selectively adjust the glow colors in different regions. The mask is applied to the source before the glows are generated so it will not clip the resulting glows.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*
The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*
Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*
Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Glow Brightness: *Default: 2, Range: 0 or greater.*
Controls the overall glow brightness. Set to zero to get no glow.

Color: *Default rgb: [1 1 1].*
Scales the color of the glows.

Glow Width: *Default: 0.224, Range: 0 or greater.*
Scales the glow distance. This and all the width parameters can be adjusted using the Width Widget. Note that a zero glow width still enhances the bright areas; set the brightness parameter to zero if you want to pass the Source through unchanged.

Width X: *Default: 1, Range: 0 or greater.*
Scales the horizontal glow width. Set to 0 for vertical only.

Width Y: *Default: 1, Range: 0 or greater.*
Scales the vertical glow width. Set to 0 for horizontal only.

Width Red: *Default: 1, Range: 0 or greater.*
Scales the red glow width. If the red, green, and blue widths are equal, the glow colors be uniform with distance. If they are not equal, the glows will vary in color with distance.

Width Green: *Default: 1.2, Range: 0 or greater.*
Scales the green glow width.

Width Blue: *Default: 1.4, Range: 0 or greater.*
Scales the blue glow width.

Subpixel: *Check-box, Default: on.*
Enables glowing by subpixel widths. Use this for smoother animation of the Width parameters.

Edges Smooth: *Default: 0, Range: 0 or greater.*
Determines the width of the extracted edges which generate the glows.

Edges Brightness: *Default: 1, Range: 0 or greater.*
Scales the brightness of the edges before the glows are applied.

Edges Threshold: *Default: 0.5, Range: 0 or greater.*
Increase to remove glows on the less sharp edges.

Show: *Popup menu*, *Default:* Result.

Selects the type of output.

Result: Normally the glows are combined with the source or background, and output.

Edges: The edge image only is output, before any glows are applied. This can be helpful while adjusting the various edge parameters.

Affect Alpha: *Default:* 0, *Range:* 0 or greater.

If this value is positive the output Alpha channel will include some opacity from the glows. The maximum of the red, green, and blue glow brightness is scaled by this value and combined with the background Alpha at each pixel.

Glow From Alpha: *Default:* 0, *Range:* 0 to 1.

Set to 1 to generate glows from the alpha channel of the source input instead of the RGB channels. In this case the glows will not pick up color from the source and will typically be brighter. Values between 0 and 1 interpolate between using the RGB and the Alpha.

Glow Under Source: *Default:* 0, *Range:* 0 to 1.

Set to 1 to composite the Source input over the glows.

Light Background: *Default:* 0, *Range:* 0 to 1.

Increase this to give a look of the glow casting light onto the background image. To see this more clearly you can also lower the Scale Background parameter or raise the Brightness parameter.

Source Opacity: *Default:* 1, *Range:* 0 to 1.

Scales the opacity of the Source input when combined with the glows. This does not affect the generation of the glows themselves.

Combine: *Popup menu*, *Default:* Screen.

Determines how the glow is combined with the Source or Background. This parameter has no effect if Light BG is set to 1.

Mult: the source or background is multiplied by the glow.

Add: the glow is added to the source or background.

Screen: the glow is blended with the source or background using a screen operation.

Difference: the result is the difference between the glow and the source or background.

Overlay: the glow is combined with the source or background using an overlay function.

Bg Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the background. This parameter only has an effect if the background input is provided, and is visible due to a partially transparent Source image or a reduced Source Opacity parameter value.

Expand Borders: *Check-box*, *Default:* off.

If enabled, transparent borders are added to the input image before processing. This allows the result to include soft edges beyond the original image size. When off, the effect only occurs within the frame and the result will retain an edge at the borders.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Glow Width: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Glow Width parameter.

See Also:

[Glow](#)
[GlowDist](#)
[GlowRainbow](#)
[GlowAura](#)
[GlowRings](#)
[GlowDarks](#)
[GlowOrthicon](#)
[GlowNoise](#)

[Glint](#)
[Sapphire](#)
[Plug-ins](#)
[Introduction](#)

S_GlowNoise

Generates glowing light from areas of the source clip that are brighter than the given threshold. The glows are also attenuated by a solid noise texture to give them a noisy or grainy effect. If the Jitter Frames parameter is positive, the noise will be regenerated for each frame for a fizzling look. If Jitter Frames is zero, two noise textures are combined and slide over each other at a rate depending on the Spread Speed.



In the Sapphire Lighting effects submenu.

Inputs:

Source: The input clip that determines the glow locations and colors.

Background: *Optional.* The clip to combine the glows with. If no background is given, the Source is also used as the Background.

Mask: *Optional.* If provided, the source glow colors are scaled by this input. A monochrome mask can be used to choose a subset of Source areas that will generate glows. A color mask can be used to selectively adjust the glow colors in different regions. The mask is applied to the source before the glows are generated so it will not clip the resulting glows.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*
The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*
Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*
Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Brightness: *Default: 2, Range: 0 or greater.*
Scales the brightness of all the glows.

Color: *Default rgb: [1 1 1].*
Scales the color of the glows. The colors and brightnesses of the glows are also affected by the Source and Mask inputs.

Threshold: *Default: 0.5, Range: 0 or greater.*
Glowes are generated from locations in the source clip that are brighter than this value. A value of 0.9 causes glowes at only the brightest spots. A value of 0 causes glowes for every non-black area.

Threshold Add Color: *Default rgb: [0 0 0].*
This can be used to raise the threshold on a specific color and thereby reduce the glowes generated on areas of the source clip containing that color.

Glow Width: *Default: 0.4, Range: 0 or greater.*
Scales the glow distance. This and all the width parameters can be adjusted using the Width Widget. Note that a zero glow width still enhances the bright areas; set the brightness parameter to zero if you want to pass the Source through unchanged.

Width X: *Default: 1, Range: 0 or greater.*
Scales the horizontal glow width. Set to 0 for vertical only.

Width Y: *Default: 1, Range: 0 or greater.*
Scales the vertical glow width. Set to 0 for horizontal only.

Width Red: *Default: 1, Range: 0 or greater.*
Scales the red glow width. If the red, green, and blue widths are equal, the glowes will match the color of the source clip. If they are not equal, the glowes will vary in color with distance.

Width Green: *Default: 1.2, Range: 0 or greater.*
Scales the green glow width.

Width Blue: *Default: 1.4, Range: 0 or greater.*
Scales the blue glow width.

Subpixel: *Check-box, Default: on.*
Enables glowing by subpixel widths. Use this for smoother animation of the Width parameters.

Noise Amplitude: *Default:* 1, *Range:* 0 or greater.

The amplitude of noise to include in the glows.

Noise Frequency: *Default:* 40, *Range:* 0.1 or greater.

The spatial frequency of the noise texture. Increase for finer grain, decrease for coarser grain.

Noise Freq Rel Y: *Default:* 1, *Range:* 0.02 or greater.

The relative vertical frequency of the noise texture. Increase to stretch it horizontally or decrease to stretch it vertically.

Noise Octaves: *Integer, Default:* 1, *Range:* 1 to 10.

The number of octaves of noise to include. Each octave is twice the frequency and half the amplitude of the previous.

Noise Seed: *Default:* 0.123, *Range:* 0 or greater.

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Noise Shift: *X & Y, Default:* [0 0], *Range:* any.

The horizontal and vertical translation of the noise texture. This can only be observed if Jitter Frames is zero.

Spread Speed: *X & Y, Default:* [0.1 0], *Range:* any.

The rate and direction that two noise textures slide over each other. This has no effect unless Jitter Frames is zero.

Jitter Frames: *Integer, Default:* 1, *Range:* 0 or greater.

If this is 0, the noise texture will remain the same for every frame processed. If it is 1, a new noise texture is used for each frame. If it is 2, a new noise texture is used for every other frame, and so on.

Show: *Popup menu, Default: Result.*

Selects the type of output

Result: Shows the final result of combining the glow, source, and background.

Threshold: Shows the thresholded image that is used to generate the glow.

Affect Alpha: *Default:* 0, *Range:* 0 or greater.

If this value is positive the output Alpha channel will include some opacity from the glows. The maximum of the red, green, and blue glow brightness is scaled by this value and combined with the background Alpha at each pixel.

Glow From Alpha: *Default:* 0, *Range:* 0 to 1.

Set to 1 to generate glows from the alpha channel of the source input instead of the RGB channels. In this case the glows will not pick up color from the source and will typically be brighter. Values between 0 and 1 interpolate between using the RGB and the Alpha.

Glow Under Source: *Default:* 0, *Range:* 0 to 1.

Set to 1 to composite the Source input over the glows.

Light Background: *Default:* 0, *Range:* 0 to 1.

Increase this to give a look of the glow casting light onto the background image. To see this more clearly you can also lower the Scale Background parameter or raise the Brightness parameter.

Source Opacity: *Default:* 1, *Range:* 0 to 1.

Scales the opacity of the Source input when combined with the glows. This does not affect the generation of the glows themselves.

Combine: *Popup menu, Default: Screen.*

Determines how the glow is combined with the Source or Background. This parameter has no effect if Light BG is set to 1.

Mult: the source or background is multiplied by the glow.

Add: the glow is added to the source or background.

Screen: the glow is blended with the source or background using a screen operation.

Difference: the result is the difference between the glow and the source or background.

Overlay: the glow is combined with the source or background using an overlay function.

Edge Mode: *Popup menu, Default: Reflect.*

Determines the behavior when accessing areas outside the source image.

Transparent: Areas outside the source image are treated as transparent, which can produce transparency around the edges of the image. Select this for fastest rendering.

Reflect: Reflects the image outside the border.

Bg Brightness: *Default: 1, Range: 0 or greater.*

Scales the brightness of the background. This parameter only has an effect if the background input is provided, and is visible due to a partially transparent Source image or a reduced Source Opacity parameter value.

Expand Borders: *Check-box, Default: off.*

If enabled, transparent borders are added to the input image before processing. This allows the result to include soft edges beyond the original image size. When off, the effect only occurs within the frame and the result will retain an edge at the borders.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Glow Width: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Glow Width parameter.

See Also:

[Glow](#)

[GlowDist](#)

[GlowRainbow](#)

[GlowAura](#)

[GlowRings](#)

[GlowDarks](#)

[GlowOrthicon](#)

[GlowEdges](#)

[Glint](#)

[Sapphire](#)

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[Introduction](#)

S_GlowOrthicon

The source clip is darkened at areas around parts of the source clip that are brighter than the given threshold, to give an 'orthicon' or 'dark glow' look. Lower the Threshold parameter to produce the orthicon effect in more areas. Adjust the Darkness and Width parameters to give different types of looks.

In the Sapphire Lighting effects submenu.



Inputs:

Source: The input clip that determines the locations to be darkened.

Background: *Optional.* The clip to combine the glows with. If no background is given, the Source is also used as the Background.

Mask: *Optional.* If provided, the source glow colors are scaled by this input. A monochrome mask can be used to choose a subset of Source areas that will generate glows. A color mask can be used to selectively adjust the glow colors in different regions. The mask is applied to the source before the glows are generated so it will not clip the resulting glows.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*
The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*
Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*
Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Darkness: *Default: 1, Range: 0 or greater.*
Scales the amount of darkening.

Color: *Default rgb: [0 0 0].*
Scales the color of the glows. The colors and brightnesses of the glows are also affected by the Source and Mask inputs.

Threshold: *Default: 0.7, Range: 0 or greater.*
Darkening will occur around locations in the source clip that are brighter than this value. A value of 0.9 causes dark glows from only the brightest spots. A value of 0 causes glows for every non-black area.

Threshold Add Color: *Default rgb: [0 0 0].*
This can be used to raise the threshold on a specific color and thereby reduce the glows generated on areas of the source clip containing that color.

Darks Width: *Default: 0.224, Range: 0 or greater.*
Scales the dark glow distance. This and all the width parameters can be adjusted using the Width Widget.

Protect Width: *Default: 0.1, Range: 0 or greater.*
The distance around the bright areas that is protected from darkening. This should normally be less than the value of Darks Width.

Protect Amount: *Default: 1, Range: 0 or greater.*
The amount that the bright areas are protected from darkening.

Width X: *Default: 1, Range: 0 or greater.*
Scales the horizontal glow width. Set to 0 for vertical only.

Width Y: *Default: 1, Range: 0 or greater.*
Scales the vertical glow width. Set to 0 for horizontal only.

Subpixel: *Check-box, Default: on.*
Enables glowing by subpixel widths. Use this for smoother animation of the Width parameters.

Show: *Popup menu, Default: Result.*
Selects the type of output

***Result:** Shows the final result of combining the glow, source, and background.
Threshold: Shows the thresholded image that is used to generate the glow.*

Glow From Alpha: *Default:* 0, *Range:* 0 to 1.

Set to 1 to generate glows from the alpha channel of the source input instead of the RGB channels. In this case the glows will not pick up color from the source and will typically be brighter. Values between 0 and 1 interpolate between using the RGB and the Alpha.

Glow Under Source: *Default:* 0, *Range:* 0 to 1.

Set to 1 to composite the Source input over the glows.

Source Opacity: *Default:* 1, *Range:* 0 to 1.

Scales the opacity of the Source input when combined with the glows. This does not affect the generation of the glows themselves.

Bg Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the background. This parameter only has an effect if the background input is provided, and is visible due to a partially transparent Source image or a reduced Source Opacity parameter value.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Darks Width: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Darks Width parameter.

See Also:

[Glow](#)

[Glint](#)

[GlowDist](#)

[Sapphire](#)

[GlowRainbow](#)

[Plug-ins](#)

[GlowAura](#)

[Introduction](#)

[GlowRings](#)

[GlowDarks](#)

[GlowEdges](#)

[GlowNoise](#)

S_GlowRainbow

Generates rainbow colored glows based on the distances from the edges of the source input. Any edges in the input image, where the brightness crosses the given threshold value, will generate an equal glow into the darker side of the edges. This is best observed when used on images with dark backgrounds.

In the Sapphire Lighting effects submenu.



Inputs:

Source: The input clip that determines the glow locations and colors.

Background: *Optional.* The clip to combine the glows with. If no background is given, the Source is also used as the Background.

Mask: *Optional.* If provided, the source glow colors are scaled by this input. A monochrome mask can be used to choose a subset of Source areas that will generate glows. A color mask can be used to selectively adjust the glow colors in different regions. The mask is applied to the source before the glows are generated so it will not clip the resulting glows.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*
The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*
Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*
Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Brightness: *Default: 0.8, Range: 0 or greater.*
Scales the brightness of the glows.

Color: *Default rgb: [1 1 1].*
Scales the color of the glows.

Glow Saturation: *Default: 1, Range: any.*
Scales the saturation of the glow colors. Increase for more intense colors. Set to 0 for monochrome.

Threshold: *Default: 0.5, Range: 0 or greater.*
Glowes are generated at the edges of areas in the source clip that are brighter than this value. A value of 0.9 causes glows from only the brightest spots. A value of 0 causes glows for every non-black area.

Threshold Add Color: *Default rgb: [0 0 0].*
This can be used to raise the threshold on a specific color and thereby reduce the glows generated on areas of the source clip containing that color.

Glow Width: *Default: 0.42, Range: 0 or greater.*
Scales the glow distance. This and all the width parameters can be adjusted using the Width Widget. Note that a zero glow width still enhances the bright areas; set the brightness parameter to zero if you want to pass the Source through unchanged.

Frequency: *Default: 12, Range: 0 or greater.*
The frequency of the color pattern. Increase for more cycles through the spectrum.

Frequency Red: *Default: 1, Range: 0 or greater.*
Scales the red frequency.

Frequency Green: *Default: 0.9, Range: 0 or greater.*
Scales the green frequency.

Frequency Blue: *Default: 0.8, Range: 0 or greater.*
Scales the blue frequency.

Phase: *Default: 0, Range: any.*
Shifts the color pattern.

Phase Speed: *Default: 1, Range: any.*
If non-zero, the color phase is automatically animated at this speed, causing the color pattern to flow over time.

Phase Red: *Default: 0, Range: any.*

Shifts the red phase.

Phase Green: *Default: 0, Range: any.*

Shifts the green phase.

Phase Blue: *Default: 0, Range: any.*

Shifts the blue phase.

Show: *Popup menu, Default: Result.*

Selects the type of output

Result: Shows the final result of combining the glow, source, and background.

Threshold: Shows the thresholded image that is used to generate the glow.

Affect Alpha: *Default: 0, Range: 0 or greater.*

If this value is positive the output Alpha channel will include some opacity from the glows. The maximum of the red, green, and blue glow brightness is scaled by this value and combined with the background Alpha at each pixel.

Glow From Alpha: *Default: 0, Range: 0 to 1.*

Set to 1 to generate glows from the alpha channel of the source input instead of the RGB channels. In this case the glows will not pick up color from the source and will typically be brighter. Values between 0 and 1 interpolate between using the RGB and the Alpha.

Glow Under Source: *Default: 0, Range: 0 to 1.*

Set to 1 to composite the Source input over the glows.

Light Background: *Default: 0, Range: 0 to 1.*

Increase this to give a look of the glow casting light onto the background image. To see this more clearly you can also lower the Scale Background parameter or raise the Brightness parameter.

Source Opacity: *Default: 1, Range: 0 to 1.*

Scales the opacity of the Source input when combined with the glows. This does not affect the generation of the glows themselves.

Combine: *Popup menu, Default: Screen.*

Determines how the glow is combined with the Source or Background. This parameter has no effect if Light BG is set to 1.

Mult: the source or background is multiplied by the glow.

Add: the glow is added to the source or background.

Screen: the glow is blended with the source or background using a screen operation.

Difference: the result is the difference between the glow and the source or background.

Overlay: the glow is combined with the source or background using an overlay function.

Bg Brightness: *Default: 1, Range: 0 or greater.*

Scales the brightness of the background. This parameter only has an effect if the background input is provided, and is visible due to a partially transparent Source image or a reduced Source Opacity parameter value.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Glow Width: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Glow Width parameter.

See Also:

[Glow](#)
[GlowDist](#)
[GlowAura](#)
[GlowRings](#)
[GlowDarks](#)
[GlowOrthicon](#)
[GlowEdges](#)
[GlowNoise](#)

[Glint](#)
[PsykoStripes](#)
[PseudoColor](#)

[Sapphire](#)
[Plug-ins](#)
[Introduction](#)

S_GlowRings

Generates glows of colored rings around the areas of the source clip that are brighter than the given threshold. Raise the threshold parameter to produce glows in fewer areas. Adjust the Width and Thickness RGB parameters to make glows with different color patterns, and adjust the Width XY parameters to make horizontal or vertical glows.

In the Sapphire Lighting effects submenu.



Inputs:

Source: The input clip that determines the glow locations and colors.

Background: *Optional.* The clip to combine the glows with. If no background is given, the Source is also used as the Background.

Mask: *Optional.* If provided, the source glow colors are scaled by this input. A monochrome mask can be used to choose a subset of Source areas that will generate glows. A color mask can be used to selectively adjust the glow colors in different regions. The mask is applied to the source before the glows are generated so it will not clip the resulting glows.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*
The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*
Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*
Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Brightness: *Default: 1, Range: 0 or greater.*
Scales the brightness of all the glows.

Color: *Default rgb: [1 1 1].*
Scales the color of the glows. The colors and brightnesses of the glows are also affected by the Source and Mask inputs.

Threshold: *Default: 0, Range: 0 or greater.*
Glowes are generated from locations in the source clip that are brighter than this value. A value of 0.9 causes glowes at only the brightest spots. A value of 0 causes glowes for every non-black area.

Threshold Add Color: *Default rgb: [0 0 0].*
This can be used to raise the threshold on a specific color and thereby reduce the glowes generated on areas of the source clip containing that color.

Glow Width: *Default: 0.4, Range: 0 or greater.*
Scales the glow distance. This and all the width parameters can be adjusted using the Width Widget. Note that a zero glow width still enhances the bright areas; set the brightness parameter to zero if you want to pass the Source through unchanged.

Width X: *Default: 1, Range: 0 or greater.*
Scales the horizontal glow width. Set to 0 for vertical only.

Width Y: *Default: 1, Range: 0 or greater.*
Scales the vertical glow width. Set to 0 for horizontal only.

Width Red: *Default: 0.5, Range: 0 or greater.*
Scales the red glow width. If the red, green, and blue widths are equal, the glowes will match the color of the source clip. If they are not equal, the glowes will vary in color with distance.

Width Green: *Default: 0.75, Range: 0 or greater.*
Scales the green glow width.

Width Blue: *Default: 1, Range: 0 or greater.*
Scales the blue glow width.

Subpixel: *Check-box, Default: on.*
Enables glowing by subpixel widths. Use this for smoother animation of the Width parameters.

Thickness Red: *Default: 0.5, Range: 0 to 1.*

Scales the thickness of the red region.

Thickness Green: *Default: 0.5, Range: 0 to 1.*

Scales the thickness of the green region.

Thickness Blue: *Default: 0.5, Range: 0 to 1.*

Scales the thickness of the blue region.

Show: *Popup menu, Default: Result.*

Selects the type of output

Result: Shows the final result of combining the glow, source, and background.

Threshold: Shows the thresholded image that is used to generate the glow.

Affect Alpha: *Default: 0, Range: 0 or greater.*

If this value is positive the output Alpha channel will include some opacity from the glows. The maximum of the red, green, and blue glow brightness is scaled by this value and combined with the background Alpha at each pixel.

Glow From Alpha: *Default: 0, Range: 0 to 1.*

Set to 1 to generate glows from the alpha channel of the source input instead of the RGB channels. In this case the glows will not pick up color from the source and will typically be brighter. Values between 0 and 1 interpolate between using the RGB and the Alpha.

Glow Under Source: *Default: 0, Range: 0 to 1.*

Set to 1 to composite the Source input over the glows.

Light Background: *Default: 0, Range: 0 to 1.*

Increase this to give a look of the glow casting light onto the background image. To see this more clearly you can also lower the Scale Background parameter or raise the Brightness parameter.

Source Opacity: *Default: 1, Range: 0 to 1.*

Scales the opacity of the Source input when combined with the glows. This does not affect the generation of the glows themselves.

Combine: *Popup menu, Default: Screen.*

Determines how the glow is combined with the Source or Background. This parameter has no effect if Light BG is set to 1.

Mult: the source or background is multiplied by the glow.

Add: the glow is added to the source or background.

Screen: the glow is blended with the source or background using a screen operation.

Difference: the result is the difference between the glow and the source or background.

Overlay: the glow is combined with the source or background using an overlay function.

Bg Brightness: *Default: 1, Range: 0 or greater.*

Scales the brightness of the background. This parameter only has an effect if the background input is provided, and is visible due to a partially transparent Source image or a reduced Source Opacity parameter value.

Expand Borders: *Check-box, Default: off.*

If enabled, transparent borders are added to the input image before processing. This allows the result to include soft edges beyond the original image size. When off, the effect only occurs within the frame and the result will retain an edge at the borders.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Glow Width: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Glow Width parameter.

See Also:

[Glow](#)
[GlowDist](#)
[GlowRainbow](#)
[GlowAura](#)
[GlowDarks](#)
[GlowOrthicon](#)
[GlowEdges](#)
[GlowNoise](#)

[Glint](#)
[Sapphire](#)
[Plug-ins](#)
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S_Gradient

Makes a smooth color gradient across the screen using given Start and End locations and colors, then optionally combines the gradient with a background clip. Increase Add Noise to reduce banding artifacts in the gradient due to color quantization.

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to combine the gradient with.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Start: *X & Y*, *Default:* [0 0.596], *Range:* any.
The starting location of the gradient. This parameter can be adjusted using the Start Widget.

End: *X & Y*, *Default:* [0 –0.596], *Range:* any.
The ending location of the gradient. This parameter can be adjusted using the End Widget.

Start Color: *Default rgb:* [1 1 1].
The color of the gradient at the Start location.

End Color: *Default rgb:* [0 0 0].
The color of the gradient at the End location

Swap Colors: *Check-box*, *Default:* off.
If checked, reverses the direction of the gradient by swapping the Start and End colors.

Brightness: *Default:* 1, *Range:* 0 or greater.
Scales the brightness of the gradient image (both the Start Color and End Color).

Add Noise: *Default:* 0, *Range:* 0 or greater.
If positive, this amount of noise is added to the gradient. This can create a grainy effect and eliminate banding in the gradient due to quantization. Set this to 1.0 to enable effective debanding for 8 bit results.

Smooth Curve: *Default:* 0, *Range:* 0 to 1.
If zero, a linear interpolation is used across the screen between the Start and End Color. Increase this value to use a smoother 'S' shaped curve for interpolation which can reduce the visual perception of the gradient's Start and End locations.

Bg Brightness: *Default:* 1, *Range:* 0 or greater.
Scales the brightness of the background before combining it with the gradient.

Combine: *Popup menu*, *Default:* Screen.
Determines how the gradient is combined with the background.

Grad Only: gives the gradient image alone with no background.
Mult: the background is multiplied by the gradient.
Add: the background is added to the gradient.
Screen: the background is blended with the gradient using a screen operation.
Difference: the result is the difference between the background and gradient.
Overlay: combines gradient and background using an overlay function.

Mask Use: *Popup menu*, *Default:* Luma.
Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.
Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.
Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and

unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Start: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Start parameter.

Show End: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the End parameter.

See Also:

[GradientRadial](#)

[GradientMulti](#)

[WipeLine](#)

[Sapphire](#)

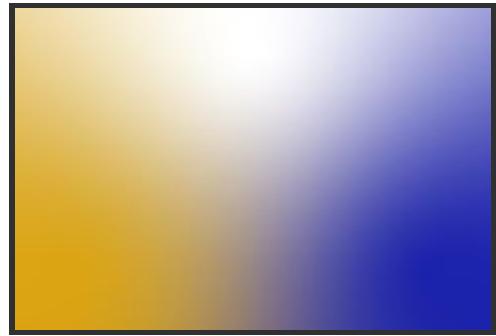
[Plug-ins](#)

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S_GradientMulti

Generates a smooth multi–color gradient across the screen using multiple control points, and optionally combines the gradient with a background clip.

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to combine the gradient with.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push–button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push–button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check–box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check–box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Softness: *Default:* 1, *Range:* 0.01 or greater.
The softness of the edges between color regions. Increasing this parameter will create a smoother gradient, while decreasing it will create sharper edges and more well-defined colors.

Softness Falloff: *Default:* 0, *Range:* 0 or greater.
Reduces the softness as the distance from the control points increases. Higher values will create more well-defined color regions near the edges of the image, while lower values will cause the colors to blend together more.

Point 1 Parameters:

Point 1 Enable: *Check-box*, *Default:* on.
Turns on or off the first control point.

Color 1: *Default* *rgb:* [1 0 0].
The color at Point 1.

Point 1: *X & Y*, *Default:* [-0.972 -0.719], *Range:* any.
First control point. This parameter can be adjusted using the Point 1 Widget.

Softness 1: *Default:* 1, *Range:* 0.1 or greater.
The relative softness of color 1.

Size 1: *Default:* 1, *Range:* 0.1 or greater.
Scales the size of the color centered at Point 1.

Point 2 Parameters:

Point 2 Enable: *Check-box*, *Default:* on.
Turns on or off the second control point.

Color 2: *Default* *rgb:* [0 1 0].
The color at Point 2.

Point 2: *X & Y*, *Default:* [-0.972 0.701], *Range:* any.
Second control point. This parameter can be adjusted using the Point 2 Widget.

Softness 2: *Default:* 1, *Range:* 0.1 or greater.
The relative softness of color 2.

Size 2: *Default:* 1, *Range:* 0.1 or greater.
Scales the size of the color centered at Point 2.

Point 3 Parameters:

Point 3 Enable: *Check-box*, *Default:* on.
Turns on or off the third control point.

Color 3: *Default* $rgb: [0\ 0\ 1]$.

The color at Point 3.

Point 3: *X & Y*, *Default*: [0.972 0.701], *Range*: any.

Third control point. This parameter can be adjusted using the Point 3 Widget.

Softness 3: *Default*: 1, *Range*: 0.1 or greater.

The relative softness of color 3.

Size 3: *Default*: 1, *Range*: 0.1 or greater.

Scales the size of the color centered at Point 3.

Point 4 Parameters:

Point 4 Enable: *Check-box*, *Default*: off.

Turns on or off the fourth control point.

Color 4: *Default* $rgb: [1\ 1\ 1]$.

The color at Point 4.

Point 4: *X & Y*, *Default*: [0.972 -0.719], *Range*: any.

Fourth control point. This parameter can be adjusted using the Point 4 Widget.

Softness 4: *Default*: 1, *Range*: 0.1 or greater.

The relative softness of color 4.

Size 4: *Default*: 1, *Range*: 0.1 or greater.

Scales the size of the color centered at Point 4.

Point 5 Parameters:

Point 5 Enable: *Check-box*, *Default*: off.

Turns on or off the fifth control point.

Color 5: *Default* $rgb: [1\ 1\ 0]$.

The color at Point 5.

Point 5: *X & Y*, *Default*: [-0.167 0], *Range*: any.

Fifth control point. This parameter can be adjusted using the Point 5 Widget.

Softness 5: *Default*: 1, *Range*: 0.1 or greater.

The relative softness of color 5.

Size 5: *Default*: 1, *Range*: 0.1 or greater.

Scales the size of the color centered at Point 5.

Point 6 Parameters:

Point 6 Enable: *Check-box*, *Default*: off.

Turns on or off the sixth control point.

Color 6: *Default* $rgb: [0\ 1\ 1]$.

The color at Point 6.

Point 6: *X & Y*, *Default*: [0.167 0], *Range*: any.

Sixth control point. This parameter can be adjusted using the Point 6 Widget.

Softness 6: *Default:* 1, *Range:* 0.1 or greater.

The relative softness of color 6.

Size 6: *Default:* 1, *Range:* 0.1 or greater.

Scales the size of the color centered at Point 6.

Bg Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the background before combining it with the gradient.

Combine: *Popup menu, Default: Screen.*

Determines how the gradient is combined with the background.

Grad Only: gives the gradient image alone with no background.

Mult: the background is multiplied by the gradient.

Add: the background is added to the gradient.

Screen: the background is blended with the gradient using a screen operation.

Difference: the result is the difference between the background and gradient.

Overlay: combines gradient and background using an overlay function.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[Gradient](#)

[GradientRadial](#)

[Sapphire](#)

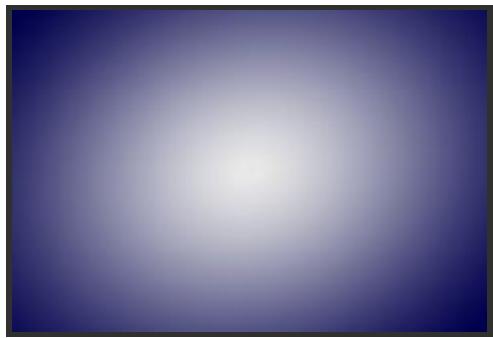
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S_GradientRadial

Makes a smooth radial color gradient in an ellipse shape, given Center, Inner Radius, and Outer Radius parameters, and optionally combines the gradient with a background clip. Increase Add Noise to reduce banding artifacts in the gradient due to color quantization.

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to combine the gradient with.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Center: *X & Y*, *Default:* [0 0], *Range:* any.

The center location of the ellipse shape. This parameter can be adjusted using the Center Widget.

Inner Radius: *Default:* 0.14, *Range:* 0 or greater.

Distance from the center that the gradient starts. This parameter can be adjusted using the Inner Radius Widget.

Outer Radius: *Default:* 1, *Range:* 0 or greater.

Distance from the center that the gradient ends. This parameter can be adjusted using the Outer Radius Widget.

Rel Height: *Default:* 0.75, *Range:* 0.1 or greater.

The relative vertical size of the ellipse shape. Increase for a taller ellipse, decrease for a wider one.

Rel Width: *Default:* 1, *Range:* 0.1 or greater.

The relative horizontal size of the ellipse shape. Increase for a wider ellipse, decrease for a taller one.

Rotate: *Default:* 0, *Range:* any.

Rotation in degrees of the ellipse. Note that rotation will have no effect when Rel Width and Rel Height are equal and the shape is a perfect circle. This parameter can be adjusted using the Rotate Widget.

Inner Color: *Default rgb:* [1 1 1].

The gradient color at the Inner Radius.

Outer Color: *Default rgb:* [0 0 0].

The gradient color at the Outer Radius.

Swap Colors: *Check-box*, *Default:* off.

If checked, reverses the direction of the gradient by swapping the Inner and Outer colors.

Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the gradient image (both the Inner Color and Outer Color).

Add Noise: *Default:* 0, *Range:* 0 or greater.

If positive, this amount of noise is added to the gradient. This can create a grainy effect and eliminate banding in the gradient due to quantization. Set this to 1.0 to enable effective debanding for 8 bit results.

Smooth Curve: *Default:* 0, *Range:* 0 to 1.

If zero, a linear interpolation is used across the screen between the Start and End Color. Increase this value to use a smoother 'S' shaped curve for interpolation which can reduce the visual perception of the gradient's Start and End locations.

Bg Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the background before combining it with the gradient.

Combine: *Popup menu*, *Default:* Screen.

Determines how the gradient is combined with the background.

Grad Only: gives the gradient image alone with no background.

Mult: the background is multiplied by the gradient.

Add: the background is added to the gradient.

Screen: the background is blended with the gradient using a screen operation.

Difference: the result is the difference between the background and gradient.

Overlay: combines gradient and background using an overlay function.

Mask Use: *Popup menu*, *Default: Luma*.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater*.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off*.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Center: *Check-box, Default: on*.

Turns on or off the screen user interface for adjusting the Center parameter.

Show Outer Radius: *Check-box, Default: on*.

Turns on or off the screen user interface for adjusting the Center parameter.

Show Inner Radius: *Check-box, Default: on*.

Turns on or off the screen user interface for adjusting the Center parameter.

Show Rotate: *Check-box, Default: on*.

Turns on or off the screen user interface for adjusting the Center parameter.

See Also:

[Gradient](#)

[GradientMulti](#)

[Gradient](#)

[GradientMulti](#)

[Sapphire](#)

[Plug-ins](#)

[SpotLight](#)

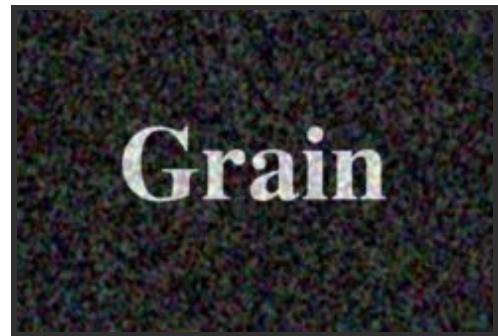
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S_Grain

Adds color and/or monochrome grain to the source clip. Amplitude and frequency parameters allow adjusting the grain texture independently for all colors together, each color channel, or black and white grain.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Color Scale: *Default rgb: [1 1 1].*
Scales the color of the grain by this value. The grain will include both positive and negative values of this color.

Color Amplitude: *Default: 0.1, Range: 0 or greater.*
The amplitude of color grain to include.

Color Frequency: *Default: 100, Range: 0.1 or greater.*
The frequency of the color grain. Increase for finer color grain, decrease for coarser color grain.

Color Octaves: *Integer, Default: 1, Range: 1 to 10.*
The number of octaves of color grain to include. Each octave is twice the frequency and half the amplitude of the previous.

Red Freq: *Default: 1, Range: 0.01 or greater.*
The relative frequency of the red channel grain.

Green Freq: *Default: 1, Range: 0.01 or greater.*
The relative frequency of the green channel grain.

Blue Freq: *Default: 1, Range: 0.01 or greater.*
The relative frequency of the blue channel grain.

Bw Amplitude: *Default: 0, Range: 0 or greater.*
The amplitude of black and white grain to include.

Bw Frequency: *Default: 100, Range: 0.1 or greater.*
The frequency of the black and white grain. Increase for finer grain, decrease for coarser grain.

Bw Octaves: *Integer, Default: 1, Range: 1 to 10.*
The number of octaves of black and white grain to include. Each octave is twice the frequency and half the amplitude of the previous.

Seed: *Default: 0.123, Range: 0 or greater.*
Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Jitter Frames: *Integer, Default: 1, Range: 0 or greater.*
If this is 0, the noise texture will remain the same for every frame processed. If it is 1, a new noise texture is used for each frame. If it is 2, a new noise texture is used for every other frame, and so on.

Mask Use: *Popup menu, Default: Luma.*
Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.
Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*
Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and

unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[GrainStatic](#)

[GrainRemove](#)

[FilmEffect](#)

[FilmEffect](#)

[FilmDamage](#)

[Diffuse](#)

[Clouds](#)

[Dissolve](#)

[Speckle](#)

[Sapphire](#)

[Plug-ins](#)

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S_GrainRemove

Smooths the source clip while retaining the edges. To adjust the parameters in this effect, first use the Show:Edges option to inspect which edges will be retained and adjust Edges Threshold, Edges Width, and Edges Scale until the important edges are fairly sharp and bright but not jaggy. Then return to Show:Result and adjust the smooth parameters to remove the appropriate amount of grain.

In the Sapphire Blur+Sharpen effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Smooth: *Default: 0.088, Range: 0 or greater.*

The amount of smoothing to apply to the non-edge regions.

Smooth Luma: *Default: 0.5, Range: 0 or greater.*

Scales the smoothing amount for the luminance component.

Smooth Chroma: *Default: 1, Range: 0 or greater.*

Scales the smoothing amount for the chrominance component.

Edges Width: *Default: 0.0224, Range: 0 or greater.*

The width of the edges to be retained.

Edges Scale: *Default: 0.25, Range: 0 or greater.*

The brightness of the edges to be retained.

Edges Threshold: *Default: 0.3, Range: 0 or greater.*

This value is subtracted from the initial edge image. Increasing it can help remove minor edges and speckles that should not be retained.

Show: *Popup menu, Default: Result.*

Selects between output options.

Result: outputs the final result.

Edges: outputs an image showing which edges are to be retained.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[Grain](#)

[GrainStatic](#)

[Blur](#)

[Sharpen](#)

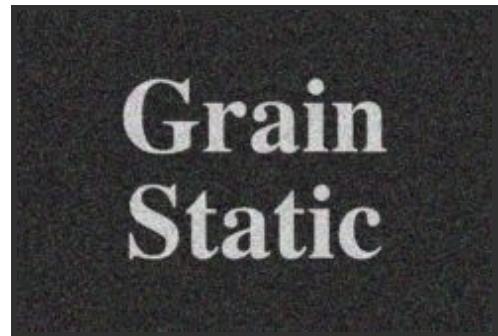
[Sapphire](#)

[Plug-ins](#)

S_GrainStatic

Adds color and/or monochrome random noise of given amplitudes to every pixel of the source clip. Unlike the other Grain effects, there is no coherency of the grain between pixels, so the resulting look will vary with different output resolutions.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* *Union*.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Color Scale: *Default rgb: [1 1 1]*.
Scales the color of the static by this value. The static will include both positive and negative values of this color.

Color Amplitude: *Default: 0.1*, *Range: 0 or greater*.
The amplitude of the color static to include.

Bw Amplitude: *Default: 0*, *Range: 0 or greater*.
The amplitude of the black and white static to include.

Mask Use: *Popup menu*, *Default: Luma*.
Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.
Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05*, *Range: 0 or greater*.
Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default: off*.
If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

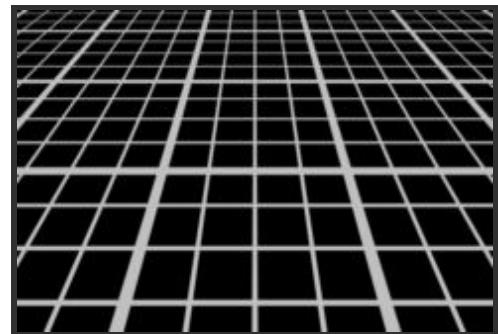
See Also:

Grain	FilmEffect	Sapphire
GrainRemove	FilmDamage	Plug-ins
FilmEffect	Diffuse	Introduction
	Clouds	
	Dissolve	
	Speckle	

S_Grid

Generates a grid of lines and combines it with a background clip. Adjust the Latitude, Swing, and Roll parameters to rotate the grid on various axes, and adjust Shift and Z Dist to translate and zoom.

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to draw the grid on.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Boxes: *X & Y, Integer*, *Default:* [24 16], *Range:* 1 or greater.
The total number of grid cells in the horizontal and vertical directions.

Grid Size: *Default:* 1, *Range:* 0 or greater.
Scales the size of the grid object.

Grid Size X: *Default:* 1, *Range:* 0 or greater.
Scales the relative horizontal size of the grid.

Grid Size Y: *Default:* 0.75, *Range:* 0 or greater.
Scales the relative vertical size of the grid.

Shift: *X & Y, Default:* [0 0], *Range:* any.
Translates the grid by this amount. This parameter can be adjusted using the Shift Widget.

Line Width: *Default:* 1.16, *Range:* 0 or greater.
Scales the thickness of all the grid lines.

H Line Rel Width: *Default:* 1, *Range:* 0 or greater.
Scales the relative thickness of the horizontal lines.

V Line Rel Width: *Default:* 1, *Range:* 0 or greater.
Scales the relative thickness of the vertical lines.

Major Line Spacing: *Integer*, *Default:* 4, *Range:* 0 or greater.
Thicker lines are drawn at each interval of this many lines. If zero, the major lines are disabled and all lines will be equal width.

Major Line Width: *Default:* 2.5, *Range:* 1 or greater.
The relative thickness of the major lines.

Brightness: *Default:* 1, *Range:* 0 or greater.
Scales the brightness of the grid color.

Color: *Default* *rgb:* [1 1 1].
The color of the grid.

Grid Opacity: *Default:* 1, *Range:* 0 to 1.
The opacity of the grid. Lower values allow more background to show through.

Latitude: *Default:* 0, *Range:* -89 to 89.
Tilts the grid up or down by this many degrees.

Swing: *Default:* 0, *Range:* any.
Rotation of the grid in counter-clockwise degrees in its initial frame.

Roll: *Default:* 0, *Range:* any.
Tilts the grid from side to side, in counter-clockwise degrees. If Latitude is 0, the effects of Swing and Roll are the

same.

Z Dist: *Default:* 1, *Range:* 0.01 or greater.

Scales the 'distance' of the grid. Values greater than 1.0 move it farther away and make it smaller. Values less than 1.0 move it closer and enlarge it.

Tele Lens Width: *Default:* 1, *Range:* 0.2 to 3.

The amount of lens telescoping. Increase to zoom in with less perspective, decrease for a wider viewing angle with more perspective.

Bg Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the background before combining with the grid. If 0, the result will contain only the grid image over black.

Combine: *Popup menu, Default: Over.*

Determines how the grid is combined with the Background.

Over: composites the grid over the background.

Exclusion: combines the grid and the Background with a difference operator.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Shift: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Shift parameter.

See general info for [Motion Blur](#)

See Also:

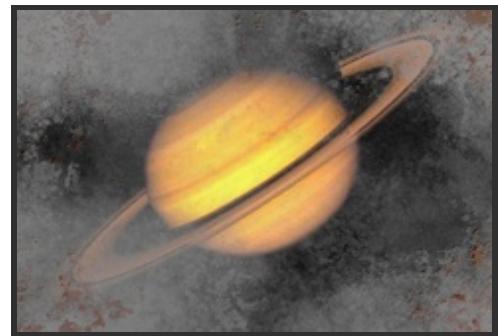
[WipeChecker](#)

[Sapphire Plug-ins Introduction](#)

S_Grunge

Simulates many different kinds of grunge including dirt, stains, flecks, grime, scratches, and paint. Up to three different kinds of grunge can be combined. There are master controls for adjusting all grunge together as well as a set of detailed controls for adjusting the look of each of the grunge collections.

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to use as background.

Mask: *Optional.* If provided, the blur is only performed on regions of the source clip specified by the bright areas of this input. Pixels outside this mask are not blurred, and do not contribute to the resulting blurred pixels within it. This input can be affected using the Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Stamp Density: *Default: 500, Range: 0 or greater.*

The overall number of stamps over the frame. Increase for more stamps, decrease to get fewer.

Stamp Size: *Default: 1, Range: 0 or greater.*

Scales the overall size of the grunge stamps.

Stamp Opacity: *Default: 0.8, Range: 0 to 1.*

The overall opacity of the grunge stamps.

Stamp Brightness: *Default: 1, Range: 0 or greater.*

Controls the brightness of the grunge stamps.

Stamp Center: *X & Y, Default: [0 0], Range: any.*

The overall position of the center of the grunge stamps.

Stamp Uses Mocha: *Check-box, Default: off.*

Controls whether the stamp center is controlled by the Stamp Center parameter or follows the Stamp Center point tracked inside of Mocha.

Smooth Stamp Track: *Integer, Default: 0, Range: 0 or greater.*

Controls how many points to average when stabilizing the Mocha point track.

Fade Softness: *Default: 0.3, Range: 0 to 1.*

Controls how fast individual grunge stamps fade. When set to zero, stamps will pop on and off. When set to one, they will fade in and out. Stamps will fade if they are blinking, along the edge of the grunge framing the background, or along the grey areas of the matte.

Seed: *Default: 0.123, Range: 0 or greater.*

Used to initialize the random number generator for the stamp positioning, size, and variation. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Blink Amount: *Default: 0, Range: 0 to 1.*

Controls how many stamps are blinking on a single frame. With a blink amount of 0 all stamps will be visible. With a blink amount of 1 approximately half of the stamps will be blinking on a given frame.

Blink Coherence: *Default: 0.5, Range: 0 to 1.*

Changes the pattern of the stamps that blink.

Blink Speed: *Default: 6, Range: 0 or greater.*

Controls how fast the stamps blink in and out.

Frame Amount: *Default: 0.35, Range: 0 to 1.*

Controls the brightness of the grunge inside the frame or border. If frame amount is set to anything other than 0, Grunge will create a picture frame border of grunge around the frame center. At a frame amount of 1, stamps inside the frame are completely invisible and at a frame amount of 0, there is no frame.

Frame Softness: *Default: 0.5, Range: 0 or greater.*

The width of the frame's soft edge. Larger values give the grunge frame a softness as the grunge brightness fades on the edges.

Frame Center: *X & Y, Default: [0 0], Range: any.*

The position of the center of the grunge frame. This parameter can be adjusted using the Frame Center Widget.

Frame Uses Mocha: *Check-box, Default: off.*

Controls whether the frame center is controlled by the Frame Center parameter or follows the Frame Center point tracked inside of Mocha.

Smooth Frame Track: *Integer, Default: 0, Range: 0 or greater.*

Controls how many points to average when stabilizing the Mocha point track.

Frame Radius: *Default: 1, Range: 0 or greater.*

Distance from the center to apply the grunge frame. This parameter can be adjusted using the Frame Radius Widget.

Frame Rel Height: *Default: 0.75, Range: 0.1 or greater.*

The relative vertical size of the frame shape. Increase for a taller shape, decrease for a wider one.

Invert Frame: *Check-box, Default: off.*

If enabled, shows the grunge in the center of the frame instead of at the edge of the frame.

Stamp1: *Popup menu, Default: Garage Floor.*

The style of grunge to apply. Up to three styles may be selected.

None: no grunge.

Plaster: large low detail grunge simulating plaster.

Garage Floor: large speckled grunge reminiscent of pavement.

Speckles: groups of small, similar sized, dots of grunge, similar to paint spray.

Paint Spray: groups of small and medium splashes of paint, similar to speckles.

Paint Splatters: long splashes of paint.

Hairline Cracks: long, narrow, wiggly cracks with no branches.

Tile Cracks: long, straight jagged cracks.

Pavement Cracks: very branchy cracks with very varied widths.

Hairs: curly and straight hairs of varying sizes.

Scratches: straight scratches biased towards the diagonals.

Frost: patches of frost.

Glass Cracks: patches of webbed glass cracks.

Clouds: puffs of clouds, similar to smoke and watercolor drops.

Smoke: wisps of smoke, similar to clouds and watercolor drops.

Splotches: paint splotches with lots of streaks of paint spreading outward.

Corrosion: patches of rust like damage.

Watercolor Drops: low detail splashes of grunge, similar to clouds and smoke.

Dust: small particles of grunge varying in shape, similar to flecks.

Stains: coffee and water stains.

Flecks: small to medium particles of grunge varying in shape and size, similar to dust.

Stamp1 Rel Density: *Default: 1, Range: 0 or greater.*

Scales the density for the specific stamp collection.

Stamp1 Color1: *Default rgb: [0.01 0.01 0.01].*

Beginning of the range of colors for the stamp collection.

Stamp1 Color2: *Default rgb: [0.3 0.3 0.3].*

End of the range of colors for the stamp collection. Each piece of grunge will have a random color between color1 and color2.

Stamp1 Rel Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness for the specific stamp collection.

Stamp1 Rel Opacity: *Default:* 1, *Range:* 0 or greater.

Scales the opacity for the specific stamp collection.

Stamp1 Rel Size: *Default:* 1, *Range:* 0 or greater.

Scales the size for the specific stamp collection.

Vary Stamp1 Brightness: *Default:* 0, *Range:* 0 or greater.

Amount to vary the brightness from one piece of grunge to the next.

Vary Stamp1 Opacity: *Default:* 0.75, *Range:* 0 or greater.

Amount to vary the opacity from one piece of grunge to the next.

Vary Stamp1 Size: *Default:* 0.5, *Range:* 0 or greater.

Amount to vary the size from one piece of grunge to the next.

Stamp2: *Popup menu, Default: Paint Spray.*

The style of grunge to apply. Up to three styles may be selected.

None: no grunge.

Plaster: large low detail grunge simulating plaster.

Garage Floor: large speckled grunge reminiscent of pavement.

Speckles: groups of small, similar sized, dots of grunge, similar to paint spray.

Paint Spray: groups of small and medium splashes of paint, similar to speckles.

Paint Splatters: long splashes of paint.

Hairline Cracks: long, narrow, wiggly cracks with no branches.

Tile Cracks: long, straight jagged cracks.

Pavement Cracks: very branchy cracks with very varied widths.

Hairs: curly and straight hairs of varying sizes.

Scratches: straight scratches biased towards the diagonals.

Frost: patches of frost.

Glass Cracks: patches of webbed glass cracks.

Clouds: puffs of clouds, similar to smoke and watercolor drops.

Smoke: wisps of smoke, similar to clouds and watercolor drops.

Splotches: paint splotches with lots of streaks of paint spreading outward.

Corrosion: patches of rust like damage.

Watercolor Drops: low detail splashes of grunge, similar to clouds and smoke.

Dust: small particles of grunge varying in shape, similar to flecks.

Stains: coffee and water stains.

Flecks: small to medium particles of grunge varying in shape and size, similar to dust.

Stamp2 Rel Density: *Default:* 0.5, *Range:* 0 or greater.

Scales the density for the specific stamp collection.

Stamp2 Color1: *Default rgb:* [0.1 0 0].

Beginning of the range of colors for the stamp collection.

Stamp2 Color2: *Default rgb:* [0.2 0.1 0.05].

End of the range of colors for the stamp collection. Each piece of grunge will have a random color between color1 and color2.

Stamp2 Rel Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness for the specific stamp collection.

Stamp2 Rel Opacity: *Default:* 1, *Range:* 0 or greater.

Scales the opacity for the specific stamp collection.

Stamp2 Rel Size: *Default: 1, Range: 0 or greater.*

Scales the size for the specific stamp collection.

Vary Stamp2 Brightness: *Default: 0, Range: 0 or greater.*

Amount to vary the brightness from one piece of grunge to the next.

Vary Stamp2 Opacity: *Default: 0.75, Range: 0 or greater.*

Amount to vary the opacity from one piece of grunge to the next.

Vary Stamp2 Size: *Default: 0.5, Range: 0 or greater.*

Amount to vary the size from one piece of grunge to the next.

Stamp3: *Popup menu, Default: None.*

The style of grunge to apply. Up to three styles may be selected.

None: no grunge.

Plaster: large low detail grunge simulating plaster.

Garage Floor: large speckled grunge reminiscent of pavement.

Speckles: groups of small, similar sized, dots of grunge, similar to paint spray.

Paint Spray: groups of small and medium splashes of paint, similar to speckles.

Paint Splatters: long splashes of paint.

Hairline Cracks: long, narrow, wiggly cracks with no branches.

Tile Cracks: long, straight jagged cracks.

Pavement Cracks: very branchy cracks with very varied widths.

Hairs: curly and straight hairs of varying sizes.

Scratches: straight scratches biased towards the diagonals.

Frost: patches of frost.

Glass Cracks: patches of webbed glass cracks.

Clouds: puffs of clouds, similar to smoke and watercolor drops.

Smoke: wisps of smoke, similar to clouds and watercolor drops.

Splotches: paint splotches with lots of streaks of paint spreading outward.

Corrosion: patches of rust like damage.

Watercolor Drops: low detail splashes of grunge, similar to clouds and smoke.

Dust: small particles of grunge varying in shape, similar to flecks.

Stains: coffee and water stains.

Flecks: small to medium particles of grunge varying in shape and size, similar to dust.

Stamp3 Rel Density: *Default: 0.5, Range: 0 or greater.*

Scales the density for the specific stamp collection.

Stamp3 Color1: *Default rgb: [0 0 0].*

Beginning of the range of colors for the stamp collection.

Stamp3 Color2: *Default rgb: [0.25 0.25 0.25].*

End of the range of colors for the stamp collection. Each piece of grunge will have a random color between color1 and color2.

Stamp3 Rel Brightness: *Default: 1, Range: 0 or greater.*

Scales the brightness for the specific stamp collection.

Stamp3 Rel Opacity: *Default: 1, Range: 0 or greater.*

Scales the opacity for the specific stamp collection.

Stamp3 Rel Size: *Default: 1, Range: 0 or greater.*

Scales the size for the specific stamp collection.

Vary Stamp3 Brightness: *Default: 0, Range: 0 or greater.*

Amount to vary the brightness from one piece of grunge to the next.

Vary Stamp3 Opacity: *Default:* 0.75, *Range:* 0 or greater.
Amount to vary the opacity from one piece of grunge to the next.

Vary Stamp3 Size: *Default:* 0.5, *Range:* 0 or greater.
Amount to vary the size from one piece of grunge to the next.

Emboss Bumps Scale: *Default:* 0.15, *Range:* 0 or greater.
Scales the amplitude of the bumps.

Emboss Light Angle: *Default:* 135, *Range:* any.
Adjusts the angle of light for the emboss. This parameter can be adjusted using the Emboss Light Angle Widget.

Emboss Smooth: *Default:* 0.0001, *Range:* 0 or greater.
Smooths the small details of the image so they don't get embossed as strongly as the big features. Set to 0 to emboss all details. Increase to smooth out more details.

Emboss Threshold: *Default:* 0.5, *Range:* -0.5 to 1.5.
Any grunge brighter than the threshold will be a bump and any grunge darker than the threshold will be a pit.

Blur Grunge: *Default:* 0, *Range:* 0 or greater.
Blurs the grunge. Increase for more blur. Doesn't affect the background.

Blur Grunge Rel: X & Y, *Default:* [1 1], *Range:* 0 or greater.
Scales the width of the blur.

Shake Amplitude: *Default:* 0, *Range:* 0 or greater.
The amount of random shaking motion that is applied to the stamps.

Shake Amplitude Rel X: *Default:* 1, *Range:* 0 or greater.
The relative horizontal amount of shaking.

Shake Amplitude Rel Y: *Default:* 1, *Range:* 0 or greater.
The relative vertical amount of shaking.

Shake Frequency: *Default:* 60, *Range:* 0 or greater.
Increase for faster shaking, decrease for slower shaking. (Be careful if you animate frequency values because the resulting shake frequency is also affected by the rate of change of the value.)

Per Stamp Amplitude: *Default:* 0, *Range:* 0 or greater.
The amount of random shaking applied independently to each stamp.

Per Stamp Frequency: *Default:* 5, *Range:* 0 or greater.
The frequency of per-stamp shaking. Increase for faster shaking, decrease for slower shaking.

Combine: *Popup menu, Default: Comp.*
Determines how the grunge image is combined with the background.

Grunge Only: gives only the grunge image with no background.

Comp: composites the grunge image over the background.

Mult: this can be used as an 'intersection' operation on matte images. White is the identity for Multiply, where one image contains white the other is not affected, so the result only contains white where both inputs are white.

Add: causes the grunge image to be added to the background.

Screen: performs a blend function which can help prevent overly bright results.

Difference: similar to Subtract but the absolute value of the result is used, which tends to give more resulting colors in bounds. This can be used to select the regions of two matte images where one or the other is white, but not both.

Subtract: subtracts the grunge image from the background.

Overlay: combines foreground and background using an overlay function.
Hard Light: similar to overlay but with foreground and background swapped.
Soft Light: darkens or lightens the background depending on the foreground.
Color Dodge: brightens the background depending on the grunge image.
Color Burn: darkens the background depending on the grunge image.
Darken: the minimum of grunge image and background. This can also be used as an 'intersection' operation with slightly different results than Multiply.
Lighten: the maximum of grunge image and background. This can also be used as a 'union' operation with slightly different results than Screen.
Exclusion: similar to Difference but with smoother results.
Linear Dodge: adds the grunge image to the background and clamps the result at white.
Linear Burn: adds the grunge image to the background but offsets to make the result darker. Similar to multiply in that combining with white gives no change and combining with black gives black.
Linear Light: performs a linear burn or linear dodge depending on if the foreground is more or less than 50 percent gray.

Use Bg Alpha: *Check-box*, *Default:* off.

When enabled, ignore the alpha generated by the grunge and use the alpha from the background.

Scale Background: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the background before combining with the grunges. If 0, the result will contain only the grunge image over black.

Blur Mask: *Default:* 0, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu*, *Default:* Luma.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Crop Grunge To Mask: *Check-box*, *Default:* off.

Controls whether the grunge has a sharp edge along the edge of the mask. If enabled, the grunge will crop to the mask. This allows grunge to be applied to specific sections of the input clip. If disabled, each grunge stamp will be checked against the mask. If most of the grunge stamp falls inside the mask, the entire grunge stamp will be added. If most of the grunge stamp falls outside the mask, the entire grunge stamp will be hidden. This allows for a Vignette like application of grunge.

Show Emboss Light Angle: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Frame Center parameter.

Show Frame Radius: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Frame Center parameter.

Show Frame Center: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Frame Center parameter.

See Also:

[Emboss](#)
[Blur](#)
[Vignette](#)
[FilmDamage](#)

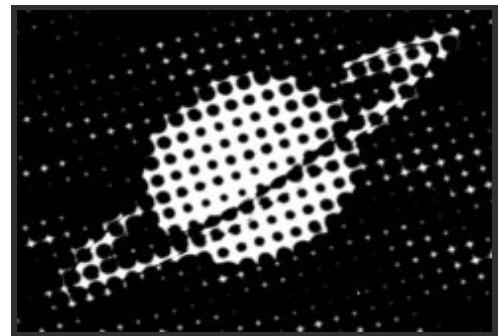
[Flicker](#)
[WarpTransform](#)
[BlurMotion](#)
[BlurMoCurves](#)

[Sapphire](#)
[Plug-ins](#)
[Introduction](#)

S_HalfTone

Generates a halftone version of the source clip using a black and white pattern of dots. Use the Smooth Source parameter to remove some details and make the dots more consistently round.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* *Union*.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Dots: *Popup menu*, *Default:* *Black*.
Selects the dots' color model.

Black: dark dots are used on a bright background.
White: bright dots are used on a dark background.

Dots Frequency: *Default:* 50, *Range:* 0 or greater.
The frequency of the dots pattern. Increase for finer dots, decrease for larger dots.

Dots Angle: *Default:* 30, *Range:* any.
The angle of the overall dots pattern, in counter-clockwise degrees.

Dots Rel Width: *Default:* 1, *Range:* 0.01 or greater.
The relative width of the dots. Increase for wider dots, decrease for taller ones.

Dots Sharpness: *Default:* 4, *Range:* 0 or greater.
Scales the sharpness of the edges of the dots.

Dots Lighten: *Default:* 0, *Range:* any.
Increase to lighten the resulting dot pattern.

Smooth Source: *Default:* 0, *Range:* 0 or greater.
If positive, the source is blurred by this amount before the halftone is applied. This can be used to remove some detail in the dots and make them more consistently round.

Color1: *Default* *rgb:* [1 1 1].
The 'bright' color to use for the dots pattern.

Color0: *Default* *rgb:* [0 0 0].
The 'dark' color to use for the dots pattern.

Dots Shift: *X & Y*, *Default:* [0 0], *Range:* any.
The horizontal and vertical translation of the dots pattern

Mask Use: *Popup menu*, *Default:* *Luma*.
Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.
Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.
Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.
If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[HalfToneColor](#)

[HalfToneRings](#)

[Etching](#)

[ScanLines](#)

[WipeDots](#)

[AutoPaint](#)

[Sketch](#)

[Mosaic](#)

[FlysEyeHex](#)

[JpegDamage](#)

[Sapphire](#)

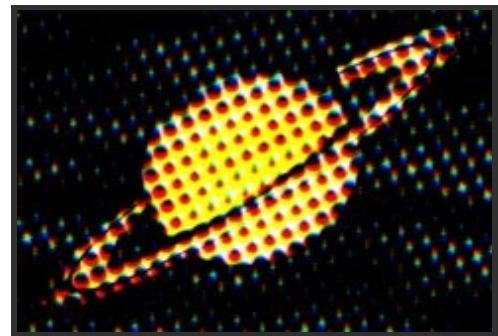
[Plug-ins](#)

[Introduction](#)

S_HalfToneColor

Generates a version of the source clip using a colored dot pattern. Use the Smooth Source parameter to remove some details and make the dots more consistently round. You can invert the dots pattern from CMY to RGB using the Dots menu.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Dots Color: *Popup menu, Default: CMY.*
Selects the dots' color model.

CMY: cyan, magenta, and yellow dots are used on a white background.
RGB: red, green, and blue dots are used on a black background.

Dots Frequency: *Default: 50, Range: 0 or greater.*
The frequency of the dots pattern. Increase for finer dots, decrease for larger dots.

Dots Angle: *Default: 30, Range: any.*
The angle of the overall dots pattern, in counter-clockwise degrees.

Dots Rel Width: *Default: 1, Range: 0.01 or greater.*
The relative width of the dots. Increase for wider dots, decrease for taller ones.

Dots Sharpness: *Default: 4, Range: 0 or greater.*
Scales the sharpness of the edges of the dots.

Dots Lighten: *Default: 0, Range: any.*
Increase to lighten the resulting dot pattern.

Smooth Source: *Default: 0, Range: 0 or greater.*
If positive, the source is blurred by this amount before the halftone is applied. This can be used to remove some detail in the dots and make them more consistently round.

Saturation: *Default: 1, Range: -2 to 10.*
Scales the color saturation. Increase for more intense colors. Set to 0 for monochrome.

Dots Shift: *X & Y, Default: [0 0], Range: any.*
The horizontal and vertical translation of the dots pattern

Shift Red: *X & Y, Default: [0 0.5], Range: any.*
The translation of the red color channel.

Shift Green: *X & Y, Default: [0 0], Range: any.*
The translation of the green color channel.

Shift Blue: *X & Y, Default: [0 -0.5], Range: any.*
The translation of the blue color channel.

Mask Use: *Popup menu, Default: Luma.*
Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.
Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*
Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and

unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[HalfTone](#)
[HalfToneRings](#)
[Etching](#)

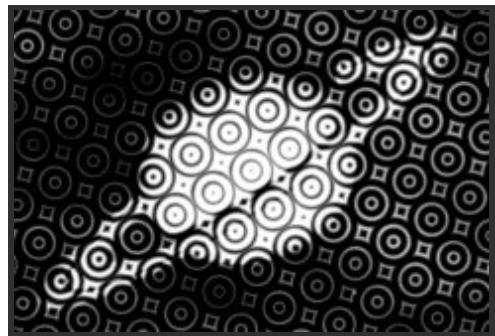
[ScanLines](#)
[WipeDots](#)
[AutoPaint](#)
[Sketch](#)
[Mosaic](#)
[FlysEyeHex](#)
[JpegDamage](#)

[Sapphire](#)
[Plug-ins](#)
[Introduction](#)

S_HalfToneRings

Generates a duotone version of the source clip using a repeating pattern of concentric rings. Use the Smooth Source parameter to remove some details and make the dots more consistently shaped.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Center: *Popup menu, Default: Black.*
Selects the rings' color model.

Black: dark rings are used on a bright background.
White: bright rings are used on a dark background.

Rings Frequency: *Default: 20, Range: 0 or greater.*
The frequency of the overall rings pattern. Increase for smaller rings, decrease for larger rings.

Rings Angle: *Default: 30, Range: any.*
The angle of the overall rings pattern, in counter-clockwise degrees.

Rings Rel Width: *Default: 1, Range: 0.01 or greater.*
The relative width of the rings. Increase for wider rings, decrease for taller ones.

Rings Sharpness: *Default: 2, Range: -1 or greater.*
Scales the sharpness of the edges of the rings.

Rings Lighten: *Default: 0, Range: any.*
Increase to lighten the resulting rings pattern.

Ring Number: *Default: 2, Range: 1 or greater.*
Determines the number of concentric rings in each tile of the repeating pattern.

Ring Phase: *Default: 0, Range: any.*
Shifts the rings in or out within each tile of the pattern.

Rings Shift: *X & Y, Default: [0 0], Range: any.*
The horizontal and vertical translation of the overall rings pattern

Smooth Source: *Default: 0, Range: 0 or greater.*
If positive, the source is blurred by this amount before the halftone is applied. This can be used to remove some detail in the dots and make them more consistently round.

Color1: *Default rgb: [1 1 1].*
The 'bright' color to use for the dots pattern.

Color0: *Default rgb: [0 0 0].*
The 'dark' color to use for the dots pattern.

Mask Use: *Popup menu, Default: Luma.*
Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.
Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*
Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and

unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[HalfTone](#)
[HalfToneColor](#)
[Etching](#)

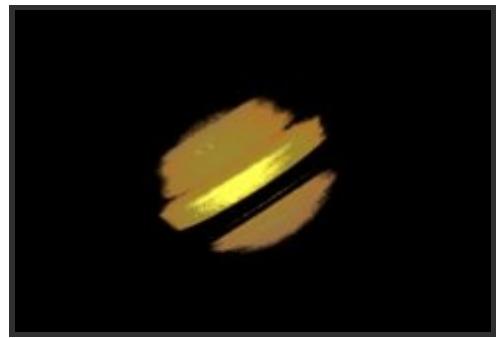
[ScanLines](#)
[WipeDots](#)
[AutoPaint](#)
[Sketch](#)
[Mosaic](#)
[FlysEyeHex](#)
[JpegDamage](#)

[Sapphire](#)
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S_Hotspots

Generates a hotspot image containing areas of the source clip brighter than a given threshold. The colors of the hotspots should match the original source. This can be used for increasing contrast or finding the bright areas of a clip, but without changing the color saturation or hue of the result.

In the Sapphire Adjust effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* *Union*.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Blur Input: *Default:* 0, *Range:* 0 or greater.
Allows smaller spots to be smoothed away before the hotspots are determined.

Threshold: *Default:* 0.7, *Range:* 0 or greater.
Include hotspots at any source areas that are brighter than this value.

Threshold Add Color: *Default* *rgb:* [0 0 0].
This can be used to raise the threshold on a specific color and thereby reduce the hotspots generated on areas of the source clip containing that color.

Saturation: *Default:* 1, *Range:* any.
Scales the color saturation. Increase for more intense colors. Set to 0 for monochrome.

Brightness: *Default:* 1, *Range:* 0 or greater.
Scales the brightness of the result.

Mask Use: *Popup menu*, *Default:* *Luma*.
Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.
Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.
Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.
If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

HueSatBright	Sapphire
Monochrome	Plug-ins
ClampChroma	Introduction
PseudoColor	
DuoTone	
TriTone	
QuadTone	
Tint	
Threshold	
Gamma	
Solarize	
ChannelSwitcher	
ShowBadColors	
Invert	

S_HueSatBright

Adjusts the hue, saturation, brightness, and/or offset of the input clip.

In the Sapphire Adjust effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Hue Shift: *Default: 0, Range: -1 to 1.*

Shifts the hue of the source colors, in revolutions from red to green to blue to red.

Preserve Luma: *Check-box, Default: off.*

Enable this to preserve the brightness values of the input image after the hue is shifted.

Saturation: *Default: 1, Range: -2 to 8.*

Scales the color saturation of the result. Increase for more intense colors. Set to 0 for monochrome. You can also invert the chroma of the result by making this negative.

Brightness: *Default: 1, Range: 0 or greater.*

Scales the brightness of the result.

Scale Colors: *Default rgb: [1 1 1].*

Scales the color of the result. For example, if it is yellow [1 1 0], the blue of the result will be 0.

Offset Dark: *Default: 0, Range: -8 to 2.*

Adds this gray value to the darker regions of the result. This can be negative to increase contrast.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:[Monochrome](#)[Flicker](#)[ClampChroma](#)[Sapphire](#)[PseudoColor](#)[Plug-ins](#)[DuoTone](#)[Introduction](#)[TriTone](#)[QuadTone](#)[Tint](#)[Threshold](#)[Hotspots](#)[Gamma](#)[Solarize](#)[ChannelSwitcher](#)[ShowBadColors](#)[Invert](#)

S_HyperPull

Pulls the foreground away in z space before dissolving to the background, and featuring some bonus color and shake effects for added style.

In the Sapphire Transitions effects submenu.



Inputs:

From: Starts the transition with this clip.

To: Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Dissolve Amount: *Default: 0, Range: -0.5 to 1.5.*

The transition ratio between the From and To inputs. A value of 0 gives only the From input and a value of 1 gives only the To input. By default this parameter automatically animates from 0 to 1 to perform a complete transition.

Slow In: *Default: 1, Range: 0 to 1.*

If positive, causes the transition to start more gradually.

Slow Out: *Default: 1, Range: 0 to 1.*

If positive, causes the transition to end more gradually.

Dissolve Speed: *Default: 5, Range: 1 or greater.*

The speed of the dissolve between the foreground and background.

Z Dist From: *Default: 5, Range: 0.001 or greater.*

Scales the 'distance' of the foreground. Values greater than 1.0 move it farther away and make it smaller. Values less than 1.0 move the image closer and enlarge it. Zooming in slightly can sometimes be used to hide edge artifacts.

Center XY From: *X & Y, Default: [0 0], Range: any.*

The center of the fish-eye warping function, in screen coordinates relative to the center of the foreground.

Rotate From: *Default: 0, Range: any.*

Rotates the foreground about the center location by this many counter-clockwise degrees. The angle ramps up to this value as the transition proceeds.

Wrap From: *X & Y, Popup menu, Default: [Reflect Reflect].*

Determines the method for accessing outside the borders of the foreground image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Z Dist To: *Default:* 0.001, *Range:* 0.001 or greater.

Scales the 'distance' of the background. Values greater than 1.0 move it farther away and make it smaller. Values less than 1.0 move the image closer and enlarge it. Zooming in slightly can sometimes be used to hide edge artifacts.

Center XY To: *X & Y*, *Default:* [0 0], *Range:* any.

The center of the fish-eye warping function, in screen coordinates relative to the center of the background.

Rotate To: *Default:* 0, *Range:* any.

Rotates the background about the center location by this many counter-clockwise degrees. The angle ramps up to this value as the transition proceeds.

Wrap To: *X & Y*, *Popup menu*, *Default:* [Reflect Reflect].

Determines the method for accessing outside the borders of the background image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Motion Blur: *Check-box*, *Default:* on.

Enables motion blur.

Blur From Z Dist: *Default:* 0.7, *Range:* 0.001 or greater.

The 'distance' of the From transformation. Increase to zoom out, decrease to zoom in.

Blur From Rotate: *Default:* 0, *Range:* any.

The rotation angle of the From transformation, in degrees, about the center.

Blur To Z Dist: *Default:* 0.9, *Range:* 0.001 or greater.

The 'distance' of the To transformation. Increase to zoom out, or decrease to zoom in.

Blur To Rotate: *Default:* 0, *Range:* any.

The rotation angle of the To transformation, in degrees, about the center. Note that if the From and To Rotate angles are very different, the interpolation between them will become less accurate.

Camera Shake: *Check-box*, *Default:* off.

Enables camera shake.

Amplitude: *Default:* 2, *Range:* 0 or greater.

Scales the amplitude of the shaking motion.

Frequency: *Default:* 2, *Range:* 0 or greater.

Increase for faster shaking, decrease for slower shaking.

Glow Brights: *Check-box*, *Default:* on.

Enables glow brights.

Glow Brightness: *Default:* 3, *Range:* 0 or greater.

Overall maximum brightness of the glow.

Glow Threshold: *Default:* 0.2, *Range:* 0 or greater.

Parts of the source clip that are brighter than this value get glowed. A value of 0.9 makes only the brightest spots glow. A value of 0 makes every non-black area glow.

Glow Width: *Default:* 0, *Range:* 0 or greater.

The width of the glow.

Width X: *Default:* 1, *Range:* 0 or greater.

Scales the horizontal glow width. Set to 0 for vertical only.

Width Y: *Default:* 1, *Range:* 0 or greater.
Scales the vertical glow width. Set to 0 for horizontal only.

Glow Dark: *Check-box*, *Default:* off.
Enables glow darks.

Darkness: *Default:* 0.5, *Range:* 0 or greater.
The magnitude of the dark glows.

Dark Threshold: *Default:* 0.5, *Range:* 0 or greater.
Parts of the source clip that are brighter than this value get glowed. A value of 0.9 makes only the brightest spots glow. A value of 0 makes every non-black area glow.

Dark Width: *Default:* 0, *Range:* 0 or greater.
Scales the dark glow distance. Note that a zero glow width still affects the dark areas; set the darkness parameter to zero if you want to pass the Source through unchanged.

Dark Width X: *Default:* 1, *Range:* 0 or greater.
Scales the horizontal dark width. Set to 0 for vertical only.

Dark Width Y: *Default:* 1, *Range:* 0 or greater.
Scales the vertical dark width. Set to 0 for horizontal only.

Warp Chroma: *Check-box*, *Default:* on.
Enables warp chroma.

Warp Amount: *Default:* 0.6, *Range:* 0 or greater.
Adjusts the overall amount of chroma warping of the result. The amount of warping ramps up to this value as the transition proceeds. Setting this to zero disables warping and leaves the image chroma unchanged.

Steps: *Integer*, *Default:* 10, *Range:* 3 to 100.
The number of color samples along the chroma warp spectrum to include. More steps give a smoother result, but require more time to process.

Brightness: *Default:* 1, *Range:* 0 or greater.
Scales the brightness of the result.

Distortion Amount: *Default:* -1, *Range:* any.
The amplitude of the fish-eye warping.

Distort RGB Amount: *Default:* 0.2, *Range:* any.
Scales the magnitude of the lens distortion for all channels. Make negative to invert the direction of the distortions.

See Also:

[DissolveBlur](#)
[DissolveBubble](#)
[DissolveDiffuse](#)
[DissolveFilm](#)
[DissolveGlow](#)
[DissolveLuma](#)
[DissolvePuddle](#)
[DissolveSpeckle](#)
[DissolveStatic](#)
[DissolveVortex](#)
[DissolveWaves](#)

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S_HyperPush

Pushes the foreground nearer in z space before dissolving to the background, and featuring some bonus color and shake effects for added style.

In the Sapphire Transitions effects submenu.



Inputs:

From: Starts the transition with this clip.

To: Ends the transition with this clip.

Parameters:

Load Preset: Push–button.

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: Push–button.

Brings up the Preset Save dialog to save a preset for this effect.

Dissolve Amount: Default: 0, Range: -0.5 to 1.5.

The transition ratio between the From and To inputs. A value of 0 gives only the From input and a value of 1 gives only the To input. By default this parameter automatically animates from 0 to 1 to perform a complete transition.

Slow In: Default: 1, Range: 0 to 1.

If positive, causes the transition to start more gradually.

Slow Out: Default: 1, Range: 0 to 1.

If positive, causes the transition to end more gradually.

Dissolve Speed: Default: 5, Range: 1 or greater.

The speed of the dissolve between the foreground and background.

Z Dist From: Default: 0.001, Range: 0.001 or greater.

Scales the 'distance' of the foreground. Values greater than 1.0 move it farther away and make it smaller. Values less than 1.0 move the image closer and enlarge it. Zooming in slightly can sometimes be used to hide edge artifacts.

Center XY From: X & Y, Default: [0 0], Range: any.

The center of the fish-eye warping function, in screen coordinates relative to the center of the foreground.

Rotate From: Default: 0, Range: any.

Rotates the foreground about the center location by this many counter-clockwise degrees. The angle ramps up to this value as the transition proceeds.

Wrap From: X & Y, Popup menu, Default: [Reflect Reflect].

Determines the method for accessing outside the borders of the foreground image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Z Dist To: *Default: 5, Range: 0.001 or greater.*

Scales the 'distance' of the background. Values greater than 1.0 move it farther away and make it smaller. Values less than 1.0 move the image closer and enlarge it. Zooming in slightly can sometimes be used to hide edge artifacts.

Center XY To: *X & Y, Default: [0 0], Range: any.*

The center of the fish-eye warping function, in screen coordinates relative to the center of the background.

Rotate To: *Default: 0, Range: any.*

Rotates the background about the center location by this many counter-clockwise degrees. The angle ramps up to this value as the transition proceeds.

Wrap To: *X & Y, Popup menu, Default: [Reflect Reflect].*

Determines the method for accessing outside the borders of the background image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Motion Blur: *Check-box, Default: on.*

Enables motion blur.

Blur From Z Dist: *Default: 0.7, Range: 0.001 or greater.*

The 'distance' of the From transformation. Increase to zoom out, decrease to zoom in.

Blur From Rotate: *Default: 0, Range: any.*

The rotation angle of the From transformation, in degrees, about the center.

Blur To Z Dist: *Default: 0.9, Range: 0.001 or greater.*

The 'distance' of the To transformation. Increase to zoom out, or decrease to zoom in.

Blur To Rotate: *Default: 0, Range: any.*

The rotation angle of the To transformation, in degrees, about the center. Note that if the From and To Rotate angles are very different, the interpolation between them will become less accurate.

Camera Shake: *Check-box, Default: off.*

Enables camera shake.

Amplitude: *Default: 2, Range: 0 or greater.*

Scales the amplitude of the shaking motion.

Frequency: *Default: 2, Range: 0 or greater.*

Increase for faster shaking, decrease for slower shaking.

Glow Brights: *Check-box, Default: on.*

Enables glow brights.

Glow Brightness: *Default: 3, Range: 0 or greater.*

Overall maximum brightness of the glow.

Glow Threshold: *Default: 0.2, Range: 0 or greater.*

Parts of the source clip that are brighter than this value get glowed. A value of 0.9 makes only the brightest spots glow. A value of 0 makes every non-black area glow.

Glow Width: *Default: 0, Range: 0 or greater.*

The width of the glow.

Width X: *Default: 1, Range: 0 or greater.*

Scales the horizontal glow width. Set to 0 for vertical only.

Width Y: *Default:* 1, *Range:* 0 or greater.
Scales the vertical glow width. Set to 0 for horizontal only.

Glow Dark: *Check-box*, *Default:* off.
Enables glow darks.

Darkness: *Default:* 0.5, *Range:* 0 or greater.
The magnitude of the dark glows.

Dark Threshold: *Default:* 0.5, *Range:* 0 or greater.
Parts of the source clip that are brighter than this value get glowed. A value of 0.9 makes only the brightest spots glow. A value of 0 makes every non-black area glow.

Dark Width: *Default:* 0, *Range:* 0 or greater.
Scales the dark glow distance. Note that a zero glow width still affects the dark areas; set the darkness parameter to zero if you want to pass the Source through unchanged.

Dark Width X: *Default:* 1, *Range:* 0 or greater.
Scales the horizontal dark width. Set to 0 for vertical only.

Dark Width Y: *Default:* 1, *Range:* 0 or greater.
Scales the vertical dark width. Set to 0 for horizontal only.

Warp Chroma: *Check-box*, *Default:* on.
Enables warp chroma.

Warp Amount: *Default:* 0.6, *Range:* 0 or greater.
Adjusts the overall amount of chroma warping of the result. The amount of warping ramps up to this value as the transition proceeds. Setting this to zero disables warping and leaves the image chroma unchanged.

Steps: *Integer*, *Default:* 10, *Range:* 3 to 100.
The number of color samples along the chroma warp spectrum to include. More steps give a smoother result, but require more time to process.

Brightness: *Default:* 1, *Range:* 0 or greater.
Scales the brightness of the result.

Distortion Amount: *Default:* -1, *Range:* any.
The amplitude of the fish-eye warping.

Distort RGB Amount: *Default:* 0.2, *Range:* any.
Scales the magnitude of the lens distortion for all channels. Make negative to invert the direction of the distortions.

See Also:

[DissolveBlur](#)
[DissolveBubble](#)
[DissolveDiffuse](#)
[DissolveFilm](#)
[DissolveGlow](#)
[DissolveLuma](#)
[DissolvePuddle](#)
[DissolveSpeckle](#)
[DissolveStatic](#)
[DissolveVortex](#)
[DissolveWaves](#)

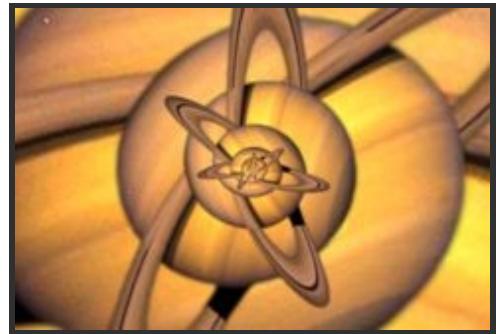
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S_InfiniteZoom

Zooms into endlessly repeating copies of an image, reminiscent of certain M.C. Escher drawings. Works best with clips with transparent edges, such as clocks or plates; or transparent centers, such as picture frames.

Transparency can come from the source clip's alpha or the mask. Animate the Zoom param to get the full effect.

In the Sapphire Distort effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Defines the transparent area of the source.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

- Union:** Uses the area covered by both masks together.
- Intersect:** Uses the area that overlaps between the two masks.
- Mocha Only:** Ignore the Input Mask and only use the Mocha Mask.

Transparent Area: *Popup menu, Default: Outside.*
If the source is transparent in the center, such as a picture frame, set this to Inside. Otherwise if it's transparent around the edges (such as a green-screen person or masked flower), or there is no transparency, set this to Outside.

- Inside:** Use this for picture frames or anything with a transparent center region where you want the copies to appear inside the empty space. This makes the copies appear behind the original.
- Outside:** Use this for flowers, plates or clocks where the background outside the object has been made transparent, so the smaller copies appear in front of the original. This is also the mode to use if you have no transparency at all.

Shrink Per Level: *Default: 0.5, Range: 0.001 to 0.9.*
How much to shrink each smaller copy compared to the previous larger copy. 0.8 means each level will be 0.8 times as big as the previous, so small values here mean the copies are much smaller at each level. Large values give closer spacing between levels.

Zoom: *Default: 1, Range: 0.001 or greater.*
Overall zoom of the image. You usually want to animate this param to get the infinite-zoom effect. Linear animation should give a nice smooth zoom.

Zoom Center: *X & Y, Default: [0 0], Range: any.*
Center point of the infinite zoom. You can get interesting looks by animating this at the same time as Zoom. This parameter can be adjusted using the Zoom Center Widget.

Twist: *Default: 0, Range: -5 or greater.*
Amount of twist between levels. Increase or decrease to get spiral zooms. In No Spiral mode, this is in units of 30 degrees per unit of twist. In the spiral modes, it's nonlinear, so best to adjust by eye.

Spiral Strands: *Popup menu, Default: 1 Counterclockwise.*
When set to No Spiral, the effect makes direct copies of the image at each level (they still may be twisted, depending on Twist). With the other spiral options, it warps each copy of the image so each level joins seamlessly to the next level in an ever-decreasing spiral.

- No Spiral:** The image isn't warped to provide a continuous spiral. This is good for picture frames.
- 1 Clockwise:** Warps the image to create one continuous spiral strand in a clockwise direction.
- 1 Counterclockwise:** Warps the image to create one continuous spiral strand in a counterclockwise direction.
- 2 Clockwise:** Warps the image to create two continuous spiral strands in a clockwise direction.
- 2 Counterclockwise:** Warps the image to create two continuous spiral strands in a counterclockwise direction.

Rotate: *Default: 0, Range: any.*
Overall rotation of the result image.

Shift: *X & Y, Default: [0 0], Range: any.*
Overall shift of the result image.

Wrap: *Popup menu, Default: No.*
Sets what happens with pixels outside the source image. Reflect can be useful with Transparent Area: Inside to fill

in small black areas, and Tile can lead to interesting effects when used with Transparent Area: Outside, as long as the image has some transparency around the edges. If your clip has no transparency, leave this at the default (None).

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Mask Use: *Popup menu*, *Default: Luma*.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Invert Mask: *Check-box*, *Default: off*.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Zoom Center: *Check-box*, *Default: on*.

Turns on or off the screen user interface for adjusting the Zoom Center parameter.

See Also:

[WarpTransform](#)

[KaleidoTriangles](#)

[KaleidoSquares](#)

[KaleidoDiamonds](#)

[KaleidoOct](#)

[KaleidoRadial](#)

[KaleidoPolar](#)

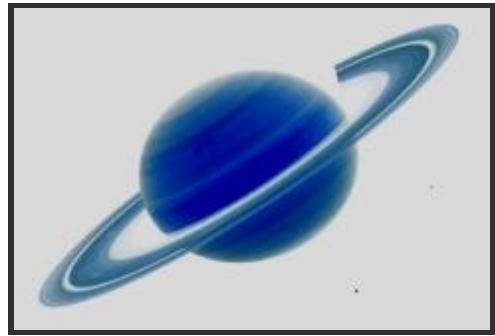
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S_Invert

Inverts the colors of the source clip, so black becomes white, and white becomes black. This can optionally also invert luma, chroma, RGB and alpha channels independently and do some basic color correction on the inverted result.

In the Sapphire Adjust effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Invert Luma: *Check-box, Default: on.*
Inverts the brightness if this is enabled. Unselect to invert only the chroma.

Invert Chroma: *Check-box, Default: on.*
Inverts the chroma if this is enabled. Unselect to invert only the luma.

Invert Red: *Check-box, Default: off.*
Inverts the red channel if this is enabled. If Invert Luma/Chroma are also selected, the red channel is un-inverted.

Invert Green: *Check-box, Default: off.*
Inverts the green channel if this is enabled. If Invert Luma/Chroma are also selected, the green channel is un-inverted.

Invert Blue: *Check-box, Default: off.*
Inverts the blue channel if this is enabled. If Invert Luma/Chroma are also selected, the blue channel is un-inverted.

Invert Alpha: *Check-box, Default: off.*
Inverts the alpha channel if an alpha channel exists.

Remult By Alpha: *Check-box, Default: on.*
Scales the new RGB colors by the alpha channel if an alpha channel exists. This can prevent adding the inverted colors to transparent areas when compositing over a background clip.

Scale Lights: *Default: 1, Range: 0 or greater.*
Scales the result by this value. Increase for a brighter result.

Tint Lights: *Default rgb: [1 1 1].*
Scales the result by this color, thus tinting the lighter regions.

Tint Dark: *Default rgb: [0 0 0].*
Adds this color to the darker regions of the result. Set this to a dark red-orange color for a negative-film effect look.

Offset Dark: *Default: 0, Range: -8 to 2.*
Adds this gray value to the darker regions of the result. This can be negative to increase contrast.

Saturation: *Default: 1, Range: -2 to 8.*
Scales the chroma saturation of the result. If this is zero you will see only color from the tint colors.

Mask Use: *Popup menu, Default: Luma.*
Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.
Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*
Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[HueSatBright](#)

[Monochrome](#)

[ClampChroma](#)

[PseudoColor](#)

[DuoTone](#)

[TriTone](#)

[QuadTone](#)

[Tint](#)

[Threshold](#)

[Hotspots](#)

[Gamma](#)

[Solarize](#)

[ChannelSwitcher](#)

[ShowBadColors](#)

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S_JitterFrames

Each output frame receives a random frame between the current frame plus and minus the Jitter Frame Dist. The jittering is random but repeatable.

In the Sapphire Time effects submenu.

Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Edit Frame Length: *Integer, Default: 1, Range: 1 or greater.*

If greater than 1, groups of frames of this size are jittered together instead of individually.

Jitter Frame Dist: *Default: 10, Range: 0 or greater.*

The magnitude of jittering.

Seed: *Default: 0.123, Range: 0 or greater.*

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[GetFrame](#)
[TimeWarpRGB](#)
[MotionDetect](#)
[TimeSlice](#)
[FreezeFrame](#)
[RandomEdits](#)
[ReverseEdits](#)
[ReverseClip](#)

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S_JpegDamage

Creates a version of the Source input that is subjected to Jpeg compression artifacts and errors. This can be used to give various looks of low quality digital transmissions. Three methods for manipulating your image are provided: the Jpeg quality can be adjusted, various internal frequencies can be scaled, and random decompression errors can be introduced. In all cases it can also be useful to lower the resolution factor to create larger, more obvious Jpeg blocks.



In the Sapphire Stylize effects submenu.

Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Quality: *Default: 0.1, Range: 0.01 to 1.*

Determines the amount of normal Jpeg artifacts. Use lower values for more compression.

Res Factor: *Integer, Default: 1, Range: 1 or greater.*

Downres the result by the inverse of this amount, so 1 is full resolution, 2 is 1/2, 3 is 1/3, etc. The pixel shapes will be larger when this is increased. You won't notice the result of this parameter unless its value is beyond then the current viewing downres factor.

Res Rel X: *Default: 1, Range: 0.01 or greater.*

Downres the result by the inverse of this amount in the horizontal direction. The jpeg block shapes will become rectangular if this is not 1.

All Freq Scale: *Default: 1, Range: 0 or greater.*

Scales the frequencies for all Jpeg coefficients. Values other than 1 cause abnormal results, and create unusual looking blocky versions of your input.

X Freq Scale: *Default: 1, Range: 0 or greater.*

Scales the horizontal Jpeg frequencies. Values other than 1 cause abnormal results.

Y Freq Scale: *Default: 1, Range: 0 or greater.*

Scales the vertical Jpeg frequencies.

Low Freq Scale: *Default: 1, Range: 0 or greater.*

Scales the softer low frequencies.

Mid Freq Scale: *Default: 1, Range: 0 or greater.*

Scales the middle range frequencies.

High Freq Scale: *Default: 1, Range: 0 or greater.*

Scales the sharper high frequencies. You may need a high Quality setting to see the high frequencies at all.

Affect Luma: *Default: 1, Range: 0 or greater.*

Determines how much the Freq Scale parameters above affect the luminance channel. A zero value causes no luminance change. Values greater than 1.0 exaggerate the change.

Affect Chroma: *Default: 0.5, Range: 0 or greater.*

Determines how much the Freq Scale parameters above affect the chroma channels. A zero value causes no chroma change. Values greater than 1.0 exaggerate the change.

Error Rate: *Default: 0, Range: 0 or greater.*

If positive, random decompression errors are introduced. The value determines the average number of errors in those blocks that receive errors. Larger values give a more even grainy look.

Err Block Density: *Default: 0.75, Range: 0 to 1.*

Determines the percentage of Jpeg blocks with errors. A value of .5 will give errors in half of the blocks and 1.0 will

give errors in all blocks.

Error Amp: *Default:* 1, *Range:* 0 or greater.

The amplitude of the decompression errors. Larger values give more visually obvious errors. This has no effect unless the Error Rate is also positive.

Error Coherence: *Default:* 1, *Range:* 0 or greater.

Determines how much the blocks with errors are grouped together. When zero, the errors are evenly distributed throughout the frame. When increased, the errors are clustered into larger groups. This has no effect unless the Error Rate is positive and the Err Block Density is less than 1.

Jitter Frames: *Integer*, *Default:* 1, *Range:* 0 or greater.

If this is 0, the random errors will remain the same for every frame processed. If it is 1, different errors are used for each frame. If it is 2, new errors are used for every other frame, and so on. This has no effect unless the Error Rate is also positive.

Rand Seed: *Default:* 0.123, *Range:* 0 or greater.

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different random error patterns, and the same value should give a repeatable result. This has no effect unless the Error Rate is also positive.

Scale Lights: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the result by this amount.

Offset Dark: *Default:* 0, *Range:* any.

Adds this gray value to the darker regions of the source. This can be negative to increase contrast.

Saturation: *Default:* 1, *Range:* any.

Scales the color saturation. Increase for more intense colors. Set to 0 for monochrome.

Mask Use: *Popup menu*, *Default:* Luma.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[ScanLines](#)

[HalfTone](#)

[Mosaic](#)

[FlysEyeRect](#)

[AutoPaint](#)

[DigitalDamage](#)

[Sapphire Plug-ins](#)

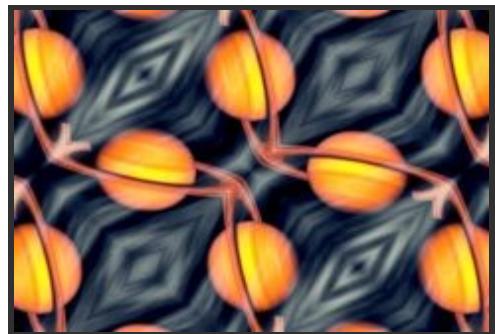
[Introduction](#)

S_Kaleido:Diamonds

Reflects the source clip into a pattern of diamonds. The 'Inside' parameters transform the Source image before it is reflected into the pattern. The Center and Z Dist transform the entire result including the reflection pattern, and the Rotate affects only the reflecting 'mirrors'.

In the Sapphire Stylize effects submenu.

In the S_Kaleido Plugin.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Center: *X & Y, Default: [0 0], Range: any.*
Center location of the kaleidoscoped image in screen coordinates relative to the center of the frame. The entire result will be shifted by this amount. This parameter can be adjusted using the Center Widget.

Z Dist: *Default: 2, Range: 0.001 or greater.*
Scales the 'distance' of the entire result in or out from the Center. Increase to zoom out, decrease to zoom in.

Rotate: *Default: 0, Range: any.*
Rotates the kaleidoscope's reflection pattern about the Center by this many counter-clockwise degrees.

Inside Shift: *X & Y, Default: [0 0], Range: any.*
Translates the source image inside the kaleidoscope before it is reflected.

Inside Z Dist: *Default: 1, Range: 0.001 or greater.*
Zooms the source image in or out inside the kaleidoscope before it is reflected.

Inside Rotate: *Default: 0, Range: any.*
Rotates the source image inside the kaleidoscope before it is reflected.

Kaleido Amount: *Default: 1, Range: 0 or greater.*
Adjusts the overall amount of distortion applied to the Source clip. Set this to zero to leave the source unchanged or to one for a normal kaleidoscope pattern.

Wrap: *X & Y, Popup menu, Default: [Reflect Reflect].*
Determines the method for accessing outside the borders of the source image. This is used only if the image inside the kaleidoscope is not contained within the shape of mirrors.

No: gives black beyond the borders.
Tile: repeats a copy of the image.
Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Filter: *Check-box, Default: on.*
If enabled, the Source image is resampled using pixel averaging. This removes aliasing and gives a higher quality result, although it may not be necessary if your input image is smooth with no sharp edges or high frequencies.

Mask Use: *Popup menu, Default: Luma.*
Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.
Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*
Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*
If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Crop Input Parameters: *Default:* 0, *Range:* 0 or greater.

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

Show Center: *Check-box, Default:* on.

Turns on or off the screen user interface for adjusting the Center parameter.

See Also:

[KaleidoTriangles](#)

[KaleidoSquares](#)

[KaleidoOct](#)

[KaleidoRadial](#)

[KaleidoPolar](#)

[FlysEyeHex](#)

[FlysEyeCircles](#)

[FlysEyeRect](#)

[Sapphire](#)

[Plug-ins](#)

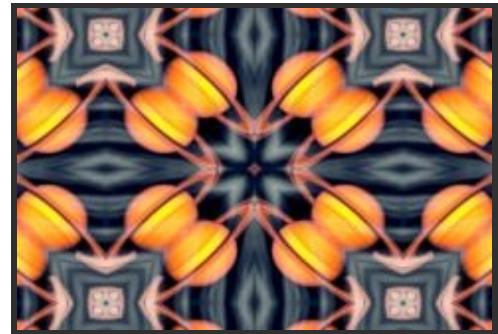
[Introduction](#)

S_Kaleido:Oct

Reflects the source clip into an octagonal pattern of right triangles. The 'Inside' parameters transform the Source image before it is reflected into the pattern. The Center and Z Dist transform the entire result including the reflection pattern, and the Rotate affects only the reflecting 'mirrors'.

In the Sapphire Stylize effects submenu.

In the S_Kaleido Plugin.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Center: *X & Y, Default: [0 0], Range: any.*
Center location of the kaleidoscoped image in screen coordinates relative to the center of the frame. The entire result will be shifted by this amount. This parameter can be adjusted using the Center Widget.

Z Dist: *Default: 2, Range: 0.001 or greater.*
Scales the 'distance' of the entire result in or out from the Center. Increase to zoom out, decrease to zoom in.

Rotate: *Default: 0, Range: any.*
Rotates the kaleidoscope's reflection pattern about the Center by this many counter-clockwise degrees.

Inside Shift: *X & Y, Default: [0 0], Range: any.*
Translates the source image inside the kaleidoscope before it is reflected.

Inside Z Dist: *Default: 1, Range: 0.001 or greater.*
Zooms the source image in or out inside the kaleidoscope before it is reflected.

Inside Rotate: *Default: 0, Range: any.*
Rotates the source image inside the kaleidoscope before it is reflected.

Kaleido Amount: *Default: 1, Range: 0 or greater.*
Adjusts the overall amount of distortion applied to the Source clip. Set this to zero to leave the source unchanged or to one for a normal kaleidoscope pattern.

Wrap: *X & Y, Popup menu, Default: [Reflect Reflect].*
Determines the method for accessing outside the borders of the source image. This is used only if the image inside the kaleidoscope is not contained within the shape of mirrors.

No: gives black beyond the borders.
Tile: repeats a copy of the image.
Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Filter: *Check-box, Default: on.*
If enabled, the Source image is resampled using pixel averaging. This removes aliasing and gives a higher quality result, although it may not be necessary if your input image is smooth with no sharp edges or high frequencies.

Mask Use: *Popup menu, Default: Luma.*
Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.
Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*
Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*
If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Crop Input Parameters: *Default:* 0, *Range:* 0 or greater.

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

Show Center: *Check-box, Default:* on.

Turns on or off the screen user interface for adjusting the Center parameter.

See Also:

[KaleidoTriangles](#)

[KaleidoSquares](#)

[KaleidoDiamonds](#)

[KaleidoRadial](#)

[KaleidoPolar](#)

[FlysEyeHex](#)

[FlysEyeCircles](#)

[FlysEyeRect](#)

[Sapphire](#)

[Plug-ins](#)

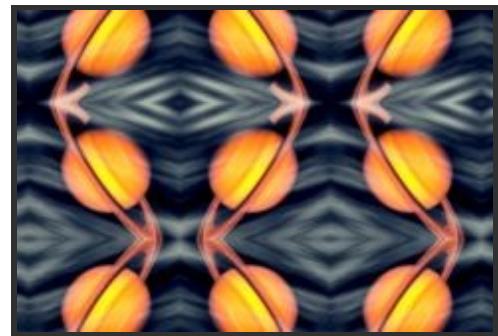
[Introduction](#)

S_Kaleido:Squares

Reflects the source clip into a pattern of squares. The 'Inside' parameters transform the Source image before it is reflected into the pattern. The Center and Z Dist transform the entire result including the reflection pattern, and the Rotate affects only the reflecting 'mirrors'.

In the Sapphire Stylize effects submenu.

In the S_Kaleido Plugin.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Center: *X & Y, Default: [0 0], Range: any.*
Center location of the kaleidoscoped image in screen coordinates relative to the center of the frame. The entire result will be shifted by this amount. This parameter can be adjusted using the Center Widget.

Z Dist: *Default: 2, Range: 0.001 or greater.*
Scales the 'distance' of the entire result in or out from the Center. Increase to zoom out, decrease to zoom in.

Rotate: *Default: 0, Range: any.*
Rotates the kaleidoscope's reflection pattern about the Center by this many counter-clockwise degrees.

Inside Shift: *X & Y, Default: [0 0], Range: any.*
Translates the source image inside the kaleidoscope before it is reflected.

Inside Z Dist: *Default: 1, Range: 0.001 or greater.*
Zooms the source image in or out inside the kaleidoscope before it is reflected.

Inside Rotate: *Default: 0, Range: any.*
Rotates the source image inside the kaleidoscope before it is reflected.

Kaleido Amount: *Default: 1, Range: 0 or greater.*
Adjusts the overall amount of distortion applied to the Source clip. Set this to zero to leave the source unchanged or to one for a normal kaleidoscope pattern.

Wrap: *X & Y, Popup menu, Default: [Reflect Reflect].*
Determines the method for accessing outside the borders of the source image. This is used only if the image inside the kaleidoscope is not contained within the shape of mirrors.

No: gives black beyond the borders.
Tile: repeats a copy of the image.
Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Filter: *Check-box, Default: on.*
If enabled, the Source image is resampled using pixel averaging. This removes aliasing and gives a higher quality result, although it may not be necessary if your input image is smooth with no sharp edges or high frequencies.

Mask Use: *Popup menu, Default: Luma.*
Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.
Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*
Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*
If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Crop Input Parameters: *Default:* 0, *Range:* 0 or greater.

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

Show Center: *Check-box, Default:* on.

Turns on or off the screen user interface for adjusting the Center parameter.

See Also:

[KaleidoTriangles](#)

[KaleidoDiamonds](#)

[KaleidoOct](#)

[KaleidoRadial](#)

[KaleidoPolar](#)

[FlysEyeHex](#)

[FlysEyeCircles](#)

[FlysEyeRect](#)

[Sapphire](#)

[Plug-ins](#)

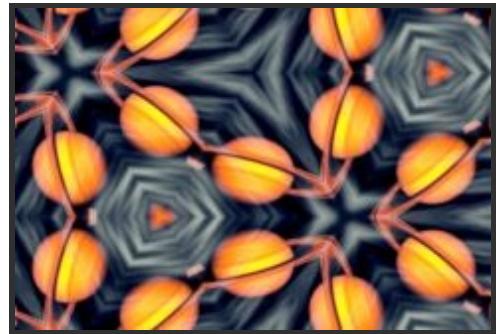
[Introduction](#)

S_Kaleido:Triangles

Reflects the source clip into a pattern of equilateral triangles. The 'Inside' parameters transform the Source image before it is reflected into the pattern. The Center and Z Dist transform the entire result including the reflection pattern, and the Rotate affects only the reflecting 'mirrors'.

In the Sapphire Stylize effects submenu.

In the S_Kaleido Plugin.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Center: *X & Y, Default: [0 0], Range: any.*
Center location of the kaleidoscoped image in screen coordinates relative to the center of the frame. The entire result will be shifted by this amount. This parameter can be adjusted using the Center Widget.

Z Dist: *Default: 2, Range: 0.001 or greater.*
Scales the 'distance' of the entire result in or out from the Center. Increase to zoom out, decrease to zoom in.

Rotate: *Default: 0, Range: any.*
Rotates the kaleidoscope's reflection pattern about the Center by this many counter-clockwise degrees.

Inside Shift: *X & Y, Default: [0 0], Range: any.*
Translates the source image inside the kaleidoscope before it is reflected.

Inside Z Dist: *Default: 1, Range: 0.001 or greater.*
Zooms the source image in or out inside the kaleidoscope before it is reflected.

Inside Rotate: *Default: 0, Range: any.*
Rotates the source image inside the kaleidoscope before it is reflected.

Kaleido Amount: *Default: 1, Range: 0 or greater.*
Adjusts the overall amount of distortion applied to the Source clip. Set this to zero to leave the source unchanged or to one for a normal kaleidoscope pattern.

Wrap: *X & Y, Popup menu, Default: [Reflect Reflect].*
Determines the method for accessing outside the borders of the source image. This is used only if the image inside the kaleidoscope is not contained within the shape of mirrors.

No: gives black beyond the borders.
Tile: repeats a copy of the image.
Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Filter: *Check-box, Default: on.*
If enabled, the Source image is resampled using pixel averaging. This removes aliasing and gives a higher quality result, although it may not be necessary if your input image is smooth with no sharp edges or high frequencies.

Mask Use: *Popup menu, Default: Luma.*
Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.
Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*
Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*
If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Crop Input Parameters: *Default:* 0, *Range:* 0 or greater.

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

Show Center: *Check-box, Default:* on.

Turns on or off the screen user interface for adjusting the Center parameter.

See Also:

[KaleidoSquares](#)

[FlysEyeHex](#)

[Sapphire](#)

[KaleidoDiamonds](#)

[FlysEyeCircles](#)

[Plug-ins](#)

[KaleidoOct](#)

[FlysEyeRect](#)

[Introduction](#)

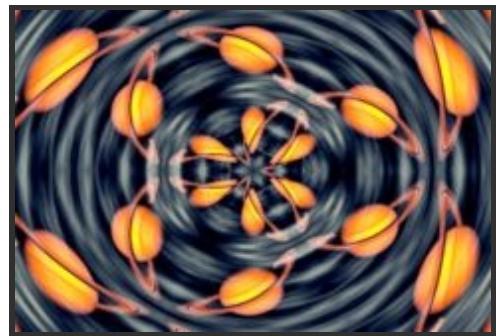
[KaleidoRadial](#)

[KaleidoPolar](#)

S_KaleidoPolar

Warps the source clip around in a disk shape and reflects radially as if viewed through a reflecting cylinder.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The input clip to be warped.

Mask: *Optional.* If provided, the amplitude of warping is scaled by the values of this input clip. Gray values internally scale the warping amplitude rather than simply cross-fading between the effect and the original source to allow more continuous results at the mask edges and more detailed control over the warping amounts. This input can be affected using the Blur Mask, Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* *Union*.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Center: *X & Y*, *Default:* [0 0], *Range:* any.

Center location of the kaleidoscoped image in screen coordinates relative to the center of the frame. The entire result will be shifted by this amount. This parameter can be adjusted using the Center Widget.

Z Dist: *Default:* 1, *Range:* 0.001 or greater.

Scales the 'distance' of the entire result in or out from the Center. Increase to zoom out, decrease to zoom in.

Rotate: *Default:* 0, *Range:* any.

Rotates the kaleidoscope's reflection pattern about the Center by this many counter-clockwise degrees.

Stretch: *X & Y*, *Default:* [1 1], *Range:* 0.1 or greater.

Scales the horizontal or vertical size of the result.

Inside Shift Y: *Default:* 0, *Range:* any.

Shifts the source image up by this amount before it is reflected. This causes the resulting pattern of images to radiate outward from the center.

Angle Repeats: *Default:* 6, *Range:* 0.01 or greater.

The number of copies of the source image to wrap around. This should be an even integer to avoid a seam where the first copy connects to the last.

Kaleido Amount: *Default:* 1, *Range:* 0 or greater.

Adjusts the overall amount of distortion applied to the Source clip. Set this to zero to leave the source unchanged or to one for a normal kaleidoscope pattern.

Filter: *Check-box*, *Default:* on.

If enabled, the image is adaptively filtered when it is resampled. This gives a better quality result when parts of the image are warped smaller.

Mask Use: *Popup menu*, *Default:* *Luma*.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Crop Input Parameters: *Default:* 0, *Range:* 0 or greater.

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular

subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

Show Center: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Center parameter.

See Also:

[KaleidoTriangles](#)

[WarpPolar](#)

[KaleidoSquares](#)

[Sapphire Plug-ins](#)

[KaleidoDiamonds](#)

[Introduction](#)

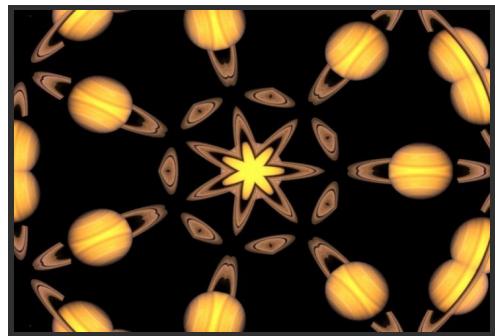
[KaleidoOct](#)

[KaleidoRadial](#)

S_KaleidoRadial

Simulates a traditional 2 or 3-mirror kaleidoscope. You see a pie-slice shaped piece of the source through the angle between the mirrors, and mirror-reflected copies of it in the rest of the image. Use the Slices parameter to control the how many copies of the source pie slice you see around the central point.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The input clip to be warped.

Mask: *Optional.* If provided, the amplitude of warping is scaled by the values of this input clip. Gray values internally scale the warping amplitude rather than simply cross-fading between the effect and the original source to allow more continuous results at the mask edges and more detailed control over the warping amounts. This input can be affected using the Blur Mask, Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Center: *X & Y*, *Default:* [0 0], *Range:* any.

Center location of the kaleidoscope mirrors, in screen coordinates relative to the center of the frame. This parameter can be adjusted using the Center Widget.

Z Dist: *Default:* 1, *Range:* 0.001 or greater.

Scales the 'distance' of the entire result in or out from the Center. Increase to zoom out, decrease to zoom in.

Slices: *Default:* 6, *Range:* 0.01 or greater.

Sets how many slices the image will be broken up into. Each slice corresponds to the area between the mirrors in a traditional kaleidoscope. Turn this up to get a more abstract look, and down to get fewer, wider slices. Fractional numbers here will get you one fractional slice; for a fully symmetrical look, use integers (3, 4, 5, and so on).

Rotate: *Default:* 0, *Range:* any.

Rotates the whole pattern about the Center by this many degrees.

Rotate Kaleido: *Default:* 0, *Range:* any.

Rotates the kaleidoscope itself, without rotating the image under (or inside) it.

Rotate Inside: *Default:* 0, *Range:* any.

Rotates the image under the kaleidoscope about the Center, much like rotating the object box at the end of a traditional kaleidoscope.

Rotate Inside Speed: *Default:* 30, *Range:* any.

Auto-rotates the image under the kaleidoscope over time. This allows you to get a nice animated look even on a still background, much like a traditional kaleidoscope where you could rotate the object box at the end. In degrees per second.

Shift Inside: *X & Y*, *Default:* [0 0], *Range:* any.

Translates or shifts the source image inside the kaleidoscope before it is reflected.

Kaleido Amount: *Default:* 1, *Range:* 0 or greater.

Adjusts the overall amount of distortion applied to the Source clip. Set this to zero to leave the source unchanged or to one for a normal kaleidoscope pattern.

Wrap: *Popup menu*, *Default:* Reflect.

Determines the method for accessing outside the borders of the source image. This is used only if the image inside the kaleidoscope is not contained within the shape of mirrors.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Filter: *Check-box*, *Default:* on.

If enabled, the image is adaptively filtered when it is resampled. This gives a better quality result when parts of the image are warped smaller.

Mask Use: *Popup menu*, *Default:* Luma.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Center: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Center parameter.

See Also:

[KaleidoTriangles](#)

[WarpPolar](#)

[KaleidoSquares](#)

[Sapphire Plug-ins](#)

[KaleidoDiamonds](#)

[Introduction](#)

[KaleidoOct](#)

[KaleidoPolar](#)

S_LaserBeam

Simulates the beam from a science fiction style laser blaster. The beam moves over a number of frames from a source point to a target point. A perspective effect may also be added.

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to use as background.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Start: *X & Y*, *Default:* [-0.444 -0.287], *Range:* any.
Starting point for the beam. This parameter can be adjusted using the Start Widget.

Stop: *X & Y*, *Default:* [0.111 0.33], *Range:* any.
Target point for the beam. This parameter can be adjusted using the Stop Widget.

Shift: *X & Y*, *Default:* [0 0], *Range:* any.
Moves the Start and Stop points, shifting the whole beam to a different location. This parameter can be adjusted using the Shift Widget.

Position: *Default:* 0.5, *Range:* 0 or greater.
Where the drawn beam segment should appear along the beam trajectory. At 0, the drawn beam segment will not yet have emerged from the source point. NOTE: nothing will be drawn at this point! At 1, the drawn beam segment will have gone inside the target point. NOTE: again, nothing will be drawn. At values in between, the beam segment will appear along the beam trajectory. The beam position may be controlled manually by key framing this control, or its position can be controlled by the frame number using the time controls.

Length: *Default:* 0.5, *Range:* 0 or greater.
Length of the drawn beam segment.

Width: *Default:* 0.01, *Range:* 0 or greater.
Width of the drawn beam segment.

Core Color: *Default rgb:* [1 1 0].
Color at the center of the beam.

Edge Color: *Default rgb:* [1 0 0].
Color at the edge of the beam.

Color Balance: *Default:* 0.5, *Range:* 0 to 1.
Adjusts the balance between the core and edge colors.

Brightness: *Default:* 1, *Range:* 0 or greater.
Brightness of the beam.

Softness: *Default:* 1, *Range:* 0 or greater.
Softness of the texturing in the beam.

Fade Back: *Default:* 0, *Range:* 0 or greater.
Fades out the brightness of the back half of the beam. Setting this to 1 will fade to black at the very back of the beam. Higher values will fade out more quickly.

Fade Front: *Default:* 0, *Range:* 0 or greater.
Fades out the brightness of the front half of the beam. Setting this to 1 will fade to black at the very front of the beam. Higher values will fade out more quickly.

Start Time: *Default:* 0, *Range:* 0 or greater.
If using the time mode of operation, this is the time at which the beam will start out from the source.

Duration: *Default:* 10, *Range:* 0 to 500.

If using the time mode of operation, this is the duration of flight of the laser beam. After start time + duration the beam will disappear into the target.

Laser Shape: *Popup menu, Default: Forward.*

The shape of the drawn segment of the beam.

Smooth: The segment is drawn with a circular profile.

Spear: The segment is drawn as a symmetrical shape with sharpened ends.

Forward: The segment is drawn as an asymmetrical shape with the leading end wider than the trailing end.

Backward: The segment is drawn as an asymmetrical shape with the trailing end wider than the leading end.

Perspective: *Default: 0, Range: -1 to 1.*

The strength of the perspective effect. At zero, there is no effect. Positive values move the bolt nearer to the target than it otherwise would be at a given beam position (or time), while negative values move it nearer to the source.

Use Time: *Check-box, Default: off.*

Control the motion of the beam segment automatically with frame number rather than manually with the position control.

Breakup: *Default: 0.05, Range: 0 to 1.*

As this increases, the drawn beam segment become more and more ragged.

Smooth: *Default: 0, Range: 0 to 1.*

Overall smoothing applied to the beam segment.

Atmosphere Amp: *Default: 0, Range: 0 or greater.*

Atmosphere gives the effect of the laser shining through a dusty atmosphere and picking up light or getting shadowed. This parameter adjusts the amount, or amplitude, of the atmospheric effect. Zero gives a smooth beam, higher values give more dusty look.

Atmosphere Freq: *Default: 4, Range: 0.1 to 20.*

Controls the spatial frequency of the atmospheric noise. Turn this up higher to get finer details, turn down for broader overall variation.

Atmosphere Detail: *Default: 0.8, Range: 0 to 1.*

Controls the amount of fine detail in the atmosphere simulation. Decrease to get smoother atmosphere, increase for a more crunchy or grainy look.

Atmosphere Seed: *Default: 0.123, Range: 0 or greater.*

Used to initialize the random number generator for the atmospheric noise. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Atmosphere Speed: *Default: 1, Range: any.*

The cloudy noise in the atmosphere evolves over time like real dust clouds; this parameter controls how fast the cloud pattern changes over time. Set to zero for a static pattern.

Affect Alpha: *Default: 0, Range: 0 or greater.*

If this value is positive the output Alpha channel will include some opacity from the laser beam. The maximum of the red, green, and blue laser beam brightness is scaled by this value and combined with the Background Alpha at each pixel.

Combine: *Popup menu, Default: Screen.*

Determines how the beam image is combined with the background.

Screen: blends the beam with the background, which can help prevent overly bright results.

Add: causes the beam image to be added to the background.

Beam Only: shows the beam over a transparent black background.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Start: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Start parameter.

Show Stop: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Stop parameter.

Show Shift: *Check-box, Default: off.*

Turns on or off the screen user interface for adjusting the Shift parameter.

See general info for [Motion Blur](#)

See Also:

[Sapphire Plug-ins Introduction](#)

S_Layer

Layers the Foreground image over the Background using one of a variety of blending operations. The colors of each input can also be adjusted using the lights, darks, and saturation parameters.

In the Sapphire Composite effects submenu.



Inputs:

Foreground: The clip to use as foreground.

Background: The clip to use as background.

Matte: *Optional.* Specifies the opacities of the Foreground clip. If this input is not provided the Foreground alpha is used instead. These values are scaled by the Fg Opacity parameter before being used.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Effect: *Popup menu, Default: Normal.*

Determines which blending method is used to combine the foreground and background pixel colors.

Normal: a normal composite. This will just give the foreground as the result unless the Opacity is below 1.0 or an alpha channel is given.

Dissolve: randomly replaces background pixels with foreground. The opacity determines the probability, so the foreground is more likely to replace the background for higher values of Opacity.

Multiply: this can be used as an 'intersection' operation on matte images. White is the identity for Multiply, where one image contains white the other is not affected, so the result only contains white where both inputs are white.

Screen: this can be useful for combining the bright areas of two clips. It can also be used as a 'union' operation on matte images. Black is the identity for Screen, where one image contains black the other is not affected, so the result is white where either of the input images is white.

Overlay: combines foreground and background using an overlay function.

Soft Light: darkens or lightens the background depending on the foreground.

Hard Light: similar to overlay but with foreground and background swapped.

Color Dodge: brightens the background depending on the foreground.

Color Burn: darkens the background depending on the foreground.

Darken: the minimum of foreground and background. This can also be used as an 'intersection' operation with slightly different results than Multiply.

Lighten: the maximum of foreground and background. This can also be used as a 'union' operation with slightly different results than Screen.

Add: adds the foreground to the background.

Subtract: subtracts the foreground from the background.

Difference: similar to Subtract but the absolute value of the result is used, which tends to give more resulting colors in bounds. This can be used to select the regions of two matte images where one or the

other is white, but not both.

Exclusion: similar to Difference but with smoother results.

Hue: combines the hue of the foreground with the saturation and luminance of the background.

Saturation: combines the saturation of the foreground with the hue and luminance of the background.

Chroma: combines the hue and saturation of the foreground with the luminance of the background.

Luminance: combines the luminance of the foreground with the hue and saturation of the background.

Linear Dodge: adds foreground and background and clamps the result at white.

Linear Burn: adds foreground and background but offsets to make the result darker. Similar to multiply in that combining with white gives no change and combining with black gives black.

Linear Light: performs a linear burn or linear dodge depending on if the foreground is more or less than 50 percent gray.

Vivid Light: performs a color burn or color dodge depending on if the foreground is more or less than 50 percent gray.

Pin Light: performs a lighten or darken depending on if the foreground is more or less than 50 percent gray.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Swap Inputs: *Check-box*, *Default:* off.

If enabled, effectively swaps the Background and Foreground inputs, and can be helpful for non-commutative operations like subtract. Note that this also causes parameters labeled 'Front' to affect the 'Back' input instead, and vice versa.

Fg Opacity: *Default:* 1, *Range:* 0 to 1.

Scales the opacity of the effect. When this is decreased the result approaches the background. At zero, the result will equal the background.

Fg Lights: *Default:* 1, *Range:* any.

Scales the Foreground before performing the effect.

Fg Darks: *Default:* 0, *Range:* any.

Offsets the darker regions of the Foreground before performing the effect. This can be negative to increase contrast.

Fg Saturation: *Default:* 1, *Range:* any.

Scales the color saturation of the Foreground before performing the effect. 0.0 makes it monochromatic, 1.0 has no effect.

Fg Hue Shift: *Default:* 0, *Range:* any.

Shifts the hue of the colors in the Front clip, in revolutions from red to green to blue to red.

Fg Blur: *Default:* 0, *Range:* 0 or greater.

Amount to blur the foreground.

Bg Lights: *Default:* 1, *Range:* any.

Scales the Background before performing the effect.

Bg Darks: *Default:* 0, *Range:* any.

Offsets the darker regions of the Background before performing the effect. This can be negative to increase contrast.

Bg Saturation: *Default:* 1, *Range:* any.

Scales the color saturation of the Background before performing the effect. 0.0 makes it monochromatic, 1.0 has no effect.

Bg Hue Shift: *Default:* 0, *Range:* any.

Shifts the hue of the colors in the Back clip, in revolutions from red to green to blue to red.

Bg Blur: *Default:* 0, *Range:* 0 or greater.

Amount to blur the background.

Result Lights: *Default:* 1, *Range:* any.

Scales the result after performing the effect.

Result Darks: *Default:* 0, *Range:* any.

Offsets the darker regions of the result after performing the effect. This can be negative to increase contrast.

Result Saturation: *Default:* 1, *Range:* any.

Scales the color saturation of the result after performing the effect. 0.0 makes it monochromatic, 1.0 has no effect.

Result Hue Shift: *Default:* 0, *Range:* any.

Shifts the hue of the colors in the result, in revolutions from red to green to blue to red.

Blur Subpixel: *Check-box*, *Default:* on.

Enables blurring by subpixel amounts. Use this for smoother animation of the Blur Front and Blur Back parameters.

Soft Borders: *Check-box*, *Default:* off.

If enabled, transparent borders are added to the input image before processing. This allows the result to include soft edges beyond the original image size. When off, the effect only occurs within the frame and the result will retain an edge at the borders.

Comp Premult: *Check-box*, *Default:* on.

Disable this if you have provided a separate Matte input and the Foreground pixel values have not been

pre-multiplied by this Matte.

Matte Use: *Popup menu, Default: Alpha.*

Determines how the Matte input channels are used to make a monochrome matte.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

All Opaque: an alpha of 1.0 is used as if the Matte were fully opaque.

See Also:

[MathOps](#)

[Sapphire Plug-ins Introduction](#)

S_LensFlare

Renders a lens flare image over the background clip, aligning various flare elements between the hotspot and pivot locations. Use the Lens menu to select different types of lensflares.

In the Sapphire Lighting effects submenu.



Inputs:

Background: *Optional.* The clip to apply the lens flare over.

Occlusion: *Optional.* Obscures and colorizes the flare. The brightness of the flare is reduced based on the opacity of this clip, and the color at the hotspot location is used to tint the flare. These behaviors can be adjusted with the Occlusion Softness, Occlusion From, Invert Occlusion, and Use Color parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Lens: *Default: 0, Range: 0 or greater.*

The type of lens flare to apply. Custom lens flare types can also be made, or existing types modified, by editing the "s_lensflares.text" file.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Scale Widths: *Default:* 1.15, *Range:* 0 or greater.

Scales the sizes of all the flare elements. This parameter can be adjusted using the Scale Widths Widget.

Rel Heights: *Default:* 1, *Range:* 0 or greater.

Scales the vertical dimension of all the flare elements, making them elliptical instead of circular. This can also be adjusted using the Scale Widths Widget.

Blur Flare: *Default:* 0, *Range:* 0 or greater.

If positive, the flare image is blurred by this amount before being combined with the background.

Hotspot: *X & Y*, *Default:* [-0.444 0.176], *Range:* any.

The location of the brightest spot in the flare in screen coordinates. It can be set by enabling and moving the hotspot widget.

Hotspot Uses Mocha: *Check-box*, *Default:* off.

Controls whether the LensFlare hotspot is controlled by the Hotspot parameter or follows the Hotspot tracked inside of Mocha.

Smooth Hotspot Track: *Integer*, *Default:* 0, *Range:* 0 or greater.

Controls how many points to average when stabilizing the Mocha point track.

Pivot: *X & Y*, *Default:* [0 0], *Range:* any.

The elements of the flare will be in a line between the Hotspot and the Pivot locations. The Pivot location is in screen coordinates.

Pivot Uses Mocha: *Check-box*, *Default:* off.

Controls whether the LensFlare pivot is controlled by the Pivot parameter or follows the Pivot tracked inside of Mocha.

Smooth Pivot Track: *Integer*, *Default:* 0, *Range:* 0 or greater.

Controls how many points to average when stabilizing the Mocha point track.

Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of all the flare elements.

Color: *Default rgb:* [1 1 1].

Scales the color of all flare elements.

Gamma: *Default:* 1, *Range:* 0.1 or greater.

Increasing gamma brightens the flare, and especially boosts the darker elements.

Saturation: *Default:* 1, *Range:* -2 to 8.

Scales the color saturation of the flare elements. Increase for more intense colors. Set to 0 for a monochrome lens flare.

Hue Shift: *Default: 0, Range: any.*

Shifts the hue of the flare, in revolutions from red to green to blue to red.

Rays Brightness: *Default: 1, Range: 0 or greater.*

Scales the brightness of the ray elements only.

Rays Rotate: *Default: 0, Range: any.*

Rotates the ray elements of the lens flare, if any, in counter-clockwise degrees.

Rays Num Scale: *Default: 1, Range: 0 or greater.*

Increases or decreases the number of rays.

Rays Length: *Default: 1, Range: 0 or greater.*

Adjusts the length of the rays without changing their thickness, or changing the size of the other flare elements.

Rays Thickness: *Default: 1, Range: 0 or greater.*

Adjusts the thickness of the individual rays within the flare.

Hotspot Bright: *Default: 1, Range: 0 or greater.*

Scales the brightness of the hotspot elements only.

Hotspot Color: *Default rgb: [1 1 1].*

Scales the color of the hotspot elements only.

Other Brightness: *Default: 1, Range: 0 or greater.*

Scales the brightness of all flare elements that are NOT at the hotspot location.

Other Color: *Default rgb: [1 1 1].*

Scales the color of all flare elements that are NOT at the hotspot location.

Other Width: *Default: 1, Range: 0 or greater.*

Scales the width of all flare elements that are NOT at the hotspot location.

Atmosphere Amp: *Default: 0, Range: 0 or greater.*

Atmosphere gives the effect of the flare shining through a dusty atmosphere and picking up light or getting shadowed. This parameter adjusts the amount, or amplitude, of the atmospheric effect. Zero gives a smoother flare, higher values give more dirty look.

Atmosphere affects some parts of the flare but not others. This behavior can be adjusted for each element by toggling the Ignore Atmosphere setting within the Flare Designer. Typically, elements which originate within the camera (such as secondary reflections) should use Ignore Atmosphere, while elements which originate outside it (such as glows) should not.

Atmosphere Freq: *Default: 1, Range: 0.1 to 20.*

Controls the spatial frequency of the atmospheric noise. Turn this up higher to get finer details, turn down for broader overall variation.

Atmosphere Detail: *Default: 0.6, Range: 0 to 1.*

Controls the amount of fine detail in the atmosphere simulation. Decrease to get smoother atmosphere, increase for a more crunchy or grainy look.

Atmosphere Seed: *Default: 0.123, Range: 0 or greater.*

Used to initialize the random number generator for the atmospheric noise. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Atmosphere Speed: *Default:* 1, *Range:* any.

The cloudy noise in the atmosphere evolves over time like real dust clouds; this parameter controls how fast the cloud pattern changes over time. Set to zero for a static pattern.

Flicker Amp: *Default:* 0, *Range:* 0 or greater.

The amount of random flickering of the flare brightness.

Flicker Speed: *Default:* 1, *Range:* 0 or greater.

The speed of random flickering.

Flicker Randomness: *Default:* 0.6, *Range:* 0 to 1.

Controls the variability of the flicker. When set to zero, the flare will flicker constantly, with a small amount of random variation. At higher values, the flickering will have longer steady spells, with the occasional large spike.

Bg Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the background before combining with the flare. If 0, the result will contain only the flare image over black.

Combine: *Popup menu, Default: Screen.*

Determines how the flare image is combined with the Background.

Screen: performs a blend function which can help prevent overly bright results.

Add: causes the flare image to be added to the background.

Flare Only: gives only the flare image with no background.

Tint Bg Whites: *Check-box, Default: off.*

If this is enabled, the chroma of the flare is added only after the result is clamped to the maximum brightness. This allows the color of the flare image to still be visible even over bright white backgrounds. For the majority of backgrounds there will be no observable difference.

Affect Alpha: *Default: 0, Range: 0 or greater.*

If this value is positive the output Alpha channel will include some opacity from the flare. The maximum of the red, green, and blue flare brightness is scaled by this value and combined with the Background Alpha at each pixel.

Edge Triggers Parameters:

Edge Width: *Default: 0.3, Range: 0 or greater.*

Creates a trigger zone at the edge of the screen which affects the brightness and size of the flare. This parameter controls the width of the zone. Setting it to zero will disable Edge Triggers.

Edge Falloff: *Default: 2, Range: 0.01 or greater.*

Controls the speed with which the intensity of the trigger decreases when moving away from the edge. A value of 1 results in a linear ramp. Values greater than one result in a steeper initial drop which gradually levels out. Values less than one result in a slope that starts gradually and gets steeper at the end.

Shift Out: *Default: 0, Range: any.*

Shifts the trigger zone outward from the edge of the screen, placing the peak off-screen. Negative values will shift the trigger zone inward toward the center of the image.

One Way: *Check-box, Default: off.*

If this box is checked, the trigger will stay at maximum intensity when the Hotspot moves off-screen, instead of ramping back down as it moves farther from the edge.

Edge Scale Brightness: *Default: 1.5, Range: 0 or greater.*

Scales the Brightness by this amount when the trigger is at peak intensity. For example, a value of 3 will cause the flare to ramp up to 3 times its normal brightness as it passes through the trigger zone. If less than 1, the trigger will dim the flare instead of brightening it.

Edge Scale Widths: *Default:* 1.2, *Range:* 0 or greater.

Scales the width of the flare by this amount when the trigger is at peak intensity. For example, a value of 3 will cause the flare to expand to 3 times its normal size as it passes through the trigger zone. If less than 1, the trigger will shrink the flare instead of growing it.

Show Edge Zones: *Check-box*, *Default:* off.

Overlays the output with a grayscale image which shows the location intensity of the Edge Triggers.

Center Radius: *Default:* 0.3, *Range:* 0 or greater.

Creates a trigger zone centered on the Pivot which affects the brightness and size of the flare. This parameter controls the radius of the zone. Setting it to zero will disable Center Triggers.

Center Falloff: *Default:* 1, *Range:* 0.01 or greater.

Controls the speed with which the intensity of the trigger decreases when moving away from the edge. A value of 1 results in a linear ramp. Values greater than one result in a steeper initial drop which gradually levels out. Values less than one result in a slope that starts gradually and gets steeper at the end.

Center Scale Brightness: *Default:* 1.5, *Range:* 0 or greater.

Scales the Brightness by this amount when the trigger is at peak intensity. For example, a value of 3 will cause the flare to ramp up to 3 times its normal brightness as it passes through the trigger zone. If less than 1, the trigger will dim the flare instead of brightening it.

Center Scale Widths: *Default:* 1.2, *Range:* 0 or greater.

Scales the width of the flare by this amount when the trigger is at peak intensity. For example, a value of 3 will cause the flare to expand to 3 times its normal size as it passes through the trigger zone. If less than 1, the trigger will shrink the flare instead of growing it.

Show Center Zone: *Check-box*, *Default:* off.

Overlays the output with a grayscale image which shows the location intensity of the Center Trigger.

Occlusion Parameters:

Occlusion Softness: *Default:* 0.0224, *Range:* 0 or greater.

Increase this value to make the flare to fade out gradually as the Hotspot moves behind an object. Set it to zero to have the flare wink out suddenly. With large softness values, the Hotspot position is automatically adjusted toward non-occluded areas. This accurately simulates a large light source which is partially obscured, and it prevents the Hotspot from appearing in front of an occluding object.

Occlusion From: *Popup menu*, *Default:* Alpha.

Selects the channels of the Occlusion image which control occlusion of the flare.

None: The flare is not occluded at all.

Luma: The flare is occluded by the luminance of the Occlusion clip. Black areas will show the flare, and white areas will obscure it.

Alpha: The flare is occluded by the alpha channel of the Occlusion clip. Use this if you have an RGBA clip of an object that should appear in front of the flare.

Invert Occlusion: *Check-box*, *Default:* off.

If enabled, inverts the Occlusion clip so the flare is obscured by black areas instead of white.

Use Color: *Check-box*, *Default:* on.

If enabled, colorizes the flare based on the color of the Occlusion clip. Use this to create stained glass effects when the Hotspot passes behind a transparent object.

Diffraction Glow: *Default:* 0, *Range:* 0 or greater.

Creates a glow on the edges of occluding objects that are near the hotspot, to simulate light bleeding around the edges of the object. This parameter controls the brightness of the glow.

Glow Width: *Default: 0.4, Range: 0 or greater.*

The width of the Diffraction Glow.

Glow Color: *Default rgb: [1 1 1].*

The color of the Diffraction Glow.

Glow Radius: *Default: 0.2, Range: 0 or greater.*

The distance from the hotspot at which Diffraction Glow is visible. The glow will fall off softly as distance from the hotspot increases. Objects outside this radius won't create any glow.

Occlusion Triggers Parameters:

Occlusion Scale Brightness: *Default: 1, Range: 0 or greater.*

Enables a Trigger that adjusts the brightness of the flare as it's occluded. The brightness will ramp up to this value when the Hotspot is 50 percent occluded, then ramp back down to its normal brightness. At the same time, the flare will be fading out due to the occlusion, so its brightness will drop off quickly at the end. Works best when Occlusion Softness is turned up as well.

Occlusion Scale Widths: *Default: 1, Range: 0 or greater.*

Enables a Trigger that adjusts the size of the flare as it's occluded. The flare will expand up to this amount when the Hotspot is 50 percent occluded, then shrink back down to its normal size. At the same time, the flare will be fading out due to the occlusion, so it will appear to shrink quickly at the end. Works best when Occlusion Softness is turned up as well.

Show Scale Widths: *Check-box, Default: on.*

Turns on or off the screen interface widget for adjusting the Scale Widths and Rel Heights parameters.

Show Hotspot: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Hotspot parameter.

Show Pivot: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Pivot parameter.

See general info for [Motion Blur](#)

See Also:

[LensFlareAutoTrack](#)

[Glint](#)

[Sapphire](#)

[DissolveLensFlare](#)

[Glare](#)

[Plug-ins](#)

[LightLeak](#)

[Introduction](#)

S_LensFlareAutoTrack

Renders one or more lens flare images over the background clip, aligning various flare elements between the hotspot and pivot locations. In this AutoTrack version of LensFlare, the hotspots are automatically positioned on the brightest areas of the background clip. Increasing Blur For Auto will cause the input to be smoothed before the brightest locations are found and can help remove the effect of secondary bright spots.



In the Sapphire Lighting effects submenu.

Inputs:

Background: *Optional.* The clip to apply the lens flare over.

Track: *Optional.* The lensflare hotspot is positioned on the brightest part of this image. If this input is not selected, the Background input (current layer) is also used for the tracking.

Occlusion: *Optional.* Obscures and colorizes the flare. The brightness of the flare is reduced based on the opacity of this clip, and the color at the hotspot location is used to tint the flare . These behaviors can be adjusted with the Occlusion Softness, Occlusion From, Invert Occlusion, and Use Color parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Lens: *Default: 0, Range: 0 or greater.*

The type of lens flare to apply. Custom lens flare types can also be made, or existing types modified, by editing the "s_lensflares.text" file.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.
The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.
The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.
Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.
Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Scale Widths: *Default:* 1.15, *Range:* 0 or greater.
Scales the sizes of all the flare elements. This parameter can be adjusted using the Scale Widths Widget.

Rel Heights: *Default:* 1, *Range:* 0 or greater.
Scales the vertical dimension of all the flare elements, making them elliptical instead of circular. This can also be adjusted using the Scale Widths Widget.

Blur Flare: *Default:* 0, *Range:* 0 or greater.
If positive, the flare image is blurred by this amount before being combined with the background.

Max Hotspots: *Integer*, *Default:* 1, *Range:* 1 or greater.
Maximum number of flares to render. Rendering multiple flares can give different tracking results than rendering a single flare.

Hotspot Threshold: *Default:* 0.6, *Range:* 0 or greater.
Flares are drawn at locations in the source clip that are brighter than this value.

Track Color: *Check-box*, *Default:* off.
If enabled, the color of each hotspot will be adjusted to match the light source it's tracking.

Hotspot Shift: *X & Y*, *Default:* [0 0], *Range:* any.
Adds this amount to the hotspot locations. This allows for a relative adjustment of the hotspots away from the auto-tracked locations if necessary.

Pivot: *X & Y*, *Default:* [0 0], *Range:* any.
The elements of the flare will be in a line between the Hotspot and the Pivot locations. The Pivot location is in screen coordinates.

Blur For Auto: *Default:* 0.056, *Range:* 0 or greater.
The input is blurred by this amount before finding the brightest location.

Brightness: *Default:* 1, *Range:* 0 or greater.
Scales the brightness of all the flare elements.

Color: *Default* *rgb:* [1 1 1].
Scales the color of all flare elements.

Gamma: *Default: 1, Range: 0.1 or greater.*

Increasing gamma brightens the flare, and especially boosts the darker elements.

Saturation: *Default: 1, Range: -2 to 8.*

Scales the color saturation of the flare elements. Increase for more intense colors. Set to 0 for a monochrome lens flare.

Hue Shift: *Default: 0, Range: any.*

Shifts the hue of the flare, in revolutions from red to green to blue to red.

Rays Brightness: *Default: 1, Range: 0 or greater.*

Scales the brightness of the ray elements only.

Rays Rotate: *Default: 0, Range: any.*

Rotates the ray elements of the lens flare, if any, in counter-clockwise degrees.

Rays Num Scale: *Default: 1, Range: 0 or greater.*

Increases or decreases the number of rays.

Rays Length: *Default: 1, Range: 0 or greater.*

Adjusts the length of the rays without changing their thickness, or changing the size of the other flare elements.

Rays Thickness: *Default: 1, Range: 0 or greater.*

Adjusts the thickness of the individual rays within the flare.

Hotspot Bright: *Default: 1, Range: 0 or greater.*

Scales the brightness of the hotspot elements only.

Hotspot Color: *Default rgb: [1 1 1].*

Scales the color of the hotspot elements only.

Other Brightness: *Default: 1, Range: 0 or greater.*

Scales the brightness of all flare elements that are NOT at the hotspot location.

Other Color: *Default rgb: [1 1 1].*

Scales the color of all flare elements that are NOT at the hotspot location.

Other Width: *Default: 1, Range: 0 or greater.*

Scales the width of all flare elements that are NOT at the hotspot location.

Atmosphere Amp: *Default: 0, Range: 0 or greater.*

Atmosphere gives the effect of the flare shining through a dusty atmosphere and picking up light or getting shadowed. This parameter adjusts the amount, or amplitude, of the atmospheric effect. Zero gives a smoother flare, higher values give more dirty look.

Atmosphere affects some parts of the flare but not others. This behavior can be adjusted for each element by toggling the Ignore Atmosphere setting within the Flare Designer. Typically, elements which originate within the camera (such as secondary reflections) should use Ignore Atmosphere, while elements which originate outside it (such as glows) should not.

Atmosphere Freq: *Default: 1, Range: 0.1 to 20.*

Controls the spatial frequency of the atmospheric noise. Turn this up higher to get finer details, turn down for broader overall variation.

Atmosphere Detail: *Default: 0.6, Range: 0 to 1.*

Controls the amount of fine detail in the atmosphere simulation. Decrease to get smoother atmosphere, increase for a more crunchy or grainy look.

Atmosphere Seed: *Default:* 0.123, *Range:* 0 or greater.

Used to initialize the random number generator for the atmospheric noise. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Atmosphere Speed: *Default:* 1, *Range:* any.

The cloudy noise in the atmosphere evolves over time like real dust clouds; this parameter controls how fast the cloud pattern changes over time. Set to zero for a static pattern.

Flicker Amp: *Default:* 0, *Range:* 0 or greater.

The amount of random flickering of the flare brightness.

Flicker Speed: *Default:* 1, *Range:* 0 or greater.

The speed of random flickering.

Flicker Randomness: *Default:* 0.6, *Range:* 0 to 1.

Controls the variability of the flicker. When set to zero, the flare will flicker constantly, with a small amount of random variation. At higher values, the flickering will have longer steady spells, with the occasional large spike.

Bg Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the background before combining with the flare. If 0, the result will contain only the flare image over black.

Combine: *Popup menu, Default: Screen.*

Determines how the flare image is combined with the Background.

Screen: performs a blend function which can help prevent overly bright results.

Add: causes the flare image to be added to the background.

Flare Only: gives only the flare image with no background.

Tint Bg Whites: *Check-box, Default: off.*

If this is enabled, the chroma of the flare is added only after the result is clamped to the maximum brightness. This allows the color of the flare image to still be visible even over bright white backgrounds. For the majority of backgrounds there will be no observable difference.

Affect Alpha: *Default:* 0, *Range:* 0 or greater.

If this value is positive the output Alpha channel will include some opacity from the flare. The maximum of the red, green, and blue flare brightness is scaled by this value and combined with the Background Alpha at each pixel.

Edge Triggers Parameters:

Edge Width: *Default:* 0, *Range:* 0 or greater.

Creates a trigger zone at the edge of the screen which affects the brightness and size of the flare. This parameter controls the width of the zone. Setting it to zero will disable Edge Triggers.

Edge Falloff: *Default:* 2, *Range:* 0.01 or greater.

Controls the speed with which the intensity of the trigger decreases when moving away from the edge. A value of 1 results in a linear ramp. Values greater than one result in a steeper initial drop which gradually levels out. Values less than one result in a slope that starts gradually and gets steeper at the end.

Shift Out: *Default:* 0, *Range:* any.

Shifts the trigger zone outward from the edge of the screen, placing the peak off-screen. Negative values will shift the trigger zone inward toward the center of the image.

One Way: *Check-box, Default: off.*

If this box is checked, the trigger will stay at maximum intensity when the Hotspot moves off-screen, instead of ramping back down as it moves farther from the edge.

Edge Scale Brightness: *Default:* 3, *Range:* 0 or greater.

Scales the Brightness by this amount when the trigger is at peak intensity. For example, a value of 3 will cause the flare to ramp up to 3 times its normal brightness as it passes through the trigger zone. If less than 1, the trigger will dim the flare instead of brightening it.

Edge Scale Widths: *Default:* 2, *Range:* 0 or greater.

Scales the width of the flare by this amount when the trigger is at peak intensity. For example, a value of 3 will cause the flare to expand to 3 times its normal size as it passes through the trigger zone. If less than 1, the trigger will shrink the flare instead of growing it.

Show Edge Zones: *Check-box*, *Default:* off.

Overlays the output with a grayscale image which shows the location intensity of the Edge Triggers.

Center Radius: *Default:* 0, *Range:* 0 or greater.

Creates a trigger zone centered on the Pivot which affects the brightness and size of the flare. This parameter controls the radius of the zone. Setting it to zero will disable Center Triggers.

Center Falloff: *Default:* 1, *Range:* 0.01 or greater.

Controls the speed with which the intensity of the trigger decreases when moving away from the edge. A value of 1 results in a linear ramp. Values greater than one result in a steeper initial drop which gradually levels out. Values less than one result in a slope that starts gradually and gets steeper at the end.

Center Scale Brightness: *Default:* 2, *Range:* 0 or greater.

Scales the Brightness by this amount when the trigger is at peak intensity. For example, a value of 3 will cause the flare to ramp up to 3 times its normal brightness as it passes through the trigger zone. If less than 1, the trigger will dim the flare instead of brightening it.

Center Scale Widths: *Default:* 1.5, *Range:* 0 or greater.

Scales the width of the flare by this amount when the trigger is at peak intensity. For example, a value of 3 will cause the flare to expand to 3 times its normal size as it passes through the trigger zone. If less than 1, the trigger will shrink the flare instead of growing it.

Show Center Zone: *Check-box*, *Default:* off.

Overlays the output with a grayscale image which shows the location intensity of the Center Trigger.

Occlusion Parameters:

Occlusion Softness: *Default:* 0.0224, *Range:* 0 or greater.

Increase this value to make the flare to fade out gradually as the Hotspot moves behind an object. Set it to zero to have the flare wink out suddenly. With large softness values, the Hotspot position is automatically adjusted toward non-occluded areas. This accurately simulates a large light source which is partially obscured, and it prevents the Hotspot from appearing in front of an occluding object.

Occlusion From: *Popup menu*, *Default:* Alpha.

Selects the channels of the Occlusion image which control occlusion of the flare.

None: The flare is not occluded at all.

Luma: The flare is occluded by the luminance of the Occlusion clip. Black areas will show the flare, and white areas will obscure it.

Alpha: The flare is occluded by the alpha channel of the Occlusion clip. Use this if you have an RGBA clip of an object that should appear in front of the flare.

Invert Occlusion: *Check-box*, *Default:* off.

If enabled, inverts the Occlusion clip so the flare is obscured by black areas instead of white.

Use Color: *Check-box*, *Default:* on.

If enabled, colorizes the flare based on the color of the Occlusion clip. Use this to create stained glass effects when the Hotspot passes behind a transparent object.

Diffraction Glow: *Default:* 0, *Range:* 0 or greater.

Creates a glow on the edges of occluding objects that are near the hotspot, to simulate light bleeding around the edges of the object. This parameter controls the brightness of the glow.

Glow Width: *Default:* 0.4, *Range:* 0 or greater.

The width of the Diffraction Glow.

Glow Color: *Default rgb:* [1 1 1].

The color of the Diffraction Glow.

Glow Radius: *Default:* 0.2, *Range:* 0 or greater.

The distance from the hotspot at which Diffraction Glow is visible. The glow will fall off softly as distance from the hotspot increases. Objects outside this radius won't create any glow.

Occlusion Triggers Parameters:

Occlusion Scale Brightness: *Default:* 1, *Range:* 0 or greater.

Enables a Trigger that adjusts the brightness of the flare as it's occluded. The brightness will ramp up to this value when the Hotspot is 50 percent occluded, then ramp back down to its normal brightness. At the same time, the flare will be fading out due to the occlusion, so its brightness will drop off quickly at the end. Works best when Occlusion Softness is turned up as well.

Occlusion Scale Widths: *Check-box, Default:* on.

Enables a Trigger that adjusts the size of the flare as it's occluded. The flare will expand up to this amount when the Hotspot is 50 percent occluded, then shrink back down to its normal size. At the same time, the flare will be fading out due to the occlusion, so it will appear to shrink quickly at the end. Works best when Occlusion Softness is turned up as well.

Show Scale Widths: *Check-box, Default:* on.

Turns on or off the screen interface widget for adjusting the Scale Widths and Rel Heights parameters.

Show Pivot: *Check-box, Default:* on.

Turns on or off the screen user interface for adjusting the Pivot parameter.

See Also:

[LensFlare](#)

[DissolveLensFlare](#)

[LightLeak](#)

[Glint](#)

[Glare](#)

[Sapphire](#)

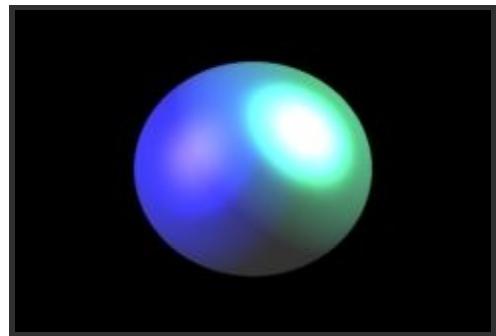
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S_Light3D

Performs 3D relighting with up to 4 individually controlled light sources. The Source input is usually an ambient or diffuse pass from a 3d renderer that shows the surface colors. The Normal vector input determines the surface direction at each pixel. The source and normals should be generated together by the 3d program so they match.

In the Sapphire Lighting effects submenu.



Inputs:

Source: The 3d surface colors.

Normals: Contains the normal vectors matching the Source clip. Typically the red channel will have the X component of the normal, green will have Y, and blue will have Z, but you can adjust this mapping using the Normal Offset and Invert parameters on the second page.

Mask: *Optional.* Used to interpolate between the original image and the result. Where the mask is black, no lighting is applied and the original Source image is visible.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.
Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.
Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Brightness: *Default:* 1, *Range:* 0 or greater.
Scales the brightness of all lights together.

Ambient Bright: *Default:* 0.2, *Range:* any.
The amount of ambient light included in the entire frame. This allows parts of the source where no light is falling to be visible.

Diffuse Bright: *Default:* 0.5, *Range:* 0.1 or greater.
Scales the diffuse light from all light sources.

Hilight Bright: *Default:* 0.8, *Range:* 0 or greater.
Scales the brightness of all specular highlights.

Hilight Size: *Default:* 0.5, *Range:* 0.1 or greater.
Adjusts the size of all specular highlights.

Light1 Parameters:

Light1 Enable: *Check-box*, *Default:* on.
Enables the first light source.

Light1 Dir: *X & Y*, *Default:* [-0.806 0.608], *Range:* any.
The x and y position of the first light source. This parameter can be adjusted using the Light1 Dir Widget.

Show Light1 Dir: *Check-box*, *Default:* on.
Turns on or off the screen user interface for adjusting the Light1 Dir parameter.

Light1 Z: *Default:* 0.5, *Range:* any.
The z position of the first light source.

Diffuse Bright 1: *Default:* 0.5, *Range:* 0.1 or greater.
Scales the diffuse brightness for Light 1 only.

Hilight Bright 1: *Default:* 1, *Range:* 0 or greater.
Scales the brightness of the specular highlights for Light 1 only.

Hilight Size 1: *Default:* 1, *Range:* 0 or greater.
Adjusts the size of the specular highlights for Light 1 only.

Light1 Color: *Default rgb:* [1 1 1].
The color of the first light source.

Light2 Parameters:

Light2 Enable: *Check-box*, *Default:* off.

Enables the second light source.

Light2 Dir: *X & Y*, *Default:* [0.806 0.608], *Range:* any.

The x and y position of the second light source. This parameter can be adjusted using the Light2 Dir Widget.

Show Light2 Dir: *Check-box*, *Default:* off.

Turns on or off the screen user interface for adjusting the Light2 Dir parameter.

Light2 Z: *Default:* 0.5, *Range:* any.

The z position of the second light source.

Diffuse Bright 2: *Default:* 0.5, *Range:* 0.1 or greater.

Scales the diffuse brightness for Light 2 only.

Hilight Bright 2: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the specular highlights for Light 2 only.

Hilight Size 2: *Default:* 1, *Range:* 0 or greater.

Adjusts the size of the specular highlights for Light 2 only.

Light2 Color: *Default rgb:* [1 1 1].

The color of the second light source.

Light3 Parameters:

Light3 Enable: *Check-box*, *Default:* off.

Enables the third light source.

Light3 Dir: *X & Y*, *Default:* [-0.806 -0.627], *Range:* any.

The x and y position of the third light source. This parameter can be adjusted using the Light3 Dir Widget.

Show Light3 Dir: *Check-box*, *Default:* off.

Turns on or off the screen user interface for adjusting the Light3 Dir parameter.

Light3 Z: *Default:* 0.5, *Range:* any.

The z position of the third light source.

Diffuse Bright 3: *Default:* 0.5, *Range:* 0.1 or greater.

Scales the diffuse brightness for Light 3 only.

Hilight Bright 3: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the specular highlights for Light 3 only.

Hilight Size 3: *Default:* 1, *Range:* 0 or greater.

Adjusts the size of the specular highlights for Light 3 only.

Light3 Color: *Default rgb:* [1 1 1].

The color of the third light source.

Light4 Parameters:

Light4 Enable: *Check-box*, *Default:* off.

Enables the fourth light source.

Light4 Dir: *X & Y*, *Default:* [0.806 –0.627], *Range:* any.

The x and y position of the fourth light source. This parameter can be adjusted using the Light4 Dir Widget.

Show Light4 Dir: *Check-box*, *Default:* off.

Turns on or off the screen user interface for adjusting the Light4 Dir parameter.

Light4 Z: *Default:* 0.5, *Range:* any.

The z position of the fourth light source.

Diffuse Bright 4: *Default:* 0.5, *Range:* 0.1 or greater.

Scales the diffuse brightness for Light 4 only.

Hilight Bright 4: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the specular highlights for Light 4 only.

Hilight Size 4: *Default:* 1, *Range:* 0 or greater.

Adjusts the size of the specular highlights for Light 4 only.

Light4 Color: *Default rgb:* [1 1 1].

The color of the fourth light source.

Normal Offset: *Default:* -0.5, *Range:* any.

Added to the values in the Normal input.

Normal X <-: *Popup menu*, *Default:* Red.

Determines which color channel is used for the horizontal component of the normal vectors.

Red: Use Red channel.

Green: Use Green channel.

Blue: Use Blue channel.

Normal Y <-: *Popup menu*, *Default:* Green.

Determines which color channel is used for the vertical component of the normal vectors.

Red: Use Red channel.

Green: Use Green channel.

Blue: Use Blue channel.

Normal Z <-: *Popup menu*, *Default:* Blue.

Determines which color channel is used for the depth component of the normal vectors.

Red: Use Red channel.

Green: Use Green channel.

Blue: Use Blue channel.

Invert X: *Check-box*, *Default:* off.

If checked, inverts the horizontal component of the normal vectors.

Invert Y: *Check-box*, *Default:* off.

If checked, inverts the vertical component of the normal vectors.

Invert Z: *Check-box*, *Default:* off.

If checked, inverts the depth component of the normal vectors.

Blur Mask: *Default:* 0, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default: off*.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu*, *Default: Luma*.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

See Also:

[Emboss](#)

[Sapphire Plug-ins](#)

[EmbossShiny](#)

[Introduction](#)

[SpotLight](#)

S_LightLeak

Renders abstract patterns of color that simulate light leaking through gaps in a camera body. The light leak consists of three distinct elements which can be adjusted individually.

In the Sapphire Lighting effects submenu.



Inputs:

Background: *Optional.* The clip to use as background.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Scale Lights: *Default: 1, Range: 0 or greater.*
Scales the light leak by this value. Increase for a brighter result.

Offset Dark: *Default: 0, Range: -8 to 2.*
Adds this gray value to the darker regions of the result. This can be negative to increase contrast.

Color: *Default rgb: [1 1 1].*
The overall color of the light leak.

Hue Shift: *Default: 0, Range: any.*
Shifts the hue of the light leak, in revolutions from red to green to blue to red.

Saturation: *Default: 1, Range: -2 to 8.*
Scales the color saturation of the light leak. Increase for more intense colors. Set to 0 for a monochrome light leak.

Gamma: *Default: 1, Range: 0.1 or greater.*
Increasing gamma brightens the light leak, and especially boosts the darker areas.

Speed: *Default: 1, Range: 0 or greater.*
Scales the speed of all elements.

Shift: *X & Y, Default: [0 0], Range: any.*
Shifts the position of all elements.

Random Motion: *Default: 0, Range: 0 or greater.*
The amount of random motion of each element.

Random Frequency: *Default: 4, Range: 0 or greater.*
The frequency of random motion. Increase for faster, more frenetic motion. Decrease for slower, smoother motion.

Seed: *Default: 0.123, Range: 0 or greater.*
Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Flicker Amp: *Default: 0.2, Range: 0 or greater.*
The amount of random flickering in the light leak brightness.

Flicker Freq: *Default: 4, Range: 0 or greater.*
The frequency of the random flickering. Increase for more variation between frames. Decrease for slower flickering.

Bg Brightness: *Default: 1, Range: 0 or greater.*
Scales the brightness of the background before combining with the lights. If 0, the result will contain only the light image over black.

Combine: *Popup menu, Default: Screen.*
Determines how the light leak is combined with the background image.

Screen: the light leak is blended with the background using a function that helps prevent overly bright

results

Add: the light leak is added to the background.

Leaks Only: the light leak is shown on its own, with no background

Affect Alpha: *Default: 0, Range: 0 or greater.*

If this value is positive the output Alpha channel will include some opacity from the light leak. The maximum of the red, green, and blue light leak brightness is scaled by this value and combined with the Background Alpha at each pixel.

Glow Brightness: *Default: 1, Range: 0 or greater.*

Scales the brightness of the glow which is applied to the entire image after combining the light leak with the background.

Glow Width: *Default: 0.4, Range: 0 or greater.*

The width of the glow. Increase for a softer glow and decrease for a sharper, brighter glow.

Glow Threshold: *Default: 0.8, Range: 0 or greater.*

Parts of the image that are brighter than this value get glowed.

Element1 Parameters:

Element1 Enable: *Check-box, Default: on.*

Turns this element on and off.

Size1: *Default: 2, Range: 0 or greater.*

Adjusts the size of this element. This parameter can be adjusted using the Size1 Widget.

Rel Height1: *Default: 2, Range: 0 or greater.*

Scales the vertical dimension of this element, making it elliptical instead of circular.

Brightness1: *Default: 0.2, Range: 0 or greater.*

Scales the brightness of this element.

Speed1: *Default: 1, Range: 0 or greater.*

The speed at which this element moves across the screen. Set to zero to keep the element stationary at its center position. A faster speed means the element will start and end farther from its center.

Angle1: *Default: 175, Range: any.*

The angle of this element's path across the screen. The element moves along a line at this angle, passing through the center position at the midpoint of the clip. This parameter can be adjusted using the Angle1 Widget.

Center1: *X & Y, Default: [0 0], Range: any.*

The center point of this element's motion. The element will reach this location half way through the clip. This parameter can be adjusted using the Center1 Widget.

Outer Color1: *Default rgb: [1 1 0.15].*

The color at the outer edge of this element.

Mid Color1: *Default rgb: [1 0.7 0.3].*

The color at the midpoint of this element, between the Outer and Center Colors. The exact location depends on the Midpoint parameter.

Center Color1: *Default rgb: [1 0.1 0].*

The color at the center of this element.

Midpoint1: *Default: 0.5, Range: 0 to 1.*

Moves the location of the Mid Color between the center and outer edge of the element. Set to 0 to place the Mid Color at the center, or 1 to place it at the edge.

Softness1: *Default: 0.4, Range: 0 or greater.*

Blurs the color gradient of this element. Increase for a smoother gradient, or decrease for sharper bands of color.

Noise Amp1: *Default: 2, Range: 0 or greater.*

The amount of noise applied to this element.

Noise Freq1: *Default: 1.5, Range: 0 or greater.*

The frequency of the noise applied to this element. Increase for smaller blobs, or decrease for larger ones.

Noise Freq Rel Y1: *Default: 1, Range: 0 or greater.*

The relative vertical frequency of the noise pattern. Increase to flatten the noise, or decrease to stretch it out vertically.

Noise Detail1: *Default: 0, Range: 0 to 1.*

Controls the amount of fine detail in the noise simulation. Decrease to get smoother noise, increase for a more crunchy or grainy look.

Noise Boil Speed1: *Default: 1, Range: 0 or greater.*

Sets the speed of noise boiling or evolving as the element moves. Set to 0 for a static noise pattern.

Element2 Parameters:

Element2 Enable: *Check-box, Default: off.*

Turns this element on and off.

Size2: *Default: 2, Range: 0 or greater.*

Adjusts the size of this element. This parameter can be adjusted using the Size2 Widget.

Rel Height2: *Default: 2, Range: 0 or greater.*

Scales the vertical dimension of this element, making it elliptical instead of circular.

Brightness2: *Default: 1, Range: 0 or greater.*

Scales the brightness of this element.

Speed2: *Default: 1, Range: 0 or greater.*

The speed at which this element moves across the screen. Set to zero to keep the element stationary at its center position. A faster speed means the element will start and end farther from its center.

Angle2: *Default: 175, Range: any.*

The angle of this element's path across the screen. The element moves along a line at this angle, passing through the center position at the midpoint of the clip. This parameter can be adjusted using the Angle2 Widget.

Center2: *X & Y, Default: [-0.5 -0.5], Range: any.*

The center point of this element's motion. The element will reach this location half way through the clip. This parameter can be adjusted using the Center2 Widget.

Outer Color2: *Default rgb: [0.25 0.15 0.1].*

The color at the outer edge of this element.

Mid Color2: *Default rgb: [0.7 0.12 0.22].*

The color at the midpoint of this element, between the Outer and Center Colors. The exact location depends on the Midpoint parameter.

Center Color2: *Default rgb: [1 1 1].*

The color at the center of this element.

Midpoint2: *Default: 0.5, Range: 0 to 1.*

Moves the location of the Mid Color between the center and outer edge of the element. Set to 0 to place the Mid

Color at the center, or 1 to place it at the edge.

Softness2: *Default: 0.4, Range: 0 or greater.*

Blurs the color gradient of this element. Increase for a smoother gradient, or decrease for sharper bands of color.

Noise Amp2: *Default: 1, Range: 0 or greater.*

The amount of noise applied to this element.

Noise Freq2: *Default: 3, Range: 0 or greater.*

The frequency of the noise applied to this element. Increase for smaller blobs, or decrease for larger ones.

Noise Freq Rel Y2: *Default: 1, Range: 0 or greater.*

The relative vertical frequency of the noise pattern. Increase to flatten the noise, or decrease to stretch it out vertically.

Noise Detail2: *Default: 0, Range: 0 to 1.*

Controls the amount of fine detail in the noise simulation. Decrease to get smoother noise, increase for a more crunchy or grainy look.

Noise Boil Speed2: *Default: 0, Range: 0 or greater.*

Sets the speed of noise boiling or evolving as the element moves. Set to 0 for a static noise pattern.

Element3 Parameters:

Element3 Enable: *Check-box, Default: off.*

Turns this element on and off.

Size3: *Default: 0.25, Range: 0 or greater.*

Adjusts the size of this element. This parameter can be adjusted using the Size3 Widget.

Rel Height3: *Default: 1, Range: 0 or greater.*

Scales the vertical dimension of this element, making it elliptical instead of circular.

Brightness3: *Default: 1, Range: 0 or greater.*

Scales the brightness of this element.

Speed3: *Default: 1, Range: 0 or greater.*

The speed at which this element moves across the screen. Set to zero to keep the element stationary at its center position. A faster speed means the element will start and end farther from its center.

Angle3: *Default: 175, Range: any.*

The angle of this element's path across the screen. The element moves along a line at this angle, passing through the center position at the midpoint of the clip. This parameter can be adjusted using the Angle3 Widget.

Center3: *X & Y, Default: [0.5 0.5], Range: any.*

The center point of this element's motion. The element will reach this location half way through the clip. This parameter can be adjusted using the Center3 Widget.

Outer Color3: *Default rgb: [0.2 0.2 0].*

The color at the outer edge of this element.

Mid Color3: *Default rgb: [0.55 0.4 0].*

The color at the midpoint of this element, between the Outer and Center Colors. The exact location depends on the Midpoint parameter.

Center Color3: *Default rgb: [1 0.7 0].*

The color at the center of this element.

Midpoint3: *Default: 0.5, Range: 0 to 1.*

Moves the location of the Mid Color between the center and outer edge of the element. Set to 0 to place the Mid Color at the center, or 1 to place it at the edge.

Softness3: *Default: 0.4, Range: 0 or greater.*

Blurs the color gradient of this element. Increase for a smoother gradient, or decrease for sharper bands of color.

Noise Amp3: *Default: 0.5, Range: 0 or greater.*

The amount of noise applied to this element.

Noise Freq3: *Default: 1, Range: 0 or greater.*

The frequency of the noise applied to this element. Increase for smaller blobs, or decrease for larger ones.

Noise Freq Rel Y3: *Default: 1, Range: 0 or greater.*

The relative vertical frequency of the noise pattern. Increase to flatten the noise, or decrease to stretch it out vertically.

Noise Detail3: *Default: 0, Range: 0 to 1.*

Controls the amount of fine detail in the noise simulation. Decrease to get smoother noise, increase for a more crunchy or grainy look.

Noise Boil Speed3: *Default: 0, Range: 0 or greater.*

Sets the speed of noise boiling or evolving as the element moves. Set to 0 for a static noise pattern.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[LensFlare](#)

[Glint](#)

[Glare](#)

[Sapphire](#)

[Plug-ins](#)

[Introduction](#)

S_Luna

Renders the Earth's Moon; you can adjust phase and colors, and add atmospheric effects.

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to use as background.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Effect: *Popup menu, Default: Luna.*

Selects how the moon's phase is chosen. You can adjust it directly in Luna mode, or select LunaDate mode to choose a date and time and the effect will use the proper phase for that date.

Luna: Select this mode to adjust the moon phase manually.

LunaDate: Select this mode to have the effect compute the phase from the given date and time.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Center: *X & Y*, *Default:* [-0.44 0.17], *Range:* any.

Center point of the moon. This parameter can be adjusted using the Center Widget.

Center Uses Mocha: *Check-box*, *Default:* off.

Controls whether the moon's center is controlled by the Center parameter or follows the Center tracked inside of Mocha.

Smooth Center Track: *Integer*, *Default:* 0, *Range:* 0 or greater.

Controls how many points to average when stabilizing the Mocha point track.

Size: *Default:* 0.3, *Range:* 0 or greater.

Size of the moon. This parameter can be adjusted using the Size Widget.

Lunar Phase: *Default:* 65, *Range:* any.

Phase of the moon, in degrees; 0 is new, 90 is first quarter, 180 is full, and 270 is last quarter. Only available in Luna mode.

Year: *Integer*, *Default:* 2.02e+03, *Range:* 1900 to 2295.

Year to use when computing the phase.

Month: *Integer*, *Default:* 3, *Range:* 1 to 12.

Month to use when computing the phase.

Day: *Integer*, *Default:* 16, *Range:* 1 to 31.

Day to use when computing the phase.

Hour: *Integer*, *Default:* 16, *Range:* 0 to 23.

Hour to use when computing the phase.

Minute: *Default:* 0, *Range:* any.

Minute to use when computing the phase.

GMT Offset: *Default:* -5, *Range:* -12 to 12.

GMT offset to use when computing the phase. -5 is Eastern Standard Time, -8 is Pacific Standard Time.

Rotation: *Default:* 30, *Range:* any.

Rotation of the moon image, in degrees.

Bumpiness: *Default:* 0.3, *Range:* 0 to 1.

The moon has craters that catch and reflect light. This parameter can be used to adjust how bumpy those craters look. 0 is completely smooth, 1 is very rough. 0.3 is about physically realistic on a clear night.

Contrast: *Default: 1, Range: 0 to 1.*

Adjusts the contrast of the moon. Values toward 0 brighten the dark areas.

Brightness: *Default: 1, Range: 0 or greater.*

Scales the brightness of the result.

Color: *Default rgb: [1 1 1].*

Scales the color of the result. For example, if it is yellow [1 1 0], the blue of the result will be 0.

Earth Glow: *Default rgb: [0 0 0].*

Adds earth-glow, which you often see near sunset when the moon is crescent. The sun's light reflects off the earth, and some of that reflected light illuminates even the dark part of the moon. This gives an especially nice look during a lunar eclipse.

Gamma: *Default: 1, Range: 0.1 or greater.*

Sets the overall gamma of the moon image. Good for reducing contrast in a different way from the contrast parameter.

Sky Color: *Default rgb: [0 0 0].*

If you want to make a complete sky image with the moon and a colored sky, you can put the moon in a blue sky by setting Sky Color to blue. This will also tint the moon toward the sky color.

Glow Brightness: *Default: 0.5, Range: 0 or greater.*

Adds some glow to the moon. You can see this often in real life when there's some haze or light clouds.

Threshold: *Default: 0.01, Range: 0 or greater.*

Threshold for the glow; only parts of the moon brighter than this threshold will glow.

Glow Size: *Default: 0.75, Range: 0 or greater.*

Size of the moon glow. Larger creates a more diffuse glow.

Halo Brightness: *Default: 0, Range: 0 or greater.*

With certain kinds of high, diffuse clouds, you can sometimes see a subtle rainbow halo around the moon. Increase this parameter to see that halo.

Halo Rel Size: *Default: 1.5, Range: 0 or greater.*

Sets the size of the halo, relative to the moon. 1.0 would be the same size as the moon, 2.0 is twice as large.

Color Fringing: *Default: 0.05, Range: 0 to 1.*

Increases or decreases the amount of color fringing in the moon halo; fringing separates the colors into a rainbow.

Inner Softness: *Default: 0.15, Range: 0 or greater.*

Sets the softness or spread of the inside of the halo, closest to the moon.

Outer Softness: *Default: 0.3, Range: 0 or greater.*

Sets the softness or spread of the outside of the halo, farthest from the moon.

Halo Saturation: *Default: 0.5, Range: 0 or greater.*

Sets the overall saturation of the moon halo. Increase for a more graphic look.

Halo Tint: *Default rgb: [1 1 1].*

Tints the halo toward this color.

Atmosphere Amp: *Default: 0.3, Range: 0 or greater.*

The Atmosphere params add a little noise to the glow and halo, for a more realistic look. Atmosphere Amp controls the amount of atmospheric noise.

Atmosphere Freq: *Default: 2, Range: 0.1 or greater.*

Controls the frequency of the atmospheric noise.

Atmosphere Turbulence: *Default:* 0.6, *Range:* 0 to 1.

Controls the turbulence (amount of detail) in the atmospheric noise.

Atmosphere Seed: *Default:* 0.123, *Range:* 0 or greater.

Sets the seed of the atmospheric noise.

Atmosphere Speed: *Default:* 1, *Range:* any.

Controls how fast the atmospheric noise changes over time.

Combine: *Popup menu, Default: Overlay.*

Combine allows you to combine the moon image with the background in various ways.

Moon Only: Ignore the background; show the moon (and its glow and halo) only.

Overlay: Overlay (composite) the moon over the background.

Add: Add the moon to the background.

Screen: Screen the moon with the background. Nice for daytime shots.

Max: Where the moon is brighter than the background, show it. This can be useful for daytime shots with clouds. Where the clouds are brighter than the moon, they'll obscure it.

Transparent Shadow: Composite only the lit part of the moon over the background, leaving the dark part transparent. This is not physically realistic, since the dark part of the moon obscures the sky and stars behind it, but it can be used for graphic effect.

Bg Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the background before combining with the moon. If 0, the result will contain only the moon image over black.

Affect Alpha: *Default:* 0, *Range:* 0 or greater.

If this value is positive, the output Alpha channel will include some opacity from the moon's halo and glow.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Size: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Center parameter.

Show Center: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Center parameter.

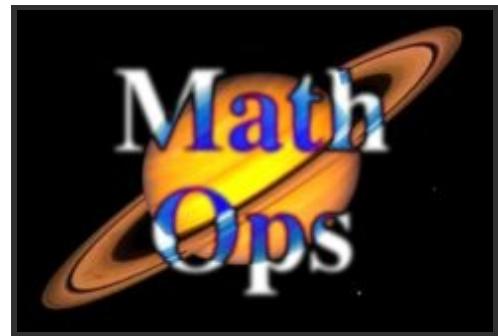
See Also:

[Sapphire Plug-ins Introduction](#)

S_MathOps

Combines two clips using one of a variety of mathematical operations. The colors of each input can also be adjusted using the lights, darks, and saturation parameters.

In the Sapphire Composite effects submenu.



Inputs:

SourceA: The first input clip to be processed.

SourceB: The second input clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Operation: *Popup menu, Default: Add.*

Determines which mathematical operation is applied to combine the pixel colors of the two source inputs.

Add: $A + B$.

Subtract: $A - B$.

Multiply: $A * B$. This can be used as an 'intersection' operation on matte images. The result only contains white where both inputs are white.

Divide: A / B . This can be used to 'un-premultiply' an image by using its matte as the second input.

Screen: $A + B - AB$. This can be useful in combining the bright areas of two clips. It can also be used as a 'union' operation on matte images. The result is white where either of the input images is white.

Average: $(A + B) / 2$.

Overlay: combines A over B with an overlay function.

Minimum: the smallest value for each color channel of each pixel. This can also be used as an 'intersection' operation with slightly different results than Multiply.

Maximum: the largest value for each color channel of each pixel. This can also be used as a 'union' operation with slightly different results than Screen.

Difference: similar to Subtract but the absolute value of the result is used, which tends to give more resulting colors in bounds. This can be used to select the regions of two matte images where one or the other is white, but not both.

Xor: performs an 'exclusive-or' operation on the colors of the source clips. This can also be used to select the regions of two matte images where one or the other is white, but not both, with slightly different results than Difference.

Xor Bits: performs a bitwise exclusive-or on the colors of the source clips. This can produce some interesting contour effects although the results are often difficult to predict.

And Bits: performs a bitwise logical and on the colors of the source clips. Similar to XorBits but tends to produce darker results.

Or Bits: performs a bitwise logical or on the colors of the source clips. Similar to XorBits but tends to produce brighter results.

Mod: gives the remainder after dividing the colors of the first source clip by the second. Set the A Scale parameter to a high value for some unusual pixel banding effects.

Round: the colors of the first source clip are rounded using the values of the second input as the step size.

Bounce: similar to Mod but the result contains fewer jagged edges. Set the A Scale parameter to a high value for some striping effects.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Swap Inputs: *Check-box*, *Default:* off.

If enabled, effectively swaps the A and B Source inputs, and can be helpful for non-commutative operations like subtract. Note that this also causes parameters labeled 'A' to affect the 'B' input instead, and vice versa.

A Lights: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of SourceA before performing the operation.

A Darks: *Default:* 0, *Range:* any.

Offsets the darker regions of the first input before performing the effect. This can be negative to increase contrast.

A Saturation: *Default:* 1, *Range:* 0 or greater.

Adjusts the color intensity of SourceA before performing the operation. 0.0 makes it monochromatic, 1.0 has no

effect.

B Lights: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of SourceB before performing the operation.

B Darks: *Default:* 0, *Range:* any.

Offsets the darker regions of the second input before performing the effect. This can be negative to increase contrast.

B Saturation: *Default:* 1, *Range:* 0 or greater.

Adjusts the color intensity of SourceB before performing the operation. 0.0 makes it monochromatic, 1.0 has no effect.

Dest Lights: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the result after performing the operation.

Dest Darks: *Default:* 0, *Range:* any.

Offsets the darker regions of the result after performing the effect. This can be negative to increase contrast.

Dest Saturation: *Default:* 1, *Range:* 0 or greater.

Scales the color intensity of the result after performing the operation. 0.0 makes it monochromatic, 1.0 has no effect.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[Layer](#)

[Sapphire Plug-ins Introduction](#)

S_MatteOps

Grows, shrinks, or adds noise to the alpha channel of the Source input. This can be useful for removing blue or green spill from a chroma key.

In the Sapphire Composite effects submenu.



Inputs:

Source: The input clip containing the matte to process. The matte is assumed to have anti-aliased but hard edges, because very soft edges might not be affected in a useful way.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Shrink- Grow+: *Default: 0, Range: any.*

Amount to grow the matte edges in approximate pixels, or shrink if negative.

Edge Softness: *Default: 1, Range: 0.01 or greater.*

The resulting softness of the edges.

Post Blur: *Default: 0, Range: 0 or greater.*

If positive, the result is blurred by this amount. This is an alternative method for softening the edges.

Filter: *Popup menu, Default: Triangle.*

The type of blur filter to use for the shrink or grow process.

Box: uses a rectangular shaped filter.

Triangle: smoother, uses a pyramid shaped filter.

Gauss: smoothest, uses a gaussian shaped filter.

Matte Use: *Popup menu, Default: Alpha.*

Determines how the Matte input channels are used to make a monochrome matte.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Invert Matte: *Check-box, Default: off.*

If enabled, the black and white of the output matte are inverted.

Soft Borders: *Check-box, Default: off.*

If enabled, transparent borders are added to the input image before processing. This allows the result to include soft edges beyond the original image size. When off, the effect only occurs within the frame and the result will retain an edge at the borders.

Output: *Popup menu, Default: RGBA.*

Selects the format of the output.

Matte: the processed Matte is output on all channels.

RGBA: the Alpha output channel receives the processed Matte, and the RGB channels are passed through from the input unchanged.

RGBA Premult: the Alpha output channel receives the processed Matte, and the RGB channels receive the input multiplied by the new Matte. This option can be appropriate if you are shrinking a matte and need an RGBA result for pre-multiplied compositing.

Noise Amplitude: *Default: 0, Range: 0 or greater.*

The amount of noise texture to add to the edges.

Noise Width: *Default: 0.0224, Range: 0 or greater.*

The width of the area at the matte edges where the noise is included. This has no effect unless Noise Amplitude is positive

Frequency: *Default: 100, Range: 0.1 or greater.*

The frequency of the noise. Increase for finer grain noise, decrease for coarser noise. This has no effect unless Noise Amplitude is positive.

Frequency Rel X: *Default: 1, Range: 0.01 or greater.*

The relative horizontal frequency of the noise. Increase to stretch the noise vertically, decrease to stretch it horizontally. This has no effect unless Noise Amplitude is positive.

Octaves: *Integer, Default: 1, Range: 1 to 10.*

The number of summed layers of noise. Each octave is twice the frequency and half the magnitude of the previous. This has no effect unless Noise Amplitude is positive.

Seed: *Default: 0.23, Range: 0 or greater.*

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Noise Shift: *X & Y, Default: [0 0], Range: any.*

The horizontal and vertical translation of the noise texture.

Jitter Frames: *Integer, Default: 1, Range: 0 or greater.*

If this is 0, the noise texture will remain the same for every frame processed. If it is 1, a new noise texture is used for each frame. If it is 2, a new noise texture is used for every other frame, and so on.

See Also:

[MatteOpsComp](#)

[Distort](#)

[Sapphire](#)

[WarpBubble](#)

[Plug-ins](#)

[Diffuse](#)

[Introduction](#)

S_MatteOpsComp

Grows, shrinks, or adds noise to the edges of the Foreground alpha channel, then uses that result to composite the Foreground over the Background. This can be useful for removing blue or green spill from a chroma key.

In the Sapphire Composite effects submenu.



Inputs:

Foreground: The clip to use as foreground.

Background: The clip to use as background.

Matte: *Optional.* The matte input clip to process. If this input is not provided, the Foreground input is used instead. The Matte is assumed to have anti-aliased but hard edges, because very soft edges might not be affected in a useful way. This input can be affected by the Invert Matte or Matte Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Shrink- Grow+: *Default: 0, Range: any.*

Amount to grow the matte edges in approximate pixels, or shrink if negative.

Edge Softness: *Default: 1, Range: 0.01 or greater.*

The resulting softness of the edges.

Post Blur: *Default: 0, Range: 0 or greater.*

If positive, the result is blurred by this amount. This is an alternative method for softening the edges.

Filter: *Popup menu, Default: Triangle.*

The type of blur filter to use for the shrink or grow process.

Box: uses a rectangular shaped filter.

Triangle: smoother, uses a pyramid shaped filter.

Gauss: smoothest, uses a gaussian shaped filter.

Matte Use: *Popup menu, Default: Alpha.*

Determines how the Matte input channels are used to make a monochrome matte.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Invert Matte: *Check-box, Default: off.*

If enabled, the black and white of the output matte are inverted.

Soft Borders: *Check-box, Default: off.*

If enabled, transparent borders are added to the input image before processing. This allows the result to include soft edges beyond the original image size. When off, the effect only occurs within the frame and the result will retain an edge at the borders.

Noise Amplitude: *Default: 0, Range: 0 or greater.*

The amount of noise texture to add to the edges.

Noise Width: *Default: 0.0224, Range: 0 or greater.*

The width of the area at the matte edges where the noise is included. This has no effect unless Noise Amplitude is positive

Frequency: *Default: 100, Range: 0.1 or greater.*

The frequency of the noise. Increase for finer grain noise, decrease for coarser noise. This has no effect unless Noise Amplitude is positive.

Frequency Rel X: *Default: 1, Range: 0.01 or greater.*

The relative horizontal frequency of the noise. Increase to stretch the noise vertically, decrease to stretch it horizontally. This has no effect unless Noise Amplitude is positive.

Octaves: *Integer*, *Default:* 1, *Range:* 1 to 10.

The number of summed layers of noise. Each octave is twice the frequency and half the magnitude of the previous. This has no effect unless Noise Amplitude is positive.

Seed: *Default:* 0.23, *Range:* 0 or greater.

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Noise Shift: *X & Y*, *Default:* [0 0], *Range:* any.

The horizontal and vertical translation of the noise texture.

Jitter Frames: *Integer*, *Default:* 1, *Range:* 0 or greater.

If this is 0, the noise texture will remain the same for every frame processed. If it is 1, a new noise texture is used for each frame. If it is 2, a new noise texture is used for every other frame, and so on.

See Also:

[MatteOps](#)

[Distort](#)

[Sapphire](#)

[WarpBubble](#)

[Plug-ins](#)

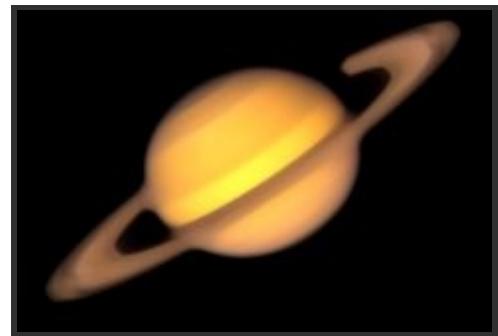
[Diffuse](#)

[Introduction](#)

S_Median

Applies a median filter to the source image. Median filters are useful for cleaning up isolated spots and noise.

In the Sapphire Blur+Sharpen effects submenu.



Inputs:

Source: The clip to be filtered.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Effect: *Popup menu, Default: Median.*

Selects whether to apply the same median filter to all channels, or a separate median filter per channel.

Median: Apply the same median filter to each channel.

MedianChannels: Apply different median channels to the r, g, and b channels.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Size: *Default: 1, Range: 0.1 to 40.*

Size of the median filter.

Subpixel: *Check-box, Default: off.*

Enables subpixel-width filtering. Use this for smoother animation of the Size parameter.

Size Rel X: *Default: 1, Range: 0.1 to 5.*

The relative horizontal size of the filter.

Size Rel Y: *Default: 1, Range: 0.1 to 5.*

The relative vertical size of the filter.

Red Rel Size X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the filter in the red channel.

Red Rel Size Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the filter in the red channel.

Green Rel Size X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the filter in the green channel.

Green Rel Size Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the filter in the green channel.

Blue Rel Size X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the filter in the blue channel.

Blue Rel Size Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the filter in the blue channel.

Alpha Rel Size X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the filter in the alpha channel.

Alpha Rel Size Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the filter in the alpha channel.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

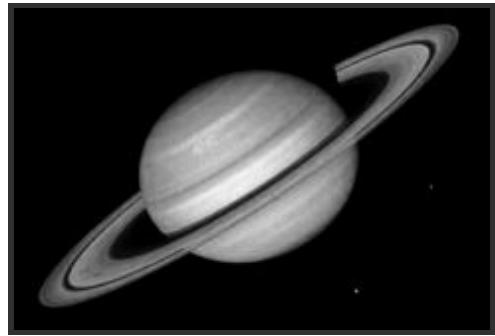
If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[Sapphire Plug-ins Introduction](#)

S_Monochrome

Generates a monochrome version of the source clip using adjustable weights for the red, green, and blue channels. This can simulate the use of a color filter applied to the lens of a black and white camera. For example, use more red weight to darken blue sky areas of the input. The weights are scaled so they sum to 1 before being used to reduce overall brightness changes when they are adjusted.



In the Sapphire Adjust effects submenu.

Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Weight Red: *Default: 0.3, Range: -1 to 1.*

The relative contribution of the source's red channel. To simulate a black and white exposure using a red filter, set this to 1 and set the green and blue weights to 0.

Weight Green: *Default: 0.5, Range: -1 to 1.*

The relative contribution of the source's green channel.

Weight Blue: *Default: 0.2, Range: -1 to 1.*

The relative contribution of the source's blue channel

Brightness: *Default: 1, Range: 0 or greater.*

Scales the brightness of the result.

Mix With Source: *Default: 0, Range: 0 to 1.*

Interpolates between the result (0) and the original source (1).

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[HueSatBright](#)

[Sapphire](#)

[ClampChroma](#)

[Plug-ins](#)

[PseudoColor](#)

[Introduction](#)

[DuoTone](#)

[TriTone](#)

[QuadTone](#)

[Tint](#)

[Threshold](#)

[Hotspots](#)

[Gamma](#)

[Solarize](#)

ChannelSwitcher

ShowBadColors

Invert

S_Mosaic

Generates a pixelated version of the source clip. Adjust the size and shape of the blocks using the Pixel Frequency and Pixel Rel Height parameters. Increase the Smooth Colors parameter to cause the colors of nearby pixel blocks to be more consistent, and less flickery over time.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* If provided, the effect is applied only at Source areas specified by this input. For gray values in the mask, the pixel blocks are mixed with the original source such that the blocks fade but remain whole. This input can be affected using the Blur Mask, Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Pixel Frequency: *Default: 40, Range: 1 or greater.*

The frequency of the pixel blocks. Increase for more numerous, smaller pixels.

Pixel Rel Height: *Default: 1, Range: 0.01 or greater.*

The relative height of the pixel blocks. Increase for taller blocks, decrease for wider ones.

Pixel Shift: *X & Y, Default: [0 0], Range: any.*

The translation of the pixel pattern.

Smooth Colors: *Default: 0, Range: 0 or greater.*

Blurs the source before pixelating. Increase to cause the colors of nearby pixel blocks to be more consistent, and less flickery over time.

Mix With Source: *Default: 0, Range: 0 to 1.*

Interpolates between the result (0) and the original source (1).

Blur Mask: *Default: 0, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Crop Input Parameters: *Default: 0, Range: 0 or greater.*

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

See Also:

[AutoPaint](#)

[Sapphire Plug-ins](#)

[Sketch](#)

[Introduction](#)

[HalfTone](#)

[HalfToneColor](#)

[Etching](#)

ScanLines

FlysEyeHex

JpegDamage

S_MotionDetect

Shows areas of motion in a clip. For each frame, finds the difference between the current frame and a previous frame.

In the Sapphire Time effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Delay Frames: *Integer, Default: 1, Range: any.*

The number of frames back to get the previous frame which is compared to the current frame.

Brightness: *Default: 1, Range: 0 or greater.*

Scales the brightness of the motion image.

Offset Dark: *Default: 0, Range: -8 to 2.*

Adds this gray value to the darker regions of the motion image. This can be negative to increase contrast.

Saturation: *Default: 1, Range: -2 to 10.*

Scales the color saturation of the motion image. Increase for more intense colors. Set to 0 for monochrome.

Motion: *Popup menu, Default: All.*

Selects between different motion types to detect.

All: shows all motion, both increasing and decreasing brightness levels.

Brighter: shows only motion in which the brightness is increasing, for example the leading edge of an object moving over a darker background.

Darker: shows only motion in which the brightness is decreasing, for example the trailing edge of an object moving over a darker background.

Combine: *Popup menu, Default: Motion Only.*

Determines how the motion image is combined with the original source.

Motion Only: gives the motion alone.

Mult: the motion is multiplied by the source.

Add: the motion is added to the source.

Screen: the motion is blended with the source using a screen operation.

Difference: the result is the difference between the motion and source.

Overlay: combines the motion and source using an overlay function.

Subtract: subtracts the motion image from the source darkening those areas.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[GetFrame](#)
[TimeWarpRGB](#)
[TimeSlice](#)
[FreezeFrame](#)
[JitterFrames](#)
[RandomEdits](#)
[ReverseEdits](#)
[ReverseClip](#)

[Sapphire Plug-ins](#)
[Introduction](#)

S_MuzzleFlash

Simulates the flash and smoke that is generated when a gun is fired. The flash from several types of gun can be simulated. All guns have a primary flash, and guns with suppressors may have secondary flashes. The gun may easily be fired repeatedly. Note: All time units in this effect are in frames.

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to use as background.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Location: *X & Y*, *Default:* [0 0], *Range:* any.
The position (on the image) of the end of the gun barrel. This parameter can be adjusted using the MuzzleFlash Widget.

Location Uses Mocha: *Check-box*, *Default:* off.
Controls whether the location is controlled by the Location parameter or follows the Location tracked inside of Mocha.

Smooth Location Track: *Integer*, *Default:* 0, *Range:* 0 or greater.
Controls how many points to average when stabilizing the Mocha point track.

Elevation: *Default:* 0, *Range:* -360 to 360.
The angle of the gun barrel in the vertical plane relative to horizontal. This parameter can be adjusted using the MuzzleFlash Widget.

Rotation: *Default:* 0, *Range:* -360 to 360.
The angle of the gun barrel in the horizontal plane relative to due east. This parameter can be adjusted using the MuzzleFlash Widget.

Radius: *Default:* 0.2, *Range:* 0.05 or greater.
The overall size of the gun blast. This parameter can be adjusted using the MuzzleFlash Widget.

Brightness: *Default:* 1, *Range:* 0 or greater.
The overall brightness of the flash.

Shift Out: *Default:* 0, *Range:* 0 or greater.
The muzzle flash will be drawn this far from the end of the gun barrel.

Gun: *Popup menu*, *Default:* M16.
The type of gun being fired.

AK47: AK47 assault rifle.
Beretta: Beretta pistol.
Colt45: Colt 45 revolver.
M16: M16 assault rifle.
12Gauge: Shotgun.

Variant: *Popup menu*, *Default:* Two.
Variations on the muzzle flash pattern.

One: First variation.
Two: Second variation.
Three: Third variation.
Random: Randomly pick one of the variations each time a shot is fired.

Seed: *Default:* 0.123, *Range:* 0 or greater.
Random number seed. Many aspects of the muzzle flash appearance depend on the seed. To get a different result for a given set of control values, try changing this seed value.

Animate Seed: *Check-box*, *Default:* off.

Selecting this will subtly change the shape of each flash generated so that they differ from frame to frame.

Octaves: *Integer*, *Default:* 3, *Range:* 1 to 6.

Increasing this increases the detail in the smoke.

Blur: *Default:* 0.0015, *Range:* 0 or greater.

How much blur is to be applied to the muzzle flash.

Mid Density: *Default:* 0.4, *Range:* 0.01 to 0.99.

How dense the muzzle flash should be at half its radius.

Mid Color: *Default rgb:* [1 0.792 0.6].

The color of the muzzle flash at half its radius.

Affect Alpha: *Default:* 0, *Range:* 0 or greater.

If this value is positive the output Alpha channel will include some opacity from the muzzle flash. The maximum of the red, green, and blue muzzle flash brightness is scaled by this value and combined with the Background Alpha at each pixel.

Combine: *Popup menu*, *Default:* Screen.

Determines how the muzzle flash is combined with the Background.

Screen: The muzzle flash is blended with the Background using a screen operation.

Add: The muzzle flash is added to the Background.

MuzzleFlash Only: Gives only the muzzle flash with no Background.

Primary Length: *Default:* 0.21, *Range:* 0 or greater.

Length of the primary flash. This is always aligned with the gun barrel and is present in all guns.

Primary Width: *Default:* 0.035, *Range:* 0 or greater.

Width of the primary flash.

Primary Brightness: *Default:* 0.6, *Range:* 0 or greater.

Overall density and brightness of the primary flash.

Primary Puff: *Default:* 0.8, *Range:* 0 or greater.

How puffy (as opposed to smooth) the primary flash should appear.

Primary Detail: *Default:* 0.5, *Range:* 0 or greater.

How much detail should appear in the primary flash specifically.

Secondary Number: *Integer*, *Default:* 6, *Range:* 0 to 10.

How many secondary flashes should be generated for those guns that have secondary flashes. These flashes appear from holes in the suppressor and only guns with suppressors have them. The flashes appear at an angle in the vertical plane with respect to the gun barrel direction. This control specifies how many holes there are in the suppressor. The holes are assumed to be evenly distributed around the circumference of the suppressor.

Secondary Angle: *Default:* 66, *Range:* 0 to 89.

The angle the secondary flashes make in the vertical plane with respect to the gun barrel.

Secondary Length: *Default:* 0.11, *Range:* 0 or greater.

The length of the secondary flashes.

Secondary Width: *Default:* 0.02, *Range:* 0 or greater.

The width of the secondary flashes.

Secondary Brightness: *Default:* 0.6, *Range:* 0 or greater.

The overall density and brightness of the secondary flashes.

Secondary Puff: *Default:* 0.7, *Range:* 0 or greater.

How puffy (as opposed to smooth) the secondary flashes should appear.

Secondary Detail: *Default:* 0.8, *Range:* 0 or greater.

How much detail should appear in the secondary flashes specifically.

Time Mode: *Popup menu, Default: Always.*

How to draw flashes as the frame number changes.

Always: Always draw the flash. Whether or not the flash appears must be controlled manually by key framing the controls.

Repeat: Fire the weapon at regular intervals between a start and end time. This is appropriate for automatic weapons, but can also be used to generate a single flash for a non-automatic weapon. The flash is drawn on a single frame.

Repeat+Fade: As Repeat, but the flash will fade out over a number of frames.

Start Time: *Integer, Default: 0, Range: 0 or greater.*

In Repeat and Repeat+Fade mode, this is the first frame on which a flash will appear.

Duration: *Integer, Default: 10, Range: 0 to 500.*

In Repeat and Repeat+Fade mode, this is the length of time after start time in which a flash may appear.

Gap Time: *Integer, Default: 3, Range: 1 to 50.*

In Repeat and Repeat+Fade mode, this is number of frames between flashes.

Fade Time: *Integer, Default: 1, Range: 1 to 5.*

In Repeat+Fade mode, this is time in frames over which the flash will fade away.

Glow Color: *Default rgb: [0.1 0.1 1].*

The color of an overall glow around the bright parts of the muzzle flash.

Glow Bright: *Default: 3, Range: 0 to 8.*

The brightness of an overall glow around the muzzle flash.

Glow Width: *Default: 1, Range: 0 to 2.*

The size of an overall glow around the muzzle flash.

Glow Threshold: *Default: 0.1, Range: 0.01 to 1.*

Muzzle flash intensities above this threshold will glow.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show MuzzleFlash: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Location parameter.

See Also:

[Sapphire Plug-ins Introduction](#)

S_NearestColor

Collects pixel colors from the input clip's frames that are closest to the given Match Color. This can create, for example, a background-only image from a clip with objects moving over a blue or green-screen background. It can also be used to accumulate the color of a moving object over a non-colored background. The collected colors are reinitialized whenever any non-consecutive frame is processed, either the first frame, reprocessing a given frame, or jumping to another frame. You must process multiple frames of a clip in a row to observe the effect, and clearing your image cache before rendering may sometimes be necessary.



In the Sapphire Time effects submenu.

Inputs:

Source: The clip to be processed.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Match Color: *Default* *rgb: [0 0 1].*

Pixel colors are kept that are 'nearest' to this color.

Chroma Weight: *Default: 1, Range: 0 or greater.*

The amount of influence hue has on the color matching. If this is 0, the pixels with the closest brightness to Match Color will be kept; if it is 2, the hue will have more influence and the brightness will have less.

See Also:

[Feedback](#)

[Trails](#)

[TrailsDiffuse](#)

[FeedbackDistort](#)

[TimeAverage](#)

[FeedbackBubble](#)

[WarpRepeat](#)

[WarpChroma](#)

[Sapphire](#)

[Plug-ins](#)

[Introduction](#)

S_NightSky

Generates a realistic starry night sky as viewed from a major city or a specified longitude and latitude. The stars are generated using a star database so that major constellations are visible where expected. Adjust magnitude limit to see more stars. Animate the Minute param to make the stars move realistically over time.

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to combine the nights with. If no background is given, the Source is also used as the Background.

Mask: *Optional.* Defines the area where stars should be rendered.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Effect: *Popup menu, Default: Night Sky.*

Controls how the location is determined.

Night Sky: location is set by adjusting Latitude, Longitude, and GMT Offset parameters.

Night Sky Locations: location is set by choosing a city from the Location list.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*
The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*
Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*
Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Latitude: *Default: 42.3, Range: -90 to 90.*
Latitude for specifying the location of the camera.

Longitude: *Default: -71.1, Range: -180 to 180.*
Longitude for specifying location of the camera.

GMT Offset: *Default: -5, Range: -12 to 12.*
Number of hours the specified time is offset from Coordinated Universal Time (UTC) or Greenwich Mean Time (GMT).

Location: *Popup menu, Default: Boston.*
Specifies which city to use to determine position on the Earth's surface. Available cities are scattered around each of the continents.

Anchorage: Anchorage, Alaska, United States, North America.

Astana: Astana, Kazakhstan, Asia.

Beijing: Beijing, China, Asia.

Boston: Boston, Massachusetts, United States, North America.

Cairo: Cairo, Egypt, Africa.

Caracas: Caracas, Venezuela, South America.

Chicago: Chicago, Illinois, United States, North America.

Hong Kong: Hong Kong, China, Asia.

Istanbul: Istanbul, Turkey, Asia/Europe.

Johannesburg: Johannesburg, South Africa, Africa.

Lagos: Lagos, Nigeria, Africa.

Lima: Lima, Peru, South America.

London: London, England, Europe.

Los Angeles: Los Angeles, California, United States, North America.

Madrid: Madrid, Spain, Europe.

Mexico City: Mexico City, Mexico, North America.

Moscow: Moscow, Russia, Europe.

Mumbai: Mumbai, India, Asia.

Nairobi: Nairobi, Kenya, Africa.

New York City: New York City, New York, United States, North America.

Nuuk: Nuuk, Greenland, North America.

Perth: Perth, Australia, Australia.

Punta Arenas: Punta Arenas, Chile, South America.

Rio de Janeiro: Rio de Janeiro, Brazil, South America.

Central Siberia: Siberia, Russia, Europe.

Stockholm: Stockholm, Sweden, Europe.

Sydney: Sydney, Australia, Australia.

Tokyo: Tokyo, Japan, Asia.

Vancouver: Vancouver, Canada, North America.

Yellowknife: Yellowknife, Canada, North America.

Warsaw: Warsaw, Poland, Europe.

Star Size: *Default:* 0.05, *Range:* 0 or greater.

The size of magnitude zero stars in pixels.

Star Brightness: *Default:* 1, *Range:* 0 or greater.

The overall brightness of the stars.

Altitude: *Default:* 30, *Range:* any.

Camera rotation up and down. An altitude of 0 points out towards the horizon. 90 degrees points straight up. 180 looks backwards (and upside down).

Azimuth: *Default:* -12, *Range:* any.

Camera rotation left and right. An azimuth of zero points North and positive values rotate East (right).

Field Of View: *Default:* 90, *Range:* 0.5 to 179.

Camera field of view.

Year: *Integer*, *Default:* 2.02e+03, *Range:* 1900 to 2295.

Which year to use to look up star locations.

Month: *Integer*, *Default:* 12, *Range:* 1 to 12.

Which month to use to look up star locations.

Day: *Integer*, *Default:* 1, *Range:* 1 to 31.

Which day of the month to use to look up star locations.

Hour: *Integer*, *Default:* 16, *Range:* 0 to 23.

The hour portion of the time to use to look up star locations. This should be specified in military (24 hour) format.

Minute: *Default:* 0, *Range:* any.

The minute portion of the time to use to look up star locations. Animate this parameter if you want to animate the stars over a period of real world time.

Magnitude Limit: *Default:* 6.5, *Range:* -2 to 10.

This controls which stars are currently visible based on their apparent magnitude.

Brighter stars have smaller magnitudes and dimmer stars have larger magnitudes, opposite from what you might think. The brightest stars in the sky have magnitude 0 or even -1. With the naked eye you can see stars up to magnitude 5 or 6, but a backyard telescope can see much fainter stars, up to 12 or more.

The larger Magnitude Limit, the more stars visible on screen. Increasing this parameter will add stars dimmer than the currently visible ones. Stars near the magnitude limit parameter value will fade so that this parameter can be animated.

Vary Size By Mag: *Default:* 0.2, *Range:* 0 to 1.

Make brighter stars larger and dimmer stars smaller so that brighter stars appear brighter and smaller stars appear dimmer. A value of zero will make all stars the same size while a value of 1 will approximate the apparent size differences naturally occurring in the sky. Magnitude 0 stars will remain the same size regardless of the value of this parameter. Negative magnitude stars (very bright stars) will grow with an increased parameter value. Positive magnitude stars (dim stars) will shrink with an increased parameter value.

Star Saturation: *Default:* 1, *Range:* 0 or greater.

Scales the color saturation of the star. Set to 0 for all white stars. Increase for more intense colors.

Glare: *Default: 0, Range: 0 or greater.*

The style of glare to apply. Custom glare types can also be made, or existing types modified, by editing the "s_glares.text" file.

Glare Brightness: *Default: 0.5, Range: 0 or greater.*

The overall brightness of the glares.

Glare Size: *Default: 0.12, Range: 0 or greater.*

Scales the size of the glares.

Rel Height: *Default: 1, Range: 0 or greater.*

Scales the vertical dimension of the glares, making them elliptical instead of circular.

Glare Color: *Default rgb: [1 1 1].*

Scales the color of the glares.

Glare Rotate: *Default: 0, Range: any.*

Rotates the ray elements of the glares, if any, in degrees.

Rays Length: *Default: 1, Range: 0 or greater.*

Adjusts the length of the rays without changing their thickness.

Glare Star Mag: *Default: 1.8, Range: -2 to 10.*

Specify which stars should be glared based on magnitude. Stars brighter than this (i.e. lower magnitude) will get glares.

Streak Length: *Default: 0.02, Range: 0 or greater.*

Length of streaks or rays radiating out from the brightest stars.

Streak Brightness: *Default: 0.1, Range: 0 or greater.*

Brightness of streaks radiating out from the brightest stars.

Streak Number: *Default: 8, Range: 0 to 8.*

Number of streaks radiating out from the brightest stars.

Streak Rotation: *Default: 0, Range: any.*

Rotation of the streaks emanating from the stars. A 0 value means that the first streak will be vertical from the star if Streak Symmetry is set to 1.

Streak Symmetry: *Default: 0.8, Range: 0 to 1.*

How symmetrically the rays are drawn. This affects both spacing and length.

Streak Star Mag: *Default: 3, Range: -2 to 10.*

Specify which stars should have streaks based on magnitude. Stars brighter than this (i.e. lower magnitude) will get streaks.

Twinkle Amount: *Default: 1, Range: 0 to 1.*

How dim stars should get when they twinkle. Twinkle is meant to simulate infrequent, intense changes in the brightness of a star (such as from a cloud passing in front of it).

Twinkle Frequency: *Default: 5, Range: 0.01 or greater.*

Frequency at which stars twinkle.

Twinkle Always: *Default: 0.3, Range: 0 to 1.*

What percentage of the time a star will twinkle on average. Set to 1 to twinkle constantly. Set to a smaller value to make the twinkle more intermittent.

Flicker Amount: *Default:* 0.3, *Range:* 0 to 1.

How dim stars should get when they flicker. Flicker is meant to simulate frequent, subtle changes in brightness, such as that caused by atmospheric distortion.

Flicker Frequency: *Default:* 30, *Range:* 0.01 or greater.

Frequency at which stars flicker.

Bg Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the background. This parameter only has an effect if the background input is provided, and is visible due to a partially transparent Source image or a reduced Source Opacity parameter value.

Combine: *Popup menu, Default: Screen.*

Determines how the stars are combined with the source image.

Stars Only: gives only the stars with no source.

Mult: the stars are multiplied by the source.

Add: the stars are added to the source.

Screen: the stars are blended with the source using a screen operation.

Difference: the result is the difference between the stars and source.

Overlay: the stars are combined with the source using an overlay function.

Blur Mask: *Default:* 0, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Type: *Popup menu, Default: Luma.*

This setting is ignored unless the Mask input is provided.

Luma: uses the luminance of the Mask input to scale the brightness of the lights.

Color: uses the RGB channels of the Mask input to scale the colors of the lights.

Alpha: uses the alpha channel of the Mask input to scale the brightness of the lights.

Seed: *Default:* 0.123, *Range:* 0 or greater.

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

See general info for [Motion Blur](#)

See Also:

[Aurora](#)

[Clouds](#)

[Zap](#)

[Glint](#)

[Glow](#)

[LensFlare](#)

[Convolve](#)

[Sapphire](#)

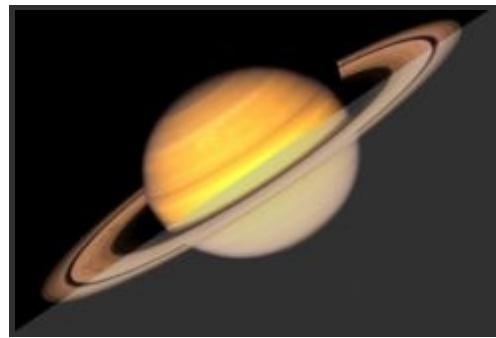
[Plug-ins](#)

[Introduction](#)

S_OCIOTransform

Transform input from one colorspace to another using OpenColorIO.

Uses the OCIO environment variable to find your OpenColorIO configuration. If that is not set, it will fall back to a default configuration. It is not recommended to change the environment variable after adding this effect to a project, as it may change the rendered results. The effect will show a warning dialog if this happens.



In the Sapphire Adjust effects submenu.

Inputs:

Source: The clip to process.

Mask: *Optional.* If provided, the effect is only applied on regions of the source clip specified by the bright areas of this input. Pixels outside this mask are not affected, and do not contribute to the resulting affected pixels within it. This input can be affected using the Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

From: *Popup menu*.

The original colorspace of the input footage.

This menu lists all the colorspaces available in your OpenColorIO configuration.

To: *Popup menu*.

The desired output colorspace.

This menu lists all the colorspaces available in your OpenColorIO configuration.

Switch To And From: *Check-box*, *Default:* off.

If checked, reverses the direction of the transform by swapping To and From colorspace.

Config: *Popup menu*, *Default:* ConfigPath.

This menu displays the path to the current OpenColorIO config file.

ConfigPath: The location and name of the current OpenColorIO config file.

Mask Use: *Popup menu*, *Default:* Luma.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[BlurMotion](#)

[Sapphire Plug-ins](#)

[LightLeak](#)

[Introduction](#)

[RackDefocus](#)

[Shake](#)

[Vignette](#)

S_ParallaxStrips

Applies a collection of 3d refracting glass strips to break up the image. The image is shifted within each strip, and the strips move over time. The strips gradually fade in or out, so the transition to the source is seamless.

In the Sapphire Distort effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Mode: *Popup menu, Default: Automatic.*
Sets whether the effect evolves automatically with time, or can be controlled manually.

Automatic: Automatically move the strips according to the time within the clip. Manual Amount is ignored in this mode.
Manual: Use Manual Amount to specify control the evolution of the effect. 0 is the beginning, and 1 is the end.

Manual Amount: *Default: 1, Range: 0 or greater.*
In Manual mode, this controls the strength and evolution of the effect. With Fade:End selected, 1 puts the strips at their starting position, with the most shift (i.e. the effect is at its strongest). 0 gives the original source: it puts the strips at their end position, and they become invisible because the amount they shift the underlying image goes to zero. With Fade:Start, the values are reversed, so 0 is strongest and 1 fades out.

Ensure Full Coverage: *Push-button.*
Pressing this button adjusts the number of strips to the minimum needed to fully cover the last frame.

N Strips: *Integer, Default: 50, Range: 1 to 1000.*
Number of refracting strips to apply. The strips are positioned randomly all over the image.

Size: *Default: 0.35, Range: 0 or greater.*
Size of the strips, in image-widths.

Rel Height: *Default: 0.3, Range: 0.001 or greater.*
Height of the strips, relative to their width. Increase to make the strips taller.

Size Vary: *X & Y, Default: [0.1 0.1], Range: 0 to 1.*
Increase to make each strip randomly larger or smaller.

Angle: *Default: 0, Range: any.*
Angle of the strips; 0 is horizontal. The strips move along their angle, and also shift the image along the same angle.

Depth: *Default: 2, Range: 0 or greater.*
Make the frontmost strips larger and move faster, so it appears they're in front, giving a 3d look.

Strip Speed: *Default: 0.4, Range: any.*
Sets how fast the strips move along their major axis. Note that this doesn't affect how the image refracts, or shifts, within the strip, just how fast the strip itself moves.

Strip Speed Vary: *Default: 0, Range: 0 or greater.*
Increase to give each strip a bit of randomness in its speed.

Shift Amount: *Default: 0.6, Range: any.*
Sets how much the image shifts, or refracts, within each strip. Shifting is always along the major axis of the strip. As the effect progresses, the shift amount progressively goes to zero, seamlessly transitioning to the original clip. See the Fade and Slow Fade params for details.

Shift Vary: *Default: 0, Range: 0 or greater.*

Increase to make the amount of shift in each strip more random.

All Strips Shift: *X & Y*, *Default:* [0 0], *Range:* any.

Move all strips around on the screen.

Z Dist: *Default:* 1, *Range:* 0.001 or greater.

Zoom in or out on the source image, before applying the parallax strips.

Show: *Popup menu*, *Default:* *Result*.

Show the effect result, or the strips themselves, which is useful during effect setup.

Result: Show the result of the effect.

Strips Over Source: Show each strip as a gray rectangle, with brightness set by depth. Uncovered areas show the source image.

Strips Over Black: Show each strip as a gray rectangle, with brightness set by depth. Uncovered areas show as black.

Slow Fade: *Default:* 0.9, *Range:* 0 to 2.

Increase to make the fade in our out slower. Set to 0 for a linear fade.

Full Height: *Check-box*, *Default:* off.

Turn on to make the strips always full height, ignoring Rel Height. This can make a nice sliding strip effect.

Fade: *Popup menu*, *Default:* *End*.

The effect fades out at one end, to allow a seamless start or end.

Start: Make the effect fade in slowly at the start.

End: Make the effect fade out slowly at the end.

Wrap: *Popup menu*, *Default:* *Reflect*.

Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Seed: *Default:* 0.123, *Range:* 0 or greater.

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Mask Use: *Popup menu*, *Default:* *Luma*.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

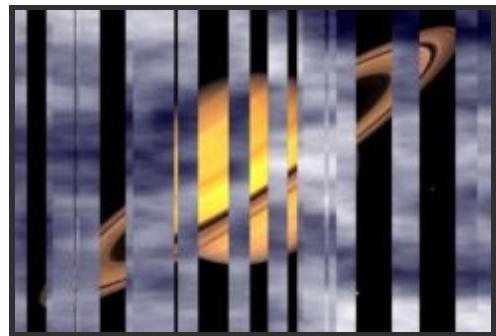
[Sapphire Plug-ins Introduction](#)

S_ParallaxStripsTransition

Applies a collection of 3d refracting glass strips to break up the image. The image is shifted within each strip, and the strips move over time. The strips gradually fade in or out, so the transition to the source is seamless.

Note: because you can control the size of the strips, it's possible to set up a transition that won't completely cover the secondary (incoming or outgoing) clip, and so will have a 'pop' at the start or end. To ensure a smooth transition, go to the end of the transition where the strips are largest, select Show: Strips mode, and adjust the strip size to make sure they fully cover the image. That way none of the back clip will leak through on that frame. Alternatively, hit the 'Ensure Full Coverage' button, and the number of strips will automatically adjust to the minimum needed to fully cover the image.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Effect: *Popup menu, Default: Rectangular Strips.*

Selects between several variations of ParallaxStripsTransition.

Rectangular Strips: Strips shift across the transition and dissolve into the secondary clip.

Linear Strips: Full-height strips grow to reveal the secondary clip.

Trans Amount: *Default: 0.5, Range: 0 to 1.*

The transition ratio between the From and To inputs. A value of 0 gives only the From input and a value of 1 gives only the To input. By default this parameter will automatically animate from 0 to 1 to perform a complete transition.

Ensure Full Coverage: *Push-button.*

Pressing this button adjusts the number of strips to the minimum needed to fully cover the last frame.

N Strips: *Integer, Default: 50, Range: 1 to 1000.*

Number of refracting strips to apply. The strips are positioned randomly all over the image.

Size: *Default: 0.35, Range: 0 or greater.*

Size of the strips, in image-widths.

Rel Height: *Default: 0.3, Range: 0.001 or greater.*

Height of the strips, relative to their width. Increase to make the strips taller.

Size Vary: *X & Y*, *Default:* [0.1 0.1], *Range:* 0 to 1.

Increase to make each strip randomly larger or smaller.

Angle: *Default:* 0, *Range:* any.

Angle of the strips; 0 is horizontal. The strips move along their angle, and also shift the image along the same angle.

Depth: *Default:* 2, *Range:* 0 or greater.

Make the frontmost strips larger and move faster, so it appears they're in front, giving a 3d look.

Strip Speed: *Default:* 0.4, *Range:* any.

Sets how fast the strips move along their major axis. Note that this doesn't affect how the image refracts, or shifts, within the strip, just how fast the strip itself moves.

Strip Speed Vary: *Default:* 0, *Range:* 0 or greater.

Increase to give each strip a bit of randomness in its speed.

Shift Amount: *Default:* 0.6, *Range:* any.

Sets how much the image shifts, or refracts, within each strip. Shifting is always along the major axis of the strip. As the effect progresses, the shift amount progressively goes to zero, seamlessly transitioning to the original clip. See the Fade and Slow Fade params for details.

Shift Vary: *Default:* 0, *Range:* 0 or greater.

Increase to make the amount of shift in each strip more random.

All Strips Shift: *X & Y*, *Default:* [0 0], *Range:* any.

Move all strips around on the screen.

Z Dist: *Default:* 1, *Range:* 0.001 or greater.

Zoom in or out on the source image, before applying the parallax strips.

Show: *Popup menu*, *Default:* *Result*.

Show the effect result, or the strips themselves, which is useful during effect setup.

Result: Show the result of the effect.

Strips Over Source: Show each strip as a gray rectangle, with brightness set by depth. Uncovered areas show the source image.

Strips Over Black: Show each strip as a gray rectangle, with brightness set by depth. Uncovered areas show as black.

Slow Fade: *Default:* 0.9, *Range:* 0 to 2.

Increase to make the fade in our out slower. Set to 0 for a linear fade.

Slow Grow: *Default:* 0.9, *Range:* 0 to 2.

Increase to make the strips start growing more slowly, for a nicer look. Set to 0 for a linear growth rate through the effect.

Wrap: *Popup menu*, *Default:* *Reflect*.

Determines the method for accessing outside the borders of the source images.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Seed: *Default:* 0.123, *Range:* 0 or greater.

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Dissolve Speed: *Default:* 3, *Range:* 1 or greater.

The speed of the dissolve between the From and To clips in Panning Strips.

See Also:

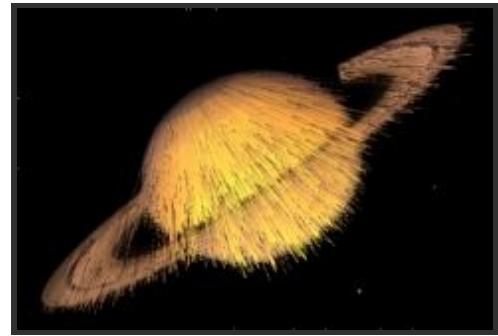
[WipeLine](#)
[WipeCircle](#)
[WipeRectangle](#)
[WipeStar](#)
[WipeClock](#)
[WipeWedge](#)
[WipeDoubleWedge](#)
[WipeFourWedges](#)
[WipeDots](#)
[WipeChecker](#)
[WipeStripes](#)
[WipeRings](#)
[WipeBlobs](#)
[WipeCells](#)
[WipeTiles](#)
[WipePixelate](#)
[WipeDiffuse](#)
[WipeBubble](#)
[WipeClouds](#)
[WipeMoiré](#)
[WipePlasma](#)
[WipePointalize](#)
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S_PixelSort

Sorts pixels over a threshold along lines arranged in various patterns. Patterns include parallel lines, lines radiating from a central point, and circular lines.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Matte: *Optional.* Defines the area that will be sorted.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Effect: *Popup menu, Default: Linear.*

Selects between several sort patterns.

Linear:

Radial:

Circular:

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Sort Angle: *Default: 0, Range: any.*

The angle to sort parallel lines at in Linear mode.

Center: *X & Y, Default: [0 0], Range: any.*

The center in Radial mode.

Start Angle: *Default: 0, Range: any.*

The angle to start sorting in Radial mode.

Degrees Sorted: *Default: 360, Range: 0 to 360.*

How many degrees around the center should be sorted in Radial mode.

Inner Radius: *Default: 0.1, Range: 0 or greater.*

The radius of unsorted pixels around the center in Radial mode.

Ray Length: *Default: 0.8, Range: 0 or greater.*

The length of the sorted pixel chunks in Radial mode.

Vary Radius: *Default: 0.1, Range: 0 to 1.*

How much to vary the starting pixel of the radiating lines in Radial mode.

Start Angle: *Default: 0, Range: any.*

The angle to start sorting in Circular mode.

Degrees Sorted: *Default: 270, Range: 0 to 360.*

How many degrees around the center should be sorted in Circular mode.

Circle Center: *X & Y, Default: [0 0], Range: any.*

The center of the concentric circles in Circular mode.

Vary Start: *Default: 0.15, Range: 0 to 1.*

How much to vary the start in Circular mode.

Inner Radius: *Default: 0, Range: 0 or greater.*

The minimum circle to sort in Circular mode.

Thickness: *Default: 1.1, Range: 0 or greater.*

The number of concentric circles to sort in Circular mode.

Threshold: *Default: 0.3, Range: any.*

Threshold for sorting the pixels. Only pixels on one side of the threshold will be sorted

Sort Direction: *Popup menu, Default: sort above threshold.*

Controls whether pixels over the threshold or under the threshold will be sorted.

sort below threshold: Sort pixels with a value lower than the threshold.

sort above threshold: Sort pixels with a value higher than the threshold.

Reverse Sort Direction: *Check-box*, *Default:* off.

Determines whether to sort the pixels in an ascending or descending order.

Sort Type: *Popup menu*, *Default:* monochrome.

Determines how to analyze the colors of the pixels for sorting.

monochrome: Sort on the monochrome value of the pixels.

average: Sort on the average value of the color channels in the pixels.

minimum: Sort on the smallest channel in the pixels.

maximum: Sort on the largest channel in the pixels.

red: Sort on the red channel in the pixels.

green: Sort on the green channel in the pixels.

blue: Sort on the blue channel in the pixels.

hue: Sort on the hue of the pixels.

saturation: Sort on the saturation of the pixels.

brightness: Sort on the brightness of the pixels.

Randomly Restart Sort: *Default:* 100, *Range:* 0 to 1000.

How often to break up the sorted pixel chunks.

Softens Threshold Mask: *Default:* 0.1, *Range:* 0 or greater.

Blur the mask generated by thresholding the image.

Seed: *Default:* 0.273, *Range:* 0 or greater.

Initializes the random number generator for the sort restarts.

Mix With Source: *Default:* 0, *Range:* 0 to 1.

Interpolates between the sorted image and the original Source.

Show: *Popup menu*, *Default:* Result.

Selects the output option.

Result: Shows the result of the pixel sort.

Raw Sort Values: Shows the values the pixel sort will use for sorting.

Threshold Mask: Shows the mask of pixels to sort based on the threshold parameter.

Random Restart Noise: Shows the pixels that will cause the sort lines to restart.

Combined Mask: Shows the threshold mask combined with the input mask.

Soft Borders: *Check-box*, *Default:* off.

If enabled, transparent borders are added to the input image before processing. This allows the result to include soft edges beyond the original image size. When off, the effect only occurs within the frame and the result will retain an edge at the borders.

Mask Use: *Popup menu*, *Default:* Luma.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no

effect unless the Mask input is provided.

See Also:

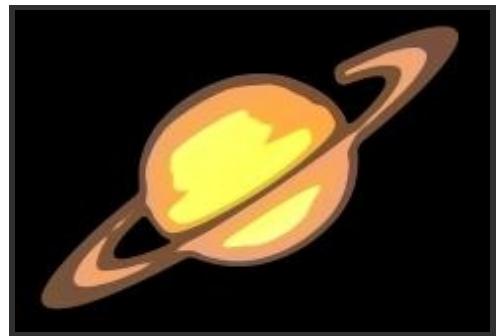
[IpegDamage](#)
[TVDamage](#)
[FilmDamage](#)

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S_Posterize

Generates a posterized version of the input by limiting the number of colors in the source, and replacing detailed texture and noise with solid colors.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Amount: *Default: 0.1, Range: 0 to 1.*
Increase this for fewer and larger regions of solid colors. Decrease for more colors and more steps between colors.

Preserve Chroma: *Default: 1, Range: 0 to 1.*
If set to 1, posterizes only the luma of the clip, leaving chroma unchanged. If set to 0, posterizes the RGB, affecting both luma and chroma which usually results in more color fringes between regions. Intermediate values interpolate between the two results.

Smooth Edges: *Default: 0.1, Range: 0 to 1.*
Amount to smooth the edges between color regions when posterizing. Increase this value to reduce aliasing between the colored areas. If set to 1, the areas will be completely smoothed together and no posterize effect will occur.

Smooth Source: *Default: 0.008, Range: 0 or greater.*
Amount to blur the input clip before posterizing. Increase this value to reduce noise or jagged edges.

Color Phase: *Default: 0, Range: any.*
Amount to shift color boundaries when posterizing. Adjust this to fine-tune the location of the edges between the color regions. A phase of 1 is equivalent to 0.

Phase Red: *Default: 0, Range: any.*
Amount to shift the red channel boundaries when not preserving chroma. If Preserve Chroma is 1.0 this has no effect.

Phase Green: *Default: 0, Range: any.*
Amount to shift the green channel boundaries when not preserving chroma.

Phase Blue: *Default: 0, Range: any.*
Amount to shift the blue channel boundaries when not preserving chroma.

Scale Lights: *Default: 1, Range: 0 or greater.*
Scales the result by this value. Increase for a brighter result.

Offset Dark: *Default: 0, Range: -8 to 2.*
Adds this gray value to the darker regions of the result. This can be negative to increase contrast.

Saturation: *Default: 1, Range: -2 to 8.*
Scales the color saturation. Increase for more intense colors. Set to 0 for monochrome.

Mask Use: *Popup menu, Default: Luma.*
Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.
Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*
Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

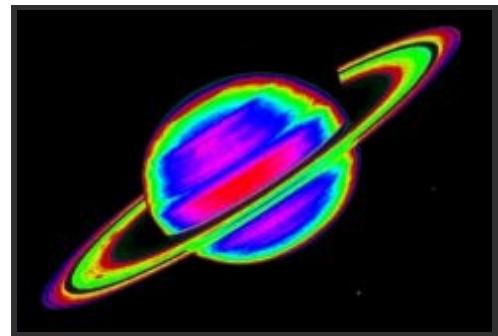
[Cartoon](#)
[CartoonPaint](#)
[Threshold](#)

[Sapphire](#)
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S_PseudoColor

Colorizes the source image. The hue is calculated from the brightness of the source.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Frequency: *Default: 2, Range: 0 or greater.*

The frequency of the colorization. Increase for more cycles of hue through the spectrum, decrease for fewer.

Hue Shift: *Default: 0, Range: -1 to 1.*

Shift the color hues by this amount.

Saturation: *Default: 1, Range: -2 to 8.*

Scales the color saturation. Increase for more intense colors. Set to 0 for monochrome.

Brightness: *Default: 1, Range: 0 or greater.*

Scales the brightness of the result.

Scale By Source: *Default: 1, Range: 0 to 1.*

The brightness of the output is scaled down by the original source brightness as this is increased to 1.

Scale By Src Amp: *Default: 1, Range: 0 or greater.*

This amplifies the effect of Scale By Source, so if increased above 1, the middle grays can still retain their full brightness. It has no effect unless Scale By Source is positive.

Mix With Source: *Default: 0, Range: 0 to 1.*

Interpolates between the result (0) and the original source (1).

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[HueSatBright](#)

[Monochrome](#)

[ClampChroma](#)

[DuoTone](#)

[TriTone](#)

[QuadTone](#)

[Tint](#)

[Threshold](#)

[Hotspots](#)

[Gamma](#)

[Solarize](#)

[Zebrafy](#)

[ZebrafyColor](#)

[PsykoBlobs](#)

[PsykoStripes](#)

[Sapphire](#)

[Plug-ins](#)

[Introduction](#)

ChannelSwitcher

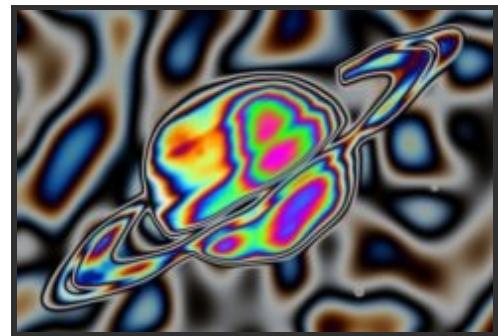
ShowBadColors

Invert

S_PsykoBlobs

Combines the source clip with a field of 'blob' shapes and then passes them through a colorization process. The Phase Speed parameter causes the colors to automatically rotate over time.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Noise Freq: *Default: 4, Range: 0.01 or greater.*
The spatial frequency of the 'blobs' noise texture. Increase for more blobs, decrease for fewer.

Noise Freq Relx: *Default: 1, Range: 0.01 or greater.*
The relative horizontal frequency of the noise texture. Increase to stretch it vertically or decrease to stretch it horizontally.

Noise Octaves: *Integer, Default: 1, Range: 1 to 10.*
The number of summed layers of noise. Each octave is twice the frequency and half the amplitude of the previous. A single octave gives a smooth texture. Adding octaves makes the result approach a fractal (1/f) noise texture.

Noise Seed: *Default: 0.23, Range: 0 or greater.*
Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Noise Shift: *X & Y, Default: [0 0], Range: any.*
Translation offset of the noise texture.

Source Blur: *Default: 0.088, Range: 0 or greater.*
If positive, smooths out the edges of the source by this amount before applying the colorization.

Source Scale: *Default: 1, Range: 0 or greater.*
Scales the source values but not the added blobs.

Freq Colors: *Default: 4, Range: 0 or greater.*
The frequency of the color pattern. Increase for a busier texture with more cycles through the spectrum.

Freq Red: *Default: 1, Range: 0 or greater.*
The frequency of the red color component. Increase for more cycles in the red channel.

Freq Green: *Default: 1.1, Range: 0 or greater.*
The frequency of the green color component. Increase for more cycles in the green channel.

Freq Blue: *Default: 1.2, Range: 0 or greater.*
The frequency of the blue color component. Increase for more cycles in the blue channel.

Phase Start: *Default: 0.5, Range: any.*
The phase offset of the color patterns.

Phase Speed: *Default: 1, Range: any.*
The phase speed of the color patterns. If non-zero, the phase is automatically animated to give the color pattern a boiling look.

Phase Red: *Default: 0, Range: any.*
The phase offset of the red color component.

Phase Green: *Default: 0, Range: any.*
The phase offset of the green color component.

Phase Blue: *Default: 0, Range: any.*
The phase offset of the blue color component.

Brightness: *Default: 1, Range: 0 or greater.*
Scales the brightness of the result.

Color: *Default rgb: [1 1 1].*
Scales the color of the result. For example, if it is yellow [1 1 0], the blue of the result will be 0.

Offset: *Default: 0, Range: -8 to 2.*
Adds this gray value to the result (or subtracts if negative). 0 has no effect, .5 is middle gray, and 1 is white.

Saturation: *Default: 1, Range: 0 to 10.*
Scales the strength of the colors. Increase for more intense colors, or decrease for muted colors.

Scale By Source: *Default: 0, Range: 0 to 1.*
The brightness of the output is scaled down by the original source brightness as this is increased to 1.

Scale By Src Amp: *Default: 1, Range: 0 or greater.*
This amplifies the effect of Scale By Source, so if increased above 1, the middle grays can still retain their full brightness. It has no effect unless Scale By Source is positive.

Mix With Source: *Default: 0, Range: 0 to 1.*
Interpolates between the result (0) and the original source (1).

Mask Use: *Popup menu, Default: Luma.*
Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.
Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*
Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*
If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[PsykoStripes](#)

[PseudoColor](#)

[Sapphire](#)

[ZebrafyColor](#)

[Plug-ins](#)

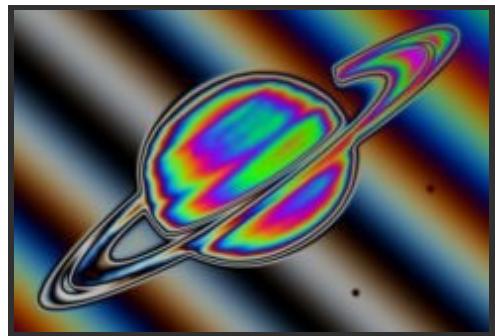
[CloudsPsyko](#)

[Introduction](#)

S_PsykoStripes

Combines the source clip with a stripe pattern and then passes them through a colorization process. The Phase Speed parameter causes the colors to automatically rotate over time.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* *Union*.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Stripe Dir: *Default:* 45, *Range:* any.
The direction of the stripes, in counter-clockwise degrees from vertical.

Stripe Mag: *Default:* 0.5, *Range:* 0 or greater.
The magnitude of the stripes. Increase for more cycles of the colors in the stripe direction.

Source Blur: *Default:* 0.088, *Range:* 0 or greater.
If positive, smooths out the edges of the source by this amount before applying the colorization.

Source Scale: *Default:* 1, *Range:* 0 or greater.
Scales the source values but not the added stripes.

Freq Colors: *Default:* 3, *Range:* 0 or greater.
The frequency of the color pattern. Increase for a busier texture with more cycles through the spectrum.

Freq Red: *Default:* 1, *Range:* 0 or greater.
The frequency of the red color component. Increase for more cycles in the red channel.

Freq Green: *Default:* 1.1, *Range:* 0 or greater.
The frequency of the green color component. Increase for more cycles in the green channel.

Freq Blue: *Default:* 1.2, *Range:* 0 or greater.
The frequency of the blue color component. Increase for more cycles in the blue channel.

Phase Start: *Default:* 0.5, *Range:* any.
The phase offset of the color patterns.

Phase Speed: *Default:* 1, *Range:* any.
The phase speed of the color patterns. If non-zero, the phase is automatically animated to give the color pattern a boiling look.

Phase Red: *Default:* 0, *Range:* any.
The phase offset of the red color component.

Phase Green: *Default:* 0, *Range:* any.
The phase offset of the green color component.

Phase Blue: *Default:* 0, *Range:* any.
The phase offset of the blue color component.

Brightness: *Default:* 1, *Range:* 0 or greater.
Scales the brightness of the result.

Color: *Default* *rgb:* [1 1 1].
Scales the color of the result. For example, if it is yellow [1 1 0], the blue of the result will be 0.

Offset: *Default:* 0, *Range:* -8 to 2.
Adds this gray value to the result (or subtracts if negative). 0 has no effect, .5 is middle gray, and 1 is white.

Saturation: *Default:* 1, *Range:* 0 to 10.

Scales the strength of the colors. Increase for more intense colors, or decrease for muted colors.

Scale By Source: *Default:* 0, *Range:* 0 to 1.

The brightness of the output is scaled down by the original source brightness as this is increased to 1.

Scale By Src Amp: *Default:* 1, *Range:* 0 or greater.

This amplifies the effect of Scale By Source, so if increased above 1, the middle grays can still retain their full brightness. It has no effect unless Scale By Source is positive.

Mix With Source: *Default:* 0, *Range:* 0 to 1.

Interpolates between the result (0) and the original source (1).

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[PsykoBlobs](#)

[PseudoColor](#)

[Sapphire](#)

[ZebrafyColor](#)

[Plug-ins](#)

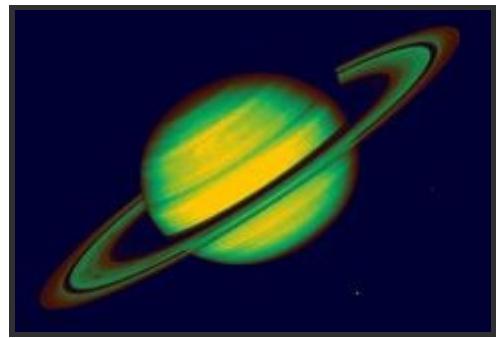
[CloudsPsyko](#)

[Introduction](#)

S_QuadTone

Performs an interpolation between four specified colors using the brightness of the source clip.

In the Sapphire Adjust effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Color3: *Default rgb: [1 1 1].*

The color to use at the brighter source regions.

Color2: *Default rgb: [0.66 0.66 0.66].*

The color to use at the light gray source regions.

Color1: *Default rgb: [0.33 0.33 0.33].*

The color to use at the dark gray source regions.

Color0: *Default rgb: [0 0 0].*

The color to use at the darker source regions.

Softness: *Default: 1, Range: 0.001 or greater.*

The softness of the interpolation between the three colors. Use lower values for sharper contours between more solid regions of color.

Softness 23: *Default: 1, Range: 0.001 or greater.*

Scales the softness of the interpolation between color2 and color3.

Softness 12: *Default: 1, Range: 0.001 or greater.*

Scales the softness of the interpolation between color1 and color2.

Softness 01: *Default: 1, Range: 0.001 or greater.*

Scales the softness of the interpolation between color0 and color1.

Color3 At Bright: *Default: 1, Range: any.*

The source brightness value to replace with color3.

Color2 At Bright: *Default: 0.66, Range: any.*

The source brightness value to replace with color2. This value should normally be in between the color1 and color3 At Bright values.

Color1 At Bright: *Default: 0.33, Range: any.*

The source brightness value to replace with color1. This value should normally be in between the color0 and color2 At Bright values.

Color0 At Bright: *Default: 0, Range: any.*

The source brightness value to replace with color0.

Mix With Source: *Default: 0, Range: 0 to 1.*

Interpolates between the result (0) and the original source (1).

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[DuoTone](#)

[TriTone](#)

[Tint](#)

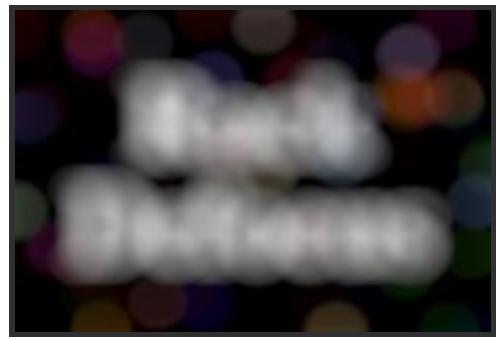
[Sapphire](#)

[Plug-ins](#)

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S_RackDefocus

Generates a defocused version of the source clip using a 'circle of confusion' convolution. This effect is often preferable to a gaussian blur for simulating a real defocused camera lens, because bright spots can be defocused into clean shapes instead of being smoothed away. The iris shape can be controlled using Points, Pointiness and Rotate, and the Use Gamma parameter can adjust the relative brightness of the blurred highlights.



In the Sapphire Blur+Sharpen effects submenu.

Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Effect: *Popup menu, Default: Defocus Color.*

Selects between full color or monochrome defocus.

Defocus Color: defocuses all channels of the source input.

Defocus Mono: makes the source monochrome and then applies the defocus (faster).

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.
The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.
Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.
Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Defocus Width: *Default:* 0.088, *Range:* 0 or greater.
The width of the defocus. This parameter can be adjusted using the Defocus Width Widget.

Rel Height: *Default:* 1, *Range:* 0.01 or greater.
The relative height of the iris shape. If it is not 1, circles become ellipses, etc.

Shape: *Popup menu*, *Default:* Circle.
Determines the shape of the simulated camera iris.

Circle: round.
3 sides: triangle.
4 sides: square.
5 sides: pentagon.
6 sides: hexagon.
7 sides: etc.

Show Shape: *Check-box*, *Default:* off.
Show the iris shape instead of the defocused image.

Roundness: *Default:* 0, *Range:* any.
Modifies the shape of the simulated camera iris. A value of 1 produces a circle; 0 gives a flat-sided polygon with a number of sides given by the Shape parameter. Less than 0 causes the sides to squeeze inward giving a star shape, while a value greater than 1 causes the corners to squeeze inward, giving a flowery shape. Has no effect if the Shape is set to Circle.

Rotate: *Default:* 0, *Range:* any.
Rotates the iris shape.

Bokeh: *Default:* 0, *Range:* any.
Softens the outer edge of the iris shape, which gives a softer look to the defocused highlights. A negative value darkens the center of the iris shape, producing a ring-like defocus shape.

Lens Noise: *Default:* 0, *Range:* 0 or greater.
Increase to add noise to the iris shape, dirtying up the defocus a little. Can make the result more realistic. Turn up past 1 for a more stylistic result.

Noise Freq: *Default:* 40, *Range:* 0.01 or greater.
The frequency of the added noise. Ignored if Lens Noise is zero.

Noise Freq Rel X: *Default: 1, Range: 0.01 or greater.*

The relative horizontal frequency of the added iris noise. Increase to stretch it vertically or decrease to stretch it horizontally.

Noise Seed: *Default: 0.123, Range: 0 or greater.*

The seed value for the added noise. To make the noise appear different on each frame, animate this to be different on each frame. The actual value doesn't matter; only that it's different.

Gauss Blur: *Default: 0, Range: 0 or greater.*

If positive, a gaussian blur is also applied which smooths out the edges of the shapes. This might also darken the highlights because Gamma is not considered in the gaussian blur.

Use Gamma: *Default: 1, Range: 0.1 or greater.*

Values above 1 cause highlights in the source clip to keep their brightness after the defocus is applied.

Boost Highlights: *Default: 0, Range: 0 or greater.*

The amount to increase the luma of the highlights in the source clip. Increase this parameter to blow out the highlights without affecting the darks or mid-tones.

Hilight Threshold: *Default: 0.9, Range: 0 or greater.*

The minimum luma value for highlights. Pixels brighter than this will be brightened according to the Boost Highlights parameter.

Chroma Distort: *Default: 0, Range: any.*

Adds some chromatic aberration around the edges of the image; red and blue wavelengths of light refract differently in real lenses, producing fringes of color where the rays strike the lens at oblique angles.

Color Fringing: *Default: 0, Range: any.*

Color Fringing produces rings of color around every object in the image by varying the focal distance for each color channel. It gives a different style of chromatic aberration from Chroma Distort because it's not just in the image corners.

Brightness: *Default: 1, Range: 0 or greater.*

Scales the brightness of the result.

Offset Dark: *Default: 0, Range: any.*

Adds this gray value to the darker regions of the result. This can be negative to increase contrast.

Mix With Source: *Default: 0, Range: 0 to 1.*

Interpolates between the defocused result and the original source. Set this to 1 for the original source.

Edge Mode: *Popup menu, Default: Reflect.*

Determines the behavior when accessing areas outside the source image.

Transparent: Areas outside the source image are treated as transparent, which can produce transparency around the edges of the image. Select this for fastest rendering.

Repeat: Repeats the last pixel outside the border of the image.

Reflect: Reflects the image outside the border.

Soft Borders: *Check-box, Default: off.*

If enabled, transparent borders are added to the input image before processing. This allows the result to include soft edges beyond the original image size. When off, the effect only occurs within the frame and the result will retain an edge at the borders.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Defocus Width: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Defocus Width parameter.

See Also:

[DefocusPrism](#)

[RackDfComp](#)

[Sapphire](#)

[Blur](#)

[Plug-ins](#)

[BlurChannels](#)

[Introduction](#)

[BlurChroma](#)

[ZDefocus](#)

[Convolve](#)

S_RackDfComp

Composites the Foreground over the Background using a Matte while defocusing both layers by different amounts.

In the Sapphire Blur+Sharpen effects submenu.



Inputs:

Foreground: The clip to use as foreground.

Background: The clip to use as background.

Matte: *Optional.* The alpha channel of this input specifies the opacities of the Foreground input. If this input is not provided, the alpha channel of the Foreground input is used instead. This input can be affected by the Invert Matte or Matte Use parameters.

Middle: *Optional.* The clip to composite between the Foreground and Background.

Mid_Matte: *Optional.* The alpha channel of this input specifies the opacities of the Middle input. If this input is not provided, the alpha channel of the Middle input is used instead. This input can be affected by the Invert Matte or Matte Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Defocus Foreground: *Default: 0.088, Range: 0 or greater.*

The amount to defocus the Foreground and its Matte. This parameter can be adjusted using the Fg Defocus Widget.

Defocus Background: *Default: 0, Range: 0 or greater.*

The amount to defocus the Background. This parameter can be adjusted using the Bg Defocus Widget.

Defocus Middle: *Default: 0, Range: 0 or greater.*

The amount to defocus the Middle and its Matte.

Rel Height: *Default: 1, Range: 0.01 or greater.*

The relative height of the iris shape. If it is not 1, circles become ellipses, etc.

Shape: *Popup menu, Default: Circle.*

Determines the shape of the simulated camera iris.

Circle: round.

3 sides: triangle.

4 sides: square.

5 sides: pentagon.

6 sides: hexagon.

7 sides: etc.

Show Shape: *Check-box*, *Default:* off.

Show the iris shape instead of the defocused image.

Roundness: *Default:* 0, *Range:* any.

Modifies the shape of the simulated camera iris. A value of 1 produces a circle; 0 gives a flat-sided polygon with a number of sides given by the Shape parameter. Less than 0 causes the sides to squeeze inward giving a star shape, while a value greater than 1 causes the corners to squeeze inward, giving a flowery shape. Has no effect if the Shape is set to Circle.

Rotate: *Default:* 0, *Range:* any.

Rotates the iris shape.

Bokeh: *Default:* 0, *Range:* any.

Softens the outer edge of the iris shape, which gives a softer look to the defocused highlights. A negative value darkens the center of the iris shape, producing a ring-like defocus shape.

Lens Noise: *Default:* 0, *Range:* 0 or greater.

Increase to add noise to the iris shape, dirtying up the defocus a little. Can make the result more realistic. Turn up past 1 for a more stylistic result.

Noise Freq: *Default:* 40, *Range:* 0.01 or greater.

The frequency of the added noise. Ignored if Lens Noise is zero.

Noise Freq Rel X: *Default:* 1, *Range:* 0.01 or greater.

The relative horizontal frequency of the added iris noise. Increase to stretch it vertically or decrease to stretch it horizontally.

Noise Seed: *Default:* 0.123, *Range:* 0 or greater.

The seed value for the added noise. To make the noise appear different on each frame, animate this to be different on each frame. The actual value doesn't matter; only that it's different.

Use Gamma: *Default:* 1, *Range:* 0.1 or greater.

Values above 1 cause highlights in the source clip to keep their brightness after the defocus is applied.

Matte Gamma: *Default:* 1, *Range:* 0.1 or greater.

The gamma value to use for the defocus of the Matte.

Boost Highlights: *Default:* 0, *Range:* 0 or greater.

The amount to increase the luma of the highlights in the source clip. Increase this parameter to blow out the highlights without affecting the darks or mid-tones.

Hilight Threshold: *Default:* 0.9, *Range:* 0 or greater.

The minimum luma value for highlights. Pixels brighter than this will be brightened according to the Boost Highlights parameter.

Comp Premult: *Check-box*, *Default:* on.

Disable this if you have provided a separate Matte input and the Foreground pixel values have not been pre-multiplied by this Matte.

Matte Use: *Popup menu*, *Default:* Alpha.

Determines how the Foreground or Matte input channels are used to make a monochrome matte.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Invert Matte: *Check-box*, *Default:* off.

If enabled, the black and white of the matte are inverted before use.

Edge Mode: *Popup menu*, *Default:* Reflect.

Determines the behavior when accessing areas outside the source image.

Transparent: Areas outside the source image are treated as transparent, which can produce transparency around the edges of the image. Select this for fastest rendering.

Repeat: Repeats the last pixel outside the border of the image.

Reflect: Reflects the image outside the border.

Soft Borders: *Check-box*, *Default:* off.

If enabled, transparent borders are added to the input image before processing. This allows the result to include soft edges beyond the original image size. When off, the effect only occurs within the frame and the result will retain an edge at the borders.

Show Fg Defocus: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Defocus Foreground parameter. Its value should first be made positive to adjust this more easily.

Show Bg Defocus: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Defocus Background parameter. Its value should first be made positive to adjust this more easily.

See Also:

[RackDefocus](#)

[DefocusPrism](#)

[Blur](#)

[Convolve](#)

[ConvolveComp](#)

[Sapphire Plug-ins](#)

[Introduction](#)

S_RandomEdits

Randomly re-edits the entire source clip. The shuffling is random but repeatable.

In the Sapphire Time effects submenu.

Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Edit Frame Length: *Default: 2, Range: 1 or greater.*

Segments of this duration are randomly rearranged.

Seed: *Default: 0.123, Range: 0 or greater.*

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:[GetFrame](#)[Sapphire Plug-ins](#)[TimeWarpRGB](#)[Introduction](#)[MotionDetect](#)[TimeSlice](#)[FreezeFrame](#)[JitterFrames](#)[ReverseEdits](#)[ReverseClip](#)

S_Rays

Generates beams of light emitting from the bright areas of the source clip. Lower the Threshold parameter to generate rays from more areas or raise it to generate rays from only the brightest areas. Set the Rays Res parameter to 1/2 for faster rendering with slightly softer rays.

In the Sapphire Lighting effects submenu.



Inputs:

Source: The clip to be processed.

Background: *Optional.* The clip to use as background.

Mask: *Optional.* If provided, the ray colors are scaled by this input. A monochrome mask can be used to choose a subset of areas that will generate rays. If the Mask Type is set to Color, a color mask input can be used to selectively adjust the ray colors in different regions. This input can optionally be blurred or inverted using the Blur Mask or Invert Mask parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Effect: *Popup menu, Default: Light Rays.*

Selects between light and dark rays.

Light Rays: Generates beams of light emitting from the bright areas of the source.

Dark Rays: Generates beams of darkness emitting from the dark areas of the source.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.
The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.
The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.
Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.
Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Center: *X & Y*, *Default:* [0 0], *Range:* any.
The location from which the rays beam outwards. This parameter can be adjusted using the Center Widget.

Center Uses Mocha: *Check-box*, *Default:* off.
Controls whether the center is controlled by the Center parameter or follows the Center tracked inside of Mocha.

Smooth Center Track: *Integer*, *Default:* 0, *Range:* 0 or greater.
Controls how many points to average when stabilizing the Mocha point track.

Rays Length: *Default:* 0.25, *Range:* -5 to 1.
The length of the rays. A length of 1.0 gives rays that continue forever, although they may still fade out as they go. To make the rays look longer you can also increase the Bias Outer Bright parameter. If Rays Length is negative the rays can beam inwards instead of outwards. Note that processing times increase for longer rays. This parameter can be adjusted using the Center Widget.

Length Red: *Default:* 1, *Range:* 0 or greater.
The relative length of the red channel of the rays. Adjust this, along with Length Green and Length Blue, to create color fringing effects.

Length Green: *Default:* 1, *Range:* 0 or greater.
The relative length of the green channel of the rays.

Length Blue: *Default:* 1, *Range:* 0 or greater.
The relative length of the blue channel of the rays.

Reverse Rays: *Default:* 0, *Range:* 0 or greater.
Extend rays inward as well as outward. The length of the reversed rays is controlled by Rays Length as well as this parameter.

Rays Brightness: *Default:* 3, *Range:* 0 or greater.
Scales the brightness of the ray beams.

Rays Color: *Default rgb:* [1 1 1].
Scales the color of the ray beams.

Rays Darkness: *Default:* 3, *Range:* 0 or greater.

Scales the intensity of the dark ray beams.

Rays Color Dark: *Default* *rgb: [0 0 0]*.

Scales the color of the dark ray beams.

Bias Outer Bright: *Default: 0, Range: 0 to 1.*

Determines the variable amount of brightness along the rays. This is normally near 0 so the rays fade away at their outer ends, 0.5 causes equal brightness along the rays, and 1.0 causes maximum brightness at the ends.

Rays Res: *Popup menu, Default: Full.*

Selects the resolution factor for the rays. Higher resolutions give sharper rays, lower resolutions give smoother rays and faster processing. This 'Res' factor only affects the rays: the background is still combined with the rays at full resolution.

Full: Full resolution is used.

Half: The rays are calculated at half resolution.

Quarter: The rays are calculated at quarter resolution.

Threshold: *Default: 0.5, Range: 0 or greater.*

Rays are generated from locations in the source clip that are brighter than this value. A value of 0.9 causes rays at only the brightest spots. A value of 0 causes rays for every non-black area.

Threshold Add Color: *Default* *rgb: [0 0 0]*.

This can be used to raise the threshold on a specific color and thereby reduce the rays generated on areas of the source clip containing that color.

Shimmer Amp: *Default: 0.5, Range: 0 or greater.*

Modulates the ray source image with this amount of noise texture to give the rays a shimmering look.

Shimmer Freq: *Default: 40, Range: 0.1 or greater.*

The frequency of the shimmer texture. Increase for a finer grained shimmer effect, decrease for larger, softer shimmer. This has no effect unless Shimmer Amp is positive.

Shimmer Seed: *Default: 0.123, Range: 0 or greater.*

Used to initialize the random number generator for the shimmer texture. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Shimmer Shift: *X & Y, Default: [0 0], Range: any.*

Translation of the shimmer texture. This has no effect unless Shimmer Amp is positive.

Shimmer Speed: *X & Y, Default: [0 0], Range: any.*

Translation speed of the shimmer texture. If non-zero, the shimmering is automatically animated to shift at this rate.

Atmosphere Amp: *Default: 0, Range: 0 or greater.*

Atmosphere gives the effect of rays shining through a dusty atmosphere and picking up light or getting shadowed. This parameter adjusts the amount, or amplitude, of the atmospheric effect. Zero gives smooth rays, higher values give more dusty look.

Atmosphere Freq: *Default: 1, Range: 0.1 to 20.*

Controls the spatial frequency of the atmospheric noise. Turn this up higher to get finer details, turn down for broader overall variation.

Atmosphere Detail: *Default: 0.6, Range: 0 to 1.*

Controls the amount of fine detail in the atmosphere simulation. Decrease to get smoother atmosphere, increase for a more crunchy or grainy look.

Atmosphere Speed: *Default: 1, Range: any.*

The cloudy noise in the atmosphere evolves over time like real dust clouds; this parameter controls how fast the

cloud pattern changes over time. Set to zero for a static pattern.

Affect Alpha: *Default:* 0, *Range:* 0 or greater.

If this value is positive the output Alpha channel will include some opacity from the rays. The maximum of the red, green, and blue ray brightness is scaled by this value and combined with the background Alpha at each pixel.

Rays From Alpha: *Default:* 0, *Range:* 0 to 1.

Set to 1 to generate rays from the source's alpha channel instead of its RGB channels. This will typically cause many more rays to be generated. Values between 0 and 1 interpolate between using the RGB and the Alpha.

Rays Under Source: *Default:* 0, *Range:* 0 to 1.

Set to 1 to composite the Source input over the rays.

Source Opacity: *Default:* 1, *Range:* 0 to 1.

Scales the opacity of the Source input when combined with the rays. This does not affect the generation of the rays themselves.

Bg Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the background before combining with the rays. This parameter only has an effect if the background input is provided.

Use Source Chroma: *Default:* 1, *Range:* 0 or greater.

If this is 1, the chroma of the Source input affects the chroma of the resulting rays. If it is 0, only the brightness of the Source input affects the brightness of the rays, and the rendering speed should also be faster. Values between 0 and 1 interpolate between these two options.

Mask Type: *Popup menu, Default: Luma.*

This setting is ignored unless the Mask input is provided.

Luma: uses the luminance of the Mask input to scale the brightness of the rays.

Color: uses the RGB channels of the Mask input to scale the colors of the rays.

Alpha: uses the alpha channel of the Mask input to scale the brightness of the rays.

Blur Mask: *Default:* 0, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Center: *Check-box, Default: on.*

Turns on or off the screen user interface widget for adjusting the Center and Rays Length parameters.

See Also:

[EdgeRays](#)

[Sapphire Plug-ins](#)

[Streaks](#)

[Introduction](#)

[BlurMotion](#)

[WarpChroma](#)

[EdgeDetect](#)

[Glow](#)

[GlowDarks](#)

S_RepairFrames

Repairs one or more frames of a clip by replacing them with a time-warped version of the surrounding frames.

In the Sapphire Time effects submenu.



Inputs:

Source: The clip to be processed.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

First Bad Frame: *Integer, Default: 5, Range: 2 or greater.*

The first bad frame to replace. Set Show:Bad Frame and scrub this param to help find the bad frame.

Bad Frame Count: *Integer, Default: 1, Range: 1 or greater.*

How many frames to repair, starting from First Bad Frame.

Show: *Popup menu, Default: Result.*

Set to Result for normal operation, showing the clip with the repaired frames. Set to Bad Frame only to help find the bad frames; once you've found the frames of interest, return to Result.

Result: Show the result clip, which is the source clip with the bad frames repaired.

Bad Frame: Show the first bad frame, no matter where the play head currently is.

See Also:

[Retime](#)

[Sapphire](#)

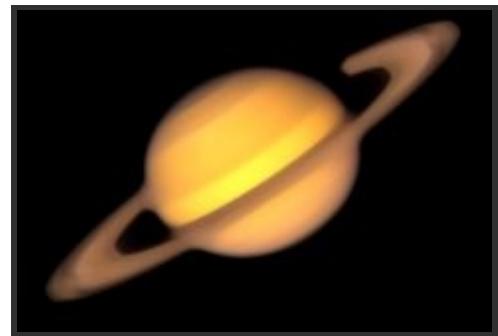
[Plug-ins](#)

[Introduction](#)

S_Retime

Retimes a clip using optical flow based motion estimation and frame interpolation.

In the Sapphire Time effects submenu.



Inputs:

Source: The clip to be retimed.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Effect: *Popup menu, Default: Retime Speed.*

How the clip is to be retimed.

Retime Speed: The output clip is to run at a specified fraction of the speed of the input clip.

Retime Longer: The output clip is to be a specified percentage longer than the input clip.

Retime Scale: The output clip is to be a specified percentage times the length of the input clip.

Retime FPS: The output clip speed is to be suitable for running at a specified frames-per-second given the input clip speed specified in frames-per-second.

Retime Length: Retimes a clip using optical flow motion estimation so that the output clip is a specified length (in frames).

Retime Variable Speed: Retimes a clip using optical flow motion estimation so that the input frame for every output frame may be controlled with a key-framed parameter. This allows vari-speed effects, backwards motion and so forth.

Speed: *Default: 0.5, Range: 0.01 to 10.*

Used in Speed mode. The output clip runs at a speed which is this times the speed of the input clip. For example, 0.2 would make the output 5 times slower than the input.

Percent Longer: *Default: 100, Range: 0 to 1e+04.*

Used in Longer mode. How many percent longer the output is to be relative to the input. 0 percent makes the output the same length as the input. 100 percent would make the output twice as long as the input.

Percent: *Default: 200, Range: 1 to 1e+04.*

Used in Scale mode. How long the output clip is to be as a percentage of the input clip length. 100 percent makes the output the same length as the input. 200 percent would make the output twice as long as the input. 50 percent would make the output half as long as the input.

Input Fps: *Default: 30, Range: 1 to 1000.*

Used in FPS mode. The frame rate of the input clip.

Output Fps: *Default: 60, Range: 1 to 1000.*

Used in FPS mode. The frame rate of the output clip. If this is greater than the Input Fps parameter, the output clip will be longer than the input clip. If this is less than the Input Fps parameter, the output clip will be shorter than the input clip. If the output clip is played at the specified output frames-per-second, it will last as long (in seconds) as

the input clip.

Output Length: *Integer*, *Default:* 30, *Range:* 2 to 1e+04.

Used in Length mode. The desired length of the output clip in frames.

Input Frame: *Default:* 1, *Range:* 0 to 1e+04.

Used in Curve mode. The input frame to output. This parameter should normally be key-framed, with the frame for which a key-frame is set designating an output frame, and the value set at that key-frame denoting the desired input frame at that output frame.

Result: *Popup menu*, *Default:* *Result*.

Output the retimed clip or a representation of the motion vectors.

Result: Output the retimed clip.

Flow Vectors: Output a representation of the motion vectors. The direction of the vector at a pixel is shown as a color, and the length of the vector as the saturation of that color.

Start Frame: *Integer*, *Default:* 0, *Range:* 0 or greater.

Frame number of the first frame in the clip.

Motion Blur: *Default:* 0, *Range:* 0 to 2.

If greater than 0.0, blur along this fraction of the length of the motion vectors.

Flow Field Smoothness: *Default:* 0.8, *Range:* 0 or greater.

Optical flow parameter: The relative importance of adhering to the image data relative to the importance of keeping a smooth flow field. The higher this value, the more relative importance is assigned to the flow field smoothness.

Emphasize Edges: *Default:* 0, *Range:* 0 to 1.

Optical flow parameter: Specify the degree of structure/texture decomposition to apply to the input clip prior to solving for the motion vector field. This can be useful to reduce problems due to lighting changes and may give better localised flows and other improvements. It is not recommended when there is fast motion in the input clip. However, in some cases, it can be very helpful in getting acceptable results. Suggested usage is to first try a value of 0.0 (which turns off structure/texture decomposition). If the result is unsatisfactory, try 0.4. Finally, try 1.0.

Flow View Scale: *Default:* 0.9, *Range:* 0 or greater.

When outputting a representation of the motion vectors, this increases the saturation of the color corresponding to a unit length motion. This makes the representation more sensitive to show shorter vectors more clearly.

Crop Input Parameters: *Default:* 0, *Range:* 0 or greater.

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. This can avoid artifacts due to pulling in black at the edges. This can happen when a lower resolution element is retimed in a higher resolution project.

See Also:

[Sapphire Plug-ins Introduction](#)

S_ReverseClip

Reverses the frame order of a clip, and optionally also reverses the fields of each frame.

In the Sapphire Time effects submenu.

Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Swap Fields: *Popup menu, Default: Yes Up1.*

Enables and selects the method for also reversing the fields of the result.

NO: Fields are not swapped.

Yes Ave: Fields are swapped by averaging up 1 pixel and down 1 pixel. This method causes slight vertical blurring, but the result is not shifted.

Yes Up1: Fields are swapped by shifting the result up 1 pixel. This method avoids vertical blurring.

Yes Down1: Fields are swapped by shifting the result down 1 pixel. This method also avoids vertical blurring.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[GetFrame](#)
[TimeWarpRGB](#)
[MotionDetect](#)
[TimeSlice](#)
[FreezeFrame](#)
[JitterFrames](#)
[RandomEdits](#)
[ReverseEdits](#)

[Sapphire Plug-ins](#)
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S_ReverseEdits

Independently reverses segments of the input clip. For example if Edit Frame Length is 5, and the input clip frames are:

1 2 3 4 5 6 7 8 9 10 11... the output frames would be:
5 4 3 2 1 10 9 8 7 6 15...

In the Sapphire Time effects submenu.

Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Edit Frame Length: *Integer, Default: 5, Range: 1 or greater.*

The duration of each segment to be reversed.

Edits Start: *Integer, Default: 0, Range: 0 or greater.*

The offset of the start and stop frames for each segment.

Reverse All: *Check-box, Default: off.*

If enabled, reverses the entire result, so each segment plays forwards again but the segments are in backwards order.

Swap Fields: *Popup menu, Default: NO.*

Enables and selects the method for also reversing the fields of the result.

NO: Fields are not swapped.

Yes Ave: Fields are swapped by averaging up 1 pixel and down 1 pixel. This method causes slight vertical blurring, but the result is not shifted.

Yes Up1: Fields are swapped by shifting the result up 1 pixel. This method avoids vertical blurring.

Yes Down1: Fields are swapped by shifting the result down 1 pixel. This method also avoids vertical blurring.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

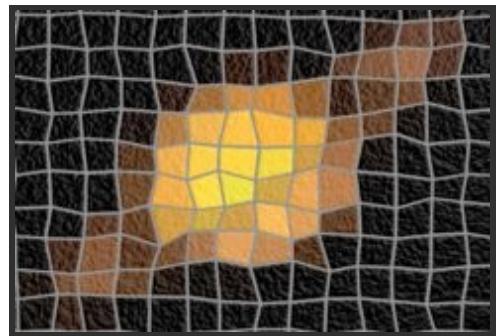
[GetFrame](#)
[TimeWarpRGB](#)
[MotionDetect](#)
[TimeSlice](#)
[FreezeFrame](#)
[JitterFrames](#)
[RandomEdits](#)
[ReverseClip](#)

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S_RomanTile

Generates a mosaic pattern based on the Source clip. Adjust the Edge Attract parameter to get the tile corners to bias towards the edges in the source. Increase Vary Shape to get a less regular tile pattern.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Defines the area that will be tiled.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Tile Size: *Default: 0.5, Range: 0 or greater.*

The width of an individual tile.

Tile Shape: *Popup menu, Default: Square.*

Determines the shape of the tiles.

Square: four sided tiles.

Hexagon: six sided tiles.

Vary Shape: *Default: 0.2, Range: 0 to 1.*

Controls the variation of the tile shape. Set to 0 for regularly shaped tiles. Set to 1 for randomly shaped tiles.

Tile Shift: *X & Y, Default: [0 0], Range: any.*

Translation offset of the result.

Tile Edge Sharpness: *Default: 0.9, Range: 0 to 1.*

How sharp to make the 3d lighting roll off on the edge of the tile. Set to 1 for a very sharp tile edge. Set to a lower number for a softer, more curved tile.

Tile Texture Freq: *Default: 50, Range: 0 or greater.*

The frequency controls how coarse or fine the bumpy texture on the tiles is.

Tile Roughness: *Default: 0.75, Range: 0 to 1.*

The height of the bumpy texture on the tiles.

Tile Height: *Default: 0.5, Range: 0 or greater.*

The strength of the lighting on the edge of the tiles.

Tile Opacity: *Default: 0.9, Range: 0 to 1.*

The opacity of the tiles. Set to 0 to show the source. Set to 1 to show only the tile.

Cracked Tiles: *Default: 0, Range: 0 to 1.*

How likely a tile is to crack along edges in the source. Set to 0 to get no cracked tiles. Set to 1 to see tiles with detectable edges crack. At .5 only tiles with strong edges will crack. Tiles with a very slow gradient will never crack.

Smooth Colors: *Default: 0.2, Range: 0 or greater.*

Control the variation in the color palette. Increase to make only very sharp image edges change tile colors.

Edge Attract: *Default: 0.2, Range: 0 to 1.*

How strongly the corners of the tiles should attract to the edges in the image.

Grout Color: *Default rgb: [0.4 0.4 0.4].*

The color of the grout between the tiles.

Grout Width: *Default: 0.1, Range: 0 to 1.*

The width of the grout between the tiles as a percentage of the tile size.

Grout Texture Freq: *Default: 150, Range: 0 or greater.*

The frequency controls how coarse or fine the bumpy texture in the grout is.

Grout Roughness: *Default: 0.5, Range: 0 to 1.*

The height of the bumpy texture in the grout.

Grout Opacity: *Default: 1, Range: 0 to 1.*

The opacity of the grout between the tiles. Set to 0 to show the source. Set to 1 to show only the grout.

Light Position: *X & Y, Default: [0.9 0.5], Range: any.*

The XY position of the light. This parameter can be adjusted using the Light Position Widget.

Light Brightness: *Default: 1, Range: 0 or greater.*

The tiles are lit with a 3d point light source. This param sets the brightness of that light. Set to 0 to disable the light. Increase value to increase the intensity of the light.

Light Color: *Default rgb: [0.5 0.5 0.5].*

The color of the light.

Light Z: *Default: 5, Range: 1 or greater.*

The height of the light source.

Crop To Alpha: *Check-box, Default: off.*

Crop the tiles to the source alpha. If a mask input is provided, the mosaic will be cropped to the mask as well. When turned off, tiles generated inside the opaque region of the image might stick out into the transparent regions. When turned on, the tiles themselves will be cropped at the edge of the opaque region.

Bg Brightness: *Default: 1, Range: 0 to 1.*

Scales the brightness of the background before combining with the romans. If 0, the result will contain only the roman image over black.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu, Default: Alpha.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Seed: *Default: 0.123, Range: 0 or greater.*

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Show Light Position: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Light Position parameter.

See Also:

[Mosaic](#)

[TileScramble](#)

[Sapphire](#)

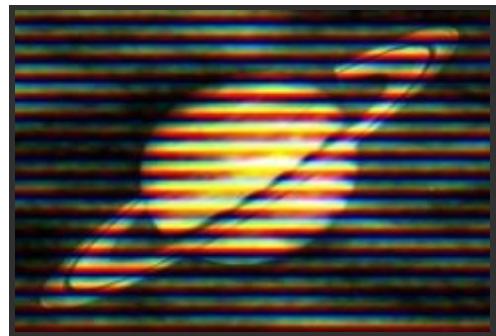
[Plug-ins](#)

[Introduction](#)

S_ScanLines

Creates a version of the source clip with a scan line pattern resembling a color TV monitor. Increase the Add Noise parameter to also add a grainy effect to the result.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Lines Frequency: *Default:* 50, *Range:* 1 or greater.
The frequency of scan lines on the screen. Increase for more lines, decrease for fewer.

Lines Sharpness: *Default:* 1, *Range:* 0 or greater.
Scales the severity of the lines. Increase for sharper edges, or decrease for a more subtle effect. A sharpness of zero reduces the scan line effect to nothing.

Lines Angle: *Default:* 0, *Range:* any.
The angle in degrees of the scan lines. Set to 90 for vertical lines instead of horizontal. This parameter can be adjusted using the Lines Angle Widget.

Lines Shift: *Default:* 0, *Range:* any.
Offsets the position of the pattern of lines. A value of 1.0 shifts one entire scan line over, giving the same result as 0.

Shift Red: *Default:* 0, *Range:* any.
Shifts the red scan lines by this amount, relative to the other lines. Set the red, green, and blue shifts to -.33, .0, and .33 for an out-of-alignment television set look.

Shift Green: *Default:* 0, *Range:* any.
Shifts the green scan lines by this amount.

Shift Blue: *Default:* 0, *Range:* any.
Shifts the blur scan lines by this amount.

Add Noise: *Default:* 0, *Range:* 0 or greater.
If positive, this much color noise is added to the image.

Noise Freq Rel: *Default:* 1, *Range:* 0.01 or greater.
The frequency of the noise, relative to the frequency of lines. This has no effect unless the Add Noise parameter above is positive.

Brightness: *Default:* 1, *Range:* 0 or greater.
Scales the brightness of the result.

Scale Color: *Default* *rgb:* [1 1 1].
Scales the color of the result. For example, if it is yellow [1 1 0], the blue of the result will be 0.

Offset: *Default:* 0, *Range:* any.
Adds this gray value to the result (or subtracts if negative). 0 has no effect, .5 is middle gray, and 1 is white.

Gamma: *Default:* 1.5, *Range:* 0.1 or greater.
Scales the brightness of the image by a curve using this gamma value, allowing adjustment of the middle gray values in the scan lines. This can help make the average brightness of the output match the input.

Saturation: *Default:* 1, *Range:* 0 or greater.
Scales the color saturation. Increase for more intense colors. Set to 0 for monochrome.

Smooth Source: *Default:* 0, *Range:* 0 or greater.

If positive, the source clip is blurred by this amount before being processed.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Lines Angle: *Check-box, Default: off.*

Turns on or off the screen user interface for adjusting the Lines Angle parameter.

See Also:

[ScanLinesMono](#)

[HalfTone](#)

[Sapphire](#)

[HalfToneColor](#)

[Plug-ins](#)

[Etching](#)

[Introduction](#)

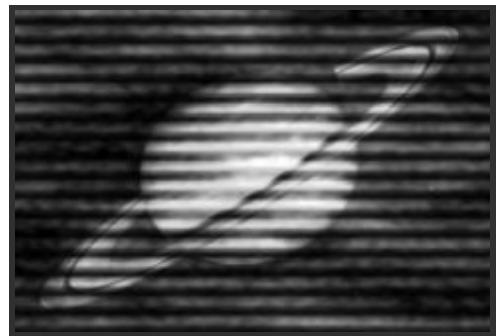
[WipeStripes](#)

[JpegDamage](#)

S_ScanLinesMono

A monochrome version of ScanLines. Creates a version of the source clip with a scan lines pattern resembling a black and white TV monitor. Increase the Add Noise parameter to also add a grainy effect to the result.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Lines Frequency: *Default: 50, Range: 1 or greater.*
The frequency of scan lines on the screen. Increase for more lines, decrease for fewer.

Lines Sharpness: *Default: 1, Range: 0 or greater.*
Scales the severity of the lines. Increase for sharper edges, or decrease for a more subtle effect. A sharpness of zero reduces the scan line effect to nothing.

Lines Angle: *Default: 0, Range: any.*
The angle in degrees of the scan lines. Set to 90 for vertical lines instead of horizontal. This parameter can be adjusted using the Lines Angle Widget.

Lines Shift: *Default: 0, Range: any.*
Offsets the position of the pattern of lines. A value of 1.0 shifts one entire scan line over, giving the same result as 0.

Add Noise: *Default: 0, Range: 0 or greater.*
If positive, this much black and white noise is added to the image.

Noise Freq Rel: *Default: 1, Range: 0.01 or greater.*
The frequency of the noise, relative to the frequency of lines. This has no effect unless the Add Noise parameter above is positive.

Brightness: *Default: 1, Range: 0 or greater.*
Scales the brightness of the result.

Color1: *Default rgb: [1 1 1].*
The 'brighter' color of the scan lines pattern.

Color0: *Default rgb: [0 0 0].*
The 'darker' color of the scan lines pattern.

Offset: *Default: 0, Range: -8 to 2.*
Adds this gray value to the result (or subtracts if negative). 0 has no effect, .5 is middle gray, and 1 is white.

Gamma: *Default: 1.5, Range: 0.1 or greater.*
Scales the brightness of the image by a curve using this gamma value, allowing adjustment of the middle gray values in the scan lines. This can help make the average brightness of the output match the input.

Smooth Source: *Default: 0, Range: 0 or greater.*
If positive, the source clip is blurred by this amount before being processed.

Mask Use: *Popup menu, Default: Luma.*
Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.
Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*
Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and

unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Lines Angle: *Check-box*, *Default:* off.

Turns on or off the screen user interface for adjusting the Lines Angle parameter.

See Also:

[ScanLines](#)

[HalfTone](#)

[Sapphire](#)

[HalfToneColor](#)

[Plug-ins](#)

[Etching](#)

[Introduction](#)

[WipeStripes](#)

[IpegDamage](#)

S_Shake

Applies a shaking motion to the source clip over time with translation, zooming, and/or rotation. The shaking is random but repeatable, so with the same parameters the same shaking motion is generated each time. Turn on Motion Blur and adjust the Mo Blur Length for different amounts of blur. Adjust the Amplitude and Frequency for different shaking speeds and amounts. The Rand parameters give detailed control of the random non-periodic shaking, and the Wave parameters adjust the regular periodic shaking. The X, Y, Z, and Tilt parameters control the horizontal, vertical, zoom, and rotation amounts of shaking respectively.



In the Sapphire Distort effects submenu.

Inputs:

Source: The clip to shake.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Style: *Popup menu, Default: Normal.*

Controls the type of shaking.

Normal: A steady camera shake.

Twitchy: Periods of stillness interrupted by bursts of rapid shaking.

Jumpy: Sudden jumps from one place to another, with slower drifting in between.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.
The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.
The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.
Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.
Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Amplitude: *Default:* 1, *Range:* 0 or greater.
Scales the amplitude of the shaking motion.

Frequency: *Default:* 8, *Range:* 0 or greater.
Increase for faster shaking, decrease for slower shaking. (Be careful if you animate frequency values because the resulting shake frequency is also affected by the rate of change of the value.)

Phase: *Default:* 0, *Range:* any.
Time shift of the shaking motions. (If you animate this value, its rate of change will also affect the apparent frequency.)

Stillness: *Default:* 0.7, *Range:* 0 to 1.
In Twitchy mode, adjusts the fraction of the time that the image is still. Increase for more frequent shaking.

Twitch Frequency: *Default:* 2, *Range:* 0 or greater.
In Twitchy mode, controls the length of the periods of movement and stillness. Increase for shorter, more frequent bursts of movement.

Drift: *Default:* 0.3, *Range:* 0 to 1.
In Jumpy mode, controls the speed of movement in between jumps.

Center Bias: *Default:* 0, *Range:* 0 or greater.
In Jumpy mode, adjusts the likelihood that each jump will reset the image to its original position. If set to zero, every jump is random. If set to one, every jump will go back to the center.

Z Dist: *Default:* 1, *Range:* 0.001 or greater.
Scales the 'distance' of the image. Values greater than 1.0 move it farther away and make it smaller. Values less than 1.0 move the image closer and enlarge it. Zooming in slightly can sometimes be used to hide edge artifacts.

Motion Blur: *Check-box*, *Default:* off.
Options for motion blur of the shaking motion.

Mo Blur Length: *Default:* 1, *Range:* 0 or greater.
Scales the amount of motion blur. Use around .5 when processing on fields or 1.0 for frames to give realistic motion blur. This parameter has no effect if Motion Blur is No.

Seed: *Default:* 0, *Range:* 0 or greater.

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Wrap: *X & Y, Popup menu, Default: [Reflect Reflect].*

Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

X Shake Parameters:

X Rand Amp: *Default:* 0.2, *Range:* 0 or greater.

Amplitude of horizontal random shaking.

X Rand Freq: *Default:* 1, *Range:* 0 or greater.

Frequency of horizontal random shaking.

X Wave Amp: *Default:* 0, *Range:* 0 or greater.

Amplitude of horizontal regular wave shaking.

X Wave Freq: *Default:* 0.5, *Range:* 0 or greater.

Frequency of horizontal regular wave shaking, in cycles per second.

X Phase: *Default:* 0, *Range:* any.

Time shift of the horizontal shaking.

Y Shake Parameters:

Y Rand Amp: *Default:* 0.1, *Range:* 0 or greater.

Amplitude of the vertical random shaking.

Y Rand Freq: *Default:* 1, *Range:* 0 or greater.

Frequency of the vertical random shaking.

Y Wave Amp: *Default:* 0, *Range:* 0 or greater.

Amplitude of the vertical regular wave shaking.

Y Wave Freq: *Default:* 0.5, *Range:* 0 or greater.

Frequency of the vertical regular wave shaking, in cycles per second.

Y Phase: *Default:* 0, *Range:* any.

Time shift of the vertical shaking.

Z Shake Parameters:

Z Rand Amp: *Default:* 0, *Range:* 0 or greater.

Amplitude of the zoom random shaking.

Z Rand Freq: *Default:* 1, *Range:* 0 or greater.

Frequency of the zoom random shaking.

Z Wave Amp: *Default:* 0, *Range:* 0 or greater.

Amplitude of the zoom regular wave shaking.

Z Wave Freq: *Default:* 0.5, *Range:* 0 or greater.

Frequency of the zoom regular wave shaking, in cycles per second.

Z Phase: *Default: 0, Range: any.*
Time shift of the zoom shaking.

Tilt Shake Parameters:

Tilt Rand Amp: *Default: 0, Range: 0 or greater.*
Amplitude of the rotational random shaking, in degrees.

Tilt Rand Freq: *Default: 1, Range: 0 or greater.*
Frequency of the rotational random shaking.

Tilt Wave Amp: *Default: 0, Range: 0 or greater.*
Amplitude of the rotational regular wave shaking, in degrees.

Tilt Wave Freq: *Default: 0.5, Range: 0 or greater.*
Frequency of the rotational regular wave shaking, in cycles per second.

Tilt Phase: *Default: 0, Range: any.*
Time shift of the rotational shaking.

Channels Parameters:

Red Amplitude: *Default: 1, Range: 0 or greater.*
The relative amount of shaking in the red channel. Changing this value from the default will cause the red channel to move more or less than the other color channels, resulting in a color fringing or channel separation look.

Green Amplitude: *Default: 1, Range: 0 or greater.*
The relative amount of shaking in the green channel.

Blue Amplitude: *Default: 1, Range: 0 or greater.*
The relative amount of shaking in the blue channel.

Red Phase: *Default: 0, Range: any.*
The relative phase of the red channel. Positive values will move the red channel ahead of the others in time, causing it to move first and the other channels to follow. Negative values have the opposite effect, causing the red channel to lag behind the others. Small values usually produce the best looks.

Green Phase: *Default: 0, Range: any.*
The relative phase of the green channel.

Blue Phase: *Default: 0, Range: any.*
The relative phase of the blue channel.

RGB Randomness: *Default: 0, Range: 0 or greater.*
The amount of random motion in each color channel. Turn up this parameter to cause all three color channels to move randomly on different paths, independent of the overall shaking. This motion is scaled by X Rand Amp, Y Rand Amp, Z Rand Amp, and Tilt Rand Amp.

RGB Frequency: *Default: 2, Range: 0 or greater.*
The frequency of the random color channel shaking.

Mask Use: *Popup menu, Default: Luma.*
Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.
Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Crop Input Parameters: *Default:* 0, *Range:* 0 or greater.

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

See Also:

[Flicker](#)

[WarpTransform](#)

[BlurMotion](#)

[BlurMoCurves](#)

[Sapphire](#)

[Plug-ins](#)

[Introduction](#)

S_Shape

Draws a shape into the image. It can give a wide variety of shapes, from polygons and circles to stars, flower shapes, and swirled starfish shapes. The main parameters to look at are Points, Pointiness, Roundness, and Swirl.

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to use as background.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* *Union*.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Center: *X & Y*, *Default:* [0 0], *Range:* any.
The center point of the shape. This parameter can be adjusted using the Center Widget.

Size: *Default:* 0.5, *Range:* 0 or greater.
The overall size of the shape. This parameter can be adjusted using the Size Widget.

Rel Width: *Default:* 1, *Range:* 0 or greater.
Increase to make the shape wider.

Rel Height: *Default:* 1, *Range:* 0 or greater.
Increase to make the shape taller.

Blur: *Default:* 0, *Range:* 0 or greater.
Blurs the whole shape.

Points: *Integer*, *Default:* 5, *Range:* 3 to 500.
The number of points in the shape. Unless Pointiness is zero, the shape will have this many points around the edge.

Pointiness: *Default:* 2.15, *Range:* any.
How pointy the shape is. 0 gives a circle (as long as Roundness is 1); 1 gives a regular polygon. Greater than 1 gives starlike shapes, and less than zero gives flower-like shapes with outward-facing lobes.

Roundness: *Default:* 0, *Range:* 0 to 1.
How rounded the edges of the shape are between the points. 0 means straight lines, and 1 means smoothly curved.
When Pointiness is 1, this has no effect.

Swirl: *Default:* 0, *Range:* -5 to 5.
Setting this to nonzero swirls the whole shape around; the outward edge is rotated more than the center to give a vortex-like appearance. Try it with large pointiness.

Rotate: *Default:* 0, *Range:* any.
Rotates the whole shape around its center. This parameter can be adjusted using the Rotate Widget.

Rotate Pre Scale: *Default:* 0, *Range:* any.
Rotates the figure around its center before the Rel Width and Rel Height are applied. You can use both rotations to get interesting effects.

Brightness1: *Default:* 1, *Range:* 0 or greater.
Scales the brightness of the shape.

Color1: *Default* *rgb:* [1 1 1].
The color of the shape.

Color0: *Default* *rgb:* [0 0 0].
The color of the background of the shape image.

Offset0: *Default:* 0, *Range:* any.
Adds this value to color0.

Bg Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the background before combining with the shapes. If 0, the result will contain only the shape image over black.

Combine: *Popup menu, Default: Over.*

Determines how the shape image is combined with the Background.

Shape Only: gives only the shape image with no Background.

Mult: the shape image is multiplied by the Background.

Add: the shape image is added to the Background.

Screen: the shape image is blended with the Background using a screen operation.

Difference: the result is the difference between the shape image and Background.

Overlay: the shape image is combined with the Background using an overlay function.

Over: composites the shape image over the background.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Size: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Center parameter.

Show Rotate: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Center parameter.

Show Center: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Center parameter.

See general info for [Motion Blur](#)

See Also:

[WipeStar](#)

[SpotLight](#)

[TextureTiles](#)

[Sapphire Plug-ins](#)

[Introduction](#)

S_Sharpen

Amplifies the high frequencies in the source clip such as edges and details. Increase the Sharpen Width parameter to sharpen more of the mid range frequencies, and adjust Sharpen Amp to control the amount of sharpening applied.

In the Sapphire Blur+Sharpen effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Scales the amount of sharpening by this input. The Source is not affected where it is black, and full sharpening occurs where it is white.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Quality: *Popup menu, Default: Best.*

Sharpen filter to apply.

Best: Advanced sharpen filter that has significantly fewer artifacts

Fast: Classic sharpen filter

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Sharpen Amp: *Default:* 1, *Range:* any.

The amount of sharpening to apply.

Edge Threshold: *Default:* 0.15, *Range:* 0 or greater.

Edges stronger than this will not be sharpened. For standard dynamic range footage (not HDR) Edge Thresholds between 0.05 and 0.3 usually produce good results. Increasing the threshold will lead to a stronger effect (more edges will be sharpened), but can introduce dark bands around objects.

Small Detail Size: *Default:* 0.01, *Range:* 0 or greater.

The size in pixels of small details. This parameter can be adjusted using the Small Detail Size Widget.

Scale Tiny Details: *Default:* 3, *Range:* 0 or greater.

Values less than one will make tiny details less visible, values greater than one will make them more visible. Tiny details are about half the size of small details.

Scale Small Details: *Default:* 1.5, *Range:* 0 or greater.

Values less than one will make small details less visible, values greater than one will make them more visible.

Scale Medium Details: *Default:* 1, *Range:* 0 or greater.

Values less than one will make medium details less visible, values greater than one will make them more visible. Medium details are about twice the size of small details.

Scale Large Details: *Default:* 2, *Range:* 0 or greater.

Values less than one will make large details less visible, values greater than one will make them more visible. Large details are about four times the size of small details.

Sharpen Width: *Default:* 0.112, *Range:* 0 or greater.

The width in pixels to perform the sharpen. Increase to sharpen softer edges, decrease to sharpen only the sharper edges.

Sharpen Luma: *Default:* 1, *Range:* 0 or greater.

The relative amount of sharpening to apply to the luminance of the source.

Sharpen Chroma: *Default:* 1, *Range:* 0 or greater.

The relative amount of sharpening to apply to the chroma of the source.

Sharpen Red: *Default:* 1, *Range:* any.

The relative amount of sharpening to apply to the red color channel.

Sharpen Green: *Default:* 1, *Range:* any.

The relative amount of sharpening to apply to the green color channel.

Sharpen Blue: *Default:* 1, *Range:* any.

The relative amount of sharpening to apply to the red color channel.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Small Detail Size: *Check-box, Default:* on.

Turns on or off the screen user interface for adjusting the Small Detail Size parameter.

See Also:

[EdgeDetect](#)

[Sapphire Plug-ins](#)

[BandPass](#)

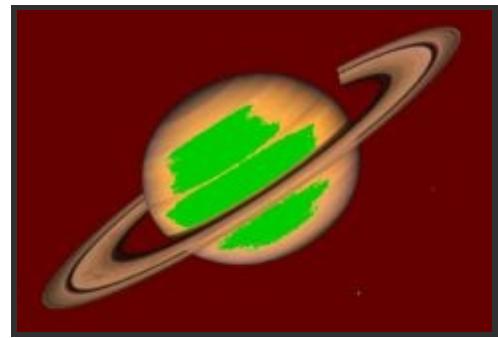
[Introduction](#)

[Threshold](#)

S_ShowBadColors

Identifies all pixels that fall outside a given color range, and flags them with the same color so they can be seen easily.

In the Sapphire Adjust effects submenu.



Inputs:

Source: The clip to be processed.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Min: *Default: 0, Range: 0 to 1.*

Minimum color value. Pixels where any color channel is less than this value will be marked with Low Color.

Max: *Default: 1, Range: 0 to 1.*

Maximum color value. Pixels where any color channel is greater than this value will be marked with High Color.

Min Luma: *Default: 0, Range: 0 to 1.*

Minimum luminance value. Pixels where the luminance is less than this value will be marked with Low Color.

Max Luma: *Default: 1, Range: 0 to 1.*

Maximum luminance value. Pixels where the luminance is greater than this value will be marked with High Color.

Min Chroma: *Default: 0, Range: 0 to 1.*

Minimum chrominance value. Pixels where the chroma is less than this value will be marked with Low Color.

Max Chroma: *Default: 1, Range: 0 to 1.*

Maximum chrominance value. Pixels where the chroma is greater than this value will be marked with High Color.

Min Rgb: *Default rgb: [0 0 0].*

Minimum values per color channel. Pixels where any color channel is below the corresponding channel of this parameter will be marked with Low Color.

Max Rgb: *Default rgb: [1 1 1].*

Maximum values per color channel. Pixels where any color channel is above the corresponding channel of this parameter will be marked with High Color.

High Color: *Default rgb: [1 0 0].*

Color to mark high pixels with. Any pixel that is above one of the Max parameters will be set to this color.

Low Color: *Default rgb: [0 0 1].*

Color to mark low pixels with. Any pixel that is below one of the Min parameters will be set to this color.

Output Matte: *Check-box, Default: off.*

If enabled, output a matte which is set to white for bad pixels and black otherwise.

Invert Matte: *Check-box*, *Default:* off.

If enabled, the matte is inverted to show black for bad pixels and white otherwise. Has no effect unless Output Matte is also enabled.

See Also:

[HueSatBright](#)

[Monochrome](#)

[ClampChroma](#)

[PseudoColor](#)

[DuoTone](#)

[TriTone](#)

[QuadTone](#)

[Tint](#)

[Threshold](#)

[Hotspots](#)

[Gamma](#)

[Solarize](#)

[ChannelSwitcher](#)

[Invert](#)

[Sapphire](#)

[Plug-ins](#)

[Introduction](#)

S_Sketch

Generates a version of the input with a hand drawn sketched look. The results of this effect can depend on the image resolution, so it is recommended to test your final resolution before processing a clip.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Style: *Popup menu*, *Default:* Sketch.
Selects the style of the sketched strokes.

Sketch: the stroke directions align with the edges found within the image.
Bumpy Sketch: the strokes are perpendicular to the edges within the image.

Frequency: *Default:* 50, *Range:* 1 or greater.
The density of brush strokes in the frame. Increase for smaller strokes.

Stroke Length: *Default:* 2, *Range:* any.
Determines the length of the strokes along the directions of edges in the source clip. If this is negative you can switch between Sketch and BumpySketch styles and vice versa.

Stroke Align: *Default:* 0.2, *Range:* 0 or greater.
Increase to smooth out the directions of the strokes so nearby strokes are more parallel.

Smooth Colors: *Default:* 0, *Range:* 0 or greater.
Blurs the source by this amount before generating the brush strokes. Increase to cause the colors of nearby strokes to be more consistent.

Seed: *Default:* 0, *Range:* 0 or greater.
Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Jitter Frames: *Integer*, *Default:* 0, *Range:* 0 or greater.
If this is 0, the locations of the strokes will remain the same for every frame processed. If it is 1, the locations of the strokes are re-randomized for each frame. If it is 2, they are re-randomized every second frame, and so on.

Background Color: *Default* *rgb:* [0.8 0.8 0.8].
The color of the background over which the sketched lines are applied.

Line Thickness: *Default:* 0.04, *Range:* 0 or greater.
The thickness of the sketched lines.

Line Strength: *Default:* 0.3, *Range:* 0 or greater.
The strength of the sketched lines. Increase for brighter lines, decrease for softer lines.

Mask Use: *Popup menu*, *Default:* Luma.
Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.
Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.
Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[AutoPaint](#)

[HalfTone](#)

[Sapphire](#)

[Mosaic](#)

[Plug-ins](#)

[FlysEyeHex](#)

[Introduction](#)

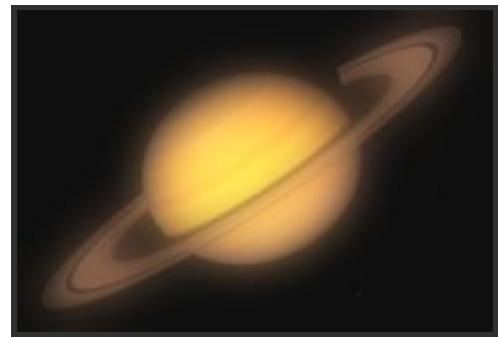
[EdgeDetect](#)

[JpegDamage](#)

S_SoftFocus

Combines a blurred version of the source with the original to give a 'soft focus' effect. Adjust the Width and Mix parameters to give different types of looks.

In the Sapphire Blur+Sharpen effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* If provided, the blur is only performed on regions of the source clip specified by the bright areas of this input. Pixels outside this mask are not blurred, and do not contribute to the resulting blurred pixels within it. This input can be affected using the Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

- Union:** Uses the area covered by both masks together.
- Intersect:** Uses the area that overlaps between the two masks.
- Mocha Only:** Ignore the Input Mask and only use the Mocha Mask.

Soft Width: *Default:* 0.224, *Range:* 0 or greater.
Scales the width of the soft focus blur. This parameter can be adjusted using the Soft Width Widget.

Width Rel: *X & Y*, *Default:* [1 1], *Range:* 0 or greater.
The relative horizontal and vertical blur widths. Set Width Rel X to 0 for a vertical-only blur, or set Width Rel Y to 0 for a horizontal-only blur. This parameter can be adjusted using the Soft Width Widget.

Mix With Blurred: *Default:* 0, *Range:* 0 to 1.
If positive, mixes in more of the blurred version of the source.

Mix With Source: *Default:* 0, *Range:* 0 to 1.
If positive, increases the amount of original source in the result.

Brightness: *Default:* 1, *Range:* 0 or greater.
Scales the brightness of the result.

Offset Dark: *Default:* 0, *Range:* -8 to 2.
Adds this gray value to the darker regions of the result. This can be negative to increase contrast.

Subpixel: *Check-box*, *Default:* on.
Enables blurring by subpixel amounts. Use this for smoother animation of the Width parameters.

Mask Use: *Popup menu*, *Default:* Luma.
Determines how the Mask input channels are used to make a monochrome mask.

- Luma:** the luminance of the RGB channels is used.
- Alpha:** only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.
Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.
If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Soft Width: *Check-box*, *Default:* on.
Turns on or off the screen user interface for adjusting the Soft Width parameter.

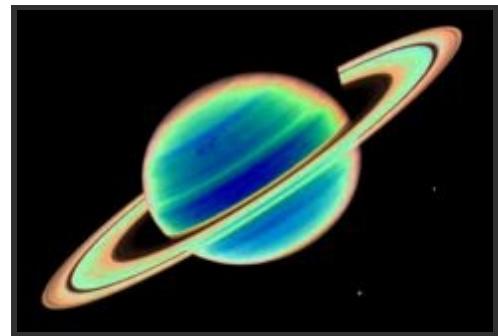
See Also:

[Blur](#) [Sapphire Plug-ins](#)
[Glow](#) [Introduction](#)

S_Solarize

Inverts the colors of the input clip that are brighter than the Threshold value, to create a 'solarization' effect.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Threshold: *Default: 0.5, Range: 0 or greater.*

Colors above this value are inverted. If this is 0, all colors are inverted to produce a negative. If this is 1, no colors are inverted and the result should equal the input.

Saturation: *Default: 1, Range: any.*

Scales the color saturation of the result. Increase for more intense colors. Set to 0 for monochrome. You can also invert the chroma of the result by making this negative.

Invert: *Check-box, Default: off.*

If enabled, the result is inverted. The invert is applied before the Brightness and Offset are used, so you may need to readjust those parameters when you change the invert option.

Brightness: *Default: 2, Range: 0 or greater.*

Scales the brightness of the result. Note that if a Threshold of .5 is used, no colors will be more than half the maximum brightness, so the contrast is increased by setting the Brightness to 2.

Offset Dark: *Default: 0, Range: any.*

Adds this gray value to the darker regions after the solarize effect. This can be negative to increase contrast.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:[HueSatBright](#)[ZebrafyColor](#)[Monochrome](#)[Sapphire Plug-ins](#)[ClampChroma](#)[Introduction](#)[PseudoColor](#)[DuoTone](#)[TriTone](#)[QuadTone](#)[Tint](#)[Threshold](#)[Hotspots](#)[Gamma](#)[ChannelSwitcher](#)[ShowBadColors](#)[Invert](#)

S_Sparkles

Generates a field of sparkling glint effects. Adjust the Frequency, Density, and Size parameters for different types of sparkling patterns. Use the Matte input to only generate sparkles in specified areas.

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to combine the sparkles with.

Mask: *Optional.* If provided, the sparkle colors are scaled by this input. A monochrome mask can be used to choose the areas that will generate sparkles. A color mask can be used to selectively adjust the sparkle colors in different regions. The mask is applied before the sparkles are generated so it will not clip the resulting glint rays.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* *Union*.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Frequency: *Default:* 25, *Range:* 0.01 or greater.

The frequency of the sparkles. Increase to zoom out, decrease to zoom in.

Density: *Default:* 0.65, *Range:* 0 to 1.

Increase to add more sparkles.

Seed: *Default:* 0.23, *Range:* 0 or greater.

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of all the sparkles.

Color: *Default rgb:* [1 1 1].

Scales the color of all the sparkles.

Brightness X: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the horizontal glint rays.

Brightness Y: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the vertical glint rays.

Brightness Diag1: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the diagonal rays from top right to bottom left.

Brightness Diag2: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the diagonal rays from top left to bottom right.

Size: *Default:* 1, *Range:* 0 or greater.

Scales the length of all the glint rays. This and all the size parameters can be adjusted using the Size Widget.

Size X: *Default:* 1, *Range:* 0 or greater.

Scales the length of the horizontal glint rays.

Size Y: *Default:* 1, *Range:* 0 or greater.

Scales the length of the vertical glint rays.

Size Diag1: *Default:* 0.5, *Range:* 0 or greater.

Scales the length of the diagonal rays from top right to bottom left.

Size Diag2: *Default:* 0.5, *Range:* 0 or greater.

Scales the length of the diagonal rays from top left to bottom right.

Size Red: *Default:* 0.6, *Range:* 0 or greater.

Scales the length of the red component of the rays. If the red, green, and blue sizes are equal the sparkles will be

monochrome.

Size Green: *Default:* 0.8, *Range:* 0 or greater.
Scales the length of the green component of the rays.

Size Blue: *Default:* 1, *Range:* 0 or greater.
Scales the length of the blue component of the rays.

Shift Start: *X & Y*, *Default:* [0 0], *Range:* any.
Translation offset of the result.

Shift Speed: *X & Y*, *Default:* [0 0], *Range:* any.
Translation speed of the result. If non-zero, the result is automatically animated to shift at this rate. The result of animated Speed values may not be intuitive, so for variable speed motion it is usually best to set this to 0 and animate the Shift Start values instead.

Sparkle Speed: *X & Y*, *Default:* [0.1 0], *Range:* any.
If non-zero, the sparkles automatically twinkle on and off at this rate.

Affect Alpha: *Default:* 0, *Range:* 0 or greater.
If this value is positive the output Alpha channel will include some opacity from the sparkles. The maximum of the red, green, and blue sparkle brightness is scaled by this value and combined with the background Alpha at each pixel.

Bg Brightness: *Default:* 1, *Range:* 0 or greater.
Scales the brightness of the background before combining with the Sparkles. If 0, the result will contain only the sparkles image over black.

Smooth Anim: *Check-box*, *Default:* off.
Enable for more steady animation, especially at high values of Frequency.

Invert Mask: *Check-box*, *Default:* off.
If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu*, *Default:* RGB.
Determines how the Mask input channels are used to make a monochrome mask.

RGB: The red, green, and blue channels are used.
Alpha: only the Alpha channel is used.

Show Size: *Check-box*, *Default:* on.
Turns on or off the screen user interface for adjusting the size parameters.

Show Shift Start: *Check-box*, *Default:* on.
Turns on or off the screen user interface for adjusting the Shift Start parameter.

See Also:

[SparklesColor](#)

[Glint](#)

[Sapphire](#)

[Plug-ins](#)

[Introduction](#)

S_SparklesColor

Generates a field of sparkling Glint effects with varying colors. Adjust the Frequency, Density, and Size parameters for different types of sparkling patterns. Use the Matte input to only generate sparkles in specified areas.

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to combine the sparkles with.

Mask: *Optional.* If provided, the sparkle colors are scaled by this input. A monochrome mask can be used to choose the areas that will generate sparkles. A color mask can be used to selectively adjust the sparkle colors in different regions. The mask is applied before the sparkles are generated so it will not clip the resulting glint rays.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Frequency: *Default: 25, Range: 0.01 or greater.*

The frequency of the sparkles. Increase to zoom out, decrease to zoom in.

Density: *Default: 0.65, Range: 0 to 1.*

Increase to add more sparkles.

Seed: *Default: 0.23, Range: 0 or greater.*

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Brightness: *Default: 1, Range: 0 or greater.*

Scales the brightness of all the sparkles.

Color: *Default rgb: [1 1 1].*

Scales the color of all the sparkles.

Color Variation: *Default: 1, Range: 0 or greater.*

Scales the saturation of the sparkles. Increase for more intense colors, decrease for more subtle colors.

Brightness X: *Default: 1, Range: 0 or greater.*

Scales the brightness of the horizontal glint rays.

Brightness Y: *Default: 1, Range: 0 or greater.*

Scales the brightness of the vertical glint rays.

Brightness Diag1: *Default: 1, Range: 0 or greater.*

Scales the brightness of the diagonal rays from top right to bottom left.

Brightness Diag2: *Default: 1, Range: 0 or greater.*

Scales the brightness of the diagonal rays from top left to bottom right.

Size: *Default: 1, Range: 0 or greater.*

Scales the length of all the glint rays. This and all the size parameters can be adjusted using the Size Widget.

Size X: *Default: 1, Range: 0 or greater.*

Scales the length of the horizontal glint rays.

Size Y: *Default: 1, Range: 0 or greater.*

Scales the length of the vertical glint rays.

Size Diag1: *Default: 0.5, Range: 0 or greater.*

Scales the length of the diagonal rays from top right to bottom left.

Size Diag2: *Default: 0.5, Range: 0 or greater.*

Scales the length of the diagonal rays from top left to bottom right.

Size Red: *Default:* 0.6, *Range:* 0 or greater.

Scales the length of the red component of the rays. If the red, green, and blue sizes are equal the sparkles will be monochrome.

Size Green: *Default:* 0.8, *Range:* 0 or greater.

Scales the length of the green component of the rays.

Size Blue: *Default:* 1, *Range:* 0 or greater.

Scales the length of the blue component of the rays.

Shift Start: *X & Y*, *Default:* [0 0], *Range:* any.

Translation offset of the result.

Shift Speed: *X & Y*, *Default:* [0 0], *Range:* any.

Translation speed of the result. If non-zero, the result is automatically animated to shift at this rate. The result of animated Speed values may not be intuitive, so for variable speed motion it is usually best to set this to 0 and animate the Shift Start values instead.

Sparkle Speed: *X & Y*, *Default:* [0.1 0], *Range:* any.

If non-zero, the sparkles automatically twinkle on and off at this rate.

Affect Alpha: *Default:* 0, *Range:* 0 or greater.

If this value is positive the output Alpha channel will include some opacity from the sparkles. The maximum of the red, green, and blue sparkle brightness is scaled by this value and combined with the background Alpha at each pixel.

Bg Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the background before combining with the Sparkles. If 0, the result will contain only the sparkles image over black.

Smooth Anim: *Check-box*, *Default:* off.

Enable for more steady animation, especially at high values of Frequency.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu*, *Default:* RGB.

Determines how the Mask input channels are used to make a monochrome mask.

RGB: The red, green, and blue channels are used.

Alpha: only the Alpha channel is used.

Show Size: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the size parameters.

Show Shift Start: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Shift Start parameter.

See Also:

[Sparkles](#)

[Glint](#)

[Sapphire](#)

[Plug-ins](#)

[Introduction](#)

S_SpotLight

Lights the input clip using one or two spotlights. For each enabled light, the intersection of a 3D light cone with the image plane is calculated using the given light source position, aim location, and beam angle. Ambient light can also be applied to affect the entire source image evenly. A wide variety of lighting shapes can be created by adjusting the parameters provided.



In the Sapphire Lighting effects submenu.

Inputs:

Background: The clip to combine the light with.

Mask: *Optional.* If provided, the source spot colors are scaled by this input. A monochrome mask can be used to choose a subset of Source areas that will generate spots. A color mask can be used to selectively adjust the spot colors in different regions. The mask is applied to the source before the spots are generated so it will not clip the resulting spots.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Light1 Enable: *Check-box*, *Default:* on.

Turns on or off this spotlight.

Light1 Uses Mocha: *Check-box*, *Default:* off.

Controls whether the first light is controlled by the Light 1 parameter or follows the Light 1 tracked inside of Mocha.

Smooth Light1 Track: *Integer*, *Default:* 0, *Range:* 0 or greater.

Controls how many points to average when stabilizing the Mocha point track.

Light1 Bright: *Default:* 0.8, *Range:* any.

Scales the brightness of this spotlight. This value can be made negative for a 'dark' spotlight effect.

Light1 Color: *Default rgb:* [1 1 1].

Determines the color of this spotlight.

Light1: *X & Y*, *Default:* [-0.5 0.361], *Range:* any.

The position of this light source relative to the image plane. This parameter can be adjusted using the Light1 Widget.

Light1 Z: *Default:* 0.5, *Range:* 0.028 or greater.

The distance of this light source from the image plane. Decreasing this brings the light source closer to the surface and causes the direction of the beam to be more parallel to the surface, which can stretch the spot into an ellipse or hyperbola shape.

Aim1: *X & Y*, *Default:* [-0.167 0], *Range:* any.

This spotlight is directed at this location on the image plane. If this is directly under the Light Source a circular spot will result. When moved away from the Light Source it can also cause the spot to change to an ellipse or hyperbola shape. This parameter can be adjusted using the Aim1 Widget.

Aim1 Uses Mocha: *Check-box*, *Default:* off.

Controls whether the first light's direction is controlled by the Aim 1 parameter or follows the Aim 1 tracked inside of Mocha.

Smooth Aim1 Track: *Integer*, *Default:* 0, *Range:* 0 or greater.

Controls how many points to average when stabilizing the Mocha point track.

Spread Angle1: *Default:* 45, *Range:* 0 to 360.

The spread angle of this spotlight beam in degrees. Larger values open up the beam for a larger spot.

Softness1: *Default:* 0.3, *Range:* 0.01 to 1.

Determines the amount of penumbra or the softness of the spotlight edges, relative to the Spread Angle. Lower

values make crisp edged shapes, higher values make softer shapes.

Falloff Power1: *Default:* 0, *Range:* 0 or greater.

Determines how much the spotlight brightness fades with distance. A value of 0 causes no fading, 1 fades the light as distance increases, and 2 fades it faster with distance. A value of 2 is correct for a physically realistic point light.

Light2 Enable: *Check-box*, *Default:* off.

Turns on or off the second spotlight.

The remainder of the Light2 parameters are the same as those described above for Light1, but control the second spotlight instead.

Ambient Bright: *Default:* 0.2, *Range:* any.

The amount of ambient light included in the entire frame. This allows parts of the Background outside of the spotlights to still be visible if desired.

Ambient Color: *Default rgb:* [1 1 1].

Determines the color of the ambient light.

All Lights Bright: *Default:* 1, *Range:* any.

Scales the brightness of all the spotlights together.

All Lights Color: *Default rgb:* [1 1 1].

Scales the color of all the spotlights together.

All Aims Shift: *X & Y*, *Default:* [0 0], *Range:* any.

Adds this amount to all lights Aim parameters. This can be used to easily make all lights aim at the same location. This parameter can be adjusted using the All Aims Shift Widget.

All Shift: *X & Y*, *Default:* [0 0], *Range:* any.

Shifts the entire spotlight pattern without changing their shapes by adding this amount to all light and aim positions.

Combine: *Popup menu*, *Default:* Mult.

Determines how the light is combined with the Background.

Lights Only: gives only the light image with no Background.

Mult: the light is multiplied by the Background. This is the effect that a real light would typically have.

Add: the light is added to the Background.

Screen: the light is blended with the Background using a screen operation.

Overlay: the light is combined with the Background using an overlay function.

Mask Use: *Popup menu*, *Default:* Luma.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Light1: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Light1 parameter.

Show Aim1: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Aim1 parameter.

Show Light2: *Check-box*, *Default:* off.

Turns on or off the screen user interface for adjusting the Light2 parameter.

Show Aim2: *Check-box*, *Default:* off.

Turns on or off the screen user interface for adjusting the Aim2 parameter.

Show All Aims Shift: *Check-box*, *Default:* off.

Turns on or off the screen user interface for adjusting the All Aims Shift parameter.

See Also:

[LensFlare](#)
[Emboss](#)

[Sapphire Plug-ins](#)
[Introduction](#)

S_Streaks

Motion blurs the bright areas of the source into streaks between the From and To transformations. This can be used to create an extended film exposure effect, or simulate soft beams of light. From and To parameters do not refer to time. They describe the two transformations in space that determine the style of blur applied to each frame.

In the Sapphire Lighting effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* If provided, the Source is scaled by the values of this input clip before the areas that get streaked are determined. This can be used to selectively remove or reduce the streaks applied to specific areas of the Source.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Streaks Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the streaks.

Exposure Bias: *Default:* 0, *Range:* 0 to 1.

Determines the variable amount of exposure along the path between the From and To transformations. A value of 0 causes more exposure at the From end, 0.5 causes equal exposure along the path, and 1.0 causes more exposure at the To end. If you have bright spots on a dark background, a 0 value would cause the processed spots to be brighter at the From end and dark at the To end, and a 1.0 value would cause the opposite.

Threshold: *Default:* 0.5, *Range:* 0 or greater.

Streaks are generated from locations in the source clip that are brighter than this value. A value of 0.9 causes streaks at only the brightest spots. A value of 0 causes streaks for every non-black area.

Threshold Add Color: *Default* *rgb:* [0 0 0].

This can be used to raise the threshold on a specific color and thereby reduce the streaks generated on areas of the source clip containing that color.

Center: *X & Y*, *Default:* [0 0], *Range:* any.

The center of rotation and zooming, in screen coordinates relative to the center of the frame. The shift values should be zero for this location to make sense. This parameter can be adjusted using the Center Widget.

From Z Dist: *Default:* 1, *Range:* 0.001 or greater.

The 'distance' of the From transformation. This zooms about the Center location when Shift is 0. Increase to zoom out, decrease to zoom in. This parameter can be adjusted using the From Transfm Widget.

From Rotate: *Default:* 0, *Range:* any.

The rotation angle of the From transformation, in degrees, about the center. This parameter can be adjusted using the From Transfm Widget.

From Shift: *X & Y*, *Default:* [0 0], *Range:* any.

The horizontal and vertical translations of the From transformation. This can be used for directional motion. If it is non-zero the center location becomes less meaningful. This parameter can be adjusted using the From Transfm Widget.

To Z Dist: *Default:* 0.8, *Range:* 0.001 or greater.

The 'distance' of the To transformation. Increase to zoom out, or decrease to zoom in. This parameter can be adjusted using the To Transform Widget.

To Rotate: *Default:* 0, *Range:* any.

The rotation angle of the To transformation, in degrees, about the center. Note that if the From and To Rotate angles are very different, the interpolation between them will become less accurate. This parameter can be adjusted using the To Transform Widget.

To Shift: *X & Y*, *Default:* [0 0], *Range:* any.

The horizontal and vertical translations of the To transformation. This can be used for directional motion. If it is

non-zero the center location becomes less meaningful. This parameter can be adjusted using the To Transform Widget.

Mix Source Dark: *Default: 1, Range: 0 to 1.*

The dark non-streaked components of the Source are scaled by this amount and added to the result. This allows combining the streaked and non-streaked versions of the source clip.

Mix Source Bright: *Default: 0, Range: 0 to 1.*

The original bright components of the Source that were used to generate the streaks are scaled by this amount and added to the result. This allows combining some non-streaked bright areas of the source clip with the output.

Result Brightness: *Default: 1, Range: 0 or greater.*

Scales the brightness of the result.

Combine: *Popup menu, Default: Add.*

Determines how the streaks are combined with the background.

Add: causes the streaks to be added to the background.

Screen: performs a blend function which can help prevent overly bright results.

Wrap: *Popup menu, Default: No.*

Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Streaks Res: *Popup menu, Default: Full.*

Selects the resolution factor for the streaks. This is similar to the general 'Res' factor parameter, but it only affects the streaks: the original mixed with the streaks remains at full resolution. Higher resolutions give better quality, lower resolutions give faster processing.

Full: Full resolution is used.

Half: The streaks are calculated at half resolution.

Quarter: The streaks are calculated at quarter resolution.

Subpixel: *Check-box, Default: on.*

If enabled, uses a better quality but slightly slower method for rendering the streaks.

Affect Alpha: *Default: 0, Range: 0 or greater.*

If this value is positive the output Alpha channel will include some opacity from the streaks. The maximum of the red, green, and blue streak brightness is scaled by this value and combined with the Background Alpha at each pixel.

Blur Mask: *Default: 0, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Type: *Popup menu, Default: Color.*

This setting is ignored unless the Mask input is provided.

Luma: uses the luminance of the Mask input to scale the brightness of the streaks.

Color: uses the RGB channels of the Mask input to scale the colors of the streaks.

Alpha: uses the alpha channel of the Mask input to scale the brightness of the streaks.

Show Center: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Center parameter.

Show From Transfm: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the From Z Dist and From Rotate parameters.

Show To Transform: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the To Z Dist and To Rotate parameters.

Show From Shift: *Check-box, Default: off.*

Turns on or off the screen user interface for adjusting the Center parameter.

Show To Shift: *Check-box, Default: off.*

Turns on or off the screen user interface for adjusting the Center parameter.

See Also:[Rays](#)[Sapphire Plug-ins](#)[EdgeRays](#)[Introduction](#)[BlurMotion](#)[WarpRepeat](#)[WarpChroma](#)

S_StretchFrameEdges

Stretch the edges of a 4x3 image while preserving the center, to hide the black pillars in a 16x9 comp. This effect takes the middle part of the Source clip and squeezes it, since viewing a 4x3 image in a 16x9 comp normally stretches it out to fit. The edges are not squeezed, so the image goes all the way out to the edges. The left and right edge portions of the image will appear stretched horizontally. Although intended for 4x3 conversion, it can work with any aspect ratios.



In the Sapphire Distort effects submenu.

Inputs:

Source: The clip to be processed.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Center Squeeze: *Default: 1.33, Range: 0 to 2.*

Amount to squeeze the center portion of the image. To fit a 4x3 image into a 16x9, normally squeeze by 4/3 or 1.333.

Center Width: *Default: 0.4, Range: 0 to 0.99.*

The center of the image (the middle half, if this parameter is 0.5) is squeezed uniformly, with no distortion. This parameter defines the un-distorted part of the image.

Border Width: *Default: 0, Range: 0 to 1.*

To reduce distortion at the edges, you can turn up Border Width to allow some black borders. The edges of the clip won't be distorted as severely because they don't have to stretch as far.

Shift X: *Default: 0, Range: -1 to 1.*

Shift the entire image left or right, to keep the interesting part of the image in the non-distorted part of the frame. Setting this to non-zero will reveal the edge of the clip, unless Wrap is set to Tile or Reflect.

Smooth: *Default: 0.5, Range: 0 to 1.*

When set to zero, the edges of the image are linearly stretched. This produces the least distortion at the very edge, but can give a visible seam where the center meets the edge zone. When set to one, the seam is fully hidden, but the very edges of the image will be fairly seriously distorted. Compromise values are in between zero and one.

Wrap: *Popup menu, Default: No.*

Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

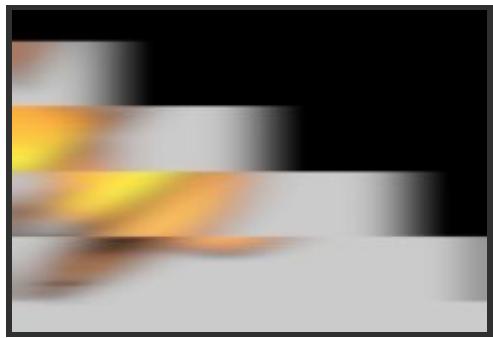
See Also:

[Sapphire Plug-ins Introduction](#)

S_StripSlide

Breaks a clip into strips and slides them off the screen one at a time to reveal the Background.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Background: *Optional.* This clip is revealed as the Source slides away.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Intersect.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Amount: *Default: 0.5, Range: 0 to 1.*

Controls the progress of the slide effect. At zero, the Source is fully visible, and at one the Background is fully visible.

Motion Blur: *Default: 0.3, Range: 0 or greater.*

Scales the amount of motion blur to use.

Strip Size: *Default: 0.1, Range: 0.01 or greater.*

The width of the strips. This parameter can affect the timing of the strips, so animating it is not recommended.

Randomize Size: *Default: 0, Range: 0 or greater.*

Makes some strips larger and some smaller, at random.

Strip Angle: *Default: 0, Range: any.*

Controls the angle along which the strips are divided, and also the direction in which they slide. This parameter can affect the timing of the strips, so animating it is not recommended.

Strip Shift: *Default: 0, Range: any.*

Adjusts the position of the strip boundaries. This parameter can affect the timing of the strips, so animating it is not recommended.

Speed: *Default: 10, Range: 1 or greater.*

The speed at which each strip moves. As speed increases, the delay between strips becomes larger. If the speed is low, many strips will be in motion at the same time, creating a wave or ripple effect. This parameter affects the timing of the strips, so animating it is not recommended.

Slow Start: *Default: 1, Range: 0 to 1.*

Controls the acceleration of each strip as it moves. If set to zero, the strip will start moving at full speed. With larger values, the strip will start moving more slowly and accelerate up to its full speed, resulting in smoother motion.

Order: *Popup menu, Default: Top Down.*

Controls the order in which the strips slide off screen.

Top Down: in order from top to bottom.

Bottom Up: in order from bottom to top.

Random: random order.

Center Out: outward from the center, alternating strips above and below the center.

Edges In: inward from the edges, alternating strips above and below the center.

Seed: *Default: 0.123, Range: 0 or greater.*

Initializes the random number generator for random strips sizes and order. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Crop Input Parameters: *Default: 0, Range: 0 or greater.*

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

See Also:

[SwishPan](#)

[Swish3D](#)

[CardFlip](#)

[TileScramble](#)

[StripSlideTransition](#)

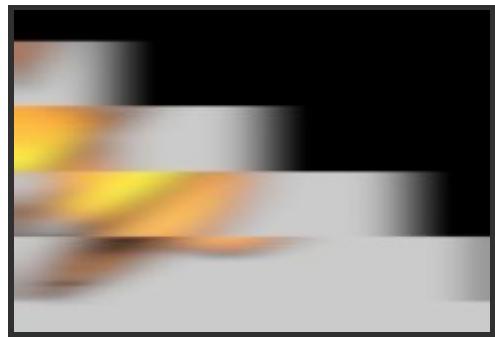
[Sapphire Plug-ins](#)

[Introduction](#)

S_StripSlideTransition

Transitions between two clips by breaking them into strips and sliding them off the screen one at a time to reveal the incoming clip.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Amount: *Default: 0, Range: -0.5 to 1.5.*

Determines the transition ratio between the From and To inputs, and would normally be animated from 0 to 1 to perform a complete transition. The curve controlling this parameter can be adjusted for more detailed control over the timing of the wipe.

Style: *Popup menu, Default: Slide Off.*

Controls which clip the slide is applied to.

Slide Off: The outgoing clip slides off to reveal the incoming clip.

Slide On: The incoming clip slides on over the outgoing clip.

Side by Side: The outgoing clip slides off while the incoming clip slides on next to it.

Motion Blur: *Default: 0.3, Range: 0 or greater.*

Scales the amount of motion blur to use.

Strip Size: *Default: 0.1, Range: 0.01 or greater.*

The width of the strips. This parameter can affect the timing of the strips, so animating it is not recommended.

Randomize Size: *Default: 0, Range: 0 or greater.*

Makes some strips larger and some smaller, at random.

Strip Angle: *Default: 0, Range: any.*

Controls the angle along which the strips are divided, and also the direction in which they slide. This parameter can affect the timing of the strips, so animating it is not recommended.

Strip Shift: *Default: 0, Range: any.*

Adjusts the position of the strip boundaries. This parameter can affect the timing of the strips, so animating it is not recommended.

Speed: *Default: 10, Range: 1 or greater.*

The speed at which each strip moves. As speed increases, the delay between strips becomes larger. If the speed is low, many strips will be in motion at the same time, creating a wave or ripple effect. This parameter affects the

timing of the strips, so animating it is not recommended.

Slow Start: *Default: 1, Range: 0 to 1.*

Controls the acceleration of each strip as it moves. If set to zero, the strip will start moving at full speed. With larger values, the strip will start moving more slowly and accelerate up to its full speed, resulting in smoother motion.

Order: *Popup menu, Default: Top Down.*

Controls the order in which the strips slide off screen.

Top Down: in order from top to bottom.

Bottom Up: in order from bottom to top.

Random: random order.

Center Out: outward from the center, alternating strips above and below the center.

Edges In: inward from the edges, alternating strips above and below the center.

Seed: *Default: 0.123, Range: 0 or greater.*

Initializes the random number generator for random strips sizes and order. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Crop Input Parameters: *Default: 0, Range: 0 or greater.*

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

See Also:

[SwishPan](#)

[Swish3D](#)

[CardFlip](#)

[DissolveTiles](#)

[StripSlide](#)

[Sapphire](#)

[Plug-ins](#)

[Introduction](#)

S_Swish3D

Dissolves between two input clips while performing 3D moves on each. During the transition the From clip is transformed by the Zdist, Rotate, Swivel, Tilt, Shift, Scale, and Shear parameters, and the To clip is transformed by the opposite of these values. The overall amount of motion for each image can be scaled by the Rel Amp From and Rel Amp To parameters.



In the Sapphire Transitions effects submenu.

Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Effect: *Popup menu, Default: Blur Warp.*

Selects the type of motion blur to apply when moving the From and To clips.

Blur Warp: Normal motion blur, similar to BlurMotion effect.

Chroma Warp: Move the color channels by different amounts, creating a color fringing effect similar to WarpChroma.

Wipe Amount: *Default: 0, Range: -0.5 to 1.5.*

Determines the transition ratio between the From and To inputs, and would normally be animated from 0 to 1 to perform a complete transition. The curve controlling this parameter can be adjusted for more detailed control over the timing of the wipe.

Center: *X & Y, Default: [0 0], Range: any.*

The location of the d center in screen coordinates relative to the center of the frame. This parameter can be set by enabling and moving the Center Widget. Note that moving the d center can also cause the d size to change so that the current value of Wipe Amt remains correct.

Motion Blur: *Default: 1, Range: 0 or greater.*

Scales the amount of motion blur to use.

Z Dist: *Default: 0.5, Range: 0.001 or greater.*

The 'distance' to transform the From clip. Values greater than 1.0 move it farther away and make it smaller. Values less than 1.0 move the image closer and enlarge it. By default, the To clip is also transformed by the opposite of this value.

Rotate: *Default: 0, Range: any.*

Rotates by the specified angle in counter-clockwise degrees.

Swivel: *Default:* 0, *Range:* any.
Rotates left or right in 3D about a vertical axis.

Tilt: *Default:* 0, *Range:* any.
Rotates up or down in 3D about a horizontal axis. You can use Swivel and Tilt together to rotate about arbitrary diagonal axes.

Perspective Amount: *Default:* 1, *Range:* 0.25 to 4.
Controls the amount of lens telescoping while applying Swivel and Tilt. Increase for more 3D perspective.

Shift: *X & Y*, *Default:* [0 0], *Range:* any.
Translation of the d pattern.

Scale: *Default:* 1, *Range:* 0 to 2.
Scales the size of the clips.

Scale Rel: *X & Y*, *Default:* [1 1], *Range:* 0 to 2.
Scales the relative horizontal or vertical size of the clips.

Shear: *X & Y*, *Default:* [0 0], *Range:* any.
Shears horizontally or vertically.

Rel Amp From: *Default:* 1, *Range:* any.
Scales the amount of transformation applied to the From clip. Set to zero to disable moving the From clip. Make negative to reverse the motion.

Rel Amp To: *Default:* -1, *Range:* any.
Scales the amount of transformation applied to the To clip. By default, the To clip is transformed in the opposite direction of the From clip. Set to zero to disable moving the To clip. Make positive to move the To clip in the same direction as the From clip.

Fade: *Popup menu*, *Default:* From and To.
Determines which clips are faded in or out during the transition.

From and To: Cross fades both clips during the transition.

Only From: Fades out the From clip and composites that over the To clip. This causes the To clip to remain fully opaque in areas where the From clip does not overlap with it.

Only To: Fades in the To clip and composites that over the From clip. This causes the From clip to remain fully opaque in areas where the To clip does not overlap with it.

Fade Mid Time: *Default:* 0.5, *Range:* 0 to 1.
The midpoint in time of the image dissolve. Decrease for an earlier dissolve or increase for a later dissolve. If this is 1.0 the From clip will remain fully opaque for the entire transition. You can use this in combination with the Combine parameter to create various reveals without fading either clip. For example set Dissolve Mid Time to 1.0, Combine to Fade From, and then Shift and/or Rotate to cause the From clip to move off the screen.

Slow In: *Default:* 0.5, *Range:* 0 to 1.
If positive, causes the transition to start more gradually.

Slow Out: *Default:* 0.5, *Range:* 0 to 1.
If positive, causes the transition to end more gradually.

Wrap From: *X & Y*, *Popup menu*, *Default:* [Reflect Reflect].
Determines the method for accessing outside the borders of the From image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Wrap To: *X & Y*, *Popup menu*, *Default: [Reflect Reflect]*.

Determines the method for accessing outside the borders of the To image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Filter: *Check-box*, *Default: on*.

If enabled, the image is adaptively filtered when it is resampled. This gives better quality results when the image is warped smaller.

Brightness: *Default: 1, Range: 0 or greater*.

Scales the brightness of the result. This can be animated to brighten the result during the transition, but should typically start and end at 1.0 to avoid any pop at the start or end of the transition.

Mid Brightness: *Default: 1, Range: 0 or greater*.

Scales the brightness of the result at the middle of the transition by this amount. Automatically ramps to this brightness and then back again during the transition.

Steps: *Integer, Default: 8, Range: 3 to 100*.

The number of spectrum samples to include along the path between the From (red) and To (blue) transformations. More steps give a smoother result, but require more time to process.

Color1: *Default rgb: [1 0 0]*.

The color at the From transformation.

Color2: *Default rgb: [0 1 0]*.

The color midway between the From and To transformations.

Color3: *Default rgb: [0 0 1]*.

The color at the To transformation.

White Balance: *Check-box, Default: off*.

When enabled, the three colors are adjusted internally so they sum to white. In this case, the colors of unwarped regions are not affected and the average color of the result remains the same.

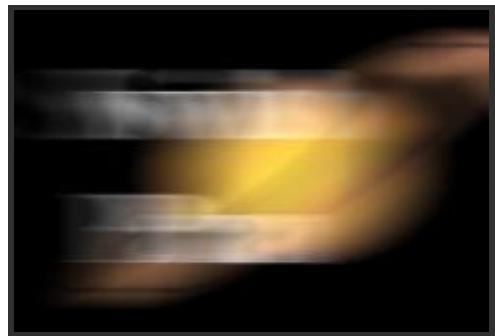
See Also:[WipeLine](#)[Sapphire](#)[WipeCircle](#)[Plug-ins](#)[WipeRectangle](#)[Introduction](#)[WipeStar](#)[WipeClock](#)[WipeWedge](#)[WipeDoubleWedge](#)[WipeFourWedges](#)[WipeDots](#)[WipeChecker](#)[WipeStripes](#)[WipeRings](#)[WipeBlobs](#)[WipeCells](#)[WipeTiles](#)[WipePixelate](#)[WipeDiffuse](#)[WipeBubble](#)

WipeClouds
WipeMoiré
WipePlasma
WipePointalize
WipeWeave
WipeFlux

S_SwishPan

Transitions between two input clips by sliding one clip off the frame and the other clip on, and adding motion blur to give the appearance of a quick pan. This works best when the duration of the transition is short.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Wipe Amount: *Default: 0, Range: -0.5 to 1.5.*

Determines the transition ratio between the From and To inputs, and would normally be animated from 0 to 1 to perform a complete transition. The curve controlling this parameter can be adjusted for more detailed control over the timing of the wipe.

Direction: *Popup menu, Default: Left.*

Direction that the clips move during the transition.

Left: Moves right-to-left

Right: Moves left-to-right

Up: Moves upward.

Down: Moves downward.

Blur Amount: *Default: 2, Range: 0 or greater.*

Amount of motion blur to use. If the direction is left or right, the blur is horizontal. If the direction is up or down, the blur is vertical.

Overlap: *Default: 0, Range: any.*

Amount to overlap the two clips. Where the clips overlap, they will be screened together. This is useful for eliminating bad edges.

Slow In: *Default: 0.5, Range: 0 to 1.*

If positive, causes the transition to start more gradually.

Slow Out: *Default: 0.5, Range: 0 to 1.*

If positive, causes the transition to end more gradually.

See Also:

[Swish3D](#)
[Blur](#)

[Sapphire](#)
[Plug-ins](#)
[Introduction](#)

S_TVChannelChange

Transitions between two input clips by simulating a channel change on an old television set. The first clip goes black with bad reception, followed by the second clip with bad reception. The reception improves over time until only the second clip is left.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Dissolve Amount: *Default: 0, Range: -0.5 to 1.5.*

The transition ratio between the From and To inputs. A value of 0 gives only the From input and a value of 1 gives only the To input. By default this parameter automatically animates from 0 to 1 to perform a complete transition.

Reception: *Default: 1.6, Range: 0 or greater.*

Master scale for all reception-oriented artifacts: static, interference, ghosting, horizontal and vertical hold, hum bars, and color stripes. Turn to zero to get perfect reception, i.e. zero of each of the above artifacts.

Dead Time Style: *Popup menu, Default: Static Over Black.*

Selects what the channel change should look like when there is no signal between the channels.

Black: use black between the channels.

Static Over Black: bad reception artifacts are displayed over black between the channels.

Static Over Dissolve: the first channel dissolves into the second while reception artifacts are applied to both.

Dead Time Duration: *Default: 0.2, Range: 0 to 1.*

The fraction of the transition time to spend in between channels.

Dead Time Start: *Default: 0, Range: 0 to 1.*

The amount of time into the transition to start the channel change. Set this to zero if you want the first channel to go straight to dead air. Set this to one if you want the second channel to snap in from dead air. If the parameter is greater than zero, the reception on the outgoing channel will get worse before going to dead air time. Conversely the new channel will get progressively better reception over time.

Interference Amplitude: *Default: 0.6, Range: 0 or greater.*

Simulates interference from nearby electrical devices (electric motors, cordless phones, and so on). The look is a pattern of semi-regularly spaced random color dots. The dot size is controlled by the TV Pixels parameter. Scaled by Reception.

Ghosting: *Default: 0.6, Range: 0 or greater.*

Ghosts are copies of the image that result from multipath distortion between the transmitter and the TV. Turn up this parameter to get stronger ghosts. Scaled by Reception.

Horizontal Hold: *Default: 0.5, Range: 0 or greater.*

Horizontal hold causes the image to shift horizontally in a semi-random way, simulating a TV with a bad horizontal hold circuit, or a signal not strong enough to engage the horizontal hold. Scaled by Reception.

Vertical Hold: *Default: 0.8, Range: 0 or greater.*

Vertical hold causes the image to shift vertically in a rolling motion. It's normally caused by a weak signal preventing the TV from locking on. This parameter controls the fraction of the time that the image is having hold problems. Set to zero for no vertical hold problems. Scaled by Reception.

Bars Brightness: *Default: 0.3, Range: 0 or greater.*

Power line hum and other TV problems can cause rolling light and dark bars to crawl up the screen. This can also be caused by failure to synchronize a video camera to the TV output. This parameter controls the overall strength of these bars. There are two sets of bars, one large and one small, that mutually interfere. This parameter controls the overall brightness scale of the bars. Turn to zero for no bars. Scaled by Reception.

Color Stripes Amplitude: *Default: 0.2, Range: 0 or greater.*

Another common form of interference, color stripes are caused by phase shifts in the chroma signal, among other things. This parameter controls the overall brightness of the color stripes. Scaled by Reception.

Static Amplitude: *Default: 0.8, Range: 0 or greater.*

Scales the brightness of the static noise. Scaled by Reception Master. The static dot size is controlled by the TV Pixels parameter.

Static Density: *Default: 0.7, Range: 0.01 to 1.*

Density of the static; turn up to get more static pixels; turn down to get only occasional static pixels.

Interference Frequency: *Default: 1.28, Range: 0 to 500.*

Interference frequency. The look is very sensitive to this parameter. Fractional values like 0.3 or 1.23 look better than integers. Animating it very slightly, say from 1.27 to 1.3 gives a nice look.

Dots Speed: *X & Y, Default: [100 –10], Range: any.*

The dot pattern moves with this speed over time in X and Y.

Jitter Amount: *Default: 10, Range: 0 to 1000.*

Turning this up makes the dot pattern jitter randomly between frames for more realism.

H Frequency: *Default: 1.25, Range: 0 or greater.*

Vertical frequency of the horizontal-hold waves.

H Time Vary: *Default: 0.5, Range: 0 or greater.*

Modulates the horizontal-hold waves over time by this amount. When increased, some frames will have more horizontal shifting while other frames will have less.

H Octaves: *Integer, Default: 3, Range: 1 to 10.*

Octaves for the horizontal hold waves. Increase for spikier look, decrease for smoother waves.

Border Width: *Default: 0.05, Range: 0 or greater.*

A TV signal has a black border outside the displayed area; this becomes visible when the horizontal hold isn't working. This parameter controls the width of that black border. On the other side of the border, you see another copy of the image.

V Frequency: *Default: 2, Range: 0 or greater.*

The frequency of vertical hold jumps. Decrease to get a more consistent rolling motion, or increase to get a jumpier look.

V Speed: *Default:* 1, *Range:* any.

The average speed of the vertical hold rolling motion over time.

V Random: *Default:* 0.1, *Range:* 0 or greater.

Controls how much randomness there is in the vertical hold rolling motion. Set to zero for smooth rolling, 1 or more for jittery behavior.

Border Height: *Default:* 0.1, *Range:* 0 or greater.

Like Border Width, this controls the vertical border between frames that becomes visible when vertical hold is not locked. Some static and closed-captioning and timecode information will typically be visible in this border.

Border Data: *Default:* 1, *Range:* 0 to 10.

Brightness of the dots and lines that appear in the vertical blanking interval specified by Border Width.

Hue Shift: *Default:* 0, *Range:* -1 to 1.

Shift the color hues by this amount.

Saturation: *Default:* 1, *Range:* any.

Scales the color saturation. Increase for more intense colors. Set to 0 for monochrome.

Scale Lights: *Default:* 1, *Range:* 0 or greater.

Scales the result by this gray value. Increase for a brighter result.

Offset Darks: *Default:* 0, *Range:* any.

Adds this gray value to the darker regions of the result. This can be negative to increase contrast.

Tint Lights: *Default* *rgb:* [1 1 1].

Scales the result by this color, thus tinting the lighter regions.

Tint Darks: *Default* *rgb:* [0 0 0].

Adds this color to the darker regions of the result. Set this to a dark red-orange color for a negative-film effect look.

Other Parameters:

Tv Pixels: *Default:* 720, *Range:* 1 or greater.

The number of 'TV pixels' across the screen. Controls the size of the static, interference, scanlines, and dropouts. Lower this to simulate a lower resolution TV.

Seed: *Default:* 0.123, *Range:* 0 or greater.

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

See Also:

[TVDamage](#)

[Sapphire Plug-ins](#)

[JpegDamage](#)

[Introduction](#)

[FilmDamage](#)

[DigitalDamage](#)

[FilmEffect](#)

[ScanLines](#)

[Vignette](#)

[HalfTone](#)

[Diffuse](#)

[GrainStatic](#)

S_TVDamage

Simulates a TV with transmission and reception problems, VCR issues, and TV hardware difficulties. Simulates static, interference, ghosting, horizontal and vertical hold, hum bars, color stripes, visible scanlines, VCR fast-forward, dropouts, vignetting, orthicon, fisheye, and turn-off.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Effect: *Popup menu, Default: TVDamage Color.*

Type of TV to simulate: color or black & white.

TVDamage Color: simulates a color TV.

TVDamage Mono: simulates a black & white TV.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Reception Master: *Default:* 0.4, *Range:* 0 or greater.

Master control for all reception-oriented artifacts: static, interference, ghosting, horizontal and vertical hold, hum bars, and color stripes. Turn to zero to get perfect reception, i.e. zero of each of the above artifacts.

Interference Amp: *Default:* 0.6, *Range:* 0 or greater.

Simulates interference from nearby electrical devices (electric motors, cordless phones, and so on). The look is a pattern of semi-regularly spaced random color dots. The dot size is controlled by the TV Pixels parameter. Scaled by Reception Master.

Ghost Amp: *Default:* 0.6, *Range:* 0 or greater.

Ghosts are copies of the image that result from multipath distortion between the transmitter and the TV. Turn up this parameter to get stronger ghosts. Scaled by Reception Master.

Horizontal Hold: *Default:* 0.5, *Range:* 0 or greater.

This causes the image to shift horizontally in a semi-random way, simulating a TV with a bad horizontal hold circuit, or a signal not strong enough to engage the horizontal hold. Scaled by Reception Master.

Vertical Hold: *Default:* 0.8, *Range:* 0 or greater.

This causes the image to shift vertically in a rolling motion, and is normally caused by a weak signal preventing the TV from locking on. This parameter controls the fraction of the time that the image is having hold problems. Set to zero for no vertical hold problems. Scaled by Reception Master.

Bars Brightness: *Default:* 0.3, *Range:* 0 or greater.

Power line hum and other TV problems can cause rolling light and dark bars to crawl up the screen. This can also be caused by failure to synchronize a video camera to the TV output. This parameter controls the overall strength of these bars. There are two sets of bars, one large and one small, that mutually interfere. This parameter controls the overall brightness scale of the bars. Turn to zero for no bars. Scaled by Reception Master.

Color Stripes Amplitude: *Default:* 0.2, *Range:* 0 or greater.

Another common form of interference, color stripes are caused by phase shifts in the chroma signal, among other things. This parameter controls the overall brightness of the color stripes. Scaled by Reception Master.

Fast Forward Amount: *Default:* 0, *Range:* 0 or greater.

Generates a VCR fast-forward look with torn bars across the screen.

Tape Dropout Brightness: *Default:* 0, *Range:* 0 or greater.

Generates VCR dropouts on random frames, at random times.

Vignette Darkness: *Default:* 0, *Range:* 0 to 1.

Vignetting is darkening of the image towards the corners and sides of the image. This parameter controls how much the outer corners of the screen should be darkened (vignetted). 0 gives no vignetting, 1 gives maximum darkening.

Static Amplitude: *Default:* 0.8, *Range:* 0 or greater.

Scales the brightness of the static noise. Scaled by Reception Master. The static dot size is controlled by the TV Pixels parameter.

Static Density: *Default:* 0.7, *Range:* 0.01 to 1.

Density of the static; turn up to get more static pixels; turn down to get only occasional static pixels.

Interference Frequency: *Default:* 1.28, *Range:* 0 to 500.

Interference frequency. The look is very sensitive to this parameter. Fractional values like 0.3 or 1.23 look better than integers. Animating it very slightly, say from 1.27 to 1.3 gives a nice look.

Dots Speed: *X & Y,* *Default:* [100 –10], *Range:* any.

The dot pattern moves with this speed over time in X and Y.

Jitter Amount: *Default:* 10, *Range:* 0 to 1000.

Turning this up makes the dot pattern jitter randomly between frames for more realism.

Num Ghosts: *Integer, Default:* 5, *Range:* 0 to 30.

The number of ghost images. Some may be ahead (to the left of) the source image, most will be to the right. Some will be positive and some negative (inverted). See Shift and Negative Ghosts below.

Negative Ghosts: *Default:* 0.5, *Range:* 0 to 1.

The fraction of the ghosts that are negative (inverted), on average.

Spacing: *Default:* 0.2, *Range:* 0 or greater.

The fraction of the image width over which ghost images are spread out.

Vary Position: *Default:* 0.3, *Range:* 0 to 1.

Controls the regularity of the ghost image spacing. Set to zero for regularly spaced ghosts; set to one for random positioning.

Shift: *Default:* 0.5, *Range:* –1 to 1.

Shifts the ghost images to the left or right, without shifting the main image.

Blur: *Default:* 0, *Range:* 0 or greater.

Blurs the ghost images without blurring the main image or any other artifacts.

H Frequency: *Default:* 1.25, *Range:* 0 or greater.

Vertical frequency of the horizontal-hold waves.

H Time Vary: *Default:* 0.5, *Range:* 0 or greater.

Modulates the horizontal-hold waves over time by this amount. When increased, some frames will have more horizontal shifting while other frames will have less.

H Octaves: *Integer, Default:* 3, *Range:* 1 to 10.

Octaves for the horizontal hold waves. Increase for spikier look, decrease for smoother waves.

Border Width: *Default:* 0.05, *Range:* 0 or greater.

A TV signal has a black border outside the displayed area; this becomes visible when the horizontal hold isn't working. This parameter controls the width of that black border. On the other side of the border, you see another copy of the image.

V Frequency: *Default:* 2, *Range:* 0 or greater.

The frequency of vertical hold jumps. Decrease to get a more consistent rolling motion, or increase to get a jumpier look.

V Speed: *Default:* 2, *Range:* 0 or greater.

The average speed of the vertical hold rolling motion over time.

V Random: *Default:* 0.1, *Range:* 0 or greater.

Controls how much randomness there is in the vertical hold rolling motion. Set to zero for smooth rolling, 1 or more for jittery behavior.

Border Height: *Default:* 0.1, *Range:* 0 or greater.

Like Border Width, this controls the vertical border between frames that becomes visible when vertical hold is not locked. Some static and closed-captioning and timecode information will typically be visible in this border.

Border Data: *Default:* 1, *Range:* 0 to 10.

Brightness of the dots and lines that appear in the vertical blanking interval specified by Border Width.

Bar Roll Speed: *Default:* 0.5, *Range:* -10 to 10.

The speed of the bars rolling up the screen. Turn negative for downward rolling.

Bar Sharpness: *Default:* 0.5, *Range:* 0.1 to 10.

Sharpens or smooths the top and bottom edges of the main bars. Set to zero for no main bars; you will only see the smaller bars.

Bar Frequency: *Default:* 1, *Range:* 0.1 or greater.

The frequency of the bars; turn up for more thinner bars, turn down for fewer fat bars.

Bar1 Width: *Default:* 0.35, *Range:* 0 to 1.

Fraction of the main bar that is light; the rest is dark.

Bar2 Rel Frequency: *Default:* 6, *Range:* 1 or greater.

Controls the frequency of the smaller bars.

Bar2 Sharpness: *Default:* 0.5, *Range:* 0.01 to 10.

Sharpens or smooths the top and bottom edges of the smaller bars. Set to zero for no small bars; you will only see the main bars.

Color Frequency: *Default:* 10, *Range:* 1 to 40.

Spatial frequency of the color stripes.

Color Angle: *Default:* 160, *Range:* any.

Angle of the stripes.

Roll Speed: *Default:* 3, *Range:* 0 or greater.

Controls how fast the stripes roll over time.

FF Band Frequency: *Default:* 4, *Range:* 0 or greater.

How many fast-forward bands to create.

FF Band Shift: *Default:* 0.1, *Range:* 0 or greater.

Shifts the fast-forward bands up or down.

FF Band Height: *Default:* 0.16, *Range:* 0 to 1.

The height of each fast-forward band.

Dropout Length: *Default:* 0.25, *Range:* 0 to 1.

The average length of each dropout scanline.

Dropout Gap Length: *Default:* 0.2, *Range:* 0 to 2.

The average length of the gaps between the dropouts.

Dropout Y Freq: *Default:* 5, *Range:* 0 to 50.

The dropouts appear on random scanlines according to a noise function with this frequency. Decrease to get a few large bands of dropouts; increase to get lots of small bands of dropouts.

Dropout Y Threshold: *Default: 0.75, Range: 0 to 1.*

Increase to cover more of the screen with dropouts (on average); decrease to cover less of it. If you don't see any dropouts at all on some frames, increase this parameter.

Dropouts Always: *Default: 1, Range: 0 to 1.*

Dropouts only appear on some frames; increase this parameter to see dropouts on more frames, so they occur more frequently in time. If you don't see dropouts on any frames, increase this parameter.

Vignette Radius: *Default: 1, Range: 0 or greater.*

Distance from the center where the vignetting starts.

Vignette Edge Softness: *Default: 0.5, Range: 0 or greater.*

The width of the vignette's soft edge. Larger values give softer, less visible edges.

Vignette Rel Height: *Default: 0.75, Range: 0.1 or greater.*

Controls the aspect ratio of the vignette ellipse. This should normally be set to the aspect ratio of the image, e.g. .75 for NTSC.

Scanlines: *Default: 0.1, Range: 0 or greater.*

Creates visible scanlines in the image. Increase to get more intense scanlines, or set to zero for no scanlines. The width of the scanlines is controlled by the TV Pixels parameter and Scanlines Rel Freq.

Scanlines Rel Freq: *Default: 1, Range: 0 or greater.*

Relative frequency of the TV scanlines. Increase to get more scanlines, decrease to get fewer large scanlines. Note that the number of scanlines is also controlled by the TV Pixels parameter.

Orthicon: *Default: 0, Range: 0 or greater.*

Darkens the clip at areas around parts of the source clip that are brighter than the given threshold, to simulate a 1950s 'orthicon' TV camera look. Most useful in black & white mode.

Threshold: *Default: 0.7, Range: 0 or greater.*

Darkening will occur around locations in the source clip that are brighter than this value. A value of 0.9 causes dark glows from only the brightest spots. A value of 0 causes glows for every non-black area.

Darks Width: *Default: 0.2, Range: 0 or greater.*

Scales the dark glow distance.

Color Correct Parameters:

Hue Shift: *Default: 0, Range: any.*

Shift the color hues by this amount.

Saturation: *Default: 1, Range: any.*

Scales the color saturation. Increase for more intense colors. Set to 0 for monochrome.

Scale Lights: *Default: 1, Range: 0 or greater.*

Scales the result by this gray value. Increase for a brighter result.

Offset Dark: *Default: 0, Range: any.*

Adds this gray value to the darker regions of the result. This can be negative to increase contrast.

Tint Lights: *Default rgb: [1 1 1].*

Scales the result by this color, thus tinting the lighter regions.

Tint Dark: *Default rgb: [0 0 0].*

Adds this color to the darker regions of the result. Set this to a dark red-orange color for a negative-film effect look.

Turn Off: *Default: 0, Range: 0 to 1.*

Animate this parameter from 0 to 1 to simulate the TV turning off. The image will turn white and shrink to a dot in the center, with a flash near the end.

Flare Width: *Default: 1, Range: 0 or greater.*

Width of the flare or flash near the end of the turn-off sequence. Set to zero to omit this flash.

Flare Brightness: *Default: 2, Range: 0 or greater.*

Brightness of the flare or flash near the end of the turn-off sequence.

Fade Out Time: *Default: 0.7, Range: 0 to 1.*

The length of the fade out during the Turn Off sequence. A value of one produces a smooth, gradual fade as Turn Off increases. As the value decreases, the fade will start later (at higher values of Turn Off), and progress more quickly. When Fade Out Time is set to zero, the fade will cut to black instantly when Turn Off reaches one.

Fish Eye: *Default: 0, Range: any.*

Expands the center of the source clip as if viewed through a fish-eye lens. This gives an old-time slightly rounded TV look.

Tv Pixels: *Default: 720, Range: 1 or greater.*

The number of 'TV pixels' across the screen. Controls the size of the static, interference, scanlines, and dropouts. Lower this to simulate a lower resolution TV.

Seed: *Default: 0.123, Range: 0 or greater.*

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[JpegDamage](#)

[Sapphire Plug-ins](#)

[FilmDamage](#)

[Introduction](#)

[DigitalDamage](#)

[FilmEffect](#)

[ScanLines](#)

[TVChannelChange](#)

[Vignette](#)

[HalfTone](#)

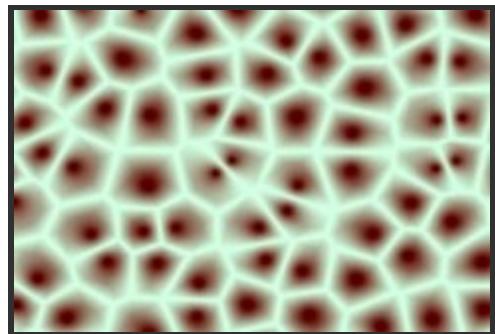
[Diffuse](#)

[GrainStatic](#)

S_TextureCells

Generates an image of procedural cellular shapes. The Rotate Speed parameter causes the cell centers to rotate within each cell over time.

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to combine the texture image with. This may be ignored if the Combine option is set to Texture Only.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* *Union*.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Frequency: *Default:* 16, *Range:* 0.01 or greater.
The spatial frequency of the texture. Increase to zoom out, decrease to zoom in.

Frequency Rel X: *Default:* 1, *Range:* 0.01 or greater.
The relative horizontal frequency of the texture. Increase to stretch it vertically or decrease to stretch it horizontally.

Seed: *Default:* 0.234, *Range:* 0 or greater.
Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Rotate Centers: *Default:* 0, *Range:* any.
Rotation offset of the cell centers, in counter-clockwise degrees.

Rotate Speed: *Default:* 90, *Range:* any.
The speed of cell center rotation, in counter-clockwise degrees per second. If non-zero, the cell centers are automatically animated to wiggle at this rate.

Shift: *X & Y*, *Default:* [0 0], *Range:* any.
Translation offset of the texture. Since the texture is procedurally generated it can be shifted with no repeating units or seams occurring. This parameter can be adjusted using the Shift Widget.

Brightness1: *Default:* 1, *Range:* 0 or greater.
Scales the brightness of Color1. Increase for more contrast.

Color1: *Default* *rgb:* [1 1 1].
The color of the 'brighter' parts of the texture. The colors of the result are determined by an interpolation between Color0 and Color1.

Color0: *Default* *rgb:* [0 0 0].
The color of the 'darker' parts of the texture.

Offset0: *Default:* 0, *Range:* any.
Adds this value to color0. Decrease to a negative value for more contrast.

Invert: *Check-box*, *Default:* off.
If enabled, the resulting texture colors are inverted. This is similar to swapping Color0 and Color1.

Bg Brightness: *Default:* 1, *Range:* 0 or greater.
The background brightness is scaled by this value before being combined with the texture.

Combine: *Popup menu*, *Default:* *Screen*.
Determines how the texture is combined with the Background.

Texture Only: gives only the texture image with no Background.
Mult: the texture is multiplied by the Background.
Add: the texture is added to the Background.
Screen: the texture is blended with the Background using a screen operation.
Difference: the result is the difference between the texture and Background.

Overlay: the texture is combined with the Background using an overlay function.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Shift: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Shift parameter.

See Also:

[TextureFolded](#)

[WipeCells](#)

[TextureWeave](#)

[Sapphire Plug-ins](#)

[TexturePlasma](#)

[Introduction](#)

[TextureNoiseEmboss](#)

[TextureNoisePaint](#)

[TextureSpots](#)

[TextureChromaSpiral](#)

[TextureMoiré](#)

[TextureTiles](#)

[TextureNeurons](#)

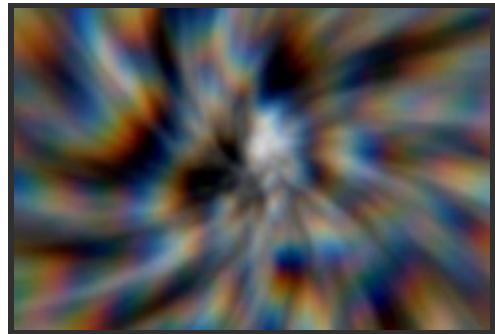
[TextureLoops](#)

[TextureFlux](#)

S_TextureChromaSpiral

Creates an abstract texture by applying a WarpChroma effect to a procedurally generated noise texture.

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to combine the texture image with. This may be ignored if the Combine option is set to Texture Only.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

- Union:** Uses the area covered by both masks together.
- Intersect:** Uses the area that overlaps between the two masks.
- Mocha Only:** Ignore the Input Mask and only use the Mocha Mask.

Noise Frequency: *Default: 6, Range: 0.01 or greater.*
The spatial frequency of the initial noise texture. Increase to zoom out, decrease to zoom in.

Noise Octaves: *Integer, Default: 3, Range: 1 to 10.*
The number of summed layers of noise. Each octave is twice the frequency and half the amplitude of the previous. A single octave gives a smooth texture. Adding octaves makes the result approach a fractal (1/f) noise texture.

Noise Shift: *X & Y, Default: [0 0], Range: any.*
Translation offset of the initial noise texture.

Noise Seed: *Default: 0.23, Range: 0 or greater.*
Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Center: *X & Y, Default: [0 0], Range: any.*
The center location of the chroma warp, in screen coordinates relative to the center of the frame. This parameter can be adjusted using the Center Widget.

Z Dist: *Default: 0.7, Range: 0.001 or greater.*
The distance that the chroma warp effect is applied over.

Rotate: *Default: -8, Range: any.*
The rotation of the spiral, in degrees. Set to 0 for a straight zoom.

Steps: *Integer, Default: 12, Range: 3 to 100.*
The number of color samples along the spectrum to include. More steps give a smoother result, but require more time to process.

Brightness: *Default: 1, Range: 0 or greater.*
Scales the brightness of the result.

Color: *Default rgb: [1 1 1].*
Scales the color of the result. For example, if it is yellow [1 1 0], the blue of the result will be 0.

Offset: *Default: 0, Range: any.*
Adds this gray value to the result (or subtracts if negative). 0 has no effect, .5 is middle gray, and 1 is white.

Bg Brightness: *Default: 1, Range: 0 or greater.*
The background brightness is scaled by this value before being combined with the texture.

Combine: *Popup menu, Default: Screen.*
Determines how the texture is combined with the Background.

- Texture Only:** gives only the texture image with no Background.
- Mult:** the texture is multiplied by the Background.
- Add:** the texture is added to the Background.
- Screen:** the texture is blended with the Background using a screen operation.
- Difference:** the result is the difference between the texture and Background.

Overlay: the texture is combined with the Background using an overlay function.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Center: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Center parameter.

See Also:

[TextureFolded](#)

[WarpChroma](#)

[Sapphire](#)

[TextureWeave](#)

[Clouds](#)

[Plug-ins](#)

[TexturePlasma](#)

[CloudsVortex](#)

[Introduction](#)

[TextureNoiseEmboss](#)

[TextureNoisePaint](#)

[TextureSpots](#)

[TextureCells](#)

[TextureMoiré](#)

[TextureTiles](#)

[TextureNeurons](#)

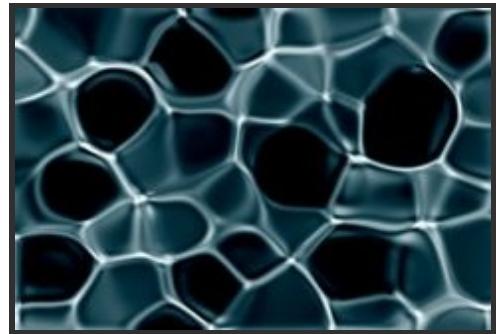
[TextureLoops](#)

[TextureFlux](#)

S_TextureFlux

Creates abstract textures of fluctuating liquid or cellular patterns. The Morph Speed parameter causes the pattern to automatically undulate over time.

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to combine the texture image with. This may be ignored if the Combine option is set to Texture Only.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Frequency: *Default:* 4, *Range:* 0.01 to 100.
The spatial frequency of the texture. Increase to zoom out, decrease to zoom in.

Frequency Rel X: *Default:* 1, *Range:* 0.01 or greater.
The relative horizontal frequency of the texture. Increase to stretch it vertically or decrease to stretch it horizontally.

Octaves: *Integer*, *Default:* 2, *Range:* 1 to 10.
The number of summed layers of noise. Each octave is twice the frequency and half the amplitude of the previous. A single octave gives a smooth texture. Adding octaves makes the result approach a fractal (1/f) noise texture.

Seed: *Default:* 0.234, *Range:* 0 or greater.
Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Shift: *X & Y*, *Default:* [0 0], *Range:* any.
Translation offset of the texture. Since the texture is procedurally generated it can be shifted with no repeating units or seams occurring. This parameter can be adjusted using the Shift Widget.

Bubble Amount: *Default:* 1, *Range:* any.
Amplitude of warping applied to generate the bubble shapes. This can be negative to generate brighter bubble shapes with dark edges.

Bubble Smooth: *Default:* 0.25, *Range:* 0.004 or greater.
Smooths the warping pattern by this amount.

Rotate Warp Dir: *Default:* 0, *Range:* any.
Rotates the direction of the warping. This can cause a twisting effect or an inverted effect when set to 180.

Morph Speed: *Default:* 0.3, *Range:* any.
Speed to automatically undulate the underlying noise pattern over time.

Morph: *X & Y*, *Default:* [0 1], *Range:* any.
The horizontal and vertical directions to undulate the underlying noise pattern, when using Morph Speed.

Brightness1: *Default:* 1, *Range:* 0 or greater.
Scales the brightness of Color1. Increase for more contrast.

Color1: *Default rgb:* [1 1 1].
The color of the 'brighter' parts of the texture. The colors of the result are determined by an interpolation between Color0 and Color1.

Color0: *Default rgb:* [0 0.12 0.15].
The color of the 'darker' parts of the texture.

Offset0: *Default:* 0, *Range:* any.
Adds this value to color0. Decrease to a negative value for more contrast.

Filter: *Check-box*, *Default:* off.

The type of convolution filter to blur with.

Bg Brightness: *Default:* 1, *Range:* 0 or greater.

The background brightness is scaled by this value before being combined with the texture.

Combine: *Popup menu, Default: Screen.*

Determines how the texture is combined with the Background.

Texture Only: gives only the texture image with no Background.

Mult: the texture is multiplied by the Background.

Add: the texture is added to the Background.

Screen: the texture is blended with the Background using a screen operation.

Difference: the result is the difference between the texture and Background.

Overlay: the texture is combined with the Background using an overlay function.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Shift: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Shift parameter.

See Also:

[TextureFolded](#)

[Sapphire Plug-ins](#)

[TextureWeave](#)

[Introduction](#)

[TexturePlasma](#)

[TextureNoiseEmboss](#)

[TextureNoisePaint](#)

[TextureSpots](#)

[TextureCells](#)

[TextureChromaSpiral](#)

[TextureMoiré](#)

[TextureTiles](#)

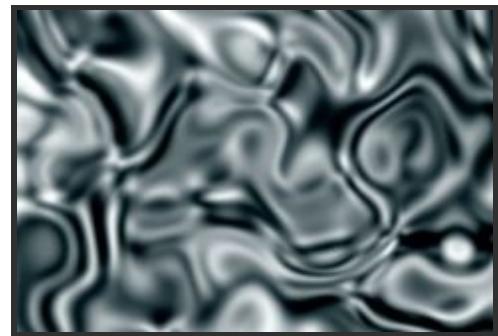
[TextureNeurons](#)

[TextureLoops](#)

S_TextureFolded

Creates an abstract texture resembling folded cloth or liquid that can be animated to give a dynamic turbulent effect. The Fold Speed parameters cause the pattern to automatically undulate over time.

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to combine the texture image with. This may be ignored if the Combine option is set to Texture Only.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Frequency: *Default: 4, Range: 0.01 or greater.*
The spatial frequency of the texture. Increase to zoom out, decrease to zoom in.

Frequency Rel X: *Default: 1, Range: 0.01 or greater.*
The relative horizontal frequency of the texture. Increase to stretch it vertically or decrease to stretch it horizontally.

Octaves: *Integer, Default: 1, Range: 1 to 10.*
The number of summed layers of noise. Each octave is twice the frequency and half the amplitude of the previous. A single octave gives a smooth texture. Adding octaves makes the result approach a fractal (1/f) noise texture.

Seed: *Default: 0.432, Range: 0 or greater.*
Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Fold Amp: *Default: 72, Range: any.*
The angle of the folding distortions.

Fold Freq: *Default: 0.5, Range: 0.01 or greater.*
The frequency of the noise used for the folding distortions.

Fold Octaves: *Integer, Default: 1, Range: 1 to 10.*
The number of octaves of noise to use for the folding distortions.

Shift: *X & Y, Default: [0 0], Range: any.*
Translation offset of the texture. Since the texture is procedurally generated it can be shifted with no repeating units or seams occurring. This parameter can be adjusted using the Shift Widget.

Fold Start: *X & Y, Default: [0 0], Range: any.*
The offset of the folding effect.

Fold Speed: *X & Y, Default: [1 0], Range: any.*
The speed of the animated folding effect. If non-zero, the folding effect automatically undulates at this rate.

Brightness1: *Default: 1, Range: 0 or greater.*
Scales the brightness of Color1. Increase for more contrast.

Color1: *Default rgb: [1 1 1].*
The color of the 'brighter' parts of the texture. The colors of the result are determined by an interpolation between Color0 and Color1.

Color0: *Default rgb: [0 0 0].*
The color of the 'darker' parts of the texture.

Offset0: *Default: 0, Range: any.*
Adds this value to color0. Decrease to a negative value for more contrast.

Bg Brightness: *Default: 1, Range: 0 or greater.*
The background brightness is scaled by this value before being combined with the texture.

Combine: *Popup menu, Default: Screen.*

Determines how the texture is combined with the Background.

Texture Only: gives only the texture image with no Background.

Mult: the texture is multiplied by the Background.

Add: the texture is added to the Background.

Screen: the texture is blended with the Background using a screen operation.

Difference: the result is the difference between the texture and Background.

Overlay: the texture is combined with the Background using an overlay function.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Shift: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Shift parameter.

See Also:

[TextureWeave](#)

[TexturePlasma](#)

[TextureNoiseEmboss](#)

[TextureNoisePaint](#)

[TextureSpots](#)

[TextureCells](#)

[TextureChromaSpiral](#)

[TextureMoiré](#)

[TextureTiles](#)

[TextureNeurons](#)

[TextureLoops](#)

[TextureFlux](#)

[Clouds](#)

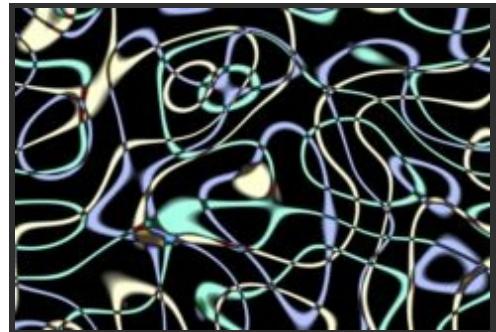
[Sapphire Plug-ins](#)

[Introduction](#)

S_TextureLoops

Creates an abstract texture of overlapping loop shapes. Three sets of shapes can be separately adjusted, colored, and then combined together. The Phase Speed parameter causes the pattern to automatically change over time.

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to combine the texture image with. This may be ignored if the Combine option is set to Texture Only.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Frequency: *Default: 3, Range: 0.01 or greater.*

The spatial frequency of the texture. Increase to zoom out, decrease to zoom in.

Frequency Rel X: *Default: 1, Range: 0.01 or greater.*

The relative horizontal frequency of the texture. Increase to stretch it vertically or decrease to stretch it horizontally.

Loop Freq: *Default: 4, Range: 1 or greater.*

Frequency of the loops within the noise patterns. Increase for more concentric loops, decrease for fewer.

Phase Start: *Default: 0, Range: any.*

The phase of the ring loops. Shifts inwards or outwards.

Phase Speed: *Default: 0.1, Range: any.*

The automatic change in phase over time.

Seed: *Default: 1, Range: 0 or greater.*

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Thickness: *Default: 0.1, Range: -1 to 2.*

Controls the thickness of the loops.

Softness: *Default: 0.2, Range: 0.01 or greater.*

The softness of the edges of the loop shapes. Increase for smoother edges or to reduce aliasing.

Smooth: *Default: 0, Range: 0 or greater.*

Amount to blur the loop shapes before combining. Increase for a defocus look, or to help remove aliasing artifacts.

Shift: *X & Y, Default: [0 0], Range: any.*

Translation offset of the texture. Since the texture is procedurally generated it can be shifted with no repeating units or seams occurring. This parameter can be adjusted using the Shift Widget.

Brightness1: *Default: 1, Range: 0 or greater.*

Scales the brightness of Color1. Increase for more contrast.

Color1: *Default rgb: [1 1 1].*

The color of the 'brighter' parts of the texture. The colors of the result are determined by an interpolation between Color0 and Color1.

Color0: *Default rgb: [0 0 0].*

The color of the 'darker' parts of the texture.

Offset0: *Default: 0, Range: any.*

Adds this value to color0. Decrease to a negative value for more contrast.

Saturation: *Default:* 1, *Range:* any.

Scales the color saturation. Increase for more intense colors. Set to 0 for monochrome.

Loops1 Freq: *Default:* 1, *Range:* 0.01 or greater.

Relative frequency of the first set of loops.

Loops2 Freq: *Default:* 1, *Range:* 0.01 or greater.

Relative frequency of the second set of loops.

Loops3 Freq: *Default:* 1, *Range:* 0.01 or greater.

Relative frequency of the third set of loops.

Loops1 Thick: *Default:* 0, *Range:* -1 to 1.

Adds this amount to the thickness of the first set of loops.

Loops2 Thick: *Default:* 0, *Range:* -1 to 1.

Adds this amount to the thickness of the second set of loops.

Loops3 Thick: *Default:* 0, *Range:* -1 to 1.

Adds this amount to the thickness of the third set of loops.

Loops1 Bright: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the first set of loops. Set to zero to remove them.

Loops2 Bright: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the second set of loops. Set to zero to remove them.

Loops3 Bright: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the third set of loops. Set to zero to remove them.

Loops1 Color: *Default* *rgb:* [1 1 1].

Color of the first set of loops.

Loops2 Color: *Default* *rgb:* [1 1 1].

Color of the second set of loops.

Loops3 Color: *Default* *rgb:* [1 1 1].

Color of the third set of loops.

Invert: *Check-box*, *Default:* off.

If enabled, the resulting texture colors are inverted. This is similar to swapping Color0 and Color1.

Combine Loops: *Popup menu*, *Default:* Diff.

Operation used to combine the colors of the three sets of loops.

Add: adds them together.

Screen: uses a screen transfer mode to combine them.

Diff: uses a difference operator to combine them.

Comp: composites the second over the third, and the first over that.

Bg Brightness: *Default:* 1, *Range:* 0 or greater.

The background brightness is scaled by this value before being combined with the texture.

Combine: *Popup menu*, *Default:* Screen.

Determines how the texture is combined with the Background.

Texture Only: gives only the texture image with no Background.

Mult: the texture is multiplied by the Background.

Add: the texture is added to the Background.

Screen: the texture is blended with the Background using a screen operation.

Difference: the result is the difference between the texture and Background.

Overlay: the texture is combined with the Background using an overlay function.

Mask Use: *Popup menu*, *Default: Luma*.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater*.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off*.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Shift: *Check-box, Default: on*.

Turns on or off the screen user interface for adjusting the Shift parameter.

See Also:

[TextureFolded](#)

[WipeBlobs](#)

[TextureWeave](#)

[Sapphire Plug-ins](#)

[TexturePlasma](#)

[Introduction](#)

[TextureNoiseEmboss](#)

[TextureNoisePaint](#)

[TextureSpots](#)

[TextureCells](#)

[TextureChromaSpiral](#)

[TextureMoiré](#)

[TextureTiles](#)

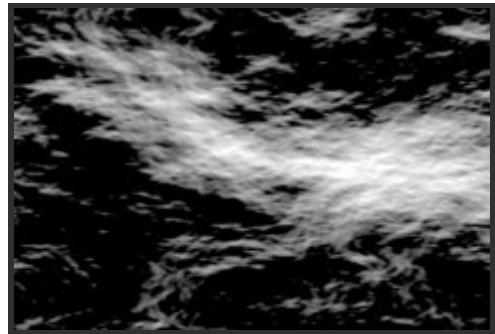
[TextureNeurons](#)

[TextureFlux](#)

S_TextureMicro

Generates a procedural texture that looks a bit like a surface of a rough object under an electron microscope.

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to combine the texture image with. This may be ignored if the Combine option is set to Texture Only.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Frequency: *Default: 1, Range: 0.01 or greater.*
The spatial frequency of the texture. Increase to zoom out, decrease to zoom in.

Frequency Rel X: *Default: 0.6, Range: 0.01 or greater.*
The relative horizontal frequency of the texture. Increase to stretch it vertically or decrease to stretch it horizontally.

Octaves: *Integer, Default: 12, Range: 1 to 12.*
The number of summed layers of noise. Each octave is twice the frequency and half the amplitude of the previous. A single octave gives a smooth texture. Adding octaves makes the result approach a fractal (1/f) noise texture.

Seed: *Default: 0.234, Range: 0 or greater.*
Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Details: *Default: 0.43, Range: 0 to 1.*
Increases or decreases the amount of fine detail in the texture. Decrease to get a smoother look, increase to get a more high-frequency, noisy look.

Boil Speed: *Default: 1, Range: any.*
Sets the speed of the time evolution of the texture. Zero gives no boiling at all.

Shift Start: *X & Y, Default: [0 0], Range: any.*
Translation offset of the texture. Since the texture is procedurally generated it can be shifted with no repeating units or seams occurring. This parameter can be adjusted using the Shift Start Widget.

Shift Speed: *X & Y, Default: [0 0], Range: any.*
Translation speed of the texture. If non-zero, the result is automatically animated to shift at this rate. The result of animated Speed values may not be intuitive, so for variable speed motion it is usually best to set this to 0 and animate the Shift Start values instead.

Threshold: *Default: 0.35, Range: 0 or greater.*
Values below this are clamped to black; increase for a darker, more intense texture.

Brightness1: *Default: 1, Range: 0 or greater.*
Scales the brightness of Color1. Increase for more contrast.

Color1: *Default rgb: [1 1 1].*
The color of the 'brighter' parts of the texture. The colors of the result are determined by an interpolation between Color0 and Color1.

Color0: *Default rgb: [0 0 0].*
The color of the 'darker' parts of the texture.

Offset0: *Default: 0, Range: any.*
Adds this value to color0. Decrease to a negative value for more contrast.

Bg Brightness: *Default: 1, Range: 0 or greater.*
The background brightness is scaled by this value before being combined with the texture.

Combine: *Popup menu, Default: Texture Only.*
Determines how the texture is combined with the Background.

Texture Only: gives only the texture image with no Background.
Mult: the texture is multiplied by the Background.
Add: the texture is added to the Background.
Screen: the texture is blended with the Background using a screen operation.
Difference: the result is the difference between the texture and Background.
Overlay: the texture is combined with the Background using an overlay function.

Mask Use: *Popup menu, Default: Luma.*
Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.
Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*
Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*
If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Shift Start: *Check-box, Default: on.*
Turns on or off the screen user interface for adjusting the Shift Start parameter.

See Also:

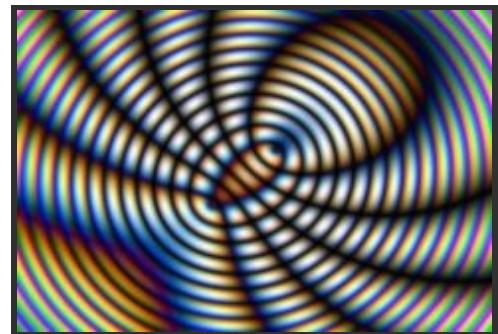
[TextureFolded](#)
[TextureWeave](#)
[TexturePlasma](#)
[TextureNoiseEmboss](#)
[TextureNoisePaint](#)
[TextureSpots](#)
[TextureCells](#)
[TextureChromaSpiral](#)
[TextureMoiré](#)
[TextureTiles](#)
[TextureNeurons](#)
[TextureLoops](#)
[TextureFlux](#)

[Sapphire Plug-ins](#)
[Introduction](#)

S_TextureMoire

Creates an abstract Moire texture by adding together two patterns of concentric rings. The Phase Speed and Moire Speed parameters cause the rings to automatically animate over time.

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to combine the texture image with. This may be ignored if the Combine option is set to Texture Only.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

A Center: *X & Y*, *Default:* [-0.0833 -0.0926], *Range:* any.
The center location of the A ring pattern. This parameter can be adjusted using the A Center Widget.

B Center: *X & Y*, *Default:* [0.0833 0.0926], *Range:* any.
The center location of the B ring pattern. This parameter can be adjusted using the B Center Widget.

Frequency: *Default:* 20, *Range:* 0.5 or greater.
The frequency of the rings. Increase for more and smaller rings, or decrease for fewer larger rings.

Rel Freq Red: *Default:* 1, *Range:* 0.1 or greater.
Scales the ring frequencies for the red color channel only.

Rel Freq Green: *Default:* 1, *Range:* 0.1 or greater.
Scales the ring frequencies for the green color channel only.

Rel Freq Blue: *Default:* 1, *Range:* 0.1 or greater.
Scales the ring frequencies for the blue color channel only.

Double Space Rings: *Check-box*, *Default:* off.
If checked, every other ring is negative giving a double spaced look. If unchecked, the absolute value of the wave form is used which gives twice as many visible rings.

Phase Start: *Default:* 0, *Range:* any.
The phase of the ring patterns. Increase to shift outwards from the centers, or decrease to shift inwards toward the centers. The phase parameters are relative to the period of the rings (1/frequency) so changing any by exactly 1 should give the same result again.

Phase Speed: *Default:* 1, *Range:* any.
The automatic change in phase, per second.

Phase Red: *Default:* 0.2, *Range:* any.
Shifts the ring phases for the red color channel only.

Phase Green: *Default:* 0.1, *Range:* any.
Shifts the ring phases for the green color channel only.

Phase Blue: *Default:* 0, *Range:* any.
Shifts the ring phases for the blue color channel only.

Moire Phase: *Default:* 0, *Range:* any.
The relative start phase of the two ring patterns. Shifts the A ring pattern out and the B ring pattern in by the same amount, causing changes in the moire pattern itself.

Moire Speed: *Default:* 1, *Range:* any.
Automatic change per second in the relative phase of the two ring patterns.

A Brightness: *Default:* 1, *Range:* 0 or greater.
Scales the brightness of the A ring pattern. Set this to zero to disable and view only the B rings.

A Color: *Default* *rgb*: [0.5 0.5 0.5].

Scales the color of the A ring pattern.

A Rel Freq: *Default*: 1, *Range*: 0.1 or greater.

Scales the ring frequencies of the A ring pattern.

A Rel Width: *Default*: 1, *Range*: 0.2 or greater.

The relative horizontal size of the A ring pattern. Increase for wider ring shapes, decrease for taller ones.

A Rotate: *Default*: 0, *Range*: any.

Rotation in degrees of the A ring pattern. Note that this will have no effect when A Rel Width is 1.

B Brightness: *Default*: 1, *Range*: 0 or greater.

Scales the brightness of the B ring pattern. Set this to zero to disable and view only the A rings.

B Color: *Default* *rgb*: [0.5 0.5 0.5].

Scales the color of the B ring pattern.

B Rel Freq: *Default*: 1, *Range*: 0.1 or greater.

Scales the ring frequencies of the B ring pattern.

B Rel Width: *Default*: 1, *Range*: 0.2 or greater.

The relative horizontal size of the B ring pattern. Increase for wider ring shapes, decrease for taller ones.

B Rotate: *Default*: 0, *Range*: any.

Rotation in degrees of the B ring pattern. Note that this will have no effect when A Rel Width is 1.

Brightness1: *Default*: 1, *Range*: 0 or greater.

Scales the brightness of Color1. Increase for more contrast.

Color1: *Default* *rgb*: [1 1 1].

The color of the 'brighter' parts of the texture. The colors of the result are determined by an interpolation between Color0 and Color1.

Color0: *Default* *rgb*: [0 0 0].

The color of the 'darker' parts of the texture.

Offset0: *Default*: 0, *Range*: any.

Adds this value to color0. Decrease to a negative value for more contrast.

Saturation: *Default*: 1, *Range*: 0 to 10.

Scales the color saturation. Increase for more intense colors. Set to 0 for monochrome.

Bg Brightness: *Default*: 1, *Range*: 0 or greater.

The background brightness is scaled by this value before being combined with the texture.

Combine: *Popup menu*, *Default*: *Screen*.

Determines how the texture is combined with the Background.

Texture Only: gives only the texture image with no Background.

Mult: the texture is multiplied by the Background.

Add: the texture is added to the Background.

Screen: the texture is blended with the Background using a screen operation.

Difference: the result is the difference between the texture and Background.

Overlay: the texture is combined with the Background using an overlay function.

Mask Use: *Popup menu*, *Default*: *Luma*.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show A Center: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the A Center parameter.

Show B Center: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the B Center parameter.

See Also:

[TextureFolded](#)

[WipeRings](#)

[TextureWeave](#)

[Sapphire Plug-ins](#)

[TexturePlasma](#)

[Introduction](#)

[TextureNoiseEmboss](#)

[TextureNoisePaint](#)

[TextureSpots](#)

[TextureCells](#)

[TextureChromaSpiral](#)

[TextureTiles](#)

[TextureNeurons](#)

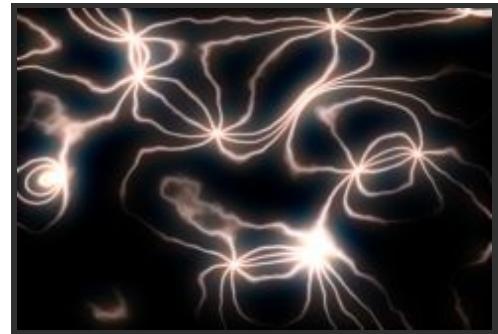
[TextureLoops](#)

[TextureFlux](#)

S_TextureNeurons

Creates an abstract texture resembling moving nerve cell tendrils. The Phase Speed and Morph Speed parameters cause the pattern to automatically change over time.

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to combine the texture image with. This may be ignored if the Combine option is set to Texture Only.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Frequency: *Default: 3, Range: 0.01 or greater.*
The spatial frequency of the texture. Increase to zoom out, decrease to zoom in.

Frequency Rel X: *Default: 1, Range: 0.01 or greater.*
The relative horizontal frequency of the texture. Increase to stretch it vertically or decrease to stretch it horizontally.

Arms: *Integer, Default: 9, Range: 0 to 50.*
The number of tendrils emanating from each center point in the texture.

Softness: *Default: 0.5, Range: 0.01 or greater.*
Decrease for sharper line edges. Increase for smoother line edges or to reduce aliasing.

Thickness: *Default: 1.1, Range: 0 or greater.*
Decrease for thinner lines. Increase for stronger brighter lines.

Outer Bright: *Default: 0.4, Range: 0.01 to 1.*
Scales the brightness of the regions away from the neuron centers. Decrease to remove the connecting lines and leave only the star shapes at the centers.

Seed: *Default: 1, Range: 0 or greater.*
Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Shift: *X & Y, Default: [0 0], Range: any.*
Translation offset of the texture. Since the texture is procedurally generated it can be shifted with no repeating units or seams occurring. This parameter can be adjusted using the Shift Widget.

Phase Start: *Default: 0, Range: any.*
Amount to rotate the arms about their centers.

Phase Speed: *Default: 0.05, Range: any.*
Speed to automatically rotate the arms and move the lines over time.

Morph Speed: *Default: 0.05, Range: any.*
Speed to automatically undulate the underlying noise pattern over time.

Morph: *X & Y, Default: [1 0], Range: any.*
The horizontal and vertical directions to undulate the underlying noise pattern, when using Morph Speed.

Twist: *Default: 0, Range: any.*
Amount to rotate the centers to cause a twisting effect.

Wiggle Amp: *Default: 0.1, Range: 0 or greater.*
Amount of additional noise to apply along the pattern of lines. Turn down to get smoother lines.

Wiggle Freq Rel: *Default: 2, Range: 0 or greater.*
Frequency of the additional noise.

Wiggle Octaves: *Integer*, *Default*: 4, *Range*: 1 to 10.

The number of octaves to use for the additional noise.

Smooth: *Default*: 0, *Range*: 0 or greater.

Amount to blur the line pattern. Increase for a defocus look, or to help remove aliasing artifacts.

Brightness: *Default*: 1, *Range*: 0 or greater.

Brightness of the result.

Color: *Default rgb*: [1 1 1].

Scales the color of the result.

Glow Brightness: *Default*: 2, *Range*: 0 or greater.

Brightness of the glow applied to the texture.

Glow Color: *Default rgb*: [1 0.8 0.8].

Color of the glow applied to the texture.

Glow Width: *Default*: 1, *Range*: 0 or greater.

The width of the glow applied to the texture.

Glow Width Red: *Default*: 0.4, *Range*: 0 or greater.

The relative red width of the glow.

Glow Width Grn: *Default*: 0.6, *Range*: 0 or greater.

The relative green width of the glow.

Glow Width Blue: *Default*: 0.8, *Range*: 0 or greater.

The relative blue width of the glow.

Bg Brightness: *Default*: 1, *Range*: 0 or greater.

The background brightness is scaled by this value before being combined with the texture.

Combine: *Popup menu*, *Default*: Screen.

Determines how the texture is combined with the Background.

Texture Only: gives only the texture image with no Background.

Mult: the texture is multiplied by the Background.

Add: the texture is added to the Background.

Screen: the texture is blended with the Background using a screen operation.

Difference: the result is the difference between the texture and Background.

Overlay: the texture is combined with the Background using an overlay function.

Mask Use: *Popup menu*, *Default*: Luma.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default*: 0.05, *Range*: 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default*: off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Shift: *Check-box*, *Default*: on.

Turns on or off the screen user interface for adjusting the Shift parameter.

See Also:

[TextureFolded](#)

[Sapphire Plug-ins](#)

[TextureWeave](#)

[Introduction](#)

[TexturePlasma](#)

[TextureNoiseEmboss](#)

[TextureNoisePaint](#)

[TextureSpots](#)

[TextureCells](#)

[TextureChromaSpiral](#)

[TextureMoiré](#)

[TextureTiles](#)

[TextureLoops](#)

[TextureFlux](#)

S_TextureNoiseEmboss

Creates an abstract texture by applying a EmbossShiny effect to a procedurally generated noise texture. Adjust the Light Dir to illuminate the pattern from different angles.

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to combine the texture image with. This may be ignored if the Combine option is set to Texture Only.

Mask: *Optional.* If provided, the emboss is applied only at the areas specified by this input. This input can be affected using the Blur Mask, Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Frequency: *Default: 2, Range: 0.1 or greater.*
The spatial frequency of the texture. Increase to zoom out, decrease to zoom in.

Frequency Rel X: *Default: 1.5, Range: 0.01 or greater.*
The relative horizontal frequency of the texture. Increase to stretch it vertically or decrease to stretch it horizontally.

Octaves: *Integer, Default: 5, Range: 1 to 10.*
The number of summed layers of noise. Each octave is twice the frequency and half the amplitude of the previous. A single octave gives a smooth texture. Adding octaves makes the result approach a fractal (1/f) noise texture.

Seed: *Default: 0.23, Range: 0 or greater.*
Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Bumps Scale: *Default: 2.5, Range: any.*
Scales the amplitude of the bump map.

Bumps Threshold: *Default: 0, Range: 0 or greater.*
This value is subtracted from the Bumps input before it is used. It can be used to create flat areas resembling 'lakes.'

Bumps Smooth: *Default: 0, Range: 0 or greater.*
Smooths the noise texture before applying the Emboss. This can be helpful in removing unwanted artifacts from the noise generation algorithm.

Shift: *X & Y, Default: [0 0], Range: any.*
Translation offset of the texture. Since the texture is procedurally generated it can be shifted with no repeating units or seams occurring.

Light Dir: *X & Y, Default: [0.389 0.33], Range: any.*
The direction vector for the light source. Surface shading is calculated using light from this direction shining onto the generated bump map. This parameter can be adjusted using the Light Dir Widget.

Hilight Brightness: *Default: 0.5, Range: 0 to 1.*
Scales the brightness of the specular highlights.

Hilight Size: *Default: 0.5, Range: 0.1 or greater.*
Adjusts the size of the specular highlights.

Brightness: *Default: 1, Range: 0 or greater.*
Scales the brightness of the result.

Surface Color: *Default rgb: [0.75 0.75 0.75].*
The color of the surface. The final color is affected by both this and the Light Color.

Light Color: *Default rgb: [1 1 1].*
The color of the light source that creates the embossed result.

Bg Brightness: *Default: 1, Range: 0 or greater.*

The background brightness is scaled by this value before being combined with the texture.

Combine: *Popup menu, Default: Screen.*

Determines how the texture is combined with the Background.

Texture Only: gives only the texture image with no Background.

Mult: the texture is multiplied by the Background.

Add: the texture is added to the Background.

Screen: the texture is blended with the Background using a screen operation.

Difference: the result is the difference between the texture and Background.

Overlay: the texture is combined with the Background using an overlay function.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Light Dir: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Light Dir parameter.

See Also:

[TextureFolded](#)

[Clouds](#)

[Sapphire](#)

[TextureWeave](#)

[EmbossShiny](#)

[Plug-ins](#)

[TexturePlasma](#)

[Introduction](#)

[TextureNoisePaint](#)

[TextureSpots](#)

[TextureCells](#)

[TextureChromaSpiral](#)

[TextureMoiré](#)

[TextureTiles](#)

[TextureNeurons](#)

[TextureLoops](#)

[TextureFlux](#)

S_TextureNoisePaint

Creates an abstract texture by applying an AutoPaint effect to a procedurally generated noise texture.

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to combine the texture image with. This may be ignored if the Combine option is set to Texture Only.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Noise Frequency: *Default: 5, Range: 0.1 or greater.*
The spatial frequency of the initial noise texture. Increase to zoom out, decrease to zoom in.

Noise Freq Rel X: *Default: 1, Range: 0.01 or greater.*
The relative horizontal frequency of the initial noise texture. Increase to stretch it vertically or decrease to stretch it horizontally.

Noise Octaves: *Integer, Default: 1, Range: 1 to 10.*
The number of summed layers of noise. Each octave is twice the frequency and half the amplitude of the previous. A single octave gives a smooth texture. Adding octaves makes the result approach a fractal (1/f) noise texture.

Noise Seed: *Default: 0.23, Range: 0 or greater.*
Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Noise Shift: *X & Y, Default: [0 0], Range: any.*
Translation offset of the initial noise texture.

Stroke Frequency: *Default: 30, Range: 0.1 or greater.*
The density of brush strokes in the frame. Increase for smaller strokes.

Stroke Length: *Default: -5, Range: any.*
Determines the length of the brush strokes along the directions of edges in the source clip. If this is negative the strokes will align perpendicular to the edges for a 'HairyPaint' style.

Stroke Align: *Default: 0, Range: 0 or greater.*
Increase to smooth out the directions of the strokes so nearby strokes are more parallel.

Sharpen: *Default: 2, Range: any.*
The amount of post-process sharpening applied.

Sharpen Width: *Default: 0.1, Range: 0 or greater.*
The width at which to apply the post-process sharpening filter, relative to the stroke sizes. Higher values affect wider areas from the edges, lower values only affect areas near sharp edges.

Jitter Frames: *Integer, Default: 0, Range: 0 or greater.*
If this is 0, the locations of the strokes will remain the same for every frame processed. If it is 1, the locations of the strokes are re-randomized for each frame. If it is 2, they are re-randomized every second frame, and so on.

Brightness: *Default: 1, Range: 0 or greater.*
Scales the brightness of the result.

Color: *Default rgb: [1 1 1].*
Scales the color of the result. For example, if it is yellow [1 1 0], the blue of the result will be 0.

Saturation: *Default: 0.8, Range: 0 to 10.*
Scales the color saturation. Increase for more intense colors. Set to 0 for monochrome.

Offset: *Default:* 0, *Range:* -8 to 2.

Adds this gray value to the result (or subtracts if negative). 0 has no effect, .5 is middle gray, and 1 is white.

Bg Brightness: *Default:* 1, *Range:* 0 or greater.

The background brightness is scaled by this value before being combined with the texture.

Combine: *Popup menu, Default: Screen.*

Determines how the texture is combined with the Background.

Texture Only: gives only the texture image with no Background.

Mult: the texture is multiplied by the Background.

Add: the texture is added to the Background.

Screen: the texture is blended with the Background using a screen operation.

Difference: the result is the difference between the texture and Background.

Overlay: the texture is combined with the Background using an overlay function.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[TextureFolded](#)

[CloudsColorSmooth](#)

[Sapphire](#)

[TextureWeave](#)

[AutoPaint](#)

[Plug-ins](#)

[TexturePlasma](#)

[Introduction](#)

[TextureNoiseEmboss](#)

[TextureSpots](#)

[TextureCells](#)

[TextureChromaSpiral](#)

[TextureMoiré](#)

[TextureTiles](#)

[TextureNeurons](#)

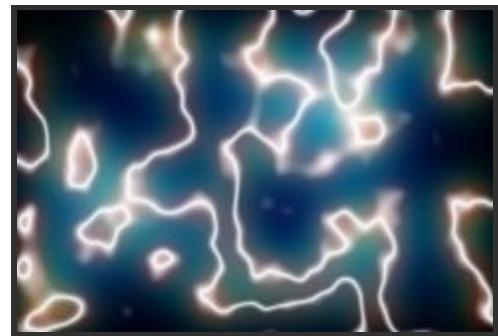
[TextureLoops](#)

[TextureFlux](#)

S_TexturePlasma

Creates an abstract texture resembling an electrical plasma effect. The Phase Speed parameter causes the pattern to automatically undulate over time.

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to combine the texture image with. This may be ignored if the Combine option is set to Texture Only.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Noise Frequency: *Default: 1.2, Range: 0.01 or greater.*
The spatial frequency of the initial noise texture. Increase to zoom out, decrease to zoom in.

Noise Freq Rel X: *Default: 1, Range: 0.01 or greater.*
The relative horizontal frequency of the initial noise texture. Increase to stretch it vertically or decrease to stretch it horizontally.

Noise Octaves: *Integer, Default: 4, Range: 1 to 10.*
The number of summed layers of noise. Each octave is twice the frequency and half the amplitude of the previous. A single octave gives a smooth texture. Adding octaves makes the result approach a fractal (1/f) noise texture.

Noise Seed: *Default: 0.12, Range: 0 or greater.*
Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Add Grad: *X & Y, Default: [0.1 0], Range: any.*
Determines the amplitude and direction of a gradient which orients the plasma lines. Increasing X makes the lines more vertical, and increasing Y makes them horizontal.

Layers: *Default: 4.5, Range: 0 or greater.*
The number of layers of plasma lines. Increase for a more striped effect.

Threshold: *Default: 0.5, Range: 0 or greater.*
Determines the thickness of the plasma lines. Increase for thinner lines, decrease for thicker and brighter ones.

Shift: *X & Y, Default: [0 0], Range: any.*
Translation offset of the texture. Since the texture is procedurally generated it can be shifted with no repeating units or seams occurring. This parameter can be adjusted using the Shift Widget.

Phase Start: *Default: 0, Range: any.*
Phase offset of the plasma lines.

Phase Speed: *Default: 1, Range: any.*
Phase speed of the plasma lines. If non-zero, the lines are automatically animated to undulate at this rate.

Brightness: *Default: 1, Range: 0 or greater.*
Scales the brightness of the result.

Color: *Default rgb: [1 1 1].*
Scales the color of the result. For example, if it is yellow [1 1 0], the blue of the result will be 0.

Glow Brightness: *Default: 3, Range: 0 or greater.*
Scales the brightness of the glow applied to the plasma texture.

Glow Color: *Default rgb: [0.6 0.8 1].*
Scales the color of the glow applied to the plasma texture.

Glow Width: *Default: 1, Range: 0 or greater.*

The width of the glow applied to the plasma texture.

Glow Width Red: *Default: 0.6, Range: 0 or greater.*

The relative red width of the glow.

Glow Width Grn: *Default: 1.2, Range: 0 or greater.*

The relative green width of the glow.

Glow Width Blue: *Default: 1.8, Range: 0 or greater.*

The relative blue width of the glow.

Bg Brightness: *Default: 1, Range: 0 or greater.*

The background brightness is scaled by this value before being combined with the texture.

Combine: *Popup menu, Default: Screen.*

Determines how the texture is combined with the Background.

Texture Only: gives only the texture image with no Background.

Mult: the texture is multiplied by the Background.

Add: the texture is added to the Background.

Screen: the texture is blended with the Background using a screen operation.

Difference: the result is the difference between the texture and Background.

Overlay: the texture is combined with the Background using an overlay function.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Shift: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Shift parameter.

See Also:

[TextureFolded](#)

[Clouds](#)

[Sapphire](#)

[TextureWeave](#)

[Glow](#)

[Plug-ins](#)

[TextureNoiseEmboss](#)

[Introduction](#)

[TextureNoisePaint](#)

[TextureSpots](#)

[TextureCells](#)

[TextureChromaSpiral](#)

[TextureMoiré](#)

[TextureTiles](#)

[TextureNeurons](#)

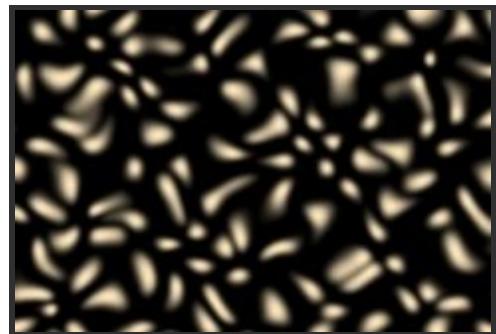
[TextureLoops](#)

[TextureFlux](#)

S_TextureSpots

Creates a field of spots that can be distorted and animated. The Warp Speed parameter causes the spots to be distorted over time by a random warping pattern.

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to combine the texture image with. This may be ignored if the Combine option is set to Texture Only.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Frequency: *Default:* 8, *Range:* 0.01 or greater.
The spatial frequency of the texture. Increase to zoom out, decrease to zoom in.

Radius: *Default:* 1, *Range:* 0 to 2.
The radius of the spots. Adjust this to change the size of the spots without changing the number of spots.

Seed: *Default:* 0.23, *Range:* 0 or greater.
Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Rand Warp Amp: *Default:* 0.2, *Range:* 0 or greater.
The amplitude of a bubble warping distortion applied to the spots.

Rand Warp Freq: *Default:* 1, *Range:* 0.01 or greater.
The spatial frequency of the noise used for the warping distortion. This has no effect unless Rand Warp Amp is positive.

Shift: X & Y, *Default:* [0 0], *Range:* any.
Translation offset of the texture. Since the texture is procedurally generated it can be shifted with no repeating units or seams occurring.

Warp Start: X & Y, *Default:* [0 0], *Range:* any.
The translation offset warping pattern. This has no effect unless Rand Warp Amp is positive.

Warp Speed: X & Y, *Default:* [0.5 0], *Range:* any.
The translation speed of the warping pattern. If non-zero the spots are animated to wiggle at this rate. This has no effect unless Rand Warp Amp is positive.

Brightness1: *Default:* 1, *Range:* 0 or greater.
Scales the brightness of Color1. Increase for more contrast.

Color1: *Default* *rgb:* [1 1 1].
The color of the 'brighter' parts of the texture. The colors of the result are determined by an interpolation between Color0 and Color1.

Color0: *Default* *rgb:* [0 0 0].
The color of the 'darker' parts of the texture.

Offset0: *Default:* 0, *Range:* any.
Adds this value to color0. Decrease to a negative value for more contrast.

Invert: *Check-box*, *Default:* off.
If enabled, the resulting texture colors are inverted. This is similar to swapping Color0 and Color1.

Bg Brightness: *Default:* 1, *Range:* 0 or greater.
The background brightness is scaled by this value before being combined with the texture.

Combine: *Popup menu*, *Default:* Screen.

Determines how the texture is combined with the Background.

Texture Only: gives only the texture image with no Background.

Mult: the texture is multiplied by the Background.

Add: the texture is added to the Background.

Screen: the texture is blended with the Background using a screen operation.

Difference: the result is the difference between the texture and Background.

Overlay: the texture is combined with the Background using an overlay function.

Mask Use: *Popup menu*, *Default: Luma*.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[TextureFolded](#)

[WarpBubble](#)

[TextureWeave](#)

[Sapphire Plug-ins](#)

[TexturePlasma](#)

[Introduction](#)

[TextureNoiseEmboss](#)

[TextureNoisePaint](#)

[TextureCells](#)

[TextureChromaSpiral](#)

[TextureMoiré](#)

[TextureTiles](#)

[TextureNeurons](#)

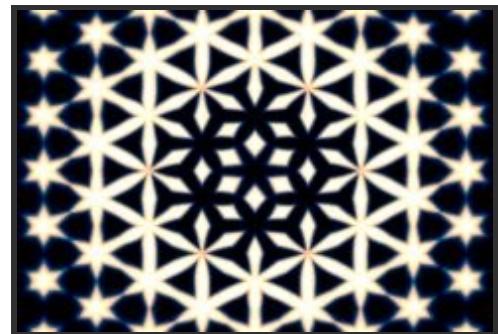
[TextureLoops](#)

[TextureFlux](#)

S_TextureTiles

TextureTiles draws a repeating pattern of tiles. The shapes can be hexagons, triangles, diamonds, stars, or variations on those, depending on the Morph parameters.

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to combine the texture image with. This may be ignored if the Combine option is set to Texture Only.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Size: *Default:* 0.5, *Range:* 0 or greater.
The size of each tile, within its cell. Zero will give all color0, one will give all color1. This doesn't change the overall size of the pattern; use Frequency for that.

Frequency: *Default:* 5, *Range:* 0.01 or greater.
Spatial frequency of the tile pattern; increase for many smaller tiles, decrease for fewer large tiles. This parameter can be adjusted using the Frequency Widget.

Angle: *Default:* 0, *Range:* any.
Rotates the whole pattern around the center point. Use Shift to adjust the center of rotation.

Rel Width: *Default:* 1, *Range:* 0.2 or greater.
Squashes or stretches the pattern.

Rel Wid Pre Rot: *Default:* 1, *Range:* 0.1 or greater.
Squashes or stretches the pattern *before* rotating by Angle. Use this if you want to squash or stretch and have the whole squashed/stretched pattern rotate around the center. If Angle is zero, this has the same effect as Rel Width.

Shift: X & Y, *Default:* [0 0], *Range:* any.
Shift the whole pattern on the screen. Also sets the center point for rotation, Morph Radial, and Size Radial. This parameter can be adjusted using the Shift Widget.

Morph Shapes: *Default:* 0, *Range:* any.
Changes the shapes of the tiles smoothly, from hexagons to triangles, diamonds, and stars.

Morph Speed: *Default:* 0.5, *Range:* any.
Automatically animates the shape morphing over time. A value of one means a complete morph cycle once per second.

Morph Grad Add: *Default:* 0, *Range:* any.
Change the shape morphing across the image, so the left side has one shape, and the right side another. See Morph Grad Angle to change the angle of this gradient.

Morph Grad Angle: *Default:* 0, *Range:* any.
Angle of the morph gradient. If Morph Grad Add is zero, this has no effect.

Morph Radial: *Default:* 0, *Range:* any.
Morph the shapes radially away from the center point; the shapes will be (for instance) hexagons in the center, smoothly becoming different toward the edges of the image. Morph Shapes and Morph Speed also interact with this parameter.

Size Grad Add: *Default:* 0, *Range:* -10 to 10.
Change the size of the shapes (like the Size parameter) differently across the image.

Size Grad Angle: *Default:* 0, *Range:* any.
Angle of the size gradient. If Size Grad Add is zero, this has no effect.

Size Radial: *Default:* 0, *Range:* any.

Change the size of the shapes (like the Size parameter) according to the distance from the center point. Increase to make the sizes smaller around the edges.

Edge Softness: *Default: 0.17, Range: 0 or greater.*

Softens the edges of each tile. If Softness Red/Green/Blue are not one, there will be some color fringing around the edges of the tiles when this is on.

Softness Red: *Default: 0, Range: 0 or greater.*

Relative softness of the red channel; see Edge Softness. To remove the color fringing around the edges of the tiles, set all the Softness Red/Green/Blue to one.

Softness Green: *Default: 1, Range: 0 or greater.*

Relative softness of the green channel; see Edge Softness. To remove the color fringing around the edges of the tiles, set all the Softness Red/Green/Blue to one.

Softness Blue: *Default: 2, Range: 0 or greater.*

Relative softness of the blue channel; see Edge Softness. To remove the color fringing around the edges of the tiles, set all the Softness Red/Green/Blue to one.

Invert: *Check-box, Default: off.*

Invert the whole pattern, swapping the dark and bright areas.

Brightness1: *Default: 1, Range: 0 or greater.*

Scales the brightness of Color1. Increase for more contrast.

Color1: *Default rgb: [1 1 1].*

The color of the 'brighter' parts of the texture. The colors of the result are determined by an interpolation between Color0 and Color1.

Color0: *Default rgb: [0 0 0].*

The color of the 'darker' parts of the texture.

Offset0: *Default: 0, Range: any.*

Adds this value to color0. Decrease to a negative value for more contrast.

Bg Brightness: *Default: 1, Range: 0 or greater.*

The background brightness is scaled by this value before being combined with the texture.

Combine: *Popup menu, Default: Screen.*

Determines how the texture is combined with the Background.

Texture Only: gives only the texture image with no Background.

Mult: the texture is multiplied by the Background.

Add: the texture is added to the Background.

Screen: the texture is blended with the Background using a screen operation.

Difference: the result is the difference between the texture and Background.

Overlay: the texture is combined with the Background using an overlay function.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Frequency: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Frequency parameter.

Show Shift: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Shift parameter.

See Also:

[TextureFolded](#)

[WipeTiles](#)

[TextureWeave](#)

[Sapphire Plug-ins](#)

[TexturePlasma](#)

[Introduction](#)

[TextureNoiseEmboss](#)

[TextureNoisePaint](#)

[TextureSpots](#)

[TextureCells](#)

[TextureChromaSpiral](#)

[TextureMoiré](#)

[TextureNeurons](#)

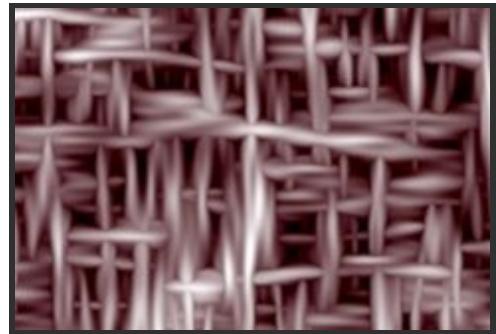
[TextureLoops](#)

[TextureFlux](#)

S_TextureWeave

Creates an abstract texture resembling perpendicular woven strands. The two sets of strands, horizontal and vertical, can be adjusted independently using frequency, octaves, and speed parameters.

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to combine the texture image with. This may be ignored if the Combine option is set to Texture Only.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Frequency: *Default: 20, Range: 0.01 or greater.*
The spatial frequency of the texture. Increase to zoom out, decrease to zoom in.

H Freq Rel X: *Default: 0.2, Range: 0.01 or greater.*
The relative horizontal frequency of the horizontal strands. Increase to make shorter, decrease to make longer.

H Octaves: *Integer, Default: 2, Range: 1 to 10.*
The number of noise octaves to use for the horizontal strands.

H Speed X: *Default: 0, Range: any.*
The horizontal speed of the horizontal strands. If non-zero, the horizontal strands will automatically crawl along their lengths at this rate.

V Frequency: *Default: 1, Range: 0.01 or greater.*
The relative frequency of the vertical strands. Increase to make smaller, decrease to make larger.

V Freq Rel Y: *Default: 0.2, Range: 0.01 or greater.*
The relative vertical frequency of the vertical strands. Increase to make shorter, decrease to make longer.

V Octaves: *Integer, Default: 2, Range: 1 to 10.*
The number of noise octaves to use for the vertical strands.

V Speed Y: *Default: 0, Range: any.*
The vertical speed of the vertical strands. If non-zero, the vertical strands will automatically crawl along their lengths at this rate.

Seed: *Default: 0.123, Range: 0 or greater.*
Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Shift: *X & Y, Default: [0 0], Range: any.*
Translation offset of the texture. Since the texture is procedurally generated it can be shifted with no repeating units or seams occurring. This parameter can be adjusted using the Shift Widget.

Shift Speed: *X & Y, Default: [0 0], Range: any.*
Translation speed of the texture. If non-zero, the result is automatically animated to shift at this rate. The result of animated Speed values may not be intuitive, so for variable speed motion it is usually best to set this to 0 and animate the Shift Start values instead.

Sharpen: *Default: 1, Range: any.*
The amount of post-process sharpening applied.

Sharpen Width: *Default: 0.1, Range: 0 or greater.*
The width at which to apply the post-process sharpening filter, relative to the texture size. Higher values affect wider areas from the edges, lower values only affect areas near sharp edges.

Brightness1: *Default: 1, Range: 0 or greater.*
Scales the brightness of Color1. Increase for more contrast.

Color1: *Default* *rgb*: [1 1 1].

The color of the 'brighter' parts of the texture. The colors of the result are determined by an interpolation between Color0 and Color1.

Color0: *Default* *rgb*: [0 0 0].

The color of the 'darker' parts of the texture.

Offset0: *Default*: 0, *Range*: any.

Adds this value to color0. Decrease to a negative value for more contrast.

Bg Brightness: *Default*: 1, *Range*: 0 or greater.

The background brightness is scaled by this value before being combined with the texture.

Combine: *Popup menu*, *Default*: *Screen*.

Determines how the texture is combined with the Background.

Texture Only: gives only the texture image with no Background.

Mult: the texture is multiplied by the Background.

Add: the texture is added to the Background.

Screen: the texture is blended with the Background using a screen operation.

Difference: the result is the difference between the texture and Background.

Overlay: the texture is combined with the Background using an overlay function.

Mask Use: *Popup menu*, *Default*: *Luma*.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default*: 0.05, *Range*: 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default*: off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Shift: *Check-box*, *Default*: on.

Turns on or off the screen user interface for adjusting the Shift parameter.

See Also:

[TextureFolded](#)

[Clouds](#)

[TexturePlasma](#)

[Sapphire Plug-ins](#)

[TextureNoiseEmboss](#)

[Introduction](#)

[TextureNoisePaint](#)

[TextureSpots](#)

[TextureCells](#)

[TextureChromaSpiral](#)

[TextureMoiré](#)

[TextureTiles](#)

[TextureNeurons](#)

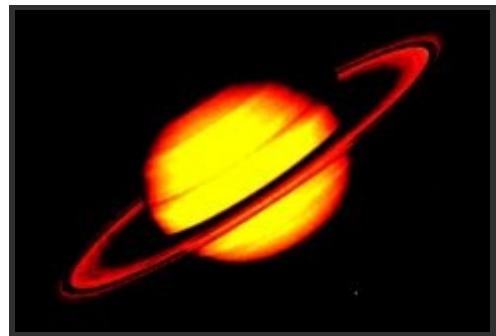
[TextureLoops](#)

[TextureFlux](#)

S_Threshold

Sets the color channels of the source clip to full on or full off using a given softness and threshold. This can be used to increase the contrast of each color channel independently.

In the Sapphire Adjust effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Threshold: *Default:* 0.5, *Range:* 0 or greater.
The source brightness value to use as the mid-point of the thresholding. This is often a middle gray around .5.

Threshold Add Color: *Default* *rgb:* [0 0 0].
Raises the thresholds on each color channel using this color. It has no effect when black.

Softness: *Default:* 0.2, *Range:* 0.001 to 1.
The softness of the transition between full off and on. Increase for smoother transitions, decrease for sharper ones.

Soft Rel Red: *Default:* 1, *Range:* 0 or greater.
The relative softness of the red thresholding.

Soft Rel Green: *Default:* 1, *Range:* 0 or greater.
The relative softness of the green thresholding.

Soft Rel Blue: *Default:* 1, *Range:* 0 or greater.
The relative softness of the blue thresholding.

Saturation: *Default:* 1, *Range:* any.
Scales the color saturation. Increase for more intense colors. Set to 0 for monochrome.

Mask Use: *Popup menu*, *Default:* Luma.
Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.
Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.
Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.
If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

HueSatBright	Sharpen
Monochrome	Sapphire
ClampChroma	Plug-ins
PseudoColor	Introduction
DuoTone	
TriTone	
QuadTone	
Tint	
Hotspots	

Gamma
Solarize
ChannelSwitcher
ShowBadColors
Invert

S_TileScramble

Breaks the image into rectangular tiles and shifts the image within each tile to create an effect like a wall of small randomly oriented mirrors reflecting the source image. The amount and direction of shifting are controllable.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The input clip to be warped.

Mask: *Optional.* If provided, the amplitude of warping is scaled by the values of this input clip. Gray values internally scale the warping amplitude rather than simply cross-fading between the effect and the original source to allow more continuous results at the mask edges and more detailed control over the warping amounts. This input can be affected using the Blur Mask, Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Amount: *Default: 0.1, Range: any.*

How much scrambling to apply to each tile. Zero gives the original image.

Amount Rel X: *Default: 1, Range: 0 or greater.*

Relative scramble amount in X. Set to zero to get only vertical scrambling.

Amount Rel Y: *Default: 1, Range: 0 or greater.*

Relative scramble amount in Y. Set to zero to get only horizontal scrambling.

Tiles: *Default: 10, Range: 1 or greater.*

How many tiles across the image. Increase for many tiny tiles; decrease for a few large ones.

Tile Rel Width: *Default: 1, Range: 0.01 or greater.*

Scales the height of each tile.

Tile Rel Height: *Default: 1, Range: 0.01 or greater.*

Scales the width of each tile.

Tile Shift: *X & Y, Default: [0 0], Range: any.*

shifts the edges of the tiles in X and Y. This doesn't shift the contents of the tiles, just the boundaries. Animate for an interesting effect. This parameter can be adjusted using the Tile Shift Widget.

Rotate Warp Dir: *Default: 0, Range: any.*

Rotates the warping direction by this many degrees. Animate to rotate the tiles around for an interesting effect.

Z Dist: *Default: 1, Range: 0.01 or greater.*

Scales the distance of the image in each tile in or out from its center. Increase to zoom out, decrease to zoom in.

Seed: *Default: 0.123, Range: 0 or greater.*

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Wrap: *Popup menu, Default: No.*

Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Filter: *Check-box, Default: off.*

If enabled, the image is filtered when it is resampled smaller. This gives a better quality result when Z Dist is greater than 1. Has no effect when Z Dist is 1 or less.

Blur Mask: *Default: 0, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and

unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu*, *Default:* Luma.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Crop Input Parameters: *Default:* 0, *Range:* 0 or greater.

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

Show Tile Shift: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Tile Shift parameter.

See general info for [Motion Blur](#)

See Also:

[FlysEyeRect](#)

[Sapphire](#)

[Mosaic](#)

[Plug-ins](#)

[KaleidoSquares](#)

[Introduction](#)

[WipeTiles](#)

S_TimeAverage

Each output frame is the average of multiple input frames: from the current frame, back to a given number of previous frames. This is similar to the Trails effect, except all frames within the range are weighted equally instead of fading out, so the end points of the trails are abrupt. Each frame contributes only 1/n of the total brightness, so fast-moving objects against a dark background may seem dim.



The average is reinitialized whenever any non-consecutive frame is processed: either the first frame, reprocessing a given frame, or jumping to another frame. You must process multiple frames of a clip in a row to observe the effect.

In the Sapphire Time effects submenu.

Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Ave Over Frames: *Integer*, *Default:* 10, *Range:* 1 or greater.

The number of previous frames to average over, including the current frame. For correct results, this parameter should not be animated.

Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the output brightness.

Mask Use: *Popup menu*, *Default:* Luma.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[Feedback](#)

[Trails](#)

[TrailsDiffuse](#)

[FeedbackDistort](#)

[NearestColor](#)

[FeedbackBubble](#)

[WarpRepeat](#)

[WarpChroma](#)

[Sapphire](#)

[Plug-ins](#)

[Introduction](#)

S_TimeDisplace

Displaces the Source clip by variable amounts in time depending on the brightness values of a Displace input.

In the Sapphire Time effects submenu.



Inputs:

Source: The clip to be processed.

Displace: *Optional.* Determines the amount of time displacement. Where the Displace input is white the Source is time-shifted by a number of frames given by White Time Shift, and where it is black the Source is shifted by Black Time Shift. Gray areas are time-shifted by the appropriately interpolated amount. This input can be optionally blurred using the Blur Displace parameter. If this input is not provided, the Source input is used for the displacement matte instead.

Mask: *Optional.* Scales the amount of time displacement. Where the Mask is black, no displacement is done, and where the Mask is white, the source is displaced by the full amount according to the Displace input. Use this input to fade out the effect in certain areas of the clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.
The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.
Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.
Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Black Time Shift: *Default:* -10, *Range:* any.
Time shift by this many frames where the Matte is black.

White Time Shift: *Default:* 10, *Range:* any.
Time shift by this many frames where the Matte is white.

Shift Relative To: *Popup menu*, *Default:* Current Frame.
Selects relative or absolute time-shifting.

Frame 0: Time shift to an absolute frame number, relative to the first frame.
Current Frame: Time shift relative to the current frame.

Interp Frames: *Check-box*, *Default:* off.
Selects the method to use for non-integer frame number references. If disabled, the nearest integer frame number is used with no interpolation, which usually gives visible edges between the time slices. If enabled, a weighted interpolation is performed between the two nearest integer frame numbers, which smooths the results between the time slices.

Displace Use: *Popup menu*, *Default:* Luma.
Determines how the Displace input channels are monochromed to produce the time displacement matte.

Luma: the luminance of the RGB channels is used.
Alpha: only the Alpha channel is used.

Blur Displace: *Default:* 0.224, *Range:* 0 or greater.
Blurs the Displace input by this amount before using. This can be used to soften the edges or quantization artifacts of the Displace input, and smooth out the time displacements.

Mask Use: *Popup menu*, *Default:* Luma.
Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.
Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0, *Range:* 0 or greater.
Blurs the Mask input by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[GetFrame](#)

[TimeWarpRGB](#)

[MotionDetect](#)

[TimeSlice](#)

[FreezeFrame](#)

[JitterFrames](#)

[RandomEdits](#)

[ReverseEdits](#)

[ReverseClip](#)

[Sapphire](#)

[Plug-ins](#)

[Introduction](#)

S_TimeSlice

Divides the output frame into slices, where each slice receives a different frame from the source clip. An example use of this effect might be to make a turning object twist into a helix shape instead of rigidly rotating. The slices are oriented depending on Slice Direction, and receive relative frame numbers between plus and minus half of Slice Number. For example if the current frame number is 30, Slice Direction is -90 degrees, Slice Number is 12, and Frame Offset is 0, the result will consist of horizontal slices containing approximately frames 30-6 to 30+6 from bottom to top.



In the Sapphire Time effects submenu.

Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Slice Direction: *Default: 90, Range: any.*

The orientation of the slices, in counter-clockwise degrees. If this is 0 the slices will go from left to right. If it is 90 they will go from top to bottom. This parameter can be adjusted using the Slice Widget.

Slice Number: *Default: 12, Range: 1 or greater.*

The number of time slices to slice the frame into. This parameter can be adjusted using the Slice Widget.

Frame Offset: *Default: 0, Range: any.*

Shifts all frame numbers in time that the slices receive. This parameter can be adjusted using the Slice Widget.

Interp Frames: *Check-box, Default: off.*

Selects the method to use for non-integer frame number references. If disabled, the nearest integer frame number is used with no interpolation, which usually gives visible edges between the time slices. If enabled, a weighted interpolation is performed between the two nearest integer frame numbers, which smooths the results between the time slices.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Slice: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Slice Direction, Slice Number, and Frame Offset parameters. This widget visually shows the single slice where the result equals the current frame of the source.

See Also:

[GetFrame](#)

[TimeDisplace](#)

[TimeWarpRGB](#)

[Sapphire](#)

[MotionDetect](#)

[Plug-ins](#)

[FreezeFrame](#)

[Introduction](#)

[JitterFrames](#)

[RandomEdits](#)

[ReverseEdits](#)

ReverseClip

S_TimeWarpRGB

Shifts the red, green, and blue channels in time by different amounts, to give a temporal chroma distortion.

In the Sapphire Time effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Red Shift Frames: *Integer, Default: 1, Range: any.*

The number of frames to shift the red channel.

Green Shift Frames: *Integer, Default: 0, Range: any.*

The number of frames to shift the green channel.

Blue Shift Frames: *Integer, Default: -1, Range: any.*

The number of frames to shift the blue channel.

Clamp Chroma: *Default: 1, Range: 0 to 1.*

If less than one, the chroma of the output is reduced to this value. This can help keep the output colors video safe.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:[GetFrame](#)[Sapphire](#)[MotionDetect](#)[Plug-ins](#)[TimeSlice](#)[Introduction](#)[FreezeFrame](#)[JitterFrames](#)[RandomEdits](#)[ReverseEdits](#)[ReverseClip](#)

S_Tint

Tints the dark and light regions of the input clip towards given colors. The dark colors are tinted by the Tint Dark color, and the brighter colors are tinted by the Tint Lights color.

In the Sapphire Adjust effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* *Union*.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.
Intersect: Uses the area that overlaps between the two masks.
Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Tint Lights: *Default* *rgb:* [1 1 1].
Scales the result by this color, thus tinting the lighter regions.

Tint Dark: *Default* *rgb:* [0 0 0].
Adds this color to the darker regions of the source.

Source Saturation: *Default:* 1, *Range:* -2 to 8.
Scales the chroma saturation of the source. If this is zero you will see only color from the given tint colors.

Scale Lights: *Default:* 1, *Range:* 0 or greater.
Scales the result by this gray value. Increase for a brighter result.

Offset Dark: *Default:* 0, *Range:* -8 to 2.
Adds this gray value to the darker regions of the source. This can be negative to increase contrast.

Mask Use: *Popup menu*, *Default:* *Luma*.
Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.
Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.
Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.
If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[HueSatBright](#)
[Monochrome](#)
[ClampChroma](#)
[PseudoColor](#)
[DuoTone](#)
[TriTone](#)
[QuadTone](#)
[Threshold](#)
[Hotspots](#)
[Gamma](#)
[Solarize](#)
[ChannelSwitcher](#)
[ShowBadColors](#)
[Invert](#)

[Sapphire](#)
[Plug-ins](#)
[Introduction](#)

S_Trails

The previous frames of the input clip are combined with the current frame to give a variety of 'time trails' effects. The output of each processed frame is stored and then combined with the next frame. The trails are reinitialized whenever any non-consecutive frame is processed, either the first frame, reprocessing a given frame, or jumping to another frame. You must process multiple frames of a clip in a row to observe the effect, and clearing your image cache before rendering may sometimes be necessary.



In the Sapphire Time effects submenu.

Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Prev Brightness: *Default: 0.8, Range: 0 or greater.*

For each frame, the previous output is scaled by this amount before it is combined with the new input frame.

Normally this value should be less than 1.0 which causes previous frames to fade out over time. A value of 1.0 causes no fading, and values greater than 1.0 cause previous frames to become brighter over time.

Prev Color: *Default rgb: [1 1 1].*

For each frame, the previous output is scaled by this color before it is combined with the new input frame. This is similar to Prev Brightness but affects the colors of the previous frames instead of just the brightness.

Prev Hue Shift: *Default: 0, Range: any.*

Shifts the hue of the previous frames' colors, for each new frame.

Combine New: *Popup menu, Default: Ave.*

Selects the method for combining previous frames with the current frame.

Ave: The current frame is averaged with the previous output, smearing moving objects out over time. The output is scaled by Fade and the input is scaled by 1.0–Fade for a weighted average, so Fade must be less than 1.0 for this to work properly. Unlike the other combine options, Ave should never affect the brightness of stationary objects in the clip.

Max: The colors of the current frame and previous frames are combined with a maximum function. This makes the output frame at least as bright as the current frame, and will make brighter 'trails' for example if you have bright objects moving on a dark background.

Screen: The colors of the current frame and previous frames are combined with a blend function. This can be used to accumulate the colors of a moving clip. However, non-black regions will become brighter with each frame.

Add: The colors of the current frame and previous frames are added. This can also be used to accumulate the colors of a moving clip, with the non-black regions becoming brighter at each frame.

Over: The current frame is composited over the previous frames using its Alpha channel. This uses pre-multiplied compositing, so where the alpha is black the Source image should normally also be black. If the input clip contains no Alpha channel, the luminance is used instead.

Under: The current frame is composited under the previous frames.

Min: The colors of the current frame and previous frames are combined with a minimum function. This makes the output frame no brighter than the current frame, and will often fade quickly to a black frame.

New Color: *Default rgb: [1 1 1].*

Scales the color of the current frame. Set this to the complement of Old Color to offset overly colored trails.

New Opacity: *Default:* 1, *Range:* 0 to 10.

Scales the opacity and brightness of the current frame.

Blur Amount: *Default:* 0, *Range:* 0 or greater.

The previous frames are blurred by this amount for each new frame. This has no effect unless it is positive.

Blur Rel: *X & Y*, *Default:* [1 1], *Range:* 0 or greater.

The relative horizontal and vertical amounts of the blurring. This has no effect unless Blur Amount is positive.

Mask Use: *Popup menu*, *Default:* Luma.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[Feedback](#)

[TrailsDiffuse](#)

[FeedbackDistort](#)

[TimeAverage](#)

[NearestColor](#)

[FeedbackBubble](#)

[WarpRepeat](#)

[WarpChroma](#)

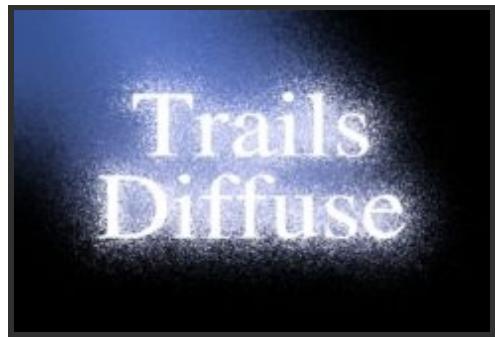
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[Introduction](#)

S_TrailsDiffuse

The previous frames of the input clip are processed with a pixel diffusion process and then combined with the current frame. The output of each processed frame is stored and then combined with the next frame. The trails are reinitialized whenever a non-consecutive frame is processed, either the first frame, reprocessing a given frame, or jumping to another frame. You must process multiple frames of a clip in a row to observe the effect, and clearing your image cache before rendering may sometimes be necessary.



In the Sapphire Time effects submenu.

Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Prev Brightness: *Default: 0.8, Range: 0 or greater.*

For each frame, the previous output is scaled by this amount before it is combined with the new input frame.

Normally this value should be less than 1.0 which causes previous frames to fade out over time. A value of 1.0 causes no fading, and values greater than 1.0 cause previous frames to become brighter over time.

Prev Color: *Default rgb: [1 1 1].*

For each frame, the previous output is scaled by this color before it is combined with the new input frame. This is similar to Prev Brightness but affects the colors of the previous frames instead of just the brightness.

Prev Hue Shift: *Default: 0, Range: any.*

Shifts the hue of the previous frames' colors, for each new frame.

Combine New: *Popup menu, Default: Ave.*

Selects the method for combining previous frames with the current frame.

Ave: The current frame is averaged with the previous output, smearing moving objects out over time. The output is scaled by Fade and the input is scaled by 1.0–Fade for a weighted average, so Fade must be less than 1.0 for this to work properly. Unlike the other combine options, Ave should never affect the brightness of stationary objects in the clip.

Max: The colors of the current frame and previous frames are combined with a maximum function. This makes the output frame at least as bright as the current frame, and will make brighter 'trails' for example if you have bright objects moving on a dark background.

Screen: The colors of the current frame and previous frames are combined with a blend function. This can be used to accumulate the colors of a moving clip. However, non-black regions will become brighter with each frame.

Add: The colors of the current frame and previous frames are added. This can also be used to accumulate the colors of a moving clip, with the non-black regions becoming brighter at each frame.

Over: The current frame is composited over the previous frames using its Alpha channel. This uses pre-multiplied compositing, so where the alpha is black the Source image should normally also be black. If the input clip contains no Alpha channel, the luminance is used instead.

Under: The current frame is composited under the previous frames.

Min: The colors of the current frame and previous frames are combined with a minimum function. This makes the output frame no brighter than the current frame, and will often fade quickly to a black frame.

New Color: *Default rgb: [1 1 1].*

Scales the color of the current frame. Set this to the complement of Old Color to offset overly colored trails.

New Opacity: *Default:* 1, *Range:* 0 to 10.

Scales the opacity and brightness of the current frame.

Diffuse Amount: *Default:* 0.028, *Range:* 0 or greater.

The previous frames are passed through a pixel-diffusion process of this magnitude, for each new frame. This has no effect unless it is positive.

Diffuse Rel: *X & Y*, *Default:* [1 1], *Range:* 0 or greater.

The relative horizontal and vertical amounts of the pixel diffusion process. This has no effect unless Diffuse Amount is positive.

Wrap: *X & Y*, *Popup menu*, *Default:* [Reflect Reflect].

Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Mask Use: *Popup menu*, *Default:* Luma.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[Feedback](#)

[Trails](#)

[FeedbackDistort](#)

[TimeAverage](#)

[NearestColor](#)

[FeedbackBubble](#)

[WarpRepeat](#)

[WarpChroma](#)

[Sapphire](#)

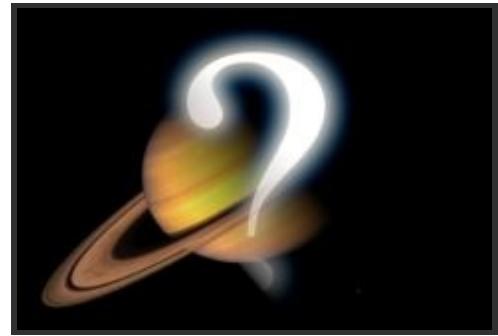
[Plug-ins](#)

[Introduction](#)

S_Transition

A Transition Builder which lets you combine multiple Sapphire effects to create new transitions, and can load presets from any transition. Click Load Preset or Edit Effect to get started.

In the Sapphire Builder effects submenu.



Inputs:

Foreground: Starts the transition with this clip.

Background: Ends the transition with this clip.

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Edit Effect: *Push-button.*

Brings up the Effect Builder to modify this effect.

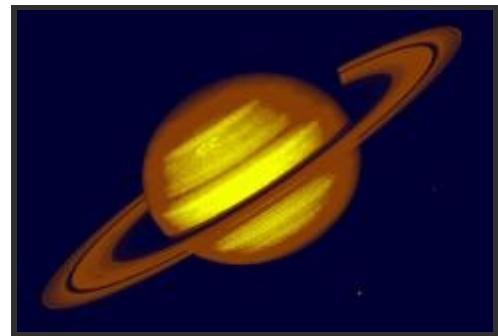
See Also:

[Sapphire Plug-ins Introduction](#)

S_TriTone

Performs an interpolation between three specified colors using the brightness of the source clip.

In the Sapphire Adjust effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Color2: *Default rgb: [1 1 1].*

The color to use at the brighter source regions.

Color1: *Default rgb: [0.5 0.5 0.5].*

The color to use at the mid tone source regions.

Color0: *Default rgb: [0 0 0].*

The color to use at the darker source regions.

Softness: *Default: 1, Range: 0.001 or greater.*

The softness of the interpolation between the three colors. Use lower values for sharper contours between more solid regions of color.

Softness 12: *Default: 1, Range: 0.001 or greater.*

Scales the softness of the interpolation between color1 and color2.

Softness 01: *Default: 1, Range: 0.001 or greater.*

Scales the softness of the interpolation between color0 and color1.

Color2 At Bright: *Default: 1, Range: any.*

The source brightness value to replace with color2.

Color1 At Bright: *Default: 0.5, Range: any.*

The source brightness value to replace with color1. This value should normally be in between the other two.

Color0 At Bright: *Default: 0, Range: any.*

The source brightness value to replace with color0.

Mix With Source: *Default: 0, Range: 0 to 1.*

Interpolates between the result (0) and the original source (1).

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[DuoTone](#)
[QuadTone](#)

[Sapphire](#)
[Plug-ins](#)

S_UltraGlow

Generates varieties of glowing light from bright areas of the source clip. Raise the threshold parameter to produce glows in fewer areas. Adjust the Width RGB parameters to make glows with different color falloffs, and adjust the Width XY parameters to make horizontal or vertical glows. Adjust Glow Falloff and Glow Bias parameters to control falloff distance and how far the hottest areas extend. Adjust After Glow parameters to generate a secondary glow on the result of the primary glow. Optionally enhance the edges or add highlights to the source clip or combine the result with atmospheric noise.

In the Sapphire Lighting effects submenu.



Inputs:

Source: The input clip that determines the glow locations and colors.

Background: *Optional.* The clip to combine the glows with. If no background is given, the Source is also used as the Background.

Mask: *Optional.* If provided, the source glow colors are scaled by this input. A monochrome mask can be used to choose a subset of Source areas that will generate glows. A color mask can be used to selectively adjust the glow colors in different regions. The mask is applied to the source before the glows are generated so it will not clip the resulting glows.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*
The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*
The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*
Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*
Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Brightness: *Default: 1.8, Range: 0 or greater.*
Scales the brightness of all the glows.

Color: *Default rgb: [1 1 1].*
Scales the color of the primary glow.

Threshold: *Default: 0.4, Range: 0 or greater.*
Glowes are generated from locations in the source clip that are brighter than this value. A value of 0.9 causes glows at only the brightest spots. A value of 0 causes glows for every non-black area.

Threshold Add Color: *Default rgb: [0 0 0].*
This can be used to raise the threshold on a specific color and thereby reduce the glows generated on areas of the source clip containing that color.

Glow Width: *Default: 0.371, Range: 0 or greater.*
Scales the glow distance. This and all the width parameters can be adjusted using the Width Widget. Note that a zero glow width still enhances the bright areas; set the brightness parameter to zero if you want to pass the Source through unchanged.

Glow Falloff: *Default: 0.35, Range: -2 to 2.*
Boost or cut the distance that the glow extends.

Glow Bias: *Default: 0, Range: -3 to 3.*
Amount to grow the outskirts of the thresholded result, or shrink if negative.

Width X: *Default: 1, Range: 0 or greater.*
Scales the horizontal glow width. Set to 0 for vertical only.

Width Y: *Default: 1, Range: 0 or greater.*
Scales the vertical glow width. Set to 0 for horizontal only.

Width Red: *Default: 1, Range: 0 or greater.*
Scales the red glow width. If the red, green, and blue widths are equal, the glows will match the color of the source clip. If they are not equal, the glows will vary in color with distance.

Width Green: *Default: 1, Range: 0 or greater.*

Scales the green glow width.

Width Blue: *Default:* 1, *Range:* 0 or greater.

Scales the blue glow width.

Subpixel: *Check-box*, *Default:* on.

Enables glowing by subpixel widths. Use this for smoother animation of the Width parameters.

Show: *Popup menu*, *Default:* Result.

Selects the type of output

Result: Shows the final result of combining the glow, source, and background.

Threshold: Shows the thresholded image that is used to generate the glow.

After Glow Width: *Default:* 0.808, *Range:* 0 or greater.

Scales the glow distance for the secondary glow.

After Glow Color: *Default* *rgb:* [1 1 1].

Scales the color of the secondary glow.

After Glow Stretch X: *Default:* 0.3, *Range:* 0 or greater.

Scales the horizontal secondary glow width.

After Glow Stretch Y: *Default:* 0.1, *Range:* 0 or greater.

Scales the vertical secondary glow width.

Horizontal Streaks: *Default:* 0.25, *Range:* 0 or greater.

Scales the appearance of narrow trails in the horizontal direction.

Vertical Streaks: *Default:* 0.25, *Range:* 0 or greater.

Scales the appearance of narrow trails in the vertical direction.

Edge Detect: *Check-box*, *Default:* off.

Enables edge detection.

Edge Combine: *Popup menu*, *Default:* Screen.

Determines how the detected edges are combined with the Source.

Screen: detected edges are blended with the Source using a screen operation.

Add: detected edges are added to the Source.

Edges Only: gives only the detected edges with no Source.

Edge Smooth: *Default:* 0, *Range:* 0 or greater.

Increase for thicker and smoother edges.

Edge Mode: *Popup menu*, *Default:* Reflect.

Determines the behavior when accessing areas outside the source image.

Transparent: Areas outside the source image are treated as transparent, which can produce transparency around the edges of the image. Select this for fastest rendering.

Reflect: Reflects the image outside the border.

Atmosphere: *Check-box*, *Default:* off.

Atmosphere gives the effect of the glow shining through a dusty atmosphere and picking up light or getting shadowed. This parameter adjusts the amount, or amplitude, of the atmospheric effect. Zero gives a smooth glow, higher values give more dusty look.

Atmosphere Amp: *Default:* 1, *Range:* 0 or greater.

Atmosphere gives the effect of the glow shining through a dusty atmosphere and picking up light or getting shadowed. This parameter adjusts the amount, or amplitude, of the atmospheric effect. Zero gives a smooth glow, higher values give more dusty look.

Atmosphere Freq: *Default:* 11.6, *Range:* 0.1 or greater.

Controls the spatial frequency of the atmospheric noise. Turn this up higher to get finer details, turn down for broader overall variation.

Atmosphere Detail: *Default:* 0.506, *Range:* 0 to 1.

Controls the amount of fine detail in the atmosphere simulation. Decrease to get smoother atmosphere, increase for a more crunchy or grainy look.

Atmosphere Speed: *Default:* 1, *Range:* any.

The cloudy noise in the atmosphere evolves over time like real dust clouds; this parameter controls how fast the cloud pattern changes over time. Set to zero for a static pattern.

Atmosphere Lights: *Default:* 0.5, *Range:* 0 or greater.

Scales the atmosphere layer by this value. Increase for a more intense result.

Atmosphere Dark: *Default:* 0, *Range:* 0 or greater.

Adds this gray value to the darker regions of the atmosphere layer. This can be negative to increase contrast.

Atmosphere Seed: *Default:* 0.123, *Range:* 0 or greater.

Used to initialize the random number generator for the atmospheric noise. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Apply Pre-Glow: *Check-box*, *Default:* off.

Enables combining atmosphere with the Source prior to any glows.

Highlights: *Check-box*, *Default:* off.

Enables highlights using an electrical plasma texture.

Highlights Freq: *Default:* 1.2, *Range:* 0.01 or greater.

The spatial frequency of the highlights. Increase to zoom out, decrease to zoom in.

Highlights Freq Rel X: *Default:* 1, *Range:* 0.01 or greater.

The relative horizontal frequency of the highlights. Increase to stretch vertically or decrease to stretch horizontally.

Highlights Octaves: *Integer*, *Default:* 4, *Range:* 1 to 10.

The number of octaves of highlights to include. Each octave is twice the frequency and half the amplitude of the previous.

Highlights Grad X: *Default:* 0.1, *Range:* any.

Determines the amplitude and direction of a gradient which orients the highlights. Increasing X makes them more vertical.

Highlights Grad Y: *Default:* 0, *Range:* any.

Determines the amplitude and direction of a gradient which orients the highlights. Increasing Y makes them more horizontal.

Highlights Layers: *Default:* 4.5, *Range:* 0 or greater.

The number of layers of highlights. Increase for a more striped effect.

Highlights Threshold: *Default:* 0.5, *Range:* 0 or greater.

Determines the thickness of the highlights. Increase for thinner lines, decrease for thicker and brighter ones.

Highlights Speed: *Default:* 1, *Range:* any.

Phase speed of the highlights. If non-zero, the lines are automatically animated to undulate at this rate.

Highlights Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the highlights.

Highlights Lights: *Default:* 1, *Range:* 0 or greater.

Scales the highlights layer by this value. Increase for a more intense result.

Highlights Darks: *Default:* 0, *Range:* 0 or greater.

Adds this gray value to the darker regions of the highlights layer. This can be negative to increase contrast.

Highlights Blur: *Default:* 0, *Range:* 0 or greater.

Softens the edges of the highlights.

Combine: *Popup menu, Default: Screen.*

Determines how the glow is combined with the Source or Background. This parameter has no effect if Light BG is set to 1.

Mult: the source or background is multiplied by the glow.

Add: the glow is added to the source or background.

Screen: the glow is blended with the source or background using a screen operation.

Difference: the result is the difference between the glow and the source or background.

Overlay: the glow is combined with the source or background using an overlay function.

Affect Alpha: *Default:* 0, *Range:* 0 or greater.

If this value is positive the output Alpha channel will include some opacity from the glows. The maximum of the red, green, and blue glow brightness is scaled by this value and combined with the background Alpha at each pixel.

Glow From Alpha: *Default:* 0, *Range:* 0 to 1.

Set to 1 to generate glows from the alpha channel of the source input instead of the RGB channels. In this case the glows will not pick up color from the source and will typically be brighter. Values between 0 and 1 interpolate between using the RGB and the Alpha.

Glow Under Source: *Default:* 0, *Range:* 0 to 1.

Set to 1 to composite the Source input over the glows.

Light Background: *Default:* 0, *Range:* 0 to 1.

Increase this to give a look of the glow casting light onto the background image. To see this more clearly you can also lower the Scale Background parameter or raise the Brightness parameter.

Source Opacity: *Default:* 1, *Range:* 0 to 1.

Scales the opacity of the Source input when combined with the glows. This does not affect the generation of the glows themselves.

Bg Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the background. This parameter only has an effect if the background input is provided, and is visible due to a partially transparent Source image or a reduced Source Opacity parameter value.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Expand Borders: *Check-box, Default: on.*

If enabled, transparent borders are added to the input image before processing. This allows the result to include soft edges beyond the original image size. When off, the effect only occurs within the frame and the result will retain an edge at the borders.

Show Glow Width: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Glow Width parameter.

See Also:

[Glow](#)
[GlowDist](#)
[GlowRainbow](#)
[GlowAura](#)
[GlowRings](#)
[GlowDarks](#)
[GlowOrthicon](#)
[GlowEdges](#)
[GlowNoise](#)

[Glint](#)
[Sapphire](#)
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S_UltraZap

Generates lightning bolts along a spline and renders them over a background. Increase Vary Endpoint to spread out the ends of the bolts. Adjust the Glow Color for differently colored results. Adjust the Loop Speed parameter to make it traverse the spline over time.

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to combine the glows with. If no background is given, the Source is also used as the Background.

Mask: *Optional.* If provided, defines the region where the lightning should be rendered. The glow on the lightning will bleed into areas with no lightning for a natural look.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Start Point: *X & Y, Default: [-0.5 0.5], Range: any.*

The starting point of the bolts.

Point 1 Enable: *Check-box, Default: off.*

Turns on or off the first control point.

Control Point 1: *X & Y, Default: [-0.34 0.304], Range: any.*

First spline control point.

Point 2 Enable: *Check-box, Default: off.*

Turns on or off the second control point.

Control Point 2: *X & Y, Default: [0.1 0.2], Range: any.*

Second spline control point.

Point 3 Enable: *Check-box, Default: on.*

Turns on or off the third control point.

Control Point 3: *X & Y, Default: [0.4 0], Range: any.*

Third spline control point.

Point 4 Enable: *Check-box, Default: off.*

Turns on or off the fourth control point.

Control Point 4: *X & Y, Default: [0.45 -0.25], Range: any.*

Fourth spline control point.

End Point: *X & Y, Default: [0.5 -0.5], Range: any.*

The end point of the bolts. This parameter can be adjusted using the End Widget.

Start Uses Mocha: *Check-box, Default: off.*

Controls whether the starting point is controlled by the Start parameter or follows the Start point track from Mocha.

Smooth Start Track: *Integer, Default: 0, Range: 0 or greater.*

Controls how many points to average when stabilizing the Mocha point track.

Point1 Uses Mocha: *Check-box, Default: off.*

Controls whether point 1 is controlled by the Control Point 1 parameter or follows the Control Point 1 track from Mocha.

Smooth Point1 Track: *Integer, Default: 0, Range: 0 or greater.*

Controls how many points to average when stabilizing the Mocha point track.

Point2 Uses Mocha: *Check-box, Default: off.*

Controls whether point 2 is controlled by the Control Point 2 parameter or follows the Control Point 2 track from

Mocha.

Smooth Point2 Track: *Integer, Default: 0, Range: 0 or greater.*

Controls how many points to average when stabilizing the Mocha point track.

Point3 Uses Mocha: *Check-box, Default: off.*

Controls whether point 3 is controlled by the Control Point 3 parameter or follows the Control Point 3 track from Mocha.

Smooth Point3 Track: *Integer, Default: 0, Range: 0 or greater.*

Controls how many points to average when stabilizing the Mocha point track.

Point4 Uses Mocha: *Check-box, Default: off.*

Controls whether point 4 is controlled by the Control Point 4 parameter or follows the Control Point 4 track from Mocha.

Smooth Point4 Track: *Integer, Default: 0, Range: 0 or greater.*

Controls how many points to average when stabilizing the Mocha point track.

End Uses Mocha: *Check-box, Default: off.*

Controls whether the end point is controlled by the End parameter or follows the End point track from Mocha.

Smooth End Track: *Integer, Default: 0, Range: 0 or greater.*

Controls how many points to average when stabilizing the Mocha point track.

Bolts: *Integer, Default: 1, Range: 0 to 500.*

The number of lightning bolts to draw, each between the Start and End location.

Bolt Width: *Default: 0.06, Range: 0 or greater.*

The width of the lightning bolts.

Bolt Length: *Default: 1, Range: 0 to 1.*

The length of the bolts, beginning at Start Offset. If less than 1, the bolts will not be drawn all the way from start to end. This can be useful for animating a lightning strike.

Wrinkle Amp: *Default: 1, Range: 0 or greater.*

Scales the amount of wrinkles in the bolts. Decrease for straighter smoother bolts or increase for more kinky bolts.

Curve Amp: *Default: 0.5, Range: 0.001 or greater.*

Similar to Wrinkle Amp but affects the general path of the bolt. If decreased, the bolt will stay closer to the line between the Start and End points. If increased it can wander further away from this line. This differs from the Wrinkle Amp parameter in that it can be used to make straighter bolts while still keeping the wrinkles at the detailed level.

Taper Start: *Default: 0.025, Range: 0 to 1.*

Determines how pointed the start of the bolts are. If 0, the entire bolt will have equal width. If 1, the bolts will thin out along their entire length for a pointed end. If it is .5, the bolts will start thin and grow to the width parameter at the center of the bolt.

Taper End: *Default: 0.25, Range: 0 to 1.*

Determines how pointed the end of the bolts are. If 0, the entire bolt will have equal width. If 1, the bolts will thin out along their entire length for a pointed end. If it is .5, the bolts will start thinning out half way between the start and end points.

Feather Bolt: *Default: 0, Range: 0 or greater.*

Add softness to the bolt before glowing.

Zap Edge Blur: *Default: 0, Range: 0 or greater.*

Only blur the edges of the zap – useful if there is noise on the zap.

Zap Brightness: *Default: 1, Range: 0 or greater.*

Scales the brightness of the lightning bolts.

Start Color: *Default rgb: [0.87 0.969 1].*

The color at the start of the main bolt.

End Color: *Default rgb: [0 0.333 1].*

The color at the tip of the main bolt.

Vary Bolt Hue: *Default: 0, Range: -1 to 1.*

This varies the start and end color between multiple bolts. This does not change the color along a single bolt.

Vary Width: *Default: 0, Range: 0 to 1.*

The amount of random variation in the width of the bolts along their lengths.

Vary Endpoint: *Default: 0, Range: 0 or greater.*

Offsets the End location by a random amount within a circle of this radius. If Bolts is greater than 1, this can be useful to spread out the different End points. For example, you can create multiple radiating bolts by increasing this radius and placing the End point near the Start point. This parameter can also be adjusted using the End Widget, after it is made positive.

Random Seed: *Default: 0.123, Range: 0 or greater.*

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different random lightning bolts, and the same value should give a repeatable result.

Start Offset: *Default: 0, Range: 0 to 1.*

The offset from the start point to begin drawing the bolts. This can be useful for animating a lightning strike.

Loop Speed: *Default: 0, Range: any.*

How fast to animate where the zap starts along the spline.

Loop Start: *Default: 0, Range: any.*

Where along the spline the zap starts for animation purposes.

Vary Loop Start: *Default: 0, Range: -1 to 1.*

This varies where multiple bolts start along the spline from one another.

Zap Direction: *Popup menu, Default: all same.*

all same: Normal zap direction for the primary spline zap.

all reverse: Flip the direction of the primary spline zap.

even reverse: Normal primary zap direction.

odd reverse: Reverse primary zap direction.

random reverse: Randomly reverse the direction of the primary spline zap.

Wiggle Start: *Default: 0, Range: 0 or greater.*

By default the bolts automatically wiggle over time. This parameter provides a starting offset for these bolt perturbations.

Wiggle Speed: *Default: 1, Range: 0 or greater.*

The speed at which the bolts are perturbed automatically over time. To animate changes in speed, set this to zero and animate the Wiggle Start parameter instead.

Jitter Frames: *Integer, Default: 0, Range: 0 or greater.*

If this is 0, the same random lightning will be used for every frame processed. If it is 1, different random lightning is

used for each frame. If it is 2, new random lightning is used for every other frame, and so on.

Bolt Noise: *Default: 0.25, Range: 0 or greater.*

Apply a noise pattern to the bolt before the glow.

Bolt Noise Freq: *Default: 0.05, Range: 0.01 or greater.*

The frequency of the bolt noise.

Bolt Noise Speed: *Default: 1, Range: any.*

The speed of the bolt noise.

Branches Only: *Check-box, Default: off.*

Hide the core bolt and only show the branches.

Branchiness: *Default: 4, Range: 0 to 20.*

Scales the number of additional bolts that branch from the main bolt. Set this to 0 for basic bolts with no extra branches.

Branch Angle: *Default: 45, Range: 0 to 180.*

The maximum angle of the random branches relative to the bolt they are branching off of. If this is 0 the branches will be more lined up with the main bolt. With larger values the branches will be more perpendicular to the main bolt.

Branch Length: *Default: 0.5, Range: 0 to 3.*

The scaled length of the branches relative to the distance between the Start and End points.

Branch Color: *Default rgb: [0.8 0.867 1].*

The color at the tips of the branches.

Vary Branch Hue: *Default: 0, Range: -1 to 1.*

This varies the end color between multiple branches.

Branch Style: *Popup menu, Default: width uses dist.*

Specify how the branch width should be calculated.

width uses dist: Brandh width is calculated based on how far along the bolt the branch splits off.

width uses bolt width: Brandh width is calculated based on how wide the bolt is as the point where the branch splits off.

Branch Width: *Default: 0.5, Range: 0 or greater.*

Width of branches relative to the main bolt.

Secondary Bolts: *Integer, Default: 0, Range: 0 or greater.*

The number of independent forked lightning bolts to draw for the secondary zap.

Secondary Bolt Width: *Default: 0.05, Range: 0 or greater.*

The width of the secondary bolts.

Secondary Length: *Default: 0.5, Range: 0 to 1.*

The length of the secondary bolts, beginning at Start Offset. If less than 1, the bolts will not be drawn all the way from start to end. This can be useful for animating a lightning strike.

Secondary Wrinkle Amp: *Default: 0.75, Range: 0 or greater.*

Scales the amount of wrinkles in the secondary bolts. Decrease for straighter, smoother bolts or increase for more kinky bolts.

Secondary Curve Amp: *Default: 0.35, Range: 0.001 or greater.*

Similar to Wrinkle Amp but affects the general path of the secondary bolt. If decreased, the bolt will stay closer to

the line between the Start and End points. If increased it can wander further away from this line. This differs from the Wrinkle Amp parameter in that it can be used to make straighter bolts while still keeping the wrinkles at the detailed level.

Secondary Taper Start: *Default: 0, Range: 0 to 1.*

Determines how pointed the start of the secondary bolts are. If 0, the entire bolt will have equal width. If 1, the bolts will thin out along their entire length for a pointed end. If it is .5, the bolts will start thin and grow to the width parameter at the center of the bolt.

Secondary Taper End: *Default: 0.25, Range: 0 to 1.*

Determines how pointed the end of the secondary bolts are. If 0, the entire bolt will have equal width. If 1, the bolts will thin out along their entire length for a pointed end. If it is .5, the bolts will start thinning out half way between the start and end points.

Secondary Brightness: *Default: 1, Range: 0 or greater.*

Scales the brightness of the secondary zap.

Secondary Start Color: *Default rgb: [1 1 1].*

The color at the start of the secondary bolt.

Secondary End Color: *Default rgb: [0.557 0 0.557].*

The color at the tip of the secondary bolt.

Secondary Vary Bolt Hue: *Default: 0, Range: -1 to 1.*

This varies the color between multiple secondary bolts. This does not change the color along a single bolt.

Secondary Vary Width: *Default: 0, Range: 0 to 1.*

The amount of random variation in the width of the secondary bolts along their lengths.

Secondary Vary Endpoint: *Default: 0, Range: 0 or greater.*

Offsets the End location by a random amount within a circle of this radius. If Bolts is greater than 1, this can be useful to spread out the different End points. For example, you can create multiple radiating bolts by increasing this radius and placing the End point near the Start point.

Secondary Seed: *Default: 0.456, Range: 0 or greater.*

A separate random seed for the secondary bolt so that it moves differently from the primary bolt.

Secondary Start Offset: *Default: 0, Range: 0 to 1.*

The offset from the start point to begin drawing the bolts. This can be useful for animating a lightning strike.

Secondary Loop Speed: *Default: 0, Range: any.*

How fast to animate where the secondary zap starts along the spline.

Secondary Loop Start: *Default: 0, Range: any.*

Where along the spline the zap starts.

Secondary Vary Loop Start: *Default: 0, Range: -1 to 1.*

This varies where multiple bolts start along the spline from one another.

Secondary Direction: *Popup menu, Default: all same.*

Control which direction along the secondary spline the zap renders.

all same: Normal zap direction for the secondary spline zap.

all reverse: Flip the direction of the secondary spline zap.

even reverse: Normal secondary zap direction.

odd reverse: Reverse secondary zap direction.

random reverse: Randomly reverse the direction of the secondary spline zap.

Secondary Wiggle Start: *Default:* 0, *Range:* 0 or greater.

By default the bolts automatically wiggle over time. This parameter provides a starting offset for these bolt perturbations.

Secondary Wiggle Speed: *Default:* 1, *Range:* 0 or greater.

The speed at which the bolts are perturbed automatically over time. To animate changes in speed, set this to zero and animate the Wiggle Start parameter instead.

Secondary Jitter Frames: *Integer, Default:* 0, *Range:* 0 or greater.

If this is 0, the noise texture will remain the same for every frame processed. If it is 1, a new noise texture is used for each frame. If it is 2, a new noise texture is used for every other frame, and so on.

Secondary Branchiness: *Default:* 4, *Range:* 0 to 20.

Scales the number of additional bolts that branch from the main bolt. Set this to 0 for basic bolts with no extra branches.

Secondary Branch Angle: *Default:* 45, *Range:* 0 to 180.

The maximum angle of the random branches relative to the bolt they are branching off of. If this is 0 the branches will be more lined up with the main bolt. With larger values the branches will be more perpendicular to the main bolt.

Secondary Branch Width: *Default:* 0.5, *Range:* 0 or greater.

Width of secondary branches compared to the secondary bolt.

Secondary Branch Length: *Default:* 0.7, *Range:* 0 to 3.

The scaled length of the secondary branches relative to the distance between the Start and End points.

Secondary Branch Color: *Default* *rgb:* [1 0.8 1].

The color at the tips of the secondary branches.

Secondary Vary Branch Hue: *Default:* 0, *Range:* -1 to 1.

This varies the end color between multiple branches.

Glow Brightness: *Default:* 1.5, *Range:* 0 or greater.

Scales the brightness of the glow applied to the lightning.

Glow Threshold: *Default:* 0, *Range:* 0 or greater.

Threshold for what colors are glowed from the zap.

Glow Color: *Default* *rgb:* [0.97 0.87 1].

The color of the glow applied to the lightning.

Glow Width: *Default:* 0.3, *Range:* 0 or greater.

The width of the glow applied to the lightning.

Glow Width Red: *Default:* 1, *Range:* 0 or greater.

The relative red width of the glow.

Glow Width Green: *Default:* 1, *Range:* 0 or greater.

The relative green width of the glow.

Glow Width Blue: *Default:* 1, *Range:* 0 or greater.

The relative blue width of the glow.

Glow Falloff: *Default:* 0.05, *Range:* -2 to 2.

Boost or cut the distance that the glow extends.

Glow Bias: *Default:* 0.5, *Range:* -3 to 3.

Amount to grow the outskirts of the thresholded result, or shrink if negative.

After Glow Width: *Default: 0.6, Range: 0* or greater.

Scales the glow distance for the secondary glow.

After Glow Color: *Default rgb: [1 1 1]*.

Scales the color of the secondary glow.

Glow Highlights: *Check-box, Default: off*.

Enables highlights using an electrical plasma texture.

Glow Highlights Frequency: *Default: 1.2, Range: 0.01* or greater.

The spatial frequency of the highlights. Increase to zoom out, decrease to zoom in.

Glow Highlights Speed: *Default: 1, Range: any*.

Phase speed of the highlights. If non-zero, the lines are automatically animated to undulate at this rate.

Glow Atmosphere: *Check-box, Default: off*.

Turn atmosphere on and off.

Glow Atmosphere Amp: *Default: 1, Range: 0* or greater.

Atmosphere gives the effect of rays shining through a dusty atmosphere and picking up light or getting shadowed. This parameter adjusts the amount, or amplitude, of the atmospheric effect. Zero gives smooth rays, higher values give more dusty look.

Glow Atmosphere Freq: *Default: 0.5, Range: 0.1* or greater.

Controls the frequency of the atmospheric noise.

Glow Atmosphere Speed: *Default: 1, Range: any*.

The cloudy noise in the atmosphere evolves over time like real dust clouds; this parameter controls how fast the cloud pattern changes over time. Set to zero for a static pattern.

Affect Alpha: *Default: 0, Range: 0* or greater.

If this value is positive the output Alpha channel will include some opacity from the lightning and its glow. The maximum of the red, green, and blue brightness is scaled by this value and combined with the background Alpha at each pixel.

Combine: *Popup menu, Default: Screen*.

Determines how the lightning and glow are combined with the Background.

Screen: performs a blend function which can help prevent overly bright results.

Add: causes the lightning to be added to the background. This gives brighter glows over light backgrounds.

Zap Only: displays the lightning over black, ignoring the source image.

Opacity: *Popup menu, Default: Normal*.

All Opaque:

Normal:

As Premult:

Bg Brightness: *Default: 1, Range: 0* or greater.

Scales the brightness of the background before combining with the lightning. If 0, the result will contain only the lightning image over black.

Blur Matte: *Default: 0.05, Range: 0* or greater.

Invert Matte: *Check-box, Default: off*.

If enabled, the black and white of the matte are inverted before use.

Matte Use: *Popup menu, Default: Luma.*

Determines how the Matte input channels are used to make a monochrome matte.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Show Spline: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Start Point parameter.

See general info for [Motion Blur](#)

See Also:

[Glow](#)

[GlowDist](#)

[GlowRainbow](#)

[GlowAura](#)

[GlowRings](#)

[GlowDarks](#)

[GlowOrthicon](#)

[GlowEdges](#)

[GlowNoise](#)

[Zap](#)

[ZapTo](#)

[ZapFrom](#)

[Sapphire](#)

[Plug-ins](#)

[Introduction](#)

S_Vignette

Darkens the border areas of the source clip to create a vignette effect. Use the Squareness, Radius, and Edge Softness parameters to affect the shape of the vignette. Use the Opacity and Color parameters to adjust its strength and color.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Effect: *Popup menu, Default: Vignette.*

Selects between several variations on generating the Vignette shape.

Vignette: The Vignette shape and location are defined by specific parameters.

VignetteMocha: The Vignette shape and location are defined using a Mocha Mask.

Center: *X & Y, Default: [0 0], Range: any.*

The center location of the vignette effect. This parameter can be adjusted using the Center Widget.

Squareness: *Default: 0, Range: 0 to 1.*

Determines how square the vignette shape is. Set to 1.0 for a square or rectangle shape. Set to 0 for a circle or ellipse. Values in between give rectangles with rounded corners by varying amounts.

Radius: *Default: 0.9, Range: 0 or greater.*

Distance from the center to apply the vignette. This parameter can be adjusted using the Radius Widget.

Rel Height: *Default: 0.75, Range: 0.05 or greater.*

The relative vertical size of the vignette shape. Increase for a taller shape, decrease for a wider one.

Rel Width: *Default: 1, Range: 0.05 or greater.*

The relative horizontal size of the vignette shape. Increase for a wider shape, decrease for a taller one.

Rotate: *Default: 0, Range: any.*

Rotation in degrees of the vignette shape. Note that rotation will have no effect if Squareness is zero, and Rel Width and Rel Height are equal. This parameter can be adjusted using the Rotate Widget.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 or greater.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 or greater.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 or greater.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Edge Softness: *Default:* 1, *Range:* 0 or greater.

The width of the vignette's soft edge. Larger values give softer, less visible edges.

Smooth Curve: *Default:* 0.4, *Range:* 0 to 1.

If zero, a linear gradient is used across the screen in the soft edge area. Increase this value to use a smoother 'S' shaped curve for interpolation which can reduce the visual perception of the gradient's start and end locations.

Color: *Default rgb:* [0 0 0].

The color of the vignette.

Opacity: *Default:* 1, *Range:* 0 or greater.

The opacity of the vignette; animate to 0 to fade the vignette out.

Blur Amount: *Default:* 0, *Range:* 0 or greater.

Blurs the borders of the image in addition to darkening them.

Blur Inside: *Check-box*, *Default:* off.

If checked, the center (undarkened) area of the image is blurred instead of the border.

Source Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the source clip. To see only the vignette, set this to zero.

Combine: *Popup menu*, *Default:* Composite.

Determines how the vignette is combined with the Source.

Composite: composites the vignette over the source clip.

Mult: the vignette color is multiplied by the source clip. If the Color is not black, this will selectively colorize the vignette area.

Add: the vignette color is added to the source clip. This will have no effect if the vignette color is black.

Screen: the vignette color is combined with the source clip using a screen operation. This will have no effect if the vignette color is black.

Subtract Inv: the inverse of the vignette color is subtracted from the source clip. Inverse means white for black, yellow for blue, and so on. This mode looks similar to Mult, but a bit more severe; it crushes the blacks and leaves the highlights more. This will have no effect if the vignette color is white.

Vignette Only: shows the vignette pattern without the source clip. The output will be white where the amount of vignetting is greatest (e.g. where the source clip would be darkened completely).

Vignette Only Inv: shows the inverted vignette pattern without the source clip. The output will be white where there is no vignetting (e.g. where the source clip would not be darkened at all).

Show Radius: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Center parameter.

Show Rotate: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Center parameter.

Show Center: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Center parameter.

See Also:

[SpotLight](#)

[Sapphire](#)

[GradientRadial](#)

[Plug-ins](#)

[FilmDamage](#)

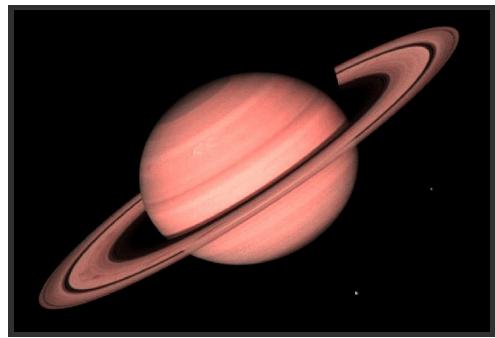
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[TVDamage](#)

S_VintageColor2Strip

Simulates the old color 2-strip film process from the 1920s. The scene is exposed twice, through red and green filters, onto alternating frames of a monochrome film strip. Then the red print is dyed with a red dye, and the green print is dyed cyan. Those two strips are cemented together back-to-back to form the final print. The result contains mostly red and green colors, with some synthetic blue from the blue components of the dyes.

This effect simulates the two filter colors and the two dye colors, and also allows adding grain and color correction.



In the Sapphire Stylize effects submenu.

Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Amount: *Default:* 1, *Range:* 0 or greater.

Amount of the effect to use. Set to zero to get the original source. Increase beyond to oversaturate.

Red Filter: *Default rgb:* [1 0 0].

The color of the red filter.

Bluegreen Filter: *Default rgb:* [0 1 0.5].

The color of the green filter.

Red Dye: *Default rgb:* [1 0 0].

The dye color for the red strip.

Cyan Dye: *Default rgb:* [0.02 1 0.91].

The dye color for the cyan strip. Adjust slightly greener for a warmer look.

Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the result.

Saturation: *Default:* 1, *Range:* -2 to 8.

Scales the color saturation. Increase for more intense colors. Set to 0 for monochrome.

Offset Dark: *Default:* 0, *Range:* -8 to 2.

Adds this gray value to the darker regions of the result. This can be negative to increase contrast.

Grain Amp: *Default:* 0, *Range:* 0 or greater.

Scales the amplitude of the film grain that is added to the result. Set this to 0 to disable all grain.

Grain Blur: *Default:* 0, *Range:* 0 to 0.4.

The grain is smoothed by this amount. Increase for coarser grain.

Show: *Popup menu*, *Default:* Result.

Shows either the final result, or any of various intermediate parts of the process.

Result: Shows the final result.

Red Strip: Shows the red-filtered source as monochrome, as it would be on the real film.

BlueGreen Strip: Shows the blue-green-filtered source as monochrome, as it would be on the real film.

Red Dye: Shows the red-dyed red strip.

Cyan Dye: Shows the cyan-dyed green strip.

Mask Use: *Popup menu*, *Default:* Luma.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[VintageColor3Strip](#)

[FilmEffect](#)

[FilmDamage](#)

[BleachBypass](#)

[DogVision](#)

[Sapphire](#)

[Plug-ins](#)

[Introduction](#)

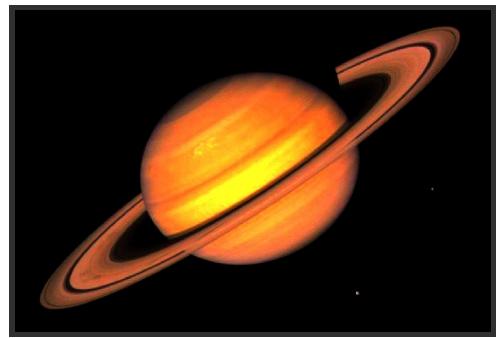
S_VintageColor3Strip

Simulates the color 3-strip film process from 1935 through 1955.

Three-strip color was a subtractive process which exposed three separate film strips through color filters, then applied complementary color dyes to the print according to the density of the original records. This process was used for many films such as *The Wizard Of Oz*, *Fantasia*, and *Gone With The Wind*.

Modern color film has much broader color filtering in the emulsion layers, so this effect simulates the narrower filters and sharper colored dyes of the era which gave it its characteristic vibrancy. This effect also allows adding grain and color correction.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Amount: *Default:* 1, *Range:* 0 or greater.

Amount of the effect to use. Set to zero to get the original source. Increase beyond to oversaturate.

Key Layer Density: *Default:* 0.1, *Range:* 0 to 1.

From 1932 up to about 1945, the blank print started with a 50 percent black and white duplicate of the green original record. This increased apparent sharpness and improved contrast. Set this to 0.5 for a historically accurate key layer, but it will decrease the overall brightness. After 1945 the key layer was no longer needed due to improvements in the process.

Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the result.

Tint: *Default rgb:* [1 1 1].

Tints the image towards the given color.

Saturation: *Default:* 1, *Range:* -2 to 8.

Scales the color saturation. Increase for more intense colors. Set to 0 for monochrome.

Offset Dark: *Default:* 0, *Range:* -8 to 2.

Adds this gray value to the darker regions of the result. This can be negative to increase contrast.

Grain Amp: *Default:* 0, *Range:* 0 or greater.

Scales the amplitude of the film grain that is added to the result. Set this to 0 to disable all grain.

Grain Blur: *Default:* 0, *Range:* 0 to 0.4.

The grain is smoothed by this amount. Increase for coarser grain.

Show: *Popup menu*, *Default:* Result.

Shows either the final result, or any of various intermediate parts of the process.

Result: Shows the final result.

Pure Colors: Shows an RGB mask containing only the pure colors in the source.

Complementary Masks: Shows a mask of the complementary colors used to apply the dyes to the final print.

Mask Use: *Popup menu*, *Default:* Luma.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[VintageColor2Strip](#)

[Sapphire](#)

[FilmEffect](#)

[Plug-ins](#)

[FilmDamage](#)

[Introduction](#)

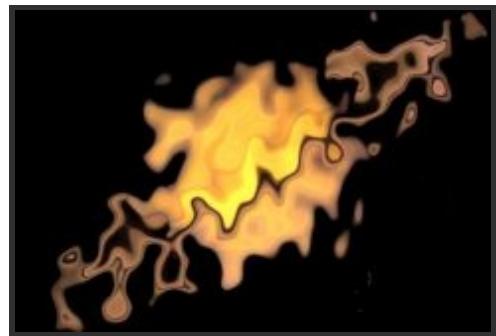
[BleachBypass](#)

[DogVision](#)

S_WarpBubble

Wraps the source clip by a smooth noise function. This can be used to create heat diffusion or under water types of effects. The Shift Speed parameters cause the noise pattern to automatically translate over time. Adjust the Amplitude and Frequency parameters to give different types of distortions.

In the Sapphire Distort effects submenu.



Inputs:

Source: The input clip to be warped.

Mask: *Optional.* If provided, the amplitude of warping is scaled by the values of this input clip. Gray values internally scale the warping amplitude rather than simply cross-fading between the effect and the original source to allow more continuous results at the mask edges and more detailed control over the warping amounts. This input can be affected using the Blur Mask, Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Amplitude: *Default:* 0.25, *Range:* any.

Scales the amount of warping distortion. Increase for more severe distortion.

Frequency: *Default:* 16, *Range:* 0.01 or greater.

The frequency of the noise pattern. Increase for more and smaller bubbles, decrease for fewer and larger bubbles.

Frequency Rel X: *Default:* 1, *Range:* 0.01 or greater.

The relative horizontal frequency of the bubble pattern. Increase for taller bubbles, decrease for wider ones.

Octaves: *Integer*, *Default:* 1, *Range:* 1 to 10.

The number of summed layers of noise. Each octave is twice the frequency and half the amplitude of the previous. A single octave gives a smooth texture. Adding octaves makes the result approach a fractal (1/f) noise texture.

Seed: *Default:* 0.23, *Range:* 0 or greater.

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Rotate Warp Dir: *Default:* 0, *Range:* any.

Rotation angle of the warping directions in counter-clockwise degrees.

Shift Start: *X & Y*, *Default:* [0 0], *Range:* any.

The translation of the bubble pattern.

Shift Speed: *X & Y*, *Default:* [0.1 0], *Range:* any.

If non-zero, the bubble pattern is automatically animated to shift at this speed. The result of animated Speed values may not be intuitive, so for variable speed motion it is usually best to set this to 0 and animate the Shift Start values instead.

Z Dist: *Default:* 1, *Range:* 0.001 or greater.

Scales the 'distance' of the image. Values greater than 1.0 move it farther away and make it smaller. Values less than 1.0 move the image closer and enlarge it. Zooming in slightly can sometimes be used to hide edge artifacts.

Wrap: *X & Y*, *Popup menu*, *Default:* [Reflect Reflect].

Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Filter: *Check-box*, *Default:* on.

If enabled, the image is adaptively filtered when it is resampled. This gives a better quality result when parts of the image are warped smaller.

Blur Mask: *Default:* 0, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu*, *Default:* Luma.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Crop Input Parameters: *Default:* 0, *Range:* 0 or greater.

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

See Also:

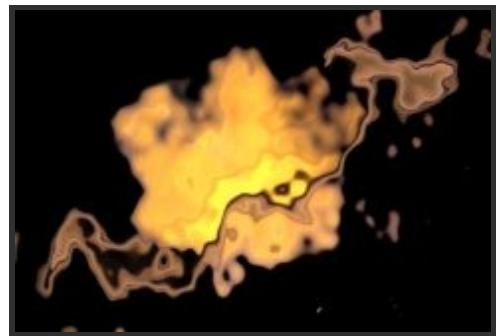
[DissolveBubble](#)
[WipeBubble](#)

[Sapphire](#)
[Plug-ins](#)
[Introduction](#)

S_WarpBubble2

Wraps the source clip using two overlapping sets of bubble patterns. This can be used to create heat diffusion or under water types of effects. The Shift Speed parameters cause the noise pattern to automatically translate over time. Adjust the Amplitude and Frequency parameters to give different types of distortions.

In the Sapphire Distort effects submenu.



Inputs:

Source: The input clip to be warped.

Mask: *Optional.* If provided, the amplitude of warping is scaled by the values of this input clip. Gray values internally scale the warping amplitude rather than simply cross-fading between the effect and the original source to allow more continuous results at the mask edges and more detailed control over the warping amounts. This input can be affected using the Blur Mask, Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.
Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.
Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

A Bubble Parameters:

A Amplitude: *Default:* 0.25, *Range:* any.
The distortion amplitude of the first set of bubbles.

A Frequency: *Default:* 4, *Range:* 0.01 or greater.
The frequency of the first set of bubbles.

A Octaves: *Integer*, *Default:* 1, *Range:* 1 to 10.
The number of noise octaves of the first set of bubbles.

A Seed: *Default:* 0.23, *Range:* 0 or greater.
The random number generator seed of the first set of bubbles.

A Shift Start: *X & Y*, *Default:* [0 0], *Range:* any.
The translation of the first set of bubbles.

A Speed: *X & Y*, *Default:* [0.1 0], *Range:* any.
Automatically animated shift for the first set of bubbles.

B Bubble Parameters:

B Amplitude: *Default:* 0.25, *Range:* any.
The distortion amplitude of the second set of bubbles.

B Frequency: *Default:* 4, *Range:* 0.01 or greater.
The frequency of the second set of bubbles.

B Octaves: *Integer*, *Default:* 1, *Range:* 1 to 10.
The number of noise octaves of the second set of bubbles.

B Seed: *Default:* 0.34, *Range:* 0 or greater.
The random number generator seed of the second set of bubbles.

B Shift Start: *X & Y*, *Default:* [0 0], *Range:* any.
The translation of the second set of bubbles.

B Speed: *X & Y*, *Default:* [-0.1 0], *Range:* any.
Automatically animated shift for the second set of bubbles.

Other Parameters:

Z Dist: *Default:* 1, *Range:* 0.001 or greater.

Scales the 'distance' of the image. Values greater than 1.0 move it farther away and make it smaller. Values less than 1.0 move the image closer and enlarge it. Zooming in slightly can sometimes be used to hide edge artifacts.

Wrap: *X & Y, Popup menu, Default: [Reflect Reflect].*

Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Filter: *Check-box, Default: on.*

If enabled, the image is adaptively filtered when it is resampled. This gives a better quality result when parts of the image are warped smaller.

Blur Mask: *Default: 0, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Crop Input Parameters: *Default: 0, Range: 0 or greater.*

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

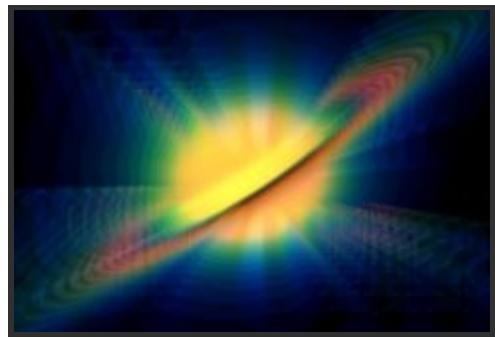
See Also:

[DissolveBubble](#)
[WipeBubble](#)

[Sapphire](#)
[Plug-ins](#)
[Introduction](#)

S_WarpChroma

Separates the source clip into spectral bands and warps them by different amounts. The red is warped by the From transformation, the blue by the To transformation, with the other colors of the spectrum in between. The From and To parameters do not refer to time. They describe the two transformations in space that determine the sequence of warps applied to each color.



In the Sapphire Distort effects submenu.

Inputs:

Source: The input clip to be warped.

Mask: *Optional.* If provided, the amplitude of warping is scaled by the values of this input clip. Gray values internally scale the warping amplitude rather than simply cross-fading between the effect and the original source to allow more continuous results at the mask edges and more detailed control over the warping amounts. This input can be affected using the Blur Mask, Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Steps: *Integer*, *Default:* 8, *Range:* 3 to 100.

The number of spectrum samples to include along the path between the From (red) and To (blue) transformations. More steps give a smoother result, but require more time to process.

Center: *X & Y*, *Default:* [0 0], *Range:* any.

The center of rotation and zooming, in screen coordinates relative to the center of the frame. The shift values should be zero for this location to make sense. This parameter can be adjusted using the Center Widget.

From Z Dist: *Default:* 1.5, *Range:* 0.001 or greater.

The 'distance' of the From transformation. This zooms about the Center location when Shift is 0. Increase to zoom out, decrease to zoom in. This parameter can be adjusted using the From Transfm Widget.

From Rotate: *Default:* 0, *Range:* any.

The rotation angle of the From transformation, in degrees, about the center. This parameter can be adjusted using the From Transfm Widget.

From Shift: *X & Y*, *Default:* [0 0], *Range:* any.

The horizontal and vertical translations of the From transformation. This can be used for directional motion. If it is non-zero the center location becomes less meaningful. This parameter can be adjusted using the From Transfm Widget.

To Z Dist: *Default:* 1, *Range:* 0.001 or greater.

The 'distance' of the To transformation. Increase to zoom out, or decrease to zoom in. This parameter can be adjusted using the To Transform Widget.

To Rotate: *Default:* 0, *Range:* any.

The rotation angle of the To transformation, in degrees, about the center. Note that if the From and To Rotate angles are very different, the interpolation between them will become less accurate. This parameter can be adjusted using the To Transform Widget.

To Shift: *X & Y*, *Default:* [0 0], *Range:* any.

The horizontal and vertical translations of the To transformation. This can be used for directional motion. If it is non-zero the center location becomes less meaningful. This parameter can be adjusted using the To Transform Widget.

Warp Amount: *Default:* 1, *Range:* 0 or greater.

Adjusts the overall amount of warping by scaling the From and To transformations. Setting this to zero disables both transforms and leaves the image unchanged.

Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the result.

Color1: *Default* *rgb*: [1 0 0].

The color at the From transformation.

Color2: *Default* *rgb*: [0 1 0].

The color midway between the From and To transformations.

Color3: *Default* *rgb*: [0 0 1].

The color at the To transformation.

White Balance: *Check-box*, *Default*: off.

When enabled, the three colors are adjusted internally so they sum to white. In this case, the colors of unwarped regions are not affected and the average color of the result remains the same.

Wrap: *X & Y*, *Popup menu*, *Default*: [No No].

Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Filter: *Check-box*, *Default*: off.

If enabled, the image is adaptively filtered when it is resampled. This gives a better quality result when parts of the image are warped smaller.

Blur Mask: *Default*: 0, *Range*: 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default*: off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu*, *Default*: Luma.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Crop Input Parameters: *Default*: 0, *Range*: 0 or greater.

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

Show Center: *Check-box*, *Default*: on.

Turns on or off the screen user interface for adjusting the Center parameter.

Show From Transfm: *Check-box*, *Default*: on.

Turns on or off the screen user interface for adjusting the From Z Dist and From Rotate parameters.

Show To Transform: *Check-box*, *Default*: on.

Turns on or off the screen user interface for adjusting the To Z Dist and To Rotate parameters.

Show From Shift: *Check-box*, *Default*: off.

Turns on or off the screen user interface for adjusting the Center parameter.

Show To Shift: *Check-box*, *Default*: off.

Turns on or off the screen user interface for adjusting the Center parameter.

See Also:

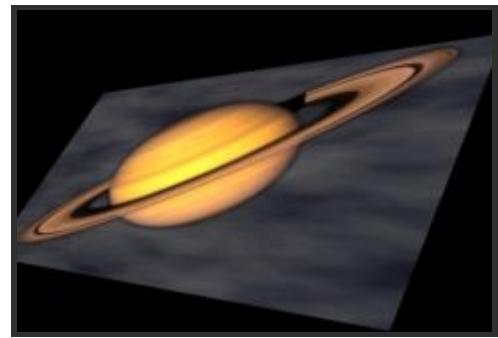
[DistortChroma](#)
[DefocusPrism](#)
[BlurMotion](#)
[Streaks](#)
[EdgeRays](#)

[Sapphire Plug-ins](#)
[Introduction](#)

S_WarpCornerPin

Performs a 3D perspective warp of the source image to align the corners with the four indicated points. This can be useful for positioning the source over an object in another clip, such as a billboard or computer screen.

In the Sapphire Distort effects submenu.



Inputs:

Source: The input clip to be warped.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Top Left: *X & Y, Default: [-0.806 0.133], Range: any.*

Location of the upper-left corner of the source. This parameter can be adjusted using the Top Left Widget.

Top Right: *X & Y, Default: [0.389 0.577], Range: any.*

Location of the upper-right corner of the source. This parameter can be adjusted using the Top Right Widget.

Bottom Left: *X & Y, Default: [-0.556 -0.441], Range: any.*

Location of the lower-left corner of the source. This parameter can be adjusted using the Bottom Left Widget.

Bottom Right: *X & Y, Default: [0.611 -0.485], Range: any.*

Location of the lower-right corner of the source. This parameter can be adjusted using the Bottom Right Widget.

Filter: *Check-box, Default: on.*

If enabled, the image is adaptively filtered when it is resampled. This gives a better quality result when parts of the image are warped smaller.

Bulge: *X & Y, Default: [0 0], Range: -1 to 1.*

Distorts the perspective of the warped image, so that it appears to bulge in one direction. A value of 1 gives no distortion. A value of less than one causes the image to stretch toward the upper/right corner, while a value of greater than one causes it to stretch to the lower/left corner.

Wrap: *X & Y, Popup menu, Default: [No No].*

Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Crop Input Parameters: *Default: 0, Range: 0 or greater.*

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

Show Top Left: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Top Left parameter.

Show Top Right: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Top Right parameter.

Show Bottom Left: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Bottom Left parameter.

Show Bottom Right: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Bottom Right parameter.

See general info for [Motion Blur](#)

See Also:

[Sapphire Plug-ins Introduction](#)

S_WarpDrops

Wraps the source clip by multiple patterns of concentric waves emanating from multiple center locations. Each area in the Centers input clip brighter than the value of Threshold Cntrs, generates an independent pattern of concentric waves, and the total brightness of each area scales the warping magnitude of those waves. If the Centers image is complex, the number and locations of resulting centers can be fairly sensitive to the threshold value. Try using just solid black with a few white dots for the Centers input. If you only need a single set of waves, you can use the WarpPuddle effect instead.



In the Sapphire Distort effects submenu.

Inputs:

Source: The input clip to be warped.

Centers: *Optional.* Determines the centers of the wave patterns. Each area in this clip brighter than the value of Threshold Cntrs, generates an independent pattern of concentric waves. The total brightness of the area (brightness x area) scales the warping magnitude of those waves. This clip is often a painted image of dots of different sizes and brightnesses. If the painted centers move over time, the effect centers will move with them.

Mask: *Optional.* If provided, the amplitude of warping is scaled by the values of this input clip. Gray values internally scale the warping amplitude rather than simply cross-fading between the effect and the original source to allow more continuous results at the mask edges and more detailed control over the warping amounts. This input can be affected using the Blur Mask, Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Amplitude: *Default:* 1, *Range:* any.

Scales the amount of warping distortion. Increase for more severe distortion.

Frequency: *Default:* 8, *Range:* 0.01 or greater.

The frequency of the waves. Increase for more waves, decrease for fewer. This parameter can be adjusted using the Frequency Widget.

Rel Height: *Default:* 1, *Range:* 0.01 or greater.

The relative height of the concentric wave pattern.

Rotate Rel H: *Default:* 0, *Range:* any.

Rotation in degrees of the wave patterns, about each center. This has no effect if the Rel Height parameter is 1.0. This parameter can be adjusted using the Rotate Rel H Widget.

Threshold Cntrs: *Default:* 0.6, *Range:* 0 or greater.

Areas brighter than this value are used as centers for the waves. A center is generated from the centroid of each set of connected pixels above this value.

Max Centers: *Integer*, *Default:* 20, *Range:* 1 or greater.

The maximum total number of centers to use. This can be used for testing or to avoid overly large numbers of centers.

Phase Start: *Default:* 0, *Range:* any.

The phase shift of the waves.

Phase Speed: *Default:* 0, *Range:* any.

The speed of the waves. If this is positive the waves automatically travel outwards from the center at this rate.

Inner Radius: *Default:* 0, *Range:* any.

The distance from the puddle center where the wave distortion is phased in. No waves are generated inside this

radius. This parameter can be adjusted using the Inner Radius Widget.

Inner Softness: *Default:* 0.1, *Range:* 0.0028 or greater.

The width of the region at the Inner Radius over which the wave distortion is phased in.

Outer Radius: *Default:* 0.5, *Range:* 0 or greater.

The distance from the puddle center where the wave distortion is phased out. No waves are generated outside this radius. This parameter can be adjusted using the Outer Radius Widget.

Outer Softness: *Default:* 0.5, *Range:* 0.0056 or greater.

The width of the region at the Outer Radius over which the wave distortion is phased out.

Z Dist: *Default:* 1, *Range:* 0.001 or greater.

Scales the 'distance' of the image. Values greater than 1.0 move it farther away and make it smaller. Values less than 1.0 move the image closer and enlarge it. Zooming in slightly can sometimes be used to hide edge artifacts.

Wrap: *X & Y, Popup menu, Default: [Reflect Reflect].*

Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Filter: *Check-box, Default: on.*

If enabled, the image is adaptively filtered when it is resampled. This gives a better quality result when parts of the image are warped smaller.

Blur Mask: *Default: 0, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Crop Input Parameters: *Default: 0, Range: 0 or greater.*

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

Show Frequency: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Frequency parameter.

Show Outer Radius: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Rel Height parameter.

Show Inner Radius: *Check-box, Default: on.*

Turns on or off the screen interface parameter for adjusting the Inner Radius. The value of the Inner Radius parameter must first be positive for this widget to be visible.

Show Rotate Rel H: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Rotate Rel H parameter.

See Also:

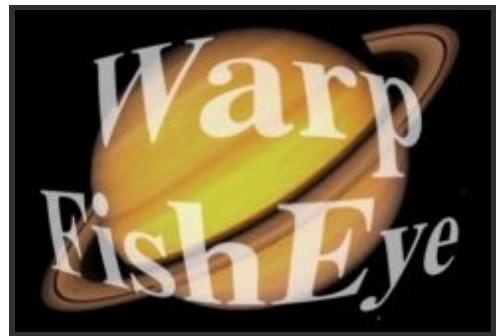
[WarpPuddle](#)
[WarpWaves](#)

[Sapphire Plug-ins](#)
[Introduction](#)

S_WarpFishEye

Expands the center of the source clip as if viewed through a fish-eye lens. Adjust the Amount parameter to give more or less distortion. Turn off the Wrap options to give transparency beyond the borders of the input clip instead of reflected copies.

In the Sapphire Distort effects submenu.



Inputs:

Source: The input clip to be warped.

Mask: *Optional.* If provided, the amplitude of warping is scaled by the values of this input clip. Gray values internally scale the warping amplitude rather than simply cross-fading between the effect and the original source to allow more continuous results at the mask edges and more detailed control over the warping amounts. This input can be affected using the Blur Mask, Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Amount: *Default: 1, Range: any.*

The amplitude of the fish-eye warping. Try this negative with a large Z Dist for some wacky 'bug eye' distortions.

Center: *X & Y, Default: [0 0], Range: any.*

The center of the fish-eye warping function, in screen coordinates relative to the center of the frame. This parameter can be adjusted using the Center Widget.

Z Dist: *Default: 1, Range: 0.001 or greater.*

Scales the 'distance' of the image. Values greater than 1.0 move it farther away and make it smaller. Values less than 1.0 move the image closer and enlarge it. Zooming in slightly can sometimes be used to hide edge artifacts.

Rotate: *Default: 0, Range: any.*

Rotates the result about the center location by this many counter-clockwise degrees.

Shift Orig: *X & Y, Default: [0 0], Range: any.*

Translates the source image before the fish-eye warping is applied.

Wrap: *X & Y, Popup menu, Default: [Reflect Reflect].*

Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Filter: *Check-box, Default: on.*

If enabled, the image is adaptively filtered when it is resampled. This gives a better quality result when parts of the image are warped smaller.

Blur Mask: *Default: 0, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Crop Input Parameters: *Default: 0, Range: 0 or greater.*

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be

transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

Show Center: *Check-box, Default:* on.

Turns on or off the screen user interface for adjusting the Center parameter.

See Also:

[Distort](#)

[Sapphire Plug-ins Introduction](#)

S_WarpMagnify

Magnifies an elliptical region of the source to create a glass lens refraction effect.

In the Sapphire Distort effects submenu.



Inputs:

Source: The input clip to be warped.

Mask: *Optional.* If provided, the amplitude of warping is scaled by the values of this input clip. Gray values internally scale the warping amplitude rather than simply cross-fading between the effect and the original source to allow more continuous results at the mask edges and more detailed control over the warping amounts. This input can be affected using the Blur Mask, Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Magnify Amount: *Default:* 2, *Range:* any.

Amount to scale the image within the magnified region. Use values below 1.0 to shrink the image instead within the lens.

Magnify Rel: *X & Y*, *Default:* [1 1], *Range:* 0 or greater.

The relative horizontal and vertical magnification.

Lens Center: *X & Y*, *Default:* [0 0], *Range:* any.

The center of the lens shape. This parameter can be adjusted using the Lens Center Widget.

Lens Radius: *Default:* 0.4, *Range:* 0 or greater.

Radius of the inner part of the lens. Within this region, the source is scaled by the full magnify amount. This parameter can be adjusted using the Edge Width Widget.

Lens Edge Width: *Default:* 0.5, *Range:* 0 or greater.

The width of the lens edge, as a fraction of the inner radius. In the edge area of the lens, magnification tapers off from the full magnify amount to no magnification. This parameter can be adjusted using the Edge Width Widget.

Lens Rel Height: *Default:* 1, *Range:* 0.1 or greater.

The relative vertical size of the lens. Increase for a taller ellipse, decrease for a wider one.

Lens Rel Width: *Default:* 1, *Range:* 0.1 or greater.

The relative horizontal size of the lens. Increase for a wider ellipse, decrease for a taller one.

Lens Rotate: *Default:* 0, *Range:* any.

Rotation in degrees of the lens. Note that rotation will have no effect when Rel Width and Rel Height are equal and the shape is a perfect circle. This parameter can be adjusted using the Lens Rotate Widget.

Lens Edge Shape: *Default:* 1, *Range:* -1 to 1.

Determines the curve of the magnification amount within the edge of the lens. If set to zero, magnification tapers off linearly. If set to one, magnification tapers off in a smoother curve, which can reduce the visual perception of the border of the lens. Other values interpolate between the two.

Wrap: *X & Y*, *Popup menu*, *Default:* [Reflect Reflect].

Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Filter: *Check-box*, *Default:* on.

If enabled, the image is adaptively filtered when it is resampled. This gives a better quality result when parts of the image are warped smaller.

Blur Mask: *Default:* 0, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu*, *Default:* Luma.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Crop Input Parameters: *Default:* 0, *Range:* 0 or greater.

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

Show Edge Width: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Lens Center parameter.

Show Lens Radius: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Lens Center parameter.

Show Lens Rotate: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Lens Center parameter.

Show Lens Center: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Lens Center parameter.

See Also:

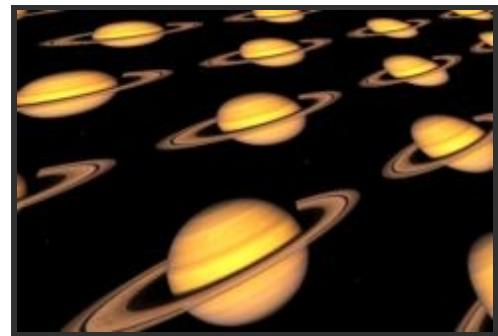
[Distort](#)
[WarpFishEye](#)

[Sapphire Plug-ins](#)
[Introduction](#)

S_WarpPerspective

Transforms the source clip onto a 3D plane with perspective. Adjust the Latitude, Swing, and Roll parameters to rotate the image on various axes, and adjust Shift and Z Dist to translate and zoom. Turn off the Wrap options to give a single non-repeated copy of the image.

In the Sapphire Distort effects submenu.



Inputs:

Source: The input clip to be warped.

Mask: *Optional.* If provided, the amplitude of warping is scaled by the values of this input clip. Gray values internally scale the warping amplitude rather than simply cross-fading between the effect and the original source to allow more continuous results at the mask edges and more detailed control over the warping amounts. This input can be affected using the Blur Mask, Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Latitude: *Default: 35, Range: -89 to 89.*

Tilts the image up or down in 3D. Positive latitude tilts the image down and negative tilts it up.

Swing: *Default: 0, Range: any.*

Rotation of the image in degrees in its initial frame.

Roll: *Default: 0, Range: any.*

Tilts the result from side to side, in counter-clockwise degrees.

Z Dist: *Default: 3, Range: 0.001 or greater.*

Scales the 'distance' of the image. Values greater than 1.0 move it farther away and make it smaller. Values less than 1.0 move the image closer and enlarge it.

Tele Lens Width: *Default: 1, Range: 0.2 to 3.*

The amount of lens telescoping. Increase to zoom in with less perspective, decrease for a wider viewing angle with more perspective.

Shift Orig: *X & Y, Default: [0 0], Range: any.*

Translates the image in its initial frame.

Wrap: *X & Y, Popup menu, Default: [Tile Tile].*

Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Wrap Above Horizon: *Check-box, Default: off.*

When the image is sufficiently tilted using the Latitude parameter, a horizon can be seen. When Wrap Above Horizon is check, the image is repeated on both sides of the horizon.

Filter: *Check-box, Default: on.*

If enabled, the image is adaptively filtered when it is resampled. This gives a better quality result when parts of the image are warped smaller.

Blur Mask: *Default: 0, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Crop Input Parameters: *Default:* 0, *Range:* 0 or greater.

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

See general info for [Motion Blur](#)

See Also:

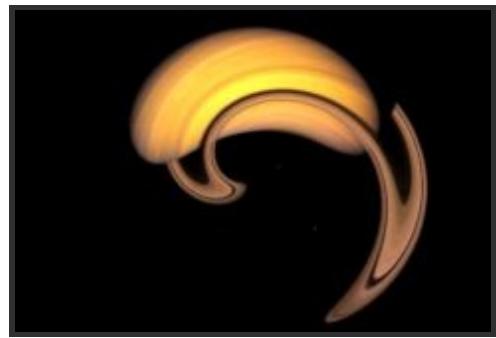
[CloudsPerspective](#)

[Sapphire Plug-ins Introduction](#)

S_WarpPolar

Wraps the source clip into a rounded disk shape. The vertical direction of the source image is mapped between the Inner Radius and Outer Radius, and the horizontal direction is rotated about the center based on the number of Angle Repeats and offset by Angle.

In the Sapphire Distort effects submenu.



Inputs:

Source: The input clip to be warped.

Mask: *Optional.* If provided, the amplitude of warping is scaled by the values of this input clip. Gray values internally scale the warping amplitude rather than simply cross-fading between the effect and the original source to allow more continuous results at the mask edges and more detailed control over the warping amounts. This input can be affected using the Blur Mask, Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Angle: *Default:* 0, *Range:* any.

Rotation of the result, in counter-clockwise degrees. This parameter can be adjusted using the Angle Widget.

Angle Repeats: *Default:* 1, *Range:* 0.01 or greater.

The number of copies of the source image to wrap around. This should be an integer to avoid a seam where the first copy connects to the last.

Center: X & Y, *Default:* [0 0], *Range:* any.

The center of the disk, in screen coordinates relative to the center of the frame. This parameter can be adjusted using the Center Widget.

Stretch: X & Y, *Default:* [1 1], *Range:* 0.01 or greater.

Scales the horizontal or vertical size of the disk shape. This parameter can be adjusted using the Inner Radius Widget.

Inner Radius: *Default:* 0.028, *Range:* any.

The distance from the center where the bottom edge of the source clip is mapped. This parameter can be adjusted using the Inner Radius Widget.

Outer Radius: *Default:* 0.84, *Range:* any.

The distance from the center where the top edge of the input clip is mapped. This parameter can be adjusted using the Outer Radius Widget.

Wrap: X & Y, *Popup menu*, *Default:* [Tile No].

Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Filter: *Check-box*, *Default:* on.

If enabled, the image is adaptively filtered when it is resampled. This gives a better quality result when parts of the image are warped smaller.

Blur Mask: *Default:* 0, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu*, *Default:* Luma.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Crop Input Parameters: *Default:* 0, *Range:* 0 or greater.

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

Show Angle: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Angle parameter.

Show Center: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Center parameter.

Show Inner Radius: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Center parameter.

Show Outer Radius: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Center parameter.

See Also:

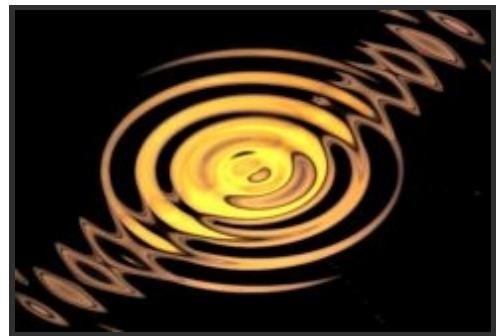
[KaleidoPolar](#)

[Sapphire Plug-ins Introduction](#)

S_WarpPuddle

Warps the source clip by a pattern of concentric waves. The Phase Speed parameter causes the waves to automatically move outwards from the center over time. Adjust the Inner and Outer Radius parameters to limit the area where the waves appear. Increase the Inner and Outer softness for smoother transitions between where the waves appear and do not appear.

In the Sapphire Distort effects submenu.



Inputs:

Source: The input clip to be warped.

Mask: *Optional.* If provided, the amplitude of warping is scaled by the values of this input clip. Gray values internally scale the warping amplitude rather than simply cross-fading between the effect and the original source to allow more continuous results at the mask edges and more detailed control over the warping amounts. This input can be affected using the Blur Mask, Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Amplitude: *Default:* 0.1, *Range:* any.

Scales the amount of warping distortion. Increase for more severe distortion.

Frequency: *Default:* 8, *Range:* 0.01 or greater.

The frequency of the waves. Increase for more waves, decrease for fewer. This parameter can be adjusted using the Frequency Widget.

Rel Height: *Default:* 0.75, *Range:* 0.01 or greater.

The relative height of the concentric wave pattern.

Rotate Puddle: *Default:* 0, *Range:* any.

Rotates the puddle pattern by this many counter-clockwise degrees after the Rel Height stretching has been applied. This has no effect when Rel Height is 1. This parameter can be adjusted using the Rotate Puddle Widget.

Center: *X & Y*, *Default:* [0 0], *Range:* any.

The center of the puddle, in screen coordinates relative to the center of the frame. This parameter can be adjusted using the Center Widget.

Phase Start: *Default:* 0, *Range:* any.

The phase shift of the waves.

Phase Speed: *Default:* 1, *Range:* any.

The speed of the waves. If this is positive the waves automatically travel outwards from the center at this rate.

Inner Radius: *Default:* 0, *Range:* any.

The distance from the puddle center where the wave distortion is phased in. No waves are generated inside this radius. This parameter can be adjusted using the Inner Radius Widget.

Inner Softness: *Default:* 0.1, *Range:* 0.0056 or greater.

The width of the region at the Inner Radius over which the wave distortion is phased in.

Outer Radius: *Default:* 1.4, *Range:* 0 or greater.

The distance from the puddle center where the wave distortion is phased out. No waves are generated outside this radius. This parameter can be adjusted using the Outer Radius Widget.

Outer Softness: *Default:* 0.42, *Range:* 0.0056 or greater.

The width of the region at the Outer Radius over which the wave distortion is phased out.

Z Dist: *Default:* 1, *Range:* 0.001 or greater.

Scales the 'distance' of the image. Values greater than 1.0 move it farther away and make it smaller. Values less than 1.0 move the image closer and enlarge it. Zooming in slightly can sometimes be used to hide edge artifacts.

Wrap: *X & Y*, *Popup menu*, *Default:* [Reflect Reflect].

Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Filter: *Check-box*, *Default:* on.

If enabled, the image is adaptively filtered when it is resampled. This gives a better quality result when parts of the image are warped smaller.

Blur Mask: *Default:* 0, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu*, *Default:* Luma.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Crop Input Parameters: *Default:* 0, *Range:* 0 or greater.

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

Show Frequency: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Frequency parameter.

Show Inner Radius: *Check-box*, *Default:* on.

Turns on or off the screen interface parameter for adjusting the Inner Radius. The value of the Inner Radius parameter must first be positive for this widget to be visible.

Show Outer Radius: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Rel Height parameter.

Show Center: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Center parameter.

Show Rotate Puddle: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Rotate Puddle parameter.

See Also:

[DissolvePuddle](#)

[Sapphire Plug-ins Introduction](#)

S_WarpPuff

Wraps the source clip based on its gradient. By default, brighter areas are puffed out and darker areas are shrunk. This is similar to applying Distort effect to an image using itself as the lens.

In the Sapphire Distort effects submenu.



Inputs:

Source: The input clip to be warped.

Mask: *Optional.* If provided, the amplitude of warping is scaled by the values of this input clip. Gray values internally scale the warping amplitude rather than simply cross-fading between the effect and the original source to allow more continuous results at the mask edges and more detailed control over the warping amounts. This input can be affected using the Blur Mask, Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* *Union*.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Direction: *Popup menu*, *Default:* *Puff*.

Determines which type of areas of the source clip are puffed.

Puff: expands brighter areas and shrinks darker ones.

Shrivel: shrinks brighter areas and expands darker ones.

Amount: *Default:* 0.5, *Range:* any.

Scales the amount of distortion. This can also be negative to turn puffs into shrivels and vice versa.

Smoothness: *Default:* 0.4, *Range:* 0 or greater.

Blurs the source clip by this amount before determining the warp directions and amounts.

Rotate Warp Dir: *Default:* 0, *Range:* any.

Rotates the direction of the warping. This can cause areas of similar brightness to be twisted instead of just expanded or shrunk.

Wrap: *X & Y*, *Popup menu*, *Default:* [Reflect Reflect].

Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Filter: *Check-box*, *Default:* on.

If enabled, the image is adaptively filtered when it is resampled. This gives a better quality result when parts of the image are warped smaller.

Blur Mask: *Default:* 0, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu*, *Default:* *Luma*.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Crop Input Parameters: *Default:* 0, *Range:* 0 or greater.

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the

frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

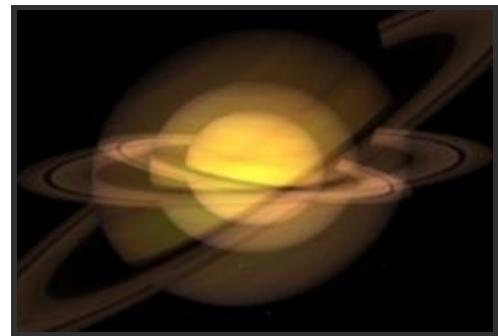
See Also:

[Distort](#)
[Sapphire Plug-ins Introduction](#)

S_WarpRepeat

Transforms the source input multiple times and averages the results. The From and To parameters do not refer to time. They describe the two transformations in space that determine the sequence of repeated warps applied to each frame.

In the Sapphire Distort effects submenu.



Inputs:

Source: The input clip to be warped.

Mask: *Optional.* If provided, the amplitude of warping is scaled by the values of this input clip. Gray values internally scale the warping amplitude rather than simply cross-fading between the effect and the original source to allow more continuous results at the mask edges and more detailed control over the warping amounts. This input can be affected using the Blur Mask, Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Steps: *Integer*, *Default:* 3, *Range:* 2 to 100.

The number of times the input image is sampled along the path between the From and To transformations. More steps require more processing time.

Center: *X & Y*, *Default:* [0 0], *Range:* any.

The center of rotation and zooming, in screen coordinates relative to the center of the frame. The shift values should be zero for this location to make sense. This parameter can be adjusted using the Center Widget.

From Z Dist: *Default:* 1.5, *Range:* 0.001 or greater.

The 'distance' of the From transformation. This zooms about the Center location when Shift is 0. Increase to zoom out, decrease to zoom in. This parameter can be adjusted using the From Transfm Widget.

From Rotate: *Default:* 0, *Range:* any.

The rotation angle of the From transformation, in degrees, about the center. This parameter can be adjusted using the From Transfm Widget.

From Shift: *X & Y*, *Default:* [0 0], *Range:* any.

The horizontal and vertical translations of the From transformation. This can be used for directional motion. If it is non-zero the center location becomes less meaningful. This parameter can be adjusted using the From Transfm Widget.

To Z Dist: *Default:* 1, *Range:* 0.001 or greater.

The 'distance' of the To transformation. Increase to zoom out, or decrease to zoom in. This parameter can be adjusted using the To Transform Widget.

To Rotate: *Default:* 0, *Range:* any.

The rotation angle of the To transformation, in degrees, about the center. Note that if the From and To Rotate angles are very different, the interpolation between them will become less accurate. This parameter can be adjusted using the To Transform Widget.

To Shift: *X & Y*, *Default:* [0 0], *Range:* any.

The horizontal and vertical translations of the To transformation. This can be used for directional motion. If it is non-zero the center location becomes less meaningful. This parameter can be adjusted using the To Transform Widget.

Warp Amount: *Default:* 1, *Range:* 0 or greater.

Adjusts the overall amount of warping by scaling the From and To transformations. Setting this to zero disables both transforms and leaves the image unchanged.

Exposure Bias: *Default:* 0.5, *Range:* 0 to 1.

Determines the variable amount of exposure along the path between the From and To transformations. A value of 0 causes more exposure at the From end, 0.5 causes equal exposure along the path, and 1.0 causes more exposure at the To end. If you have bright spots on a dark background, a 0 value would cause the processed spots to be brighter at the From end and dark at the To end, and a 1.0 value would cause the opposite.

Wrap: *X & Y*, *Popup menu*, *Default:* [No No].

Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Filter: *Check-box*, *Default:* off.

If enabled, the image is adaptively filtered when it is resampled. This gives a better quality result when parts of the image are warped smaller.

Blur Mask: *Default:* 0, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu*, *Default:* Luma.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Crop Input Parameters: *Default:* 0, *Range:* 0 or greater.

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

Show Center: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Center parameter.

Show From Transfm: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the From Z Dist and From Rotate parameters.

Show To Transform: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the To Z Dist and To Rotate parameters.

Show From Shift: *Check-box*, *Default:* off.

Turns on or off the screen user interface for adjusting the Center parameter.

Show To Shift: *Check-box*, *Default:* off.

Turns on or off the screen user interface for adjusting the Center parameter.

See Also:

[BlurMotion](#)

[Sapphire Plug-ins](#)

[Streaks](#)

[Introduction](#)

[EdgeRays](#)

S_WarpTransform

Warps the source clip by a combination of linear transformations including scale, shear, zoom, rotation, and translation.

In the Sapphire Distort effects submenu.



Inputs:

Source: The input clip to be warped.

Mask: *Optional.* If provided, the amplitude of warping is scaled by the values of this input clip. Gray values internally scale the warping amplitude rather than simply cross-fading between the effect and the original source to allow more continuous results at the mask edges and more detailed control over the warping amounts. This input can be affected using the Blur Mask, Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Scale: *X & Y, Default: [1 1], Range: any.*

Scales the relative horizontal or vertical size of the source image.

Shift: *X & Y, Default: [0 0], Range: any.*

Translates the source image. This parameter can be adjusted using the Shift Widget.

Z Dist: *Default: 1, Range: 0.001 or greater.*

Scales the 'distance' of the image. Values greater than 1.0 move it farther away and make it smaller. Values less than 1.0 move the image closer and enlarge it. Note that Scale X and Y also scale the size of the image, but in an inverse way and on each axis.

Rotate: *Default: 0, Range: any.*

Rotates the source image by the specified angle in counter-clockwise degrees.

Swivel: *Default: 0, Range: any.*

Rotates the image left or right in 3D about the vertical axis.

Tilt: *Default: 0, Range: any.*

Rotates the image up or down in 3D about the horizontal axis. You can use Swivel and Tilt together to rotate about arbitrary diagonal axes.

Perspective Amount: *Default: 1, Range: 0.25 to 4.*

Controls the amount of lens telescoping while applying Swivel and Tilt. Increase for more 3D perspective.

Shear: *X & Y, Default: [0 0], Range: any.*

Shears the source image horizontally or vertically.

Wrap: *X & Y, Popup menu, Default: [No No].*

Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Filter: *Check-box, Default: on.*

If enabled, the image is adaptively filtered when it is resampled. This gives a better quality result when parts of the image are warped smaller.

Blur Mask: *Default: 0, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Crop Input Parameters: *Default: 0, Range: 0 or greater.*

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

Show Shift: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Shift parameter.

See general info for [Motion Blur](#)

See Also:

[Shake](#)

[Sapphire Plug-ins Introduction](#)

S_WarpVortex

Twists the source clip into a vortex, about a given Center location. Use the Vortex Start parameter to adjust the amount of vortexing, and use Angle Offset to also apply a normal rotation. Vortex Speed can be used to automatically animate the amount of vortexing.

In the Sapphire Distort effects submenu.



Inputs:

Source: The input clip to be warped.

Mask: *Optional.* If provided, the amplitude of warping is scaled by the values of this input clip. Gray values internally scale the warping amplitude rather than simply cross-fading between the effect and the original source to allow more continuous results at the mask edges and more detailed control over the warping amounts. This input can be affected using the Blur Mask, Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Vortex Start: *Default:* 36, *Range:* any.

The amount of vortex rotation, in approximate counter-clockwise degrees at the edge of the frame.

Vortex Speed: *Default:* 0, *Range:* any.

The speed of the vortex rotation, in approximate degrees per second at the edge of the frame. If non-zero, the vortexing is automatically animated at this rate.

Angle Offset: *Default:* 0, *Range:* any.

If non-zero, a rotation is combined with the vortex. Make negative to rotate the inner and outer regions in opposite directions.

Center: X & Y, *Default:* [0 0], *Range:* any.

The center of the vortex, in screen coordinates relative to the center of the frame. This parameter can be adjusted using the Center Widget.

Z Dist: *Default:* 1, *Range:* 0.001 or greater.

Scales the 'distance' of the image. Values greater than 1.0 move it farther away and make it smaller. Values less than 1.0 move the image closer and enlarge it.

Inner Radius: *Default:* 0.042, *Range:* 0 or greater.

The radius from the center at which the vortexing is phased in. This can be used to reduce excessive distortion and aliasing at the very center of the vortex.

Wrap: X & Y, *Popup menu*, *Default:* [Reflect Reflect].

Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Filter: *Check-box*, *Default:* on.

If enabled, the image is adaptively filtered when it is resampled. This gives a better quality result when parts of the image are warped smaller.

Blur Mask: *Default:* 0, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu*, *Default:* Luma.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Crop Input Parameters: *Default:* 0, *Range:* 0 or greater.

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

Show Center: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Center parameter.

See Also:

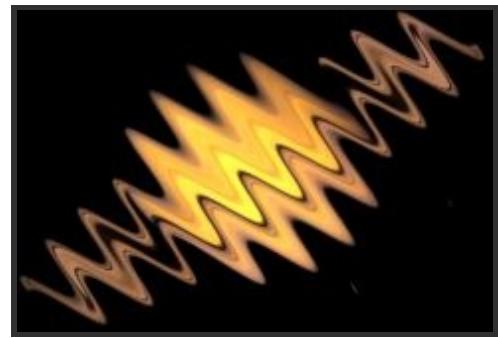
[DissolveVortex](#)

[Sapphire Plug-ins Introduction](#)

S_WarpWaves

Wraps the source clip by a wave pattern. You can make the waves move over time by increasing the Phase Speed parameter, or by animating the value of Phase Start.

In the Sapphire Distort effects submenu.



Inputs:

Source: The input clip to be warped.

Mask: *Optional.* If provided, the amplitude of warping is scaled by the values of this input clip. Gray values internally scale the warping amplitude rather than simply cross-fading between the effect and the original source to allow more continuous results at the mask edges and more detailed control over the warping amounts. This input can be affected using the Blur Mask, Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* *Union*.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Amplitude: *Default:* 0.1, *Range:* any.

Scales the amount of warping distortion. Increase for more severe distortion.

Frequency: *Default:* 8, *Range:* 0.1 or greater.

The frequency of the waves. Increase for more waves, decrease for fewer.

Angle: *Default:* 45, *Range:* any.

The rotation angle of the wave pattern in counter-clockwise degrees. If angle is 0, the waves move to the right and are aligned vertically.

Displace Angle: *Default:* 90, *Range:* any.

The warping direction in degrees relative to the angle of the waves. 0 gives compression-expansion waves, and 90 gives side to side waves.

Phase Start: *Default:* 0, *Range:* any.

The phase shift of the waves. The wave pattern is translated in the direction of Angle by this amount.

Phase Speed: *Default:* 0, *Range:* any.

The phase speed of the waves. If this is non-zero the wave pattern automatically travels at this rate.

Z Dist: *Default:* 1, *Range:* 0.001 or greater.

Scales the 'distance' of the image. Values greater than 1.0 move it farther away and make it smaller. Values less than 1.0 move the image closer and enlarge it. Zooming in slightly can sometimes be used to hide edge artifacts.

Wrap: *X & Y*, *Popup menu*, *Default:* [Reflect Reflect].

Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Filter: *Check-box*, *Default:* on.

If enabled, the image is adaptively filtered when it is resampled. This gives a better quality result when parts of the image are warped smaller.

Blur Mask: *Default:* 0, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu*, *Default:* *Luma*.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Crop Input Parameters: *Default:* 0, *Range:* 0 or greater.

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

See Also:

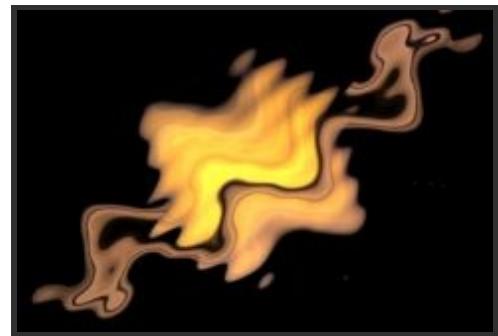
[DissolveWaves](#)

[Sapphire Plug-ins Introduction](#)

S_WarpWaves2

Warps the source clip using two sets of overlapping wave patterns. You can make the waves move over time by increasing the Phase Speed parameters, or by animating the value of the Phase Start parameters.

In the Sapphire Distort effects submenu.



Inputs:

Source: The input clip to be warped.

Mask: *Optional.* If provided, the amplitude of warping is scaled by the values of this input clip. Gray values internally scale the warping amplitude rather than simply cross-fading between the effect and the original source to allow more continuous results at the mask edges and more detailed control over the warping amounts. This input can be affected using the Blur Mask, Invert Mask, or Mask Use parameters.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default: [0 0], Range: any.*

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

A Waves Parameters:

A Amplitude: *Default: 0.06, Range: any.*

The amplitude of the first set of waves.

A Frequency: *Default: 6, Range: 0.01 or greater.*

The frequency of the first set of waves. Increase for more waves, decrease for fewer.

A Angle: *Default: 45, Range: any.*

The rotation angle of the first set of waves in degrees.

A Displace Angle: *Default: 0, Range: any.*

The warping direction of the first set of waves in degrees relative to their angle.

A Phase Start: *Default: 0, Range: any.*

The phase shift of the first set of waves.

A Phase Speed: *Default: 1, Range: any.*

If non-zero, the first set of wave automatically travels at this rate.

B Waves Parameters:

B Amplitude: *Default: 0.12, Range: any.*

The amplitude of the second set of waves.

B Frequency: *Default: 3, Range: 0.01 or greater.*

The frequency of the second set of waves. Increase for more waves, decrease for fewer.

B Angle: *Default: 15, Range: any.*

The rotation angle of the second set of waves in degrees.

B Displace Angle: *Default: 0, Range: any.*

The warping direction of the second set of waves in degrees relative to their angle.

B Phase Start: *Default: 0, Range: any.*

The phase shift of the second set of waves.

B Phase Speed: *Default: -1, Range: any.*

If non-zero, the second set of wave automatically travels at this rate.

Other Parameters:

Z Dist: *Default: 1, Range: 0.001 or greater.*

Scales the 'distance' of the image. Values greater than 1.0 move it farther away and make it smaller. Values less than 1.0 move the image closer and enlarge it. Zooming in slightly can sometimes be used to hide edge artifacts.

Wrap: *X & Y*, *Popup menu*, *Default:* [Reflect Reflect].

Determines the method for accessing outside the borders of the source image.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Filter: *Check-box*, *Default:* on.

If enabled, the image is adaptively filtered when it is resampled. This gives a better quality result when parts of the image are warped smaller.

Blur Mask: *Default:* 0, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu*, *Default:* Luma.

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Crop Input Parameters: *Default:* 0, *Range:* 0 or greater.

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

See Also:

[DissolveWaves](#)

[Sapphire Plug-ins Introduction](#)

S_WhipLash

2D-only version of Swish3D, with optional Whip Out motion and RGB Split. Cuts between two input clips while performing 2D moves on each. During the transition the clips are transformed by the Rotate, Shift, and Scale parameters.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Wipe Amount: *Default: 0, Range: -0.5 to 1.5.*

Determines the transition ratio between the From and To inputs, and would normally be animated from 0 to 1 to perform a complete transition. The curve controlling this parameter can be adjusted for more detailed control over the timing of the wipe.

Center: *X & Y, Default: [0 0], Range: any.*

The center position about which to scale or rotate.

Motion Blur: *Default: 1, Range: 0 or greater.*

Scales the amount of motion blur to use.

Rotate: *Default: 0, Range: any.*

Rotates by the specified angle in counter-clockwise degrees.

Shift: *X & Y, Default: [-4 0], Range: any.*

Translates horizontally or vertically.

Scale: *Default: 1, Range: 0 to 2.*

Scales the size of the clips.

Whip Out: *Popup menu, Default: Smooth.*

End of transition motion

Smooth: Smooth decelerate

Bounce: Overshoot with bounce to stop

Snap: Overshoot then snap to stop

Mix RGB: *Default: 0, Range: 0 to 1.*

Blend in optional RGB split / blur

Blur Amount: *Default:* 1.25, *Range:* 0 or greater.

Scales the width of the blur.

Angle: *Default:* 0, *Range:* any.

The rotation of the overall lash pattern used for the wipe, in counter-clockwise degrees.

Shift RGB: *Default:* 2, *Range:* any.

Shifts the image in the direction of the blur. A negative shift amount shifts the image in the opposite direction.

Bias: *Default:* 0.5, *Range:* 0 to 1.

Varies the weight of the pixels along the path of the blur, which gives the appearance of trails or streaks in a single direction. A value of 0.5 weights all pixels evenly. A value of 1 causes the weight to increase toward the direction of the blur, while a value of 0 has the opposite effect.

Blur Red: *Default:* 1, *Range:* 0 or greater.

The blur width of the red channel, relative to Blur Amount.

Blur Green: *Default:* 0.5, *Range:* 0 or greater.

The blur width of the green channel, relative to Blur Amount.

Blur Blue: *Default:* 0, *Range:* 0 or greater.

The blur width of the blue channel, relative to Blur Amount.

Shift Red: *Default:* 0.5, *Range:* any.

Additional amount to shift the red color channel.

Shift Green: *Default:* 0.25, *Range:* any.

Additional amount to shift the green color channel.

Shift Blue: *Default:* 0, *Range:* any.

Additional amount to shift the blue color channel.

Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the result.

Offset Dark: *Default:* 0, *Range:* -8 to 2.

Adds this gray value to the darker regions of the result. This can be negative to increase contrast.

Edge Mode: *Popup menu, Default: Reflect.*

Determines the behavior when accessing areas outside the source image.

Transparent: Areas outside the source image are treated as transparent, which can produce transparency around the edges of the image. Select this for fastest rendering.

Repeat: Repeats the last pixel outside the border of the image.

Reflect: Reflects the image outside the border.

Soft Borders: *Check-box, Default: off.*

If enabled, transparent borders are added to the input image before processing. This allows the result to include soft edges beyond the original image size. When off, the effect only occurs within the frame and the result will retain an edge at the borders.

See Also:

[Swish3D](#)

[Sapphire](#)

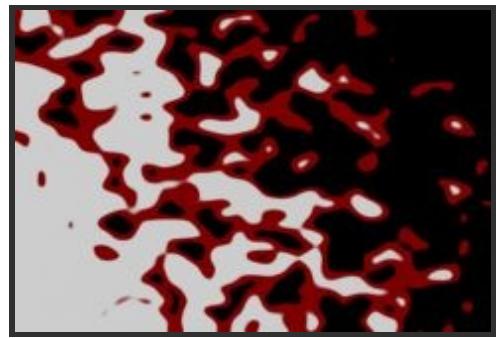
[Plug-ins](#)

[Introduction](#)

S_WipeBlobs

Performs a wipe transition between two input clips using a pattern of blobs generated by a noise function. The Wipe Amount parameter should be animated to control the transition speed. Increase the Grad Add parameter to make the timing of the blobs pattern move across the screen during the wipe. Increase the Border Width parameter to draw a border at the wipe transition edges.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Wipe Amount: *Default: 0, Range: -0.5 to 1.5.*

Determines the transition ratio between the From and To inputs, and would normally be animated from 0 to 1 to perform a complete transition. The curve controlling this parameter can be adjusted for more detailed control over the timing of the wipe.

Edge Softness: *Default: 0, Range: 0 or greater.*

The width of the transition edges. Larger values will cause softer, less visible edges in the wipe pattern.

Frequency: *Default: 6, Range: 0.1 or greater.*

The frequency of the blobs pattern. Increase for more and smaller elements, or decrease for fewer and larger.

Rel Width: *Default: 1, Range: 0.01 or greater.*

The relative horizontal size of the blobs. Increase for wider blobs, decrease for taller ones.

Octaves: *Integer, Default: 1, Range: 1 to 10.*

The number of summed layers of noise. Each octave is twice the frequency and half the amplitude of the previous. A single octave gives a smooth texture. Adding octaves makes the result approach a fractal (1/f) noise texture.

Seed: *Default: 0.432, Range: 0 or greater.*

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Shift: *X & Y, Default: [0 0], Range: any.*

Translation of the blobs pattern.

Grad Add: *Default: 0, Range: -10 to 10.*

If positive, a gradient will be added to the timing of the transition pattern so it moves across the screen during the wipe. This parameter can be adjusted using the Wipe Widget if enabled, but the value must be positive to make this

widget visible.

Grad Angle: *Default: 0, Range: any.*

The direction of the wipe gradient in counter-clockwise degrees. This will have no effect unless Grad Add is positive. The Wipe Widget also allows adjusting this parameter.

Border Width: *Default: 0, Range: 0 or greater.*

If positive, a colored border is drawn at the wipe transition edges, using the border color, opacity, softness, and shift parameters below.

Border Color: *Default rgb: [0.75 0 0].*

The color of the border. This has no effect unless Border Width is positive.

Border Opacity: *Default: 1, Range: 0 to 1.*

The opacity of the border. Decrease to make the border transparent and allow the image under it to show through. This has no effect unless Border Width is positive.

Border Softness: *Default: 0, Range: 0 or greater.*

The softness of the border edges. This has no effect unless Border Width is positive.

Border Shift: *Default: 0, Range: any.*

Shifts the border ahead of or behind the transition edge. This has no effect unless Border Width is positive.

Border Glow: *Default: 0, Range: 0 or greater.*

Adds a glow along the border of the wipe. The value determines the brightness of the glow.

Glow Width: *Default: 0.1, Range: 0 or greater.*

The width of the glowing border.

Width Red: *Default: 1, Range: 0 or greater.*

Scales the red glow width. If the red, green, and blue widths are all equal, the glow will match Glow Color. Otherwise it will have a fringe of varying color.

Width Green: *Default: 1.2, Range: 0 or greater.*

Scales the green glow width.

Width Blue: *Default: 1.4, Range: 0 or greater.*

Scales the blue glow width.

Glow Color: *Default rgb: [1 1 1].*

The color of the glowing border.

Noise Amp: *Default: 1, Range: 0 or greater.*

The amount of noise to add to the glowing border.

Noise Freq: *Default: 16, Range: 0.1 to 20.*

The spatial frequency of the noise.

Noise Speed: *Default: 2, Range: any.*

The speed with which the noise changes or boils over time.

Show Wipe: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Wipe Amount parameter.

Show Shift: *Check-box, Default: on.*

Turns on or off the screen user interface widget for adjusting the Shift parameter, which translates the blobs pattern.

Show Glow Width: *Check-box, Default: off.*

Turns on or off the screen user interface for adjusting the Glow Width parameter.

See Also:

[WipeLine](#)
[WipeCircle](#)
[WipeRectangle](#)
[WipeStar](#)
[WipeClock](#)
[WipeWedge](#)
[WipeDoubleWedge](#)
[WipeFourWedges](#)
[WipeDots](#)
[WipeChecker](#)
[WipeStripes](#)
[WipeRings](#)
[WipeCells](#)
[WipeTiles](#)
[WipePixelate](#)
[WipeDiffuse](#)
[WipeBubble](#)
[WipeClouds](#)
[WipeMoiré](#)
[WipePlasma](#)
[WipePointalize](#)
[WipeWeave](#)
[WipeFlux](#)

[Clouds](#)
[DissolveSpeckle](#)
[TextureLoops](#)
[Sapphire](#)
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S_WipeBubble

Wipes between two input clips with a bubble-warp process performed within the transition area. The Wipe Amount parameter should be animated to control the transition speed.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Wipe Amount: *Default: 0, Range: -0.5 to 1.5.*

Determines the transition ratio between the From and To inputs, and would normally be animated from 0 to 1 to perform a complete transition. The curve controlling this parameter can be adjusted for more detailed control over the timing of the wipe.

Edge Width: *Default: 1.4, Range: 0.014 or greater.*

The width of the transition area. This can be adjusted using the Wipe Widget.

Angle: *Default: 0, Range: any.*

The angle of the wipe direction in counter-clockwise degrees from the right. This can be adjusted using the Wipe Widget.

Bubble Amount: *Default: 0.5, Range: 0 or greater.*

The magnitude of the bubble distortion.

Frequency: *Default: 8, Range: 0.1 or greater.*

The frequency of the bubble pattern. Increase to zoom out, decrease to zoom in.

Frequency Rel X: *Default: 1, Range: 0.01 or greater.*

The relative horizontal frequency of the bubble pattern. Increase for taller bubbles, decrease for wider bubbles.

Octaves: *Integer, Default: 8, Range: 1 to 10.*

The number of summed layers of noise. Each octave is twice the frequency and half the amplitude of the previous. A single octave gives a smooth texture. Adding octaves makes the result approach a fractal (1/f) noise texture.

Seed: *Default: 0.23, Range: 0 or greater.*

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Wrap: *X & Y, Popup menu, Default: [Reflect Reflect].*

Determines the method for accessing outside the borders of the source images.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Crop Input Parameters: *Default:* 0, *Range:* 0 or greater.

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

Show Wipe: *Check-box, Default:* on.

Turns on or off the screen user interface widget for adjusting the Wipe Amt, Angle, and Edge Width parameters.

See Also:

[WipeLine](#)

[WipeCircle](#)

[WipeRectangle](#)

[WipeStar](#)

[WipeClock](#)

[WipeWedge](#)

[WipeDoubleWedge](#)

[WipeFourWedges](#)

[WipeDots](#)

[WipeChecker](#)

[WipeStripes](#)

[WipeRings](#)

[WipeBlobs](#)

[WipeCells](#)

[WipeTiles](#)

[WipePixelate](#)

[WipeDiffuse](#)

[WipeClouds](#)

[WipeMoiré](#)

[WipePlasma](#)

[WipePointalize](#)

[WipeWeave](#)

[WipeFlux](#)

[WarpBubble](#)

[DissolveBubble](#)

[Sapphire](#)

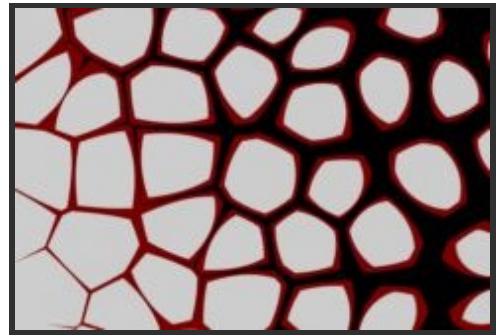
[Plug-ins](#)

[Introduction](#)

S_WipeCells

Performs a wipe transition between two input clips using a pattern of procedurally generated cellular shapes. The Wipe Amount parameter should be animated to control the transition speed. Increase the Grad Add parameter to make the timing of the cells pattern move across the screen during the wipe. Increase the Border Width parameter to draw a border at the wipe transition edges.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Wipe Amount: *Default: 0, Range: -0.5 to 1.5.*

Determines the transition ratio between the From and To inputs, and would normally be animated from 0 to 1 to perform a complete transition. The curve controlling this parameter can be adjusted for more detailed control over the timing of the wipe.

Cells: *Popup menu, Default: Grow.*

The direction of the cells transition.

Shrink: the cells start large and shrink inwards.

Grow: the cells start small and grow outwards.

Edge Softness: *Default: 0, Range: 0 or greater.*

The width of the transition edges. Larger values will cause softer, less visible edges in the wipe pattern.

Frequency: *Default: 6, Range: 0.01 or greater.*

The frequency of the cells pattern. Increase for more and smaller elements, or decrease for fewer and larger.

Rel Width: *Default: 1, Range: 0.1 or greater.*

The relative horizontal size of the cells. Increase for wider cells, decrease for taller ones.

Seed: *Default: 0.432, Range: 0 or greater.*

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Shift: *X & Y, Default: [0 0], Range: any.*

Translation of the cells pattern.

Grad Add: *Default: 0, Range: -10 to 10.*

If positive, a gradient will be added to the timing of the transition pattern so it moves across the screen during the wipe. This parameter can be adjusted using the Wipe Widget if enabled, but the value must be positive to make this widget visible.

Grad Angle: *Default: 0, Range: any.*

The direction of the wipe gradient in counter-clockwise degrees. This will have no effect unless Grad Add is positive. The Wipe Widget also allows adjusting this parameter.

Border Width: *Default: 0, Range: 0 or greater.*

If positive, a colored border is drawn at the wipe transition edges, using the border color, opacity, softness, and shift parameters below.

Border Color: *Default rgb: [0.75 0 0].*

The color of the border. This has no effect unless Border Width is positive.

Border Opacity: *Default: 1, Range: 0 to 1.*

The opacity of the border. Decrease to make the border transparent and allow the image under it to show through. This has no effect unless Border Width is positive.

Border Softness: *Default: 0, Range: 0 or greater.*

The softness of the border edges. This has no effect unless Border Width is positive.

Border Shift: *Default: 0, Range: any.*

Shifts the border ahead of or behind the transition edge. This has no effect unless Border Width is positive.

Border Glow: *Default: 0, Range: 0 or greater.*

Adds a glow along the border of the wipe. The value determines the brightness of the glow.

Glow Width: *Default: 0.1, Range: 0 or greater.*

The width of the glowing border.

Width Red: *Default: 1, Range: 0 or greater.*

Scales the red glow width. If the red, green, and blue widths are all equal, the glow will match Glow Color. Otherwise it will have a fringe of varying color.

Width Green: *Default: 1.2, Range: 0 or greater.*

Scales the green glow width.

Width Blue: *Default: 1.4, Range: 0 or greater.*

Scales the blue glow width.

Glow Color: *Default rgb: [1 1 1].*

The color of the glowing border.

Noise Amp: *Default: 1, Range: 0 or greater.*

The amount of noise to add to the glowing border.

Noise Freq: *Default: 16, Range: 0.1 to 20.*

The spatial frequency of the noise.

Noise Speed: *Default: 2, Range: any.*

The speed with which the noise changes or boils over time.

Show Wipe: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Wipe Amount parameter.

Show Shift: *Check-box, Default: on.*

Turns on or off the screen user interface widget for adjusting the Shift parameter, which translates the cells pattern.

Show Glow Width: *Check-box*, *Default:* off.

Turns on or off the screen user interface for adjusting the Glow Width parameter.

See Also:

[WipeLine](#)

[WipeCircle](#)

[WipeRectangle](#)

[WipeStar](#)

[WipeClock](#)

[WipeWedge](#)

[WipeDoubleWedge](#)

[WipeFourWedges](#)

[WipeDots](#)

[WipeChecker](#)

[WipeStripes](#)

[WipeRings](#)

[WipeBlobs](#)

[WipeTiles](#)

[WipePixelate](#)

[WipeDiffuse](#)

[WipeBubble](#)

[WipeClouds](#)

[WipeMoire](#)

[WipePlasma](#)

[WipePointalize](#)

[WipeWeave](#)

[WipeFlux](#)

[TextureCells](#)

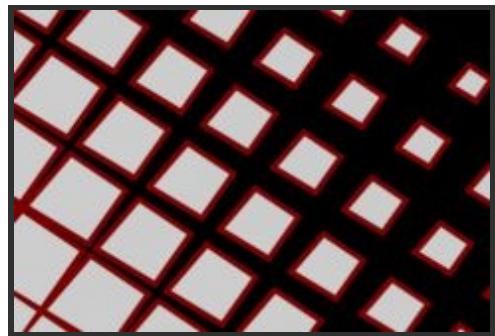
[Sapphire](#)

[Plug-ins](#)

[Introduction](#)

S_WipeChecker

Performs a wipe transition between two input clips using a grid of growing or shrinking checkers. The Wipe Amount parameter should be animated to control the transition speed. Increase the Grad Add parameter to make the timing of the checker pattern move across the screen during the wipe. Increase the Border Width parameter to draw a border at the wipe transition edges.



In the Sapphire Transitions effects submenu.

Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Wipe Amount: *Default: 0, Range: -0.5 to 1.5.*

Determines the transition ratio between the From and To inputs, and would normally be animated from 0 to 1 to perform a complete transition. The curve controlling this parameter can be adjusted for more detailed control over the timing of the wipe.

Checkers: *Popup menu, Default: Grow.*

The direction of the checkers transition.

Shrink: the squares start large and shrink inwards.

Grow: the squares start small and grow outwards.

Edge Softness: *Default: 0, Range: 0 or greater.*

The width of the transition edges. Larger values will cause softer, less visible edges in the wipe pattern.

Angle: *Default: 45, Range: any.*

The rotation of the overall checker pattern used for the wipe, in counter-clockwise degrees.

Frequency: *Default: 6, Range: 0.1 or greater.*

The frequency of the checker pattern. Increase for more and smaller elements, or decrease for fewer and larger.

Rel Width: *Default: 1, Range: 0.1 or greater.*

The relative horizontal size of the checkers. Increase for wider checkers, decrease for taller ones.

Rel Wid Pre Rot: *Default: 1, Range: 0.1 or greater.*

The relative size of the checkers in the direction of the current rotation angle. If the Angle parameter is zero this will have the same effect as Rel Width.

Shift: *X & Y*, *Default:* [0 0], *Range:* any.

Translation of the checker pattern.

Grad Add: *Default:* 0, *Range:* -10 to 10.

If positive, a gradient will be added to the timing of the transition pattern so it moves across the screen during the wipe. This parameter can be adjusted using the Wipe Widget if enabled, but the value must be positive to make this widget visible.

Grad Angle: *Default:* 0, *Range:* any.

The direction of the wipe gradient in counter-clockwise degrees. This will have no effect unless Grad Add is positive. The Wipe Widget also allows adjusting this parameter.

Border Width: *Default:* 0, *Range:* 0 or greater.

If positive, a colored border is drawn at the wipe transition edges, using the border color, opacity, softness, and shift parameters below.

Border Color: *Default* *rgb:* [0.75 0 0].

The color of the border. This has no effect unless Border Width is positive.

Border Opacity: *Default:* 1, *Range:* 0 to 1.

The opacity of the border. Decrease to make the border transparent and allow the image under it to show through. This has no effect unless Border Width is positive.

Border Softness: *Default:* 0, *Range:* 0 or greater.

The softness of the border edges. This has no effect unless Border Width is positive.

Border Shift: *Default:* 0, *Range:* any.

Shifts the border ahead of or behind the transition edge. This has no effect unless Border Width is positive.

Border Glow: *Default:* 0, *Range:* 0 or greater.

Adds a glow along the border of the wipe. The value determines the brightness of the glow.

Glow Width: *Default:* 0.1, *Range:* 0 or greater.

The width of the glowing border.

Width Red: *Default:* 1, *Range:* 0 or greater.

Scales the red glow width. If the red, green, and blue widths are all equal, the glow will match Glow Color. Otherwise it will have a fringe of varying color.

Width Green: *Default:* 1.2, *Range:* 0 or greater.

Scales the green glow width.

Width Blue: *Default:* 1.4, *Range:* 0 or greater.

Scales the blue glow width.

Glow Color: *Default* *rgb:* [1 1 1].

The color of the glowing border.

Noise Amp: *Default:* 1, *Range:* 0 or greater.

The amount of noise to add to the glowing border.

Noise Freq: *Default:* 16, *Range:* 0.1 to 20.

The spatial frequency of the noise.

Noise Speed: *Default:* 2, *Range:* any.

The speed with which the noise changes or boils over time.

Show Wipe: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Wipe Amount parameter.

Show Shift: *Check-box*, *Default:* on.

Turns on or off the screen user interface widget for adjusting the Shift parameter, which translates the checker pattern.

Show Glow Width: *Check-box*, *Default:* off.

Turns on or off the screen user interface for adjusting the Glow Width parameter.

See Also:

[WipeLine](#)

[Grid](#)

[WipeCircle](#)

[Sapphire](#)

[WipeRectangle](#)

[Plug-ins](#)

[WipeStar](#)

[Introduction](#)

[WipeClock](#)

[WipeWedge](#)

[WipeDoubleWedge](#)

[WipeFourWedges](#)

[WipeDots](#)

[WipeStripes](#)

[WipeRings](#)

[WipeBlobs](#)

[WipeCells](#)

[WipeTiles](#)

[WipePixelate](#)

[WipeDiffuse](#)

[WipeBubble](#)

[WipeClouds](#)

[WipeMoire](#)

[WipePlasma](#)

[WipePointalize](#)

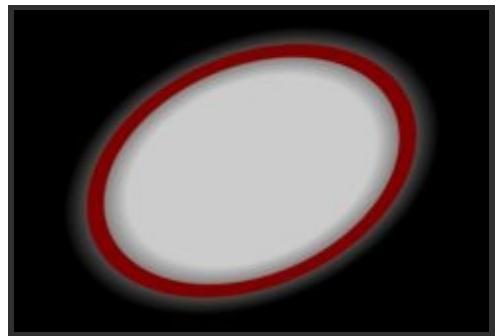
[WipeWeave](#)

[WipeFlux](#)

S_WipeCircle

Performs a wipe transition between two input clips using a growing or shrinking circle. The Wipe Amount parameter should be animated to control the transition speed. Increase the Border Width parameter to draw a border at the wipe transition edges.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Wipe Amount: *Default: 0, Range: -0.5 to 1.5.*

Determines the transition ratio between the From and To inputs, and would normally be animated from 0 to 1 to perform a complete transition. The curve controlling this parameter can be adjusted for more detailed control over the timing of the wipe.

Wipe Direction: *Popup menu, Default: Circle In.*

The direction of the circle wipe.

Circle In: the circle contains the first image and shrinks inwards.

Circle Out: the circle contains the second image and grows outwards.

Edge Softness: *Default: 0, Range: 0 or greater.*

The width of the transition edges. Larger values will cause softer, less visible edges in the wipe pattern.

Rel Width: *Default: 1, Range: 0.1 or greater.*

The relative width of the 'circle' shape. Increase to make a wider oval, decrease to make a taller one.

Rotate: *Default: 0, Range: any.*

The rotation angle of the 'circle' in counter-clockwise degrees. This has no effect if the Rel Width parameter is 1.0.

Center: *X & Y, Default: [0 0], Range: any.*

The location of the circle center in screen coordinates relative to the center of the frame. This parameter can be set by enabling and moving the Center Widget. Note that moving the circle center can also cause the circle size to change so that the current value of Wipe Amt remains correct.

Border Width: *Default: 0, Range: 0 or greater.*

If positive, a colored border is drawn at the wipe transition edges, using the border color, opacity, softness, and shift parameters below.

Border Color: *Default* `rgb: [0.75 0 0]`.

The color of the border. This has no effect unless Border Width is positive.

Border Opacity: *Default:* 1, *Range:* 0 to 1.

The opacity of the border. Decrease to make the border transparent and allow the image under it to show through. This has no effect unless Border Width is positive.

Border Softness: *Default:* 0, *Range:* 0 or greater.

The softness of the border edges. This has no effect unless Border Width is positive.

Border Shift: *Default:* 0, *Range:* any.

Shifts the border ahead of or behind the transition edge. This has no effect unless Border Width is positive.

Border Glow: *Default:* 0, *Range:* 0 or greater.

Adds a glow along the border of the wipe. The value determines the brightness of the glow.

Glow Width: *Default:* 0.1, *Range:* 0 or greater.

The width of the glowing border.

Width Red: *Default:* 1, *Range:* 0 or greater.

Scales the red glow width. If the red, green, and blue widths are all equal, the glow will match Glow Color. Otherwise it will have a fringe of varying color.

Width Green: *Default:* 1.2, *Range:* 0 or greater.

Scales the green glow width.

Width Blue: *Default:* 1.4, *Range:* 0 or greater.

Scales the blue glow width.

Glow Color: *Default* `rgb: [1 1 1]`.

The color of the glowing border.

Noise Amp: *Default:* 1, *Range:* 0 or greater.

The amount of noise to add to the glowing border.

Noise Freq: *Default:* 16, *Range:* 0.1 to 20.

The spatial frequency of the noise.

Noise Speed: *Default:* 2, *Range:* any.

The speed with which the noise changes or boils over time.

Show Center: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Center parameter.

Show Glow Width: *Check-box*, *Default:* off.

Turns on or off the screen user interface for adjusting the Glow Width parameter.

See Also:

[WipeLine](#)

[Sapphire](#)

[WipeRectangle](#)

[Plug-ins](#)

[WipeStar](#)

[Introduction](#)

[WipeClock](#)

[WipeWedge](#)

[WipeDoubleWedge](#)

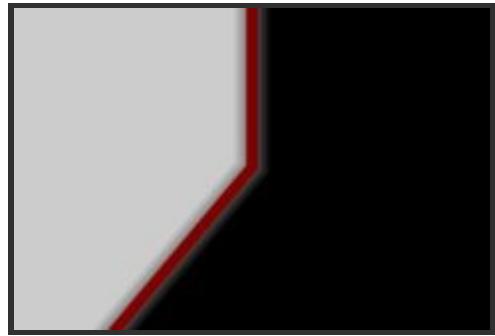
[WipeFourWedges](#)

[WipeDots](#)
[WipeChecker](#)
[WipeStripes](#)
[WipeRings](#)
[WipeBlobs](#)
[WipeCells](#)
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[WipePixelate](#)
[WipeDiffuse](#)
[WipeBubble](#)
[WipeClouds](#)
[WipeMoiré](#)
[WipePlasma](#)
[WipePointalize](#)
[WipeWeave](#)
[WipeFlux](#)

S_WipeClock

Performs a clock wipe transition between two input clips. The Wipe Amount parameter should be animated to control the transition speed. Increase the Border Width parameter to draw a border at the wipe transition edges.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Wipe Amount: *Default: 0, Range: -0.5 to 1.5.*

Determines the transition ratio between the From and To inputs, and would normally be animated from 0 to 1 to perform a complete transition. The curve controlling this parameter can be adjusted for more detailed control over the timing of the wipe.

Direction: *Popup menu, Default: Clockwise.*

Selects the direction of the edge rotation.

Clockwise: wipes with an edge rotating clockwise.

CounterCW: wipes with an edge rotating counter clockwise.

Edge Softness: *Default: 0, Range: 0 or greater.*

The width of the transition edges. Larger values will cause softer, less visible edges in the wipe pattern.

Angle Open: *Default: 0, Range: any.*

The angle in degrees at which the wipe opens at the start.

Angle Close: *Default: 0, Range: any.*

The angle in degrees at which the wipe closes at the finish. If Angle Open and Close are not equal, both edges will rotate. For example for a double edged clock wipe set Angle Close to 180.

Center: *X & Y, Default: [0 0], Range: any.*

The location of the clock center in screen coordinates relative to the center of the frame. This parameter can be set by enabling and moving the Center Widget.

Border Width: *Default: 0, Range: 0 or greater.*

If positive, a colored border is drawn at the wipe transition edges, using the border color, opacity, softness, and shift parameters below.

Border Color: *Default* `rgb: [0.75 0 0]`.

The color of the border. This has no effect unless Border Width is positive.

Border Opacity: *Default:* 1, *Range:* 0 to 1.

The opacity of the border. Decrease to make the border transparent and allow the image under it to show through. This has no effect unless Border Width is positive.

Border Softness: *Default:* 0, *Range:* 0 or greater.

The softness of the border edges. This has no effect unless Border Width is positive.

Border Shift: *Default:* 0, *Range:* any.

Shifts the border ahead of or behind the transition edge. This has no effect unless Border Width is positive. For the clock wipe pattern, the shift amount is limited to within the area of Edge Softness.

Border Glow: *Default:* 0, *Range:* 0 or greater.

Adds a glow along the border of the wipe. The value determines the brightness of the glow.

Glow Width: *Default:* 0.1, *Range:* 0 or greater.

The width of the glowing border.

Width Red: *Default:* 1, *Range:* 0 or greater.

Scales the red glow width. If the red, green, and blue widths are all equal, the glow will match Glow Color. Otherwise it will have a fringe of varying color.

Width Green: *Default:* 1.2, *Range:* 0 or greater.

Scales the green glow width.

Width Blue: *Default:* 1.4, *Range:* 0 or greater.

Scales the blue glow width.

Glow Color: *Default* `rgb: [1 1 1]`.

The color of the glowing border.

Noise Amp: *Default:* 1, *Range:* 0 or greater.

The amount of noise to add to the glowing border.

Noise Freq: *Default:* 16, *Range:* 0.1 to 20.

The spatial frequency of the noise.

Noise Speed: *Default:* 2, *Range:* any.

The speed with which the noise changes or boils over time.

Show Center: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Center parameter.

Show Glow Width: *Check-box*, *Default:* off.

Turns on or off the screen user interface for adjusting the Glow Width parameter.

See Also:

[WipeLine](#)

[Sapphire](#)

[WipeCircle](#)

[Plug-ins](#)

[WipeRectangle](#)

[Introduction](#)

[WipeStar](#)

[WipeWedge](#)

[WipeDoubleWedge](#)

[WipeFourWedges](#)

[WipeDots](#)

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[WipeBubble](#)

[WipeClouds](#)

[WipeMoiré](#)

[WipePlasma](#)

[WipePointalize](#)

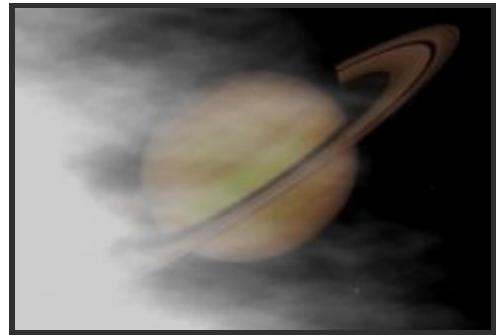
[WipeWeave](#)

[WipeFlux](#)

S_WipeClouds

Transitions from the first clip to the second using a moving cloud texture. The Wipe Amount parameter should be animated to control the transition speed.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Wipe Amount: *Default: 0, Range: -0.5 to 1.5.*

Determines the transition ratio between the From and To inputs, and would normally be animated from 0 to 1 to perform a complete transition. The curve controlling this parameter can be adjusted for more detailed control over the timing of the wipe.

Frequency: *Default: 2, Range: 0.1 or greater.*

The frequency of the clouds pattern. Increase for more and smaller elements, or decrease for fewer and larger.

Frequency Rel X: *Default: 0.4, Range: 0.01 or greater.*

The relative horizontal frequency of the texture. Increase to stretch it vertically or decrease to stretch it horizontally.

Octaves: *Integer, Default: 8, Range: 1 to 10.*

The number of summed layers of noise. Each octave is twice the frequency and half the amplitude of the previous. A single octave gives a smooth texture. Adding octaves makes the result approach a fractal (1/f) noise texture.

Seed: *Default: 0.23, Range: 0 or greater.*

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Shift Start: *X & Y, Default: [0 0], Range: any.*

Translation offset of the texture. Since the texture is procedurally generated it can be shifted with no repeating units or seams occurring.

Shift Speed: *X & Y, Default: [2 0], Range: any.*

Translation speed of the texture. If non-zero, the result is automatically animated to shift at this rate. The result of animated Speed values may not be intuitive, so for variable speed motion it is usually best to set this to 0 and animate the Shift Start values instead.

Grad Add: *Default: 0, Range: -10 to 10.*

If positive, a gradient will be added to the timing of the transition pattern so it moves across the screen during the wipe. This parameter can be adjusted using the Wipe Widget if enabled, but the value must be positive to make this

widget visible.

Grad Angle: *Default:* 0, *Range:* any.

The direction of the wipe gradient in counter-clockwise degrees. This will have no effect unless Grad Add is positive. The Wipe Widget also allows adjusting this parameter.

Show Wipe: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Wipe Amount parameter.

Show Shift Start: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Shift Start parameter.

See Also:

[WipeLine](#)

[Clouds](#)

[WipeCircle](#)

[Sapphire](#)

[WipeRectangle](#)

[Plug-ins](#)

[WipeStar](#)

[Introduction](#)

[WipeClock](#)

[WipeWedge](#)

[WipeDoubleWedge](#)

[WipeFourWedges](#)

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[WipePixelate](#)

[WipeDiffuse](#)

[WipeBubble](#)

[WipeMoiré](#)

[WipePlasma](#)

[WipePointalize](#)

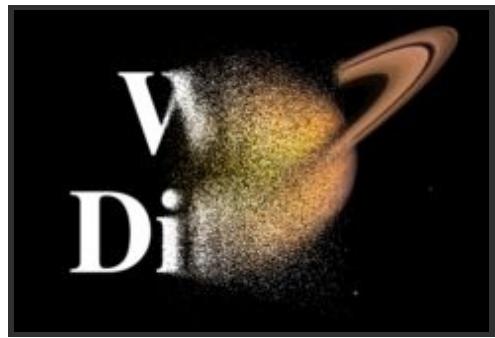
[WipeWeave](#)

[WipeFlux](#)

S_WipeDiffuse

Wipes between two input clips with a pixel-diffusion process performed within the transition area. The Wipe Amount parameter should be animated to control the transition speed. The pixelated look of this effect depends on the image resolution, so it is recommended to test your final resolution before processing.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Wipe Amount: *Default: 0, Range: -0.5 to 1.5.*

Determines the transition ratio between the From and To inputs, and would normally be animated from 0 to 1 to perform a complete transition. The curve controlling this parameter can be adjusted for more detailed control over the timing of the wipe.

Edge Width: *Default: 1.4, Range: 0.014 or greater.*

The width of the transition area. This can be adjusted using the Wipe Widget.

Angle: *Default: 0, Range: any.*

The angle of the wipe direction in counter-clockwise degrees from the right. This can be adjusted using the Wipe Widget.

Diffuse Amount: *Default: 0.4, Range: 0 or greater.*

The magnitude of the pixel diffusion.

Wrap: *X & Y, Popup menu, Default: [Reflect Reflect].*

Determines the method for accessing outside the borders of the source images.

No: gives black beyond the borders.

Tile: repeats a copy of the image.

Reflect: repeats a mirrored copy. Edges are often less visible with this method.

Crop Input Parameters: *Default: 0, Range: 0 or greater.*

These 4 parameters, **Crop Top**, **Crop Bottom**, **Crop Left**, and **Crop Right**, allow selecting a rectangular subsection of the input image to be processed. If the Wrap parameters are set to "No" the exposed borders will be transparent. If the Wrap is "Tile" or "Reflect" the source image is wrapped on the new cropped borders to fill the frame. This can make it easier to avoid artifacts due to distorting an image with bad edges.

Show Wipe: *Check-box*, *Default:* on.

Turns on or off the screen user interface widget for adjusting the Wipe Amt, Angle, and Edge Width parameters.

See Also:

[WipeLine](#)
[WipeCircle](#)
[WipeRectangle](#)
[WipeStar](#)
[WipeClock](#)
[WipeWedge](#)
[WipeDoubleWedge](#)
[WipeFourWedges](#)
[WipeDots](#)
[WipeChecker](#)
[WipeStripes](#)
[WipeRings](#)
[WipeBlobs](#)
[WipeCells](#)
[WipeTiles](#)
[WipePixelate](#)
[WipeBubble](#)
[WipeClouds](#)
[WipeMoiré](#)
[WipePlasma](#)
[WipePointalize](#)
[WipeWeave](#)
[WipeFlux](#)

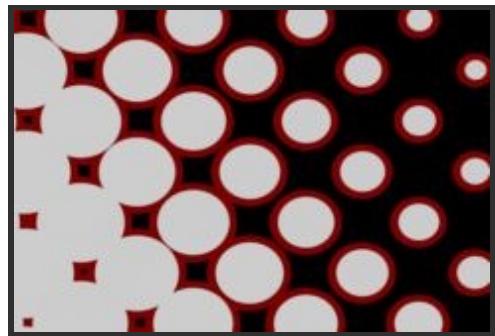
[Diffuse](#)
[DissolveDiffuse](#)

[Sapphire](#)
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[Introduction](#)

S_WipeDots

Performs a wipe transition between two input clips using a grid of growing or shrinking dots. The Wipe Amount parameter should be animated to control the transition speed. Increase the Grad Add parameter to make the timing of the dots pattern move across the screen during the wipe. Increase the Border Width parameter to draw a border at the wipe transition edges.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Wipe Amount: *Default: 0, Range: -0.5 to 1.5.*

Determines the transition ratio between the From and To inputs, and would normally be animated from 0 to 1 to perform a complete transition. The curve controlling this parameter can be adjusted for more detailed control over the timing of the wipe.

Dots: *Popup menu, Default: Grow.*

The direction of the dots transition.

Shrink: the dots start large and shrink inwards.

Grow: the dots start small and grow outwards.

Edge Softness: *Default: 0, Range: 0 or greater.*

The width of the transition edges. Larger values will cause softer, less visible edges in the wipe pattern.

Angle: *Default: 45, Range: any.*

The rotation of the overall dots pattern used for the wipe, in counter-clockwise degrees.

Frequency: *Default: 6, Range: 0.1 or greater.*

The frequency of the dots pattern. Increase for more and smaller elements, or decrease for fewer and larger.

Rel Width: *Default: 1, Range: 0.1 or greater.*

The relative horizontal size of the dots. Increase for wider dots, decrease for taller ones.

Rel Wid Pre Rot: *Default: 1, Range: 0.1 or greater.*

The relative size of the dots in the direction of the current rotation angle. If the Angle parameter is zero this will have the same effect as Rel Width.

Shift: X & Y, *Default: [0 0], Range: any.*

Translation of the dots pattern.

Grad Add: *Default: 0, Range: -10 to 10.*

If positive, a gradient will be added to the timing of the transition pattern so it moves across the screen during the wipe. This parameter can be adjusted using the Wipe Widget if enabled, but the value must be positive to make this widget visible.

Grad Angle: *Default: 0, Range: any.*

The direction of the wipe gradient in counter-clockwise degrees. This will have no effect unless Grad Add is positive. The Wipe Widget also allows adjusting this parameter.

Border Width: *Default: 0, Range: 0 or greater.*

If positive, a colored border is drawn at the wipe transition edges, using the border color, opacity, softness, and shift parameters below.

Border Color: *Default rgb: [0.75 0 0].*

The color of the border. This has no effect unless Border Width is positive.

Border Opacity: *Default: 1, Range: 0 to 1.*

The opacity of the border. Decrease to make the border transparent and allow the image under it to show through. This has no effect unless Border Width is positive.

Border Softness: *Default: 0, Range: 0 or greater.*

The softness of the border edges. This has no effect unless Border Width is positive.

Border Shift: *Default: 0, Range: any.*

Shifts the border ahead of or behind the transition edge. This has no effect unless Border Width is positive.

Border Glow: *Default: 0, Range: 0 or greater.*

Adds a glow along the border of the wipe. The value determines the brightness of the glow.

Glow Width: *Default: 0.1, Range: 0 or greater.*

The width of the glowing border.

Width Red: *Default: 1, Range: 0 or greater.*

Scales the red glow width. If the red, green, and blue widths are all equal, the glow will match Glow Color. Otherwise it will have a fringe of varying color.

Width Green: *Default: 1.2, Range: 0 or greater.*

Scales the green glow width.

Width Blue: *Default: 1.4, Range: 0 or greater.*

Scales the blue glow width.

Glow Color: *Default rgb: [1 1 1].*

The color of the glowing border.

Noise Amp: *Default: 1, Range: 0 or greater.*

The amount of noise to add to the glowing border.

Noise Freq: *Default: 16, Range: 0.1 to 20.*

The spatial frequency of the noise.

Noise Speed: *Default: 2, Range: any.*

The speed with which the noise changes or boils over time.

Show Wipe: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Wipe Amount parameter.

Show Shift: *Check-box, Default: on.*

Turns on or off the screen user interface widget for adjusting the Shift parameter, which translates the dots pattern.

Show Glow Width: *Check-box*, *Default:* off.

Turns on or off the screen user interface for adjusting the Glow Width parameter.

See Also:

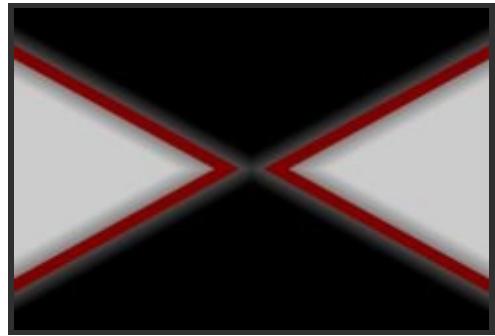
[WipeLine](#)
[WipeCircle](#)
[WipeRectangle](#)
[WipeStar](#)
[WipeClock](#)
[WipeWedge](#)
[WipeDoubleWedge](#)
[WipeFourWedges](#)
[WipeChecker](#)
[WipeStripes](#)
[WipeRings](#)
[WipeBlobs](#)
[WipeCells](#)
[WipeTiles](#)
[WipePixelate](#)
[WipeDiffuse](#)
[WipeBubble](#)
[WipeClouds](#)
[WipeMoire](#)
[WipePlasma](#)
[WipePointalize](#)
[WipeWeave](#)
[WipeFlux](#)

[HalfTone](#)
[Sapphire](#)
[Plug-ins](#)
[Introduction](#)

S_WipeDoubleWedge

Performs a wipe transition between two input clips using two wedge shapes. The Wipe Amount parameter should be animated to control the transition speed. Increase the Border Width parameter to draw a border at the wipe transition edges.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Wipe Amount: *Default: 0, Range: -0.5 to 1.5.*

Determines the transition ratio between the From and To inputs, and would normally be animated from 0 to 1 to perform a complete transition. The curve controlling this parameter can be adjusted for more detailed control over the timing of the wipe.

Wipe Direction: *Popup menu, Default: Wedge In.*

Selects the direction of the motion of the wedges.

Wedge In: the wedge contains the first image and shrinks inwards.

Wedge Out: the wedge contains the second image and grows outwards.

Edge Softness: *Default: 0, Range: 0 or greater.*

The width of the transition edges. Larger values will cause softer, less visible edges in the wipe pattern.

Angle: *Default: 0, Range: any.*

The rotation angle of the wedge shapes in counter-clockwise degrees.

Pointiness: *Default: 2, Range: 0 or greater.*

The sharpness of the point of the wedges.

Border Width: *Default: 0, Range: 0 or greater.*

If positive, a colored border is drawn at the wipe transition edges, using the border color, opacity, softness, and shift parameters below.

Border Color: *Default rgb: [0.75 0 0].*

The color of the border. This has no effect unless Border Width is positive.

Border Opacity: *Default: 1, Range: 0 to 1.*

The opacity of the border. Decrease to make the border transparent and allow the image under it to show through. This has no effect unless Border Width is positive.

Border Softness: *Default: 0, Range: 0 or greater.*

The softness of the border edges. This has no effect unless Border Width is positive.

Border Shift: *Default: 0, Range: any.*

Shifts the border ahead of or behind the transition edge. This has no effect unless Border Width is positive.

Border Glow: *Default: 0, Range: 0 or greater.*

Adds a glow along the border of the wipe. The value determines the brightness of the glow.

Glow Width: *Default: 0.1, Range: 0 or greater.*

The width of the glowing border.

Width Red: *Default: 1, Range: 0 or greater.*

Scales the red glow width. If the red, green, and blue widths are all equal, the glow will match Glow Color. Otherwise it will have a fringe of varying color.

Width Green: *Default: 1.2, Range: 0 or greater.*

Scales the green glow width.

Width Blue: *Default: 1.4, Range: 0 or greater.*

Scales the blue glow width.

Glow Color: *Default rgb: [1 1 1].*

The color of the glowing border.

Noise Amp: *Default: 1, Range: 0 or greater.*

The amount of noise to add to the glowing border.

Noise Freq: *Default: 16, Range: 0.1 to 20.*

The spatial frequency of the noise.

Noise Speed: *Default: 2, Range: any.*

The speed with which the noise changes or boils over time.

Show Angle: *Check-box, Default: off.*

Turns on or off the screen user interface for adjusting the Angle parameter.

Show Glow Width: *Check-box, Default: off.*

Turns on or off the screen user interface for adjusting the Glow Width parameter.

See Also:

[WipeLine](#)

[Sapphire](#)

[WipeCircle](#)

[Plug-ins](#)

[WipeRectangle](#)

[Introduction](#)

[WipeStar](#)

[WipeClock](#)

[WipeWedge](#)

[WipeFourWedges](#)

[WipeDots](#)

[WipeChecker](#)

[WipeStripes](#)

[WipeRings](#)

[WipeBlobs](#)

[WipeCells](#)

[WipeTiles](#)

[WipePixelate](#)
[WipeDiffuse](#)
[WipeBubble](#)
[WipeClouds](#)
[WipeMoiré](#)
[WipePlasma](#)
[WipePointalize](#)
[WipeWeave](#)
[WipeFlux](#)

S_WipeFlux

Performs a wipe transition between two input clips using a flux texture with mostly round cells. The Wipe Amount parameter should be animated to control the transition speed. Increase the Grad Add parameter to make the timing of the flux pattern move across the screen during the wipe. Increase the Border Width parameter to draw a border at the wipe transition edges.



In the Sapphire Transitions effects submenu.

Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Wipe Amount: *Default: 0, Range: -0.5 to 1.5.*

Determines the transition ratio between the From and To inputs, and would normally be animated from 0 to 1 to perform a complete transition. The curve controlling this parameter can be adjusted for more detailed control over the timing of the wipe.

Edge Softness: *Default: 0, Range: 0 or greater.*

The width of the transition edges. Larger values will cause softer, less visible edges in the wipe pattern.

Frequency: *Default: 6, Range: 0.1 or greater.*

The frequency of the flux pattern. Increase for more and smaller elements, or decrease for fewer and larger.

Freq Rel X: *Default: 1, Range: 0.1 or greater.*

The relative horizontal frequency of the flux. Increase to stretch it vertically or decrease to stretch it horizontally.

Seed: *Default: 0.432, Range: 0 or greater.*

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Shift: *X & Y, Default: [0 0], Range: any.*

Translation of the flux pattern.

Octaves: *Integer, Default: 2, Range: 1 to 10.*

The number of summed layers of noise. Each octave is twice the frequency and half the amplitude of the previous. A single octave gives a smooth texture. Adding octaves makes the result approach a fractal (1/f) noise texture.

Bubble Amount: *Default: 1, Range: any.*

Amplitude of warping applied to generate the bubble shapes. This can be negative to generate brighter bubble shapes with dark edges.

Bubble Smooth: *Default:* 0.25, *Range:* 0.004 or greater.

Smooths the warping pattern by this amount.

Rotate Warp Dir: *Default:* 0, *Range:* any.

Rotates the direction of the warping. This can cause a twisting effect or an inverted effect when set to 180.

Morph: *X & Y*, *Default:* [0 1], *Range:* any.

The horizontal and vertical directions to undulate the underlying noise pattern, when using Morph Speed.

Morph Speed: *Default:* 0.3, *Range:* any.

Speed to automatically undulate the underlying noise pattern over time.

Grad Add: *Default:* 0, *Range:* -10 to 10.

If positive, a gradient will be added to the timing of the transition pattern so it moves across the screen during the wipe. This parameter can be adjusted using the Wipe Widget if enabled, but the value must be positive to make this widget visible.

Grad Angle: *Default:* 0, *Range:* any.

The direction of the wipe gradient in counter-clockwise degrees. This will have no effect unless Grad Add is positive. The Wipe Widget also allows adjusting this parameter.

Border Width: *Default:* 0, *Range:* 0 or greater.

If positive, a colored border is drawn at the wipe transition edges, using the border color, opacity, softness, and shift parameters below.

Border Color: *Default* *rgb:* [0.75 0 0].

The color of the border. This has no effect unless Border Width is positive.

Border Opacity: *Default:* 1, *Range:* 0 to 1.

The opacity of the border. Decrease to make the border transparent and allow the image under it to show through. This has no effect unless Border Width is positive.

Border Softness: *Default:* 0, *Range:* 0 or greater.

The softness of the border edges. This has no effect unless Border Width is positive.

Border Shift: *Default:* 0, *Range:* any.

Shifts the border ahead of or behind the transition edge. This has no effect unless Border Width is positive.

Border Glow: *Default:* 0, *Range:* 0 or greater.

Adds a glow along the border of the wipe. The value determines the brightness of the glow.

Glow Width: *Default:* 0.1, *Range:* 0 or greater.

The width of the glowing border.

Width Red: *Default:* 1, *Range:* 0 or greater.

Scales the red glow width. If the red, green, and blue widths are all equal, the glow will match Glow Color. Otherwise it will have a fringe of varying color.

Width Green: *Default:* 1.2, *Range:* 0 or greater.

Scales the green glow width.

Width Blue: *Default:* 1.4, *Range:* 0 or greater.

Scales the blue glow width.

Glow Color: *Default* *rgb:* [1 1 1].

The color of the glowing border.

Noise Amp: *Default:* 1, *Range:* 0 or greater.

The amount of noise to add to the glowing border.

Noise Freq: *Default:* 16, *Range:* 0.1 to 20.

The spatial frequency of the noise.

Noise Speed: *Default:* 2, *Range:* any.

The speed with which the noise changes or boils over time.

Show Wipe: *Check-box, Default:* on.

Turns on or off the screen user interface for adjusting the Wipe Amount parameter.

Show Glow Width: *Check-box, Default:* off.

Turns on or off the screen user interface for adjusting the Glow Width parameter.

See Also:

[WipeLine](#)

[TextureFlux](#)

[WipeCircle](#)

[Sapphire](#)

[WipeRectangle](#)

[Plug-ins](#)

[WipeStar](#)

[Introduction](#)

[WipeClock](#)

[WipeWedge](#)

[WipeDoubleWedge](#)

[WipeFourWedges](#)

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[WipeTiles](#)

[WipePixelate](#)

[WipeDiffuse](#)

[WipeBubble](#)

[WipeClouds](#)

[WipeMoire](#)

[WipePlasma](#)

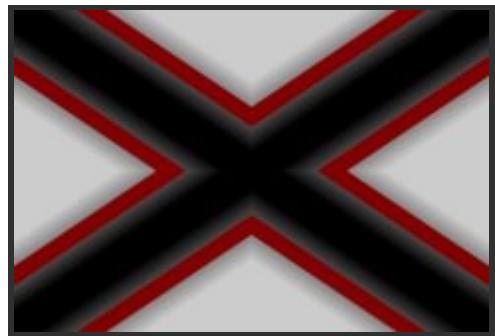
[WipePointalize](#)

[WipeWeave](#)

S_WipeFourWedges

Performs a wipe transition between two input clips using a pattern of four wedges merging into an 'X' shape. The Wipe Amount parameter should be animated to control the transition speed. Increase the Border Width parameter to draw a border at the wipe transition edges.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Wipe Amount: *Default: 0, Range: -0.5 to 1.5.*

Determines the transition ratio between the From and To inputs, and would normally be animated from 0 to 1 to perform a complete transition. The curve controlling this parameter can be adjusted for more detailed control over the timing of the wipe.

Wipe Direction: *Popup menu, Default: Wedge In.*

Selects the direction of motion of the wedges.

Wedge In: the wedges contains the first image and shrinks inwards.

Wedge Out: the wedges contains the second image and grows outwards.

Edge Softness: *Default: 0, Range: 0 or greater.*

The width of the transition edges. Larger values will cause softer, less visible edges in the wipe pattern.

Angle: *Default: 0, Range: any.*

The rotation angle in counter-clockwise degrees of the wedge pattern.

Aspect Scale: *Default: 1, Range: 0.01 or greater.*

Scales the aspect ratio of the wedge pattern. Increase to stretch the shapes in the horizontal direction.

Border Width: *Default: 0, Range: 0 or greater.*

If positive, a colored border is drawn at the wipe transition edges, using the border color, opacity, softness, and shift parameters below.

Border Color: *Default rgb: [0.75 0 0].*

The color of the border. This has no effect unless Border Width is positive.

Border Opacity: *Default: 1, Range: 0 to 1.*

The opacity of the border. Decrease to make the border transparent and allow the image under it to show through. This has no effect unless Border Width is positive.

Border Softness: *Default: 0, Range: 0 or greater.*

The softness of the border edges. This has no effect unless Border Width is positive.

Border Shift: *Default: 0, Range: any.*

Shifts the border ahead of or behind the transition edge. This has no effect unless Border Width is positive.

Border Glow: *Default: 0, Range: 0 or greater.*

Adds a glow along the border of the wipe. The value determines the brightness of the glow.

Glow Width: *Default: 0.1, Range: 0 or greater.*

The width of the glowing border.

Width Red: *Default: 1, Range: 0 or greater.*

Scales the red glow width. If the red, green, and blue widths are all equal, the glow will match Glow Color. Otherwise it will have a fringe of varying color.

Width Green: *Default: 1.2, Range: 0 or greater.*

Scales the green glow width.

Width Blue: *Default: 1.4, Range: 0 or greater.*

Scales the blue glow width.

Glow Color: *Default rgb: [1 1 1].*

The color of the glowing border.

Noise Amp: *Default: 1, Range: 0 or greater.*

The amount of noise to add to the glowing border.

Noise Freq: *Default: 16, Range: 0.1 to 20.*

The spatial frequency of the noise.

Noise Speed: *Default: 2, Range: any.*

The speed with which the noise changes or boils over time.

Show Angle: *Check-box, Default: off.*

Turns on or off the screen user interface for adjusting the Angle parameter.

Show Glow Width: *Check-box, Default: off.*

Turns on or off the screen user interface for adjusting the Glow Width parameter.

See Also:

[WipeLine](#)

[Sapphire](#)

[WipeCircle](#)

[Plug-ins](#)

[WipeRectangle](#)

[Introduction](#)

[WipeStar](#)

[WipeClock](#)

[WipeWedge](#)

[WipeDoubleWedge](#)

[WipeDots](#)

[WipeChecker](#)

[WipeStripes](#)

[WipeRings](#)

[WipeBlobs](#)

[WipeCells](#)

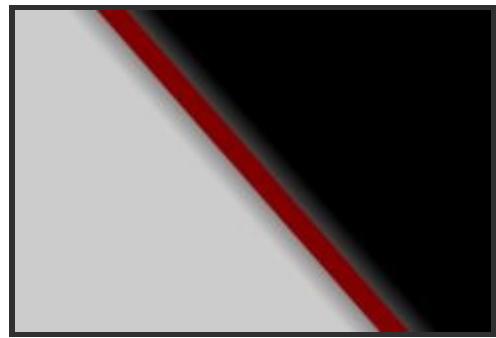
[WipeTiles](#)

[WipePixelate](#)
[WipeDiffuse](#)
[WipeBubble](#)
[WipeClouds](#)
[WipeMoiré](#)
[WipePlasma](#)
[WipePointalize](#)
[WipeWeave](#)
[WipeFlux](#)

S_WipeLine

Performs a simple line wipe transition between two input clips. The Wipe Amount parameter should be animated to control the transition speed. Increase the Border Width parameter to draw a border at the wipe transition edges.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Wipe Amount: *Default: 0, Range: -0.5 to 1.5.*

Determines the transition ratio between the From and To inputs, and would normally be animated from 0 to 1 to perform a complete transition. The curve controlling this parameter can be adjusted for more detailed control over the timing of the wipe.

Edge Softness: *Default: 0, Range: 0 or greater.*

The width of the transition edges. Larger values will cause softer, less visible edges in the wipe pattern.

Angle: *Default: 45, Range: any.*

The angle of the wipe direction in degrees. Use 0 for a wipe from left to right, 90 or -90 for a vertical wipe, 180 for a wipe from right to left.

Border Width: *Default: 0, Range: 0 or greater.*

If positive, a colored border is drawn at the wipe transition edges, using the border color, opacity, softness, and shift parameters below.

Border Color: *Default rgb: [0.75 0 0].*

The color of the border. This has no effect unless Border Width is positive.

Border Opacity: *Default: 1, Range: 0 to 1.*

The opacity of the border. Decrease to make the border transparent and allow the image under it to show through. This has no effect unless Border Width is positive.

Border Softness: *Default: 0, Range: 0 or greater.*

The softness of the border edges. This has no effect unless Border Width is positive.

Border Shift: *Default: 0, Range: any.*

Shifts the border ahead of or behind the transition edge. This has no effect unless Border Width is positive.

Border Glow: *Default: 0, Range: 0 or greater.*

Adds a glow along the border of the wipe. The value determines the brightness of the glow.

Glow Width: *Default: 0.1, Range: 0 or greater.*

The width of the glowing border.

Width Red: *Default: 1, Range: 0 or greater.*

Scales the red glow width. If the red, green, and blue widths are all equal, the glow will match Glow Color.

Otherwise it will have a fringe of varying color.

Width Green: *Default: 1.2, Range: 0 or greater.*

Scales the green glow width.

Width Blue: *Default: 1.4, Range: 0 or greater.*

Scales the blue glow width.

Glow Color: *Default rgb: [1 1 1].*

The color of the glowing border.

Noise Amp: *Default: 1, Range: 0 or greater.*

The amount of noise to add to the glowing border.

Noise Freq: *Default: 16, Range: 0.1 to 20.*

The spatial frequency of the noise.

Noise Speed: *Default: 2, Range: any.*

The speed with which the noise changes or boils over time.

Show Wipe: *Check-box, Default: on.*

Turns on or off the screen user interface widget for adjusting the Wipe Amt, Angle, and Edge Softness parameters.

Show Glow Width: *Check-box, Default: off.*

Turns on or off the screen user interface for adjusting the Glow Width parameter.

See Also:

[WipeCircle](#)

[Gradient](#)

[WipeRectangle](#)

[Sapphire](#)

[WipeStar](#)

[Plug-ins](#)

[WipeClock](#)

[Introduction](#)

[WipeWedge](#)

[WipeDoubleWedge](#)

[WipeFourWedges](#)

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[WipePixelate](#)

[WipeDiffuse](#)

[WipeBubble](#)

[WipeClouds](#)

[WipeMoire](#)

[WipePlasma](#)

[WipePointalize](#)

[WipeWeave](#)

[WipeFlux](#)

S_WipeMoire

Performs a wipe transition between two input clips using a pattern of combined concentric rings. The Wipe Amount parameter should be animated to control the transition speed. The Phase Speed and Moire Speed parameters cause the rings to automatically animate over time. Increase the Grad Add parameter to make the timing of the pattern move across the screen during the wipe. Increase the Border Width parameter to draw a border at the wipe transition edges.



In the Sapphire Transitions effects submenu.

Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Wipe Amount: *Default: 0, Range: -0.5 to 1.5.*

Determines the transition ratio between the From and To inputs, and would normally be animated from 0 to 1 to perform a complete transition. The curve controlling this parameter can be adjusted for more detailed control over the timing of the wipe.

Edge Softness: *Default: 0.02, Range: 0 or greater.*

The width of the transition edges. Larger values will cause softer, less visible edges in the wipe pattern.

A Center: *X & Y, Default: [-0.208 -0.231], Range: any.*

The center location of the A ring pattern.

B Center: *X & Y, Default: [0.208 0.231], Range: any.*

The center location of the B ring pattern.

Frequency: *Default: 5, Range: 0.5 or greater.*

The frequency of the moire pattern. Increase for more and smaller elements, or decrease for fewer and larger.

Phase Start: *Default: 0, Range: any.*

The phase of the ring patterns. Increase to shift outwards from the centers, or decrease to shift inwards toward the centers. The phase parameters are relative to the period of the rings (1/frequency) so changing any by exactly 1 should give the same result again.

Phase Speed: *Default: 1, Range: any.*

The automatic change in phase during the transition period.

Moire Phase: *Default: 0, Range: any.*

The relative start phase of the two ring patterns. Shifts the A ring pattern out and the B ring pattern in by the same

amount, causing changes in the moire pattern itself.

Moire Speed: *Default:* 0, *Range:* any.

Automatic change in the relative phase of the two ring patterns during the transition.

A Rel Freq: *Default:* 1, *Range:* 0.1 or greater.

Scales the ring frequencies of the A ring pattern.

A Rel Width: *Default:* 1, *Range:* 0.2 or greater.

The relative horizontal size of the A ring pattern. Increase for wider ring shapes, decrease for taller ones.

A Rotate: *Default:* 0, *Range:* any.

Rotation in degrees of the A ring pattern. Note that this will have no effect when A Rel Width is 1.

B Rel Freq: *Default:* 1, *Range:* 0.1 or greater.

Scales the ring frequencies of the B ring pattern.

B Rel Width: *Default:* 1, *Range:* 0.2 or greater.

The relative horizontal size of the B ring pattern. Increase for wider ring shapes, decrease for taller ones.

B Rotate: *Default:* 0, *Range:* any.

Rotation in degrees of the B ring pattern. Note that this will have no effect when A Rel Width is 1.

Grad Add: *Default:* 0, *Range:* -10 to 10.

If positive, a gradient will be added to the timing of the transition pattern so it moves across the screen during the wipe. This parameter can be adjusted using the Wipe Widget if enabled, but the value must be positive to make this widget visible.

Grad Angle: *Default:* 0, *Range:* any.

The direction of the wipe gradient in counter-clockwise degrees. This will have no effect unless Grad Add is positive. The Wipe Widget also allows adjusting this parameter.

Border Width: *Default:* 0, *Range:* 0 or greater.

If positive, a colored border is drawn at the wipe transition edges, using the border color, opacity, softness, and shift parameters below.

Border Color: *Default* `rgb: [0.75 0 0]`.

The color of the border. This has no effect unless Border Width is positive.

Border Opacity: *Default:* 1, *Range:* 0 to 1.

The opacity of the border. Decrease to make the border transparent and allow the image under it to show through. This has no effect unless Border Width is positive.

Border Softness: *Default:* 0, *Range:* 0 or greater.

The softness of the border edges. This has no effect unless Border Width is positive.

Border Shift: *Default:* 0, *Range:* any.

Shifts the border ahead of or behind the transition edge. This has no effect unless Border Width is positive.

Border Glow: *Default:* 0, *Range:* 0 or greater.

Adds a glow along the border of the wipe. The value determines the brightness of the glow.

Glow Width: *Default:* 0.1, *Range:* 0 or greater.

The width of the glowing border.

Width Red: *Default:* 1, *Range:* 0 or greater.

Scales the red glow width. If the red, green, and blue widths are all equal, the glow will match Glow Color. Otherwise it will have a fringe of varying color.

Width Green: *Default: 1.2, Range: 0 or greater.*
Scales the green glow width.

Width Blue: *Default: 1.4, Range: 0 or greater.*
Scales the blue glow width.

Glow Color: *Default rgb: [1 1 1].*
The color of the glowing border.

Noise Amp: *Default: 1, Range: 0 or greater.*
The amount of noise to add to the glowing border.

Noise Freq: *Default: 16, Range: 0.1 to 20.*
The spatial frequency of the noise.

Noise Speed: *Default: 2, Range: any.*
The speed with which the noise changes or boils over time.

Show Wipe: *Check-box, Default: on.*
Turns on or off the screen user interface for adjusting the Wipe Amount parameter.

Show Glow Width: *Check-box, Default: off.*
Turns on or off the screen user interface for adjusting the Glow Width parameter.

See Also:

[WipeLine](#)
[WipeCircle](#)
[WipeRectangle](#)
[WipeStar](#)
[WipeClock](#)
[WipeWedge](#)
[WipeDoubleWedge](#)
[WipeFourWedges](#)
[WipeDots](#)
[WipeChecker](#)
[WipeStripes](#)
[WipeRings](#)
[WipeBlobs](#)
[WipeCells](#)
[WipeTiles](#)
[WipePixelate](#)
[WipeDiffuse](#)
[WipeBubble](#)
[WipeClouds](#)
[WipePlasma](#)
[WipePointalize](#)
[WipeWeave](#)
[WipeFlux](#)

[TextureMoire](#)
[Sapphire](#)
[Plug-ins](#)
[Introduction](#)

S_WipePixelate

Transitions between two input clips by adding blocks of pixels of one clip onto another in a semi-random order. The Wipe Amount parameter should be animated to control the transition speed. Adjust the Edge Width and Chunky parameters for different pixelated patterns.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Wipe Amount: *Default: 0, Range: -0.5 to 1.5.*

Determines the transition ratio between the From and To inputs, and would normally be animated from 0 to 1 to perform a complete transition. The curve controlling this parameter can be adjusted for more detailed control over the timing of the wipe.

Edge Width: *Default: 1, Range: 0.014 or greater.*

The width of the transition area.

Angle: *Default: 0, Range: any.*

The angle of the wipe direction in degrees. Use 0 for a wipe from left to right, 90 or -90 for a vertical wipe, 180 for a wipe from right to left.

Pixel Frequency: *Default: 20, Range: 0.1 or greater.*

Increase for smaller and more pixels, decrease for fewer and larger pixels.

Pixel Rel Width: *Default: 1, Range: 0.01 or greater.*

The relative horizontal size of the pixels. Increase for wide pixels, decrease for tall ones.

Chunky: *Default: 0, Range: 0 or greater.*

Increase to cause the pixels to be added with a more clustered ordering.

Seed: *Default: 0.23, Range: 0 or greater.*

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Show Wipe: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Wipe Amount parameter.

See Also:

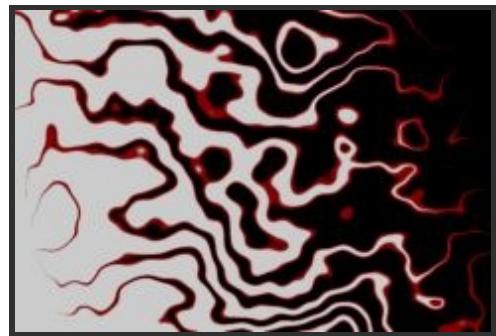
[WipeLine](#)
[WipeCircle](#)
[WipeRectangle](#)
[WipeStar](#)
[WipeClock](#)
[WipeWedge](#)
[WipeDoubleWedge](#)
[WipeFourWedges](#)
[WipeDots](#)
[WipeChecker](#)
[WipeStripes](#)
[WipeRings](#)
[WipeBlobs](#)
[WipeCells](#)
[WipeTiles](#)
[WipeDiffuse](#)
[WipeBubble](#)
[WipeClouds](#)
[WipeMoiré](#)
[WipePlasma](#)
[WipePointalize](#)
[WipeWeave](#)
[WipeFlux](#)

[Mosaic](#)
[Sapphire](#)
[Plug-ins](#)
[Introduction](#)

S_WipePlasma

Performs a wipe transition between two input clips using a plasma texture with moving tendrils. The Wipe Amount parameter should be animated to control the transition speed. Increase the Grad Add parameter to make the timing of the plasma pattern move across the screen during the wipe. Increase the Border Width parameter to draw a border at the wipe transition edges.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Wipe Amount: *Default: 0, Range: -0.5 to 1.5.*

Determines the transition ratio between the From and To inputs, and would normally be animated from 0 to 1 to perform a complete transition. The curve controlling this parameter can be adjusted for more detailed control over the timing of the wipe.

Edge Softness: *Default: 0, Range: 0 or greater.*

The width of the transition edges. Larger values will cause softer, less visible edges in the wipe pattern.

Frequency: *Default: 4, Range: 0.05 or greater.*

The frequency of the plasma pattern. Increase for more and smaller elements, or decrease for fewer and larger.

Freq Rel X: *Default: 1, Range: 0.01 or greater.*

The relative horizontal frequency of the texture. Increase to stretch it vertically or decrease to stretch it horizontally.

Octaves: *Integer, Default: 4, Range: 1 to 10.*

The number of summed layers of noise. Each octave is twice the frequency and half the amplitude of the previous. A single octave gives a smooth texture. Adding octaves makes the result approach a fractal (1/f) noise texture.

Seed: *Default: 0.12, Range: 0 or greater.*

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Plasma Grad: *Default: 0, Range: 0 or greater.*

The amplitude of a gradient which aligns the plasma tendrils. Increase for a more zebra-like striped effect.

Plasma Grad Angle: *Default: 0, Range: any.*

Orients the gradient of the plasma lines. This only has an affect if the Plasma Grad parameter is positive.

Layers: *Default: 8, Range: 0 or greater.*

The number of layers of plasma lines. Increase for a more striped effect.

Shift: *X & Y, Default: [0 0], Range: any.*

Translation of the plasma pattern.

Phase Start: *Default: 0, Range: any.*

Phase offset of the plasma lines.

Phase Speed: *Default: 2, Range: any.*

Phase speed of the plasma lines. If non-zero, the lines are automatically animated to undulate at this rate.

Grad Add: *Default: 0.5, Range: -10 to 10.*

If positive, a gradient will be added to the timing of the transition pattern so it moves across the screen during the wipe. This parameter can be adjusted using the Wipe Widget if enabled, but the value must be positive to make this widget visible.

Grad Angle: *Default: 0, Range: any.*

The direction of the wipe gradient in counter-clockwise degrees. This will have no effect unless Grad Add is positive. The Wipe Widget also allows adjusting this parameter.

Border Width: *Default: 0, Range: 0 or greater.*

If positive, a colored border is drawn at the wipe transition edges, using the border color, opacity, softness, and shift parameters below.

Border Color: *Default rgb: [0.75 0 0].*

The color of the border. This has no effect unless Border Width is positive.

Border Opacity: *Default: 1, Range: 0 to 1.*

The opacity of the border. Decrease to make the border transparent and allow the image under it to show through. This has no effect unless Border Width is positive.

Border Softness: *Default: 0, Range: 0 or greater.*

The softness of the border edges. This has no effect unless Border Width is positive.

Border Shift: *Default: 0, Range: any.*

Shifts the border ahead of or behind the transition edge. This has no effect unless Border Width is positive.

Border Glow: *Default: 0, Range: 0 or greater.*

Adds a glow along the border of the wipe. The value determines the brightness of the glow.

Glow Width: *Default: 0.1, Range: 0 or greater.*

The width of the glowing border.

Width Red: *Default: 1, Range: 0 or greater.*

Scales the red glow width. If the red, green, and blue widths are all equal, the glow will match Glow Color. Otherwise it will have a fringe of varying color.

Width Green: *Default: 1.2, Range: 0 or greater.*

Scales the green glow width.

Width Blue: *Default: 1.4, Range: 0 or greater.*

Scales the blue glow width.

Glow Color: *Default rgb: [1 1 1].*

The color of the glowing border.

Noise Amp: *Default: 1, Range: 0 or greater.*

The amount of noise to add to the glowing border.

Noise Freq: *Default:* 16, *Range:* 0.1 to 20.

The spatial frequency of the noise.

Noise Speed: *Default:* 2, *Range:* any.

The speed with which the noise changes or boils over time.

Show Wipe: *Check-box, Default:* on.

Turns on or off the screen user interface for adjusting the Wipe Amount parameter.

Show Shift: *Check-box, Default:* on.

Turns on or off the screen user interface widget for adjusting the Shift parameter, which translates the plasma pattern.

Show Glow Width: *Check-box, Default:* off.

Turns on or off the screen user interface for adjusting the Glow Width parameter.

See Also:

[WipeLine](#)

[WipeCircle](#)

[WipeRectangle](#)

[WipeStar](#)

[WipeClock](#)

[WipeWedge](#)

[WipeDoubleWedge](#)

[WipeFourWedges](#)

[WipeDots](#)

[WipeChecker](#)

[WipeStripes](#)

[WipeRings](#)

[WipeBlobs](#)

[WipeCells](#)

[WipeTiles](#)

[WipePixelate](#)

[WipeDiffuse](#)

[WipeBubble](#)

[WipeClouds](#)

[WipeMoire](#)

[WipePointalize](#)

[WipeWeave](#)

[WipeFlux](#)

[TexturePlasma](#)

[TextureLoops](#)

[Sapphire](#)

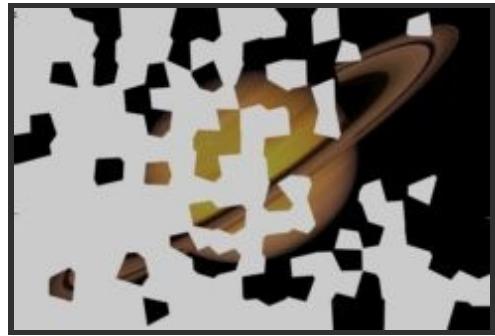
[Plug-ins](#)

[Introduction](#)

S_WipePointalize

Transitions between two input clips by adding brush-like polygon shapes from one clip onto another in a semi-random order. The Wipe Amount parameter should be animated to control the transition speed. Adjust the Frequency to change the size of the shapes, and adjust the Edge Width and Chunky parameters for different patterns.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Wipe Amount: *Default: 0, Range: -0.5 to 1.5.*

Determines the transition ratio between the From and To inputs, and would normally be animated from 0 to 1 to perform a complete transition. The curve controlling this parameter can be adjusted for more detailed control over the timing of the wipe.

Edge Width: *Default: 2, Range: 0.05 or greater.*

The width of the transition area.

Angle: *Default: 0, Range: any.*

The angle of the wipe direction in degrees. Use 0 for a wipe from left to right, 90 or -90 for a vertical wipe, 180 for a wipe from right to left.

Frequency: *Default: 20, Range: 5 or greater.*

Increase for smaller and more polygon shapes, decrease for fewer and larger.

Chunky: *Default: 0, Range: 0 or greater.*

Increase to cause the shapes to be added with a more clustered ordering.

Stroke Length: *Default: 0, Range: any.*

Determines the length of the brush stroke shapes. A zero value gives regular polygon shapes. Increase for longer more random shapes. Negative values cause the strokes to orient in the other direction. Note that when this parameter is non-zero, the stroke shapes will also vary over time as if being re-painted.

Stroke Align: *Default: 0.5, Range: 0 or greater.*

Increase to smooth out the directions of the strokes so nearby strokes are more parallel.

Seed: *Default: 0.23, Range: 0 or greater.*

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Show Wipe: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Wipe Amount parameter.

See Also:

[WipeLine](#)

[WipeCircle](#)

[WipeRectangle](#)

[WipeStar](#)

[WipeClock](#)

[WipeWedge](#)

[WipeDoubleWedge](#)

[WipeFourWedges](#)

[WipeDots](#)

[WipeChecker](#)

[WipeStripes](#)

[WipeRings](#)

[WipeBlobs](#)

[WipeCells](#)

[WipeTiles](#)

[WipePixelate](#)

[WipeDiffuse](#)

[WipeBubble](#)

[WipeClouds](#)

[WipeMoire](#)

[WipePlasma](#)

[WipeWeave](#)

[WipeFlux](#)

[AutoPaint](#)

[Sapphire](#)

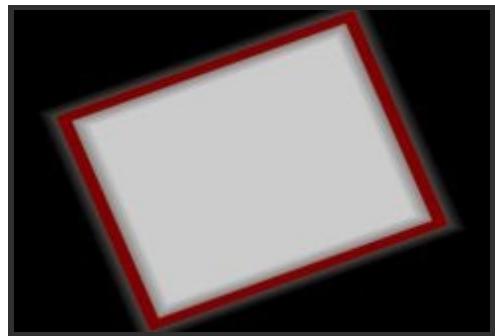
[Plug-ins](#)

[Introduction](#)

S_WipeRectangle

Performs a wipe transition between two input clips using a growing or shrinking rectangle. The Wipe Amount parameter should be animated to control the transition speed. Increase the Border Width parameter to draw a border at the wipe transition edges.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Wipe Amount: *Default: 0, Range: -0.5 to 1.5.*

Determines the transition ratio between the From and To inputs, and would normally be animated from 0 to 1 to perform a complete transition. The curve controlling this parameter can be adjusted for more detailed control over the timing of the wipe.

Wipe Direction: *Popup menu, Default: Rect In.*

The direction of the rectangle wipe.

Rect In: the rectangle contains the first image and shrinks inwards.

Rect Out: the rectangle contains the second image and grows outwards.

Edge Softness: *Default: 0, Range: 0 or greater.*

The width of the transition edges. Larger values will cause softer, less visible edges in the wipe pattern.

Angle: *Default: 0, Range: any.*

The rotation angle of the rectangle in counter-clockwise degrees.

Rel Width: *Default: 1.25, Range: 0.02 or greater.*

The relative width of the rectangle. Increase to make wider, decrease to make thinner.

Center: *X & Y, Default: [0 0], Range: any.*

The location of the rectangle center in screen coordinates relative to the center of the frame. This parameter can be set by enabling and moving the Center Widget. Note that moving the rectangle center can also cause the rectangle size to change so that the current value of Wipe Amt remains correct.

Border Width: *Default: 0, Range: 0 or greater.*

If positive, a colored border is drawn at the wipe transition edges, using the border color, opacity, softness, and shift parameters below.

Border Color: *Default* `rgb: [0.75 0 0]`.

The color of the border. This has no effect unless Border Width is positive.

Border Opacity: *Default:* 1, *Range:* 0 to 1.

The opacity of the border. Decrease to make the border transparent and allow the image under it to show through. This has no effect unless Border Width is positive.

Border Softness: *Default:* 0, *Range:* 0 or greater.

The softness of the border edges. This has no effect unless Border Width is positive.

Border Shift: *Default:* 0, *Range:* any.

Shifts the border ahead of or behind the transition edge. This has no effect unless Border Width is positive.

Border Glow: *Default:* 0, *Range:* 0 or greater.

Adds a glow along the border of the wipe. The value determines the brightness of the glow.

Glow Width: *Default:* 0.1, *Range:* 0 or greater.

The width of the glowing border.

Width Red: *Default:* 1, *Range:* 0 or greater.

Scales the red glow width. If the red, green, and blue widths are all equal, the glow will match Glow Color. Otherwise it will have a fringe of varying color.

Width Green: *Default:* 1.2, *Range:* 0 or greater.

Scales the green glow width.

Width Blue: *Default:* 1.4, *Range:* 0 or greater.

Scales the blue glow width.

Glow Color: *Default* `rgb: [1 1 1]`.

The color of the glowing border.

Noise Amp: *Default:* 1, *Range:* 0 or greater.

The amount of noise to add to the glowing border.

Noise Freq: *Default:* 16, *Range:* 0.1 to 20.

The spatial frequency of the noise.

Noise Speed: *Default:* 2, *Range:* any.

The speed with which the noise changes or boils over time.

Show Angle: *Check-box*, *Default:* off.

Turns on or off the screen user interface for adjusting the Angle parameter.

Show Center: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Center parameter.

Show Glow Width: *Check-box*, *Default:* off.

Turns on or off the screen user interface for adjusting the Glow Width parameter.

See Also:

[WipeLine](#)

[Sapphire](#)

[WipeCircle](#)

[Plug-ins](#)

[WipeStar](#)

[Introduction](#)

[WipeClock](#)

[WipeWedge](#)
[WipeDoubleWedge](#)
[WipeFourWedges](#)
[WipeDots](#)
[WipeChecker](#)
[WipeStripes](#)
[WipeRings](#)
[WipeBlobs](#)
[WipeCells](#)
[WipeTiles](#)
[WipePixelate](#)
[WipeDiffuse](#)
[WipeBubble](#)
[WipeClouds](#)
[WipeMoiré](#)
[WipePlasma](#)
[WipePointalize](#)
[WipeWeave](#)
[WipeFlux](#)

S_WipeRings

Performs a wipe transition between two input clips using a pattern of concentric rings. The Wipe Amount parameter should be animated to control the transition speed. Increase the Grad Add parameter to make the timing of the rings pattern move across the screen during the wipe. Increase the Border Width parameter to draw a border at the wipe transition edges.



In the Sapphire Transitions effects submenu.

Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Wipe Amount: *Default: 0, Range: -0.5 to 1.5.*

Determines the transition ratio between the From and To inputs, and would normally be animated from 0 to 1 to perform a complete transition. The curve controlling this parameter can be adjusted for more detailed control over the timing of the wipe.

Edge Softness: *Default: 0, Range: 0 or greater.*

The width of the transition edges. Larger values will cause softer, less visible edges in the wipe pattern.

Frequency: *Default: 4, Range: 0.1 or greater.*

The frequency of the rings pattern. Increase for more and smaller elements, or decrease for fewer and larger.

Rel Width: *Default: 1, Range: 0.1 or greater.*

The relative horizontal size of the rings. Increase for wider rings, decrease for taller ones.

Shift Stripes: *Default: 0, Range: -5 to 5.*

Translation of the stripe pattern.

Center: *X & Y, Default: [0 0], Range: any.*

The center location of the ring pattern.

Bulge: *Default: 0, Range: -1 to 1.*

Increase to make the inner rings thicker than the outer rings, or set negative to make the outer rings thicker.

Rotate: *Default: 0, Range: any.*

The rotation angle of the ring pattern in counter-clockwise degrees. Note that you will not notice any rotation when the Rel Width value is 1.

Grad Add: *Default: 0, Range: -10 to 10.*

If positive, a gradient will be added to the timing of the transition pattern so it moves across the screen during the wipe. This parameter can be adjusted using the Wipe Widget if enabled, but the value must be positive to make this widget visible.

Grad Angle: *Default: 0, Range: any.*

The direction of the wipe gradient in counter-clockwise degrees. This will have no effect unless Grad Add is positive. The Wipe Widget also allows adjusting this parameter.

Radial Grad: *Default: 0, Range: any.*

If non-zero, a radial gradient will be added to the timing of the rings pattern so it moves outwards from the center during the wipe. If negative, it moves inwards towards the center.

Border Width: *Default: 0, Range: 0 or greater.*

If positive, a colored border is drawn at the wipe transition edges, using the border color, opacity, softness, and shift parameters below.

Border Color: *Default rgb: [0.75 0 0].*

The color of the border. This has no effect unless Border Width is positive.

Border Opacity: *Default: 1, Range: 0 to 1.*

The opacity of the border. Decrease to make the border transparent and allow the image under it to show through. This has no effect unless Border Width is positive.

Border Softness: *Default: 0, Range: 0 or greater.*

The softness of the border edges. This has no effect unless Border Width is positive.

Border Shift: *Default: 0, Range: any.*

Shifts the border ahead of or behind the transition edge. This has no effect unless Border Width is positive.

Border Glow: *Default: 0, Range: 0 or greater.*

Adds a glow along the border of the wipe. The value determines the brightness of the glow.

Glow Width: *Default: 0.1, Range: 0 or greater.*

The width of the glowing border.

Width Red: *Default: 1, Range: 0 or greater.*

Scales the red glow width. If the red, green, and blue widths are all equal, the glow will match Glow Color. Otherwise it will have a fringe of varying color.

Width Green: *Default: 1.2, Range: 0 or greater.*

Scales the green glow width.

Width Blue: *Default: 1.4, Range: 0 or greater.*

Scales the blue glow width.

Glow Color: *Default rgb: [1 1 1].*

The color of the glowing border.

Noise Amp: *Default: 1, Range: 0 or greater.*

The amount of noise to add to the glowing border.

Noise Freq: *Default: 16, Range: 0.1 to 20.*

The spatial frequency of the noise.

Noise Speed: *Default: 2, Range: any.*

The speed with which the noise changes or boils over time.

Show Wipe: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Wipe Amount parameter.

Show Center: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Center parameter.

Show Glow Width: *Check-box*, *Default:* off.

Turns on or off the screen user interface for adjusting the Glow Width parameter.

See Also:[WipeLine](#)[Sapphire](#)[WipeCircle](#)[Plug-ins](#)[WipeRectangle](#)[Introduction](#)[WipeStar](#)[WipeClock](#)[WipeWedge](#)[WipeDoubleWedge](#)[WipeFourWedges](#)[WipeDots](#)[WipeChecker](#)[WipeStripes](#)[WipeBlobs](#)[WipeCells](#)[WipeTiles](#)[WipePixelate](#)[WipeDiffuse](#)[WipeBubble](#)[WipeClouds](#)[WipeMoiré](#)[WipePlasma](#)[WipePointalize](#)[WipeWeave](#)[WipeFlux](#)

S_WipeStar

Performs a wipe transition between two input clips using a star shape. The Wipe Amount parameter should be animated to control the transition speed. Increase the Border Width parameter to draw a border at the wipe transition edges.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Wipe Amount: *Default: 0, Range: -0.5 to 1.5.*

Determines the transition ratio between the From and To inputs, and would normally be animated from 0 to 1 to perform a complete transition. The curve controlling this parameter can be adjusted for more detailed control over the timing of the wipe.

Wipe Direction: *Popup menu, Default: Star In.*

The direction of the star wipe.

Star In: the star contains the first image and shrinks inwards.

Star Out: the star contains the second image and grows outwards.

Edge Softness: *Default: 0, Range: 0 or greater.*

The width of the transition edges. Larger values will cause softer, less visible edges in the wipe pattern.

Points: *Integer, Default: 5, Range: 3 or greater.*

The number of points in the star.

Pointiness: *Default: 1.1, Range: 0 or greater.*

The pointiness of the star. Increase for sharp spikes, decrease for more regular polygonal shapes.

Angle: *Default: 0, Range: any.*

The rotation angle of the star in counter-clockwise degrees.

Rel Width: *Default: 1, Range: 0.1 or greater.*

The relative horizontal size of the star. Increase for wider star, decrease for taller ones.

Center: *X & Y, Default: [0 0], Range: any.*

The location of the star center in screen coordinates relative to the center of the frame. This parameter can be set by enabling and moving the Center Widget. Note that moving the star center can also cause the star size to change so that the current value of Wipe Amt remains correct.

Border Width: *Default: 0, Range: 0 or greater.*

If positive, a colored border is drawn at the wipe transition edges, using the border color, opacity, softness, and shift parameters below.

Border Color: *Default rgb: [0.75 0 0].*

The color of the border. This has no effect unless Border Width is positive.

Border Opacity: *Default: 1, Range: 0 to 1.*

The opacity of the border. Decrease to make the border transparent and allow the image under it to show through. This has no effect unless Border Width is positive.

Border Softness: *Default: 0, Range: 0 or greater.*

The softness of the border edges. This has no effect unless Border Width is positive.

Border Shift: *Default: 0, Range: any.*

Shifts the border ahead of or behind the transition edge. This has no effect unless Border Width is positive.

Border Glow: *Default: 0, Range: 0 or greater.*

Adds a glow along the border of the wipe. The value determines the brightness of the glow.

Glow Width: *Default: 0.1, Range: 0 or greater.*

The width of the glowing border.

Width Red: *Default: 1, Range: 0 or greater.*

Scales the red glow width. If the red, green, and blue widths are all equal, the glow will match Glow Color. Otherwise it will have a fringe of varying color.

Width Green: *Default: 1.2, Range: 0 or greater.*

Scales the green glow width.

Width Blue: *Default: 1.4, Range: 0 or greater.*

Scales the blue glow width.

Glow Color: *Default rgb: [1 1 1].*

The color of the glowing border.

Noise Amp: *Default: 1, Range: 0 or greater.*

The amount of noise to add to the glowing border.

Noise Freq: *Default: 16, Range: 0.1 to 20.*

The spatial frequency of the noise.

Noise Speed: *Default: 2, Range: any.*

The speed with which the noise changes or boils over time.

Show Angle: *Check-box, Default: off.*

Turns on or off the screen user interface for adjusting the Angle parameter.

Show Center: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Center parameter.

Show Glow Width: *Check-box, Default: off.*

Turns on or off the screen user interface for adjusting the Glow Width parameter.

See Also:

[WipeLine](#)
[WipeCircle](#)
[WipeRectangle](#)
[WipeClock](#)
[WipeWedge](#)
[WipeDoubleWedge](#)
[WipeFourWedges](#)
[WipeDots](#)
[WipeChecker](#)
[WipeStripes](#)
[WipeRings](#)
[WipeBlobs](#)
[WipeCells](#)
[WipeTiles](#)
[WipePixelate](#)
[WipeDiffuse](#)
[WipeBubble](#)
[WipeClouds](#)
[WipeMoiré](#)
[WipePlasma](#)
[WipePointalize](#)
[WipeWeave](#)
[WipeFlux](#)

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S_WipeStripes

Performs a wipe transition between two input clips using a series of stripes. The Wipe Amount parameter should be animated to control the transition speed. Increase the Grad Add parameter to make the timing of the stripe pattern move across the screen during the wipe. Increase the Border Width parameter to draw a border at the wipe transition edges.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Wipe Amount: *Default: 0, Range: -0.5 to 1.5.*

Determines the transition ratio between the From and To inputs, and would normally be animated from 0 to 1 to perform a complete transition. The curve controlling this parameter can be adjusted for more detailed control over the timing of the wipe.

Edge Softness: *Default: 0, Range: 0 or greater.*

The width of the transition edges. Larger values will cause softer, less visible edges in the wipe pattern.

Angle: *Default: 45, Range: any.*

The rotation of the overall stripes pattern used for the wipe, in counter-clockwise degrees.

Frequency: *Default: 6, Range: 0.1 or greater.*

The frequency of the stripes pattern. Increase for more and smaller elements, or decrease for fewer and larger.

Shift Stripes: *Default: 0, Range: any.*

Translation of the stripe pattern.

Grad Add: *Default: 0, Range: -10 to 10.*

If positive, a gradient will be added to the timing of the transition pattern so it moves across the screen during the wipe. This parameter can be adjusted using the Wipe Widget if enabled, but the value must be positive to make this widget visible.

Grad Angle: *Default: 0, Range: any.*

The direction of the wipe gradient in counter-clockwise degrees. This will have no effect unless Grad Add is positive. The Wipe Widget also allows adjusting this parameter.

Border Width: *Default: 0, Range: 0 or greater.*

If positive, a colored border is drawn at the wipe transition edges, using the border color, opacity, softness, and shift parameters below.

Border Color: *Default* `rgb: [0.75 0 0]`.

The color of the border. This has no effect unless Border Width is positive.

Border Opacity: *Default:* 1, *Range:* 0 to 1.

The opacity of the border. Decrease to make the border transparent and allow the image under it to show through. This has no effect unless Border Width is positive.

Border Softness: *Default:* 0, *Range:* 0 or greater.

The softness of the border edges. This has no effect unless Border Width is positive.

Border Shift: *Default:* 0, *Range:* any.

Shifts the border ahead of or behind the transition edge. This has no effect unless Border Width is positive.

Border Glow: *Default:* 0, *Range:* 0 or greater.

Adds a glow along the border of the wipe. The value determines the brightness of the glow.

Glow Width: *Default:* 0.1, *Range:* 0 or greater.

The width of the glowing border.

Width Red: *Default:* 1, *Range:* 0 or greater.

Scales the red glow width. If the red, green, and blue widths are all equal, the glow will match Glow Color. Otherwise it will have a fringe of varying color.

Width Green: *Default:* 1.2, *Range:* 0 or greater.

Scales the green glow width.

Width Blue: *Default:* 1.4, *Range:* 0 or greater.

Scales the blue glow width.

Glow Color: *Default* `rgb: [1 1 1]`.

The color of the glowing border.

Noise Amp: *Default:* 1, *Range:* 0 or greater.

The amount of noise to add to the glowing border.

Noise Freq: *Default:* 16, *Range:* 0.1 to 20.

The spatial frequency of the noise.

Noise Speed: *Default:* 2, *Range:* any.

The speed with which the noise changes or boils over time.

Show Wipe: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Wipe Amount parameter.

Show Glow Width: *Check-box*, *Default:* off.

Turns on or off the screen user interface for adjusting the Glow Width parameter.

See Also:

[WipeLine](#)

[Sapphire](#)

[WipeCircle](#)

[Plug-ins](#)

[WipeRectangle](#)

[Introduction](#)

[WipeStar](#)

[WipeClock](#)

[WipeWedge](#)

[WipeDoubleWedge](#)

[WipeFourWedges](#)

[WipeDots](#)

[WipeChecker](#)

[WipeRings](#)

[WipeBlobs](#)

[WipeCells](#)

[WipeTiles](#)

[WipePixelate](#)

[WipeDiffuse](#)

[WipeBubble](#)

[WipeClouds](#)

[WipeMoiré](#)

[WipePlasma](#)

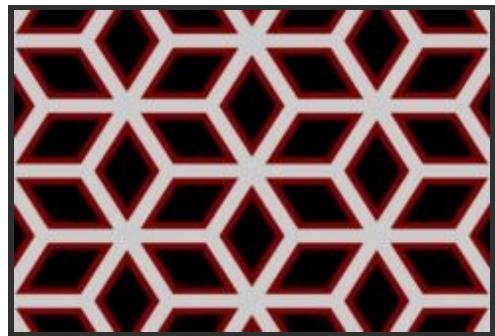
[WipePointalize](#)

[WipeWeave](#)

[WipeFlux](#)

S_WipeTiles

Performs a wipe transition between two input clips using a pattern of growing or shrinking hexagons, triangles, diamonds, or stars. The Wipe Amount parameter should be animated to control the transition speed. Increase the Grad Add parameter to make the timing of the tile pattern move across the screen during the wipe. Increase the Border Width parameter to draw a border at the wipe transition edges.



In the Sapphire Transitions effects submenu.

Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Wipe Amount: *Default: 0, Range: -0.5 to 1.5.*

Determines the transition ratio between the From and To inputs, and would normally be animated from 0 to 1 to perform a complete transition. The curve controlling this parameter can be adjusted for more detailed control over the timing of the wipe.

Tile Shapes: *Popup menu, Default: Hexagons.*

The tile shapes used to generate the pattern. Note that the Morph Shapes parameter can transform the shapes away from this setting.

Hexagons: A honeycomb pattern of hexagons

Triangles: A triangle mesh

Diamonds: A pattern made of diamonds

Stars: Six-pointed stars merge to make a pattern of squares.

Shapes Dir: *Popup menu, Default: Grow.*

The direction of change of the tile sizes.

Shrink: the tiles start large and shrink inwards.

Grow: the tiles start small and grow outwards.

Edge Softness: *Default: 0, Range: 0 or greater.*

The width of the transition edges. Larger values will cause softer, less visible edges in the wipe pattern.

Angle: *Default: 0, Range: any.*

The rotation of the overall tiles pattern used for the wipe, in counter-clockwise degrees.

Frequency: *Default: 4, Range: 0.1 or greater.*

The frequency of the tiles pattern. Increase for more and smaller elements, or decrease for fewer and larger.

Rel Width: *Default:* 1, *Range:* 0.1 or greater.

The relative horizontal size of the tiles. Increase for wider tiles, decrease for taller ones.

Rel Wid Pre Rot: *Default:* 1, *Range:* 0.1 or greater.

The relative size of the tiles in the direction of the current rotation angle. If the Angle parameter is zero this will have the same effect as Rel Width.

Shift: *X & Y,* *Default:* [0 0], *Range:* any.

Translation of the tiles pattern.

Morph Shapes: *Default:* 0, *Range:* any.

The angle in degrees to rotate the sides of the shapes. This can be used to transform one shape into another, or generate new different tile patterns.

Grad Add: *Default:* 0, *Range:* -10 to 10.

If positive, a gradient will be added to the timing of the transition pattern so it moves across the screen during the wipe. This parameter can be adjusted using the Wipe Widget if enabled, but the value must be positive to make this widget visible.

Grad Angle: *Default:* 0, *Range:* any.

The direction of the wipe gradient in counter-clockwise degrees. This will have no effect unless Grad Add is positive. The Wipe Widget also allows adjusting this parameter.

Border Width: *Default:* 0, *Range:* 0 or greater.

If positive, a colored border is drawn at the wipe transition edges, using the border color, opacity, softness, and shift parameters below.

Border Color: *Default* *rgb:* [0.75 0 0].

The color of the border. This has no effect unless Border Width is positive.

Border Opacity: *Default:* 1, *Range:* 0 to 1.

The opacity of the border. Decrease to make the border transparent and allow the image under it to show through. This has no effect unless Border Width is positive.

Border Softness: *Default:* 0, *Range:* 0 or greater.

The softness of the border edges. This has no effect unless Border Width is positive.

Border Shift: *Default:* 0, *Range:* any.

Shifts the border ahead of or behind the transition edge. This has no effect unless Border Width is positive.

Border Glow: *Default:* 0, *Range:* 0 or greater.

Adds a glow along the border of the wipe. The value determines the brightness of the glow.

Glow Width: *Default:* 0.1, *Range:* 0 or greater.

The width of the glowing border.

Width Red: *Default:* 1, *Range:* 0 or greater.

Scales the red glow width. If the red, green, and blue widths are all equal, the glow will match Glow Color. Otherwise it will have a fringe of varying color.

Width Green: *Default:* 1.2, *Range:* 0 or greater.

Scales the green glow width.

Width Blue: *Default:* 1.4, *Range:* 0 or greater.

Scales the blue glow width.

Glow Color: *Default* *rgb:* [1 1 1].

The color of the glowing border.

Noise Amp: *Default:* 1, *Range:* 0 or greater.
The amount of noise to add to the glowing border.

Noise Freq: *Default:* 16, *Range:* 0.1 to 20.
The spatial frequency of the noise.

Noise Speed: *Default:* 2, *Range:* any.
The speed with which the noise changes or boils over time.

Show Wipe: *Check-box*, *Default:* on.
Turns on or off the screen user interface for adjusting the Wipe Amount parameter.

Show Shift: *Check-box*, *Default:* on.
Turns on or off the screen user interface widget for adjusting the Shift parameter, which translates the tiles pattern.

Show Glow Width: *Check-box*, *Default:* off.
Turns on or off the screen user interface for adjusting the Glow Width parameter.

See Also:

[WipeLine](#)
[WipeCircle](#)
[WipeRectangle](#)
[WipeStar](#)
[WipeClock](#)
[WipeWedge](#)
[WipeDoubleWedge](#)
[WipeFourWedges](#)
[WipeDots](#)
[WipeChecker](#)
[WipeStripes](#)
[WipeRings](#)
[WipeBlobs](#)
[WipeCells](#)
[WipePixelate](#)
[WipeDiffuse](#)
[WipeBubble](#)
[WipeClouds](#)
[WipeMoiré](#)
[WipePlasma](#)
[WipePointalize](#)
[WipeWeave](#)
[WipeFlux](#)

[HalfTone](#)

[TextureTiles](#)

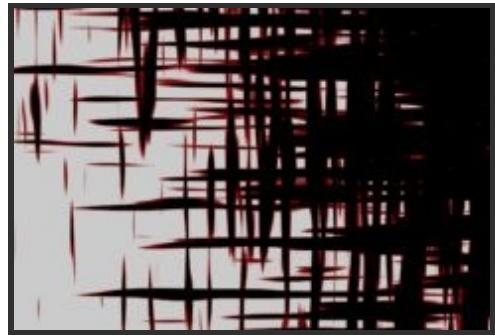
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S_WipeWeave

Performs a wipe transition between two input clips using a texture resembling perpendicular woven strands. The Wipe Amount parameter should be animated to control the transition speed. Increase the Grad Add parameter to make the timing of the weave pattern move across the screen during the wipe. Increase the Border Width parameter to draw a border at the wipe transition edges.



In the Sapphire Transitions effects submenu.

Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Wipe Amount: *Default: 0, Range: -0.5 to 1.5.*

Determines the transition ratio between the From and To inputs, and would normally be animated from 0 to 1 to perform a complete transition. The curve controlling this parameter can be adjusted for more detailed control over the timing of the wipe.

Strands: *Popup menu, Default: Grow.*

The direction of the weave pattern transition.

Shrink: The strands start large and shrink inwards.

Grow: The strands start small and grow outwards.

Edge Softness: *Default: 0, Range: 0 or greater.*

The width of the transition edges. Larger values will cause softer, less visible edges in the wipe pattern.

Frequency: *Default: 20, Range: 0.01 or greater.*

The frequency of the weave pattern. Increase for more and smaller elements, or decrease for fewer and larger.

Rel Length: *Default: 10, Range: 0.1 or greater.*

The relative length of the strands. Increase for longer thinner strands. Decrease for shorter thicker strands.

Octaves: *Integer, Default: 2, Range: 1 to 10.*

The number of summed layers of noise. Each octave is twice the frequency and half the amplitude of the previous. A single octave gives a smooth texture. Adding octaves makes the result approach a fractal (1/f) noise texture.

Seed: *Default: 0.123, Range: 0 or greater.*

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Shift: *X & Y*, *Default:* [0 0], *Range:* any.

Translation of the weave pattern.

H Speed X: *Default:* 0, *Range:* any.

The horizontal speed of the horizontal strands. If non-zero, the horizontal strands will automatically crawl along their lengths at this rate.

V Speed Y: *Default:* 0, *Range:* any.

The vertical speed of the vertical strands. If non-zero, the vertical strands will automatically crawl along their lengths at this rate.

Grad Add: *Default:* 0, *Range:* -10 to 10.

If positive, a gradient will be added to the timing of the transition pattern so it moves across the screen during the wipe. This parameter can be adjusted using the Wipe Widget if enabled, but the value must be positive to make this widget visible.

Grad Angle: *Default:* 0, *Range:* any.

The direction of the wipe gradient in counter-clockwise degrees. This will have no effect unless Grad Add is positive. The Wipe Widget also allows adjusting this parameter.

Border Width: *Default:* 0, *Range:* 0 or greater.

If positive, a colored border is drawn at the wipe transition edges, using the border color, opacity, softness, and shift parameters below.

Border Color: *Default* *rgb:* [0.75 0 0].

The color of the border. This has no effect unless Border Width is positive.

Border Opacity: *Default:* 1, *Range:* 0 to 1.

The opacity of the border. Decrease to make the border transparent and allow the image under it to show through. This has no effect unless Border Width is positive.

Border Softness: *Default:* 0, *Range:* 0 or greater.

The softness of the border edges. This has no effect unless Border Width is positive.

Border Shift: *Default:* 0, *Range:* any.

Shifts the border ahead of or behind the transition edge. This has no effect unless Border Width is positive.

Border Glow: *Default:* 0, *Range:* 0 or greater.

Adds a glow along the border of the wipe. The value determines the brightness of the glow.

Glow Width: *Default:* 0.1, *Range:* 0 or greater.

The width of the glowing border.

Width Red: *Default:* 1, *Range:* 0 or greater.

Scales the red glow width. If the red, green, and blue widths are all equal, the glow will match Glow Color. Otherwise it will have a fringe of varying color.

Width Green: *Default:* 1.2, *Range:* 0 or greater.

Scales the green glow width.

Width Blue: *Default:* 1.4, *Range:* 0 or greater.

Scales the blue glow width.

Glow Color: *Default* *rgb:* [1 1 1].

The color of the glowing border.

Noise Amp: *Default:* 1, *Range:* 0 or greater.

The amount of noise to add to the glowing border.

Noise Freq: *Default:* 16, *Range:* 0.1 to 20.

The spatial frequency of the noise.

Noise Speed: *Default:* 2, *Range:* any.

The speed with which the noise changes or boils over time.

Show Wipe: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Wipe Amount parameter.

Show Shift: *Check-box*, *Default:* on.

Turns on or off the screen user interface widget for adjusting the Shift parameter, which translates the weave pattern.

Show Glow Width: *Check-box*, *Default:* off.

Turns on or off the screen user interface for adjusting the Glow Width parameter.

See Also:

[WipeLine](#)

[WipeCircle](#)

[WipeRectangle](#)

[WipeStar](#)

[WipeClock](#)

[WipeWedge](#)

[WipeDoubleWedge](#)

[WipeFourWedges](#)

[WipeDots](#)

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[WipeClouds](#)

[WipeMoiré](#)

[WipePlasma](#)

[WipePointalize](#)

[WipeFlux](#)

[TextureWeave](#)

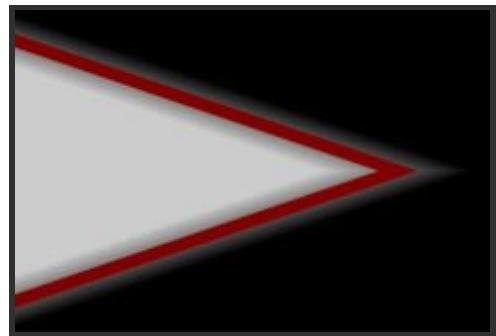
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S_WipeWedge

Performs a wipe transition between two input clips using a wedge shape. The Wipe Amount parameter should be animated to control the transition speed. Increase the Border Width parameter to draw a border at the wipe transition edges.

In the Sapphire Transitions effects submenu.



Inputs:

From: *Optional.* Starts the transition with this clip.

To: *Optional.* Ends the transition with this clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Wipe Amount: *Default: 0, Range: -0.5 to 1.5.*

Determines the transition ratio between the From and To inputs, and would normally be animated from 0 to 1 to perform a complete transition. The curve controlling this parameter can be adjusted for more detailed control over the timing of the wipe.

Wipe Direction: *Popup menu, Default: Wedge In.*

Selects the direction of the wedge motion.

Wedge In: the wedge contains the first image and shrinks inwards.

Wedge Out: the wedge contains the second image and grows outwards.

Edge Softness: *Default: 0, Range: 0 or greater.*

The width of the transition edges. Larger values will cause softer, less visible edges in the wipe pattern.

Angle: *Default: 0, Range: any.*

The rotation angle of the wedge shape in counter-clockwise degrees.

Pointiness: *Default: 2, Range: 0 or greater.*

The sharpness of the point of the wedge.

Border Width: *Default: 0, Range: 0 or greater.*

If positive, a colored border is drawn at the wipe transition edges, using the border color, opacity, softness, and shift parameters below.

Border Color: *Default rgb: [0.75 0 0].*

The color of the border. This has no effect unless Border Width is positive.

Border Opacity: *Default: 1, Range: 0 to 1.*

The opacity of the border. Decrease to make the border transparent and allow the image under it to show through. This has no effect unless Border Width is positive.

Border Softness: *Default: 0, Range: 0 or greater.*

The softness of the border edges. This has no effect unless Border Width is positive.

Border Shift: *Default: 0, Range: any.*

Shifts the border ahead of or behind the transition edge. This has no effect unless Border Width is positive.

Border Glow: *Default: 0, Range: 0 or greater.*

Adds a glow along the border of the wipe. The value determines the brightness of the glow.

Glow Width: *Default: 0.1, Range: 0 or greater.*

The width of the glowing border.

Width Red: *Default: 1, Range: 0 or greater.*

Scales the red glow width. If the red, green, and blue widths are all equal, the glow will match Glow Color. Otherwise it will have a fringe of varying color.

Width Green: *Default: 1.2, Range: 0 or greater.*

Scales the green glow width.

Width Blue: *Default: 1.4, Range: 0 or greater.*

Scales the blue glow width.

Glow Color: *Default rgb: [1 1 1].*

The color of the glowing border.

Noise Amp: *Default: 1, Range: 0 or greater.*

The amount of noise to add to the glowing border.

Noise Freq: *Default: 16, Range: 0.1 to 20.*

The spatial frequency of the noise.

Noise Speed: *Default: 2, Range: any.*

The speed with which the noise changes or boils over time.

Show Angle: *Check-box, Default: off.*

Turns on or off the screen user interface for adjusting the Angle parameter.

Show Glow Width: *Check-box, Default: off.*

Turns on or off the screen user interface for adjusting the Glow Width parameter.

See Also:

[WipeLine](#)

[Sapphire](#)

[WipeCircle](#)

[Plug-ins](#)

[WipeRectangle](#)

[Introduction](#)

[WipeStar](#)

[WipeClock](#)

[WipeDoubleWedge](#)

[WipeFourWedges](#)

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[WipePixelate](#)
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[WipeFlux](#)

S_ZComp

Layers a source input over or under a second source input based on the difference of two depth images. The DepthA input should be a 'z' depth image corresponding to the objects in the first input, and DepthB should be a 'z' depth image corresponding to the objects in the second input.

In the Sapphire Composite effects submenu.



Inputs:

SourceA: The first input image.

SourceB: The second input image.

DepthA: The depth image corresponding to the objects in SourceA

DepthB: The depth image corresponding to the objects in SourceB

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Anti Alias: *Default:* 0, *Range:* 0 or greater.

The amount of depth difference over which to interpolate the source inputs instead of taking just the closer one. Specified as a fraction of the entire depth range: 0 does no antialiasing, 1 interpolates over the entire depth range.

Invert Z: *Check-box, Default:* off.

Normally larger depth values (white) are treated as farther away and smaller values (black) are treated as near. When this is enabled, these depth values are reversed.

See Also:

[ZFogLinear](#)

[ZFogExponential](#)

[ZBlur](#)

[Sapphire Plug-ins](#)

[Introduction](#)

S_ZBlur

Blurs areas of the source clip by different amounts using depth values from a ZBuffer input. Separates the input into a number of layers in depth and blurs them by different amounts depending on each layer's depth. Linear fog can also be mixed into the result. To use this effect, first set ZBuffer:Black Is Near or White Is Near according to your Z buffer, then adjust the focus depth and depth of field parameters to get the look you want. To help set the focus depth, you can use Show: In Focus Zone.



In the Sapphire Blur+Sharpen effects submenu.

Inputs:

Source: The clip to be processed.

ZBuffer: The input clip containing depth values for each Source pixel. These values should be in the range of black to white, and it is best if not anti-aliased. Normally black corresponds to the farthest objects and white to the nearest, though this can be adjusted using Z Buffer parameter.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Focal Depth: *Default: 0, Range: any.*

The depth of the focus plane; 0 is near and 1 is far. Areas with this Z value will be in focus. Objects near this depth may be in focus depending on the Depth of Field parameter. You can use Show: In Focus Zone to show the Focal Depth when adjusting. If the effect of this parameter seems backwards, you can invert the depth values using the Z Buffer parameter.

Depth Of Field: *Default: 0.1, Range: 0 to 1.*

Specifies how wide a range of depths near the Focal Depth will be in focus. If the Focal Depth is 0.5 and Depth of Field is 0.2, all objects with Z values from 0.4 to 0.6 will be in focus. Set to zero to have only objects exactly at the Focal Depth in focus. You can use Show: In Focus Zone to show this when adjusting.

Blur Width: *Default: 0.168, Range: 0 or greater.*

Scales the overall amount of blur. This parameter can be adjusted using the Blur Width Widget.

Blur Rel: *X & Y, Default: [1 1], Range: 0 or greater.*

The relative horizontal and vertical blur widths. Set Blur Rel X to 0 for a vertical-only blur, or set Blur Rel Y to 0 for a horizontal-only blur.

Zbuffer Type: *Popup menu, Default: White is Near.*

How to interpret the values in the Z buffer.

Black is Near: Black pixels in the Z buffer indicate that the object at that point is near (close to you), and white means far away.

White is Near: White pixels in the Z buffer indicate that the object at that point is near (close to you), and black means far away.

Show: *Popup menu, Default: Result.*

Selects the type of output

Result: Shows the normal result of the effect.

In Focus Zone: Highlights the in-focus areas of the clip to make it easier to select the focal point and depth.

Layers: *Integer, Default: 5, Range: 2 to 50.*

The number of depth layers to separate the source into. More layers require more processing but give smoother results in Z. More layers are sometimes needed to avoid visible seams between the layers.

Layer Mode: *Popup menu, Default: Interp.*

Determines how the differently blurred layers are combined.

Comp: the closer layers are composited over the farther layers. This method often gives better results if you have objects at different depths overlapping each other with discontinuous values in your depth image. However, this option can be slower, and sometimes artifacts between layers are visible.

Interp: the layers are interpolated using depth image values. This method gives smoother transitions between layers, and is usually better if there are no sharp changes in your depth image.

Width Rel Near: *Default: 1, Range: 0 or greater.*

Scales the blur width for parts of the image that are nearer than the focal plane.

Width Rel Far: *Default: 1, Range: 0 or greater.*

Scales the blur width for parts of the image that are farther away than the focal plane.

Fog Near: *Default: 0, Range: 0 to 1.*

The amount of fog to add to nearby (close) objects.

Fog Far: *Default: 0, Range: 0 to 1.*

The amount of fog to add to far away objects.

Fog Color: *Default rgb: [0.5 0.5 0.5].*

The fog color should normally match the sky or background color of the source clip. Use gray for mist, brown for smog, blue for underwater, etc.

Zbuffer Use: *Popup menu, Default: Luma.*

Determines how the ZBuffer input channels make a monochrome z image.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Soft Borders: *Check-box, Default: off.*

If enabled, transparent borders are added to the input image before processing. This allows the result to include soft edges beyond the original image size. When off, the effect only occurs within the frame and the result will retain an edge at the borders.

Show Blur Width: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Blur Width parameter.

See Also:

[ZDefocus](#)

[ZGlow](#)

[ZConvolve](#)

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S_ZConvolve

Convolves areas of the source clip using a kernel which is made larger or smaller using depth values from a ZBuffer input. Separates the input into a number of layers and applies different sized convolution blurs depending on the distance from the focal depth, and depth of field. This is similar to ZDefocus but with an iris shape (or Kernel) that comes from a clip.

In the Sapphire Blur+Sharpen effects submenu.



Inputs:

Source: The clip to be processed.

Kernel: The filter kernel or shape for the convolution. This should normally be all black around the edges (outside the specified Kernel Crop region), with a non-black central part. A larger shape normally produces blurrier results. Only the part of the kernel within the two Kernel Crop params is considered; the part outside that boundary is ignored.

ZBuffer: The input clip containing depth values for each Source pixel. These values should be in the range of black to white, and it is best if not anti-aliased. Normally black corresponds to the farthest objects and white to the nearest, though this can be adjusted using Z Buffer parameter.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Focal Depth: *Default: 0, Range: any.*

The depth of the focus plane; 0 is near and 1 is far. Areas with this Z value will be in focus. Objects near this depth may be in focus depending on the Depth of Field parameter. You can use Show: In Focus Zone to show the Focal Depth when adjusting. If the effect of this parameter seems backwards, you can invert the depth values using the Z Buffer parameter.

Depth Of Field: *Default: 0.1, Range: 0 to 1.*

Specifies how wide a range of depths near the Focal Depth will be in focus. If the Focal Depth is 0.5 and Depth of Field is 0.2, all objects with Z values from 0.4 to 0.6 will be in focus. Set to zero to have only objects exactly at the Focal Depth in focus. You can use Show: In Focus Zone to show this when adjusting.

Size: *Default: 1, Range: 0 or greater.*

The maximum amount to resize the kernel larger or smaller. 1.0 is the original size. This parameter can be adjusted using the Size Widget.

Size Rel X: *Default: 1, Range: 0 or greater.*

Increase to make the kernel fatter or wider without changing its height. Decrease to shrink it horizontally, making it thinner.

Size Rel Y: *Default: 1, Range: 0 or greater.*

Increase to make the kernel taller without changing its weight. Decrease to shrink it vertically, making it flatter.

Zbuffer Type: *Popup menu, Default: White is Near.*

How to interpret the values in the Z buffer.

Black is Near: Black pixels in the Z buffer indicate that the object at that point is near (close to you), and white means far away.

White is Near: White pixels in the Z buffer indicate that the object at that point is near (close to you), and black means far away.

Show: *Popup menu, Default: Result.*

Selects the type of output.

Result: Show the final output.

Kernel: Show the convolve kernel over the final output. Use this to adjust the kernel cropping and threshold parameters.

In Focus Zone: Show the in-focus zone highlighted over the original image. Use this to adjust the focal depth and depth of field.

Layers: *Integer, Default: 5, Range: 2 to 50.*

The number of depth layers to separate the source into. More layers require more processing but give smoother results in Z. More layers are sometimes needed to avoid visible seams between the layers.

Layer Mode: *Popup menu, Default: Interp.*

Determines how the differently blurred layers are combined.

Comp: the closer layers are composited over the farther layers. This method often gives better results if you have objects at different depths overlapping each other with discontinuous values in your depth image. However, this option can be slower, and sometimes artifacts between layers are visible.

Interp: the layers are interpolated using depth image values. This method gives smoother transitions between layers, and is usually better if there are no sharp changes in your depth image.

Kernel Center: *X & Y, Default: [0 0], Range: any.*

The center point of the kernel; if you think of convolution as repeated stamping of the kernel at each point of the source, the center is where the stamp aligns with the source pixels it's stamped over. If you move the center to the right in the kernel, the whole result image will move to the left, and similarly up and down. This parameter is ignored if AutoCenter is on. It may be helpful to turn on Show Kernel while adjusting this parameter. Note that if Autocenter is off, the center point is always included in the kernel no matter what this param is set to. This parameter can be adjusted using the Kernel Center Widget.

Autocenter: *Check-box, Default: on.*

Automatically finds the center of the kernel image. Turning this on makes the effect ignore the Kernel Center parameter.

Use Gamma: *Default: 1, Range: 0.1 or greater.*

Values above 1 cause highlights in the source clip to keep their brightness after the convolution filter is applied.

Boost Highlights: *Default: 0, Range: 0 or greater.*

The amount to increase the luma of the highlights in the source clip. Increase this parameter to blow out the highlights without affecting the darks or mid-tones.

Highlight Threshold: *Default: 0.9, Range: 0 or greater.*

The minimum luma value for highlights. Pixels brighter than this will be brightened according to the Boost Highlights parameter.

Brightness: *Default: 1, Range: 0 or greater.*

Scales the brightness of the result.

Threshold: *Default: 0, Range: 0 or greater.*

Any source value below this will be treated as black. When combining the convolved result with the original, you can increase this value to only convolve bright areas of the source. Typically when using this parameter, you will also set Combine to Screen or Add to get a glare-like effect.

Threshold Add Color: *Default rgb: [0 0 0].*

This can be used to raise the threshold on a specific color and thereby reduce the convolved result generated on areas of the source clip containing that color.

Combine: *Popup menu, Default: Convolve Only.*

Determines how the convolved image is combined with the original source.

Convolve Only: Only show the convolved image. Use this option for a blur or defocus-like effect

Screen: Screen the convolved image with the original source. Use this option for a glow or glare-like effect.

Add: Add the convolved image to the original source.

Difference: Show the difference between the convolved image and the source.

Mix With Source: *Default: 0, Range: 0 to 1.*

Interpolates between the convolved result (0) and the original source (1). 0.1 can give a nice misty effect since it mixes only a little of the source in.

Edge Mode: *X & Y, Popup menu, Default: [Transparent Transparent].*

Determines the behavior when accessing areas outside the source image.

Transparent: Areas outside the source image are treated as transparent, which can produce transparency around the edges of the image. Select this for fastest rendering.

Repeat: Repeats the last pixel outside the border of the image.

Reflect: Reflects the image outside the border.

Size Rel Near: *Default: 1, Range: 0 or greater.*

Scales the kernel size for parts of the image that are nearer than the focal plane.

Size Rel Far: *Default: 1, Range: 0 or greater.*

Scales the kernel size for parts of the image that are farther away than the focal plane.

Kernel Threshold: *Default: 0.001, Range: 0 or greater.*

Any kernel value below this will be treated as black. It's important for the edges of the kernel image to be completely black, or the result will have a grayish cast to it. If your kernel image may have a little noise in the black areas, turn up threshold a little to remove that background noise.

Clamp Below Threshold: *Check-box, Default: on.*

When turned on, values below the threshold are clamped to zero. This usually gives the best result. For certain special cases with partially-negative kernels, turning this off gives you additional flexibility in designing your kernel.

Kernel Crop1: *X & Y, Default: [-0.997 -0.747], Range: any.*

The upper left corner of the kernel area. Parts of the kernel image outside the rectangle defined by Kernel Crop1 and Kernel Crop2 are assumed to be black. Making this area smaller to avoid processing the kernel's black edges can speed up the convolution somewhat. It may be helpful to turn on Show Kernel while adjusting this parameter. Note that if Autocenter is off, the center point is always included in the kernel no matter what this param is set to.

Kernel Crop2: *X & Y, Default: [0.997 0.747], Range: any.*

The lower right corner of the kernel area.

Autoscale Mode: *Popup menu, Default: Max Channel.*

In convolution, either a larger or brighter kernel will make the result image brighter. The kernel must be auto-scaled or normalized so the result is, on average, as bright as the input. The autoscaling can be done in several ways, each

of which is best in certain circumstances. With a monochrome kernel or with Color Kernel turned off, Max Channel, Luma, and Indep Channels all give the same result.

Max Channel: Autoscales the kernel by summing the elements of each channel, and using whichever is brightest as the overall kernel scale factor. This normalizes a dim kernel to full brightness, and generally preserves the color of the kernel, but allows brightness variations in the dimmer channels to show in the result.

Luma: Autoscales the kernel by summing the luminances of each kernel pixel. This method preserves changes in the kernel's hue, but normalizes the luma, so a brighter or darker kernel will have no effect. Use the Scale parameter to adjust the result brightness.

Indep Channels: Independently normalizes each color channel of the kernel. A colored kernel will give a white/gray result with this method. Use this method if your kernel channels are independent of each other (i.e. different things going on in each of R, G, and B) but you want normalized results in each channel.

Count Nonzero: Count how many kernel pixels are nonzero (brighter than black), but otherwise ignore how bright they are. This method is best if you want variations in kernel hue and luma to show up in the result. But blurring the kernel will give a dimmer result, since there will be more nonzero pixels.

Kernel Size: Ignore the pixel *values* entirely; only use the size of the kernel rectangle to auto-scale. Use this if you want all kernel variations to show up in the result, but don't use it if you intend to animate Kernel Crop1 and Crop2, as that would affect the result's brightness.

Zbuffer Use: *Popup menu, Default: Luma.*

Determines how the ZBuffer input channels make a monochrome z image.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Show Size: *Check-box, Default: on.*

Turns on or off the screen user interface for adjusting the Size parameter.

Show Kernel Center: *Check-box, Default: off.*

Turns on or off the screen user interface for adjusting the Kernel Center parameter.

Show Kernel Crop: *Check-box, Default: off.*

Turns on or off the screen user interface for adjusting the Kernel Crop1 parameter.

See Also:

[ZDefocus](#)

[ZBlur](#)

[ZGlow](#)

[ZFogLinear](#)

[Convolve](#)

[RackDefocus](#)

[Glare](#)

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S_ZDefocus

Defocuses areas of the source clip by different amounts using depth values from a ZBuffer input. Separates the input into a number of depth layers and applies different amounts of defocus depending on each layer's depth. To use this effect, first set ZBuffer:Black Is Near or White Is Near according to your Z buffer, then adjust the Focus Depth and Depth Of Field parameters to get the look you want. To help set the Focus Depth, you can use Show: In Focus Zone.



In the Sapphire Blur+Sharpen effects submenu.

Inputs:

Source: The clip to be processed.

ZBuffer: The input clip containing depth values for each Source pixel. These values should be in the range of black to white, and it is best if not anti-aliased. Normally black corresponds to the farthest objects and white to the nearest, though this can be adjusted using Z Buffer parameter.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Focal Depth: *Default: 0, Range: any.*

The depth of the focus plane; 0 is near and 1 is far. Areas with this Z value will be in focus. Objects near this depth may be in focus depending on the Depth of Field parameter. You can use Show: In Focus Zone to show the Focal Depth when adjusting. If the effect of this parameter seems backwards, you can invert the depth values using the Z Buffer parameter.

Depth Of Field: *Default: 0.1, Range: 0 to 1.*

Specifies how wide a range of depths near the Focal Depth will be in focus. If the Focal Depth is 0.5 and Depth of Field is 0.2, all objects with Z values from 0.4 to 0.6 will be in focus. Set to zero to have only objects exactly at the Focal Depth in focus. You can use Show: In Focus Zone to show this when adjusting.

Defocus Width: *Default: 0.35, Range: 0 or greater.*

Scales the overall defocus width. This parameter can be adjusted using the Defocus Width Widget.

Rel Height: *Default: 1, Range: 0.01 or greater.*

The relative height of the iris shape. If it is not 1, circles become ellipses, etc.

Zbuffer Type: *Popup menu, Default: White is Near.*

How to interpret the values in the Z buffer.

Black is Near: Black pixels in the Z buffer indicate that the object at that point is near (close to you), and white means far away.

White is Near: White pixels in the Z buffer indicate that the object at that point is near (close to you), and black means far away.

Show: *Popup menu, Default: Result.*

Selects the type of output

Result: Shows the final result of the effect.

In Focus Zone: Highlights the in-focus areas of the clip to make it easier to select the focal point and depth.

Shape: Show the iris shape instead of the defocused image.

Layers: *Integer, Default: 5, Range: 2 to 50.*

The number of depth layers to separate the source into. More layers require more processing but give smoother results in Z. More layers are sometimes needed to avoid visible seams between the layers.

Layer Mode: *Popup menu, Default: Interp.*

Determines how the differently blurred layers are combined.

Comp: the closer layers are composited over the farther layers. This method often gives better results if you have objects at different depths overlapping each other with discontinuous values in your depth image. However, this option can be slower, and sometimes artifacts between layers are visible.

Interp: the layers are interpolated using depth image values. This method gives smoother transitions between layers, and is usually better if there are no sharp changes in your depth image.

Shape: *Popup menu, Default: Circle.*

Determines the shape of the simulated camera iris.

Circle: round.

3 sides: triangle.

4 sides: square.

5 sides: pentagon.

6 sides: hexagon.

7 sides: etc.

Roundness: *Default: 0, Range: any.*

Modifies the shape of the simulated camera iris. A value of 1 produces a circle; 0 gives a flat-sided polygon with a number of sides given by the Shape parameter. Less than 0 causes the sides to squeeze inward giving a star shape, while a value greater than 1 causes the corners to squeeze inward, giving a flowery shape. Has no effect if the Shape is set to Circle.

Rotate: *Default: 0, Range: any.*

Rotates the iris shape.

Bokeh: *Default: 0, Range: any.*

Softens the outer edge of the iris shape, which gives a softer look to the defocused highlights. A negative value darkens the center of the iris shape, producing a ring-like defocus shape.

Lens Noise: *Default: 0, Range: 0 or greater.*

Increase to add noise to the iris shape, dirtying up the defocus a little. Can make the result more realistic. Turn up past 1 for a more stylistic result.

Noise Freq: *Default: 40, Range: 0.01 or greater.*

The frequency of the added noise. Ignored if Lens Noise is zero.

Noise Freq Rel X: *Default: 1, Range: 0.01 or greater.*

The relative horizontal frequency of the added iris noise. Increase to stretch it vertically or decrease to stretch it horizontally.

Noise Seed: *Default:* 0.123, *Range:* 0 or greater.

The seed value for the added noise. To make the noise appear different on each frame, animate this to be different on each frame. The actual value doesn't matter; only that it's different.

Use Gamma: *Default:* 1, *Range:* 0.1 or greater.

Values above 1 cause highlights in the source clip to keep their brightness after the defocus is applied.

Boost Highlights: *Default:* 0, *Range:* 0 or greater.

The amount to increase the luma of the highlights in the source clip. Increase this parameter to blow out the highlights without affecting the darks or mid-tones.

Highlight Threshold: *Default:* 0.9, *Range:* 0 to 1.

The minimum luma value for highlights. Pixels brighter than this will be brightened according to the Boost Highlights parameter.

Brightness: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the result.

Offset Dark: *Default:* 0, *Range:* any.

Adds this gray value to the darker regions of the result. This can be negative to increase contrast.

Mix With Source: *Default:* 0, *Range:* 0 to 1.

Interpolates between the defocused result and the original source. Set this to 1 for the original source.

Width Rel Near: *Default:* 1, *Range:* 0 or greater.

Scales the defocus width for parts of the image that are nearer than the focal plane.

Width Rel Far: *Default:* 1, *Range:* 0 or greater.

Scales the defocus width for parts of the image that are farther away than the focal plane.

Fog Near: *Default:* 0, *Range:* 0 to 1.

The amount of fog to add to nearby (close) objects.

Fog Far: *Default:* 0, *Range:* 0 to 1.

The amount of fog to add to far away objects.

Fog Color: *Default* `rgb: [0.5 0.5 0.5]`.

The fog color should normally match the sky or background color of the source clip. Use gray for mist, brown for smog, blue for underwater, etc.

Edge Mode: *Popup menu, Default: Reflect.*

Determines the behavior when accessing areas outside the source image.

Transparent: Areas outside the source image are treated as transparent, which can produce transparency around the edges of the image. Select this for fastest rendering.

Repeat: Repeats the last pixel outside the border of the image.

Reflect: Reflects the image outside the border.

Zbuffer Use: *Popup menu, Default: Luma.*

Determines how the ZBuffer input channels make a monochrome z image.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Soft Borders: *Check-box, Default: off.*

If enabled, transparent borders are added to the input image before processing. This allows the result to include soft edges beyond the original image size. When off, the effect only occurs within the frame and the result will retain an edge at the borders.

Show Defocus Width: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Defocus Width parameter.

See Also:

[RackDefocus](#)

[ZBlur](#)

[ZGlow](#)

[ZConvolve](#)

[ZFogLinear](#)

[Sapphire](#)

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S_ZFogExponential

Mixes a fog color into the source clip using depth values from a ZBuffer input. The fog starts at the nearest depth and increases exponentially to the farthest depth at a rate depending on the Fog Density.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

ZBuffer: The input clip containing depth values for each Source pixel. These values should be in the range of black to white, and it is best if not anti-aliased. Normally black corresponds to the farthest objects and white to the nearest, though this can be adjusted using Z Buffer parameter.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Fog Color: *Default* *rgb: [0.5 0.5 0.5].*

The fog color should normally match the sky or background color of the source clip. Use gray for mist, brown for smog, blue for underwater, etc.

Fog Density: *Default: 0.7, Range: 0 to 1.*

The density of the fog.

Z Buffer Type: *Popup menu, Default: White is Near.*

How to interpret the values in the Z buffer.

Black is Near: Black pixels in the Z buffer indicate that the object at that point is near (close to you), and white means far away.

White is Near: White pixels in the Z buffer indicate that the object at that point is near (close to you), and black means far away.

Zbuffer Use: *Popup menu, Default: Luma.*

Determines how the ZBuffer input channels make a monochrome z image.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

See Also:

[ZFogLinear](#)
[ZBlur](#)

[ZComp](#)
[ZGlow](#)

[Sapphire](#)
[Plug-ins](#)

Introduction

S_ZFogLinear

Mixes a fog color into the source clip using depth values from a ZBuffer input. The fog amount varies linearly between Fog Near and Fog Far depending on the depth.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

ZBuffer: The input clip containing depth values for each Source pixel. These values should be in the range of black to white, and it is best if not anti-aliased. Normally black corresponds to the farthest objects and white to the nearest, though this can be adjusted using Z Buffer parameter.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Fog Color: *Default* *rgb: [0.5 0.5 0.5].*

The fog color should normally match the sky or background color of the source clip. Use gray for mist, brown for smog, blue for underwater, etc.

Fog Near: *Default: 0, Range: 0 to 1.*

The amount of fog to add to nearby (close) objects.

Fog Far: *Default: 0.8, Range: 0 to 1.*

The amount of fog to add to far away objects.

Z Buffer Type: *Popup menu, Default: White is Near.*

How to interpret the values in the Z buffer.

Black is Near: Black pixels in the Z buffer indicate that the object at that point is near (close to you), and white means far away.

White is Near: White pixels in the Z buffer indicate that the object at that point is near (close to you), and black means far away.

Zbuffer Use: *Popup menu, Default: Luma.*

Determines how the ZBuffer input channels make a monochrome z image.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

See Also:

[ZFogExponential](#)
[ZBlur](#)

[ZComp](#) [Sapphire](#)
[ZGlow](#) [Plug-ins](#)
[Introduction](#)

S_ZGlow

Glows areas of the source clip with varying widths depending on the depth values from a ZBuffer input. Separates the input into a number of layers and applies different amounts of glow depending on Width Near, Width Far, Brightness Near, and Brightness Far parameters.

In the Sapphire Lighting effects submenu.



Inputs:

Source: The clip to be processed.

ZBuffer: The input clip containing depth values for each Source pixel. These values should be in the range of black to white, and it is best if not anti-aliased. Normally black corresponds to the farthest objects and white to the nearest, though this can be adjusted using Z Buffer parameter.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Brightness: *Default: 2, Range: 0 or greater.*

Scales the brightness of all the glows.

Color: *Default rgb: [1 1 1].*

Scales the color of the glow. The colors and brightnesses of the glow are also affected by the Source input.

Width Near: *Default: 0.0336, Range: 0 or greater.*

The glow width of near (close) objects.

Width Far: *Default: 0.4, Range: 0 or greater.*

The glow width of far away objects.

Threshold: *Default: 0.5, Range: 0 or greater.*

Glows are generated from locations in the source clip that are brighter than this value. A value of 0.9 causes glows at only the brightest spots. A value of 0 causes glows for every non-black area.

Threshold Add Color: *Default rgb: [0 0 0].*

This can be used to raise the threshold on a specific color and thereby reduce the glow generated on areas of the source clip containing that color.

Zbuffer Type: *Popup menu, Default: White is Near.*

How to interpret the values in the Z buffer.

Black is Near: Black pixels in the Z buffer indicate that the object at that point is near (close to you), and white means far away.

White is Near: White pixels in the Z buffer indicate that the object at that point is near (close to you), and black means far away.

Z Min: *Default: 0, Range: 0 to 1.*

Clamps all Z values to this minimum bound. Use this parameter to create a constant glow on all parts of the image nearer than Z Min.

Z Max: *Default: 1, Range: 0 to 1.*

Clamps all Z values to this maximum bound. Use this parameter to create a constant glow on all parts of the image farther than Z Max.

Layers: *Integer, Default: 5, Range: 2 to 50.*

The number of depth layers to separate the source into. More layers require more processing but give smoother results in Z. More layers are sometimes needed to avoid visible seams between the layers.

Brightness Near: *Default: 1, Range: 0 or greater.*

Scales the glow brightness for near objects.

Color Near: *Default rgb: [1 1 1].*

Scales the glow color for near objects.

Width Red Near: *Default: 1, Range: 0 or greater.*

Scales the red glow width for near objects.

Width Green Near: *Default: 1, Range: 0 or greater.*

Scales the green glow width for near objects.

Width Blue Near: *Default: 1, Range: 0 or greater.*

Scales the blue glow width for near objects.

Brightness Far: *Default: 1, Range: 0 or greater.*

Scales the glow brightness for far objects.

Color Far: *Default rgb: [1 1 1].*

Scales the glow color for far objects.

Width Red Far: *Default: 1, Range: 0 or greater.*

Scales the red glow width for far objects.

Width Green Far: *Default: 1, Range: 0 or greater.*

Scales the green glow width for far objects.

Width Blue Far: *Default: 1, Range: 0 or greater.*

Scales the blue glow width for far objects.

Width X: *Default: 1, Range: 0 or greater.*

Scales the horizontal glow width. Set to 0 for vertical only.

Width Y: *Default: 1, Range: 0 or greater.*

Scales the vertical glow width. Set to 0 for horizontal only.

Width Red: *Default: 1, Range: 0 or greater.*

Scales the red glow width. If the red, green, and blue widths are equal, the glows will match the color of the source clip. If they are not equal, the glows will vary in color with distance.

Width Green: *Default: 1.2, Range: 0 or greater.*

Scales the green glow width.

Width Blue: *Default:* 1.4, *Range:* 0 or greater.
Scales the blue glow width.

Affect Alpha: *Default:* 0, *Range:* 0 or greater.
If this value is positive the output Alpha channel will include some opacity from the zs. The maximum of the red, green, and blue z brightness is scaled by this value and combined with the background Alpha at each pixel.

Source Opacity: *Default:* 1, *Range:* 0 to 1.
Scales the opacity of the Source input when combined with the zs. This does not affect the generation of the zs themselves.

Zbuffer Use: *Popup menu, Default: Luma.*
Determines how the ZBuffer input channels make a monochrome z image.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Expand Borders: *Check-box, Default: off.*
If enabled, transparent borders are added to the input image before processing. This allows the result to include soft edges beyond the original image size. When off, the effect only occurs within the frame and the result will retain an edge at the borders.

Show Width Near: *Check-box, Default: on.*
Turns on or off the screen user interface for adjusting the Width Near parameter.

Show Width Far: *Check-box, Default: on.*
Turns on or off the screen user interface for adjusting the Width Far parameter.

See Also:

[ZBlur](#)
[ZDefocus](#)
[ZConvolve](#)
[ZFogLinear](#)

[Glow](#)
[Glint](#)
[Glare](#)

[Sapphire](#)
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S_Zap

Generates lightning bolts between two points, and renders them over a background. Increase the number of bolts to give a electrical plasma effect. Increase Vary Endpoint to spread out the ends of the bolts. Adjust the Glow Color for differently colored results. The Wiggle Speed parameter causes the bolts to automatically undulate over time.

In the Sapphire Render effects submenu.



Inputs:

Background: *Optional.* The clip to use as background.

Mask: *Optional.* If provided, defines the region where the lightning should be rendered. The glow on the lightning will bleed into areas with no lightning for a natural look.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Effect: *Popup menu, Default: 2D.*

Selects between 2D and 3D modes.

2D: creates a zap along a spline.

3D: creates a three-dimensional zap.

Mocha Project: *Default: 0, Range: 0 or greater.*

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default: 0, Range: 0 or greater.*

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default: 1, Range: 0 to 1.*

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default: off.*

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default: 1, Range: 0 to 2.*

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default: 1, Range: 0 to 2.*

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default: 1, Range: 0 to 2.*

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Bolts: *Integer*, *Default:* 1, *Range:* 1 to 500.

The number of lightning bolts to draw, each between the Start and End location.

Start: *X & Y*, *Default:* [-0.5 0.596], *Range:* any.

The starting point of the bolts.

Start Uses Mocha: *Check-box*, *Default:* off.

Controls whether the starting point is controlled by the Start parameter or follows the Start point track from Mocha.

Smooth Start Track: *Integer*, *Default:* 0, *Range:* 0 or greater.

Controls how many points to average when stabilizing the Mocha point track.

Point 1 Enable: *Check-box*, *Default:* off.

Turns on or off the first control point.

Control Point 1: *X & Y*, *Default:* [-0.33 0.4], *Range:* any.

First spline control point.

Point1 Uses Mocha: *Check-box*, *Default:* off.

Controls whether point 1 is controlled by the Control Point 1 parameter or follows the Control Point 1 track from Mocha.

Smooth Point1 Track: *Integer*, *Default:* 0, *Range:* 0 or greater.

Controls how many points to average when stabilizing the Mocha point track.

Point 2 Enable: *Check-box*, *Default:* off.

Turns on or off the second control point.

Control Point 2: *X & Y*, *Default:* [0.1 0.25], *Range:* any.

Second spline control point.

Point2 Uses Mocha: *Check-box*, *Default:* off.

Controls whether point 2 is controlled by the Control Point 2 parameter or follows the Control Point 2 track from Mocha.

Smooth Point2 Track: *Integer*, *Default:* 0, *Range:* 0 or greater.

Controls how many points to average when stabilizing the Mocha point track.

Point 3 Enable: *Check-box*, *Default:* on.

Turns on or off the third control point.

Control Point 3: *X & Y*, *Default:* [0.4 0], *Range:* any.

Third spline control point.

Point3 Uses Mocha: *Check-box, Default: off.*

Controls whether point 3 is controlled by the Control Point 3 parameter or follows the Control Point 3 track from Mocha.

Smooth Point3 Track: *Integer, Default: 0, Range: 0 or greater.*

Controls how many points to average when stabilizing the Mocha point track.

Point 4 Enable: *Check-box, Default: off.*

Turns on or off the fourth control point.

Control Point 4: *X & Y, Default: [0.45 –0.33], Range: any.*

Fourth spline control point.

Point4 Uses Mocha: *Check-box, Default: off.*

Controls whether point 4 is controlled by the Control Point 4 parameter or follows the Control Point 4 track from Mocha.

Smooth Point4 Track: *Integer, Default: 0, Range: 0 or greater.*

Controls how many points to average when stabilizing the Mocha point track.

End: *X & Y, Default: [0.5 –0.596], Range: any.*

The end point of the bolts. This parameter can be adjusted using the End Widget.

End Uses Mocha: *Check-box, Default: off.*

Controls whether the end point is controlled by the End parameter or follows the End point track from Mocha.

Smooth End Track: *Integer, Default: 0, Range: 0 or greater.*

Controls how many points to average when stabilizing the Mocha point track.

Vary Endpoint: *Default: 0, Range: 0 or greater.*

Offsets the End location by a random amount within a circle of this radius. If Bolts is greater than 1, this can be useful to spread out the different End points. For example, you can create multiple radiating bolts by increasing this radius and placing the End point near the Start point. This parameter can also be adjusted using the End Widget, after it is made positive.

Bolt Width: *Default: 0.07, Range: 0 or greater.*

The width of the lightning bolts.

Vary Width: *Default: 0, Range: 0 to 1.*

The amount of random variation in the width of the bolts along their lengths.

End Pointiness: *Default: 0.1, Range: 0 to 1.*

Determines how pointed the end of the bolts are. If 0, the entire bolt will have equal width. If 1, the bolts will thin out along their entire length for a pointed end. If it is .5, the bolts will start thinning out half way between the start and end points.

Wiggle Start: *Default: 0, Range: 0 or greater.*

By default the bolts automatically wiggle over time. This parameter provides a starting offset for these bolt perturbations.

Wiggle Speed: *Default: 1, Range: 0 or greater.*

The speed at which the bolts are perturbed automatically over time. To animate changes in speed, set this to zero and animate the Wiggle Start parameter instead.

Jitter Frames: *Integer, Default: 0, Range: 0 or greater.*

If this is 0, the same random lightning will be used for every frame processed. If it is 1, different random lightning is

used for each frame. If it is 2, new random lightning is used for every other frame, and so on.

Rand Seed: *Default:* 0.123, *Range:* 0 or greater.

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different random lightning bolts, and the same value should give a repeatable result.

Wrinkle Amp: *Default:* 1, *Range:* 0 or greater.

Scales the amount of wrinkles in the bolts. Decrease for straighter smoother bolts or increase for more kinky bolts.

Curve Amp: *Default:* 0.5, *Range:* 0 or greater.

Similar to Wrinkle Amp but affects the general path of the bolt. If decreased, the bolt will stay closer to the line between the Start and End points. If increased it can wander further away from this line. This differs from the Wrinkle Amp parameter in that it can be used to make straighter bolts while still keeping the wrinkles at the detailed level.

Branchiness: *Default:* 1, *Range:* 0 to 20.

Scales the number of additional bolts that branch from the main bolt. Set this to 0 for basic bolts with no extra branches.

Branch Angle: *Default:* 65, *Range:* 0 to 180.

The maximum angle of the random branches relative to the bolt they are branching off of. If this is 0 the branches will be more lined up with the main bolt. With larger values the branches will be more perpendicular to the main bolt.

Branch Length: *Default:* 0.5, *Range:* 0 to 3.

The scaled length of the branches relative to the distance between the Start and End points.

Glow Parameters:

Glow Bright: *Default:* 2, *Range:* 0 or greater.

Scales the brightness of the glow applied to the lightning.

Glow Color: *Default* `rgb: [0.5 0.5 1]`.

The color of the glow applied to the lightning.

Glow Width: *Default:* 0.224, *Range:* 0 or greater.

The width of the glow applied to the lightning.

Glow Width Red: *Default:* 0.5, *Range:* 0 or greater.

The relative red width of the glow.

Glow Width Grn: *Default:* 1, *Range:* 0 or greater.

The relative green width of the glow.

Glow Width Blue: *Default:* 1.5, *Range:* 0 or greater.

The relative blue width of the glow.

Affect Alpha: *Default:* 0, *Range:* 0 or greater.

If this value is positive the output Alpha channel will include some opacity from the lightning and its glow. The maximum of the red, green, and blue brightness is scaled by this value and combined with the background Alpha at each pixel.

Other Parameters:

Zap Bright: *Default:* 1, *Range:* 0 or greater.

Scales the brightness of the lightning bolts.

Zap Color: *Default*: `rgb: [1 1 1]`.

The color of the lightning. If you want to keep the lightning bolt itself bright white, you can still affect the perceived color by adjusting the Glow Color instead.

Start Offset: *Default*: 0, *Range*: 0 to 1.

The offset from the start point to begin drawing the bolts. This can be useful for animating a lightning strike.

Length: *Default*: 1, *Range*: 0 to 1.

The length of the bolts, beginning at Start Offset. If less than 1, the bolts will not be drawn all the way from start to end. This can be useful for animating a lightning strike.

Bg Brightness: *Default*: 1, *Range*: 0 or greater.

Scales the brightness of the background before combining with the lightning. If 0, the result will contain only the lightning image over black.

Combine: *Popup menu*, *Default*: *Screen*.

Determines how the lightning and glow are combined with the Background.

Screen: performs a blend function which can help prevent overly bright results.

Add: causes the lightning to be added to the background. This gives brighter glows over light backgrounds.

Zap Only: displays the lightning over black, ignoring the source image.

Atmosphere Amp: *Default*: 0, *Range*: 0 or greater.

Atmosphere gives the effect of the zap shining through a dusty atmosphere and picking up light or getting shadowed. This parameter adjusts the amount, or amplitude, of the atmospheric effect. Zero gives a smooth zap, higher values give more dusty look.

Atmosphere Freq: *Default*: 2, *Range*: 0.1 to 20.

Controls the spatial frequency of the atmospheric noise. Turn this up higher to get finer details, turn down for broader overall variation.

Atmosphere Detail: *Default*: 0.7, *Range*: 0 to 1.

Controls the amount of fine detail in the atmosphere simulation. Decrease to get smoother atmosphere, increase for a more crunchy or grainy look.

Atmosphere Seed: *Default*: 0.123, *Range*: 0 or greater.

Used to initialize the random number generator for the atmospheric noise. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Atmosphere Speed: *Default*: 1, *Range*: any.

The cloudy noise in the atmosphere evolves over time like real dust clouds; this parameter controls how fast the cloud pattern changes over time. Set to zero for a static pattern.

Show: *Popup menu*, *Default*: *Result*.

Selects what the effect will output.

Result: shows the normal lightning result over the background.

ZBuffer: shows a depth map of the lightning which can be used for compositing or to control other effects.

Swivel Zap: *Default*: -45, *Range*: any.

In 3D mode, rotates the lightning left or right about a vertical axis.

Tilt Zap: *Default*: -15, *Range*: any.

In 3D mode, rotates the lightning up or down about a horizontal axis. You can use Swivel and Tilt together to rotate about arbitrary diagonal axes.

Camera Zoom: *Default*: 0, *Range*: -5 to 1.

In 3D mode, zooms in or out on the lightning.

Glow Fade: *Default:* 0.2, *Range:* 0 or greater.

In 3D mode, fades out the glow on more distant parts of the lightning.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Spline: *Check-box, Default:* on.

Turns on or off the screen user interface for adjusting the Start parameter.

Show Vary Endpoint: *Check-box, Default:* on.

Turns on or off the screen user interface for adjusting the End parameter.

See general info for [Motion Blur](#)

See Also:

[ZapTo](#)

[Sapphire Plug-ins](#)

[ZapFrom](#)

[Introduction](#)

S_ZapFrom

Generates multiple lightning bolts outwards from the edges of objects in the FromObj input clip, and renders them over a background input. Use the Show:Edges option to view the source edges while adjusting the Threshold and Blur From Obj parameters.

In the Sapphire Render effects submenu.



Inputs:

Background: The clip to use as background. If none is selected the main input (the current layer) is also used for the background.

FromObject: *Optional.* The edges of objects in this clip are extracted, and the lightning starts at points along these edges.

Mask: *Optional.* The lengths of the bolts in each area are scaled by this input. White areas generate normal bolts, gray areas generate shorter bolts, and black areas cause no bolts to be made.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y, Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box, Default: off.*

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box, Default: off.*

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Surface Bolts: *Integer, Default: 25, Range: 1 to 2000.*

The number of points along the edges to generate lightning bolts from. These surface bolts are divided up amongst the isolated shapes in the FromObject input, proportionally to the sizes of the shapes.

Threshold: *Default: 0.5, Range: 0 or greater.*

The value used to determine the edge locations. Objects darker than this value are ignored. On smooth objects, larger threshold values move the edges inwards to make smaller shapes, and smaller values move the edges outwards. You can use the Show Edges option to view the edge image directly while adjusting this parameter.

Blur FromObj: *Default: 0.088, Range: 0 or greater.*

Blurs the FromObject input clip before finding the edges. This can help remove noise, and reduce the number of separate shapes. You can use the Show Edges option to view the edge image directly while adjusting this parameter.

FromObj Use: *Popup menu, Default: Luma.*

Determines which channel of the FromObject input channels are used.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Show: *Popup menu, Default: Result.*

Selects the output option.

Result: shows the normal lightning result over the background.

Edges: shows the edge image. This can be useful to view while adjusting the Threshold and Blur From Obj parameters.

Max Length: *Default: 0.2, Range: 0 or greater.*

Scales the length of the bolts.

Vary Length: *Default: 0.5, Range: 0 to 1.*

The amount to randomly vary the length of each bolt. A value of 0 makes all bolt lengths equal to Max Length, and a value of 1 makes bolt lengths between zero and Max Length.

Vary Spacing: *Default: 0.5, Range: 0 or greater.*

The amount to randomly vary the starting point of each bolt along the edges. A value of 0 makes the bolts regularly spaced, and value of 1 make the bolts randomly spaced.

Bolt Width: *Default: 0.07, Range: 0 or greater.*

The width of the lightning bolts.

Vary Width: *Default: 0, Range: 0 to 1.*

The amount of random variation in the width of the bolts along their lengths.

End Pointiness: *Default: 1, Range: 0 to 1.*

Determines how pointed the end of the bolts are. If 0, the entire bolt will have equal width. If 1, the bolts will thin

out along their entire length for a pointed end. If it is .5, the bolts will start thinning out half way between the start and end points.

Wiggle Start: *Default: 0, Range: 0 or greater.*

By default the bolts automatically wiggle over time. This parameter provides a starting offset for these bolt perturbations.

Wiggle Speed: *Default: 1, Range: 0 or greater.*

The speed at which the bolts are perturbed automatically over time. To animate changes in speed, set this to zero and animate the Wiggle Start parameter instead.

Jitter Frames: *Integer, Default: 0, Range: 0 or greater.*

If this is 0, the same random lightning will be used for every frame processed. If it is 1, different random lightning is used for each frame. If it is 2, new random lightning is used for every other frame, and so on.

Rand Seed: *Default: 0.123, Range: 0 or greater.*

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different random lightning bolts, and the same value should give a repeatable result.

Wrinkle Amp: *Default: 1, Range: 0 or greater.*

Scales the amount of wrinkles in the bolts. Decrease for straighter smoother bolts or increase for more kinky bolts.

Curve Amp: *Default: 0.5, Range: 0 or greater.*

Similar to Wrinkle Amp but affects the general path of the bolt. If decreased, the bolt will stay closer to the line between the Start and End points. If increased it can wander further away from this line. This differs from the Wrinkle Amp parameter in that it can be used to make straighter bolts while still keeping the wrinkles at the detailed level.

Branchiness: *Default: 1, Range: 0 to 10.*

Scales the number of additional bolts that branch from the main bolt. Set this to 0 for basic bolts with no extra branches.

Branch Angle: *Default: 65, Range: 0 to 180.*

The maximum angle of the random branches relative to the bolt they are branching off of. If this is 0 the branches will be more lined up with the main bolt. With larger values the branches will be more perpendicular to the main bolt.

Branch Length: *Default: 0.5, Range: 0 to 3.*

The scaled length of the branches relative to the distance between the Start and End points.

Glow Parameters:

Glow Bright: *Default: 2, Range: 0 or greater.*

Scales the brightness of the glow applied to the lightning.

Glow Color: *Default rgb: [0.5 0.5 1].*

The color of the glow applied to the lightning.

Glow Width: *Default: 0.224, Range: 0 or greater.*

The width of the glow applied to the lightning.

Glow Width Red: *Default: 0.5, Range: 0 or greater.*

The relative red width of the glow.

Glow Width Grn: *Default: 1, Range: 0 or greater.*

The relative green width of the glow.

Glow Width Blue: *Default: 1.5, Range: 0 or greater.*

The relative blue width of the glow.

Affect Alpha: *Default: 0, Range: 0 or greater.*

If this value is positive the output Alpha channel will include some opacity from the lightning and its glow. The maximum of the red, green, and blue brightness is scaled by this value and combined with the background Alpha at each pixel.

Other Parameters:

Zap Bright: *Default: 1, Range: 0 or greater.*

Scales the brightness of the lightning bolts.

Zap Color: *Default rgb: [1 1 1].*

The color of the lightning. If you want to keep the lightning bolt itself bright white, you can still affect the perceived color by adjusting the Glow Color instead.

Start Offset: *Default: 0, Range: 0 to 1.*

The offset from the start point to begin drawing the bolts. This can be useful for animating a lightning strike.

Length: *Default: 1, Range: 0 to 1.*

The length of the bolts, beginning at Start Offset. If less than 1, the bolts will not be drawn all the way from start to end. This can be useful for animating a lightning strike.

Bg Brightness: *Default: 1, Range: 0 or greater.*

Scales the brightness of the background before combining with the lightning. If 0, the result will contain only the lightning image over black.

Combine: *Popup menu, Default: Screen.*

Determines how the lightning and glow are combined with the Background.

Screen: performs a blend function which can help prevent overly bright results.

Add: causes the lightning to be added to the background. This gives brighter glows over light backgrounds.

Zap Only: displays the lightning over black, ignoring the source image.

Blur Mask: *Default: 0, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Atmosphere Amp: *Default: 0, Range: 0 or greater.*

Atmosphere gives the effect of the zap shining through a dusty atmosphere and picking up light or getting shadowed. This parameter adjusts the amount, or amplitude, of the atmospheric effect. Zero gives a smooth zap, higher values give more dusty look.

Atmosphere Freq: *Default: 2, Range: 0.1 to 20.*

Controls the spatial frequency of the atmospheric noise. Turn this up higher to get finer details, turn down for broader overall variation.

Atmosphere Detail: *Default:* 0.7, *Range:* 0 to 1.

Controls the amount of fine detail in the atmosphere simulation. Decrease to get smoother atmosphere, increase for a more crunchy or grainy look.

Atmosphere Seed: *Default:* 0.123, *Range:* 0 or greater.

Used to initialize the random number generator for the atmospheric noise. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Atmosphere Speed: *Default:* 1, *Range:* any.

The cloudy noise in the atmosphere evolves over time like real dust clouds; this parameter controls how fast the cloud pattern changes over time. Set to zero for a static pattern.

See general info for [Motion Blur](#)

See Also:

[Zap](#) [Sapphire Plug-ins](#)
[ZapTo](#) [Introduction](#)

S_ZapTo

Generates a forked lightning bolt from a given point to the edges of objects in the ToObject input clip, and renders it over a background input. Use the Show:Edges option to view the target edges while adjusting the Threshold and Blur To Obj parameters.

In the Sapphire Render effects submenu.



Inputs:

Background: The clip to use as background. If none is selected the main input (the current layer) is also used for the background.

ToObject: *Optional.* The edges of objects in this clip are extracted, and the lightning connects to points along these edges facing towards the starting point.

Mask: *Optional.* If provided, this input is used to control which edges are used to attract the lightning. Edges found in black areas will not be used. Edges found in white areas will be used as normal. Edges found in grey areas will be scaled down.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box, Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.
Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.
Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.
Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu*, *Default:* Union.
Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Surface Points: *Integer*, *Default:* 10, *Range:* 1 to 500.

The number of points along the edges to connect the lightning to. These surface points are divided up amongst the shapes in the ToObject input. If the number of requested surface points is equal to the number of separate shapes in the ToObject input, one lightning fork will connect to each.

Bolts: *Integer*, *Default:* 1, *Range:* 1 to 200.

The number of independent forked lightning bolts to draw, each connecting the Start position with the edge points.

Start: *X & Y*, *Default:* [0 0], *Range:* any.

The starting position of the lightning.

Max Dist: *Default:* 2, *Range:* 0 to 5.6.

The maximum distance of surface points from the Start position. Edges outside this distance are ignored.

Threshold: *Default:* 0.5, *Range:* 0 or greater.

The value used to determine the edge locations. Objects darker than this value are ignored. On smooth objects, larger threshold values move the edges inwards to make smaller shapes, and smaller values move the edges outwards. You can use the Show Edges option to view the edge image directly while adjusting this parameter.

Blur ToObj: *Default:* 0.0224, *Range:* 0 or greater.

Blurs the ToObject input clip before finding the edges. This can help remove noise, and reduce the number of separate shapes. You can use the Show Edges option to view the edge image directly while adjusting this parameter.

ToObj Use: *Popup menu*, *Default:* Luma.

Determines which channel of the ToObject input channels are used.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Show: *Popup menu*, *Default:* Result.

Selects what the effect will output.

Result: shows the normal lightning result over the background.

Edges: shows the target edge image. This can be useful to view while adjusting the Threshold and Blur To Obj parameters.

Bolt Width: *Default:* 0.07, *Range:* 0 or greater.

The width of the lightning bolts.

Vary Width: *Default:* 0, *Range:* 0 to 1.

The amount of random variation in the width of the bolts along their lengths.

End Pointiness: *Default: 0.25, Range: 0 to 1.*

Determines how pointed the end of the bolts are. If 0, the entire bolt will have equal width. If 1, the bolts will thin out along their entire length for a pointed end. If it is .5, the bolts will start thinning out half way between the start and end points.

Wiggle Start: *Default: 0, Range: 0 or greater.*

By default the bolts automatically wiggle over time. This parameter provides a starting offset for these bolt perturbations.

Wiggle Speed: *Default: 1, Range: 0 or greater.*

The speed at which the bolts are perturbed automatically over time. To animate changes in speed, set this to zero and animate the Wiggle Start parameter instead.

Jitter Frames: *Integer, Default: 0, Range: 0 or greater.*

If this is 0, the same random lightning will be used for every frame processed. If it is 1, different random lightning is used for each frame. If it is 2, new random lightning is used for every other frame, and so on.

Rand Seed: *Default: 0.123, Range: 0 or greater.*

Used to initialize the random number generator. The actual seed value is not significant, but different seeds give different random lightning bolts, and the same value should give a repeatable result.

Wrinkle Amp: *Default: 1, Range: 0 or greater.*

Scales the amount of wrinkles in the bolts. Decrease for straighter smoother bolts or increase for more kinky bolts.

Branchiness: *Default: 1, Range: 0 to 20.*

Scales the number of additional bolts that branch from the main bolt. Set this to 0 for basic bolts with no extra branches.

Branch Angle: *Default: 65, Range: 0 to 180.*

The maximum angle of the random branches relative to the bolt they are branching off of. If this is 0 the branches will be more lined up with the main bolt. With larger values the branches will be more perpendicular to the main bolt.

Branch Length: *Default: 0.5, Range: 0 to 3.*

The scaled length of the branches relative to the distance between the Start and End points.

Glow Parameters:

Glow Bright: *Default: 2, Range: 0 or greater.*

Scales the brightness of the glow applied to the lightning.

Glow Color: *Default rgb: [0.5 0.5 1].*

The color of the glow applied to the lightning.

Glow Width: *Default: 0.224, Range: 0 or greater.*

The width of the glow applied to the lightning.

Glow Width Red: *Default: 0.5, Range: 0 or greater.*

The relative red width of the glow.

Glow Width Grn: *Default: 1, Range: 0 or greater.*

The relative green width of the glow.

Glow Width Blue: *Default: 1.5, Range: 0 or greater.*

The relative blue width of the glow.

Affect Alpha: *Default: 0, Range: 0 or greater.*

If this value is positive the output Alpha channel will include some opacity from the lightning and its glow. The

maximum of the red, green, and blue brightness is scaled by this value and combined with the background Alpha at each pixel.

Other Parameters:

Zap Bright: *Default: 1, Range: 0 or greater.*
Scales the brightness of the lightning bolts.

Zap Color: *Default rgb: [1 1 1].*
The color of the lightning. If you want to keep the lightning bolt itself bright white, you can still affect the perceived color by adjusting the Glow Color instead.

Start Offset: *Default: 0, Range: 0 to 1.*
The offset from the start point to begin drawing the bolts. This can be useful for animating a lightning strike.

Length: *Default: 1, Range: 0 to 1.*
The length of the bolts, beginning at Start Offset. If less than 1, the bolts will not be drawn all the way from start to end. This can be useful for animating a lightning strike.

Bg Brightness: *Default: 1, Range: 0 or greater.*
Scales the brightness of the background before combining with the lightning. If 0, the result will contain only the lightning image over black.

Combine: *Popup menu, Default: Screen.*
Determines how the lightning and glow are combined with the Background.

Screen: performs a blend function which can help prevent overly bright results.
Add: causes the lightning to be added to the background. This gives brighter glows over light backgrounds.
Zap Only: displays the lightning over black, ignoring the source image.

Atmosphere Amp: *Default: 0, Range: 0 or greater.*
Atmosphere gives the effect of the zap shining through a dusty atmosphere and picking up light or getting shadowed. This parameter adjusts the amount, or amplitude, of the atmospheric effect. Zero gives a smooth zap, higher values give more dusty look.

Atmosphere Freq: *Default: 2, Range: 0.1 to 20.*
Controls the spatial frequency of the atmospheric noise. Turn this up higher to get finer details, turn down for broader overall variation.

Atmosphere Detail: *Default: 0.7, Range: 0 to 1.*
Controls the amount of fine detail in the atmosphere simulation. Decrease to get smoother atmosphere, increase for a more crunchy or grainy look.

Atmosphere Seed: *Default: 0.123, Range: 0 or greater.*
Used to initialize the random number generator for the atmospheric noise. The actual seed value is not significant, but different seeds give different results and the same value should give a repeatable result.

Atmosphere Speed: *Default: 1, Range: any.*
The cloudy noise in the atmosphere evolves over time like real dust clouds; this parameter controls how fast the cloud pattern changes over time. Set to zero for a static pattern.

Mask Use: *Popup menu, Default: Luma.*
Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.
Alpha: only the Alpha channel is used.

Blur Mask: *Default:* 0.05, *Range:* 0 or greater.

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box*, *Default:* off.

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

Show Start: *Check-box*, *Default:* on.

Turns on or off the screen user interface for adjusting the Start parameter.

See general info for [Motion Blur](#)

See Also:

[Zap](#)

[ZapFrom](#)

[Sapphire Plug-ins](#)

[Introduction](#)

S_Zebrafy

Modulates the brightness of the source clip with a sinusoid to give a black and white solarized look.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Source Blur: *Default: 0.088, Range: 0 or greater.*

Smooths the source edges by this amount.

Frequency: *Default: 4, Range: 0.01 or greater.*

The frequency of the stripe pattern. Increase for more color cycles.

Phase Start: *Default: 0, Range: any.*

The phase shift of the stripe pattern.

Phase Speed: *Default: 0, Range: any.*

The phase speed of the stripe pattern. If non-zero, the stripes are automatically animated to flow at this rate.

Brightness: *Default: 1, Range: 0 or greater.*

Scales the brightness of the result.

Color: *Default rgb: [1 1 1].*

Scales the color of the result. For example, if it is yellow [1 1 0], the blue of the result will be 0.

Offset: *Default: 0, Range: -8 to 2.*

Adds this gray value to the result (or subtracts if negative). 0 has no effect, .5 is middle gray, and 1 is white.

Scale By Source: *Default: 0, Range: 0 to 1.*

The brightness of the output is scaled down by the original source brightness as this is increased to 1.

Scale By Src Amp: *Default: 1, Range: 0 or greater.*

This amplifies the effect of Scale By Source, so if increased above 1, the middle grays can still retain their full brightness. It has no effect unless Scale By Source is positive.

Mix With Source: *Default: 0, Range: 0 to 1.*

Interpolates between the result (0) and the original source (1).

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:[ZebrafyColor](#)[HalfTone](#)[Sapphire](#)[Etching](#)[Plug-ins](#)

[ScanLines](#)

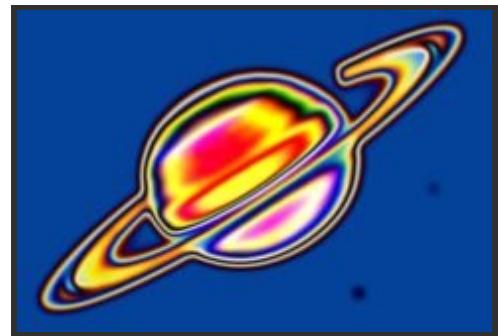
[Solarize](#)

[Introduction](#)

S_ZebrafyColor

Modulates the brightness of the source clip with sinusoids for each color channel to give a color striped effect.

In the Sapphire Stylize effects submenu.



Inputs:

Source: The clip to be processed.

Mask: *Optional.* Interpolate between the result and the Source input. White areas use the result of the effect. Black areas use the Source clip.

Parameters:

Load Preset: *Push-button.*

Brings up the Preset Browser to browse all available presets for this effect.

Save Preset: *Push-button.*

Brings up the Preset Save dialog to save a preset for this effect.

Mocha Project: *Default:* 0, *Range:* 0 or greater.

Brings up the Mocha window for tracking footage and generating masks.

Blur Mocha: *Default:* 0, *Range:* 0 or greater.

Blurs the Mocha Mask by this amount before using. This can be used to soften the edges or quantization artifacts of the mask, and smooth out the time displacements.

Mocha Opacity: *Default:* 1, *Range:* 0 to 1.

Controls the strength of the Mocha mask. Lower values reduce the intensity of the effect.

Invert Mocha: *Check-box*, *Default:* off.

If enabled, the black and white of the Mocha Mask are inverted before applying the effect.

Resize Mocha: *Default:* 1, *Range:* 0 to 2.

Scales the Mocha Mask. 1.0 is the original size.

Resize Rel X: *Default:* 1, *Range:* 0 to 2.

The relative horizontal size of the Mocha Mask.

Resize Rel Y: *Default:* 1, *Range:* 0 to 2.

The relative vertical size of the Mocha Mask.

Shift Mocha: *X & Y*, *Default:* [0 0], *Range:* any.

Offsets the position of the Mocha Mask.

Bypass Mocha: *Check-box*, *Default:* off.

Ignore the Mocha Mask and apply the effect to the entire source clip.

Show Mocha Only: *Check-box*, *Default:* off.

Bypass the effect and show the Mocha Mask itself.

Combine Masks: *Popup menu, Default: Union.*

Determines how to combine the Mocha Mask and Input Mask when both are supplied to the effect.

Union: Uses the area covered by both masks together.

Intersect: Uses the area that overlaps between the two masks.

Mocha Only: Ignore the Input Mask and only use the Mocha Mask.

Source Blur: *Default: 0.088, Range: 0 or greater.*

Smooths the source edges by this amount.

Frequency: *Default: 3, Range: 0.01 or greater.*

The frequency of the stripe pattern. Increase for more color cycles.

Freq Red: *Default: 1, Range: 0 or greater.*

The frequency of the red color component. Increase for more cycles in the red channel.

Freq Green: *Default: 1.1, Range: 0 or greater.*

The frequency of the green color component. Increase for more cycles in the green channel.

Freq Blue: *Default: 1.2, Range: 0 or greater.*

The frequency of the blue color component. Increase for more cycles in the blue channel.

Phase Start: *Default: 0, Range: any.*

The phase shift of the stripe pattern.

Phase Red: *Default: 0, Range: any.*

The phase offset of the red color component.

Phase Green: *Default: 0, Range: any.*

The phase offset of the green color component.

Phase Blue: *Default: 0, Range: any.*

The phase offset of the blue color component.

Phase Speed: *Default: 0, Range: any.*

The phase speed of the stripe pattern. If non-zero, the stripes are automatically animated to flow at this rate.

Brightness: *Default: 1, Range: 0 or greater.*

Scales the brightness of the result.

Color: *Default rgb: [1 1 1].*

Scales the color of the result. For example, if it is yellow [1 1 0], the blue of the result will be 0.

Offset: *Default: 0, Range: -8 to 2.*

Adds this gray value to the result (or subtracts if negative). 0 has no effect, .5 is middle gray, and 1 is white.

Saturation: *Default: 1, Range: 0 to 10.*

Scales the strength of the colors. Increase for more intense colors, or decrease for muted colors.

Scale By Source: *Default: 0, Range: 0 to 1.*

The brightness of the output is scaled down by the original source brightness as this is increased to 1.

Scale By Src Amp: *Default: 1, Range: 0 or greater.*

This amplifies the effect of Scale By Source, so if increased above 1, the middle grays can still retain their full brightness. It has no effect unless Scale By Source is positive.

Mix With Source: *Default: 0, Range: 0 to 1.*

Interpolates between the result (0) and the original source (1).

Mask Use: *Popup menu, Default: Luma.*

Determines how the Mask input channels are used to make a monochrome mask.

Luma: the luminance of the RGB channels is used.

Alpha: only the Alpha channel is used.

Blur Mask: *Default: 0.05, Range: 0 or greater.*

Blurs the Mask input by this amount before using. This can provide a smoother transition between the masked and unmasked areas. It has no effect unless the Mask input is provided.

Invert Mask: *Check-box, Default: off.*

If on, inverts the mask input so the effect is applied to areas where the Mask is black instead of white. This has no effect unless the Mask input is provided.

See Also:

[Zebrafy](#)

[PseudoColor](#)

[Sapphire](#)

[Solarize](#)

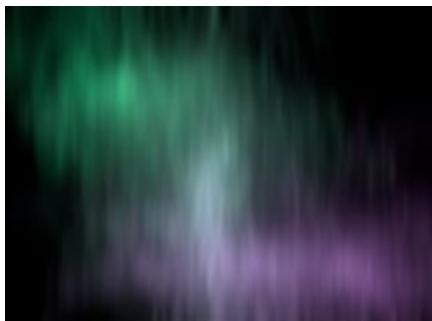
[Plug-ins](#)

[PsykoBlobs](#)

[Introduction](#)

[PsykoStripes](#)

List of Effects With Pictures



Aurora



AutoPaint



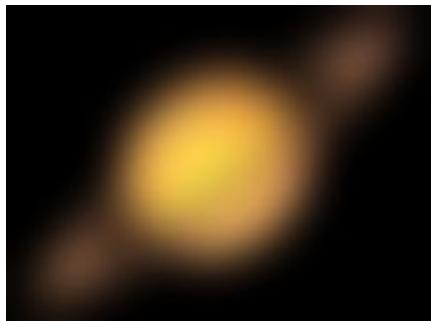
BandPass



Beauty



BleachBypass



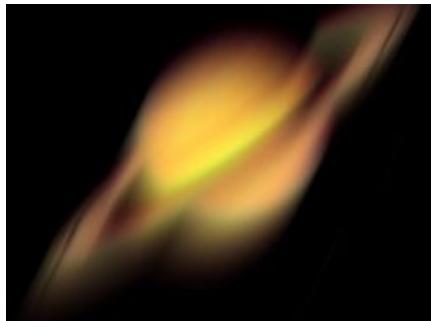
Blur



BlurChannels



BlurChroma



BlurDirectional



BlurMoCurves



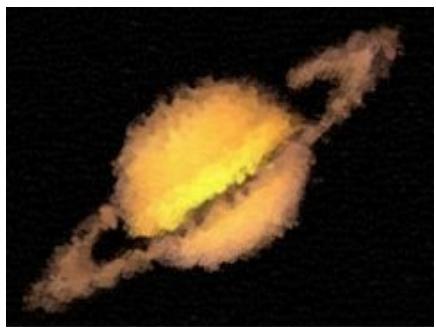
BlurMotion



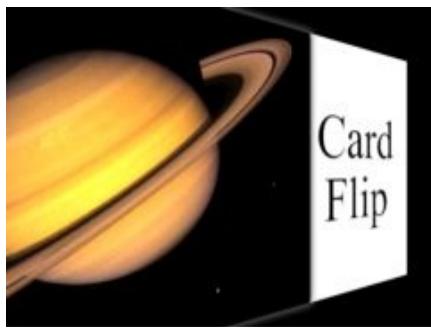
BokehLights



BrushChalk



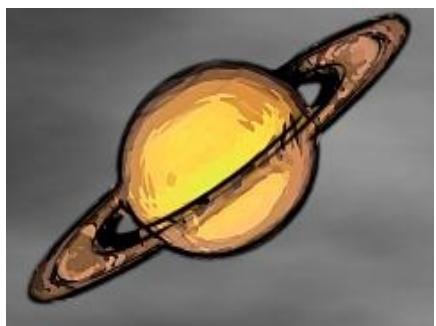
BrushOil



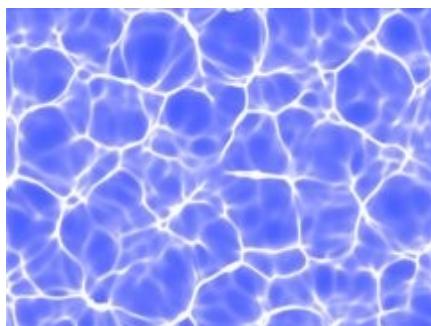
CardFlip



Cartoon



CartoonPaint



Caustics



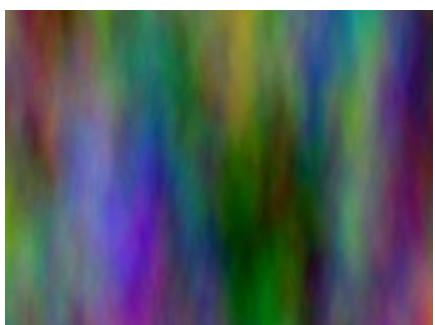
ChannelSwitcher



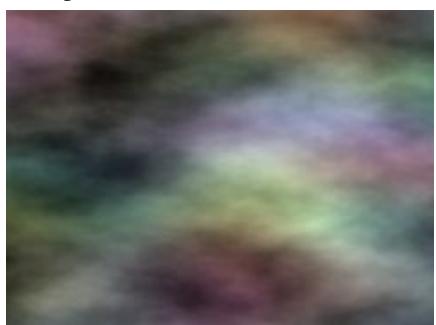
ClampChroma



Clouds



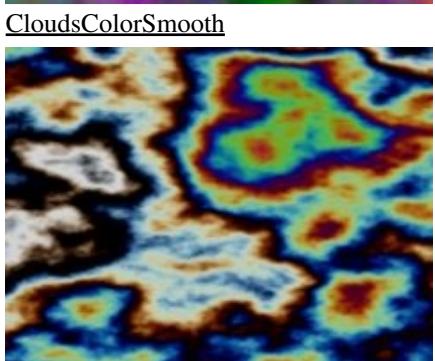
CloudsColorSmooth



CloudsMultColor



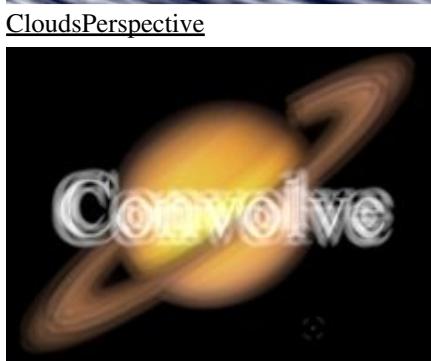
CloudsPerspective



CloudsPsyko



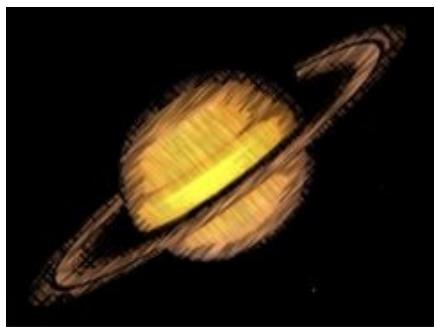
CloudsVortex



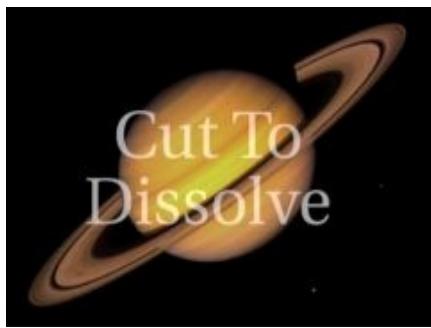
Convolve



ConvolveComp



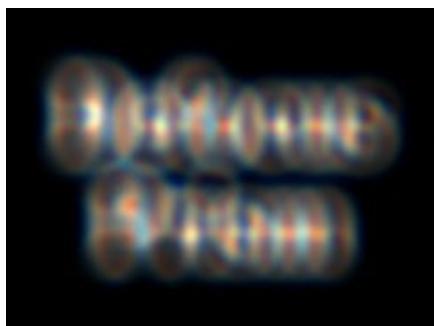
Crosshatch



CutToDissolve



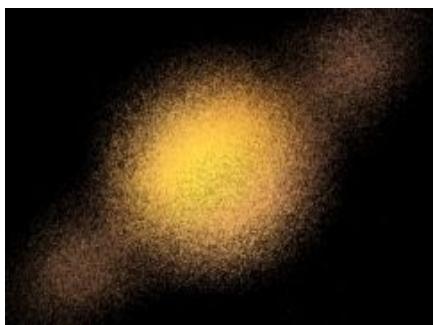
Deband



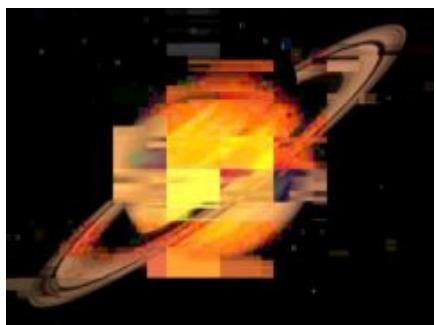
DefocusPrism



DeinterlaceAuto



Diffuse



DigitalDamage



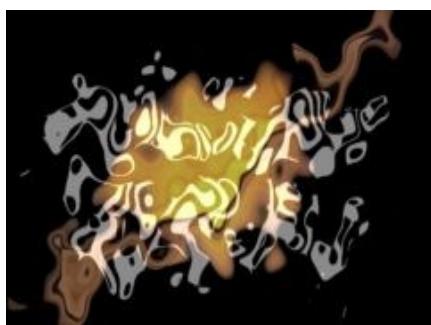
Dissolve



DissolveAutoPaint



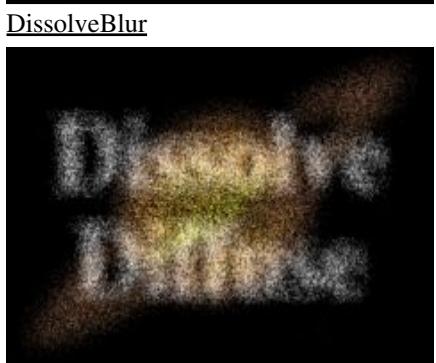
DissolveBlur



DissolveBubble



DissolveDefocus



DissolveDiffuse



DissolveDigitalDamage



DissolveDistort



DissolveEdgeRays



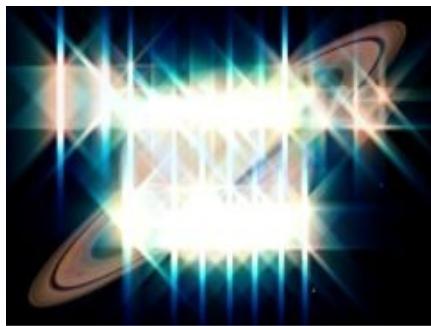
DissolveFilm



DissolveFlashbulbs



DissolveGlare



DissolveGlint



DissolveGlintRainbow



DissolveGlow



DissolveLensFlare



DissolveLuma



DissolvePixelSort



DissolvePuddle



DissolveRays



DissolveShake



DissolveSpeckle



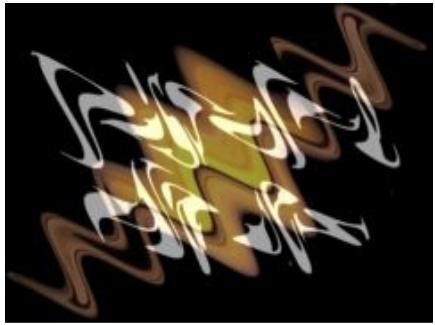
DissolveStatic



DissolveTiles



DissolveVortex



DissolveWaves



DissolveZap



Distort



DistortBlur



DistortChroma



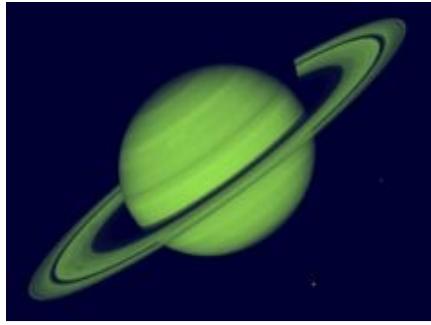
DistortRGB



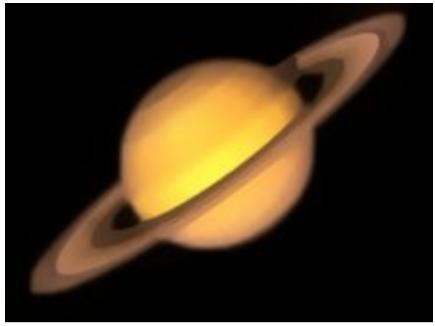
DogVision



DropShadow



DuoTone



EdgeAwareBlur



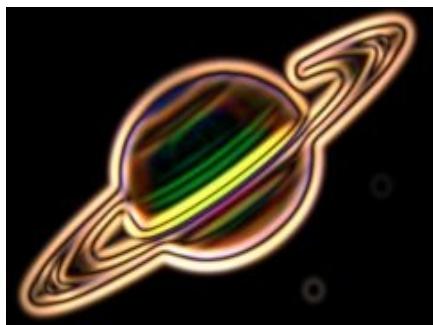
EdgeBlur



EdgeColorize



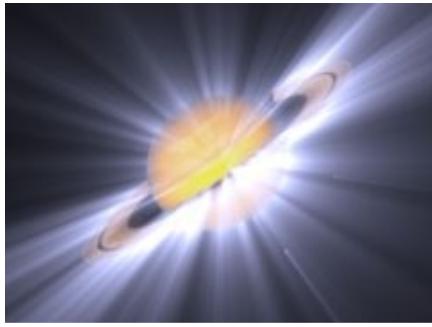
EdgeDetect



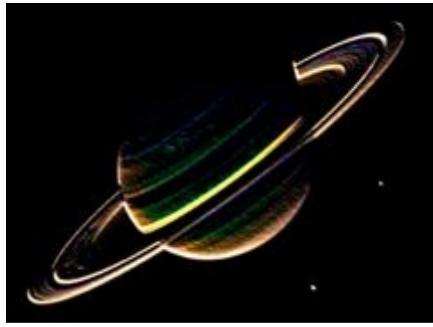
EdgeDetectDouble



EdgeFlash



EdgeRays



EdgesInDirection



Effect



Emboss



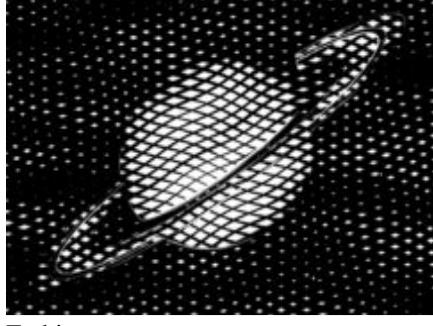
EmbossDistort



EmbossGlass



EmbossShiny



Etching



Feedback



FeedbackBubble



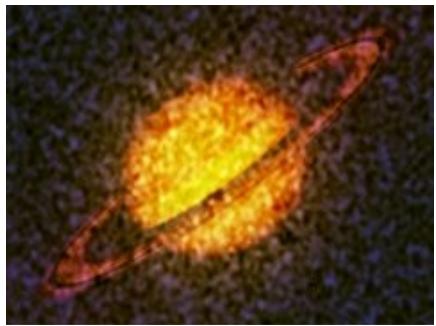
FeedbackDistort



FieldRemove



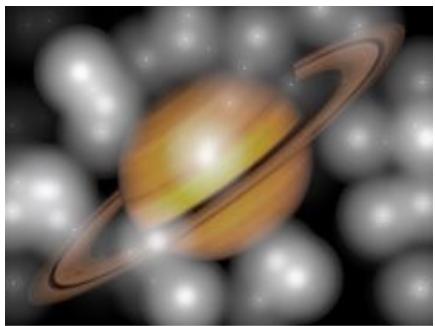
FilmDamage



FilmEffect



FilmRoll



Flashbulbs



Flicker



FlickerMatch



FlickerMatchColor



FlickerMatchMatte



FlickerMchMatteColor



FlickerRemove



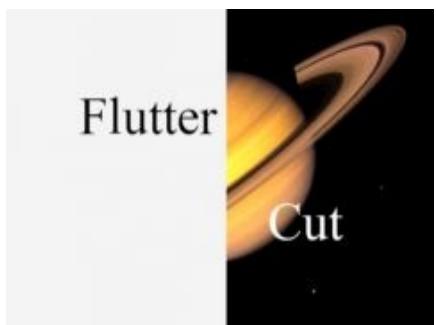
FlickerRemoveColor



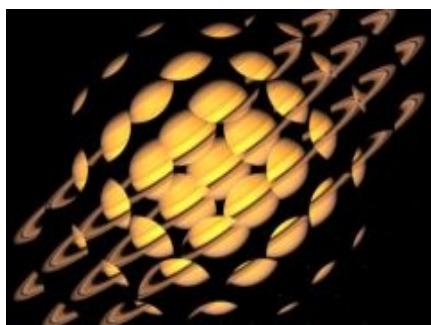
FlickerRemoveMatte



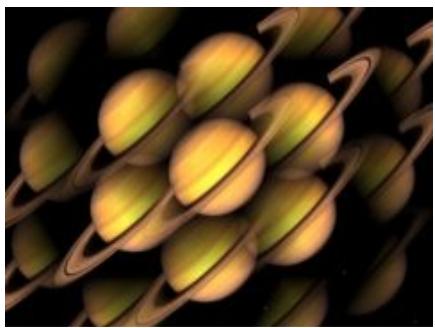
FlickerRmMatteColor



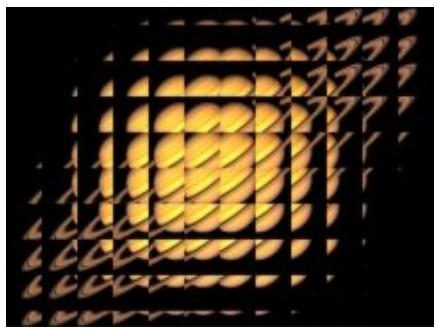
FlutterCut



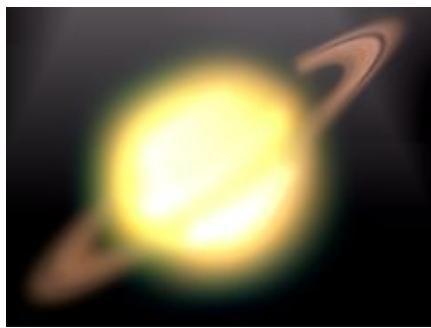
FlysEyeCircles



FlysEyeHex



FlysEyeRect



FreeLens



Gamma



Glare



Glint



GlintRainbow



Glow



GlowAura



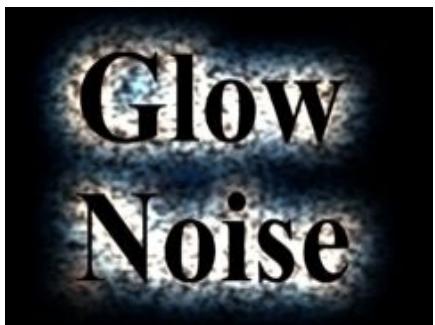
GlowDarks



GlowDist



GlowEdges



GlowNoise



GlowOrthicon



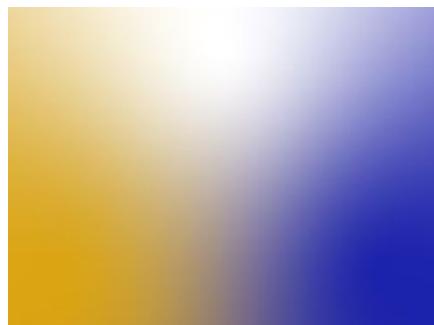
GlowRainbow



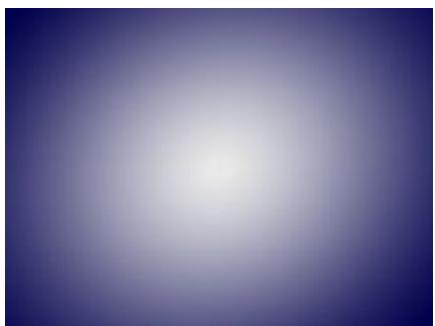
GlowRings



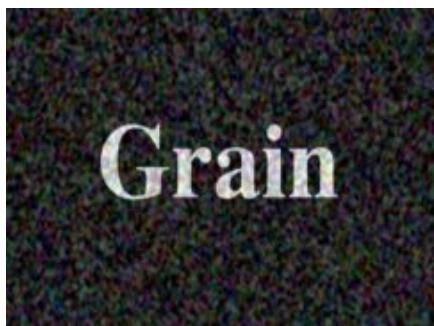
Gradient



GradientMulti



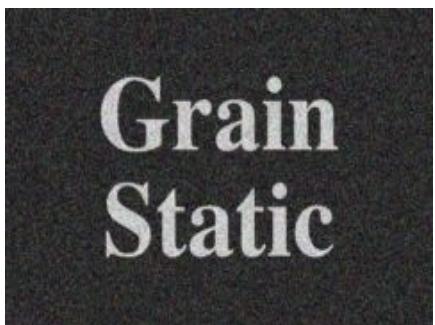
GradientRadial



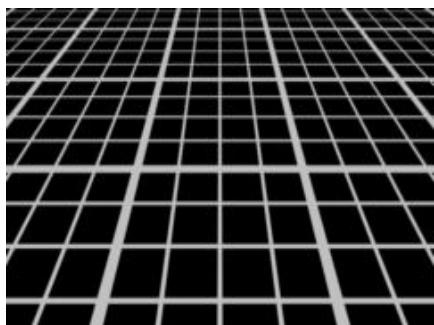
Grain



GrainRemove



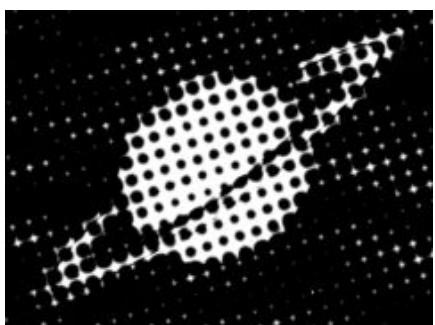
GrainStatic



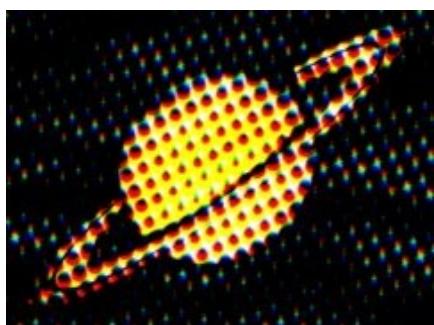
Grid



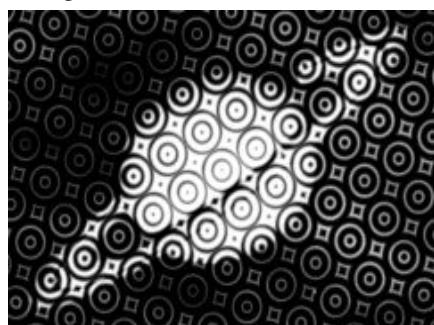
Grunge



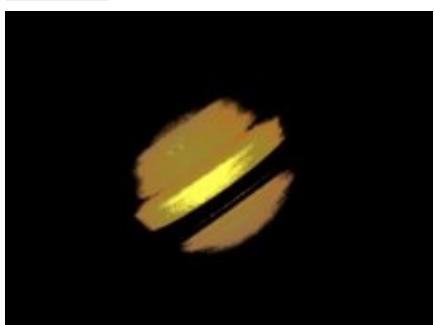
HalfTone



HalfToneColor



HalfToneRings



Hotspots



HueSatBright



HyperPull



HyperPush



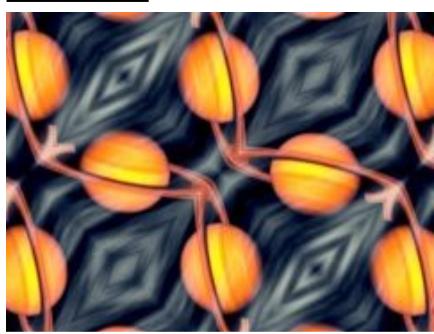
InfiniteZoom



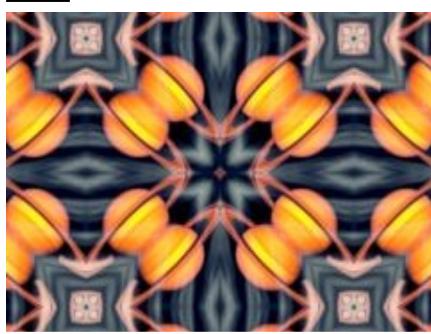
Invert



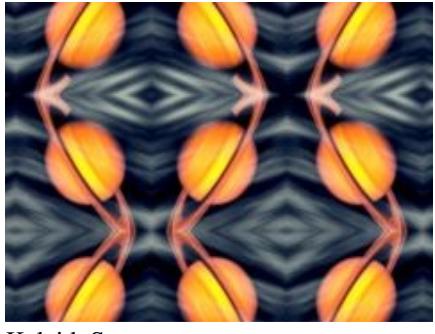
JpegDamage



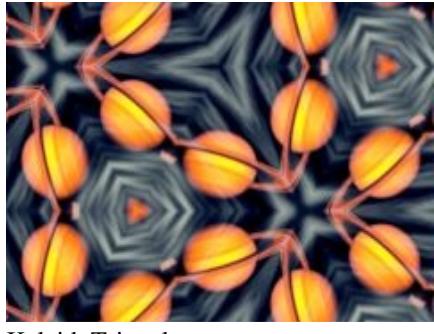
KaleidoDiamonds



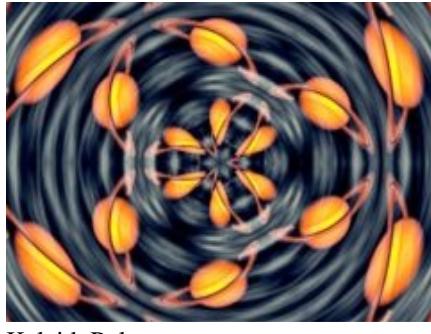
KaleidoOct



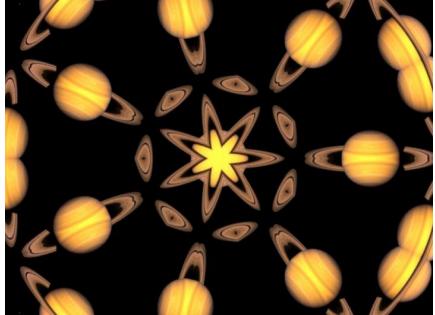
KaleidoSquares



KaleidoTriangles



KaleidoPolar



KaleidoRadial



LaserBeam



Layer



LensFlare



LensFlareAutoTrack



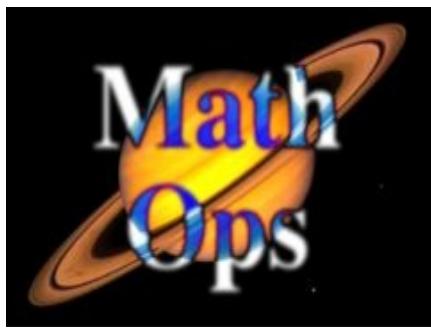
Light3D



LightLeak



Luna



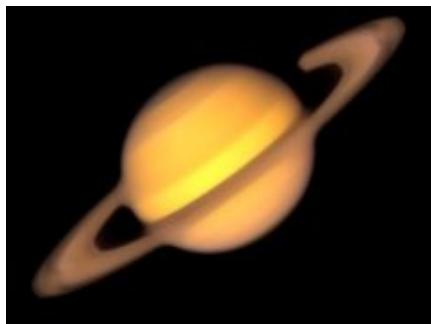
MathOps



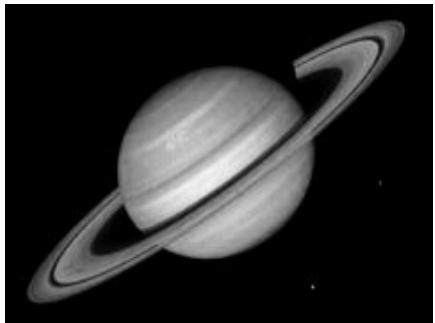
MatteOps



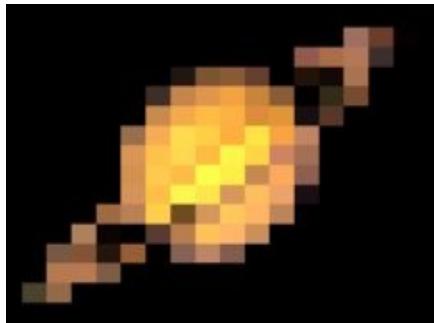
MatteOpsComp



Median



Monochrome
FreezeFrame
RandomEdits



Mosaic
GetFrame
ReverseClip



MotionDetect
JitterFrames
ReverseEdits



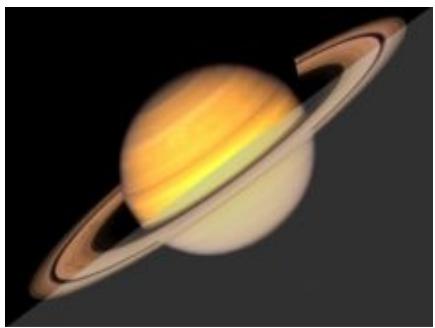
MuzzleFlash



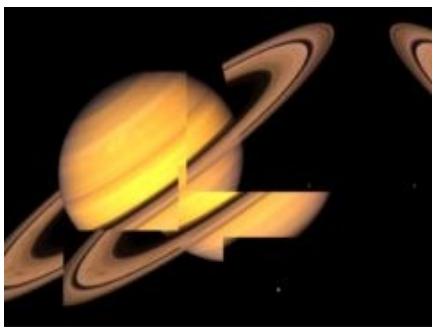
NearestColor



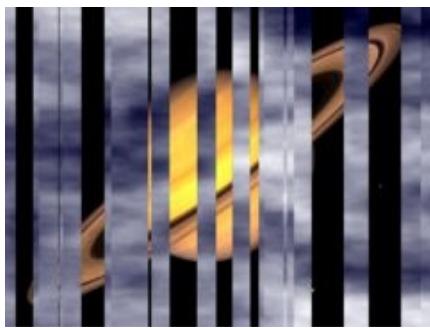
NightSky



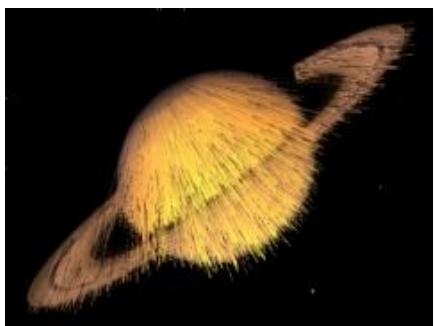
OCIOTransform



ParallaxStrips



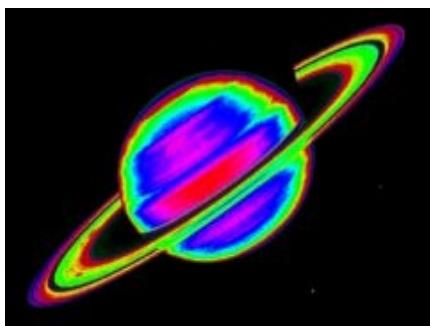
ParallaxStripsTransition



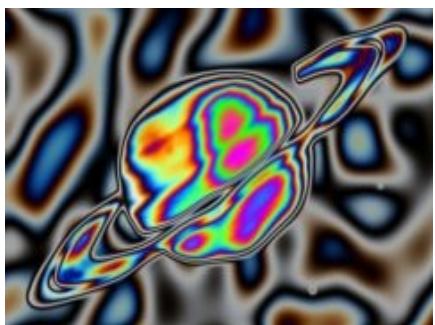
PixelSort



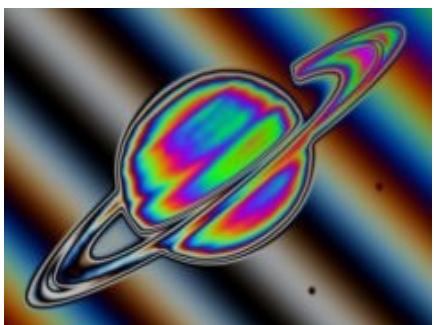
Posterize



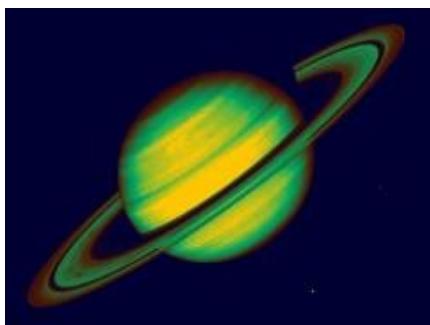
PseudoColor



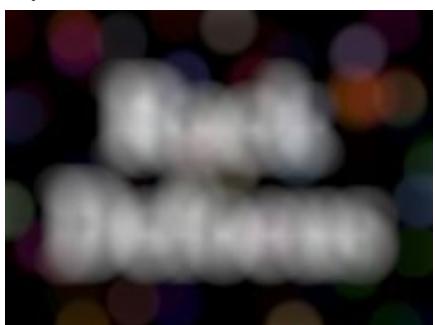
PsykoBlobs



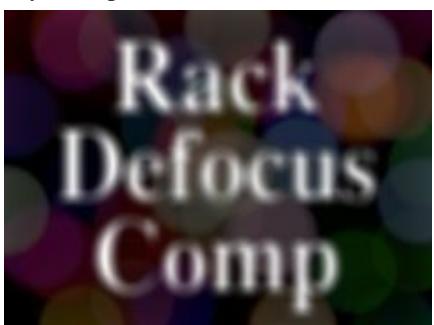
PsykoStripes



QuadTone



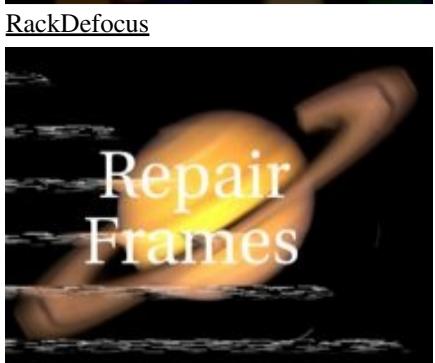
RackDefocus



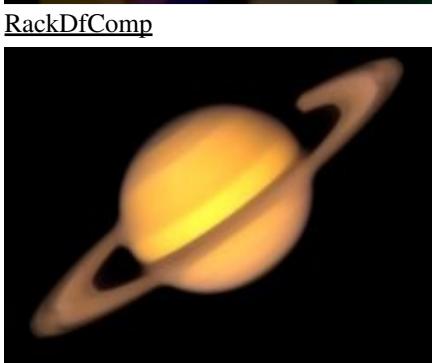
RackDfComp



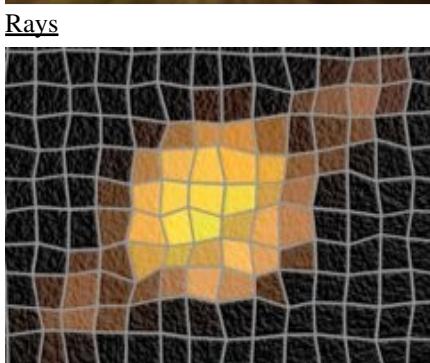
Rays



RepairFrames



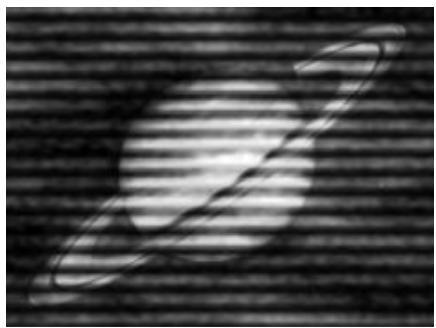
Retime



RomanTile



ScanLines



ScanLinesMono



Shake



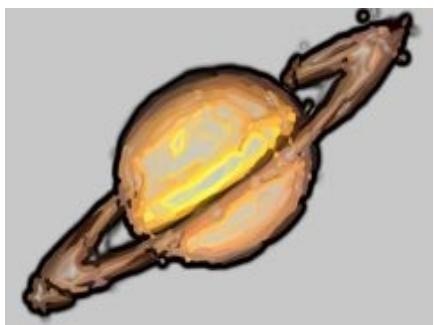
Shape



Sharpen



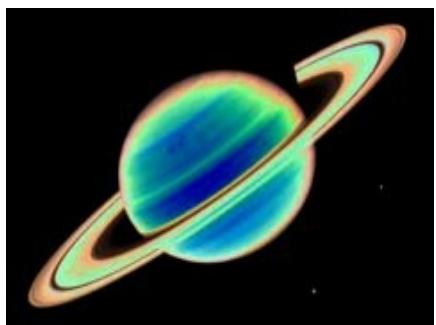
ShowBadColors



Sketch



SoftFocus



Solarize



Sparkles



SparklesColor



SpotLight



Streaks



StretchFrameEdges



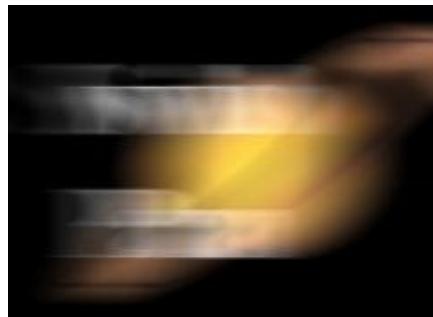
StripSlide



StripSlideTransition



Swish3D



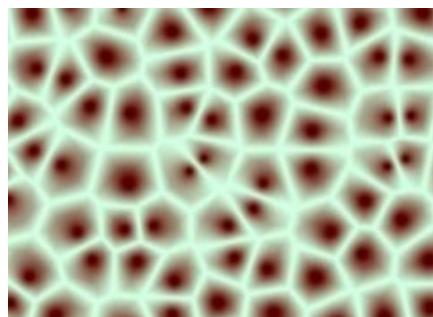
SwishPan



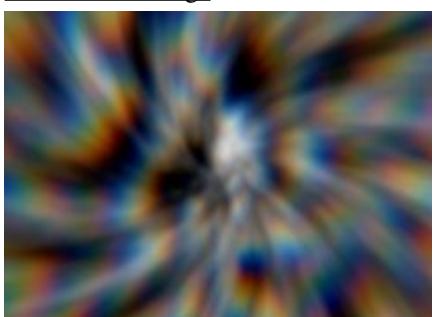
TVChannelChange



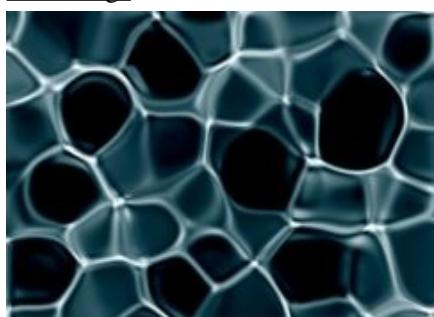
TVDamage



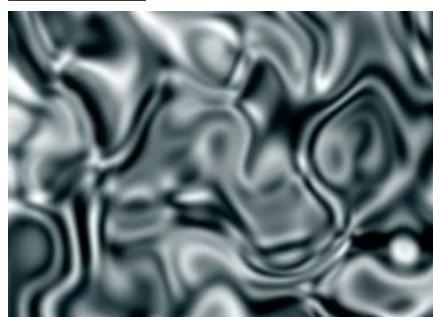
TextureCells



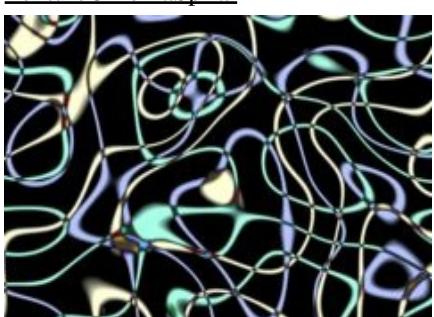
TextureChromaSpiral



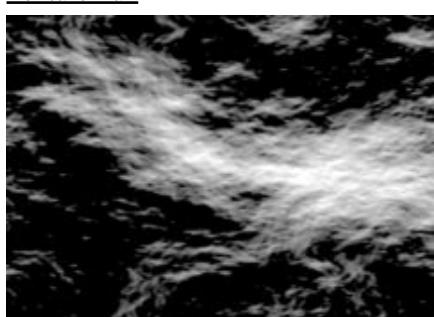
TextureFlux



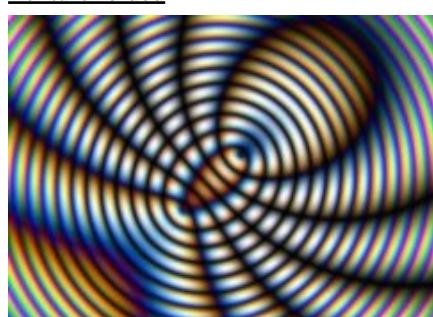
TextureFolded



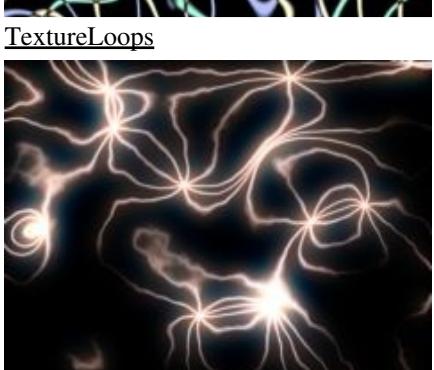
TextureLoops



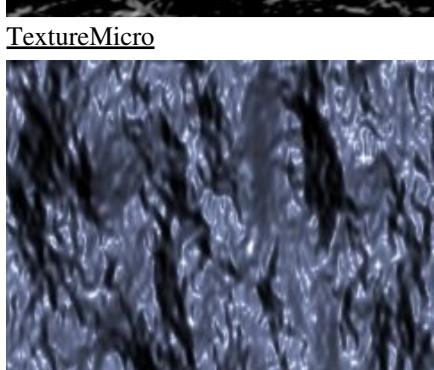
TextureMicro



TextureMoiré



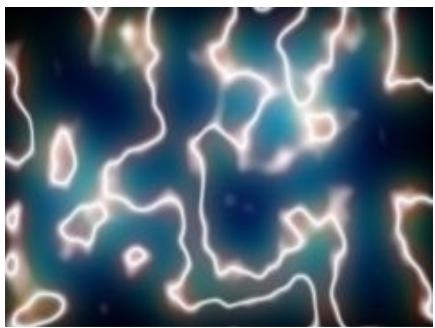
TextureNeurons



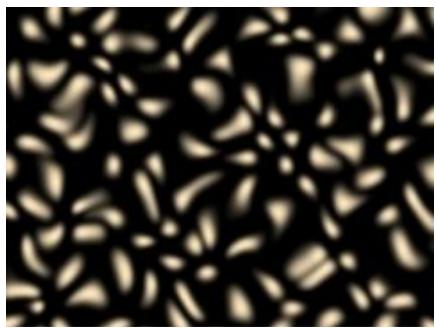
TextureNoiseEmboss



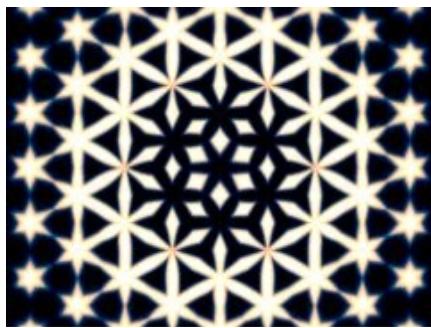
TextureNoisePaint



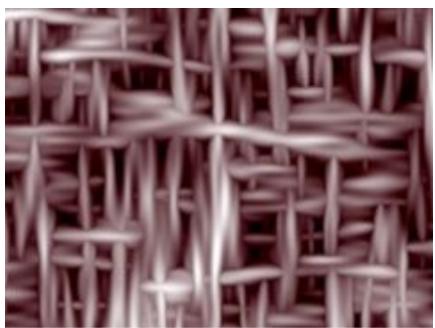
TexturePlasma



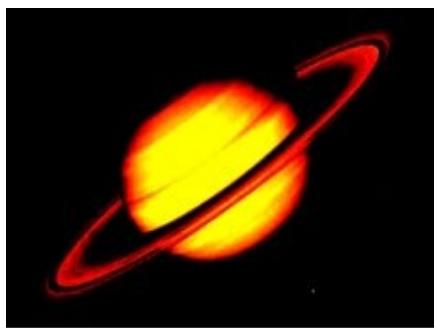
TextureSpots



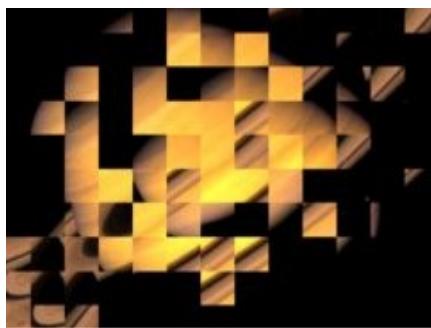
TextureTiles



TextureWeave



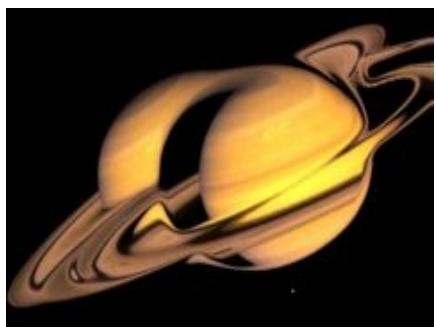
Threshold



TileScramble



TimeAverage



TimeDisplace



TimeSlice



TimeWarpRGB



Tint



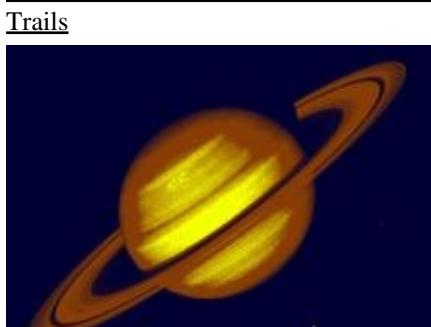
Trails



TrailsDiffuse



Transition



TriTone



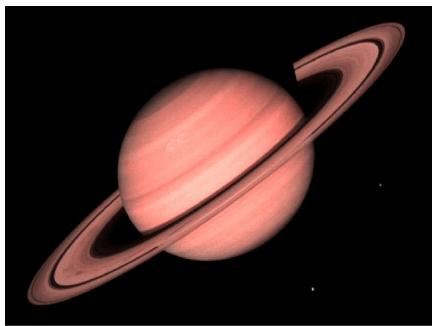
UltraGlow



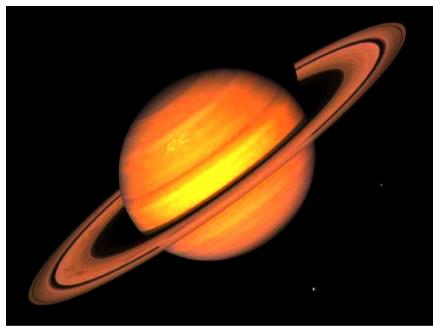
UltraZap



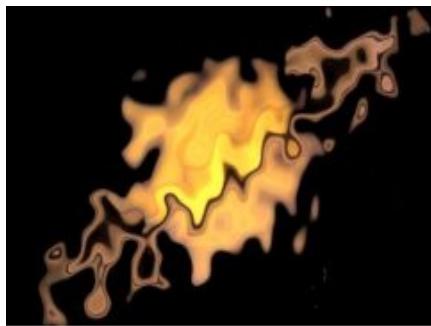
Vignette



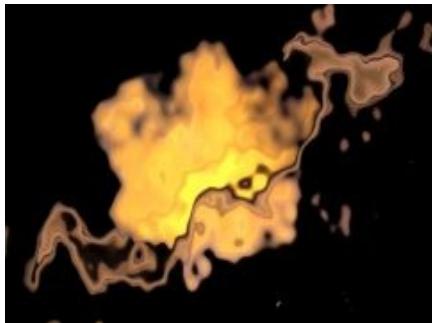
VintageColor2Strip



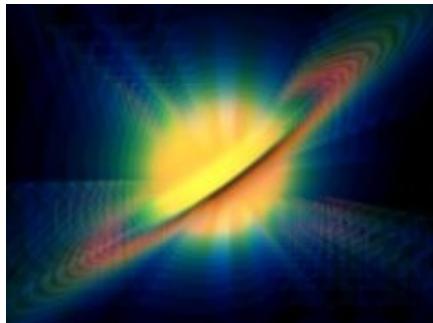
VintageColor3Strip



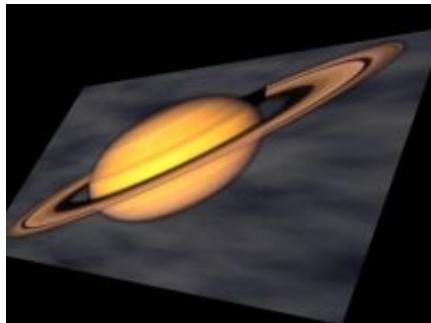
WarpBubble



WarpBubble2



WarpChroma



WarpCornerPin



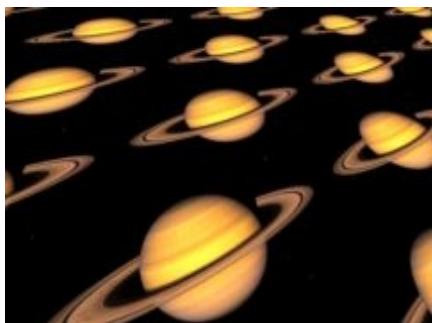
WarpDrops



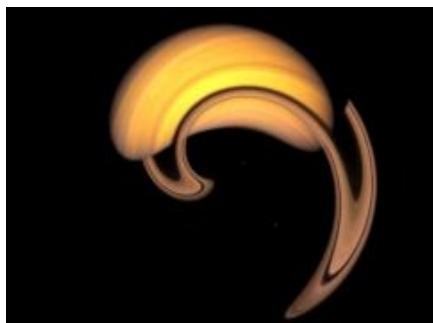
WarpFishEye



WarpMagnify



WarpPerspective



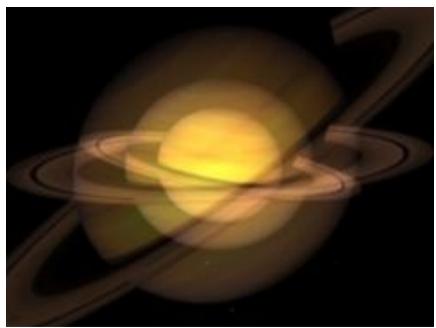
WarpPolar



WarpPuddle



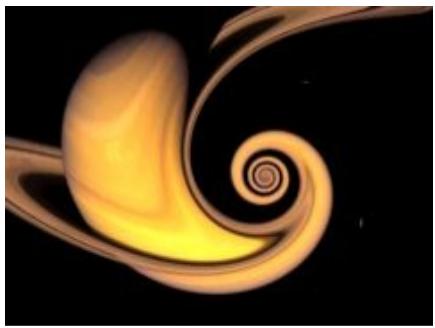
WarpPuff



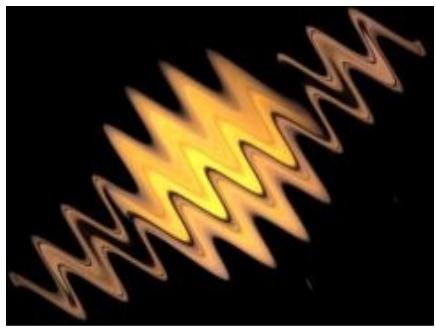
WarpRepeat



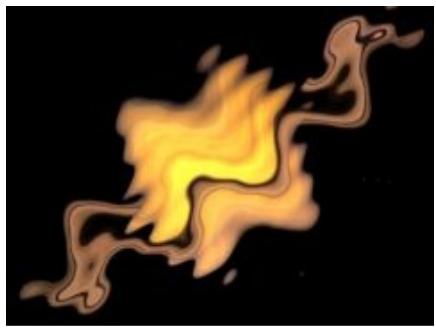
WarpTransform



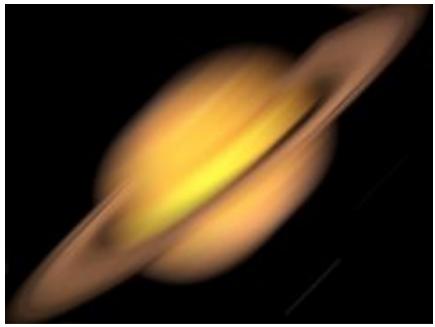
WarpVortex



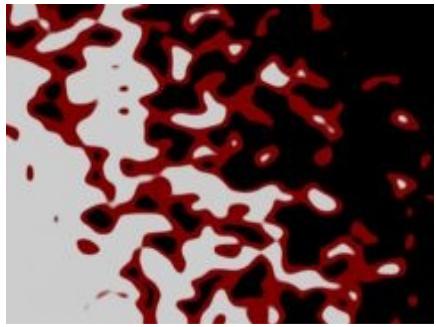
WarpWaves



WarpWaves2



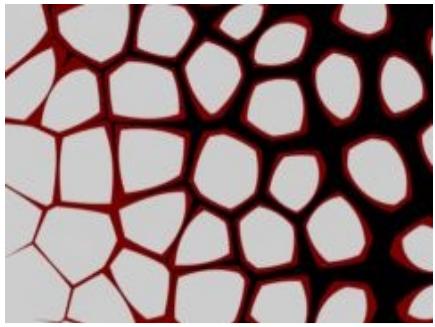
WhipLash



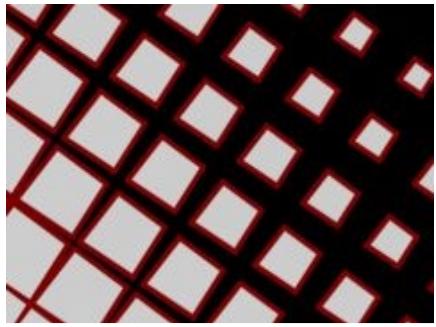
WipeBlobs



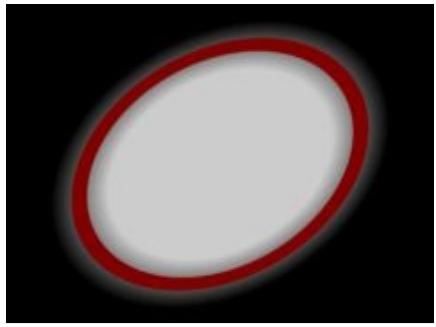
WipeBubble



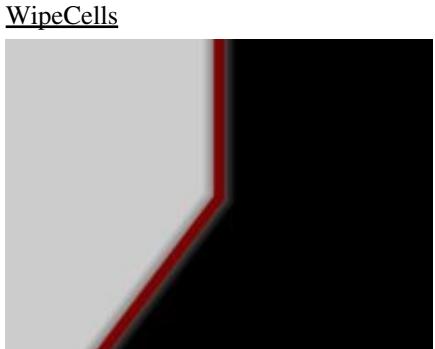
WipeCells



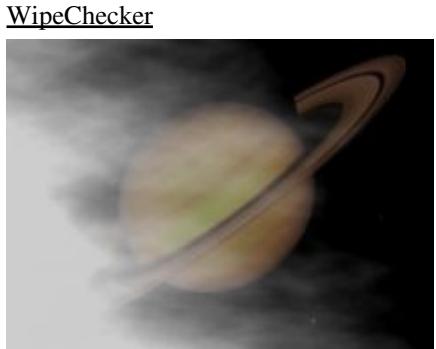
WipeChecker



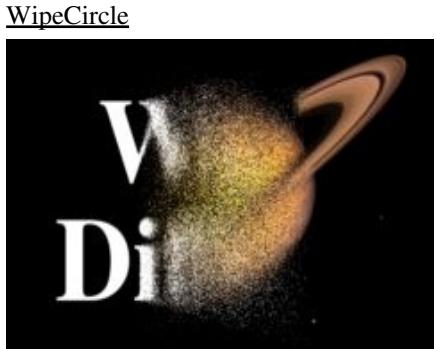
WipeCircle



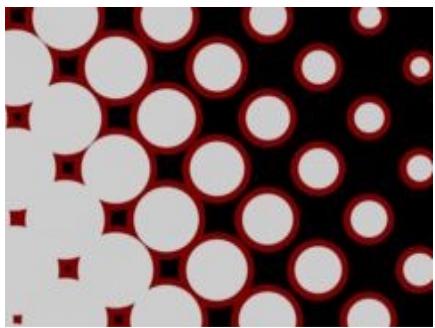
WipeClock



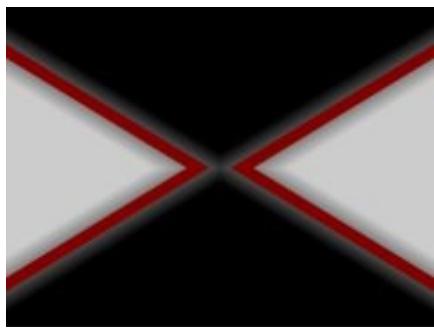
WipeClouds



WipeDiffuse



WipeDots



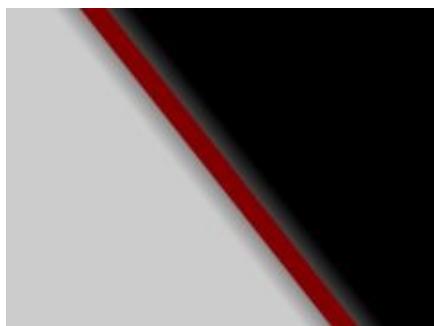
WipeDoubleWedge



WipeFlux



WipeFourWedges



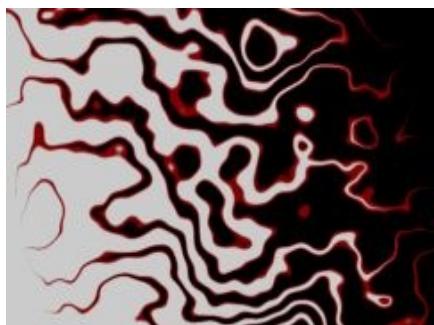
WipeLine



WipeMoiré



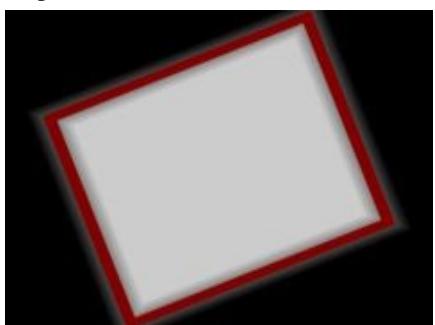
WipePixelate



WipePlasma



WipePointalize



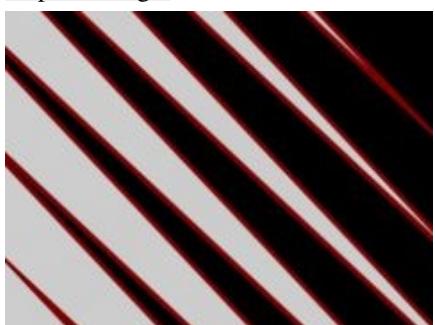
WipeRectangle



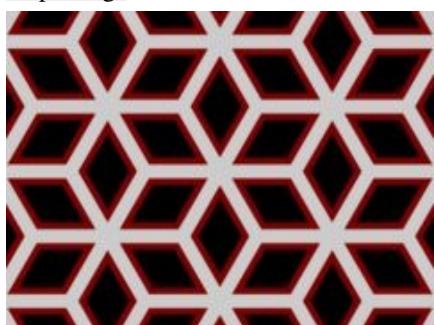
WipeRings



WipeStar



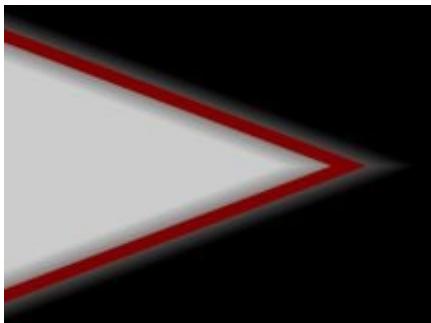
WipeStripes



WipeTiles



WipeWeave



WipeWedge



ZBlur



ZComp



ZConvolve



ZDefocus



ZFogExponential



ZFogLinear



ZGlow



Zap



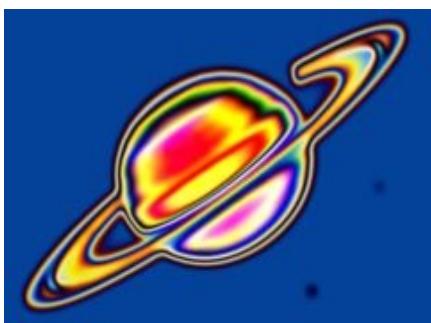
ZapFrom



ZapTo



Zebrafy



ZebrafyColor

List of Effects With Summaries

Aurora

Generates a two colored swirl of light along a user controlled spline reminiscent of the Aurora Borealis (Northern Lights).



AutoPaint

Generates a 'paint-brushed' version of the source clip. Use the Frequency and Stroke Length parameters to adjust the density and shape of the brush strokes. You can set Jitter Frames to 1 if you want to re-randomize the brush stroke pattern for each frame.



BandPass

Generates an X-ray-like effect using a band-pass filter. Two blurs are performed with different widths, and the result is the difference scaled and offset by a gray value. Frequencies above and below the cutoffs are attenuated, leaving only the middle band of frequencies.



Beauty

Applies smoothing, color correction, soft focus, and glow to skin regions. Skin regions are based on the value of Enable Skin Detection and whether a second input is provided. If Enable Skin Detection is on, the plugin generates an internal mask from the Skin Color, Luma and Chroma Range parameters. The second input is an optional mask, that if connected the effect only applies to bright areas of the mask (if Enable Skin Detection is on and a mask is provided the two are multiplied).



BleachBypass

Simulates a film process in which silver is not removed from the negative. The result has increased contrast and reduced color saturation.



Blur

Blurs the source clip by an arbitrary amount using a gaussian, triangle, or box filter. This effect should render quickly even with very large Width values. Use the Blur Rel X and Y parameters for a more horizontal or vertical blur direction.



BlurChannels

Blurs each channel of the source clip by an arbitrary amount using a gaussian, triangle, or box filter. This effect should render quickly even with very large Width values. Use the Blur Rel X and Y parameters for a more horizontal or vertical blur direction.



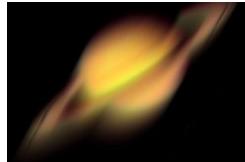
BlurChroma

Separates the source into luminance and chrominance components, blurs the chrominance and/or the luminance independently, and recombines them. You can also scale the luma and chroma independently to enhance or remove either.



BlurDirectional

Blurs the source clip in a given direction using a gaussian, triangle, or box filter. It can also blur each channel by different amounts.



BlurMoCurves

Performs a motion blur and optionally transforms the source clip using the animated curves of the Z Dist, Rotate and Shift parameters. If these parameters are constant, no motion blur will occur.



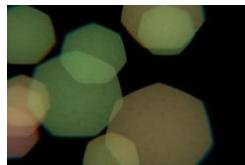
BlurMotion

Performs a motion blur of the source clip between the specified From and To transformations. This can be used to perform radial zoom blurs, rotate blurs, directional blurs, or any combination of these. The From and To parameters do not refer to time. They describe the two transformations in space that determine the style of blur applied to each frame.



BokehLights

Generates random, defocused lights that move around the screen.



BrushChalk

Simulates the look of a chalk drawing by layering brush strokes of different sizes and directions. This effect can be used with one of the following brushes: felt tip, splat, water color, stipple, pencil, pastel, sponge, splodge, round, or cubes. In addition, there are controls for adjusting shape, size, orientation, density, lighting, and shading.



BrushOil

Simulates the look of an oil painting by layering brush strokes of different sizes and directions. This effect can be used with one of the following brushes: felt tip, splat, water color, stipple, pencil, pastel, sponge, splodge, round, or cubes. In addition, there are controls for adjusting shape, size, orientation, density, lighting, and shading.



CardFlip

Transitions between two clips by sliding or spinning the outgoing clip to reveal the incoming clip behind it. The Amount parameter should be animated to control the transition speed. Adjusting Revolutions and Shift will give different kinds of transitions.



Cartoon

Generates a version of the source clip with a cartoon look. Finds the edges in the image and draws new outlines for those edges. Smooths the colors of the areas between the edges, and optionally posterizes the colors into fewer color values.



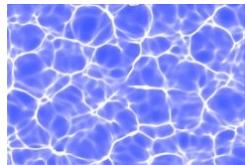
CartoonPaint

Auto-generates a version of the source clip with a cartoon paint-brushed look. Finds the edges in the image and draws new outlines for those edges. Replaces the colors of the areas between the edges with paint brush shapes.



Caustics

Simulates the patterns created when light rays are reflected or refracted by a curved surface. Caustics can often be seen at the bottom of a swimming pool in bright sunlight or on objects viewed underwater.



ChannelSwitcher

Reorders the RGBA channels of the source clip. Allows mapping any source channel into any output channel, with scaling and offset for each output channel.



ClampChroma

Reduces the chrominance of the input clip if necessary so it is not above a specified maximum. This effect can be used to make 'broadcast safe' colors. It also can be used to scale the chrominance, clamp the luminance, or scale the luminance.



Clouds

Generates a procedural noise texture. Use the Frequency parameter to zoom in and out of the texture. The Shift Speed parameters cause the texture to automatically translate over time.



CloudsColorSmooth

Generates a full color clouds texture. Procedural noise texture is independently generated for each of the red, green, and blue output channels. The Shift Speed parameters cause the texture to automatically translate over time.



CloudsMultColor

Generates a procedural noise texture like S_Clouds and tints the colors using an additional color noise texture. The Shift Speed parameters cause the texture to automatically translate over time.



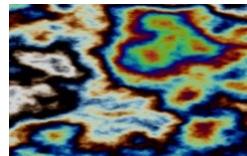
CloudsPerspective

Generates a procedural noise texture transformed onto a 3D plane with perspective. Adjust the Latitude, Swing, and Roll parameters to rotate the image on various axes, each axis, and use the Frequency parameter to zoom in and out of the texture. Shift Speed causes the texture to automatically translate over time.



CloudsPsyko

Generates a procedural noise texture, and passes this through a colorizing process. The Shift Speed parameters cause the pattern to automatically translate over time, and Phase Speed causes the colors to rotate over time.



CloudsVortex

Generates a procedural noise texture twisting into a vortex. The Vortex Speed parameter causes the amount of vortex rotation to automatically animate over time.



Convolve

Convolves a source image with a kernel. Convolution is a mathematical operator which uses one image, the kernel, as a filter shape for another image (the source). Convolution effectively stamps a copy of the kernel at each point of the source, using the source's brightness at that point. The effect is that a copy of the kernel will appear over all the bright spots of the source. A kernel image shaped like a circle or polygon will give an effect similar to RackDefocus; a kernel image shaped like a starburst can give something like Glare.



ConvolveComp

Convolves front and back images with a kernel, and composites them using a matte. Convolution is a mathematical operator which uses one image, the kernel, as a filter shape for another image (the source). Convolution effectively stamps a copy of the kernel at each point of the source, using the source's brightness at that point. The effect is that a copy of the kernel will appear over all the bright spots of the source. A kernel image shaped like a circle or polygon will give an effect similar to RackDefocusComp; a kernel image shaped like a starburst can give something like GlareComp.



The kernel size can vary between front and back so either or both can be blurred.

Crosshatch

Simulates a pen-sketch crosshatched look using overlapping strokes. The source is divided into four bands based on luma; each band from dark to light gets a different pattern of strokes.



CutToDissolve

Turns a cut within a single clip into a dissolve. No heads or tails are required; just set the cut point (frame) and CutToDissolve creates a dissolve around that point. Note that this effect does not take two clips; just a single clip already containing a cut. The Cut Point param is key to making it work; whatever frames are on either side of that will be treated as the cut, and the dissolve will be created around them.



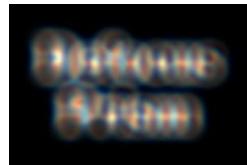
Deband

Removes banding artifacts from a clip by diffusing pixels across the banded areas, while keeping the original edges intact. To use this effect, first select Show:Edges and adjust the edge threshold until the banding edges just disappear, leaving only the desired real edges. Then select Show:Result to see the result. If you still see some banding, increase Diffuse Threshold and/or Diffuse Radius.



DefocusPrism

Defocuses the color channels of the source clip into rings of different widths.



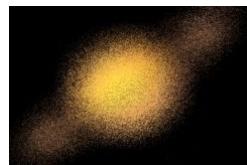
DeinterlaceAuto

Can automatically detect an interlaced pulldown pattern, and deinterlace or reinterlace a clip. To deinterlace, first click on the Find Pattern button. If the effect fails to find a pattern, move to a frame with plenty of motion and click Find Pattern again. If the pulldown pattern seems longer than usual, increase the Max Pattern Fields accordingly. Once the pattern is found, the plug-in will output progressive frames. To reinterlace back to the original pattern, copy the node (or create a new node and copy the pattern parameters). Then change the mode to Reinterlace and connect the progressive footage to the Source input. The plug-in will output reinterlaced frames using the original pulldown pattern. Note that the output of this effect may be longer or shorter than the input clip, depending on the pattern.



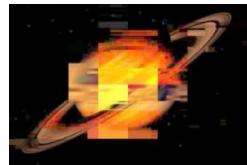
Diffuse

Scrambles the pixels of the source input within an area determined by the Diffuse Amount. Use the Blur Rel X and Y parameters for a more horizontal or vertical diffuse direction. The pixelated look of this effect depends on the image resolution, so it is recommended to test your final resolution before processing.



DigitalDamage

Simulates bad digital TV transmission with many options, including freeze-frames, shifting and flowing blocks, various kinds of blocky noise, and pixelization. Can give looks similar to MPEG stream errors, digital dropouts, and satellite feed data corruption.



Dissolve

A basic cross fade between two input clips.



DissolveAutoPaint

Fade in a 'paint-brushed' version of the starting clip. Decrease the complexity of the painting until it is just a few colors, then transition to a 'paint-brushed' version of the second clip which then grows in color and complexity until the second clip fades in.



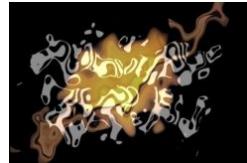
DissolveBlur

Transitions between two input clips while blurring each. The first clip is blurred and faded out while the second clip is unblurred and faded in. The Dissolve Amount parameter should be animated to control the transition speed.



DissolveBubble

Transitions between two input clips using a bubble warping function. The first clip is warped away and faded out while the second clip is unwarped into place and faded in. The Dissolve Amount parameter should be animated to control the transition speed.



DissolveDefocus

Transitions between two input clips while defocusing each. The first clip is defocused and faded out while the second clip is brought into focus and faded in. The Dissolve Amount parameter should be animated to control the transition speed.



DissolveDiffuse

Transitions between two input clips by scrambling the pixels of the inputs within an area determined by Max Amount. The first clip is diffused away while the second clip is diffused into place. The Dissolve Amount parameter should be animated to control the transition speed. The pixelated look of this effect depends on the image resolution, so it is recommended to test your final resolution before processing.



DissolveDigitalDamage

Transitions between two input clips using a dissolve while applying DigitalDamage to the dissolved clips. The Dissolve Amount parameter should be animated to control the transition speed.



DissolveDistort

Transitions between two input clips while distorting each using the gradient of the other. The first clip is warped away and faded out while the second clip is unwarped into place and faded in. The Dissolve Amount parameter should be animated to control the transition speed.



DissolveEdgeRays

Transitions between two input clips using animated edge rays. The clips dissolve into each other, and edge rays are added to the result. The edge rays ramps up and down over the duration of the effect. The edge rays animate by moving the origin of the edge rays across the screen along a line. The Dissolve Amount parameter should be animated to control the transition speed.



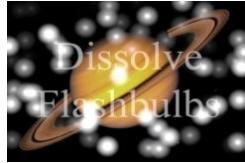
DissolveFilm

Transitions between two input clips using a film dissolve with selectable gamma. Film dissolve preserves the highlights in the clips longer compared to a regular dissolve. The Dissolve Amount parameter should be animated to control the transition speed.



DissolveFlashbulbs

Simulates lots of flashbulbs going off while dissolving between two clips. With many small flashes, can look like a stadium scene. With a few large flashes, works well on a celebrity red carpet clip.



DissolveGlare

Transitions between two input clips using animated glares. The clips dissolve into each other, and glares are added to the result. The glare size and brightness ramps up and down over the duration of the effect.



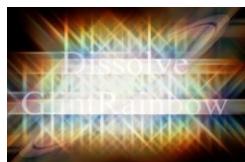
DissolveGlint

Transitions between two input clips using a bright glowing glint. The clips dissolve into each other, while each one gets a glint which ramps up and down over the duration of the effect. The Dissolve Amount parameter should be animated to control the transition speed.



DissolveGlintRainbow

Transitions between two input clips using a bright glowing glint. The clips dissolve into each other, while each one gets a glint which ramps up and down over the duration of the effect. The Dissolve Amount parameter should be animated to control the transition speed.



DissolveGlow

Transitions between two input clips using a bright glowing flash. The clips dissolve into each other, while each one gets a glow which ramps up and down over the duration of the effect. The Dissolve Amount parameter should be animated to control the transition speed.



DissolveLensFlare

Transitions between two input clips using an animated lens flare. The clips dissolve into each other, while a lens flare moves along a straight line. The lens flare grows and shrinks over the duration of the effect. The Dissolve Amount parameter should be animated to control the transition speed.



DissolveLuma

Transitions between two input clips using a pattern derived from their luminances. One clip often appears to emerge through the other. The Dissolve Amount parameter should be animated to control the transition speed.



DissolvePixelSort

Transitions between two input clips while sorting the dissolve result.



DissolvePuddle

Transitions between two input clips while warping by a circular pattern of waves. The first clip is warped away and faded out while the second clip is unwarped into place and faded in. The Dissolve Amount parameter should be animated to control the transition speed.



DissolveRays

Transitions between two input clips using animated rays. The clips dissolve into each other, and rays are added to the result. The rays ramp up and down over the duration of the effect. The rays animate by moving the origin of the rays across the screen along a line. The Dissolve Amount parameter should be animated to control the transition speed.



DissolveShake

Transitions between two clips by applying a shaking motion to them, along with a quick dissolve. The shaking uses translation, zooming, and/or rotation. It is random but repeatable, so with the same parameters the same shaking motion is generated each time. Turn on Motion Blur and adjust the Mo Blur Length for different amounts of blur. Adjust the Amplitude and Frequency for different shaking speeds and amounts. The Rand parameters give detailed control of the random non-periodic shaking, and the Wave parameters adjust the regular periodic shaking. The X, Y, Z, and Tilt parameters control the horizontal, vertical, zoom, and rotation amounts of shaking respectively.



DissolveSpeckle

Transition between two input clips using a speckled noise pattern. The Dissolve Amount parameter should be animated to control the transition speed.



DissolveStatic

Transitions between two input clips using random pixel static. The Dissolve Amount parameter should be animated to control the transition speed. The pixelated look of this effect depends on the image resolution, so it is recommended to test your final resolution before processing.



DissolveTiles

Transitions between two input clips while breaking each up into tiles and scrambling them. The first clip breaks apart and spreads out while the second clip coalesces behind the first. The Dissolve Amount parameter should be animated to control the transition speed.



DissolveVortex

Transitions between two input clips using a vortex warping function. The first clip is warped away and faded out while the second clip is unwarped into place and faded in. The Dissolve Amount parameter should be animated to control the transition speed.



DissolveWaves

Transitions between two input clips using a waves warping function. The first clip is warped away and faded out while the second clip is unwarped into place and faded in. The Dissolve Amount parameter should be animated to control the transition speed.



DissolveZap

Transition between two clips using animated lightning bolts. The clips dissolve into each other, while the lightning grows. The Dissolve Amount parameter should be animated to control the transition speed.



Distort

Warps the source input clip using the gradient of the Lens input clip. This can generate optical glass-like effects as if the source clip were being viewed through an arbitrarily shaped lens. It is best demonstrated when the lens image contains just a few bold shapes or a simple texture.



DistortBlur

Blurs the source input clip in the direction of the gradient of the Lens input clip. It is best demonstrated when the lens image contains just a few simple shapes.



DistortChroma

Warps the chrominance of the source input by different amounts using the gradient of the Lens input clip. This can generate optical glass-like effects as if the source clip were being viewed through an arbitrarily shaped or textured prism. It is best demonstrated when the lens image contains just a few simple bold shapes.



DistortRGB

Warps the red, green, and blue color channels of the source input by different amounts using the gradient of the Lens input clip. It is best demonstrated when the lens image contains just a few simple bold shapes.



DogVision

Generates a dual color-channel version of the input image, as might be perceived by the limited color vision system of dogs. Humans have three color receptors (for red, green, and blue) while dogs have only two receptors (for yellow and blue).



DropShadow

Generates a shadow on the Background clip using the alpha channel of the Foreground or an optional Matte, then composites the Foreground over the Background to give the final result.



DuoTone

Performs an interpolation between two specified colors using the brightness of the source clip.



EdgeAwareBlur

Blur regions of similar color while preserving edges between regions of different colors.



EdgeBlur

Finds the edges within the Matte clip, and blurs the Source clip at those edges. Use the Show Edges option to view which areas will receive the blur while adjusting the edge parameters. Then adjust Blur Width to control the amount of blur.



EdgeColorize

Assigns different colors to the edges of the source clip depending on their direction. Increase the Edge Smooth parameter for thicker edges.



EdgeDetect

Finds the edges within the source clip. Increase the Edge Smooth parameter for thicker edges. Select Mono or Chroma mode to show only edges in Luminance or Chroma.



EdgeDetectDouble

Performs an edge detect operation twice giving a double stranded edge effect. Increase the Edge Smooth parameters for thicker edges.



EdgeFlash

Adds a glow from the Front clip onto the Back clip, and vice versa, then composites the Front over the Back. This can be used to make a composite look more natural with light flashing between the layers as if exposed on film together.



EdgeRays

Generates beams of light emitting from the edges of an input clip. You can provide a Matte input to selectively scale the colors of the rays. If Matte Type is set to Color, you can also use the Matte input to colorize the rays differently in different regions. Set the Rays Res parameter to 1/2 for faster rendering with slightly softer rays.



EdgesInDirection

Finds the edges of the source input that are aligned in a specified direction. Increase the Edge Smooth parameter for thicker edges.



Effect

An Effect Builder which lets you combine multiple Sapphire effects and load presets from any effect. Click Load Preset or Edit Effect to get started.



Emboss

Embosses the Source clip using the brightness of the Bumps input as a relief map. Increase the Bumps Smooth parameter for bolder bumps, and adjust the Light Dir to illuminate the bumps from different angles.



EmbossDistort

Embosses and warps the Source clip using the Bumps input as a relief map and also distorts the result using the Bumps as a 'lens' image. Increase the Bumps Smooth parameter for bolder bumps, and adjust the Light Dir to illuminate the bumps from different angles.



EmbossGlass

The Source is embossed and warped using the Bumps input as a relief map and lens image. A chrominance distortion is also performed, separating the spectrum for a 'prismatic' look. Increase the Bumps Smooth parameter for bolder bumps, and adjust the Light Dir to illuminate the bumps from different angles.



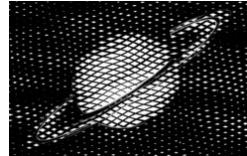
EmbossShiny

Embosses the Source clip using the Bumps input as a relief map. A lighting model is used which includes highlights from specular reflections. Increase the Bumps Smooth parameter for bolder bumps, and adjust the Light Dir to illuminate the bumps from different angles.



Etching

Generates a version of the source clip using two sets of black and white lines of varying thickness to give an 'etching' or 'lithograph' look. Use the Smooth Source parameter to remove some details and make the lines more evenly shaped. Use the Lines Frequency parameter to adjust the density of all lines.



Feedback

The previous frames of the input clip are transformed and combined with the current frame to give a variety of effects inspired by video feedback. The output of each processed frame is stored and then combined with the next frame. The feedback is reinitialized whenever any non-consecutive frame is processed: either the first frame, reprocessing a given frame, or jumping to another frame. You must process multiple frames of a clip in a row to observe the effect, and clearing your image cache before rendering may sometimes be necessary.



FeedbackBubble

Similar to Feedback, previous frames are combined with the current frame while distorting by a bubble pattern. The feedback is reinitialized whenever any non-consecutive frame is processed: either the first frame, reprocessing a given frame, or jumping to another frame. You must process multiple frames of a clip in a row to observe the effect, and clearing your image cache before rendering may sometimes be necessary.



FeedbackDistort

The previous frames of the input clip are distorted by the gradient of a given Lens input clip and combined with the current frame to give a variety of possible effects. The output of each processed frame is stored and then combined with the next frame. The feedback is reinitialized whenever any non-consecutive frame is processed, either the first frame, reprocessing a given frame, or jumping to another frame. You must process multiple frames of a clip in a row to observe the effect, and clearing your image cache before rendering may sometimes be necessary.



FieldRemove

Adaptively removes video field interlacing artifacts from areas with motion, without blurring the stationary parts of the image. A 'Motion Matte' is generated internally and the moving areas are deinterlaced with the usual loss of vertical resolution, but the stationary areas are not deinterlaced and should remain sharp.



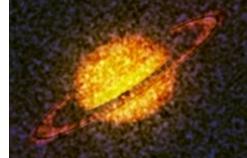
FilmDamage

Simulates damaged film with many options, including dust, hairs, stains, scratches, defocusing, flicker, and shake. Each option has a master control and a set of detailed controls for adjusting the look of that type of damage.



FilmEffect

Provides a physically accurate model of film exposure and processing to make your video footage look like it was shot on particular film stocks. It can remove field artifacts, perform color correction for specific film types, add film grain, and apply glow or soft focus effects. The color correction and grain can be selectively disabled using the Scale CC and Grain Amp parameters.



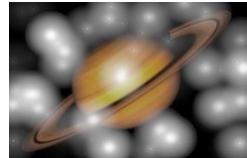
FilmRoll

Transitions between two clips by rolling one off screen vertically while rolling the other on, while applying various film damage effects such as shaking, stains, scratches, and flicker.



Flashbulbs

Simulates lots of flashbulbs going off. With many small flashes, can look like a stadium scene. With a few large flashes, works well on a celebrity red carpet clip.



Flicker

Scales the colors of the source clip by different amounts over time for a flickering effect. The pattern of flickering can be random, a periodic wave, or a combination of the two.



FlickerMatch

Adds flicker to the Source clip using the flicker from a second Match clip. For example, a clip can be brightened in synchrony with a flashing light in another clip. To use this effect, first position the corners of the rectangle over an area of the Match clip which has brightness changes you want to copy. A middle or light gray area is best for this. Then select a frame where you want the Source brightness unchanged, and hit the Set Match Level button. When other frames are processed, the Source brightness will be scaled by the average Match brightness within the rectangle, relative to the Match Level.



FlickerMatchColor

Adds color changes to the Source clip using the color changes from a second Match clip. Similar to FlickerMatch but the process is applied to each color channel. To use this effect, first position the corners of the rectangle over an area of the Match clip which has color changes you want to copy. A middle or light gray area is best for this. Then select a frame for which you want the Source color unchanged, and hit the Set Match Level button. When you process other frames, the Source colors will be scaled by the average Match color within the rectangle, relative to the Match Color.



FlickerMatchMatte

Adds flicker to the Source clip using the flicker from a second Match clip, in the areas specified by a Matte. To use this effect, select a frame where you want the Source brightness unchanged, and hit the Set Match Level button. When other frames are processed, the Source brightness will be scaled by the average Match brightness within the Matte, relative to the Match Level.



FlickerMchMatteColor

Adds color changes to the Source clip using the color changes from a second Match clip, in the areas specified by a Matte. To use this effect, select a frame where you want the Source color unchanged, and hit the Set Match Color button. When other frames are processed, the Source color will be scaled by the average Match color within the Matte, relative to the Match Color.



FlickerRemove

Removes temporal flickering from the Source clip. For example, old footage with uneven exposure times can be smoothed out with this effect. To use this effect, first position the corners of the rectangle over an area where the average brightness should remain constant. A middle or light gray area is best for this. Then select a Source frame that has the desired brightness within the rectangle, and hit the Set Hold Level button. When other frames are processed, their brightness will be scaled so the average brightness within the rectangle is equal to the Hold Level. You can keyframe different Hold Level values over time to account for desirable brightness changes.



FlickerRemoveColor

Removes temporal color changes from the Source clip. Similar to FlickerRemove but the process is applied to each color channel. To use this effect, first position the corners of the rectangle over an area where the average color should remain constant. A middle or light gray area is best for this. Then select a Source frame that has the desired color within the rectangle, and hit the Set Hold Color button. When other frames are processed, their colors will be scaled so the average color within the rectangle is equal to the Hold Color.



FlickerRemoveMatte

Removes temporal flickering from the Source clip using a Matte clip to specify the area where the average brightness should remain constant. To use this effect, select a Source frame that has the desired brightness within the Matte, and hit the Set Hold Level button. When other frames are processed, their brightness will be scaled so the average brightness within the Matte is equal to the Hold Level. You can keyframe different Hold Level values over time to account for desirable brightness changes.



FlickerRmMatteColor

Removes temporal color changes from the Source clip using a Matte clip to specify the area where the average color should remain constant. To use this effect, select a Source frame that has the desired color within the Matte, and hit the Set Hold Color button. When other frames are processed, their color will be scaled so the average color within the Matte is equal to the Hold Color.



FlutterCut

Transitions between two clips by rapidly cutting back and forth between them, optionally inserting solid colored or inverted frames as well. The cuts of each clip can get longer or shorter over the length of the transition.



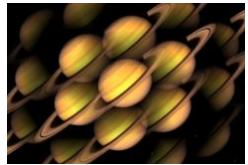
FlysEyeCircles

Breaks the image into circle shaped tiles and transforms the image within each shape, to create a fly's eye view effect. The Overlap options allow the circles to be combined in different ways where they overlap. The 'Inside' parameters transform the Source image before it is tiled into the pattern, and the 'Tile' parameters transform the entire fly's eye pattern.



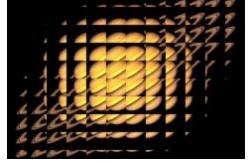
FlysEyeHex

Breaks the image into hexagon shaped tiles and transforms the image within each shape, to create a fly's eye view effect. Increase Edge Softness for a smoother overlap between the tiles. The 'Inside' parameters transform the Source image before it is tiled into the pattern, and the 'Tile' parameters transform the entire fly's eye pattern.



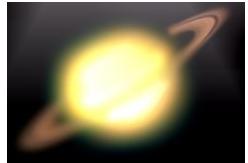
FlysEyeRect

Breaks the image into rectangle shaped tiles and transforms the image within each shape, to create a fly's eye view effect. The 'Inside' parameters transform the Source image before it is tiled into the pattern, and the 'Tile' parameters transform the entire fly's eye pattern.



FreeLens

Generates a distorted, defocused and light leaked version of the source clip to simulate the in-camera technique of holding a detached lens in front of the camera and moving it to create focus and light effects.



FreezeFrame

Freezes motion for each duration of Freeze Frames. For example if Freeze Frames is 5 and the source frames are: 1 2 3 4 5 6 7 8 9 10 11... the output frames would be: 1 1 1 1 1 6 6 6 6 11...

Gamma

Applies a gamma correction to the input clip. The red, green, and blue channels can be adjusted independently. From Gamma just causes the inverse effect of adjusting Gamma.



GetFrame

Retrieves a specified frame from the source clip for each destination frame. This is meant to be used by animating the value of Get Frame to speed up, slow down, or reverse the input clip in an arbitrary way as desired.

Glare

Composites rainbow halos and/or glint-like rays at locations where the Source clip is brighter than the threshold. Lower the threshold parameter to produce glares in more areas. Use the Style menu to select different glare types. Set the Glare Res parameter to 1/2 for faster rendering with slightly softer glares. Use the Convolve option for smoother results. Glares are best observed on dark images with a few bright spots.



Glint

Generates star shaped glints at locations where the Source clip is brighter than the threshold. Lower the threshold parameter to produce glints in more areas. Adjust the size and brightness parameters to make different types of glints. Glints are best observed on dark images with a few bright spots.



GlintRainbow

Generates star shaped rainbow colored glints at locations where the Source clip is brighter than the threshold. Lower the threshold parameter to produce glints in more areas. Adjust the Shift Out, Size, and Brightness parameters to make different types of glints. Glints are best observed on dark images with a few bright spots.



Glow

Generates glowing light from areas of the source clip that are brighter than the given threshold. Raise the threshold parameter to produce glows in fewer areas. Adjust the Width RGB parameters to make glows with different color falloffs, and adjust the Width XY parameters to make horizontal or vertical glows.



GlowAura

Generates radial colored aura lines following the gradient of the source clip. Raise the threshold parameter to produce glows in fewer areas. Adjust the Width, Frequency, Phase, and Twist parameters to make glows with different aura patterns.



GlowDarks

Areas of the source clip darker than the given threshold are blurred and combined with the input clip to give a deep smoky look. Adjust the Darkness, Width, and Threshold parameters to give different types of looks.



GlowDist

Generates glows based on the distances from the edges of the source input. Any edges in the input image, where the brightness crosses the given threshold value, will generate an equally bright glow into the darker side of the edges. This is best observed when used on images with dark backgrounds.



GlowEdges

Creates glowing light from the edges of the source clip. This differs from the default Glow in that small or thin objects generate as much glow around their edges as large objects. Also the glow colors are not affected by the colors of the source clip.



GlowNoise

Generates glowing light from areas of the source clip that are brighter than the given threshold. The glows are also attenuated by a solid noise texture to give them a noisy or grainy effect. If the Jitter Frames parameter is positive, the noise will be regenerated for each frame for a fizzling look. If Jitter Frames is zero, two noise textures are combined and slide over each other at a rate depending on the Spread Speed.



GlowOrthicon

The source clip is darkened at areas around parts of the source clip that are brighter than the given threshold, to give an 'orthicon' or 'dark glow' look. Lower the Threshold parameter to produce the orthicon effect in more areas. Adjust the Darkness and Width parameters to give different types of looks.



GlowRainbow

Generates rainbow colored glows based on the distances from the edges of the source input. Any edges in the input image, where the brightness crosses the given threshold value, will generate an equal glow into the darker side of the edges. This is best observed when used on images with dark backgrounds.



GlowRings

Generates glows of colored rings around the areas of the source clip that are brighter than the given threshold. Raise the threshold parameter to produce glows in fewer areas. Adjust the Width and Thickness RGB parameters to make glows with different color patterns, and adjust the Width XY parameters to make horizontal or vertical glows.



Gradient

Makes a smooth color gradient across the screen using given Start and End locations and colors, then optionally combines the gradient with a background clip. Increase Add Noise to reduce banding artifacts in the gradient due to color quantization.



GradientMulti

Generates a smooth multi-color gradient across the screen using multiple control points, and optionally combines the gradient with a background clip.



GradientRadial

Makes a smooth radial color gradient in an ellipse shape, given Center, Inner Radius, and Outer Radius parameters, and optionally combines the gradient with a background clip. Increase Add Noise to reduce banding artifacts in the gradient due to color quantization.



Grain

Adds color and/or monochrome grain to the source clip. Amplitude and frequency parameters allow adjusting the grain texture independently for all colors together, each color channel, or black and white grain.



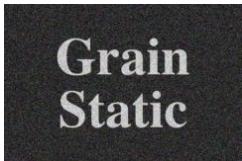
GrainRemove

Smooths the source clip while retaining the edges. To adjust the parameters in this effect, first use the Show:Edges option to inspect which edges will be retained and adjust Edges Threshold, Edges Width, and Edges Scale until the important edges are fairly sharp and bright but not jaggy. Then return to Show:Result and adjust the smooth parameters to remove the appropriate amount of grain.



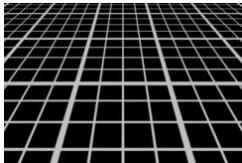
GrainStatic

Adds color and/or monochrome random noise of given amplitudes to every pixel of the source clip. Unlike the other Grain effects, there is no coherency of the grain between pixels, so the resulting look will vary with different output resolutions.



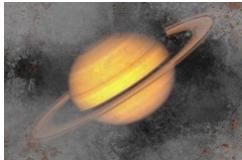
Grid

Generates a grid of lines and combines it with a background clip. Adjust the Latitude, Swing, and Roll parameters to rotate the grid on various axes, and adjust Shift and Z Dist to translate and zoom.



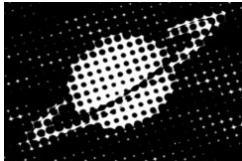
Grunge

Simulates many different kinds of grunge including dirt, stains, flecks, grime, scratches, and paint. Up to three different kinds of grunge can be combined. There are master controls for adjusting all grunge together as well as a set of detailed controls for adjusting the look of each of the grunge collections.



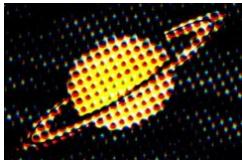
HalfTone

Generates a halftone version of the source clip using a black and white pattern of dots. Use the Smooth Source parameter to remove some details and make the dots more consistently round.



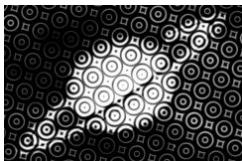
HalfToneColor

Generates a version of the source clip using a colored dot pattern. Use the Smooth Source parameter to remove some details and make the dots more consistently round. You can invert the dots pattern from CMY to RGB using the Dots menu.



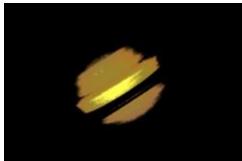
HalfToneRings

Generates a duotone version of the source clip using a repeating pattern of concentric rings. Use the Smooth Source parameter to remove some details and make the dots more consistently shaped.



Hotspots

Generates a hotspot image containing areas of the source clip brighter than a given threshold. The colors of the hotspots should match the original source. This can be used for increasing contrast or finding the bright areas of a clip, but without changing the color saturation or hue of the result.



HueSatBright

Adjusts the hue, saturation, brightness, and/or offset of the input clip.



HyperPull

Pulls the foreground away in z space before dissolving to the background, and featuring some bonus color and shake effects for added style.



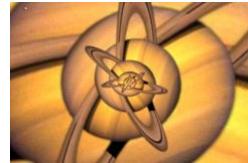
HyperPush

Pushes the foreground nearer in z space before dissolving to the background, and featuring some bonus color and shake effects for added style.



InfiniteZoom

Zooms into endlessly repeating copies of an image, reminiscent of certain M.C. Escher drawings. Works best with clips with transparent edges, such as clocks or plates; or transparent centers, such as picture frames. Transparency can come from the source clip's alpha or the mask. Animate the Zoom param to get the full effect.



Invert

Inverts the colors of the source clip, so black becomes white, and white becomes black. This can optionally also invert luma, chroma, RGB and alpha channels independently and do some basic color correction on the inverted result.



JitterFrames

Each output frame receives a random frame between the current frame plus and minus the Jitter Frame Dist. The jittering is random but repeatable.

JpegDamage

Creates a version of the Source input that is subjected to Jpeg compression artifacts and errors. This can be used to give various looks of low quality digital transmissions. Three methods for manipulating your image are provided: the Jpeg quality can be adjusted, various internal frequencies can be scaled, and random decompression errors can be introduced. In all cases it can also be useful to lower the resolution factor to create larger, more obvious Jpeg blocks.



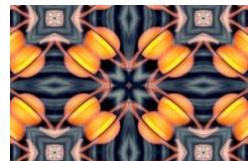
KaleidoDiamonds

Reflects the source clip into a pattern of diamonds. The 'Inside' parameters transform the Source image before it is reflected into the pattern. The Center and Z Dist transform the entire result including the reflection pattern, and the Rotate affects only the reflecting 'mirrors'.



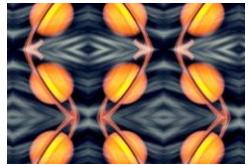
KaleidoOct

Reflects the source clip into an octagonal pattern of right triangles. The 'Inside' parameters transform the Source image before it is reflected into the pattern. The Center and Z Dist transform the entire result including the reflection pattern, and the Rotate affects only the reflecting 'mirrors'.



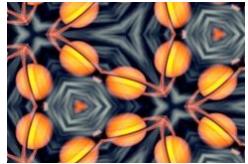
KaleidoSquares

Reflects the source clip into a pattern of squares. The 'Inside' parameters transform the Source image before it is reflected into the pattern. The Center and Z Dist transform the entire result including the reflection pattern, and the Rotate affects only the reflecting 'mirrors'.



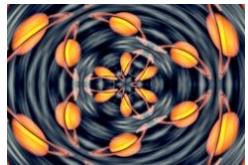
KaleidoTriangles

Reflects the source clip into a pattern of equilateral triangles. The 'Inside' parameters transform the Source image before it is reflected into the pattern. The Center and Z Dist transform the entire result including the reflection pattern, and the Rotate affects only the reflecting 'mirrors'.



KaleidoPolar

Wraps the source clip around in a disk shape and reflects radially as if viewed through a reflecting cylinder.



KaleidoRadial

Simulates a traditional 2 or 3-mirror kaleidoscope. You see a pie-slice shaped piece of the source through the angle between the mirrors, and mirror-reflected copies of it in the rest of the image. Use the Slices parameter to control the how many copies of the source pie slice you see around the central point.



LaserBeam

Simulates the beam from a science fiction style laser blaster. The beam moves over a number of frames from a source point to a target point. A perspective effect may also be added.



Layer

Layers the Foreground image over the Background using one of a variety of blending operations. The colors of each input can also be adjusted using the lights, darks, and saturation parameters.



LensFlare

Renders a lens flare image over the background clip, aligning various flare elements between the hotspot and pivot locations. Use the Lens menu to select different types of lensflares.



LensFlareAutoTrack

Renders one or more lens flare images over the background clip, aligning various flare elements between the hotspot and pivot locations. In this AutoTrack version of LensFlare, the hotspots are automatically positioned on the brightest areas of the background clip. Increasing Blur For Auto will cause the input to be smoothed before the brightest locations are found and can help remove the effect of secondary bright spots.



Light3D

Performs 3D relighting with up to 4 individually controlled light sources. The Source input is usually an ambient or diffuse pass from a 3d renderer that shows the surface colors. The Normal vector input determines the surface direction at each pixel. The source and normals should be generated together by the 3d program so they match.



LightLeak

Renders abstract patterns of color that simulate light leaking through gaps in a camera body. The light leak consists of three distinct elements which can be adjusted individually.



Luna

Renders the Earth's Moon; you can adjust phase and colors, and add atmospheric effects.



MathOps

Combines two clips using one of a variety of mathematical operations. The colors of each input can also be adjusted using the lights, darks, and saturation parameters.



MatteOps

Grows, shrinks, or adds noise to the alpha channel of the Source input. This can be useful for removing blue or green spill from a chroma key.



MatteOpsComp

Grows, shrinks, or adds noise to the edges of the Foreground alpha channel, then uses that result to composite the Foreground over the Background. This can be useful for removing blue or green spill from a chroma key.



Median

Applies a median filter to the source image. Median filters are useful for cleaning up isolated spots and noise.



Monochrome

Generates a monochrome version of the source clip using adjustable weights for the red, green, and blue channels. This can simulate the use of a color filter applied to the lens of a black and white camera. For example, use more red weight to darken blue sky areas of the input. The weights are scaled so they sum to 1 before being used to reduce overall brightness changes when they are adjusted.



Mosaic

Generates a pixelated version of the source clip. Adjust the size and shape of the blocks using the Pixel Frequency and Pixel Rel Height parameters. Increase the Smooth Colors parameter to cause the colors of nearby pixel blocks to be more consistent, and less flickery over time.



MotionDetect

Shows areas of motion in a clip. For each frame, finds the difference between the current frame and a previous frame.



MuzzleFlash

Simulates the flash and smoke that is generated when a gun is fired. The flash from several types of gun can be simulated. All guns have a primary flash, and guns with suppressors may have secondary flashes. The gun may easily be fired repeatedly. Note: All time units in this effect are in frames.



NearestColor

Collects pixel colors from the input clip's frames that are closest to the given Match Color. This can create, for example, a background-only image from a clip with objects moving over a blue or green-screen background. It can also be used to accumulate the color of a moving object over a non-colored background. The collected colors are reinitialized whenever any non-consecutive frame is processed, either the first frame, reprocessing a given frame, or jumping to another frame. You must process multiple frames of a clip in a row to observe the effect, and clearing your image cache before rendering may sometimes be necessary.



NightSky

Generates a realistic starry night sky as viewed from a major city or a specified longitude and latitude. The stars are generated using a star database so that major constellations are visible where expected. Adjust magnitude limit to see more stars. Animate the Minute param to make the stars move realistically over time.



OCIOTransform

Transform input from one colorspace to another using OpenColorIO.

Uses the OCIO environment variable to find your OpenColorIO configuration. If that is not set, it will fall back to a default configuration. It is not recommended to change the environment variable after adding this effect to a project, as it may change the rendered results. The effect will show a warning dialog if this happens.



ParallaxStrips

Applies a collection of 3d refracting glass strips to break up the image. The image is shifted within each strip, and the strips move over time. The strips gradually fade in or out, so the transition to the source is seamless.



ParallaxStripsTransition

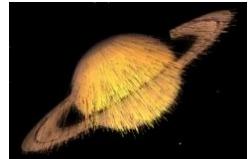
Applies a collection of 3d refracting glass strips to break up the image. The image is shifted within each strip, and the strips move over time. The strips gradually fade in or out, so the transition to the source is seamless.



Note: because you can control the size of the strips, it's possible to set up a transition that won't completely cover the secondary (incoming or outgoing) clip, and so will have a 'pop' at the start or end. To ensure a smooth transition, go to the end of the transition where the strips are largest, select Show: Strips mode, and adjust the strip size to make sure they fully cover the image. That way none of the back clip will leak through on that frame. Alternatively, hit the 'Ensure Full Coverage' button, and the number of strips will automatically adjust to the minimum needed to fully cover the image.

PixelSort

Sorts pixels over a threshold along lines arranged in various patterns. Patterns include parallel lines, lines radiating from a central point, and circular lines.



Posterize

Generates a posterized version of the input by limiting the number of colors in the source, and replacing detailed texture and noise with solid colors.



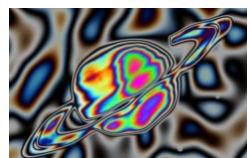
PseudoColor

Colorizes the source image. The hue is calculated from the brightness of the source.



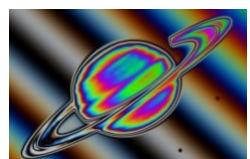
PsykoBlobs

Combines the source clip with a field of 'blob' shapes and then passes them through a colorization process. The Phase Speed parameter causes the colors to automatically rotate over time.



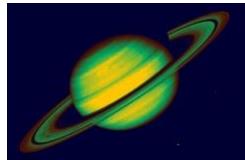
PsykoStripes

Combines the source clip with a stripe pattern and then passes them through a colorization process. The Phase Speed parameter causes the colors to automatically rotate over time.



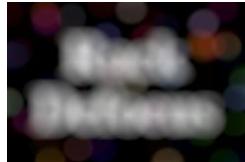
QuadTone

Performs an interpolation between four specified colors using the brightness of the source clip.



RackDefocus

Generates a defocused version of the source clip using a 'circle of confusion' convolution. This effect is often preferable to a gaussian blur for simulating a real defocused camera lens, because bright spots can be defocused into clean shapes instead of being smoothed away. The iris shape can be controlled using Points, Pointiness and Rotate, and the Use Gamma parameter can adjust the relative brightness of the blurred highlights.



RackDfComp

Composites the Foreground over the Background using a Matte while defocusing both layers by different amounts.



RandomEdits

Randomly re-edits the entire source clip. The shuffling is random but repeatable.

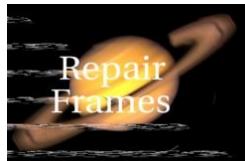
Rays

Generates beams of light emitting from the bright areas of the source clip. Lower the Threshold parameter to generate rays from more areas or raise it to generate rays from only the brightest areas. Set the Rays Res parameter to 1/2 for faster rendering with slightly softer rays.



RepairFrames

Repairs one or more frames of a clip by replacing them with a time-warped version of the surrounding frames.



Retime

Retimes a clip using optical flow based motion estimation and frame interpolation.



ReverseClip

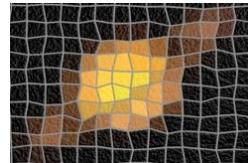
Reverses the frame order of a clip, and optionally also reverses the fields of each frame.

ReverseEdits

Independently reverses segments of the input clip. For example if Edit Frame Length is 5, and the input clip frames are: 1 2 3 4 5 6 7 8 9 10 11... the output frames would be: 5 4 3 2 1 10 9 8 7 6 15...

RomanTile

Generates a mosaic pattern based on the Source clip. Adjust the Edge Attract parameter to get the tile corners to bias towards the edges in the source. Increase Vary Shape to get a less regular tile pattern.



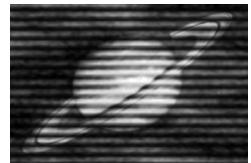
ScanLines

Creates a version of the source clip with a scan line pattern resembling a color TV monitor. Increase the Add Noise parameter to also add a grainy effect to the result.



ScanLinesMono

A monochrome version of ScanLines. Creates a version of the source clip with a scan lines pattern resembling a black and white TV monitor. Increase the Add Noise parameter to also add a grainy effect to the result.



Shake

Applies a shaking motion to the source clip over time with translation, zooming, and/or rotation. The shaking is random but repeatable, so with the same parameters the same shaking motion is generated each time. Turn on Motion Blur and adjust the Mo Blur Length for different amounts of blur. Adjust the Amplitude and Frequency for different shaking speeds and amounts. The Rand parameters give detailed control of the random non-periodic shaking, and the Wave parameters adjust the regular periodic shaking. The X, Y, Z, and Tilt parameters control the horizontal, vertical, zoom, and rotation amounts of shaking respectively.



Shape

Draws a shape into the image. It can give a wide variety of shapes, from polygons and circles to stars, flower shapes, and swirled starfish shapes. The main parameters to look at are Points, Pointiness, Roundness, and Swirl.



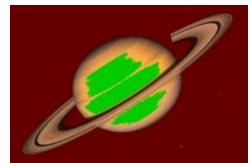
Sharpen

Amplifies the high frequencies in the source clip such as edges and details. Increase the Sharpen Width parameter to sharpen more of the mid range frequencies, and adjust Sharpen Amp to control the amount of sharpening applied.



ShowBadColors

Identifies all pixels that fall outside a given color range, and flags them with the same color so they can be seen easily.



Sketch

Generates a version of the input with a hand drawn sketched look. The results of this effect can depend on the image resolution, so it is recommended to test your final resolution before processing a clip.



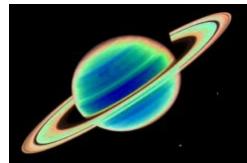
SoftFocus

Combines a blurred version of the source with the original to give a 'soft focus' effect. Adjust the Width and Mix parameters to give different types of looks.



Solarize

Inverts the colors of the input clip that are brighter than the Threshold value, to create a 'solarization' effect.



Sparkles

Generates a field of sparkling glint effects. Adjust the Frequency, Density, and Size parameters for different types of sparkling patterns. Use the Matte input to only generate sparkles in specified areas.



SparklesColor

Generates a field of sparkling Glint effects with varying colors. Adjust the Frequency, Density, and Size parameters for different types of sparkling patterns. Use the Matte input to only generate sparkles in specified areas.



SpotLight

Lights the input clip using one or two spotlights. For each enabled light, the intersection of a 3D light cone with the image plane is calculated using the given light source position, aim location, and beam angle. Ambient light can also be applied to affect the entire source image evenly. A wide variety of lighting shapes can be created by adjusting the parameters provided.



Streaks

Motion blurs the bright areas of the source into streaks between the From and To transformations. This can be used to create an extended film exposure effect, or simulate soft beams of light. From and To parameters do not refer to time. They describe the two transformations in space that determine the style of blur applied to each frame.



StretchFrameEdges

Stretch the edges of a 4x3 image while preserving the center, to hide the black pillars in a 16x9 comp. This effect takes the middle part of the Source clip and squeezes it, since viewing a 4x3 image in a 16x9 comp normally stretches it out to fit. The edges are not squeezed, so the image goes all the way out to the edges. The left and right edge portions of the image will appear stretched horizontally. Although intended for 4x3 conversion, it can work with any aspect ratios.



StripSlide

Breaks a clip into strips and slides them off the screen one at a time to reveal the Background.



StripSlideTransition

Transitions between two clips by breaking them into strips and sliding them off the screen one at a time to reveal the incoming clip.



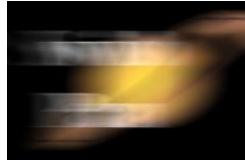
Swish3D

Dissolves between two input clips while performing 3D moves on each. During the transition the From clip is transformed by the Zdist, Rotate, Swivel, Tilt, Shift, Scale, and Shear parameters, and the To clip is transformed by the opposite of these values. The overall amount of motion for each image can be scaled by the Rel Amp From and Rel Amp To parameters.



SwishPan

Transitions between two input clips by sliding one clip off the frame and the other clip on, and adding motion blur to give the appearance of a quick pan. This works best when the duration of the transition is short.



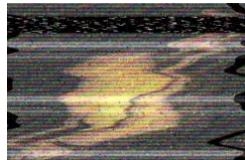
TVChannelChange

Transitions between two input clips by simulating a channel change on an old television set. The first clip goes black with bad reception, followed by the second clip with bad reception. The reception improves over time until only the second clip is left.



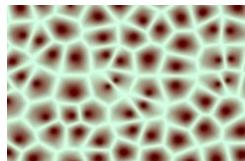
TVDamage

Simulates a TV with transmission and reception problems, VCR issues, and TV hardware difficulties. Simulates static, interference, ghosting, horizontal and vertical hold, hum bars, color stripes, visible scanlines, VCR fast-forward, dropouts, vignetting, orthicon, fisheye, and turn-off.



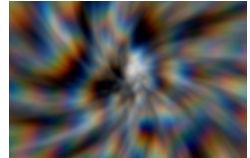
TextureCells

Generates an image of procedural cellular shapes. The Rotate Speed parameter causes the cell centers to rotate within each cell over time.



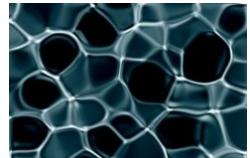
TextureChromaSpiral

Creates an abstract texture by applying a WarpChroma effect to a procedurally generated noise texture.



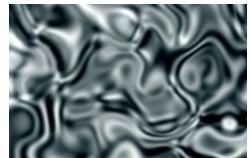
TextureFlux

Creates abstract textures of fluctuating liquid or cellular patterns. The Morph Speed parameter causes the pattern to automatically undulate over time.



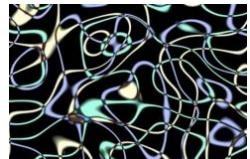
TextureFolded

Creates an abstract texture resembling folded cloth or liquid that can be animated to give a dynamic turbulent effect. The Fold Speed parameters cause the pattern to automatically undulate over time.



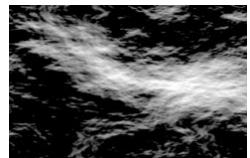
TextureLoops

Creates an abstract texture of overlapping loop shapes. Three sets of shapes can be separately adjusted, colored, and then combined together. The Phase Speed parameter causes the pattern to automatically change over time.



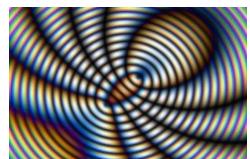
TextureMicro

Generates a procedural texture that looks a bit like a surface of a rough object under an electron microscope.



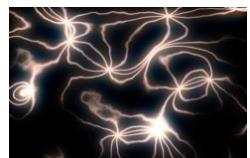
TextureMoire

Creates an abstract Moire texture by adding together two patterns of concentric rings. The Phase Speed and Moire Speed parameters cause the rings to automatically animate over time.



TextureNeurons

Creates an abstract texture resembling moving nerve cell tendrils. The Phase Speed and Morph Speed parameters cause the pattern to automatically change over time.



TextureNoiseEmboss

Creates an abstract texture by applying a EmbossShiny effect to a procedurally generated noise texture. Adjust the Light Dir to illuminate the pattern from different angles.



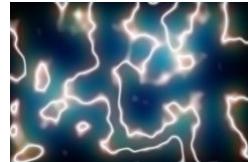
TextureNoisePaint

Creates an abstract texture by applying an AutoPaint effect to a procedurally generated noise texture.



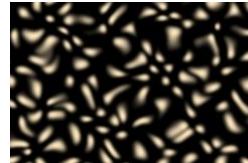
TexturePlasma

Creates an abstract texture resembling an electrical plasma effect. The Phase Speed parameter causes the pattern to automatically undulate over time.



TextureSpots

Creates a field of spots that can be distorted and animated. The Warp Speed parameter causes the spots to be distorted over time by a random warping pattern.



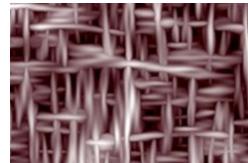
TextureTiles

TextureTiles draws a repeating pattern of tiles. The shapes can be hexagons, triangles, diamonds, stars, or variations on those, depending on the Morph parameters.



TextureWeave

Creates an abstract texture resembling perpendicular woven strands. The two sets of strands, horizontal and vertical, can be adjusted independently using frequency, octaves, and speed parameters.



Threshold

Sets the color channels of the source clip to full on or full off using a given softness and threshold. This can be used to increase the contrast of each color channel independently.



TileScramble

Breaks the image into rectangular tiles and shifts the image within each tile to create an effect like a wall of small randomly oriented mirrors reflecting the source image. The amount and direction of shifting are controllable.



TimeAverage

Each output frame is the average of multiple input frames: from the current frame, back to a given number of previous frames. This is similar to the Trails effect, except all frames within the range are weighted equally instead of fading out, so the end points of the trails are abrupt. Each frame contributes only 1/n of the total brightness, so fast-moving objects against a dark background may seem dim. The average is reinitialized whenever any non-consecutive frame is processed: either



the first frame, reprocessing a given frame, or jumping to another frame. You must process multiple frames of a clip in a row to observe the effect.

TimeDisplace

Displaces the Source clip by variable amounts in time depending on the brightness values of a Displace input.



TimeSlice

Divides the output frame into slices, where each slice receives a different frame from the source clip. An example use of this effect might be to make a turning object twist into a helix shape instead of rigidly rotating. The slices are oriented depending on Slice Direction, and receive relative frame numbers between plus and minus half of Slice Number. For example if the current frame number is 30, Slice Direction is -90 degrees, Slice Number is 12, and Frame Offset is 0, the result will consist of horizontal slices containing approximately frames 30-6 to 30+6 from bottom to top.



TimeWarpRGB

Shifts the red, green, and blue channels in time by different amounts, to give a temporal chroma distortion.



Tint

Tints the dark and light regions of the input clip towards given colors. The dark colors are tinted by the Tint Dark color, and the brighter colors are tinted by the Tint Lights color.



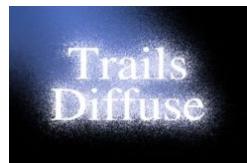
Trails

The previous frames of the input clip are combined with the current frame to give a variety of 'time trails' effects. The output of each processed frame is stored and then combined with the next frame. The trails are reinitialized whenever any non-consecutive frame is processed, either the first frame, reprocessing a given frame, or jumping to another frame. You must process multiple frames of a clip in a row to observe the effect, and clearing your image cache before rendering may sometimes be necessary.



TrailsDiffuse

The previous frames of the input clip are processed with a pixel diffusion process and then combined with the current frame. The output of each processed frame is stored and then combined with the next frame. The trails are reinitialized whenever a non-consecutive frame is processed, either the first frame, reprocessing a given frame, or jumping to another frame. You must process multiple frames of a clip in a row to observe the effect, and clearing your image cache before rendering may sometimes be necessary.



Transition

A Transition Builder which lets you combine multiple Sapphire effects to create new transitions, and can load presets from any transition. Click Load Preset or Edit Effect to get started.



TriTone

Performs an interpolation between three specified colors using the brightness of the source clip.



UltraGlow

Generates varieties of glowing light from bright areas of the source clip. Raise the threshold parameter to produce glows in fewer areas. Adjust the Width RGB parameters to make glows with different color falloffs, and adjust the Width XY parameters to make horizontal or vertical glows. Adjust Glow Falloff and Glow Bias parameters to control falloff distance and how far the hottest areas extend. Adjust After Glow parameters to generate a secondary glow on the result of the primary glow. Optionally enhance the edges or add highlights to the source clip or combine the result with atmospheric noise.



UltraZap

Generates lightning bolts along a spline and renders them over a background. Increase Vary Endpoint to spread out the ends of the bolts. Adjust the Glow Color for differently colored results. Adjust the Loop Speed parameter to make it traverse the spline over time.



Vignette

Darkens the border areas of the source clip to create a vignette effect. Use the Squareness, Radius, and Edge Softness parameters to affect the shape of the vignette. Use the Opacity and Color parameters to adjust its strength and color.



VintageColor2Strip

Simulates the old color 2-strip film process from the 1920s. The scene is exposed twice, through red and green filters, onto alternating frames of a monochrome film strip. Then the red print is dyed with a red dye, and the green print is dyed cyan. Those two strips are cemented together back-to-back to form the final print. The result contains mostly red and green colors, with some synthetic blue from the blue components of the dyes.

This effect simulates the two filter colors and the two dye colors, and also allows adding grain and color correction.



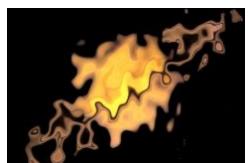
VintageColor3Strip

Simulates the color 3-strip film process from 1935 through 1955. Three-strip color was a subtractive process which exposed three separate film strips through color filters, then applied complementary color dyes to the print according to the density of the original records. This process was used for many films such as The Wizard Of Oz, Fantasia, and Gone With The Wind. Modern color film has much broader color filtering in the emulsion layers, so this effect simulates the narrower filters and sharper colored dyes of the era which gave it its characteristic vibrancy. This effect also allows adding grain and color correction.



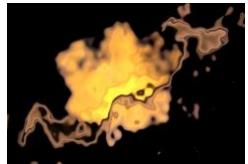
WarpBubble

Wraps the source clip by a smooth noise function. This can be used to create heat diffusion or under water types of effects. The Shift Speed parameters cause the noise pattern to automatically translate over time. Adjust the Amplitude and Frequency parameters to give different types of distortions.



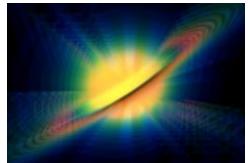
WarpBubble2

Warps the source clip using two overlapping sets of bubble patterns. This can be used to create heat diffusion or under water types of effects. The Shift Speed parameters cause the noise pattern to automatically translate over time. Adjust the Amplitude and Frequency parameters to give different types of distortions.



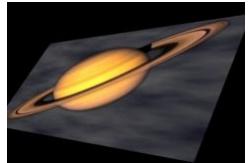
WarpChroma

Separates the source clip into spectral bands and warps them by different amounts. The red is warped by the From transformation, the blue by the To transformation, with the other colors of the spectrum in between. The From and To parameters do not refer to time. They describe the two transformations in space that determine the sequence of warps applied to each color.



WarpCornerPin

Performs a 3D perspective warp of the source image to align the corners with the four indicated points. This can be useful for positioning the source over an object in another clip, such as a billboard or computer screen.



WarpDrops

Warps the source clip by multiple patterns of concentric waves emanating from multiple center locations. Each area in the Centers input clip brighter than the value of Threshold Cntrs, generates an independent pattern of concentric waves, and the total brightness of each area scales the warping magnitude of those waves. If the Centers image is complex, the number and locations of resulting centers can be fairly sensitive to the threshold value. Try using just solid black with a few white dots for the Centers input. If you only need a single set of waves, you can use the WarpPuddle effect instead.



WarpFishEye

Expands the center of the source clip as if viewed through a fish-eye lens. Adjust the Amount parameter to give more or less distortion. Turn off the Wrap options to give transparency beyond the borders of the input clip instead of reflected copies.



WarpMagnify

Magnifies an elliptical region of the source to create a glass lens refraction effect.



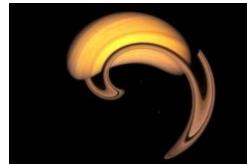
WarpPerspective

Transforms the source clip onto a 3D plane with perspective. Adjust the Latitude, Swing, and Roll parameters to rotate the image on various axes, and adjust Shift and Z Dist to translate and zoom. Turn off the Wrap options to give a single non-repeated copy of the image.



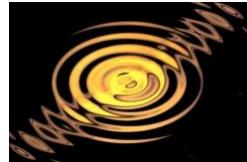
WarpPolar

Warps the source clip into a rounded disk shape. The vertical direction of the source image is mapped between the Inner Radius and Outer Radius, and the horizontal direction is rotated about the center based on the number of Angle Repeats and offset by Angle.



WarpPuddle

Warps the source clip by a pattern of concentric waves. The Phase Speed parameter causes the waves to automatically move outwards from the center over time. Adjust the Inner and Outer Radius parameters to limit the area where the waves appear. Increase the Inner and Outer softness for smoother transitions between where the waves appear and do not appear.



WarpPuff

Warps the source clip based on its gradient. By default, brighter areas are puffed out and darker areas are shrunk. This is similar to applying Distort effect to an image using itself as the lens.



WarpRepeat

Transforms the source input multiple times and averages the results. The From and To parameters do not refer to time. They describe the two transformations in space that determine the sequence of repeated warps applied to each frame.



WarpTransform

Warps the source clip by a combination of linear transformations including scale, shear, zoom, rotation, and translation.



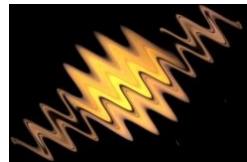
WarpVortex

Twists the source clip into a vortex, about a given Center location. Use the Vortex Start parameter to adjust the amount of vortexing, and use Angle Offset to also apply a normal rotation. Vortex Speed can be used to automatically animate the amount of vortexing.



WarpWaves

Warps the source clip by a wave pattern. You can make the waves move over time by increasing the Phase Speed parameter, or by animating the value of Phase Start.



WarpWaves2

Warps the source clip using two sets of overlapping wave patterns. You can make the waves move over time by increasing the Phase Speed parameters, or by animating the value of the Phase Start parameters.



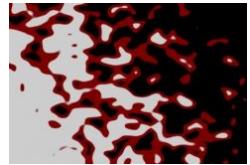
WhipLash

2D-only version of Swish3D, with optional Whip Out motion and RGB Split. Cuts between two input clips while performing 2D moves on each. During the transition the clips are transformed by the Rotate, Shift, and Scale parameters.



WipeBlobs

Performs a wipe transition between two input clips using a pattern of blobs generated by a noise function. The Wipe Amount parameter should be animated to control the transition speed. Increase the Grad Add parameter to make the timing of the blobs pattern move across the screen during the wipe. Increase the Border Width parameter to draw a border at the wipe transition edges.



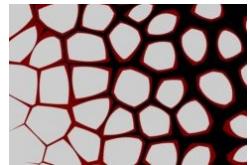
WipeBubble

Wipes between two input clips with a bubble-warp process performed within the transition area. The Wipe Amount parameter should be animated to control the transition speed.



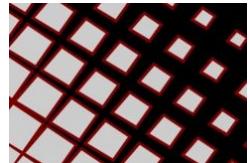
WipeCells

Performs a wipe transition between two input clips using a pattern of procedurally generated cellular shapes. The Wipe Amount parameter should be animated to control the transition speed. Increase the Grad Add parameter to make the timing of the cells pattern move across the screen during the wipe. Increase the Border Width parameter to draw a border at the wipe transition edges.



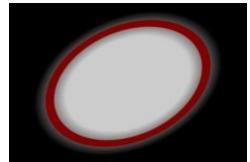
WipeChecker

Performs a wipe transition between two input clips using a grid of growing or shrinking checkers. The Wipe Amount parameter should be animated to control the transition speed. Increase the Grad Add parameter to make the timing of the checker pattern move across the screen during the wipe. Increase the Border Width parameter to draw a border at the wipe transition edges.



WipeCircle

Performs a wipe transition between two input clips using a growing or shrinking circle. The Wipe Amount parameter should be animated to control the transition speed. Increase the Border Width parameter to draw a border at the wipe transition edges.



WipeClock

Performs a clock wipe transition between two input clips. The Wipe Amount parameter should be animated to control the transition speed. Increase the Border Width parameter to draw a border at the wipe transition edges.



WipeClouds

Transitions from the first clip to the second using a moving cloud texture. The Wipe Amount parameter should be animated to control the transition speed.



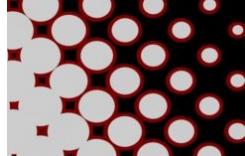
WipeDiffuse

Wipes between two input clips with a pixel-diffusion process performed within the transition area. The Wipe Amount parameter should be animated to control the transition speed. The pixelated look of this effect depends on the image resolution, so it is recommended to test your final resolution before processing.



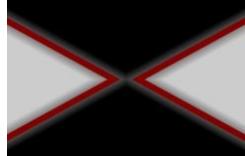
WipeDots

Performs a wipe transition between two input clips using a grid of growing or shrinking dots. The Wipe Amount parameter should be animated to control the transition speed. Increase the Grad Add parameter to make the timing of the dots pattern move across the screen during the wipe. Increase the Border Width parameter to draw a border at the wipe transition edges.



WipeDoubleWedge

Performs a wipe transition between two input clips using two wedge shapes. The Wipe Amount parameter should be animated to control the transition speed. Increase the Border Width parameter to draw a border at the wipe transition edges.



WipeFlux

Performs a wipe transition between two input clips using a flux texture with mostly round cells. The Wipe Amount parameter should be animated to control the transition speed. Increase the Grad Add parameter to make the timing of the flux pattern move across the screen during the wipe. Increase the Border Width parameter to draw a border at the wipe transition edges.



WipeFourWedges

Performs a wipe transition between two input clips using a pattern of four wedges merging into an 'X' shape. The Wipe Amount parameter should be animated to control the transition speed. Increase the Border Width parameter to draw a border at the wipe transition edges.



WipeLine

Performs a simple line wipe transition between two input clips. The Wipe Amount parameter should be animated to control the transition speed. Increase the Border Width parameter to draw a border at the wipe transition edges.



WipeMoire

Performs a wipe transition between two input clips using a pattern of combined concentric rings. The Wipe Amount parameter should be animated to control the transition speed. The Phase Speed and Moire Speed parameters cause the rings to automatically animate over time. Increase the Grad Add parameter to make the timing of the pattern move across the screen during the wipe. Increase the Border Width parameter to draw a border at the wipe transition edges.



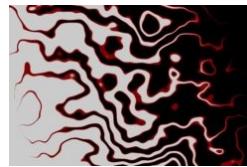
WipePixelate

Transitions between two input clips by adding blocks of pixels of one clip onto another in a semi-random order. The Wipe Amount parameter should be animated to control the transition speed. Adjust the Edge Width and Chunky parameters for different pixelated patterns.



WipePlasma

Performs a wipe transition between two input clips using a plasma texture with moving tendrils. The Wipe Amount parameter should be animated to control the transition speed. Increase the Grad Add parameter to make the timing of the plasma pattern move across the screen during the wipe. Increase the Border Width parameter to draw a border at the wipe transition edges.



WipePointalize

Transitions between two input clips by adding brush-like polygon shapes from one clip onto another in a semi-random order. The Wipe Amount parameter should be animated to control the transition speed. Adjust the Frequency to change the size of the shapes, and adjust the Edge Width and Chunky parameters for different patterns.



WipeRectangle

Performs a wipe transition between two input clips using a growing or shrinking rectangle. The Wipe Amount parameter should be animated to control the transition speed. Increase the Border Width parameter to draw a border at the wipe transition edges.



WipeRings

Performs a wipe transition between two input clips using a pattern of concentric rings. The Wipe Amount parameter should be animated to control the transition speed. Increase the Grad Add parameter to make the timing of the rings pattern move across the screen during the wipe. Increase the Border Width parameter to draw a border at the wipe transition edges.



WipeStar

Performs a wipe transition between two input clips using a star shape. The Wipe Amount parameter should be animated to control the transition speed. Increase the Border Width parameter to draw a border at the wipe transition edges.



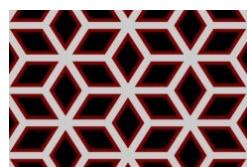
WipeStripes

Performs a wipe transition between two input clips using a series of stripes. The Wipe Amount parameter should be animated to control the transition speed. Increase the Grad Add parameter to make the timing of the stripe pattern move across the screen during the wipe. Increase the Border Width parameter to draw a border at the wipe transition edges.



WipeTiles

Performs a wipe transition between two input clips using a pattern of growing or shrinking hexagons, triangles, diamonds, or stars. The Wipe Amount parameter should be animated to control the transition speed. Increase the Grad Add parameter to make the timing of the tile pattern move across the screen during the wipe. Increase the Border Width parameter to draw a border at the wipe transition edges.



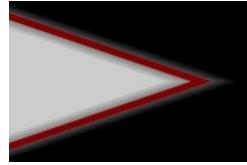
WipeWeave

Performs a wipe transition between two input clips using a texture resembling perpendicular woven strands. The Wipe Amount parameter should be animated to control the transition speed. Increase the Grad Add parameter to make the timing of the weave pattern move across the screen during the wipe. Increase the Border Width parameter to draw a border at the wipe transition edges.



WipeWedge

Performs a wipe transition between two input clips using a wedge shape. The Wipe Amount parameter should be animated to control the transition speed. Increase the Border Width parameter to draw a border at the wipe transition edges.



ZBlur

Blurs areas of the source clip by different amounts using depth values from a ZBuffer input. Separates the input into a number of layers in depth and blurs them by different amounts depending on each layer's depth. Linear fog can also be mixed into the result. To use this effect, first set ZBuffer:Black Is Near or White Is Near according to your Z buffer, then adjust the focus depth and depth of field parameters to get the look you want. To help set the focus depth, you can use Show: In Focus Zone.



ZComp

Layers a source input over or under a second source input based on the difference of two depth images. The DepthA input should be a 'z' depth image corresponding to the objects in the first input, and DepthB should be a 'z' depth image corresponding to the objects in the second input.



ZConvolve

Convolves areas of the source clip using a kernel which is made larger or smaller using depth values from a ZBuffer input. Separates the input into a number of layers and applies different sized convolution blurs depending on the distance from the focal depth, and depth of field. This is similar to ZDefocus but with an iris shape (or Kernel) that comes from a clip.



ZDefocus

Defocuses areas of the source clip by different amounts using depth values from a ZBuffer input. Separates the input into a number of depth layers and applies different amounts of defocus depending on each layer's depth. To use this effect, first set ZBuffer:Black Is Near or White Is Near according to your Z buffer, then adjust the Focus Depth and Depth Of Field parameters to get the look you want. To help set the Focus Depth, you can use Show: In Focus Zone.



ZFogExponential

Mixes a fog color into the source clip using depth values from a ZBuffer input. The fog starts at the nearest depth and increases exponentially to the farthest depth at a rate depending on the Fog Density.



ZFogLinear

Mixes a fog color into the source clip using depth values from a ZBuffer input. The fog amount varies linearly between Fog Near and Fog Far depending on the depth.



ZGlow

Glow areas of the source clip with varying widths depending on the depth values from a ZBuffer input. Separates the input into a number of layers and applies different amounts of glow depending on Width Near, Width Far, Brightness Near, and Brightness Far parameters.



Zap

Generates lightning bolts between two points, and renders them over a background. Increase the number of bolts to give a electrical plasma effect. Increase Vary Endpoint to spread out the ends of the bolts. Adjust the Glow Color for differently colored results. The Wiggle Speed parameter causes the bolts to automatically undulate over time.



ZapFrom

Generates multiple lightning bolts outwards from the edges of objects in the FromObj input clip, and renders them over a background input. Use the Show:Edges option to view the source edges while adjusting the Threshold and Blur From Obj parameters.



ZapTo

Generates a forked lightning bolt from a given point to the edges of objects in the ToObject input clip, and renders it over a background input. Use the Show:Edges option to view the target edges while adjusting the Threshold and Blur To Obj parameters.



Zebrify

Modulates the brightness of the source clip with a sinusoid to give a black and white solarized look.



ZebrifyColor

Modulates the brightness of the source clip with sinusoids for each color channel to give a color striped effect.



Appendix A: 3rd Party Licenses

Half-float conversion

Branch-free implementation of half-precision (16 bit) floating point
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OFX Plug-in API

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Thrust CUDA GPU library

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Qt UI Framework

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The source code for Qt is available [here](#). Sapphire Plug-ins v2021.0 uses Qt 5.13.2, SIP 5.3.0, and PyQt 5.13.2.

SIP

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cJSON

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Python

A. HISTORY OF THE SOFTWARE

Python was created in the early 1990s by Guido van Rossum at Stichting Mathematisch Centrum (CWI, see <http://www.cwi.nl>) in the Netherlands as a successor of a language called ABC. Guido remains Python's principal author, although it includes many contributions from others.

In 1995, Guido continued his work on Python at the Corporation for National Research Initiatives (CNRI, see <http://www.cnri.reston.va.us>) in Reston, Virginia where he released several versions of the software.

In May 2000, Guido and the Python core development team moved to BeOpen.com to form the BeOpen PythonLabs team. In October of the same year, the PythonLabs team moved to Digital Creations (now Zope Corporation, see <http://www.zope.com>). In 2001, the Python Software Foundation (PSF, see <http://www.python.org/psf/>) was formed, a non-profit organization created specifically to own Python-related Intellectual Property. Zope Corporation is a sponsoring member of the PSF.

All Python releases are Open Source (see <http://www.opensource.org> for the Open Source Definition). Historically, most, but not all, Python releases have also been GPL-compatible; the table below summarizes the various releases.

Release	Derived from	Year	Owner	GPL-compatible? (1)
0.9.0 thru 1.2		1991-1995	CWI	yes
1.3 thru 1.5.2	1.2	1995-1999	CNRI	yes
1.6	1.5.2	2000	CNRI	no
2.0	1.6	2000	BeOpen.com	no
1.6.1	1.6	2001	CNRI	yes (2)
2.1	2.0+1.6.1	2001	PSF	no
2.0.1	2.0+1.6.1	2001	PSF	yes
2.1.1	2.1+2.0.1	2001	PSF	yes
2.1.2	2.1.1	2002	PSF	yes
2.1.3	2.1.2	2002	PSF	yes
2.2 and above	2.1.1	2001-now	PSF	yes

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fastapprox: Fast Approximate Functions

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