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Hawaiki Keyer 5 Help

Version 5.1

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GETTING STARTED

Welcome



VERSION 5.1

Hawaiki Keyer 5

The industry's most sophisticated green and blue screen keyer, now with AI tracking.

Hawaiki Keyer 5 builds on the best-in-class keying tools of Hawaiki Keyer 4 with even more powerful and intelligent tools for isolating your foreground: **secondary keys** and **dynamic garbage mattes** with AI-powered face and object tracking and realtime edge tracking, **Crop**, and all the **edge tools** built in. It runs in DaVinci Resolve, Final Cut Pro, Motion, Premiere Pro and After Effects.



Hawaiki Keyer 5 (Green)
The keyer, optimised for green screens



Hawaiki Keyer 5 (Blue)
The keyer, optimised for blue screens



Hawaiki Comp Tools 5
Image, matte and edge tools for any key



Hawaiki Slice 5
Image analysis for green and blue screens

What's New
Tracking, AI Track, Crop, the edge tools and every release since 5.0.

Keying Technique
Tutorials, shooting tips and how to approach a difficult key.

Keyer Reference
Every control of Hawaiki Keyer 5, section by section.

Comp Tools Reference

Matte, image and edge processing for any footage.

System Requirements

macOS	macOS 14.7 Sonoma or later (macOS 15 Sequoia, macOS 26 Tahoe)
FxFactory	8.0.27 or later
Applications	DaVinci Resolve 20 or later, Final Cut Pro 10.6 or later, Motion 5.6 or later, Premiere Pro 22 or later, After Effects 22 or later

Installing

Hawaiki Keyer 5 is installed and licensed through FxFactory. Install FxFactory, then install the trial of Hawaiki Keyer 5 from FxFactory's catalogue or from the download link. The trial watermarks the output until you buy a licence; buying unlocks the installed plug-in.

DaVinci Resolve	The Effects Library (OpenFX, under Hawaiki).
Final Cut Pro	The Effects Browser, in the Hawaiki category.
Premiere Pro	The Effects panel, under Video Effects.
After Effects	The Effects & Presets panel and the Effect menu.
Motion	The Library, under Filters.

Drag the effect onto your clip to get started. Keep FxFactory up to date: many problems are solved by installing its latest version.

Upgrading

Hawaiki Keyer 5 installs beside earlier versions of Hawaiki Keyer, so projects made with them keep working. Current users of Hawaiki Keyer get 50% off: contact us.

The Four Effects

The bundle installs four effects in the **Hawaiki** category.

Hawaiki Keyer 5 (Green) **Hawaiki Keyer 5 (Blue)**	Choose the keyer for your screen colour. Both work the same way, but each is optimised for its screen colour, so a few defaults differ: the Keyer Reference notes them.
Hawaiki Comp Tools 5	Hawaiki Keyer's image, matte and edge tools for any keyer and any footage. Reference
Hawaiki Slice 5	Checks screens, levels and channels along a line through the frame. Reference

Getting Help

We're happy to help by email. To get you an answer quickly, please tell us:

- ✓ your Mac and **the version of macOS**;
- ✓ **the version of Hawaiki Keyer 5** and of **FxFactory**;
- ✓ **the host application** and its version;
- ✓ what happens and what you have tried, and any other plug-ins used alongside ours.

Write to support@hawaiki.co. We're always happy to look at your footage and to hear what you think we could improve. See also the Support page.

WHAT'S NEW

Overview

Hawaiki Keyer 5 - the industry's most sophisticated Green & Blue Screen Keyer now with AI tracking

Hawaiki Keyer 5 builds on the best-in-class keying tools of Hawaiki Keyer 4 and enables you to use them more efficiently with even more powerful and intelligent tools for isolating your foreground.

It's easier than ever to maintain hair and other fine detail by creating **secondary keys** and **dynamic garbage mattes** with the new **AI-powered face & object tracking** and the new realtime **edge tracking.** And the new **Crop** tools allow you to exclude the edges of the screen and speed up the rendering of complex keys.

Refining your composite is faster and simpler with all the **edge tools** that were in a separate plug-in now integrated into Hawaiki Keyer. And we've expanded the compositing toolset with even more edge operations and the ability to resize and composite the background within the plug-in.

On top of this we've refined the UI and operation of the plug-in and optimized it for Apple silicon (M1 & M2) and HDR.

Tutorial: Hawaiki Keyer 5 - New Features

New in Hawaiki Keyer 5.1

- DaVinci Resolve 20 support.
- macOS 26 Tahoe officially supported.
- Requires macOS 14.7 Sonoma and FxFactory 8.0.27

New in Hawaiki Keyer 5.0.2

- macOS 14 Sonoma officially supported.
- Requires macOS 12.6 Monterey and FxFactory 8.0.16
- AI Track: Improvements when using Track Area.
- Comp Tools: Fix so On Color view displays correctly.
- Comp Tools: Fix for Premultiply when using On Color view.
- Comp Tools: Fix for External Matte.
- External Matte - Fix for Subtract Mode (Ext-Key).

New in Hawaiki Keyer 5.0.1

- macOS 13 Ventura officially supported.
- Despill - Use Background: foreground image no longer disappears when the Background drop zone/image well is empty and Use Background is enabled.
- Edge Tools - Background Match: foreground image no longer disappears when the Background drop zone/image well empty and Background Match is enabled.

- Edge Tools - Fine Edge - Use BG: foreground image no longer disappears when the Background drop zone/image well empty and Use BG is enabled.
- Comp Tools: Fix for Light Wrap displaying incorrectly.
- Help: Keying Technique section refined and updated - including more shooting tips and links to tutorials.

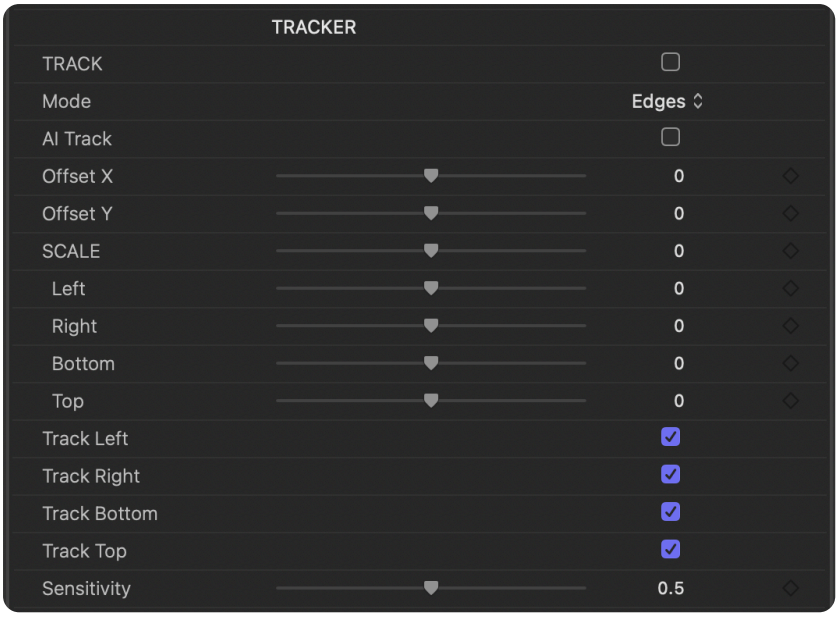
Tracking

Hawaiki Keyer now provides automatic tracking of the **edges** of your foreground as well as centre tracking. Both modes work with the new AI Track.



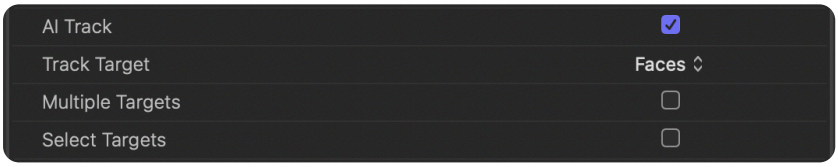
Set the shape matte with onscreen controls

Either track the centre of the foreground subject, setting the shape matte with the onscreen controls, or track the edges of the foreground automatically and refine with the scale sliders that appear. When AI Track is enabled you are tracking the centre or edges of a face or object. You can use the new Track edges option to create a dynamic garbage matte that moves with the foreground subject.



AI Track

AI-powered tracking of faces and objects.



Face tracking is useful for creating trackable head mattes that allow you to pull a secondary key on the subject's hair.

Object tracking is an alternative to the standard Hawaiki Keyer tracking. It's a good option when the screen doesn't cover the entire shot, when a light or other fixture is in the shot or if the screen has a lot of tracking markers.

AI Track works with both centre and edges tracking modes. **Centre** works best for face tracking if the subject's distance to the camera doesn't change. If the subject is moving away from or towards the camera you can use the **Edges** mode and the scale controls to create a head matte that automatically resizes.

Sensitivity slider

Increase sensitivity to expand what the tracker sees as foreground - useful to pick up areas with heavy spill that the tracker is excluding such as the edges of hair. Decrease Sensitivity to reduce what is defined as foreground - can be helpful if stray lighting and reflections are being picked up as foreground. The Sensitivity slider is most useful when Mode is set to Edges. NB. This slider is not available when AI Track is enabled.

Track Area

You can set now the maximum part of the frame that is used when tracking to either the whole Frame, the area defined in Crop or to the onscreen controls (setting to OSCs is best used when Track Mode is set to Edges). Then further refine with the Left, Right, Bottom, Top sliders which work relative to the box defined in Track Area.



Shape

Secondary matte and tracking controls have been moved into the Shape section and the size and position of the shape matte is now easier to set with two **onscreen controls**which replace the sliders used in HK4.



As with Hawaiki Keyer 4, when Secondary is enabled the Secondary key is applied within the shape matte and the Primary key outside of it. New in Hawaiki Keyer 5 the shape matte can also be used as a garbage matte (or, when inverted, holdout matte) with either the Primary or Secondary keys. By default when Shape is enabled and Secondary disabled the shape matte works on the Primary key. Enable Secondary and disable Primary (a new checkbox in HK5) to have the Shape matte work with the Secondary keyer. This can be a useful way to test different keying strategies by switching between the two keys.

Screen Clean - Exclude from Shape

Enable to exclude the Screen Clean process from the area inside the Shape matte. Makes it easier to pull a softer Secondary key while clearing the edges of the screen.



Crop

Quickly create a garbage matte and speed up rendering with complex keys. Crop doesn't apply a matte at the end of the chain, it defines the pixels that are processed from the beginning of the chain, for both image and matte operations.



Crop Key Automation - limits the automatic screen extraction to the area defined by the crop. If you apply crop after you've finessed your key you may wish to disable this as the key may change, depending on how uniform your screen is. Normally the matte will soften when Crop Key Automation is enabled as the dark edges of the screen are excluded.

Image Processing Pipeline

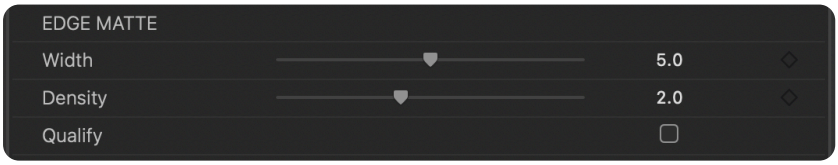
Hawaiki Keyer 5 utilizes a new image processing pipeline that provides **Metal** GPU acceleration. It is built with FxFactory's new node-based compositing engine FxCore and optimised for **Apple silicon** (M1 and M2) with better handling of **HDR** footage. AI Track makes uses of Apple's Neural Engine when using computers with the M1 or M2.

Edge Tools

All the processes available in the HK4 Edge Tools plug-in are now incorporated into the main Keyer plug-ins:

Edge color and blur controls, **Fine Edge** and **Edge Blend** have been added along with a new **Premultiply** process that combines the background and foreground where the matte is transparent.

Background Match has been revamped and can now match color as well as brightness. There is also better handling of composites where the background is very bright and the foreground dark.







Resolution Independence

Maintain consistent effects when changing resolution.



The baseline parameter can be used to set the relative strength of the parameters - increasing will decrease the strength. Or you can set it to match the behaviour you are used to in Hawaiki Keyer 4 - simply match the Baseline to the resolution of your footage. Lastly, if Resolution Independence is not enabled and you then copy and paste an instance of the keyer to a clip with a different resolution -

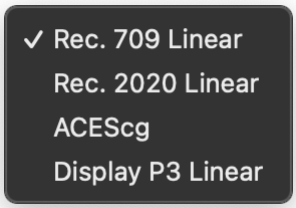
enable Resolution Independence on the new clip and set the baseline to the width of the first clip - this will ensure the parameter strength matches.

Resolution Independent Parameters:

- Denoise: Strength
- Matte: Shrink - Grow
- Matte: Blur
- Matte Cleaner: Fill Holes
- Outer Matte: Expand
- Edge Matte: Width
- Edge Replace: Sample In
- Edge Replace: Fill
- Light Wrap: Background Blur
- Light Wrap: Depth
- Edge Blend: Blend
- Despill - Use Background: Depth
- Comp Tools - Image - Smoothing: High Pass
- Comp Tools - Image - Smoothing: Low Pass
- Comp Tools - Image - Pixelate: Scale
- Comp Tools - Image: Blur
- Comp Tools - Image - Sharpen: Radius

Color Space

Option to override the default working space of the plug-in for the primary and secondary keyers, despill and color correction.

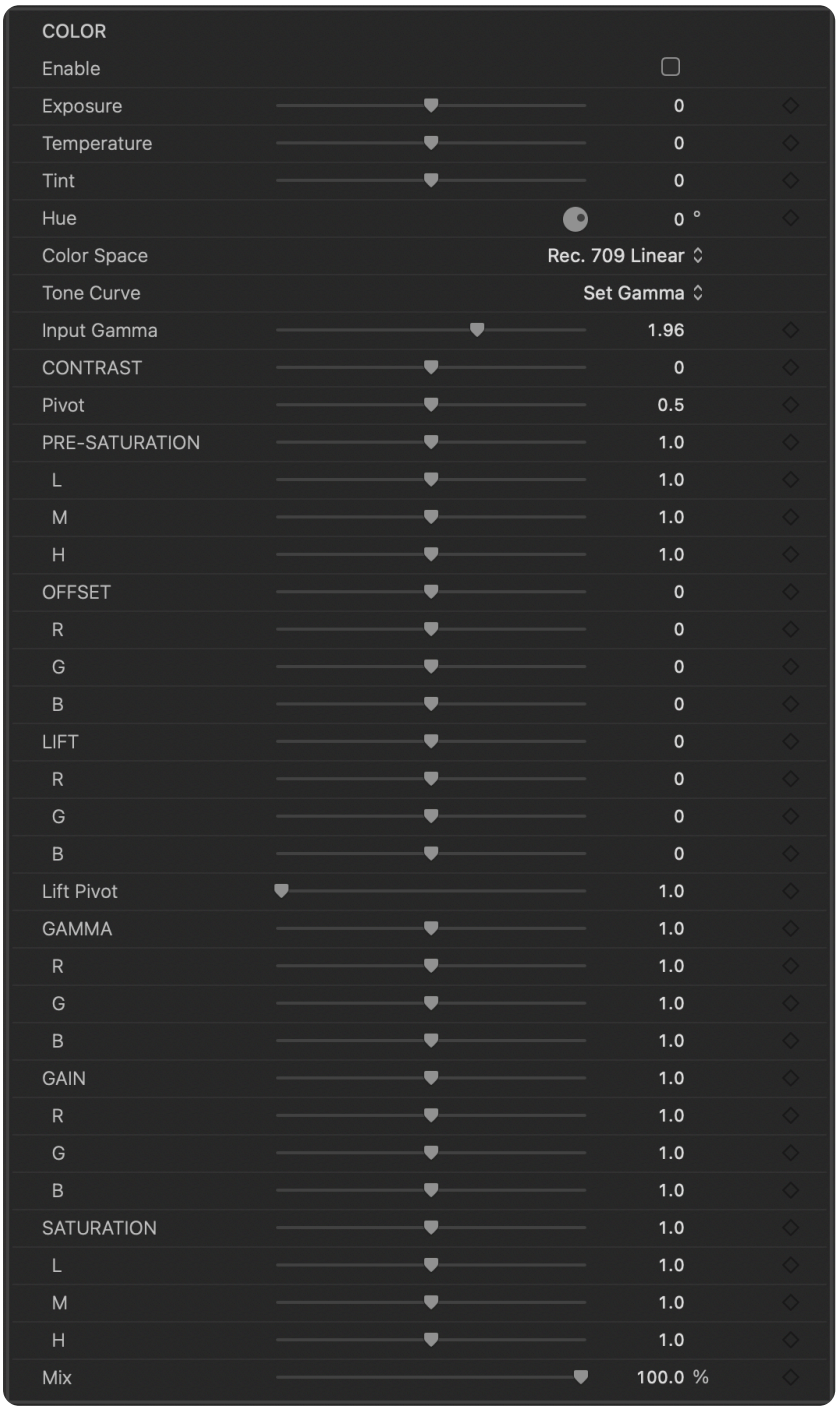


Color

In the Color section you now have the option to change Color Space (709, 2020, ACEScg, Display P3) and Tone Curve (transfer function) to match your preferred color workflow.



New controls include Exposure, Temperature and Tint, Hue, Contrast (with Pivot), Lift Pivot, Offset and Pre-saturation. There is also a new Mix slider to control the overall effect.



Fit Background

Scales the background image to match the foreground within the plug-in. Options to Fit, Fill or stretch with different scaling and positioning controls.



Views

New views include:

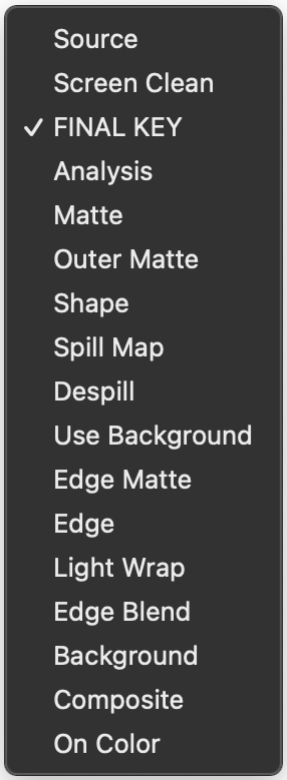
Shape - shape matte as defined in the shape group.

Background - shows the background used in the dropzone/image well - useful to see if any scaling is required.

Composite - shows the foreground comped over the background requires the Background dropzone/image well to be populated. An alternative to having the host app do the final composite.

Edge - the final output multiplied by the edge matte comped over black. As such, unlike the other views it updates when you toggle the checkboxes for edge operations. Allows you to compare the various edge operations and their combinations as well as evaluate the impact on the edge of any global changes you make to the image and matte.

Edge Blend - now that it is incorporated in the main plug-in



Comp Tools

The Edge Tools plug-in has been expanded and renamed Comp Tools and includes options for processing the matte (alpha channel) and image. Image processes include color correction, blur, pixelate, smoothing and despill. Matte processes: gain, clip, shrink-grow, blur, matte cleaner. You can now use an external matte and the Analysis view from Hawaiki Keyer is available.



Allows you to use Hawaiki Keyer's advanced image and compositing tools with any keyer and on any type of footage.

Hawaiki Slice

- New color space and tone curve (transfer function) options.
- Value UI (numerical readout) runs on GPU, Value checkbox now also an onscreeen control in Motion and FCP.
- Downscale Input option to improve realtime playback with 6k+ footage on older and entry level Macs.

Misc Changes

- **Despill** - change the **color space** used. Rec.709 Linear (the default) provides the most neutral look, even with HDR material. Select Rec.2020 Linear, ACEScg or Display P3 Linear for a different look - normally the resulting despilled image is slightly warmer.
- Matte Shrink replaced with **Shrink - Grow**. Uses a different method that produces smoother results, and you can now also expand the matte.
- **External Matte** - pick the **channel** to use - Red,Green,Blue or Alpha (HK4 always used Red and expected a black and white matte).
- New **modes** to combine the External Matte: Max, Multiply, Min, Subtract (Key-Ext), Subtract (Ext-Key).
- **Enable** checkboxes for **Despill** and **Matte** - allows you to quickly toggle on and off to see changes.
- Global "Advanced" control replaced with **Fine-Tune** control for both the Primary and Secondary Keyers.
- New built-in **Help** - click on the banner image at the top of the inspector, or the help button next to it, to access. In Final Cut Pro and Motion there is also an onscreen button that performs the same function. The help page will open in your default browser and is available offline.
- **Quick View** checkboxes (Matte, Analysis, Source) now work in reverse - top and left has precedence. This seemed slightly more logical to us - as you move right to left or bottom to top you override what is below/to the right of it.

  The Quick View buttons are designed to override the main View menu so that you can quickly check something by flicking the button on and off without having to drill down through the View menu.
- Edge Blur and transparency processes improved.
- **Edge - Tone Curve Gamma**: Edge Brightness and RGB can now work in a gamma space which you can set with the Tone Curve Gamma slider - defaults to the Final Cut Pro default of 1.96. Colour adjustments are more fine grained especially when when the foreground is dark. Set to 1.0 to revert to the current behaviour in HK4 Edge Tools.
- **Matte Check** - off by default.
- **White Balance** moved to its own group.
- Control over the **input clamping** to the main keying routines. HK4 and earlier clamped at 0.001 and 1. Default is now 0.001 and 2 which handles very bright screens and HDR footage better (you can go beyond the slider range and enter values for min down to -10 and max up to 1000). Enable Fine-Tune in the Primary and Secondary sections to see these controls.
- **Output clamping** option with min and max controls. Off by default.

KEYING TECHNIQUE

Tutorials

▶ New in Hawaiki Keyer 5
YouTube

▶ Intro
YouTube

▶ Primary and Secondary: Basics
YouTube

▶ Screen Clean
YouTube

▶ Hawaiki Keyer 5 in DaVinci Resolve
YouTube

Secondary Keyer

Even the best keyers in the world sometimes can't give you the perfect key for all areas of your shot in one go and often you might find that you are compromising one area in order to get the required result in another area and it can get very frustrating very quickly.

In Hawaiki Keyer 5 when you engage **Secondary** you have access to **two keyers in one** and it's a very easy job to break up your shot into two distinct areas so as to get the best result for each one. This is especially advisable for preserving hair detail which is usually the first thing to suffer when you try to make one key do all the work.

Noise

Keying hair can be tricky, especially if the source footage has a lot of noise. This is something you might not see looking at the the four channel (RGBA) image but if you switch to viewing just a single channel - red, green or blue - you're more likely to notice it. Hawaiki Keyer, like most green/blue screen keyers, extracts a matte by comparing the green or blue channel to one or both of the other two channels. When any of these channels has significant noise some of the matte values change randomly, resulting in edges that bubble or flicker.

Running the footage through a dedicated **denoising** plug-in or app can help. We recommend exporting the denoised version to disk and re-importing before applying Hawaiki Keyer.

Manual Adjustments

Proceed carefully when adjusting the **manual** controls. Use the relevant view mode as you work, making only **gradual, fine adjustments**until you've only just got the result you need. The key thing to bear in mind is that more is not better - just enough and no more is what you should always be aiming for.

Shooting tips

- ✓ Shoot at the **lowest ISO** as possible to mimimize noise - you may need more light than for a standard shoot.
- ✓ Turn off all **in-camera sharpening**.
- ✓ Use the **least compressed codec** your camera offers - e.g 4:2:2 10-bit is preferable to 4:2:0 8-bit.
- ✓ Ensure there is **adequate distance between the screen and the talent** - VES recommend around 4 metres, which might not be achievable, but try to make it at least 2 to 3 metres.
- ✓ Light your foreground/talent to **match the lighting in your background** plate.
- ✓ Light the **screen separately** from the talent.
- ✓ Ensure your backing/screen has adequate **saturation.**
- ✓ To minimize spill **use flags** to mask areas of the screen that are not behind the foreground.

Further help

Hawaiki Keyer 5 offers you a wide range of different but complementary strategies that you can use depending on the source material, but you may well find cases where you can't work out the best approach. If you need help, **we are always happy to look at your footage** and consult on the best way of getting a good result.

KEYER REFERENCE

Hawaiki Keyer 5

Every control of Hawaiki Keyer 5 (Green) and (Blue), in the order the effect shows them. The two keyers have the same controls; where the Blue keyer's default differs, a **Blue** note says so.

Top of the Controls

Matte CHECKBOX

Off by default

QUICK VIEW: The three quick view buttons allow you to access the most common views (Matte, Analysis and Source) at the flick of a switch. Note that the Matte button over-rides Analysis which in turn over-rides Source. All three can be enabled at once.



Analysis CHECKBOX

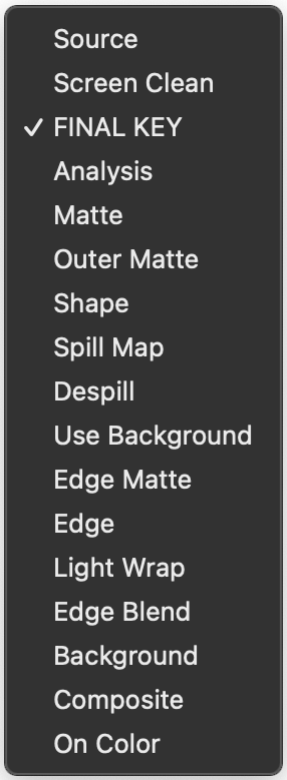
Off by default

Source CHECKBOX

Off by default

VIEW Menu

Hawaiki Keyer provides a comprehensive set of view modes to make it easy to set up your key and refine the spill suppression. In Final Cut Pro and Motion (but not the Adobe hosts) there are onscreen buttons and menus for selecting the views which are duplicates of the Inspector controls.


Source
Screen Clean
✓ FINAL KEY
Analysis
Matte
Outer Matte
Shape
Spill Map
Despill
Use Background
Edge Matte
Edge
Light Wrap
Edge Blend
Background
Composite
On Color

View Menu

VIEW MENU NEW IN 5 NEW IN 5 NEW IN 5 NEW IN 5

Default **FINAL KEY**

Source



Lets you view your untreated original source image.

Screen Clean



Shows the result of the Screen Clean process.

FINAL KEY DEFAULT



The default mode is Final Key which shows you the keyed image with spill suppression. Make sure to select this view when you have finished work on your key because this is the view that will get rendered. The Invert button inverts this view.

Analysis



Shows you the current state of the matte, with orange representing the solid foreground pixels, blue representing the semi-transparent pixels (typically your edges), and black representing the fully transparent background. Pixels that show up yellow are on the verge of becoming transparent (90 to 99% opacity) but will show up fully opaque in your final matte. Note that using the Invert switch with the Analysis view is a great way of making sure you have eliminated all stray pixels from the backing, which are otherwise less easy to spot.

Matte



Shows you the familiar black and white matte. Note that you will get much better results if you use Hawaiki's Analysis view to set up your matte as a simple black and white view makes it much harder to judge the matte density correctly. Use this view if you need to send the black and white matte out to another compositing operation. The Invert button inverts this view.

Outer Matte



Shows you the hard matte for the outer regions of the background, with red for the full transparent background pixels, overlaid over the full colour original source image.

Shape



Shows the black and white shape matte as defined in the Shape group.

Spill Map



Shows you a representation of the pixels that will be affected by the spill suppression with pink for the areas that are fully despilled and cyan for those that are not affected by the despill process. Note that adjusting the Spill Map Depth, Amount, Balance, etc. will all update this view.

Despill



Shows you the unmatted source image after the spill suppression has been applied.

Use Background



Shows you the result of the Despill - Use Background process where spill on the edge of the foreground is colorized by the background image. It shows the output of the whole Despill process

multiplied by the main matte and the custom edge matte employed by Use Background (composited over black).

Edge Matte



Shows you the fine edge matte that is used by Edge, Edge Replace and Background Match within the Edge Tools group. In the default Edge Matte mode, the matte is grayscale, but if you turn on Qualify, the colors will change to purple for the Value A side, and yellow for the Value B side.

Edge



The final output multiplied by the edge matte comped over black. As such, unlike the other views it updates when you toggle the various checkboxes for edge operations. Allows you to compare the various edge operations and their combinations as well as evaluate the impact on the edge of any global changes you make to the image and matte.

Light Wrap



Allows you to monitor the Light Wrap component on its own - in this case what you are seeing is the full color Light Wrap and not just its matte, which makes it easy to assess the depth, brightness and saturation of the Light Wrap before applying it to the final key

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Edge Blend



Shows you the result of the edge blend operation prior to compositing with the final image. Note this uses a different edge matte from the main Edge controls, Background Match and Edge Replace.

Background



Shows the background used in the dropzone/image well - useful to see if any scaling is required.

Composite



Shows the Foreground comped over the background. An alternative to having the host app do the final composite. This can be handy in complex timelines where you are using a lot of layers.

NB. Composite view requires the Background dropzone to be populated.

On Color



Shows you the final key composited over a black background or any other color of your choice with correct premultiplication. This can be very useful for checking your key or even for your final composited output, which means you don't need to add a background layer if you simply intend to composite over a solid color. On Color lets you choose a custom color to composite against and you can select your own using the swatch situated at the bottom of the Inspector. The Invert button inverts this view.

Invert CHECKBOX

Off by default

The Invert button allows you to invert many of the views, including: On Color, Final Key, Analysis, Main Matte, and Combined Matte.

Matte Check CHECKBOX

Off by default

Provides a gamma correction to the matte view so you can easily spot pixels in the background that are not clear. Leave off to have the Matte view match the alpha channel view of the host.

CROP

New in 5

Quickly create a garbage matte and speed up rendering with complex keys. Crop doesn't apply a matte at the end of the chain it defines the pixels that are processed from the beginning of the chain, for both image and matte operations.



Enable CHECKBOX

Off by default

Enable the Crop operation

Left SLIDER

Default **0** · slider 0 to 1 · type from 0, no upper limit

Right SLIDER

Default **1** · 0 to 1

Bottom SLIDER

Default **0** · slider 0 to 1 · type from 0, no upper limit

Top SLIDER

Default **1** · 0 to 1

Crop Key Automation CHECKBOX

On by default

Limits the automatic screen extraction (used when Auto is enabled in the Primary and Secondary keyers) to the area defined by the crop.

If you apply crop after you've finessed your key you may wish to disable this as the key may change, depending on how uniform your screen is. Normally the matte will soften when Crop Key Automation is enabled as the dark edges of the screen are excluded.

Crop Background CHECKBOX

On by default

Crop the image/clip that is used in the Background drop zone/ image well. The Crop is applied prior to any operations in which the Background is used.

Crop External Matte CHECKBOX

On by default

Crop the image that is used in the External Matte drop zone/ image well. The Crop is applied prior to any operations in which the External Matte is used.

DENOISE

The Denoise group gives the user a sophisticated method for reducing edge noise in the matte. It can also help to clear up stray backing pixels caused by noisy source footage. This option is always the preferred method for dealing with "jaggies" or steppiness on the edges of the matte. Unlike a conventional matte blur, Hawaiki Keyer's denoise does a much smoother job of cleaning the edges, while retaining as much of the detail as possible.



Enable CHECKBOX

Off by default

Enable the Denoise checkbox and adjust the Amount as required - try to use only as much as is needed to resolve your edge problem. You have the option to choose either Low, Medium or High denoise.

Strength MENU

Default **Low**

▶ 3 choices

Amount SLIDER

Default **1** · 0 to 1

Type MENU

Default **YUV**

By default, the denoise process works on the UV channels in YUV colorspace and you have the option to adjust the relative noise reduction in each of these two channels. Or you can choose to denoise in RGB colorspace, by selecting this option from the dropdown menu. When RGB is enabled, the UV sliders are replaced by RGB sliders.

▶ 2 choices

U SLIDER
Default **1** · slider 0 to 1 · type from 0, no upper limit

V SLIDER
Default **1** · slider 0 to 1 · type from 0, no upper limit

R SLIDER
Default **1** · slider 0 to 1 · type from 0, no upper limit

G SLIDER
Default **1** · slider 0 to 1 · type from 0, no upper limit

B SLIDER
Default **1** · slider 0 to 1 · type from 0, no upper limit

SCREEN CLEAN

Screen Clean is a sophisticated screen correction function that intelligently analyses the green or blue screen backing to remove defects and create an even screen, making most keys a lot easier to pull.

It's not very often that one manages to shoot a perfectly even green or blue screen backing and sometimes the results can be very uneven indeed, which means that the keyer is having to work overtime to compensate and that inevitably compromises the overall result.

So while you can use the Density and Level controls to clear the darker parts of an uneven screen, often these patches are insufficiently distinct from the edge of the foreground, especially hair, and you lose edge detail in the process.

Screen Clean solves this problem - clearing the backing whilst preserving edges. It also frees up the Secondary keyer for further refinements rather than having to use it to clean up an uneven screen. Screen Clean can also benefit well lit screens - enhancing edge detail by smoothing out out the unevenness that is very close to the key subject.

NB. The best view to evaluate Screen Clean is the Analysis view and we've also provided a dedicated Screen Clean view so you can see the results of the process.



Hawaiki Keyer Tutorial: Screen Clean

Enable CHECKBOX

Off by default

Auto CHECKBOX

On by default

Screen Clean's intelligent analysis is optimised to give the best possible result but you can manually override some of this. Disabling Auto brings up the option to make a pick of the screen. This colour is then used to smooth out defects in the screen.

Pick Screen COLOUR

Clicking on the color swatch brings up the macOS color picker allowing you make a pick of the screen - switch the view mode to Source.

Visible when Auto is disabled.

Include SLIDER

Default **0.9** · slider 0.5 to 1 · type 0 to 1

The Include slider defines the areas of the screen that are to be replaced - increase the value to grab more of the screen but be careful to maintain edge detail.

Density SLIDER

Default **0** · slider -0.5 to 1 · type -0.5 to 2

The Density slider has a very similar effect to the Density sliders in Primary and Secondary and can be used either on its own or in conjunction with these controls - increase it to clear more of the screen.

Edge Protect SLIDER

Default **5** · slider 0 to 20 · type 0 to 100

Excludes the edges of the foreground from the process. Default works for most shots but you may need to increase on shots with a lot of spill.

Clamp SLIDER

Default **0** · 0 to 1

By default Screen Clean won't adjust brighter parts of the screen, as they will normally clear. However if they're less saturated than the rest of the screen you may need to level off these bright spots by increasing the Clamp slider.

Amount SLIDER

Default **1** · slider 0 to 1 · type 0 to 2

Mix the cleaned screen with the source.

Exclude from Shape CHECKBOX NEW IN 5

Off by default

Enable to exclude the Screen Clean process from the area inside the Shape matte. Makes it easier to pull a softer Secondary key while clearing the edges of the screen.

PRIMARY

The best way of working on creating a great-looking matte is to use the View menu and select the Analysis view mode which gives a color representation of the state of the matte. Solid foreground pixels will be orange and the transparent edge pixels will be blue. Pixels that show up yellow are on the verge of becoming transparent but will show up fully opaque in your final matte. To begin with, some of your background may be washed blue because it is not yet fully transparent. Note that using the Invert button with the Analysis view is a great way of picking up stray background pixels that are otherwise tricky to spot, so you may want to try that at the final clean-up stage of your matte.

Be sure to adjust all of these controls only as much as is necessary. If you go too far you will lose precious edge detail and that's something you really want to avoid.



Hawaiki Keyer Tutorial: Primary and Secondary - Basics

Enable CHECKBOX

On by default

Enable the Primary Key.

Auto CHECKBOX

On by default

Produces a key by extracting the screen color automatically for every frame and comparing that with every pixel in the image. The intelligent analysis in Hawaiki Keyer 5 is optimised to give the best possible result but you can manually override this. Disabling Auto brings up the option to make a pick of the screen.

Pick Screen COLOUR

Clicking on the color swatch brings up the macOS color picker allowing you make a pick of the screen - switch the view mode to Source.

Visible when Auto is disabled.

DENSITY SLIDER

Default **0** · slider -0.5 to 0.5 · type -1 to 0.99

Use the density control to clear the backing. Switching on invert in Analysis mode can help show those stray pixels that have yet to be zeroed.

FG Fill SLIDER

Default **0.1** · slider 0 to 2 · type 0 to 5

Once you have cleared your backing, you may need to firm up your foreground and remove transparent areas where there shouldn't be any. To do this all you have to do is use the FG Fill (foreground fill) slider and the easiest way of making sure you are doing the right thing is to use the Analysis view. Again, do this only just enough to solidify your foreground and make sure not to go too far. Wherever a pixel has turned orange (or yellow), you know that it is fully opaque - any that are still blue will be semi-transparent. Note that you want to make sure that your edges stay blue - the one thing you don't want is a hard edge to your matte as this will look very ugly and unrealistic. If you are having major problems with solidiying your foreground, then you will need to have a look at using Matte Cleaner (see below).

Knee SLIDER

Default **0.8** · slider 0 to 1 · type from 0, no upper limit

Sets the point at which the FG Fill kicks in. Reduce it to add more transparency to the edges, increase it to solidify the edges.

Displayed when the Fine-Tune checkbox is enabled.

FG Threshold SLIDER

Default **0.9** · slider 0.5 to 1 · type 0 to 1

Works like a white clip control but earlier in the matte extraction process so the effect is more subtle. Reduce it to solidify the foreground, increase it to give the edges of the foreground greater transparency.

Displayed when the Fine-Tune checkbox is enabled.

LEVEL SLIDER

Default **0.6** · slider 0.2 to 1 · type 0.01 to 1

Adjusts the level of the screen. In general increasing level (from the default) can help clear the backing, decreasing reclaim edge detail, but it will depend on the shot and what you are seeing in the Analysis view. We've noticed most of the clips users sent us had backings that were underexposed. Level is our answer to that. It uses a novel algorithm that helps clear the backing whilst maximising edge detail. NB. Some very bright screens may require you bypass the level control altogether and there is a checkbox for this when Fine-Tune is enabled.

Blue Default **0.8** · slider 0.2 to 1 · type 0.01 to 1

Black Limit SLIDER

Default **0.2** · 0 to 1

Limits the Level process to prevent dark parts of the FG from eroding. If you have a screen with dark patches that won't clear then reduce the amount.

Displayed when the Fine-Tune checkbox is enabled.

Bypass Level CHECKBOX

Off by default

Bypasses the level control - may be required on some screens (especially very bright stock shots).

Displayed when the Fine-Tune checkbox is enabled.

Linear CHECKBOX

Off by default

Changes the basic curve used when comparing the screen to the foreground. For green screens we've come up with a custom curve - enabling Linear turns this off. Linear is on by default with blue screens. If when keying a green screen you find your edges are too soft you may wish to enable this. Note it will make it harder to clear dark parts of the backing but the level control can help here. NB. Enabling Linear also changes the way the Matte group gain and gamma controls work.

Displayed when the Fine-Tune checkbox is enabled.

Blue On by default

BIAS SLIDER

Default **0.25** · slider -0.5 to 1 · type -1 to 2

HK5 is a sophisticated color difference keyer - in essence it works by comparing the dominant channel of the screen (green or blue) with the other two channels (red and blue for a green screen, red and green for a blue screen) Bias allows you to use one or the other of those other channels or a mix of the two. The setting that works best is very much dependent on not only the colour balance of the screen but also of the foreground. We're working on automating this but in the meantime it is largely a process of trial and error.

Bias Gain SLIDER

Default **1** · slider 1 to 2 · type 0 to 5

Adjust the gain of the channel or channels set with the Bias control - it can be useful for solidifying the foreground in away that produces a smoother gradient at the edges than FG Fill.

Limit Bias Gain CHECKBOX

Off by default

Limits the Bias gain to the foreground. Allows you to push Bias Gain so as to keep the foreground solid whilst adjusting the Bias and Switch Bias controls in a way that clears the backing e.g you can switch Bias to use the min channel whilst maintaining a solid foreground.

Displayed when the Fine-Tune checkbox is enabled.

Switch Bias CHECKBOX

Off by default

Lets you specify the channels used rather than using the maximum and minimum. When enabled in HK5 Green 0 becomes the red channel and 1 blue and in HK5 Blue 0 is the green channel and 1 red. Like the main Bias slider this is a control best experimented with.

Displayed when the Fine-Tune checkbox is enabled.

Gamma SLIDER

Default **1** · slider 0.01 to 3 · type 0.01 to 10

Adjusts the gamma and color (RGB) balance of the shot being sent into the keyer. Really useful for dealing with problematic shots. When used in tandem with the bias controls quite sophisticated results can be achieved.

Displayed when the Fine-Tune checkbox is enabled.

R SLIDER

Default **1** · slider 0.01 to 3 · type 0.01 to 10

Adjust the gamma of the red channel.

Displayed when the Fine-Tune checkbox is enabled.

G SLIDER

Default **1** · slider 0.01 to 3 · type 0.01 to 10

Adjust the gamma of the green channel.

Displayed when the Fine-Tune checkbox is enabled.

B SLIDER

Default **1** · slider 0.01 to 3 · type 0.01 to 10

Adjust the gamma of the blue channel.

Displayed when the Fine-Tune checkbox is enabled.

Input Min SLIDER NEW IN 5

Default **0** · slider 0 to 1 · type -10 to 10

Set the minimum value of the input to the Primary key.

Displayed when the Fine-Tune checkbox is enabled.

Input Max SLIDER NEW IN 5

Default **2** · slider 0 to 10 · type 0 to 1000

Set the maximum value of the input to the Primary key.

Displayed when the Fine-Tune checkbox is enabled.

Color Space MENU NEW IN 5

Default **Rec. 709 Linear**

Adjust the color space of the input to the Primary key.

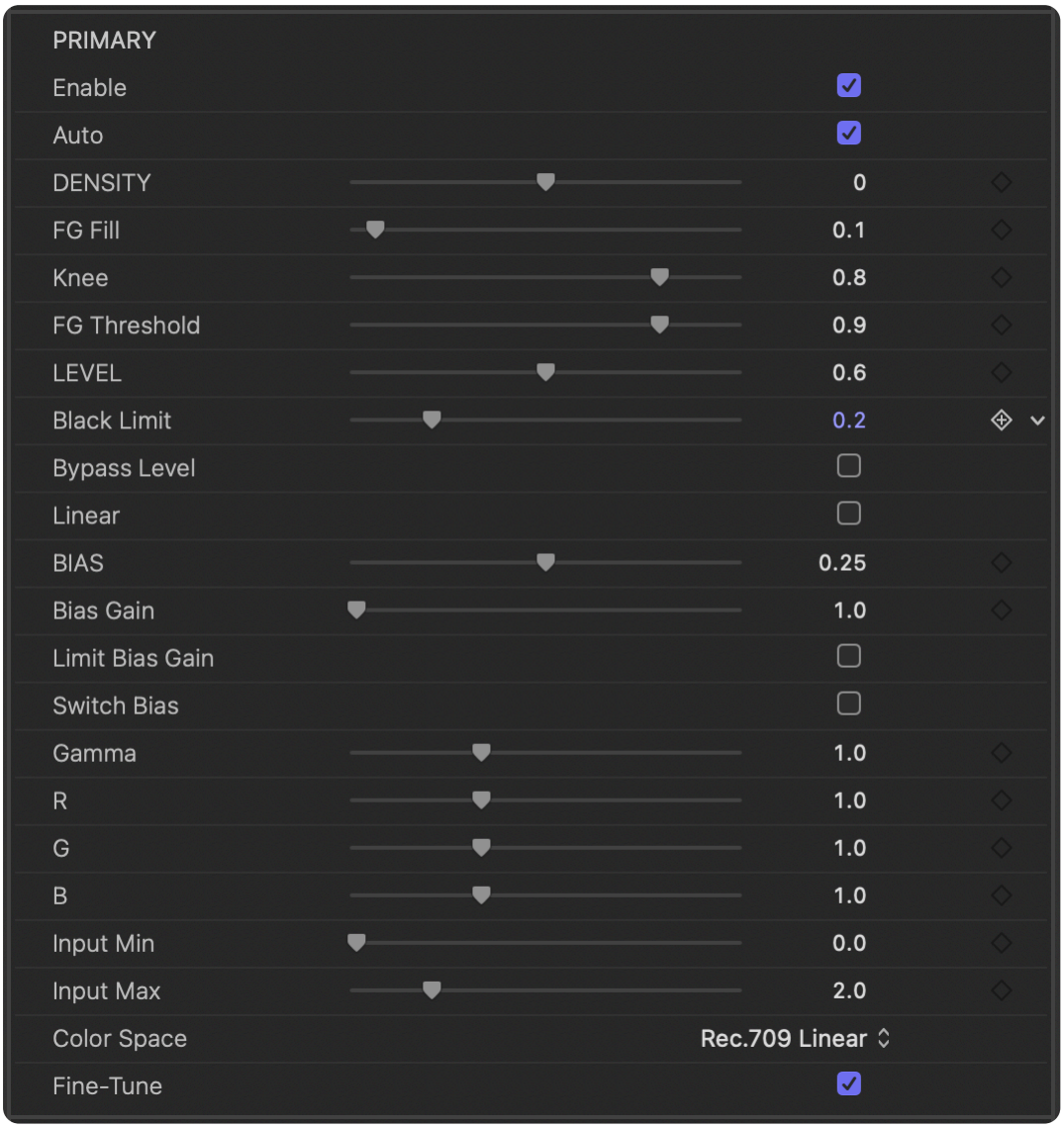
▶ 4 choices

Displayed when the Fine-Tune checkbox is enabled.

Fine-Tune CHECKBOX NEW IN 5

Off by default

Enable to display additional controls in the Primary group that allow you to refine and fine-tune the Primary key.



SECONDARY

When you engage Secondary you have easy access to two keyers in one and it's a very easy job to break up your shot into two distinct areas so as to get the best result for each one. This is especially advisable for preserving hair detail which is usually the first thing to suffer when you try to make one key do all the work.

The controls for the trackable shape matte that is used to qualify the Primary and Secondary keyers can be found in the Shape group.



Hawaiki Keyer Tutorial: Primary and Secondary - Basics

Enable CHECKBOX

Off by default

Enable the Secondary Key.

Auto CHECKBOX

On by default

Produces a key by extracting the screen color automatically for every frame and comparing that with every pixel in the image. The intelligent analysis in Hawaiki Keyer 5 is optimised to give the best possible result but you can manually override this. Disabling Auto brings up the option to make a pick of the screen.

Pick Screen COLOUR

Clicking on the color swatch brings up the macOS color picker allowing you make a pick of the screen - switch the view mode to Source.

Visible when Auto is disabled.

DENSITY SLIDER

Default **0** · slider -0.5 to 0.5 · type -1 to 0.99

Use the density control to clear the backing. Switching on invert in Analysis mode can help show those stray pixels that have yet to be zeroed.

FG Fill SLIDER

Default **0.1** · slider 0 to 2 · type 0 to 5

Once you have cleared your backing, you may need to firm up your foreground and remove transparent areas where there shouldn't be any. To do this all you have to do is use the FG Fill (foreground fill) slider and the easiest way of making sure you are doing the right thing is to use the Analysis view. Again, do this only just enough to solidify your foreground and make sure not to go too far. Wherever a pixel has turned orange (or yellow), you know that it is fully opaque - any that are still blue will be semi-transparent. Note that you want to make sure that your edges stay blue - the one thing you don't want is a hard edge to your matte as this will look very ugly and unrealistic. If you are having major problems with solidiying your foreground, then you will need to have a look at using Matte Cleaner (see below).

Knee SLIDER

Default **0.8** · slider 0 to 1 · type from 0, no upper limit

Sets the point at which the FG Fill kicks in. Reduce it to add more transparency to the edges, increase it to solidify the edges.

Displayed when the Fine-Tune checkbox is enabled.

FG Threshold SLIDER

Default **0.9** · slider 0.5 to 1 · type 0 to 1

Works like a white clip control but earlier in the matte extraction process so the effect is more subtle. Reduce it to solidify the foreground, increase it to give the edges of the foreground greater transparency.

Displayed when the Fine-Tune checkbox is enabled.

LEVEL SLIDER

Default **0.6** · slider 0.2 to 1 · type 0.01 to 1

Adjusts the level of the screen. In general increasing level (from the default) can help clear the backing, decreasing reclaim edge detail, but it will depend on the shot and what you are seeing in the Analysis view. We've noticed most of the clips users sent us had backings that were underexposed. Level is our answer to that. It uses a novel algorithm that helps clear the backing whilst maximising edge detail. NB. Some very bright screens may require you bypass the level control altogether and there is a checkbox for this when Fine-Tune is enabled.

Blue Default **0.8** · slider 0.2 to 1 · type 0.01 to 1

Black Limit SLIDER

Default **0.2** · slider 0 to 1 · type from 0, no upper limit

Limits the Level process to prevent dark parts of the FG from eroding. If you have a screen with dark patches that won't clear then reduce the amount.

Displayed when the Fine-Tune checkbox is enabled.

Bypass Level CHECKBOX

Off by default

Bypasses the level control - may be required on some screens (especially very bright stock shots).

Displayed when the Fine-Tune checkbox is enabled.

Linear CHECKBOX

Off by default

Changes the basic curve used when comparing the screen to the foreground. For green screens we've come up with a custom curve - enabling Linear turns this off. Linear is on by default with blue screens. If when keying a green screen you find your edges are too soft you may wish to enable this. Note it will make it harder to clear dark parts of the backing but the level control can help here. NB. Enabling Linear also changes the way the Matte group gain and gamma controls work.

Displayed when the Fine-Tune checkbox is enabled.

Blue On by default

BIAS SLIDER

Default **0.25** · slider -0.5 to 1 · type -1 to 2

HK5 is a sophisticated color difference keyer - in essence it works by comparing the dominant channel of the screen (green or blue) with the other two channels (red and blue for a green screen, red and green for a blue screen) Bias allows you to use one or the other of those other channels or a mix of the two. The setting that works best is very much dependent on not only the colour balance of the screen but also of the foreground. We're working on automating this but in the meantime it is largely a process of trial and error.

Bias Gain SLIDER

Default **1** · slider 1 to 2 · type 0 to 5

Adjust the gain of the channel or channels set with the Bias control - it can be useful for solidifying the foreground in away that produces a smoother gradient at the edges than FG Fill.

Limit Bias Gain CHECKBOX

Off by default

Limits the Bias gain to the foreground. Allows you to push Bias Gain so as to keep the foreground solid whilst adjusting the Bias and Switch Bias controls in a way that clears the backing e.g you can switch Bias to use the min channel whilst maintaining a solid foreground.

Displayed when the Fine-Tune checkbox is enabled.

Switch Bias CHECKBOX

Off by default

Lets you specify the channels used rather than using the maximum and minimum. When enabled in HK5 Green 0 becomes the red channel and 1 blue and in HK5 Blue 0 is the green channel and 1 red. Like the main Bias slider this is a control best experimented with.

Displayed when the Fine-Tune checkbox is enabled.

Gamma SLIDER

Default **1** · slider 0.01 to 3 · type 0.01 to 10

Adjusts the gamma and color (RGB) balance of the shot being sent into the keyer. Really useful for dealing with problematic shots. When used in tandem with the bias controls quite sophisticated results can be achieved.

Displayed when the Fine-Tune checkbox is enabled.

R SLIDER

Default **1** · slider 0.01 to 3 · type 0.01 to 10

Adjust the gamma of the red channel.

Displayed when the Fine-Tune checkbox is enabled.

G SLIDER

Default **1** · slider 0.01 to 3 · type 0.01 to 10

Adjust the gamma of the green channel.

Displayed when the Fine-Tune checkbox is enabled.

B SLIDER

Default **1** · slider 0.01 to 3 · type 0.01 to 10

Adjust the gamma of the blue channel.

Displayed when the Fine-Tune checkbox is enabled.

Input Min SLIDER NEW IN 5

Default **0** · slider 0 to 1 · type -10 to 10

Set the minimum value of the input to the Secondary key.

Displayed when the Fine-Tune checkbox is enabled.

Input Max SLIDER NEW IN 5

Default **2** · slider 0 to 10 · type 0 to 1000

Set the maximum value of the input to the Secondary key.

Displayed when the Fine-Tune checkbox is enabled.

Color Space MENU NEW IN 5

Default **Rec. 709 Linear**

Adjust the color space of the input to the Secondary key.

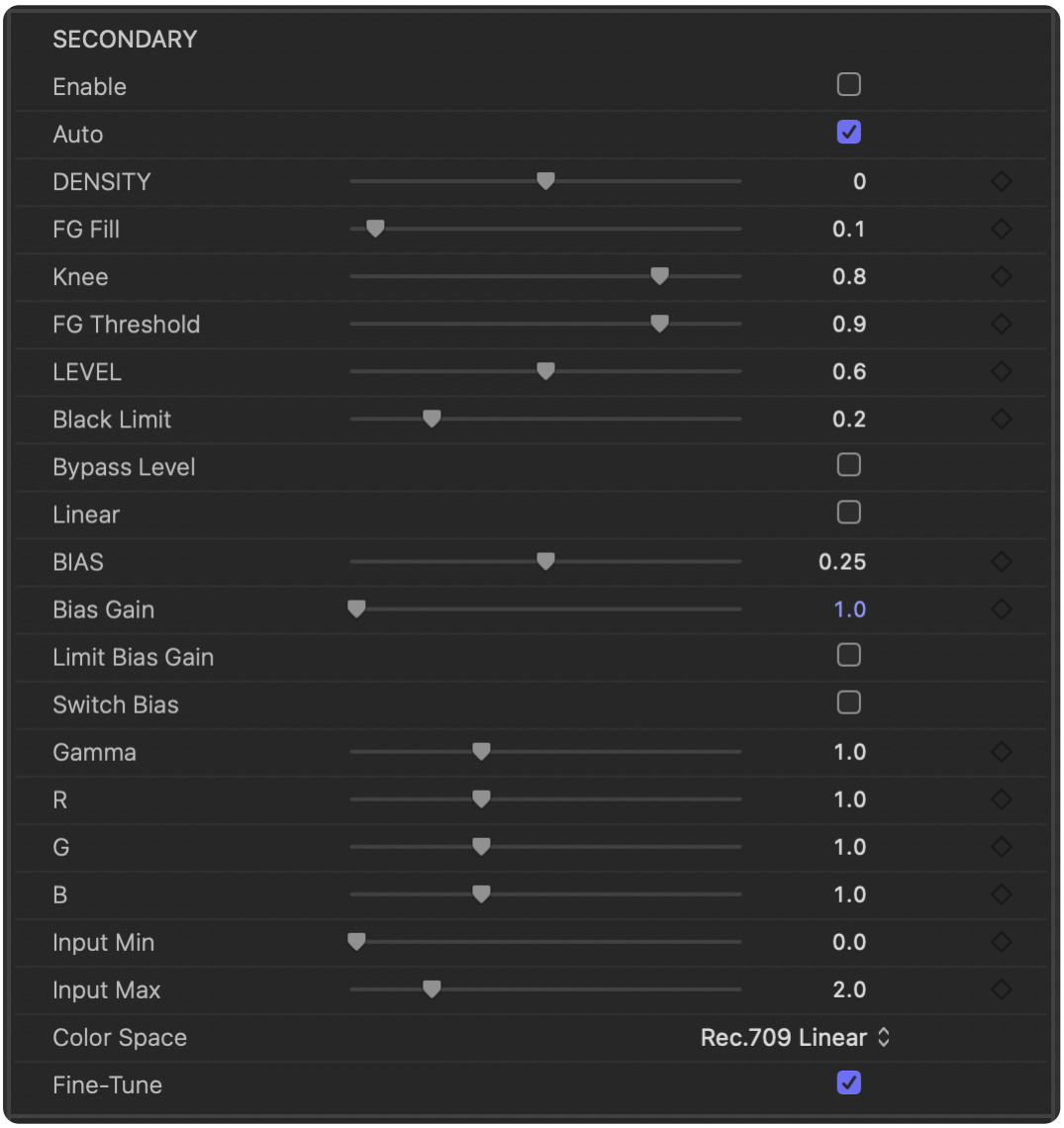
▶ 4 choices

Displayed when the Fine-Tune checkbox is enabled.

Fine-Tune CHECKBOX NEW IN 5

Off by default

Enable to display additional controls in the Secondary group that allow you to refine and fine-tune the Secondary key.



SHAPE

New in 5

Set the shape matte that is used to qualify the Primary and Secondary keyers. Control the size and position of the shape matte with onscreen controls which replace the sliders used in Hawaiki Keyer 4.



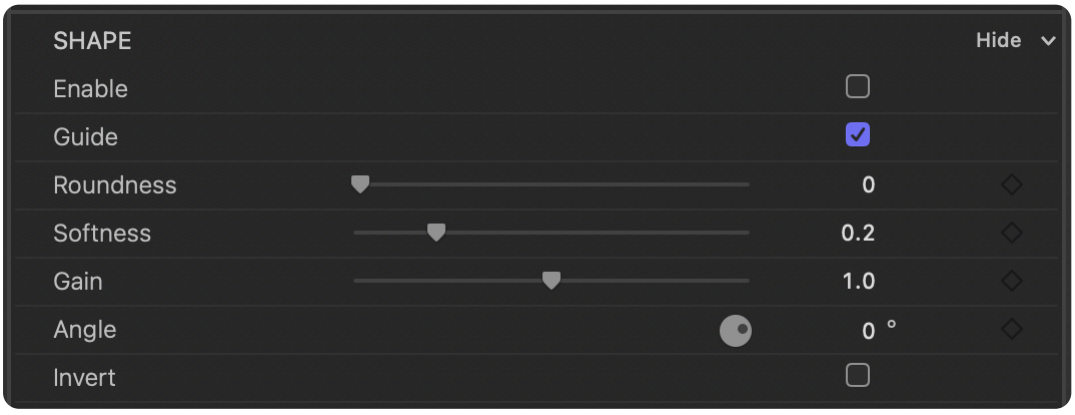
Set the shape matte with onscreen controls

NB. For the Shape OSCs to appear onscreen the plug-in must be selected. Click on the plug-in title in the Inspector/Effect Control panel to do this.

As with Hawaiki Keyer 4, when Secondary is enabled, the Secondary key is applied within the shape matte and the Primary key outside of it.

New in Hawaiki Keyer 5 the shape matte can also be used as a garbage matte (or, when inverted, holdout matte) with either the Primary or Secondary keys. By default when Shape is enabled and Secondary disabled the shape matte works on the Primary key.

Enable Secondary and disable Primary to have the Shape matte work with just the Secondary keyer. This can be a useful way to test different keying strategies by switching between the two keys.



Enable CHECKBOX

Off by default

NB. If both Primary and Secondary are enabled then Shape is automatically enabled and the Enable checkbox is not shown.

Guide CHECKBOX

On by default

Guide - When enabled a white outline showing the edge of the shape matte is displayed. When softness is greater than zero a grey outline is also shown.

NB. This is disabled automatically whenever the Final Key view is selected.

Roundness SLIDER

Default **0** · slider 0 to 1 · type -∞ to +∞

Adjust in tandem with the onscreen controls to create a range of squares, circles, rectangles and ovals.

Softness SLIDER

Default **0.2** · slider 0 to 1 · type 0 to 2

Adjust the softness or feathering of the matte - a second grey outline is present when softness is greater than zero.

Gain SLIDER NEW IN 5

Default **1** · slider 0 to 2 · type 0 to 100

Adjust the gain of the shape matte.

Angle ANGLE

Default **0°**

Rotate the matte.

Invert CHECKBOX

Off by default

Inverts the shape matte.

Will swap the Primary and Secondary keyers when both of them are enabled or change the shape matte from a garbage matte to a holdout matte when only one is enabled.

TRACKER

Tracking

Hawaiki Keyer now provides automatic tracking of the **edges** of your foreground subject as well as centre tracking. Both modes work with the new AI-powered face and object tracking.



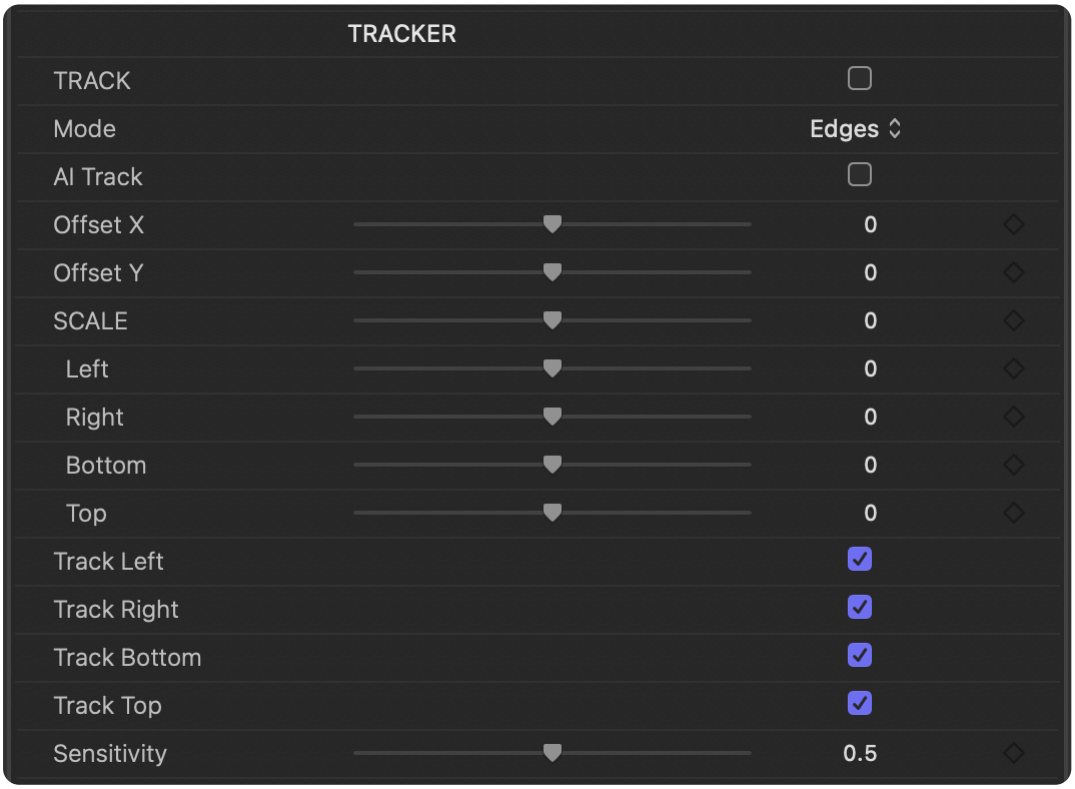
TRACK CHECKBOX

Off by default

Mode MENU NEW IN 5

Default **Centre**

Either track the centre of the foreground subject - setting the shape matte with the onscreen controls, or track the edges of the foreground automatically and refine with the Scale sliders that appear.



▶ 2 choices

AI Track CHECKBOX NEW IN 5

Off by default

AI-powered tracking of faces and objects.

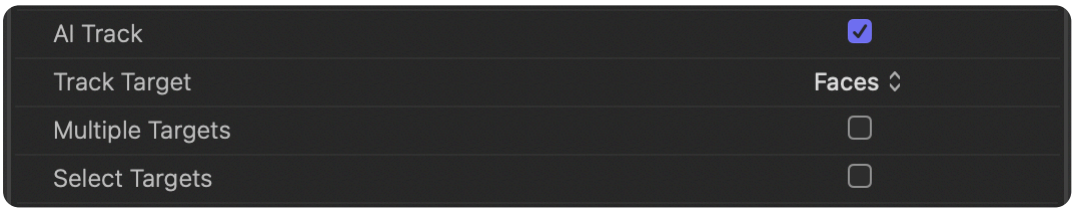
Use the Track Target menu to choose to track either faces or objects (normally people).

Face tracking is useful for creating trackable head mattes that allow you to pull a secondary key on the subject's hair.

Object tracking is an alternative to the standard Hawaiki Keyer tracking. It's a good option when the screen doesn't cover the entire shot, when a light or other fixture is in the shot or if the screen has a lot of tracking markers.

AI Track works with both centre and edges tracking modes. **Centre** works best for face tracking if the subject's distance to the camera doesn't change. If the subject is moving away from or towards the camera you can use the **Edges** mode and the scale controls to create a head matte that automatically resizes.

With Object tracking set to edges you can create a dynamic garbage matte that isolates the subject.



Track Target MENU

Default **Faces**

Set the AI Tracker to track either faces or objects in the frame. The object tracking aims to pick the main subject of the shot, which is usually people.

▶ 2 choices

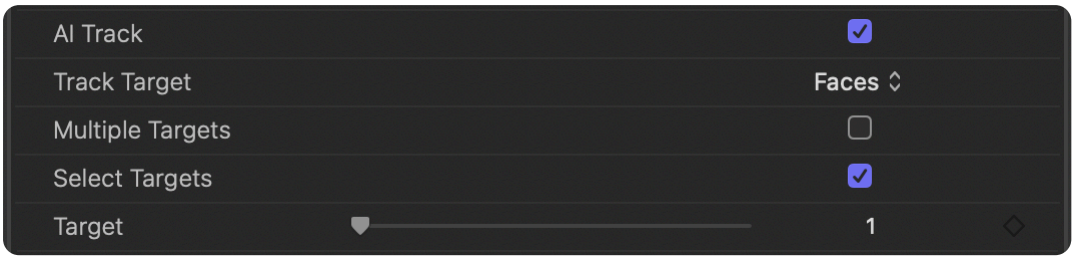
Multiple Targets CHECKBOX

Off by default

Enable if there is more than one person or object in the shot and you wish to create a shape matte for each of them.

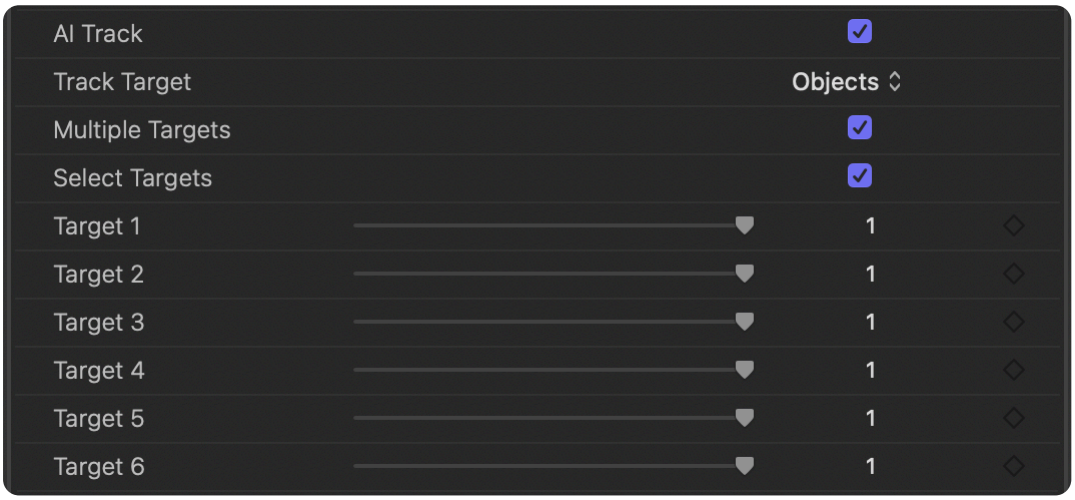
Select Targets CHECKBOX

Off by default



Select a single face or object

Use the Target slider to pick the face or object to track. Targets are selected left to right.



Select multiple targets

When Multiple is selected you can choose which faces or objects to include using the Target sliders. Target 1 is the leftmost face, Target 6 the rightmost. The slider can be set to 1 - select the target or 0 - ignore the target. The controls are presented as sliders rather than checkboxes so they can be keyframed.

NB. The Track Area controls can also be used to exclude particular faces and objects.

Target SLIDER

Default **1** · slider 1 to 6 · type 1 to 100

Select the face or object to track. Targets are selected left to right i.e the leftmost face or object is chosen with a slider value of 1. The slider goes up to 6 but values greater than this can be entered if you have more than 6 targets in the shot.

Target 1 SLIDER

Default **1** · 0 to 1

The slider can be set to 1 - select the target or 0 - ignore the target.

Target 2 SLIDER

Default **1** · 0 to 1

The slider can be set to 1 - select the target or 0 - ignore the target.

Target 3 SLIDER

Default **1** · 0 to 1

The slider can be set to 1 - select the target or 0 - ignore the target.

Target 4 SLIDER

Default **1** · 0 to 1

The slider can be set to 1 - select the target or 0 - ignore the target.

Target 5 SLIDER

Default **1** · 0 to 1

The slider can be set to 1 - select the target or 0 - ignore the target.

Target 6 SLIDER

Default **1** · 0 to 1

The slider can be set to 1 - select the target or 0 - ignore the target.

Offset X SLIDER

Default **0** · slider -0.25 to 0.25 · type -1 to 1

Manually offset the tracked shape matte horizontally.

Offset Y SLIDER

Default **0** · slider -0.25 to 0.25 · type -1 to 1

Manually offset the tracked shape matte vertically.

SCALE SLIDER

Default **0** · slider -1 to 1 · type -1 to 100

Scale the tracked shape matte.

Displayed when Mode is set to Edges.

Left SLIDER

Default **0** · slider -1 to 1 · type -1 to 100

Scale the left edge of the tracked shape matte.

Displayed when Mode is set to Edges.

Right SLIDER

Default **0** · slider -1 to 1 · type -1 to 100

Scale the right edge of the tracked shape matte.

Displayed when Mode is set to Edges.

Bottom SLIDER

Default **0** · slider -1 to 1 · type -1 to 100

Scale the bottom edge of the tracked shape matte.

Displayed when Mode is set to Edges.

Top SLIDER

Default **0** · slider -1 to 1 · type -1 to 100

Scale the top edge of the tracked shape matte.

Displayed when Mode is set to Edges.

Track X CHECKBOX

On by default

Enables Tracking in the X axis i.e the secondary matte will follow the horizontal movement of foreground elements within the Track Area.

Displayed when Mode is set to Centre.

Track Y CHECKBOX

On by default

Enables Tracking in the Y axis i.e the secondary matte will follow the vertical movement of foreground elements within the Track Area.

Displayed when Mode is set to Centre.

Track Left CHECKBOX

On by default

Track the left edge of the foreground. When disabled the position of the shape matte will be set by one of the onscreen controls.

Displayed when Mode is set to Edges.

Track Right CHECKBOX

On by default

Track the right edge of the foreground. When disabled the position of the shape matte will be set by one of the onscreen controls.

Displayed when Mode is set to Edges.

Track Bottom CHECKBOX

On by default

Track the bottom edge of the foreground. When disabled the position of the shape matte will be set by one of the onscreen controls.

Displayed when Mode is set to Edges.

Track Top CHECKBOX

On by default

Track the top edge of the foreground. When disabled the position of the shape matte will be set by one of the onscreen controls.

Displayed when Mode is set to Edges.

Sensitivity SLIDER

Default **0.5** · slider 0 to 1 · type -1 to 2

New Sensitivity slider (most useful when Mode is set to Edges) : Increase sensitivity to expand what the tracker sees as foreground - useful to pick up areas with heavy spill that the tracker is excluding such as the edges of hair. Decrease Sensitivity to reduce what is defined as foreground - can be helpful if stray lighting and reflections are being picked up as foreground.

NB. This slider is not shown when Face Track is enabled.

TRACK AREA MENU NEW IN 5

Default **Frame**

Set the maximum part of the frame that is used when tracking to either the whole frame, the area defined in Crop or to the onscreeen controls (setting to OSCs is best used when Track Mode is set to Edges). Then further refine with the Left, Right, Bottom, Top sliders which work relative to the box defined in Track Area.

Red lines will appear on screen to show the area being tracked.

NB. You will generally want to exclude from the Track Area: anything in the frame that is not going to be in the final composite e.g lights,mics, areas of the frame not covered by the green screen; static objects; moving objects you don't want masked by the Shape matte.



▶ 3 choices

Left SLIDER

Default **0** · slider 0 to 1 · type -10 to 10

Right SLIDER

Default **1** · slider 0 to 1 · type -10 to 10

Bottom SLIDER

Default **0** · slider 0 to 1 · type -10 to 10

Top SLIDER

Default **1** · slider 0 to 1 · type -10 to 10

BL POINT NEW IN 5

Drag it in the viewer: Onscreen Controls

Onscreen Control for the bottom left of the shape matte.

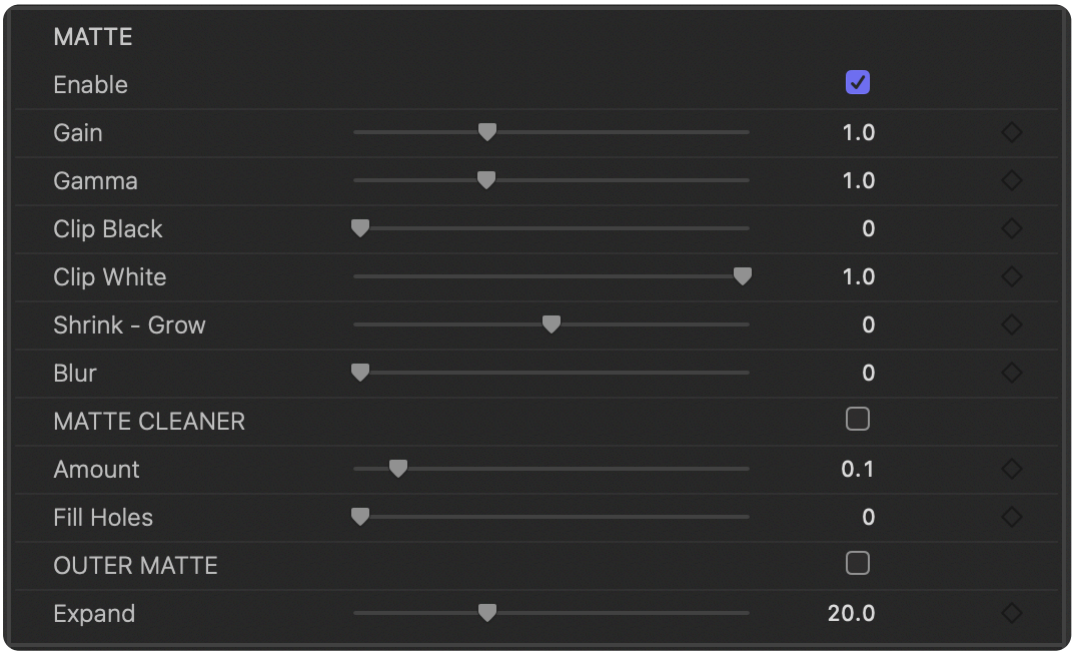
TR POINT NEW IN 5

Drag it in the viewer: Onscreen Controls

Onscreen Control for the top right of the shape matte.

MATTE

The Matte group comprises a variety of tools for cleaning up, refining the matte and dealing with specific problems - these are all best used once you have done everything you can with Density and Pre-Qualify. The tools include Black and White Clip, Gamma, Matte Shrink,Matte Blur and Matte Cleaner (with Fill Holes option), and Outer Matte.



Enable CHECKBOX NEW IN 5

On by default

Enable the matte controls.

Gain SLIDER

Default **1** · slider 0 to 3 · type 0 to 10

Scales the matte. Works in a similar way to the Density control in Primary and Secondary - increasing it will help clean up the background - but across both mattes and in a way that is less prone to eroding the foreground when pushed. That said it is best to exhaust the possibilites of the Level,Density and Bias controls before turning to Matte Gain.

Gamma SLIDER

Default **1** · slider 0.01 to 3 · type 0.01 to 10

The Gamma slider performs the magic trick of making your transparent edges either more opaque or more transparent - increase the value for greater transparency and reduce it for increased opacity. This is a great control for making your edges look more realistic, but, as always, be sure to use it gently and don't overcook the results.

Clip Black SLIDER

Default **0** · 0 to 0.99

The black and white Clips allow you to adjust the matte in the conventional way, in other words by clipping either the black or white values or both - clipping the black cleans up the background, and clipping the white solidifies the foreground. Note that while this common process can be useful for fine-tuning an almost perfect matte, it's not recommended to use them to do the heavy lifting of extracting the matte in the first place. Hawaiki's unique and much more refined and targeted level,density and bias controls will give you a superior result every time.

Clip White SLIDER

Default **1** · 0.01 to 1

Shrink - Grow SLIDER NEW IN 5

Default **0** · slider -5 to 5 · type -50 to 50

You shouldn't ever really need to shrink (or grow) your matte, as Hawaiki Keyer gives you so many great tools for creating a great-looking edge, but if you do need to shrink it for any reason, then use the Shrink - Grow slider. Again, try to ration yourself as much as possible - a matte that has been visibly shrunk is not a professional-looking matte! If you facing the kind of desperate situation where Shrink - Grow is needed, you may need to use it in conjunction with a small amount of Edge Blur (see below).

Blur SLIDER

Default **0** · slider 0 to 10 · type 0 to 100

Blurs the matte using a gaussian blur. The slider sets the blur radius.

In general, you want to avoid blurring your matte wherever you can to preserve as much fine detail as possible, but sometimes if your green/blue screen is not as good as it should be, you'll have unwanted "stepping" or aliasing of your edges, or some of the processing you have applied may have made them look a bit too sharp. If this is the case, your first step should be to make sure you have enabled Denoise (see above) which is specifically designed to deal with this type of issue and will handle it really beautifully and smoothly without compromising your matte. If your footage is really poor and Denoise doesn't get you far enough only then should you consider using Blur - after having first fired your cameraman and/or thrown away your camera!

If you are encountering serious aliasing problems, it usually means that you've over-processed the matte somewhere or other. Make sure you go back and review your previous decisions to see if you can improve on them before trying Blur. Hawaiki Keyer gives you more options for refining your matte than any other keyer so you should usually be able to find a good way of treating the problem without having to resort to blur.

Matte Cleaner

Matte Cleaner is designed to help you deal with problem areas in your foreground that refuse to go solid. At extreme settings you can use Matte Cleaner to force fill "holes" in your foreground caused by reflections or foreground colors that too closely match the background screen color. Check the Matte Cleaner switch to enable this option, and adjust the Amount slider as necessary. For advanced hole filling operations you will probably also want to use the Fill Holes slider which helps to force the filler into more of the holes.

Note that while Matte Cleaner is a really powerful tool, like any keying control you want to make sure that you only use as much as you actually need and no more - at extreme settings you can risk compromising your edges, so keep an eye on them to make sure you're doing enough but no more.

COMPOSITING TIP: If your foreground holes are caused by reflections, it's worth knowing that filling them in is not always the best-looking option. Being reflections they should ideally be reflecting your environment, and in your final composite that environment isn't the flat color of your despilled green/blue screen (which is what it will be if you fill them in), but rather it ought to be the color of the new background and any detail it may contain. Hence leaving your holes see-through will often have the effect of making them look more like real reflections and your composite will look better as a result.



MATTE CLEANER CHECKBOX

Off by default

Amount SLIDER
Default **0.1** · slider 0 to 1 · type from 0, no upper limit

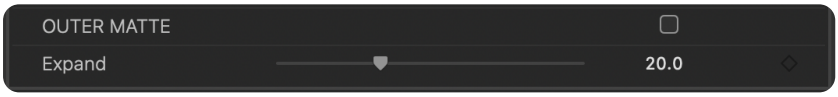
Fill Holes SLIDER
Default **0** · slider 0 to 20 · type 0 to 50

Outer Matte

The Outer Matte helps take care of the outer regions of the background and makes them fully transparent. The Outer Matte is disabled by default - use the checkbox to turn it on.

The Outer Matte keeps clear of the edges of the main matte so as not to lose any detail, but you can increase the clearance if necessary using the Expand slider.

Note that the Outer Matte is usually large enough (or can be expanded enough) to keep well out of the way of the Main Matte in most cases. However, if you have lots of large areas of transparency that you need to keep, it's best to leave the Outer Matte turned off to avoid fighting with those areas.



OUTER MATTE CHECKBOX
Off by default

Expand SLIDER
Default **20** · slider 5 to 50 · type 5 to 400

DESPILL

The spill suppression provided in Hawaiki Keyer is very powerful with a lot of fine control of the results - more than you'll find in most keyers at any level. Spill suppresssion works by isolating the areas of your foreground that are contaminated with excess amounts of the background screen color and replacing it with something less offensive.

Overview - Unlike some well-known keyers, the despill operation in Hawaiki Keyer is entirely separate from the matte extraction operation and will not be affected by the matte that you pull. Obviously a softer matte will show more of the despilled background than a very hard matte that crunches away too much of the edge detail but other than that there is no interaction between the two operations, and it is our view that this is a much better way of working. Too often with other systems, you end up chasing your tail between getting the matte right and getting the despill right and Hawaiki Keyer takes away that frustration.

Because despill by definition is removing green (or blue), an unmodified despill process inevitably results in a darkening of the despilled areas (less green/blue means less overall luminance). For this reason, Hawaiki Keyer 5 uses an automatic process to adjust for this, which is designed to compensate for the darkening (and also the desaturation). However the automated process is simply designed to get

you close enough to a sensible starting point with the option to over-ride the result manually as required.

This is because there is obviously no "ideal" setting that will make a perfect composite for every shot - if you have a dark background, you want the despilled edge to be dark and if you have a bright background you want it to be bright. This is where the deep layer of control within the despill section really comes into play - you can manually over-ride the brightness, as well as the saturation and even play with the color balance.



Enable CHECKBOX NEW IN 5

On by default

Enable the Despill operation.

Brightness SLIDER

Default **0** · slider -1 to 1 · type -2 to 2

The Brightness control lets you make manual adjustments to the brightness of the despill.

Saturation SLIDER

Default **0** · -5 to 5

The Saturation control lets you fine tune the saturation of the despilled areas, either to reduce it or increase it as required.

R SLIDER

Default **0** · slider -1 to 1 · type -2 to 2

The three RGB sliders let you adjust the color of the despilled areas directly and intuitively for really fine-grained control of the result.

G SLIDER

Default **0** · slider -1 to 1 · type -2 to 2

B SLIDER

Default **0** · slider -1 to 1 · type -2 to 2

Restore Luminance SLIDER

Default **1** · slider 0 to 1 · type 0 to 2

This controls the amount of the automated luminance correction. A value of 1.0 matches the luminance of the despilled image to the luminance of the source. A value of zero turns off the auto process.

NB. You may need to increase Brightness or increase Restore Luminance (you can enter values above the max slider value of 1) to match very bright backgrounds.

Amount SLIDER

Default **1** · 0 to 2

Use the Amount slider to increase or decrease the degree of spill suppression being applied.

Spill Map

When setting up the spill suppression operation it's a good idea to use the Spill Map view to see exactly what's going on and fine tune the despill process to the demands of your particular shot. The Spill Map defines the specific areas that will be de-contaminated and with Hawaiki Keyer, unlike most keyers on the market, you have total control over how this works.

Reading the Spill Map view - Looking at the straight Spill Map view first, where the foreground is cyan, there's no spill being removed but the more pink there is, the more intense the despill process. And the spill map view will update as you make changes to the Amount, the Spill Map Depth, or the Balance.

Despill works by referencing the red, green and blue channels and removing any green (or blue, as the case may be) that exceeds the value of either (or both) of the other two. In this way you can control not only which areas are being despilled but also have some control over the resulting colors.

Use the Spill Map Depth control to increase the intensity of the Spill Map as necessary. This will enable you to target areas with only slight contamination but which you still want to despill.



SPILL MAP Depth SLIDER

Default **0** · slider -0.25 to 0.5 · type -0.25 to 1

Blue Default **0.25** · slider -0.25 to 0.5 · type -0.25 to 1

Balance SLIDER

Default **0.5** · slider 0 to 1 · type from 0, no upper limit

Adjusts the degree to which the Red or Blue are referenced (in the case of green screen, or Red and Green in the case of blue screen).

Blue Default **0.75** · slider 0 to 1 · type from 0, no upper limit

R SLIDER

Default **1** · 0 to 2

Use the Spill Map Red and Blue sliders to make precise adjustments to the areas that will be despilled (or the Red and Green in the case of a blue screen).

B SLIDER

Default **1** · 0 to 2

Color Space MENU NEW IN 5

Default **Rec. 709 Linear**

Adjust the color space used in the Despill process.

Rec.709 Linear (the default) provides the most neutral look, even with HDR material. Select Rec.2020 Linear, ACEScg or Display P3 Linear for a different look - normally the resulting despilled image is slightly warmer.

▶ 4 choices

USE BACKGROUND CHECKBOX

Off by default

Use Background uses the color of the Background image to colorize the areas of spill on the edge of the foreground. The area of the foreground replaced can be seen in the Use Background view, which will update when you adjust the controls below.

NB. The Use Background view will also update when the main Despill parameters are changed.

Areas of the foreground are only replaced where there is spill, shown as pink in the Spill Map view (more precisely, the Use Background matte is the intersection of a custom edge matte with the Spill Map). This means that areas of the Spill Map that are cyan will not be colorized. It also means that changes to the Spill Map controls will change the intensity of the Use Background process.

IMPORTANT NOTE: - It's important to note that in order to use this feature, you need to add your background image to the Background source well. Without a background image being fed to the plug-in, you won't get the desired result.



Hawaiki Keyer Tutorial: Despill - Use Background

Amount SLIDER

Default **1** · slider 0 to 1 · type 0 to 2

Controls the mix of the original despilled image with the background image - a setting of 0 will turn it off

Depth SLIDER

Default **3** · slider 1 to 10 · type 0 to 20

Sets the distance into the foreground that the spill is replaced with the background i.e the width of the custom edge matte employed by Use Background.

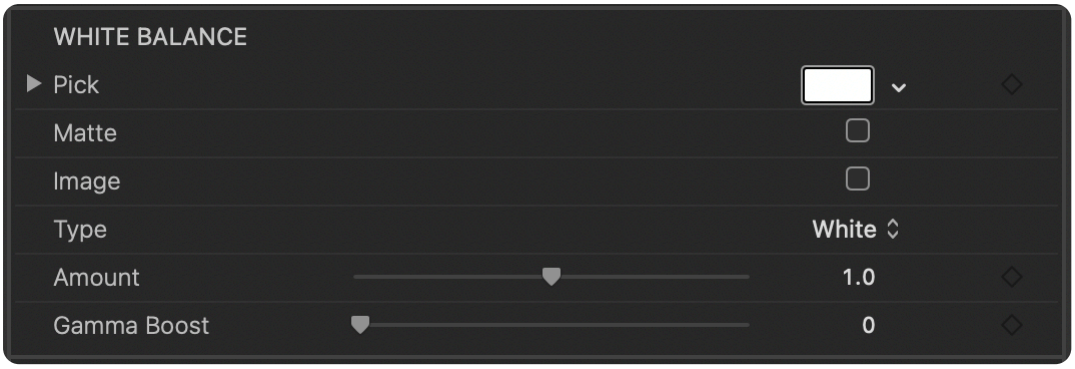
Density SLIDER

Default **3** · slider 0 to 5 · type 0 to 10

Modifies the intensity of the Use Background process by changing the density of the custom edge matte.

WHITE BALANCE

Allows you to white balance by picking either an area of white/grey or skin. You can choose to balance the Matte input (which can assist with pulling the key if the White Balance is badly off), or the Image (as a starting point for color correction and/or to assist the despill process) or both.



Pick BUTTON

Clicking on the color swatch brings up the macOS color picker allowing you make a pick of the screen.

Matte CHECKBOX

Off by default

Enable to white balance the input to the matte extraction (keying) process.

Image CHECKBOX

Off by default

Enable to white balance the despilled and color corrected foreground image.

Type MENU

Default **White**

Choose white to pick an area of the image that should be white or grey, choose Skin if you are picking an area skin. The Skin Red and Skin Yellow sliders will appear.



▶ 2 choices

Amount SLIDER

Default **1** · slider 0 to 2 · type 0 to 5

Gamma Boost SLIDER

Default **0** · slider 0 to 1 · type 0 to 2

Brightens the midtones of the white balanced image.

Skin Red SLIDER

Default **0.5** · slider 0 to 1 · type -1 to 1

Adjust how red the resulting skin color is.

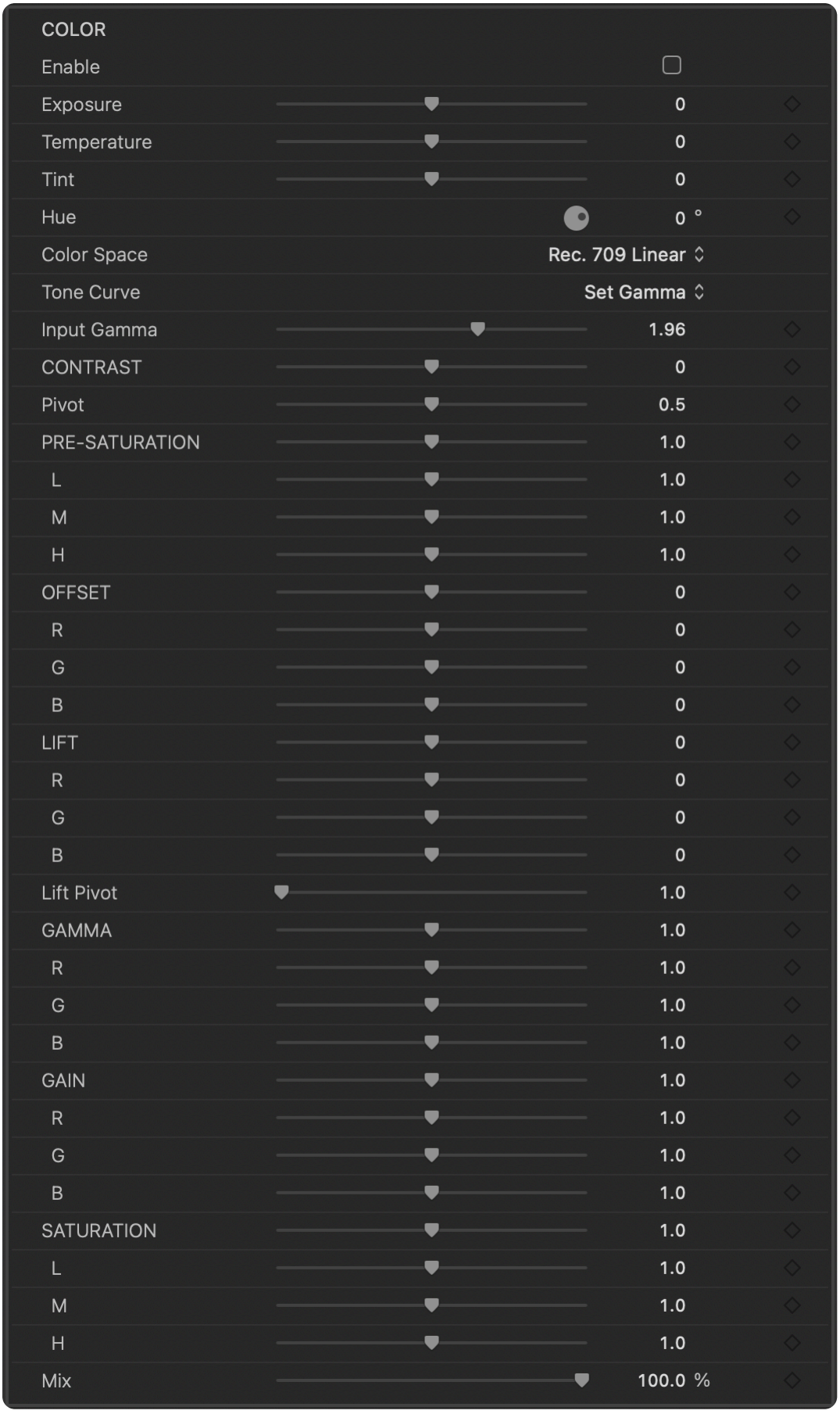
Skin Yellow SLIDER

Default **0.1** · slider 0 to 0.5 · type -1 to 1

Adjust how yellow the resulting skin color is.

COLOR

Hawaiki Keyer gives you an entire color correction suite so you can polish your composite all from within the one plug-in.



Enable CHECKBOX

Off by default

Exposure SLIDER NEW IN 5
Default **0** · slider -5 to 5 · type -16 to 16

Temperature SLIDER NEW IN 5
Default **0** · slider -100 to 100 · type -120 to 120

Tint SLIDER NEW IN 5
Default **0** · slider -100 to 100 · type -200 to 200

Hue ANGLE NEW IN 5
Default **0°**

Color Space MENU NEW IN 5
Default **Rec. 709 Linear**

Set the Color Space of all of all Color parameters below this menu.

NB. Exposure, Temperature, Tint and Hue operations are always performed in the default linear color space of the plug-in.

▶ 4 choices

Tone Curve MENU NEW IN 5
Default **Set Gamma**

Set the Tone Curve (transfer function) of all Color parameters below this menu.

▶ 7 choices

Input Gamma SLIDER
Default **1.96** · slider 0 to 3 · type 0 to 100

Apple HLG CHECKBOX
Off by default

Uses the HLG encoding adopted by Apple’s HLG color spaces.

CONTRAST SLIDER NEW IN 5
Default **0** · slider -1 to 1 · type -1 to 10

Pivot SLIDER
Default **0.5** · slider 0 to 1 · type -1 to 100

PRE-SATURATION SLIDER
Default **1** · slider 0 to 2 · type 0 to 10

L SLIDER
Default **1** · slider 0 to 2 · type 0 to 10

M SLIDER
Default **1** · slider 0 to 2 · type 0 to 10

H SLIDER
Default **1** · slider 0 to 2 · type 0 to 10

OFFSET SLIDER
Default **0** · slider -1 to 1 · type -100 to 100

R SLIDER
Default **0** · slider -1 to 1 · type -100 to 100

G SLIDER
Default **0** · slider -1 to 1 · type -100 to 100

B SLIDER
Default **0** · slider -1 to 1 · type -100 to 100

LIFT SLIDER
Default **0** · slider -1 to 1 · type -2 to 2

R SLIDER
Default **0** · slider -1 to 1 · type -2 to 2

G SLIDER
Default **0** · slider -1 to 1 · type -2 to 2

B SLIDER
Default **0** · slider -1 to 1 · type -2 to 2

Lift Pivot SLIDER NEW IN 5
Default **1** · slider 1 to 10 · type 0.1 to 100

Set the pivot point for the lift sliders. Values above this are left unchanged.

GAMMA SLIDER
Default **1** · slider 0 to 2 · type 0 to 100

R SLIDER
Default **1** · slider 0 to 2 · type 0 to 100

G SLIDER
Default **1** · slider 0 to 2 · type 0 to 100

B SLIDER
Default **1** · slider 0 to 2 · type 0 to 100

GAIN SLIDER
Default **1** · slider 0 to 2 · type 0 to 100

R SLIDER
Default **1** · slider 0 to 2 · type 0 to 100

G SLIDER
Default **1** · slider 0 to 2 · type 0 to 100

B SLIDER
Default **1** · slider 0 to 2 · type 0 to 100

SATURATION SLIDER NEW IN 5
Default **1** · slider 0 to 2 · type 0 to 10

L SLIDER
Default **1** · slider 0 to 2 · type 0 to 10

M SLIDER
Default **1** · slider 0 to 2 · type 0 to 10

H SLIDER
Default **1** · slider 0 to 2 · type 0 to 10

Mix SLIDER NEW IN 5
Default **100%**

Control the overall effect of the parameters in the Color group.

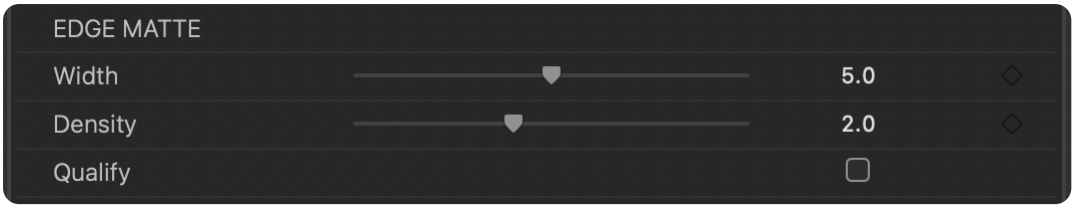
EDGE TOOLS

The Edge Tools group provides a range of custom tools for refining your edges.

Hawaiki Keyer Tutorial: Edge Tools

Edge Matte

Adjust the Width and Density sliders to taste - it's a very good idea to do this while looking at the Edge Matte view so you know exactly what you are doing. Normally the default edge width and density should be enough, but you may need to increase the values for problematic foregrounds or high resolution footage. Note that the Edge Matte view is not the matte used in Light Wrap.



Width SLIDER

Default **5** · slider 0 to 10 · type 0 to 100

Density SLIDER

Default **2** · slider 0 to 5 · type 0 to 10

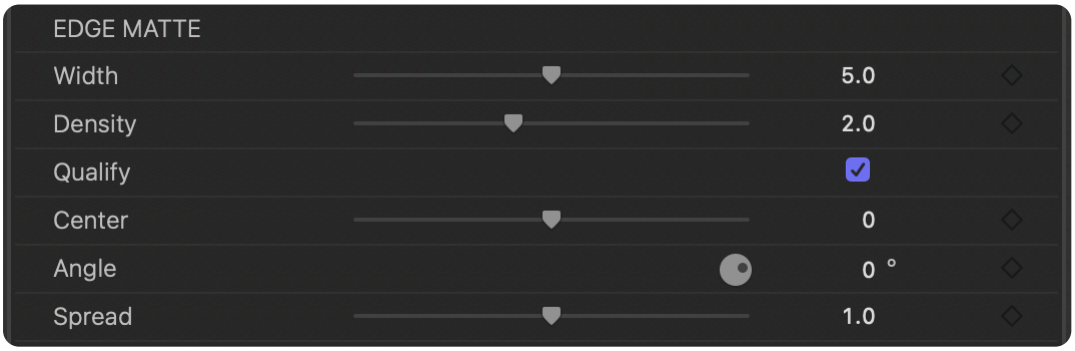
Qualify CHECKBOX

Off by default

If you enable Qualify, you will see the Center, Angle and Spread controls appear and the Edge Matte view change with purple on the left hand side and yellow on the right, representing the two halves of a gradient matte. This is used in Edge Replace and Edge where additional controls will become visible.

When you enable Qualify, you will see the Edge Matte view change with purple on the left hand side and yellow on the right, representing the two halves of the gradient. The Value A sliders will now control the areas that are purple and the Value B slider sthe edges that are yellow.

You can adjust the Angle of the gradient any way you like - so for example you could have Value A at the top and Value B at the bottom by entering an Angle of -90 degrees. You can adjust the center of the gradient with the Center slider - negative values move the center closer to Value A and vice versa. Finally, the Spread slider allows you to adjust the spread of values across the gradient and hence the softness of the mix between the A and B values - a lower Spread value will make for a more abrupt transition between the two sides and a larger value will spread it out further.



Center SLIDER

Default **0** · -1 to 1

Angle ANGLE

Default **0°**

Spread SLIDER
Default **1** · slider 0 to 2 · type 0 to 4

Edge Replace

Edge Replace allows you to replace the edge of the foreground with pixels further from the edge. Useful for dealing with a noticeable dark or light edge caused by excessive in-camera sharpening and chroma subsampling as well as the real world light wrap that is present in some shots.

It does this by eroding - Sample In - then blurring - Fill - the foreground and replacing the original foreground with these synthesized pixels in the area defined by the main Edge Matte. Amount controls the blend of the replacement with the original - a value of 1 replaces the original foreground entirely (providing the Edge Matte value is also 1).

NB. You can refine the area affected by Edge Replace with the Edge Matte controls.

You need to increase Sample In enough to avoid sampling the edge artefacts (by default Sample In is set to zero because the Fill process suffices for a lot of shots) and then push Fill just enough to ensure the edge pixels are replaced. The ideal setting for these controls is very much dependent on the color of the surrounding foreground pixels as well as the color of the background in the area you are replacing.



EDGE REPLACE CHECKBOX
Off by default

Fill SLIDER
Default **3** · slider 1 to 30 · type 1 to 100

Sample In SLIDER
Default **0** · slider 0 to 20 · type 0 to 50

Amount SLIDER
Default **1** · slider 0 to 1 · type from 0, no upper limit

B Controls

When The Edge Matte is qualified you have the option to qualify Edge Replace with a gradient matte and the B controls appear. The A sliders will now control the areas that are purple and the B sliders the edges that are yellow. This allows you to target specific problem areas.



Fill SLIDER

Default **3** · slider 1 to 30 · type 1 to 100

Works on areas of the Edge Matte that are coloured yellow.

Displayed when Edge Matte - Qualify is enabled.

Sample In SLIDER

Default **0** · slider 0 to 20 · type 0 to 50

Works on areas of the Edge Matte that are coloured yellow.

Displayed when Edge Matte - Qualify is enabled.

Amount SLIDER

Default **1** · slider 0 to 1 · type from 0, no upper limit

Works on areas of the Edge Matte that are coloured yellow.

Displayed when Edge Matte - Qualify is enabled.

Edge

You can adjust the color (RGB Balance, Brightness and Saturation), transparency and blur of the edge. Note that unless Qualify is enabled, the A sliders are the master controls for the various edge corrections and the B sliders are not shown.

Each of these methods uses the same very thin matte which only encompasses the very edges of your foreground. Using this matte you can make detailed adjustments to the edge as required to help the foreground sit better into the background, compensate for edges that have been over-lit, or create special effects. The really powerful and unique feature of Edge in Hawaiki Keyer 5 is that you can divide the edge in two and affect either side independently, using the Qualify option.



EDGE CHECKBOX NEW IN 5

Off by default

Brightness SLIDER

Default **0** · slider -0.5 to 0.5 · type -1 to 1

Use the Brightness slider to adjust the brightness of the edge up or down as required.

Saturation SLIDER

Default **1** · slider 0 to 2 · type 0 to 3

Adjusts the saturation of the edge as required.

R SLIDER

Default **0** · slider -0.5 to 0.5 · type -1 to 1

Adjust the red channel of the Edge.

G SLIDER

Default **0** · slider -0.5 to 0.5 · type -1 to 1

Adjust the green channel of the Edge.

B SLIDER

Default **0** · slider -0.5 to 0.5 · type -1 to 1

Adjust the blue channel of the edge.

Transparency SLIDER

Default **1** · 0 to 1

Edge Transparency is a great way to soften any hard edges in your matte and give you a smoother-looking composite. It uses the same thin edge matte as the rest of the edge features and allows you to reduce the opacity of the foreground in that small area.

Blur SLIDER

Default **0** · slider 0 to 10 · type 0 to 100

Set the blur radius with the Blur sliders. Edge Blur has a more subtle effect than the main Matte Blur.

In general, you want to avoid blurring your matte wherever you can to preserve as much fine detail as possible, but sometimes if your green/blue screen is not as good as it should be, you'll have unwanted "stepping" or aliasing of your edges, or some of the processing you have applied may have made them look a bit too sharp. If this is the case, your first step should be to make sure you have enabled Denoise (see above) which is specifically designed to deal with this type of issue and will handle it really beautifully and smoothly without compromising your matte. If your footage is really poor and Denoise doesn't get you far enough only then should you consider using Blur - after having first fired your cameraman and/or thrown away your camera!

If you are encountering serious aliasing problems, it usually means that you've over-processed the matte somewhere or other. Make sure you go back and review your previous decisions to see if you can improve on them before trying Blur. Hawaiki Keyer gives you more options for refining your matte than any other keyer so you should usually be able to find a good way of treating the problem without having to resort to blur.

NB. Changes to Edge transparency and blur change the matte and as such will be reflected in the Matte view

B Controls

When The Edge Matte is qualified you have the option to qualify Edge Replace with a gradient matte and the B controls appear. The A sliders will now control the areas that are purple and the B sliders the edges that are yellow. This allows you to target specific problem areas.



Brightness SLIDER

Default **0** · slider -0.5 to 0.5 · type -1 to 1

Use the Brightness slider to adjust the brightness of the edge up or down as required.

Works on areas of the Edge Matte that are coloured yellow.

Displayed when Edge Matte - Qualify is enabled.

Saturation SLIDER

Default **1** · slider 0 to 2 · type 0 to 3

Adjusts the saturation of the edge as required.

Works on areas of the Edge Matte that are coloured yellow.

Displayed when Edge Matte - Qualify is enabled.

R SLIDER

Default **0** · slider -0.5 to 0.5 · type -1 to 1

Adjust the red channel of the Edge.

Works on areas of the Edge Matte that are coloured yellow.

Displayed when Edge Matte - Qualify is enabled.

G SLIDER

Default **0** · slider -0.5 to 0.5 · type -1 to 1

Adjust the green channel of the Edge.

Works on areas of the Edge Matte that are coloured yellow.

Displayed when Edge Matte - Qualify is enabled.

B SLIDER

Default **0** · slider -0.5 to 0.5 · type -1 to 1

Adjust the blue channel of the edge.

Works on areas of the Edge Matte that are coloured yellow.

Displayed when Edge Matte - Qualify is enabled.

Transparency SLIDER

Default **1** · 0 to 1

Edge Transparency is a great way to soften any hard edges in your matte and give you a smoother-looking composite. It uses the same thin edge matte as the rest of the edge features and allows you to reduce the opacity of the foreground in that small area.

Works on areas of the Edge Matte that are coloured yellow.

Displayed when Edge Matte - Qualify is enabled.

Blur SLIDER

Default **0** · slider 0 to 10 · type 0 to 100

Set the blur radius with the Blur sliders. Edge Blur has a more subtle effect than the main Matte Blur.

Works on areas of the Edge Matte that are coloured yellow.

Displayed when Edge Matte - Qualify is enabled.

Tone Curve Gamma SLIDER NEW IN 5

Default **1.96** · slider 1 to 3 · type 0.01 to 5

Edge Brightness and RGB can now work in a gamma space which you can set with the Tone Curve Gamma slider - defaults to the Final Cut Pro default of 1.96. Colour adjustments are more fine grained especially when when the foreground is dark. Set to 1.0 to revert to the current behaviour in HK 4.5 Edge Tools.

Fine Edge

Fine Edge allows you to darken the outer edge and brighten the inner edge of the foreground's semi-transparent (grey matte values) pixels. Quite sophisticated results can be achieve with a look that differs from the main Edge brightness.



NB. Use BG requires the Background dropzone to be populated as it uses the luminance of the background image to adjust the process.

FINE EDGE CHECKBOX NEW IN 5

Off by default

Brighten Inner SLIDER

Default **1** · slider 1 to 2 · type 1 to 5

Darken Outer SLIDER

Default **0** · -1 to 0

Use BG CHECKBOX

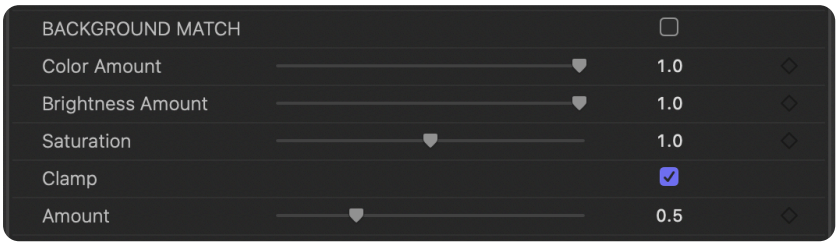
Off by default

Amount SLIDER

Default **0.5** · slider 0 to 1 · type 0 to 2

Background Match

Background Match automatically adjusts the edges of the foreground to match the color and brightness of the background. If a foreground pixel is darker than the background it will be brightened and if lighter than the background, darkened but only in the area defined by the Edge Matte. Background Match can be used as an alternative or complement to Light Wrap.



IMPORTANT NOTE: - It's important to note that in order to use this feature, you need to add your background image to the Background source well. Without a background image being fed to the plug-in, you won't get the desired result.

BACKGROUND MATCH CHECKBOX
Off by default

Color Amount SLIDER
Default **1** · 0 to 1

Brightness Amount SLIDER
Default **1** · 0 to 1

Saturation SLIDER
Default **1** · slider 0 to 2 · type 0 to 3

Clamp CHECKBOX
On by default

Amount SLIDER
Default **0.5** · slider 0 to 2 · type 0 to 3

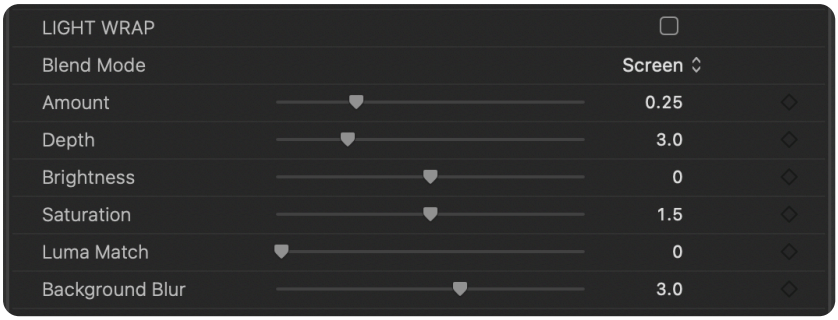
Light Wrap

Light Wrap simulates the indirect illumination of the scene, which is where the background colors wrap themselves around the edges of the foreground. This can be very useful in helping the match between the keyed foreground and the new background.

Toggle the Light Wrap switch to enable this feature, and adjust the amount, depth (the distance that the Light Wrap overlaps the foreground), the brightness and the saturation.

Select from five different blend modes for light wrap: Screen, Add, Overlay, Soft Light, and Multiply.

Just remember that a little of this effect goes a long way, so it's best not to overdo it - gauge the amount you need depending on the illumination level of the new background.



LIGHT WRAP CHECKBOX

Off by default

Blend Mode MENU

Default **Screen**

▶ 5 choices

Amount SLIDER

Default **0.25** · 0 to 1

Depth SLIDER

Default **3** · slider 1 to 10 · type 1 to 20

The distance that the Light Wrap overlaps the foreground.

Brightness SLIDER

Default **0** · slider -0.5 to 0.5 · type -0.5 to 1

Saturation SLIDER

Default **1.5** · slider 0 to 3 · type 0 to 5

Luma Match SLIDER

Default **0** · slider 0 to 1 · type from 0, no upper limit

Allows you to match the original luma of the foreground but mix in the color from the background. This control can also be used to subtly reduce Light Wrap brightness.

Background Blur SLIDER

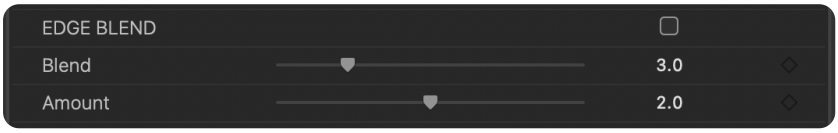
Default **3** · slider 0 to 5 · type 0 to 100

Control the amount the background is blurred when creating the light wrap.

Edge Blend

Edge Blend is a really sophisticated compositing technique used by visual effects artists to put the finishing touches to a great composite. It works by taking another very thin matte that encompasses the composited foreground and background, and then creates a subtle blend of foreground and background just in that small area. It's a great way of making your keys look more photorealistic and less artificial.

In general, the only control you will need to adjust for Edge Blend is the Amount slider, which determines the intensity of the effect. The Blend slider adjusts the blend of foreground and background, but in almost all cases you will find that the default value of 3.0 is the right blend amount for your needs. However, you might need to increase this value when using source footage that is 4K and upwards.



IMPORTANT NOTE: - It's important to note that in order to use this feature, you need to add your background image to the Background source well. Without a background image being fed to the plug-in, you won't get the desired result.

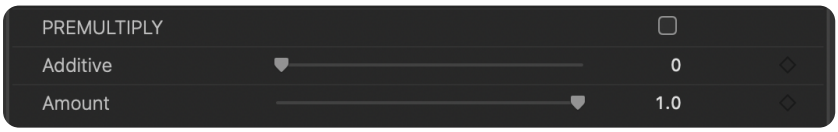
EDGE BLEND CHECKBOX NEW IN 5
Off by default

Blend SLIDER
Default **3** · slider 1 to 10 · type 1 to 20

Amount SLIDER
Default **2** · slider 0 to 4 · type 0 to 10

Premultiply

Combines the background and foreground where the matte is transparent.



IMPORTANT NOTE: - It's important to note that in order to use this feature, you need to add your background image to the Background source well. Without a background image being fed to the plug-in, you won't get the desired result.

PREMULTIPLY CHECKBOX NEW IN 5
Off by default

Additive SLIDER

Default **0** · slider 0 to 1 · type from 0, no upper limit

When the Additive slider is set to 1 you are combining the background with the unpremultiplied foreground. When set to 0 it is the standard source over blend mode. In practice increasing additive raises the brightness of the edge of the foreground.

Amount SLIDER

Default **1** · 0 to 1

Other Controls

Use Color CHECKBOX

Off by default

Changes the background image used in Light Wrap, Background Match, Despill - Use Background, Fine Edge - Use BG, Edge Blend and Premultiply from the background image well to the color selected in the On Color swatch.

On Color COLOUR

Default ■ #000000

Pick the color used by the On Color view and when Use Color is enabled.



BACKGROUND

Set the background image used in Edge Tools and Despill - Use Background.



Background IMAGE INPUT

Connect an image: Image Inputs

Fit Background CHECKBOX

Off by default

Resize the background image to match the foreground. Check the new Background view to see the results.



Fitting Method MENU

Default **Fill**

▶ 3 choices

Scaling MENU

Default **Bilinear**

Choose the scaling algorithm used to resize the background image.

▶ 3 choices

Centered CHECKBOX

On by default

Pixel Aligned CHECKBOX

On by default

EXTERNAL MATTE

HK5 gives you the ablity to bring in an external matte for use by the keyer.



IMPORTANT NOTE: For External Matte to function correctly, it's really important that your external image is formatted correctly - if for any reason it's not the exact same size and aspect ratio as your timeline, please make sure to create a compound clip of it (Final Cut Pro), put it in a flattened group (Motion), nest it (Premiere), or precompose it (After Effects). The plug-in is expecting to see an image that is the same aspect ratio as your timeline - the host application has no way of telling the plug-in that you have used something different. If you have applied any kind of spatial transform (position, crop, scale or rotate) to your external matte, the same thing applies and you will need to preformat it in the

same way. And the same thing applies if you have applied a spatial transform to the shot that you are trying to key. In each case, preformatting will give you the correct result, while failure to do this will mean that the images are out of register with each other.

External Matte IMAGE INPUT

Connect an image: Image Inputs

Mode MENU

Default **Off**

Use the dropdown menu to select how the External Matte is combined with the matte generated by the keyer.

There are many uses for this option, but an obvious use for Add (or Max) is to create a hold-out matte, and for Multiply (or Min) to create a garbage matte. Replace is useful if you simply want to use the spill suppression and other finishing options of Hawaiki Keyer but the matte from another instance of Hawaiki Keyer or another keyer.

▶ 8 choices

Channel MENU NEW IN 5

Default **Red**

Pick the channel of the external matte to use as a matte: Red, Green, Blue or Alpha.

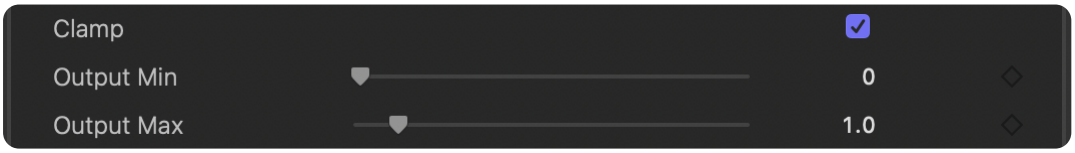
NB. HK4 always used Red and expected a black and white matte.

▶ 4 choices

Clamp CHECKBOX NEW IN 5

Off by default

Enable clamping of output values.



Output Min SLIDER

Default **0** · slider 0 to 1 · type -10 to 10

Set the minimum output value.

Output Max SLIDER

Default **1** · slider 0 to 10 · type 0 to 1000

Set the maximum output value.

RESOLUTION INDEPENDENCE

New in 5

Maintain consistent effects when changing resolution.

The baseline parameter can be used to set the relative strength of the parameters - increasing will decrease the strength. Or you can set it to match the behaviour you are used to in Hawaiki Keyer 4 - simply match the Baseline to the resolution of your footage. Lastly, if Resolution Independence is not enabled and you then copy and paste an instance of the keyer to a clip with a different resolution - enable Resolution Independence on the new clip and set the baseline to the width of the first clip - this will ensure the parameter strength matches.



Resolution Independent Parameters :

- Denoise: Strength
- Matte: Shrink - Grow
- Matte: Blur
- Matte Cleaner: Fill Holes
- Outer Matte: Expand
- Despill - Use Background: Depth
- Edge Matte: Width
- Edge Replace: Sample In
- Edge Replace: Fill
- Light Wrap: Background Blur
- Light Wrap: Depth
- Edge Blend: Blend

Resolution Independence CHECKBOX

On by default

Baseline MENU

Default **4k (3840)**

▶ 10 choices

Width SLIDER

Default **3840** · slider 1 to 8192 · type 1 to 16384

Manually set the Resolution Independence Baseline.

Presets PRESETS MENU

Saves and loads a snapshot of every control. Presets made in one host open in every other. Working with presets

The built-in presets allow you to save any of your keys for future use, or you can customise a default layout of the plug-in.



COMP TOOLS REFERENCE

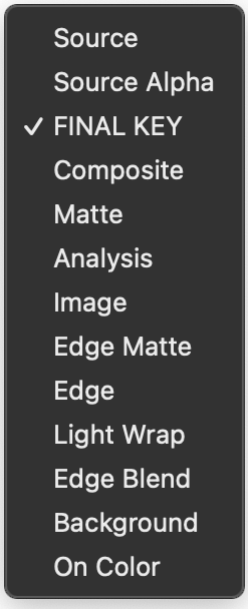
Hawaiki Comp Tools 5

Advanced compositing tools: Hawaiki Keyer's matte, image and edge processing for any keyer and any type of footage, with External Matte and the Analysis view.

Top of the Controls

VIEW Menu

Hawaiki Comp Tools provides a comprehensive set of view modes to make it easy to setup and refine your composite. In Final Cut Pro and Motion (but not the Adobe hosts) there are onscreen buttons and menus for selecting the views which are duplicates of the Inspector controls.



View Menu

VIEW MENU NEW IN 5 NEW IN 5

Default **FINAL KEY**



Source



Lets you view your untreated original source image.

Source Alpha



Shows the alpha of the source image.

FINAL KEY DEFAULT



The default mode is Final Key which shows you the keyed image with any image and matte changes you have made. Make sure to select this view when you have finished work on your key because this is the view that will get rendered. The Invert button inverts this view.

Composite



Shows the Foreground comped over the background. An alternative to having the host app do the final composite. This can be handy in complex timelines where you are using a lot of layers.

NB. Composite view requires the Background dropzone to be populated.

Matte



Shows you the familiar black and white matte. Note that you will get much better results if you use Hawaiki's Analysis view to set up your matte as a simple black and white view makes it much harder to judge the matte density correctly. Use this view if you need to send the black and white matte out to another compositing operation. The Invert button inverts this view

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Analysis



Shows you the current state of the matte, with orange representing the solid foreground pixels, blue representing the semi-transparent pixels (typically your edges), and black representing the fully transparent background. Pixels that show up yellow are on the verge of becoming transparent (90 to 99% opacity) but will show up fully opaque in your final matte. Note that using the Invert switch with the Analysis view is a great way of making sure you have eliminated all stray pixels from the backing, which are otherwise less easy to spot.

Image



Shows the output from the Image group.

Edge Matte



Shows you the fine edge matte that is used by Edge, Edge Replace and Background Match. In the default Edge Matte mode, the matte is grayscale, but if you turn on Qualify, the colors will change to purple for the Value A side, and yellow for the Value B side.

Edge



The final output multiplied by the edge matte comped over black. As such, unlike the other views it updates when you toggle the various checkboxes for edge operations. Allows you to compare the various edge operations and their combinations as well as evaluate the impact on the edge of any global changes you make to the image and matte.

Light Wrap



Allows you to monitor the Light Wrap component on its own - in this case what you are seeing is the full color Light Wrap and not just its matte, which makes it easy to assess the depth, brightness and saturation of the Light Wrap before applying it to the final key

---

Edge Blend



Shows you the result of the edge blend operation prior to compositing with the final image. Note this uses a different edge matte from the main Edge controls, Background Match and Edge Replace.

Background



Shows the background used in the dropzone/image well - useful to see if any scaling is required.

On Color



Shows you the final key composited over a black background or any other color of your choice with correct premultiplication. This can be very useful for checking your key or even for your final composited output, which means you don't need to add a background layer if you simply intend to composite over a solid color. On Color lets you choose a custom color to composite against and you can select your own using the swatch situated at the bottom of the Inspector. The Invert button inverts this view.

Matte Check CHECKBOX

Off by default

Provides a gamma correction to the matte view so you can easily spot pixels in the background that are not clear. Leave off to have the Matte view match the alpha channel view of the host.



MATTE

New in 5

Enable CHECKBOX

Off by default

Enable the Matte controls.

Gain SLIDER

Default **1** · slider 0 to 3 · type 0 to 100

Scales the matte.

Gamma SLIDER

Default **1** · slider 0 to 3 · type 0 to 100

The Gamma slider performs the magic trick of making your transparent edges either more opaque or more transparent - increase the value for greater transparency and reduce it for increased opacity. This is a great control for making your edges look more realistic, but, as always, be sure to use it gently and don't overcook the results.

Clip Black SLIDER

Default **0** · 0 to 0.99

The black and white Clips allow you to adjust the matte in the conventional way, in other words by clipping either the black or white values or both - clipping the black cleans up the background, and clipping the white solidifies the foreground.

Clip White SLIDER

Default **1** · 0.01 to 1

Shrink - Grow SLIDER NEW IN 5

Default **0** · slider -5 to 5 · type -50 to 50

Contract or expand the matte.

Blur SLIDER

Default **0** · slider 0 to 20 · type 0 to 200

Blurs the matte using a gaussian blur. The slider sets the blur radius.

Matte Cleaner

Matte Cleaner is designed to help you deal with problem areas in your foreground that refuse to go solid. At extreme settings you can use Matte Cleaner to force fill "holes" in your foreground caused by reflections or foreground colors that too closely match the background screen color. Check the Matte Cleaner switch to enable this option, and adjust the Amount slider as necessary. For advanced hole filling operations you will probably also want to use the Fill Holes slider which helps to force the filler into more of the holes.

Note that while Matte Cleaner is a really powerful tool, like any keying control you want to make sure that you only use as much as you actually need and no more - at extreme settings you can risk compromising your edges, so keep an eye on them to make sure you're doing enough but no more.

COMPOSITING TIP: If your foreground holes are caused by reflections, it's worth knowing that filling them in is not always the best-looking option. Being reflections they should ideally be reflecting your environment, and in your final composite that environment isn't the flat color of your despilled green/blue screen (which is what it will be if you fill them in), but rather it ought to be the color of the new background and any detail it may contain. Hence leaving your holes see-through will often have the effect of making them look more like real reflections and your composite will look better as a result.

Matte Cleaner CHECKBOX

Off by default

Amount SLIDER

Default **0.1** · 0 to 1

Fill Holes SLIDER

Default **0** · slider 0 to 20 · type 0 to 50

POST Gain SLIDER

Default **1** · slider 0 to 3 · type 0 to 100

Gamma SLIDER

Default **1** · slider 0 to 3 · type 0 to 100

Clip Black SLIDER
Default **0** · 0 to 0.99

Clip White SLIDER
Default **1** · 0.01 to 1

Invert CHECKBOX
Off by default

Invert the matte.

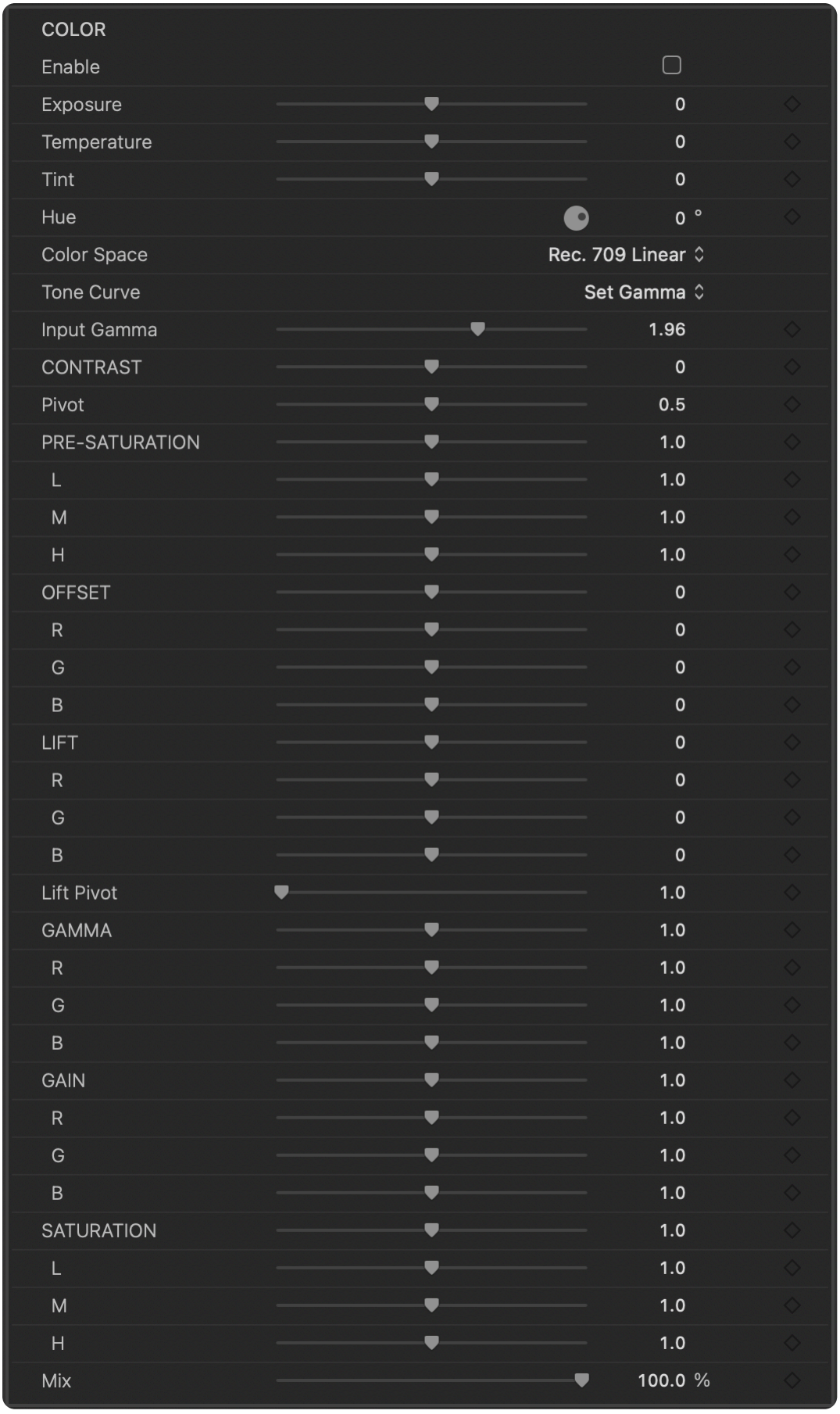
IMAGE

New in 5

COLOR CHECKBOX

Off by default

Hawaiki Comp Tools gives you an entire color correction suite so you can polish your composite all from within the one plug-in.



Exposure SLIDER

Default **0** · slider -5 to 5 · type -16 to 16

Temperature SLIDER

Default **0** · slider -100 to 100 · type -120 to 120

Tint SLIDER

Default **0** · slider -100 to 100 · type -200 to 200

Hue ANGLE

Default **0°**

Color Space MENU NEW IN 5

Default **Rec. 709 Linear**

Set the Color Space of all of all Color parameters below this menu.

NB. Exposure, Temperature, Tint and Hue operations are always performed in the default linear color space of the plug-in.

▶ 4 choices

Tone Curve MENU NEW IN 5

Default **Set Gamma**

Set the Tone Curve (transfer function) of all Color parameters below this menu.

▶ 7 choices

Input Gamma SLIDER

Default **1.96** · slider 0 to 3 · type 0 to 100

Apple HLG CHECKBOX

Off by default

Uses the HLG encoding adopted by Apple's HLG color spaces.

CONTRAST SLIDER NEW IN 5

Default **0** · slider -1 to 1 · type -1 to 10

Pivot SLIDER

Default **0.5** · slider 0 to 1 · type -1 to 100

PRE-SATURATION SLIDER

Default **1** · slider 0 to 2 · type 0 to 10

L SLIDER

Default **1** · slider 0 to 2 · type 0 to 10

M SLIDER

Default **1** · slider 0 to 2 · type 0 to 10

H SLIDER
Default **1** · slider 0 to 2 · type 0 to 10

OFFSET SLIDER
Default **0** · slider -1 to 1 · type -100 to 100

R SLIDER
Default **0** · slider -1 to 1 · type -100 to 100

G SLIDER
Default **0** · slider -1 to 1 · type -100 to 100

B SLIDER
Default **0** · slider -1 to 1 · type -100 to 100

LIFT SLIDER
Default **0** · slider -1 to 1 · type -2 to 2

R SLIDER
Default **0** · slider -1 to 1 · type -2 to 2

G SLIDER
Default **0** · slider -1 to 1 · type -2 to 2

B SLIDER
Default **0** · slider -1 to 1 · type -2 to 2

Lift Pivot SLIDER NEW IN 5
Default **1** · slider 1 to 10 · type 0.1 to 100

Set the pivot point for the lift sliders. Values above this are left unchanged.

GAMMA SLIDER
Default **1** · slider 0 to 2 · type 0 to 100

R SLIDER
Default **1** · slider 0 to 2 · type 0 to 100

G SLIDER
Default **1** · slider 0 to 2 · type 0 to 100

B SLIDER
Default **1** · slider 0 to 2 · type 0 to 100

GAIN SLIDER

Default **1** · slider 0 to 2 · type 0 to 100

R SLIDER

Default **1** · slider 0 to 2 · type 0 to 100

G SLIDER

Default **1** · slider 0 to 2 · type 0 to 100

B SLIDER

Default **1** · slider 0 to 2 · type 0 to 100

SATURATION SLIDER NEW IN 5

Default **1** · slider 0 to 2 · type 0 to 10

L SLIDER

Default **1** · slider 0 to 2 · type 0 to 10

M SLIDER

Default **1** · slider 0 to 2 · type 0 to 10

H SLIDER

Default **1** · slider 0 to 2 · type 0 to 10

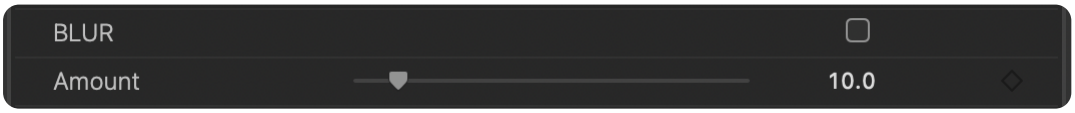
Mix SLIDER NEW IN 5

Default **100%**

Control the overall effect of the parameters in the Color group.

BLUR CHECKBOX NEW IN 5

Off by default

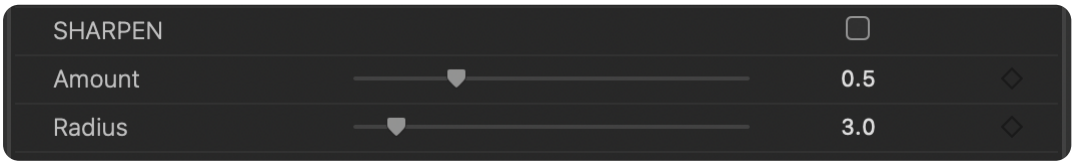


Amount SLIDER

Default **10** · slider 0 to 100 · type 0 to 400

SHARPEN CHECKBOX NEW IN 5

Off by default



Amount SLIDER

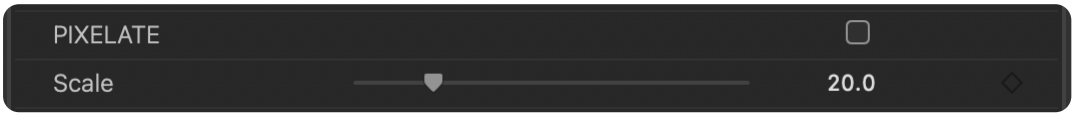
Default **0.5** · slider 0 to 2 · type 0 to 100

Radius SLIDER

Default **3** · slider 0 to 32 · type 0 to 400

PIXELATE CHECKBOX NEW IN 5

Off by default

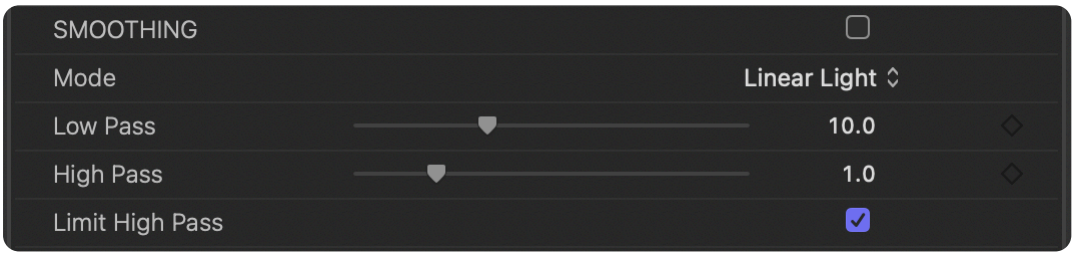


Scale SLIDER

Default **20** · slider 1 to 100 · type 1 to 400

SMOOTHING CHECKBOX NEW IN 5

Off by default



Mode MENU

Default **Linear Light**

▶ 2 choices

Low Pass SLIDER

Default **10** · slider 0 to 30 · type 0 to 100

Adjust the amount of smoothing.

High Pass SLIDER

Default **1** · slider 0 to 5 · type 0 to 30

Restore texture to the smoothed image.

Limit High Pass CHECKBOX

On by default

DESPILL CHECKBOX

Off by default

Choose the spill color you wish to reduce.

Color MENU

Default **Green**

▶ 3 choices

Brightness SLIDER

Default **0.2** · slider -1 to 1 · type -2 to 2

The Brightness control lets you make manual adjustments to the brightness of the despill.

Saturation SLIDER

Default **0** · -5 to 5

The Saturation control lets you fine tune the saturation of the despilled areas, either to reduce it or increase it as required.

R SLIDER

Default **0** · slider -1 to 1 · type -2 to 2

The three RGB sliders let you adjust the color of the despilled areas directly and intuitively for really fine-grained control of the result.

G SLIDER

Default **0** · slider -1 to 1 · type -2 to 2

B SLIDER

Default **0** · slider -1 to 1 · type -2 to 2

Amount SLIDER

Default **1** · slider 0 to 2 · type from 0, no upper limit

Use the Amount slider to increase or decrease the degree of spill suppression being applied.

Spill Map Depth SLIDER

Default **0** · slider -0.25 to 0.5 · type -0.25 to 1

Use the Spill Map Depth control to increase the intensity of the Spill Map as necessary. This will enable you to target areas with only slight contamination but which you still want to despill.

Spill Map Balance SLIDER

Default **0.5** · slider 0 to 1 · type from 0, no upper limit

Adjusts the degree to which the Red or Blue are referenced (in the case of green screen, or Red and Green in the case of blue screen, or Green and Blue in the case of Red screen.)

Despill Color Space MENU NEW IN 5

Default **Rec. 709 Linear**

Adjust the color space used in the Despill process.

Rec.709 seems to work best even with HDR material but you can select Rec.2020, ACEScg or Display P3 Linear for a different look - normally the resulting despilled image is slightly warmer.

▶ 4 choices

EDGE MATTE

Adjust the Width and Density sliders to taste - it's a very good idea to do this while looking at the Edge Matte view so you know exactly what you are doing. Normally the default edge width and density should be enough, but you may need to increase the values for problematic foregrounds or high resolution footage. Note that the Edge Matte view is not the matte used in Light Wrap.



Width SLIDER

Default **5** · slider 0 to 10 · type 0 to 100

Density SLIDER

Default **2** · slider 0 to 5 · type 0 to 10

Qualify CHECKBOX

Off by default

If you enable Qualify, you will see the Center, Angle and Spread controls appear and the Edge Matte view change with purple on the left hand side and yellow on the right, representing the two halves of a gradient matte. This is used in Edge Replace and Edge where additional controls will become visible.

If you enable Qualify, you will see the Edge Matte view change with purple on the left hand side and yellow on the right, representing the two halves of the gradient. The Value A sliders will now control the areas that are purple and the Value B slider sthe edges that are yellow.

You can adjust the Angle of the gradient any way you like - so for example you could have Value A at the top and Value B at the bottom by entering an Angle of -90 degrees. You can adjust the center of the gradient with the Center slider - negative values move the center closer to Value A and vice versa. Finally, the Spread slider allows you to adjust the spread of values across the gradient and hence the softness of the mix between the A and B values - a lower Spread value will make for a more abrupt transition between the two sides and a larger value will spread it out further.



Center SLIDER

Default **0** · -1 to 1

Angle ANGLE

Default **0°**

Spread SLIDER

Default **1** · slider 0 to 2 · type 0 to 4

EDGE REPLACE

Edge Replace allows you to replace the edge of the foreground with pixels further from the edge. Useful for dealing with a noticeable dark or light edge caused by excessive in-camera sharpening and chroma subsampling as well as the real world light wrap that is present in some shots.

It does this by eroding - Sample In - then blurring - Fill - the foreground and replacing the original foreground with these synthesized pixels in the area defined by the main Edge Matte. Amount controls

the blend of the replacement with the original - a value of 1 replaces the original foreground entirely (providing the Edge Matte value is also 1).

NB. You can refine the area affected by Edge Replace with the Edge Matte controls.

You need to increase Sample In enough to avoid sampling the edge artefacts (by default Sample In is set to zero because the Fill process suffices for a lot of shots) and then push Fill just enough to ensure the edge pixels are replaced. The ideal setting for these controls is very much dependent on the color of the surrounding foreground pixels as well as the color of the background in the area you are replacing.



Enable CHECKBOX
Off by default

Fill SLIDER
Default **3** · slider 1 to 30 · type 1 to 100

Sample In SLIDER
Default **0** · slider 0 to 20 · type 0 to 50

Amount SLIDER
Default **1** · 0 to 1

B Controls

When The Edge Matte is qualified you have the option to qualify Edge Replace with a gradient matte and the B controls appear. The A sliders will now control the areas that are purple and the B sliders the edges that are yellow. This allows you to target specific problem areas.



Fill SLIDER

Default **3** · slider 1 to 30 · type 1 to 100

Works on areas of the Edge Matte that are coloured yellow.

Displayed when Edge Matte - Qualify is enabled.

Sample In SLIDER

Default **0** · slider 0 to 20 · type 0 to 50

Works on areas of the Edge Matte that are coloured yellow.

Displayed when Edge Matte - Qualify is enabled.

Amount SLIDER

Default **1** · 0 to 1

Works on areas of the Edge Matte that are coloured yellow.

Displayed when Edge Matte - Qualify is enabled.

EDGE

You can adjust the color (RGB Balance, Brightness and Saturation), transparency and blur of the edge. Note that unless Qualify is enabled, the A sliders are the master controls for the various edge corrections and the B sliders are not shown.

Each of these methods uses the same very thin matte which only encompasses the very edges of your foreground. Using this matte you can make detailed adjustments to the edge as required to help the foreground sit better into the background, compensate for edges that have been over-lit, or create special effects. The really powerful and unique feature of Edge in Hawaiki Comp Tools is that you can divide the edge in two and affect either side independently, using the Qualify option.



Enable CHECKBOX

Off by default

Brightness SLIDER

Default **0** · slider -0.5 to 0.5 · type -1 to 1

Use the Brightness slider to adjust the brightness of the edge up or down as required.

Saturation SLIDER

Default **1** · slider 0 to 2 · type 0 to 3

Adjusts the saturation of the edge as required.

R SLIDER

Default **0** · slider -0.5 to 0.5 · type -1 to 1

Adjust the red channel of the Edge.

G SLIDER

Default **0** · slider -0.5 to 0.5 · type -1 to 1

Adjust the green channel of the Edge.

B SLIDER

Default **0** · slider -0.5 to 0.5 · type -1 to 1

Adjust the blue channel of the edge.

Transparency SLIDER

Default **1** · slider 0 to 1 · type from 0, no upper limit

Edge Transparency is a great way to soften any hard edges in your matte and give you a smoother-looking composite. It uses the same thin edge matte as the rest of the edge features and allows you to reduce the opacity of the foreground in that small area.

Blur SLIDER

Default **0** · slider 0 to 10 · type 0 to 100

Set the blur radius with the Blur sliders. Edge Blur has a more subtle effect than the main Matte Blur.

In general, you want to avoid blurring your matte wherever you can to preserve as much fine detail as possible, but sometimes if your green/blue screen is not as good as it should be, you'll have unwanted "stepping" or aliasing of your edges, or some of the processing you have applied may have made them look a bit too sharp. If this is the case, your first step should be to make sure you have enabled Denoise (see above) which is specifically designed to deal with this type of issue and will handle it really beautifully and smoothly without compromising your matte. If your footage is really poor and Denoise doesn't get you far enough only then should you consider using Blur - after having first fired your cameraman and/or thrown away your camera!

If you are encountering serious aliasing problems, it usually means that you've over-processed the matte somewhere or other. Make sure you go back and review your previous decisions to see if you can improve on them before trying Blur. Hawaiki Keyer gives you more options for refining your matte than any other keyer so you should usually be able to find a good way of treating the problem without having to resort to blur.

NB. Changes to Edge transparency and blur change the matte and as such will be reflected in the Matte view

B Controls

When The Edge Matte is qualified you have the option to qualify Edge Replace with a gradient matte and the B controls appear. The A sliders will now control the areas that are purple and the B sliders the edges that are yellow. This allows you to target specific problem areas.



Brightness SLIDER

Default **0** · slider -0.5 to 0.5 · type -1 to 1

Use the Brightness slider to adjust the brightness of the edge up or down as required.

Works on areas of the Edge Matte that are coloured yellow.

Displayed when Edge Matte - Qualify is enabled.

Saturation SLIDER

Default **1** · slider 0 to 2 · type 0 to 3

Adjusts the saturation of the edge as required.

Works on areas of the Edge Matte that are coloured yellow.

Displayed when Edge Matte - Qualify is enabled.

R SLIDER

Default **0** · slider -0.5 to 0.5 · type -1 to 1

Adjust the red channel of the Edge.

Works on areas of the Edge Matte that are coloured yellow.

Displayed when Edge Matte - Qualify is enabled.

G SLIDER

Default **0** · slider -0.5 to 0.5 · type -1 to 1

Adjust the green channel of the Edge.

Displayed when Edge Matte - Qualify is enabled. Works on areas of the Edge Matte that are coloured yellow.

B SLIDER

Default **0** · slider -0.5 to 0.5 · type -1 to 1

Adjust the blue channel of the edge.

Works on areas of the Edge Matte that are coloured yellow.

Displayed when Edge Matte - Qualify is enabled.

Transparency SLIDER

Default **1** · slider 0 to 1 · type from 0, no upper limit

Edge Transparency is a great way to soften any hard edges in your matte and give you a smoother-looking composite. It uses the same thin edge matte as the rest of the edge features and allows you to reduce the opacity of the foreground in that small area.

Works on areas of the Edge Matte that are coloured yellow.

Displayed when Edge Matte - Qualify is enabled.

Blur SLIDER

Default **0** · slider 0 to 10 · type 0 to 100

Set the blur radius with the Blur sliders. Edge Blur has a more subtle effect than the main Matte Blur.

Works on areas of the Edge Matte that are coloured yellow.

Displayed when Edge Matte - Qualify is enabled.

Tone Curve Gamma SLIDER NEW IN 5

Default **1.96** · slider 1 to 3 · type 0.01 to 5

Edge Brightness and RGB can now work in a gamma space which you can set with the Tone Curve Gamma slider - defaults to the Final Cut Pro default of 1.96. Colour adjustments are more fine grained especially when when the foreground is dark. Set to 1.0 to revert to the current behaviour in HK 4.5 Edge Tools.

FINE EDGE

Fine Edge allows you to darken the outer edge and brighten the inner edge of the foreground's semi-transparent (grey matte values) pixels. Quite sophisticated results can be achieve with a look that differs from the main Edge brightness.



NB.Use BG requires the Background dropzone to be populated as it uses the luminance of the background image to adjust the process.

Enable CHECKBOX

Off by default

Brighten Inner SLIDER

Default **1** · slider 1 to 2 · type 1 to 5

Darken Outer SLIDER

Default **0** · -1 to 0

Use BG CHECKBOX

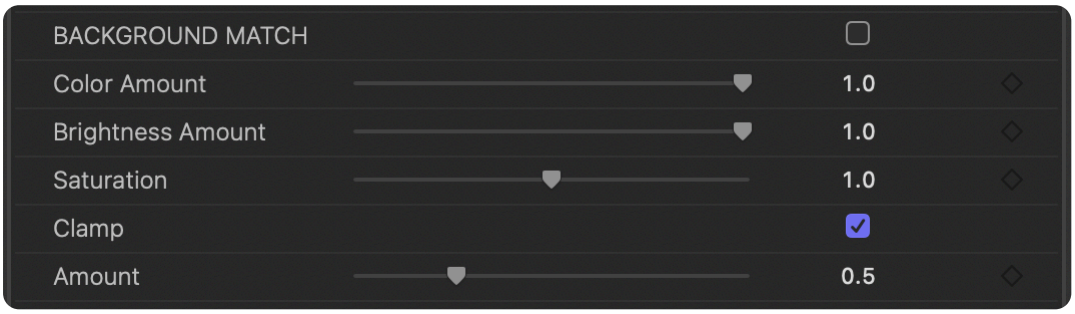
Off by default

Amount SLIDER

Default **0.5** · slider 0 to 1 · type 0 to 2

BACKGROUND MATCH

Background Match automatically adjusts the edges of the foreground to match the color and brightness of the background. If a foreground pixel is darker than the background it will be brightened and if lighter than the background, darkened but only in the area defined by the Edge Matte. Background Match can be used as an alternative or complement to Light Wrap.



IMPORTANT NOTE: - It's important to note that in order to use this feature, you need to add your background image to the Background source well. Without a background image being fed to the plug-in, you won't get the desired result.

Enable CHECKBOX
Off by default

Color Amount SLIDER
Default **1** · 0 to 1

Brightness Amount SLIDER
Default **1** · 0 to 1

Saturation SLIDER
Default **1** · slider 0 to 2 · type 0 to 3

Clamp CHECKBOX
On by default

Amount SLIDER
Default **0.5** · slider 0 to 2 · type 0 to 3

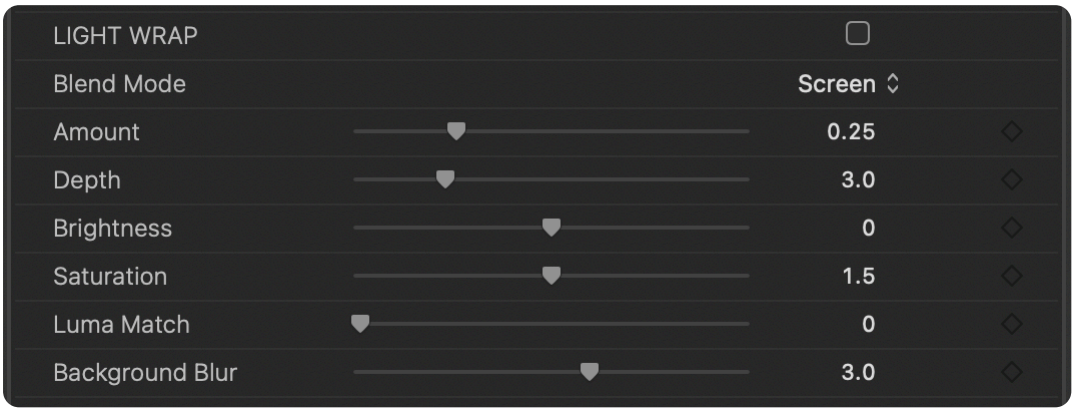
LIGHT WRAP

Light Wrap simulates the indirect illumination of the scene, which is where the background colors wrap themselves around the edges of the foreground. This can be very useful in helping the match between the keyed foreground and the new background.

Toggle the Light Wrap switch to enable this feature, and adjust the amount, depth (the distance that the Light Wrap overlaps the foreground), the brightness and the saturation.

Select from five different blend modes for light wrap: Screen, Add, Overlay, Soft Light, and Multiply.

Just remember that a little of this effect goes a long way, so it's best not to overdo it - gauge the amount you need depending on the illumination level of the new background.



Enable CHECKBOX

Off by default

Blend Mode MENU

Default **Screen**

▶ 5 choices

Amount SLIDER

Default **0.25** · 0 to 1

Depth SLIDER

Default **3** · slider 1 to 10 · type 1 to 20

The distance that the Light Wrap overlaps the foreground.

Brightness SLIDER

Default **0** · slider -0.5 to 0.5 · type -0.5 to 1

Saturation SLIDER

Default **1.5** · slider 0 to 3 · type 0 to 5

Luma Match SLIDER

Default **0** · slider 0 to 1 · type from 0, no upper limit

Allows you to match the original luma of the foreground but mix in the color from the background. This control can also be used to subtly reduce Light Wrap brightness.

Background Blur SLIDER

Default **3** · slider 0.5 to 5 · type 0.5 to 100

Control the amount the background is blurred when creating the light wrap.

EDGE BLEND

Edge Blend is a really sophisticated compositing technique used by visual effects artists to put the finishing touches to a great composite. It works by taking another very thin matte that encompasses the composited foreground and background, and then creates a subtle blend of foreground and background just in that small area. It's a great way of making your keys look more photorealistic and less artificial.

In general, the only control you will need to adjust for Edge Blend is the Amount slider, which determines the intensity of the effect. The Blend slider adjusts the blend of foreground and background, but in almost all cases you will find that the default value of 3.0 is the right blend amount for your needs. However, you might need to increase this value when using source footage that is 4K and upwards.



IMPORTANT NOTE: - It's important to note that in order to use this feature, you need to add your background image to the Background source well. Without a background image being fed to the plug-in, you won't get the desired result.

Enable CHECKBOX

Off by default

Blend SLIDER

Default **3** · slider 1 to 10 · type 1 to 20

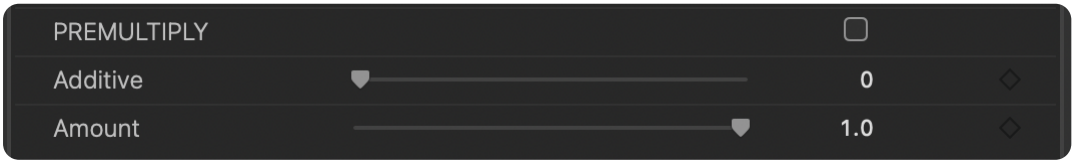
Amount SLIDER

Default **2** · slider 0 to 4 · type 0 to 10

PREMULTIPLY

New in 5

Combines the background and foreground where the matte is transparent.



IMPORTANT NOTE: - It's important to note that in order to use this feature, you need to add your background image to the Background source well. Without a background image being fed to the plug-in, you won't get the desired result.

Enable CHECKBOX

Off by default

Additive SLIDER

Default **0** · slider 0 to 1 · type from 0, no upper limit

When the Additive slider is set to 1 you are combining the background with the unpremultiplied foreground. When set to 0 it is the standard source over blend mode. In practice increasing additive raises the brightness of the edge of the foreground.

Amount SLIDER

Default **1** · slider 0 to 1 · type 0 to 2

Other Controls

Use Color CHECKBOX

Off by default

Changes the background image used in Light Wrap, Background Match, Fine Edge - Use BG, Edge Blend and Premultiply from the background image well to the color selected in the On Color swatch.

On Color COLOUR

Default ■ #000000

Pick the color used by the On Color view and when Use Color is enabled.



BACKGROUND

Set the background image used by the Background Match, Light Wrap, Fine Edge, Edge Blend and Premultiply operations and in the Composite view.



Background IMAGE INPUT

Connect an image: Image Inputs

Fit Background CHECKBOX

Off by default

Resize the background image to match the foreground. Check the new Background view to see the results.



Fitting Method MENU

Default **Fill**

▶ 3 choices

Scaling MENU

Default **Bilinear**

Choose the scaling algorithm used to resize the background image.

▶ 3 choices

Centered CHECKBOX

On by default

Pixel Aligned CHECKBOX

On by default

Blend Mode MENU

Default **Normal**

When the Background dropzone is populated you can bypass the host compositing by switching the View menu to Composite and using one of 30 blend modes to composite the foreground with the background. This can be handy in complex timelines where you are using a lot of layers. The Opacity slider controls the opacity of the foreground.



NB. Blend modes also work with the On Color view. Enable Use Color when using this view mode for Light Wrap, Edge Blend,Background Match,Fine Edge and Premultiply to use the color selected with the On Color picker.

▶ 30 choices

Opacity SLIDER

Default **1** · slider 0 to 1 · type from 0, no upper limit

EXTERNAL MATTE

HK5 gives you the ablity to bring in an external matte for use by the Comp Tools.



IMPORTANT NOTE: For External Matte to function correctly, it's really important that your external image is formatted correctly - if for any reason it's not the exact same size and aspect ratio as your timeline, please make sure to create a compound clip of it (Final Cut Pro), put it in a flattened group (Motion), nest it (Premiere), or precompose it (After Effects). The plug-in is expecting to see an image that is the same aspect ratio as your timeline - the host application has no way of telling the plug-in that you have used something different. If you have applied any kind of spatial transform (position, crop, scale or rotate) to your external matte, the same thing applies and you will need to preformat it in the same way. And the same thing applies if you have applied a spatial transform to the shot that you are trying to key. In each case, preformatting will give you the correct result, while failure to do this will mean that the images are out of register with each other.

External Matte IMAGE INPUT

Connect an image: Image Inputs

Mode MENU

Default **Off**

Use the dropdown menu to select how the External Matte is combined with the matte generated by the keyer.

There are many uses for this option, but an obvious use for Add (or Max) is to create a hold-out matte, and for Multiply (or Min) to create a garbage matte. Replace is useful if you simply want to use the spill suppression and other finishing options of Hawaiki Keyer but the matte from another instance of Hawaiki Keyer or another keyer.

▶ 8 choices

Channel MENU NEW IN 5

Default **Red**

Pick the channel of the external matte to use as a matte: Red, Green, Blue or Alpha.

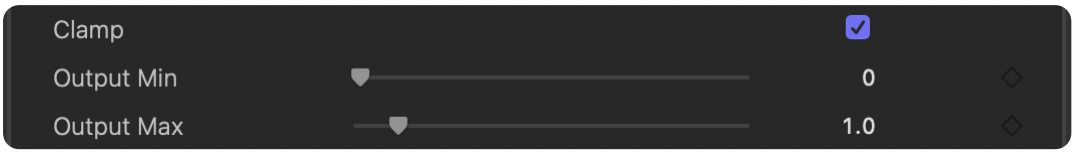
NB. HK4 always used Red and expected a black and white matte.

▶ 4 choices

Clamp CHECKBOX NEW IN 5

Off by default

Enable clamping of output values.



Output Min SLIDER

Default **0** · slider 0 to 1 · type -10 to 10

Set the minimum output value.

Output Max SLIDER

Default **1** · slider 0 to 10 · type 0 to 1000

Set the maximum output value.

RESOLUTION INDEPENDENCE

New in 5

Maintain consistent effects when changing resolution.

The baseline parameter can be used to set the relative strength of the parameters - increasing will decrease the strength. Or you can set it to match the behaviour you are used to in Hawaiki Keyer 4 - simply match the Baseline to the resolution of your footage. Lastly, if Resolution Independence is not enabled and you then copy and paste an instance of the keyer to a clip with a different resolution - enable Resolution Independence on the new clip and set the baseline to the width of the first clip - this will ensure the parameter strength matches.



Resolution Independent Parameters :

- Matte: Shrink - Grow
- Matte: Blur
- Matte Cleaner: Fill Holes
- Edge Matte: Width
- Edge Replace: Sample In
- Edge Replace: Fill
- Light Wrap: Background Blur
- Light Wrap: Depth
- Edge Blend: Blend

- Image - Smoothing: High Pass
- Image - Smoothing: Low Pass
- Image - Pixelate: Scale
- Image: Blur
- Image - Sharpen: Radius

Resolution Independence CHECKBOX

On by default

Baseline MENU

Default **4k (3840)**

▶ 10 choices

Width SLIDER

Default **3840** · slider 1 to 8192 · type 1 to 16384

Manually set the Resolution Independence Baseline.

Presets PRESETS MENU

Saves and loads a snapshot of every control. Presets made in one host open in every other. Working with presets

The built-in presets allow you to save any of your keys for future use, or you can customise a default layout of the plug-in.



SLICE REFERENCE

Hawaiki Slice 5

Image analysis for green and blue screens: the red, green, blue and alpha values along a line through the frame, as a graph over the image.

When you first add Hawaiki Slice to a clip the slice graph showing the red, green, blue and alpha values as lines will appear along with yellow dotted line that indicates the slice of the frame that you are sampling. Moving the onscreen point control up and down changes the row that is sampled. Moving it left and right controls the centre of the zoomed area when the zoom level is greater than 100%. NB. When sampling is set to Vertical moving the OSC left and right sets the column that is sampled and up and down controls the centre of the zoom.

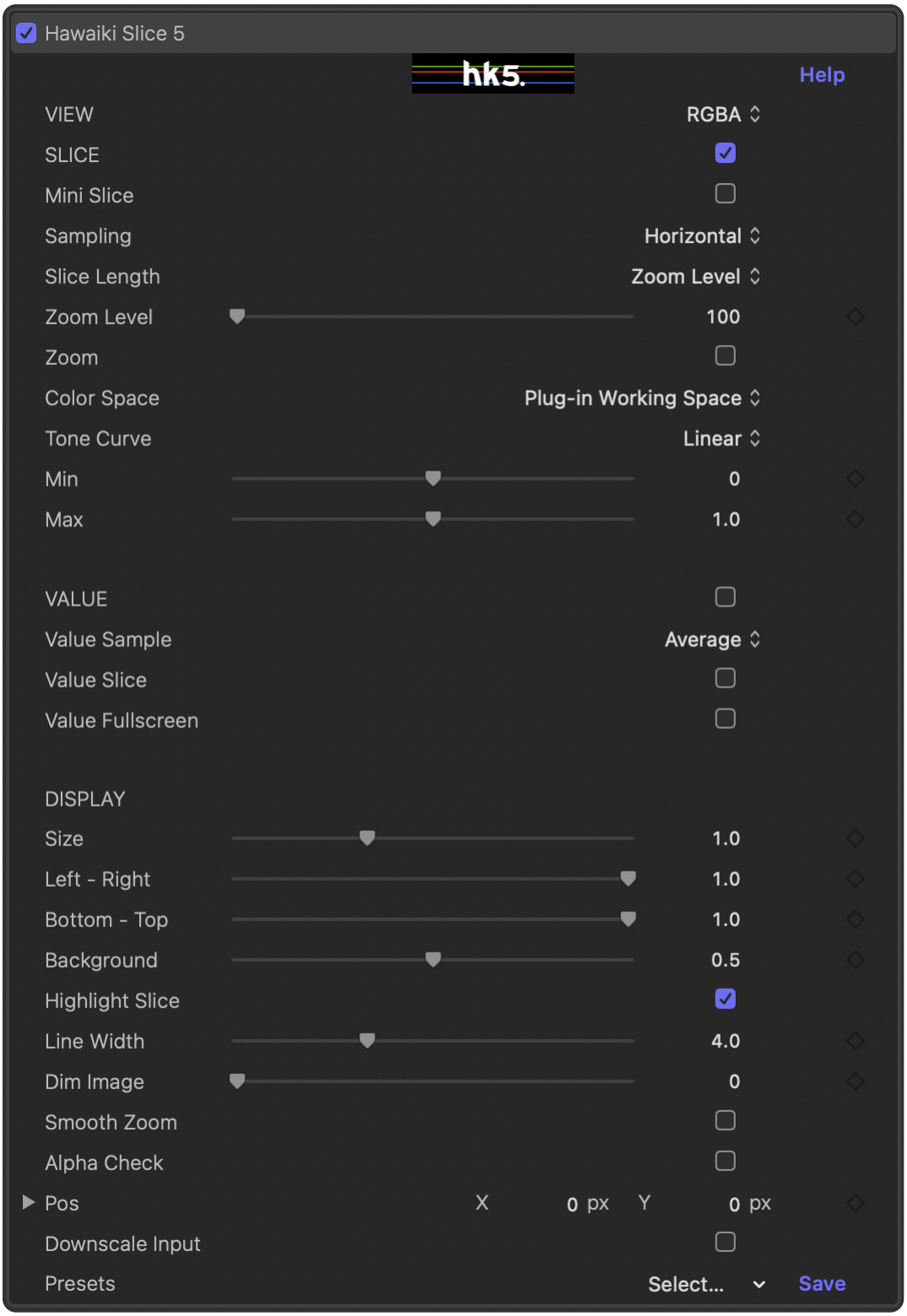


By default Hawaiki Slice uses the full width and height of the frame to display the slice graph, so in horizontal mode the top of the frame is set to the Max value (defaults to 1) and the bottom is set to the Min (defaults to 0) and when a vertical slice is sampled the left of the frame is the Min value and the right the Max.

Controls

VIEW MENU

Default **RGBA**



VIEW- Switch the channel(s) displayed: options RGBA - normal Color image, Red, Green, Blue, Alpha and the Max view - a three-colour view that shows which of the three channels is the dominant one in each area of the image - useful for identifying issues with green and blue screens. NB. This menu is also available onscreen in Final Cut Pro X and Motion.

▶ 6 choices

SLICE

Turn the onscreen slice display on and off.

NB. This checkbox is also available as an onscreen control in Final Cut Pro and Motion.

SLICE CHECKBOX

On by default

Mini Slice CHECKBOX

Off by default

Shrinks the slice graph to a portion of the screen. The size and position of the Mini Slice graph can be set with the Display controls below.



Square CHECKBOX

Off by default

Shown when Mini-Slice is enabled - Overrides the frame aspect ratio so that the Mini Slice graph is displayed as a square similar to the waveform displays available in most host applications.

Sampling MENU

Default **Horizontal**

Switch between a horizontal and vertical slice of the image.

▶ 2 choices

Slice Length MENU

Default **Zoom Level**



Switch between setting the slice length either using the Zoom level or the Pixels slider that replaces Zoom Level when Pixels is selected.



The Pixels option is handy if you're only wanting to sample a small area.

▶ 2 choices

Zoom Level SLIDER

Default **100** · slider 100 to 1600 · type 100 to 100000

Allows you to zoom in on a portion of the image and see a more detailed slice - the slice graph updates and the area excluded is darkened. NB. the slice is zoomed around the centre of the onscreen control.



Pixels SLIDER

Default **50** · slider 1 to 100 · type 1 to 4000

Set the width of the slice in pixels.

Zoom CHECKBOX

Off by default

When enabled the background image is zoomed as well so the slice graph aligns with the image pixels (except when Mini Slice is enabled, see below).



Color Space MENU NEW IN 5

Default **Plug-in Working Space**

Select the Color Space that Hawaiki Slice displays - both the Slice graph and Values display will update when this is changed.

▶ 12 choices

Tone Curve MENU NEW IN 5

Default **Linear**

Select the Tone Curve (transfer function) that Hawaiki Slice displays - both the Slice graph and Values display will update when this is changed.

▶ 7 choices

Gamma SLIDER

Default **1.96** · slider 0 to 3 · type 0 to 100

Apple HLG CHECKBOX

Off by default

Uses the HLG encoding adopted by Apple's HLG color spaces.

Min SLIDER

Default **0** · slider -1 to 1 · type -10 to 100

Sets the bottom of the slice graph range - defaults to 0, reduce to show out of range values. NB. If you take the Min value below 0 a dotted white line appears to indicate zero.

Max SLIDER

Default **1** · slider 0 to 2 · type -10 to 100

Sets the top of the slice graph range, defaults to 1, increase to show out of range values.

VALUE

Turns on the RGBA display that shows the numerical value of the slice.

NB. This checkbox is also available as an onscreen control in Final Cut Pro and Motion.



VALUE CHECKBOX

Off by default

Value Sample MENU

Default **Average**

Switches the value displayed between an Average of all the pixels in the slice or when switched to “Pixel” the option to step through each of the pixels. The Slice Pixel slider appears allowing you to step through the slice (0 samples the left most pixel, 1 the right) and the pixel sampled is shown on the slice guide.

▶ 2 choices

Slice Pixel SLIDER

Default **0** · 0 to 1

Value Slice CHECKBOX

Off by default

Updates the slice graph to show only the current value as selected in Value Sample.

Value Fullscreen CHECKBOX

Off by default

Displays the value as a fullscreen colour - useful if you need a swatch value that is an average of a group of pixels and to provide a larger target if you want a swatch value for a single pixel. NB. Updating the View menu cycles through the channels of this sample.

DISPLAY



Size SLIDER

Default **1** · slider 0.5 to 2 · type 0.5 to 3

Set the size of the Value readout and Mini Slice graph

Left - Right SLIDER

Default **1** · 0 to 1

Position the Value readout and Mini Slice graph.

Bottom - Top SLIDER

Default **1** · 0 to 1

Position the Value readout and Mini Slice graph.

Background SLIDER

Default **0.5** · slider 0 to 1 · type from 0, no upper limit

Sets the opacity of the Mini Slice and Value background.

Highlight Slice CHECKBOX

On by default

Highlight the zoomed section of the image.

Line Width SLIDER

Default **4** · 1 to 10

Sets the width of the slice graph lines.

Display Horizontal CHECKBOX

Off by default



May be more intuitive for some users, especially when used in tandem with Square in Mini-Slice mode.

Visible when Sampling is set to Vertical - displays the vertical slice graph horizontally (bottom -> top gets mapped to left -> right).

Dim Image SLIDER

Default **0** · slider 0 to 1 · type from 0, no upper limit

Darkens the image - useful if you can't see the slice graph because the image colours are close to the slice graph colours.

Smooth Zoom CHECKBOX

Off by default

Smooths the zoomed image so individual pixels aren't visible.

Alpha Check CHECKBOX

Off by default

Works like Matte Check in the Keyer modules, applies a slight gamma correction to the alpha channel view so you can see stray pixels that are not cleared.

Pos POINT

Drag it in the viewer: Onscreen Controls

Reflects the position of the onscreen point control.

Downscale Input CHECKBOX

Off by default

Improves realtime playback with 5k+ footage on older and entry level Macs.

Scale SLIDER

Default **0.5** · slider 0.2 to 1 · type 0 to 1

Presets PRESETS MENU

Saves and loads a snapshot of every control. Presets made in one host open in every other. Working with presets

Allows you to save a custom layout for Hawaiki Slice.



WORKING IN YOUR HOST

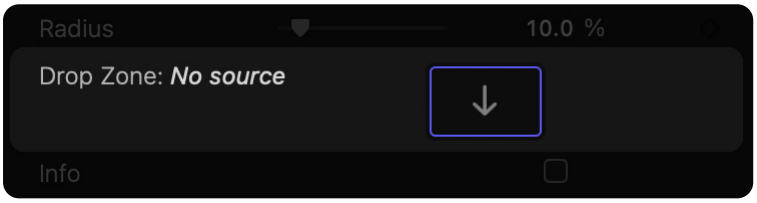
Image Inputs

Some controls take a second image: a background, a clean plate or a matte. Each host connects it differently.

Drop Zones in Final Cut Pro

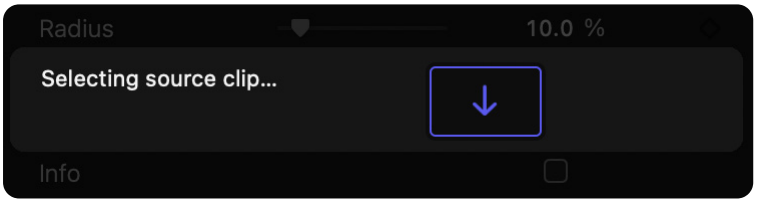
Drop Zones in Final Cut Pro

Media can be supplied to the effect via a *Drop Zone*:



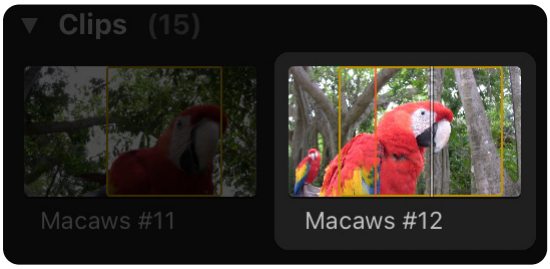
A drop zone in Final Cut Pro

To assign a clip to the drop zone, click the area indicated by the ↓ arrow:



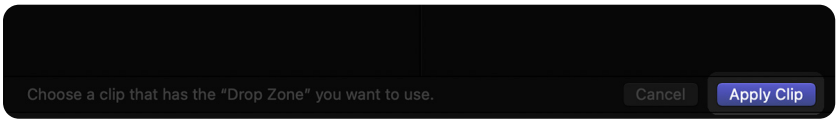
A drop zone in Final Cut Pro

The drop zone now allows you to assign a clip to it. Select the desired clip by clicking it in the browser:



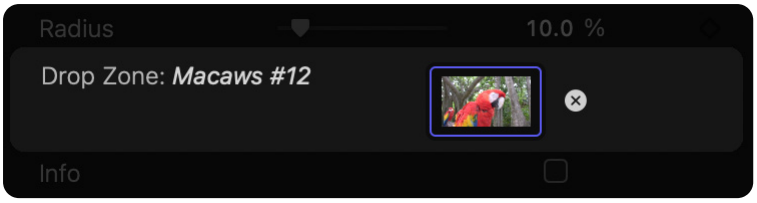
Clicking on a clip assigns it to the drop zone

To confirm your selection, click the **Apply Clip** button in the Canvas:



Confirm your selection in the Canvas

The drop zone reflects your clip selection:



A clip has been assigned to the drop zone

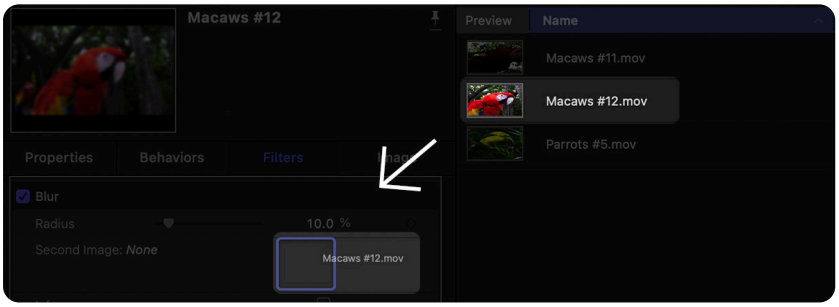
Drop Zones in Motion

Clips that appear in the *Media* section of your project can be supplied to the effect via a *Drop Zone*:



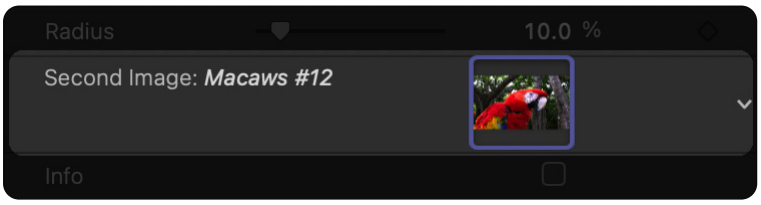
A drop zone in Motion

Drag a clip from the **Media** panel to assign it to the drop zone:



Drag and drop a clip onto the drop zone

The drop zone reflects your assignment by displaying a thumbnail preview:

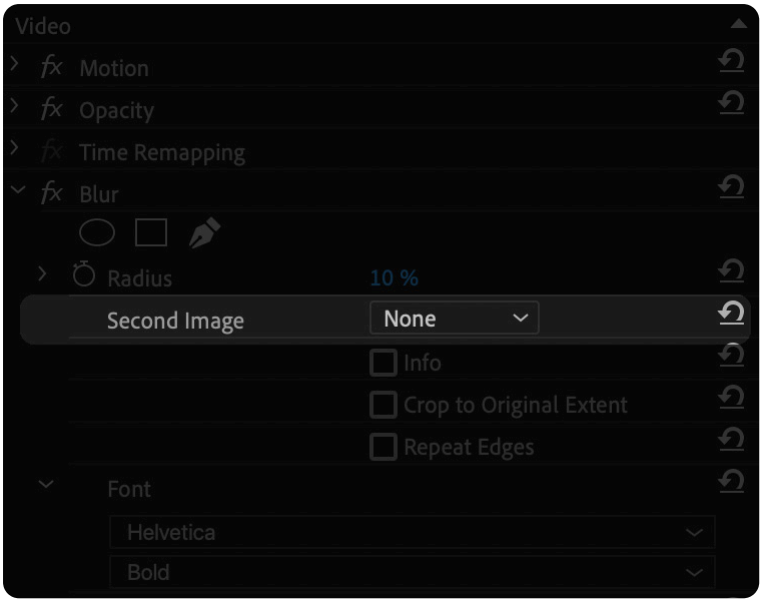


A clip has been assigned to the drop zone

Using the same technique, Motion also allows you to assign layers to drop zones. *You can only drag a layer to the drop zone if it does not contain the effect being configured.* This limitation prevents a circular dependency from being introduced in the layer hierarchy.

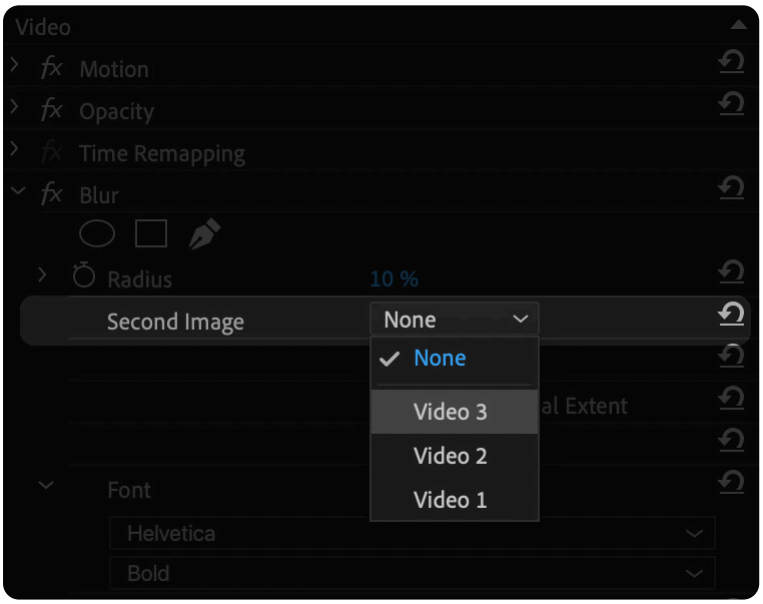
Video Track Selection in Premiere Pro

A popup menu lets you select any video track in your timeline as an input to the parameter:



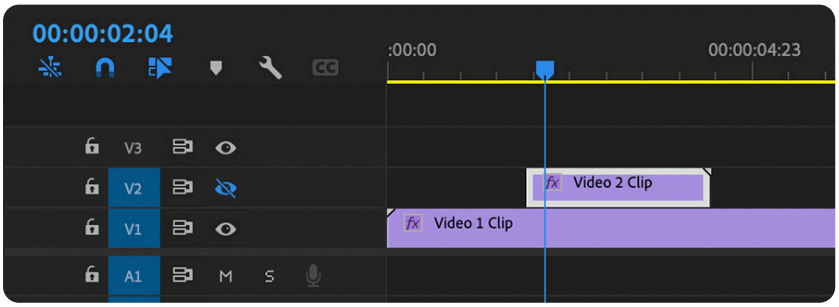
Track selection parameter

The menu lists all available video tracks in your timeline:



Track selection menu

Please note that content for the selected video track is only available in sections that overlap:

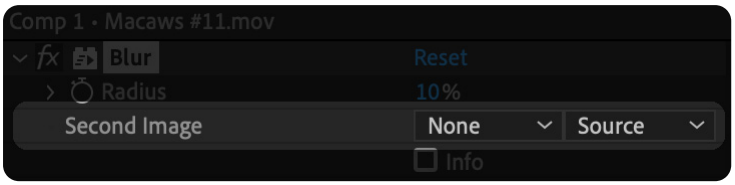


Video tracks with non-overlapping sections

No content is supplied to the plug-in for any sections where the tracks do not overlap.

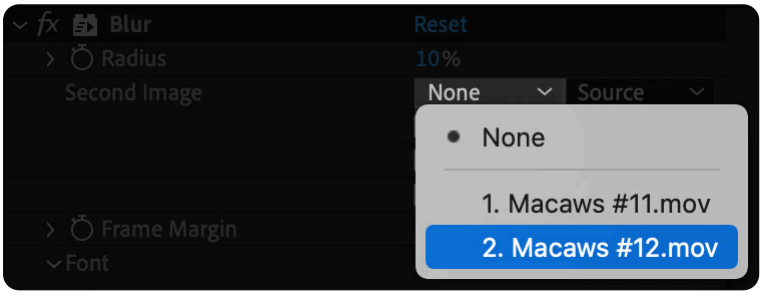
Layer Selection in After Effects

A layer selection menu allows you to select any layer in the composition as an input to the parameter:



Layer selection menu

Select the desired layer through the first popup menu:



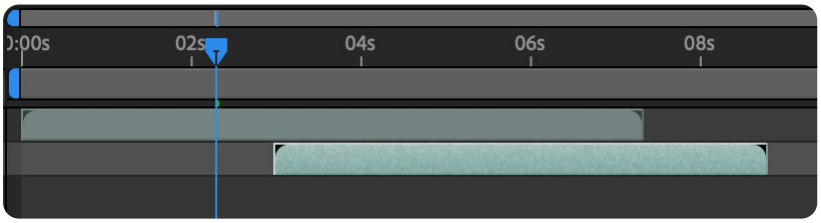
Layers in the composition are available in the menu

Once a layer has been assigned, the parameter reflects your choice in the inspector:



A layer has been assigned

Please note that content for the selected layer is only available in sections that overlap:



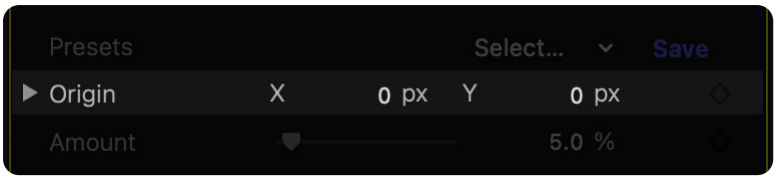
Layers with non-overlapping sections

No content is supplied to the plug-in for any sections where the layers do not overlap.

Onscreen Controls

Point parameters represent 2D locations within the frame. Each point has X and Y coordinates. While it is possible to change the X and Y coordinates via the inspector, it is far easier to interact with point parameters directly on-screen. Each video application provides a slightly different way to do this. This document describes the various techniques to adjust the location of a point parameter on-screen.

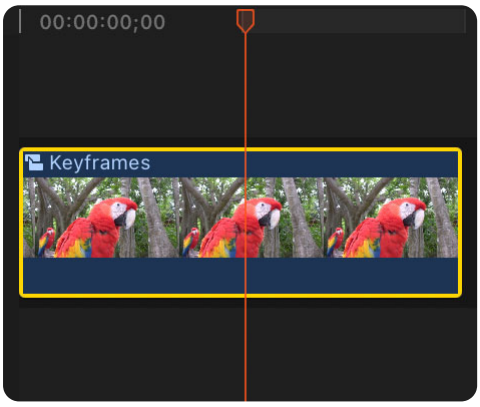
Point Parameters in Final Cut Pro



A point parameter as it appears in the inspector

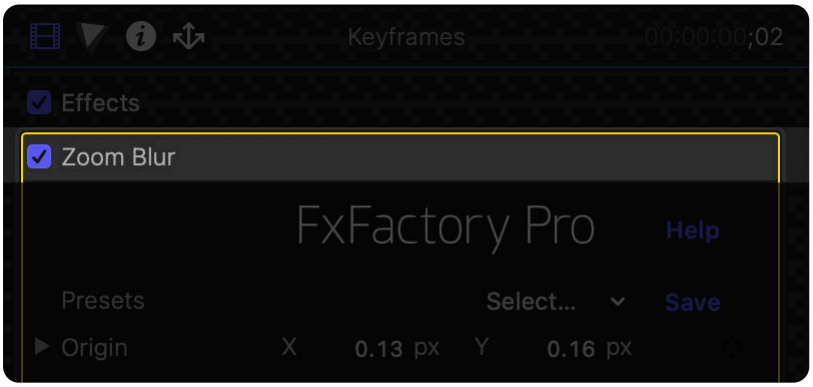
Final Cut Pro allows you to change the X and Y coordinates of a point through the inspector. You can either click over a coordinate and drag up or down, or click and release to enter a value through the keyboard.

It is far easier to configure point parameters on-screen. Your first step is to make sure the clip is selected, and the playhead is positioned somewhere within its in/out points:



A selected clip with playhead positioned within its in/out points

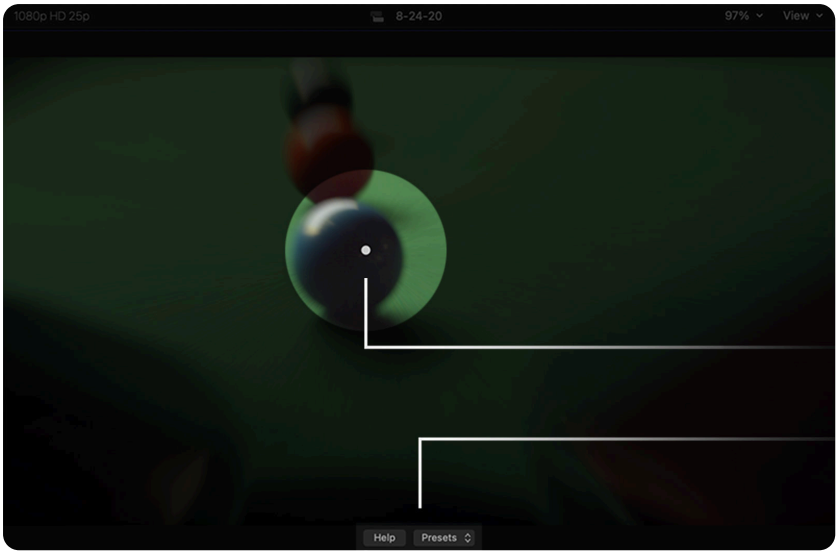
The above is enough to display on-screen controls for Generators, Titles and Transitions. When working with Effects applied to a clip, an extra step is required. Since multiple effects may be applied to the same clip, make sure the effect you wish to configure is selected in the parameter inspector:



A yellow outline denotes the currently selected effect, whose on-screen controls are displayed in the Canvas

> Effects are also known in video applications as filters. Contrary to Generators and Transitions, multiple filters can be applied to the same clip, in a stack.

Upon completing the above steps, an on-screen control becomes available for each point parameter you can adjust:



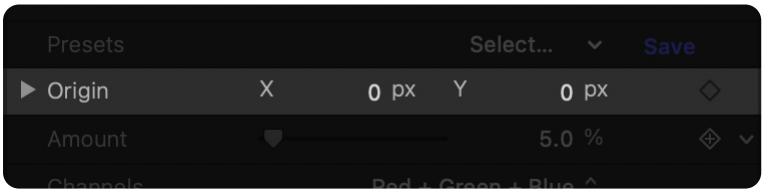
The on-screen control for a point parameter, displayed at its exact coordinate within the frame. Other, unrelated on-screen controls may be available at the bottom of the frame.

Click and drag the on-screen control to the desired location in the frame.

Please note that the size and color of the on-screen control may vary from one effect to the next. In some cases, a point may only be moved within a certain region of the frame, or it may only be moved along a given axis.

> **Tip:**Hold down the *Shift* key to constrain movement to the horizontal or vertical axis. Hold down the *Command* ⌘ key to make smaller, more precise adjustments to the X and Y coordinates. Hold down the *Option* ⌥ key and click on the control to reset its location to the default X and Y coordinates.

Point Parameters in Motion



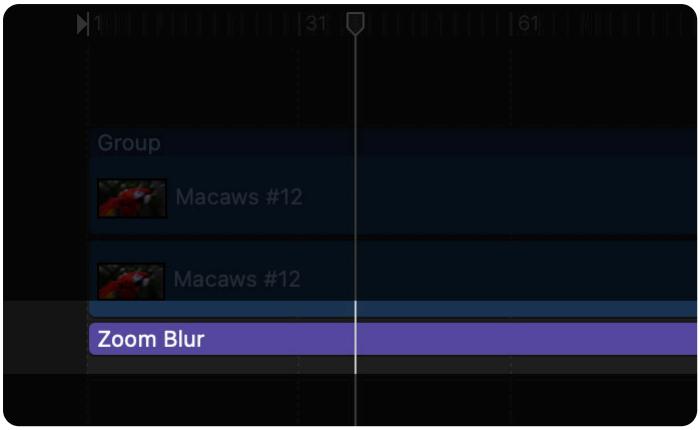
A point parameter as it appears in the inspector

Motion allows you to change the X and Y coordinates of a point through the inspector. You can either click over a coordinate and drag up or down, or click and release to enter a value through the keyboard.

It is far easier to configure point parameters on-screen. Your first step is to make sure that the correct item on your timeline is selected.

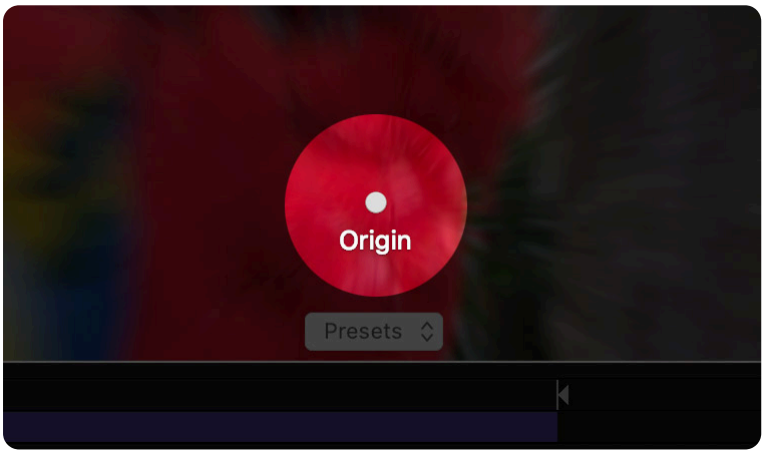
Displaying on-screen point parameters for Filters

When working with Filters, make sure its layer is selected:



Selecting the filter layer (in purple) applied to a clip

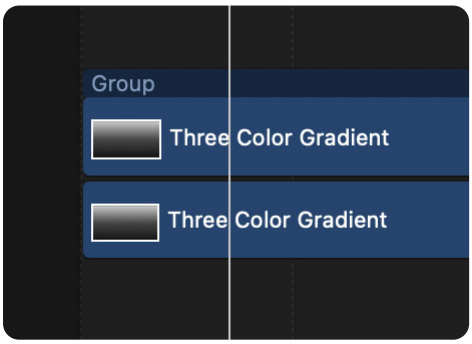
When the filter layer is selected, any custom on-screen controls for that plug-in are displayed in the Canvas. This includes point parameters:



A labeled, on-screen point parameter as it appears in the Canvas

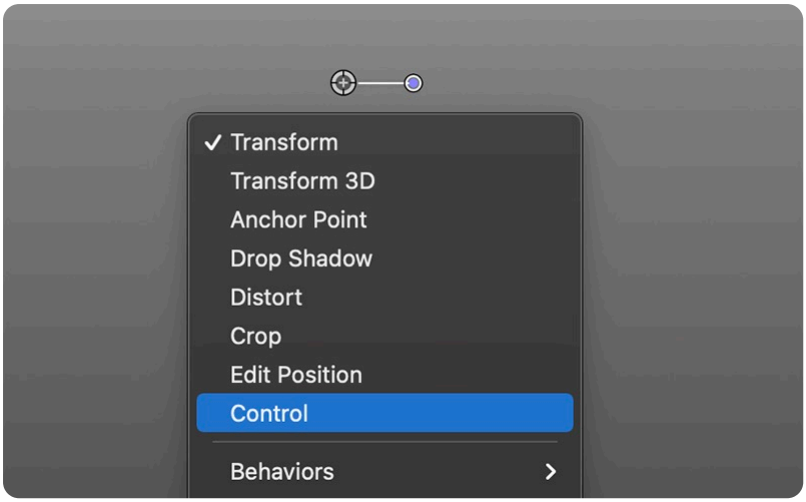
Displaying on-screen point parameters for Generators

When working with a Generator, make sure its clip is selected in the timeline:



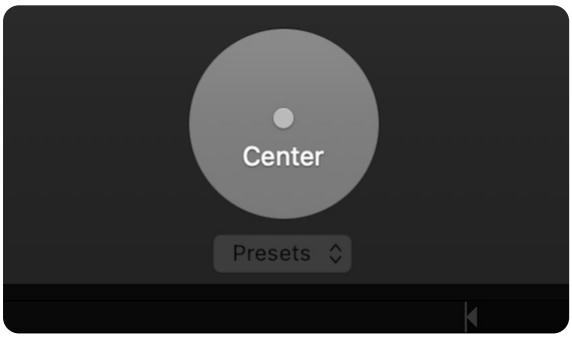
Generator

By default, Motion does **not** display custom on-screen controls for Generators, even when they are selected in the timeline. Your next step is to right-click on the Generator's output in the Canvas to and select the *Control* command from the contextual menu:



A contextual menu lets you switch between various set of on-screen controls available

Upon selecting the *Control* option, any point parameters are displayed on-screen along with any other custom on-screen controls associated with the plug-in.



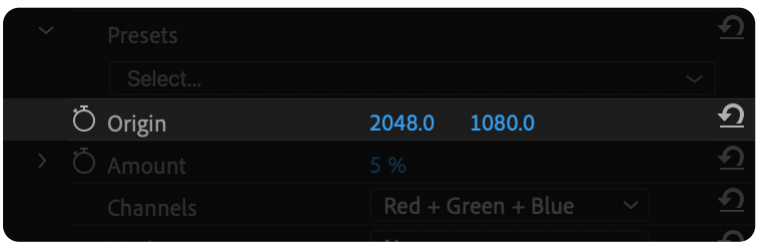
The on-screen control for a point parameter, displayed at its exact coordinate within the frame. Other, unrelated on-screen controls may be available at the bottom of the frame.

Click and drag the on-screen control to the desired location in the frame.

Please note that the size and color of the on-screen control may vary from one effect to the next. In some cases, a point may only be moved within a certain region of the frame, or it may only be moved along a given axis.

> **Tip:**Hold down the *Shift* key to constrain movement to the horizontal or vertical axis. Hold down the *Command* ⌘ key to make smaller, more precise adjustments to the X and Y coordinates. Hold down the *Option* ⌥ key and click on the control to reset its location to the default X and Y coordinates.

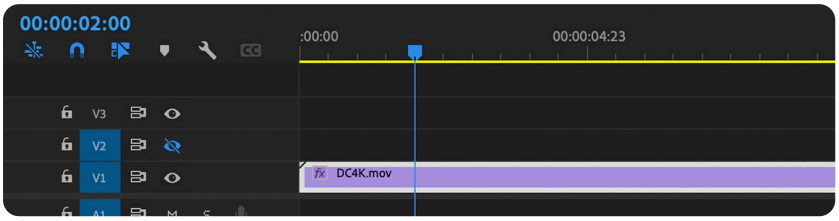
Point Parameters in Premiere Pro



A point parameter as it appears in the Effect Controls panel

Premiere Pro allows you to change the X and Y coordinates of a point through the Effect Controls panel. You can either click over a coordinate and drag left or right, or click and release to enter a value through the keyboard.

It is far easier to configure point parameters on-screen. Your first step is to make sure the clip is selected, and the playhead is positioned somewhere within its in/out points:



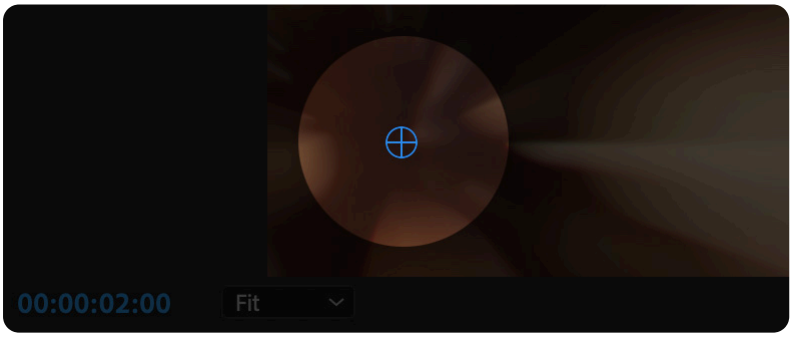
A selected clip with playhead positioned within its in/out points

Since multiple plug-ins may be applied to the same clip, make sure the effect you wish to configure is selected in the Effect Controls panel. Click the effect title to highlight it:



An effect with its name highlighed to enable on-screen configuration

When the effect title is highlighed, Premiere Pro displays on-screen controls for every point parameter you can configure:



The on-screen control for a point parameter, displayed at its exact coordinate within the frame.

Click and drag the on-screen control to the desired location in the frame.

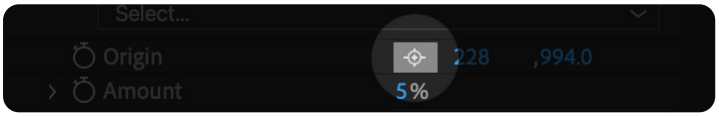
Point Parameters in After Effects



A point parameter as it appears in the Effect Controls panel

After Effects allows you to change the X and Y coordinates of a point through the Effect Controls panel. You can either click over a coordinate and drag left or right, or click and release to enter a value through the keyboard.

A far easier way to assign new coordinates to the point parameter is to click the button to the left of the coordinates:



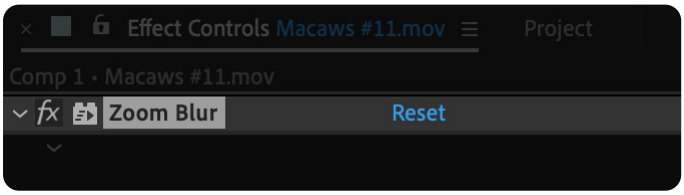
The button that allows you to quickly reposition the point on-screen

Immediately after clicking that button, move your mouse over to the preview panel and click anywhere in the frame to assign that position:



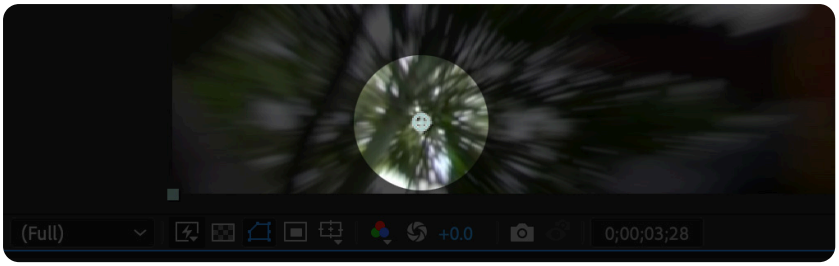
When in this mode, click anywhere in the frame to assign those coordinates to the point parameter

It is also possible to display and configure all point parameters for the effect at once. Make sure the effect you wish to configure is selected in the Effect Controls panel. Click the effect title to highlight it



An effect with its name highlighed to enable on-screen configuration

When the effect title is highlighed, After Effects displays on-screen controls for every point parameter you can configure:



The on-screen control for a point parameter, displayed at its exact coordinate within the frame.

Click and drag the on-screen control to the desired location in the frame.

Presets

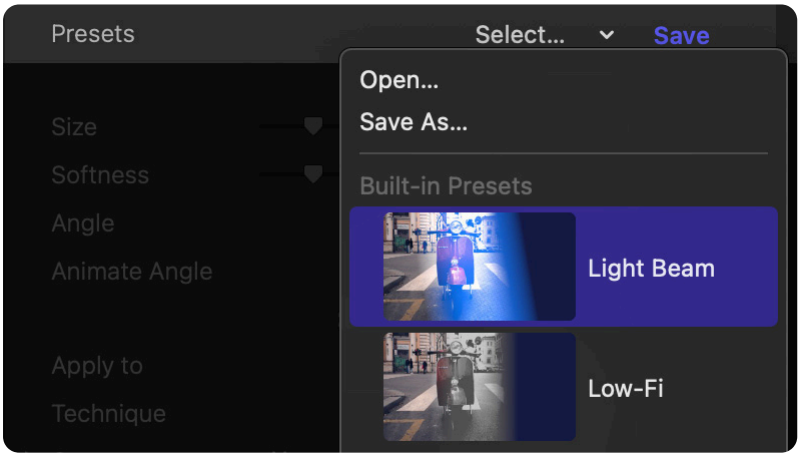
Presets are designed to make the following tasks easier for you:

- Applying one of the effect configurations included with the plug-in
- Saving current effect configuration to a file
- Loading effect configuration from a file
- Sharing effect configuration across different video applications

Most plug-ins offer only one parameter to work with presets in the inspector. The features you can access through the inspector vary from one effect to the next. This document describes the basic functionality of a presets parameter and its popup menu.

Applying a Built-in Preset

If the plug-in includes factory-made presets, they are easily accessible under the popup menu:



Built-in presets, when available, appear under the presets menu

Built-in presets may sport a thumbnail preview to make their effect more obvious. Select a preset to apply it.

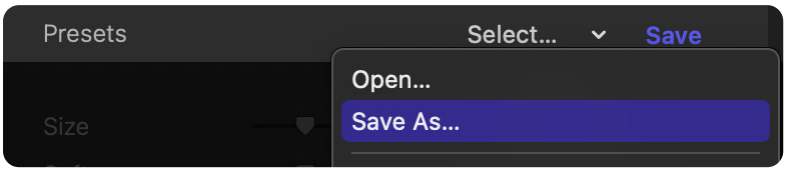
Saving a Preset

The fastest way to save current effect configuration to a file is to click the **Save** button that appears in the inspector, to the right of the popup menu:



The Save button lets you save current effect configuration to a file

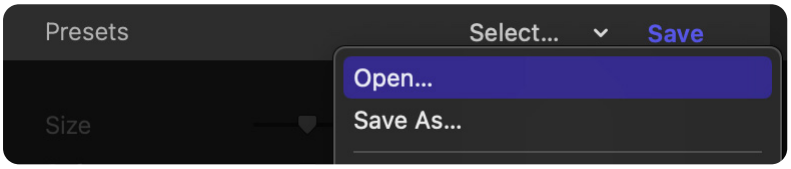
You can also save a preset by selecting the **Save As...** command under the presets menu:



The Save As... command available under the presets menu

Loading a Preset

To load a preset file, select the **Open...** command under the presets popup menu:



The Open command available under the presets menu

Select a preset created by the *same* plug-in.

Please note that some plugins offer presets in more than one location in the parameter inspector. A plugin may limit your ability to save or load preset files to the topmost parameter only. When plug-ins follow this approach, the corresponding button and menu commands may be missing.

Details on Preset File Compatibility

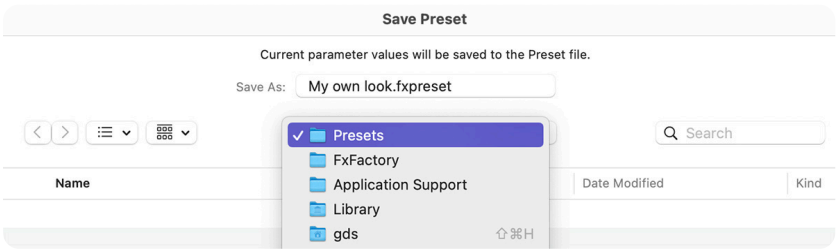
If the preset file was created by the same version of the plug-in, you can load the preset from any video applications the plug-in is available in.

For example: you can create a preset in Final Cut Pro and load it from the same plug-in in Premiere Pro.

In most cases, you can also load preset files created by previous versions of the plug-in. If a new version of the plug-in introduces significant changes to its effect configuration, you may notice that older preset files may no longer be accessible.

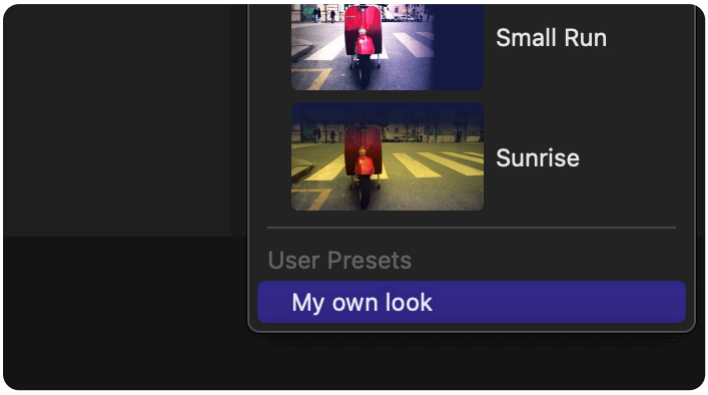
Special Features of User-created Presets

When you first ask the plug-in to save a new preset file, the location on disk will default to a special **Presets** folder located under your Home:



The default location for user-created presets

If you allow the preset file to be saved at that location, it will automatically appear under the presets popup menu, for quick access:



The newly-created preset file, accessible through the menu

The above demonstrates the advantage of saving your own preset files at this pre-defined location:

`Home → Library → Application Support → FxFactory → Presets`

Any presets located in that folder will automatically show up under the presets menu. This is not a requirement, since presets can be saved anywhere on disk and shared with other users or systems simply by copying the file.

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