DFT User Guide

About this Guide

This User Guide is a reference for DFT. You can read from start to finish or jump around as you please. This guide is available in Acrobat PDF format.

Copyright

April 13, 2019

About Us

Digital Film Tools brings together the unbeatable combination of superior software designers, motion picture visual effects veterans, video editors and photographers. Add three Emmy Awards and experience in creating visual effects for hundreds of feature films, commercials and television shows and you have a recipe for success. The understanding of photography, film and video editing, and in particular visual effects, allows us to design productive and highly specialized software. Software that is useful as well as easy to use. Our products stand up to the rigors of production and are the culmination of many years of experience.

Our philosophy is to bring our visual effects tools and techniques to the masses. What was once found only in expensive high-end packages or existed as proprietary in-house tools, is now available to photographers, artists, designers, and video/film editors. Did I mention affordable? Our software doesn't cost an arm and a leg and won't break the bank.

TABLE OF CONTENTS

INTRODUCTION

DFT

DFT (aka Digital Film Tools) is the definitive digital toolbox meant to simulate optical camera filters, specialized lenses, film stocks and grain, lens flares, optical lab processes, color correction as well as natural light and photographic effects.

Available as plug-ins for all popular video and film post production programs as well as a standalone application, DFT provides you with everything you will need to enhance your images using a staggering amount of filter presets. Using the DFT Standalone or photo plug-in versions, any filter can be limited to a portion of the screen using sophisticated but simple to use masking controls. A layering system to apply multiple filters as well as the Standalone's batch processing system rounds out DFT's set of tools.

DFT is comprised of the following filters: Ambient Light, Auto Adjust, Black and White, Bleach Bypass, Blur, Borders, Cartoon, Center Spot, Chroma Bands, Chromatic Aberration, Color, Color Correct, Color Gradient, Color Infrared, Colorize Gradient, Color Shadow, Color Spot, Cross Processing, Curves, Day for Night, DeBand, DeBlock, DeFog, DeFringe, DeNoise, Depth of Field, Detail, Develop, Diffusion, Dot, Double Fog, Dual Gradient, Enhancing, Eye Light, Fan Rays, Film Stocks, Flag, Flashing, Fluorescent, Fog, F-Stop, Frost, Gels, Glow, Glow Darks, Glow Edges, Grain, Grunge, Harris Shutter, Haze, High Contrast, Hot Spot, Ice Halos, Infrared, Kelvin, Key Light, Lens Distortion, Lens Flare, Levels, Light, Looks, Low Contrast, Match, Mist, Multi-Star, ND Gradient, Net, Night Vision, Overexpose, Ozone, Paint, Pastel, Pencil, Photographic, Polarizer, Printer Points, Rack Focus, Radial Exposure, Radial Streaks, Radial Tint, Rainbow, Random Spikes, Rays, Reflector, ReLight, Selective Color Correct, Selective Saturation, Sepia, Shadows/Highlights, Sharpen, Skin Tone, Silk, Sky, Soft Light, Spikes, Spiral Rays, Split Field, Split Tone, Star, Streaks, Sunset, Telecine, Temperature, Texture, Three Strip, Tint, Tone Adjust, Two Strip, Vignette, Water Droplets, Wide Angle Lens, and X -Ray.

DFT Features

General

- Simulation of optical glass camera filters, specialized lenses, film stocks, lens flares, optical lab processes, grain, exacting color correction as well as natural light and photographic effects
- 112 individual filters
- Thousands of customizable presets

Film Stocks & Looks

- 294 different color and black and white still photographic film stocks, motion picture films stocks and historical photographic processes
- 89 color grading presets from Academy Award nominated movies including 2001 A Space Odyssey, Apocalypse Now, Blade Runner, Back to the Future, Frankenstein, Gone with the Wind, King Kong, Saving Private Ryan and Titanic
- 68 stylized color and black and white looks

Lighting

- 331 optical lens flare presets organized into Anamorphic, Circular, Polygons, Star, Starburst and Stylized categories
- 193 different lighting gels to colorize your images
- Gobo library for lighting effects includes 751 gobos categorized into Abstract, Doors, Elements, Foliage, Snowflakes, Textures and Windows groups

Photo Versions

- Paint system that includes Black/White, Blur, Clone, Color, Eraser, Mosaic, Red-Eye, Repair and Scatter brushes
- Layering system for multiple filter application
- Sophisticated but easy to use masking tools
- Variation generator for effect parameters

Architecture

- Mac Retina Display Support
- 8, 16, 32 bit image processing
- Multi-processor acceleration
- GPU acceleration

Filter Categories

The Filters are categorized by filter function: Color, Diffusion, Film Lab, Grads/Tints, Image, Lens, Light, and Special Effects.

Color

1 **Auto Adjust**
2 **Black and White**
3 **Color**
4 **Color Correct**
5 **Curves**
6 **Develop**
7 **Enhancing**
8 **F-Stop**
9 **Fluorescent**
10 **Haze**
11 **High Contrast**
12 **Kelvin**
13 **Levels**
14 **Low Contrast**
15 **Match**
16 **Ozone**
17 **Polarizer**
18 **Printer Points**
19 **Selective Color Correct**
20 **Selective Saturation**
21 **Shadows/Highlights**
22 **Sky**
23 **Telecine**
24 **Temperature**
25 **Tone Adjust**

Diffusion

1 Center Spot
2 Diffusion
3 Double Fog
4 Fog
5 Frost
6 Mist
7 Net
8 Silk

Film Lab

1 Bleach Bypass
2 Cross Processing
3 Film Stocks
4 Flashing
5 Grain
6 Grunge
7 Overexpose
8 Three Strip
9 Two Strip

Grads/Tints

1 Color Spot
2 Color Gradient
3 Colorize Gradient
4 Dual Gradient
5 Gels
6 ND Gradient
7 Photographic
8 Radial Tint
9 Sepia

10 Skin Tone

11 Split Tone

12 Sunset

13 Tint

Image

1 DeBand

2 DeBlock

3 DeFog

4 DeNoise

5 Detail

6 Paint

7 Sharpen

Lens

1 Blur

2 Chromatic Aberration

3 DeFringe

4 Depth of Field

5 Lens Distortion

6 Rack Focus

7 Radial Exposure

8 Split Field

9 Vignette

10 Wide Angle Lens

Light

1 Ambient Light

2 Chroma Bands

3 Dot

4 Edge Glow

5 Eye Light

6 Fan Rays
7 Flag
8 Glow
9 Glow Darks
10 Halo
11 Hot Spot
12 Ice Halos
13 Key Light
14 Lens Flare
15 Light
16 Multi-Star
17 Radial Streaks
18 Rainbow
19 Random Spikes
20 Rays
21 Reflector
22 ReLight
23 Soft Light
24 Spikes
25 Spiral Rays
26 Star
27 Streaks
28 Water Droplets

Special Effects

1 Borders
2 Cartoon
3 Color Infrared
4 Color Shadow
5 Day for Night

6 Harris Shutter

7 Infrared

8 Looks

9 Night Vision

10 Pastel

11 Pencil

12 Texture

13 X-Ray

INSTALLATION

Photo Plug-ins

1. **Download DFT at www.digitalfilmtools.com**
2. **Double-click on the file that was downloaded and run through the installation process.**
3. **When prompted, select the destination programs to install to. You can choose from Photoshop, Photoshop Elements, and Lightroom.**
4. **Start your program and load or select an image.**
5. **Apply a DFT filter:**
   - **Photoshop/Elements: In the Filter menu, select DFT v1 from the Digital Film Tools group.**
   - **Lightroom: In the Photo menu, select Edit In and then choose Edit in DFT v1.**

   A dialog box pops up when you run DFT.
6. **If you purchased the software, select Activate DFT and follow the instructions.**

   or
7. **Select Request Trial Activation (Internet Required) and click Next to receive a fully functioning version of DFT for the specified trial period. At the end of the trial period, DFT reverts to a limited demo mode.**

   or
8. **Select Run in Demo Mode and click Finish.**

   Note: In Demo Mode, a watermark is superimposed over the image.

Adding DFT to Lightroom as an External Editor

If Lightroom is found during the installation of DFT, DFT will automatically be added as an external editor. If for some reason DFT does not show up as an external editor, you can manually add DFT as an external editor by following the steps below.

1. **Open the Preferences in Lightroom.**
2. **Click the External Editing tab.**
3. **In the Additional External Editor section, select TIFF for File Format, sRGB for Color Space, 8 or 16 bits/component for Bit Depth, set the desired Resolution, and choose None for Compression.**

   Note: DFT is only compatible with TIFF files (8 or 16-bit, with no compression).
4. **Click on Choose to select an application. Navigate to the location of DFT.**
   - **On Windows, the default installation location for DFT will be: C:\Program Files\Digital Film Tools\DFT**
   - **On Macintosh, the default installation location for DFT will be: /Macintosh HD/Applications/Digital Film Tools/DFT**
5. **Select the DFT Lightroom file and click Choose.**
6. **Under the Preset drop-down menu, select Save Current Settings as New Preset… and name the preset DFT v1.**

   DFT can now be easily accessed under the Photo menu as a preset external editor.

UNINSTALLING

Windows

From the Windows Start Menu, select Programs > Digital Film Tools > DFT v1 > Uninstall DFT.

Macintosh

Go to Applications/Digital Film Tools/DFT v1 and double-click on Uninstall DFT.

Activating, Deactivating and Transferring Licenses

Activation Options

Internet Activate

Activates DFT over the Internet.

Request License from Self-Service Website

If you do not have an Internet Connection on the computer where you want to run DFT, use this option. The self-service website will generate a license file which you can then transfer to the desired computer.

Install a License File

Loads a license file obtained from the self-service website or received by email.

Note: If you experience an error when using Internet Activate, it is because you or your company uses a proxy server to access the Internet and/or your firewall is blocking our program's access to the Internet. For proxy server users, select Advanced Options and enter the appropriate proxy server settings. For firewall users, open your firewall software and allow our software to access the Internet.

Deactivation Options

Once DFT has been activated, you can access the Deactivation options by selecting the License menu.

Internet Deactivate

Deactivates DFT over the Internet and is only available if you initially activated over the Internet. Use this method to return your Product Code back to the activation server. You will then be able to use your Product Code to activate DFT on another computer.

To deactivate a license:

1. **Select License from the Help menu.**
2. **Choose Internet Deactivate and click Next.**

DFT is now deactivated.

License Transfer

Your Product Code allows you to run DFT on one computer at a time. However, you may transfer the license by deactivating on one computer and activating on another.

Internet Deactivate / Internet Activate is the preferred method of license transfer between computers, but is only available if you initially activated over the Internet and currently have Internet access. If you do not have Internet access, you will need to contact customer support to assist you in transferring the license.

To transfer a license:

1. **Select License from the Help menu.**
2. **Choose Internet Deactivate and click Next.**

   DFT is now deactivated.
3. **On the target computer, select Activate DFT and follow the instructions.**

   DFT will then activate on the new computer.

GENERAL TUTORIALS

DFT Workflow

1. **Apply DFT to an image.**
2. **Choose a filter category.**
3. **Select a filter.**
4. **Try out the various filter presets.**
5. **Adjust the filter parameters to your liking.**
6. **Use masks to limit where the filter is applied.**
7. **Add additional filters.**
8. **Click the Done button to apply the filters to your image.**

Applying a Single Filter

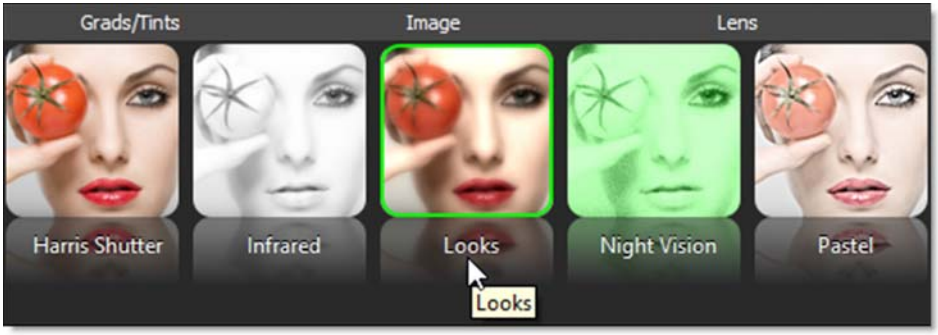
The General Tutorials build on one another and are designed to be done in order.

1. **Apply DFT:**
   - **Photoshop/Elements: In the Filter menu, select DFT v1 from the Digital Film Tools group.**
   - **Lightroom: In the Photo menu, select Edit In and then choose Edit in DFT v1.**

The image appears in the Viewer and thumbnails (small images) are created

for all of the effects in the current category of the Filters window.

2 **Click on one of the categories in the Filters window and select a filter.**

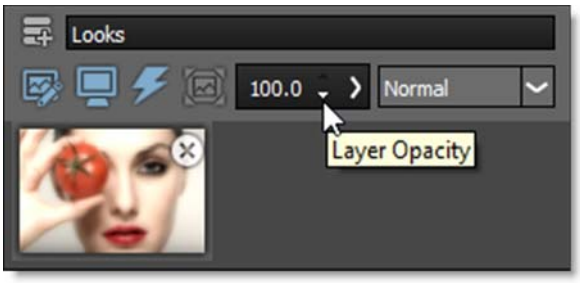


Presets for the selected filter are generated in the Presets window and the default preset for the filter is applied to the image in the Viewer.

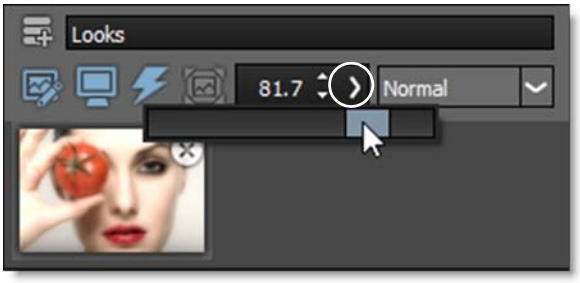
3 Select from the various filter presets by clicking them in the Presets window.

The image in the Viewer is updated as each Preset is clicked.

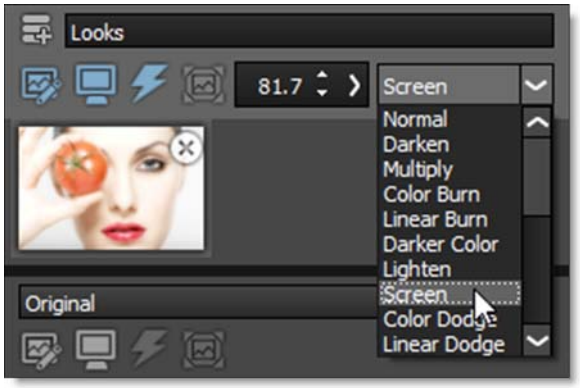
You can set the opacity of the filter using the Layer Opacity control in the Effect window.



4 Click on the greater than character ">" to the right of the Layer Opacity spin controls to bring up the slider so that it can be adjusted.



In addition to opacity, Layers can be combined with the layer below using a variety of Blend modes.



Go to **Blend Modes** for explanations of the various modes.

5 Click the Done button to apply the filter to your image.

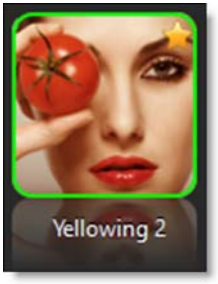
The next time you apply DFT in Photoshop, your previous DFT setup consisting of filters, layers and masks will all be displayed and can be modified. For the DFT setup information to be remembered in Lightroom, you need to use “Edit Copy with Lightroom Adjustments” and render the result. If you then apply DFT to the newly rendered version and use “Edit Original”, your previous DFT setup will also be displayed and can be modified. This behavior in Lightroom can be disabled via the Save setup with image preference.

Tagging and Sorting Favorite Presets

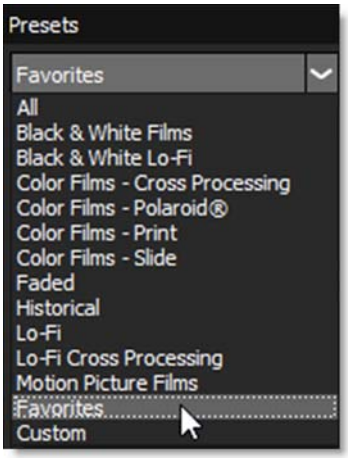
Presets can be tagged as a Favorite allowing them to be sorted separately in the Presets window as well as in the Favorites tab of the Filters window.

1. **Apply a DFT filter with presets.**
2. **Tag a preset as a Favorite by selecting the preset and pressing the Toggle Favorite icon located at the top right of the Presets window.**

Presets tagged as a favorite display a yellow star at the top right of the preset.



3 **To sort the Presets window by Favorites, select Favorites in the Presets pop-up menu.**



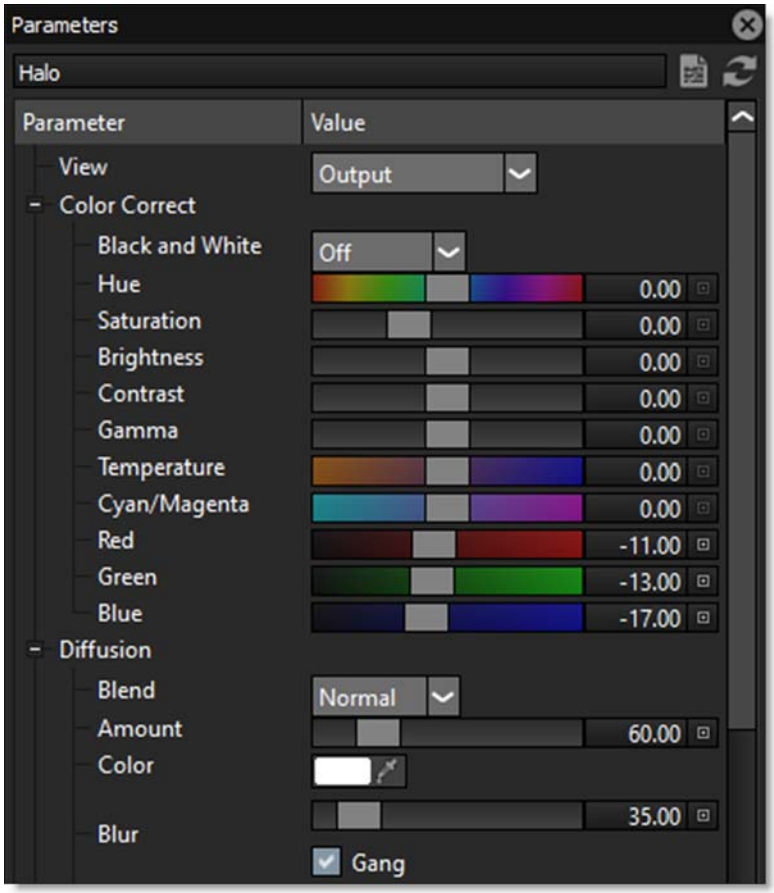
Adjusting Filter Parameters and Creating Presets

1 **Select a DFT filter and choose a preset.**

When the Parameters tab is selected at the bottom of the Presets and Parameters window, the Parameters window is visible and displays the current filter's parameters.

2 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

3 **In the Parameters window, adjust the filter parameters to your liking.**



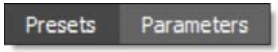
Adjusting the parameters will update and change the image in the Viewer.

Next, you can save your settings as a new custom preset, but you must first create a new name.

4 **In the name field to the left of the Create Custom Preset icon, type in a new name.**

5 **Click the Create Custom Preset icon to create a new preset in the Presets window based on the current parameter settings.**

6 **Click the Presets tab at the bottom of the Parameters window to show the Presets window.**



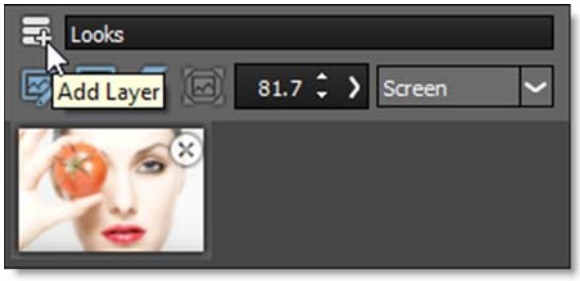
7 **In the Presets window, you will see the newly created custom preset.**

Applying Multiple Filters

1 **Select a DFT filter and choose a preset.**

2 **Adjust the filter parameters if you'd like.**

Before another filter can be added, the first filter must be added as a layer in the Effect window.



3 **Click the Add Layer icon at the top left of the Effect window.**

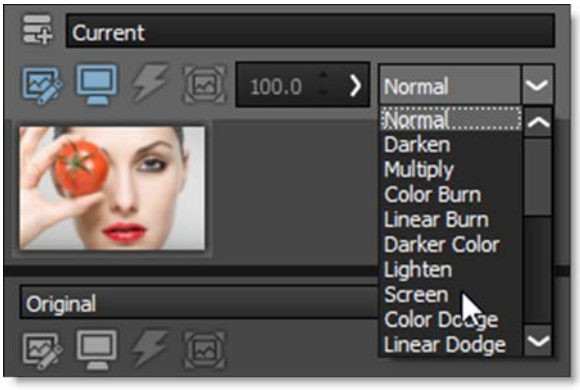
The first filter drops down one position in the Effect window and is added as a layer. Multiple filters can be added in this manner.

Note: You can also use Add Layer even if no filter is applied. This way Layer Blend Modes can be used to create effects between layers.

Applying Multiple Layer Blend Modes

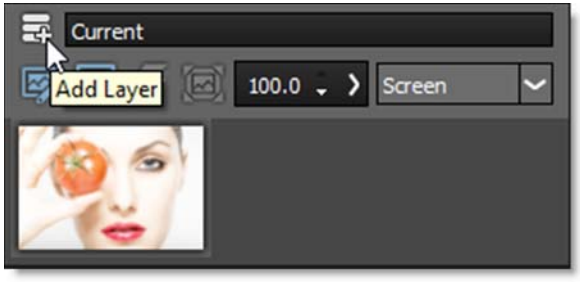
Instead of adding filters to a layer, you can use only the Layer Blend Mode to create an effect.

1 **Select a Layer Blend Mode.**



Go to **Blend Modes** for explanations of the various modes.

2 **Before another Layer Blend Mode can be added, click the Add Layer icon at the top left of the Effect window.**



The first layer drops down one position in the Effect window and a new layer is added.

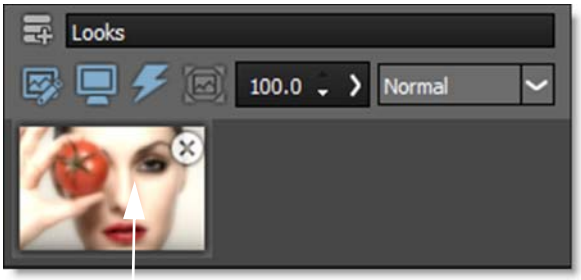
3 **Select a different Layer Blend Mode for the new layer.**

Multiple Layer Blend Mode's can be added in this manner.

Viewing Individual Layers

1 **Apply a couple of filters to your image and add them as layers.**

2 **Click on the image thumbnail in the Effect window to display that layer in the Viewer.**



With each click of the mouse, the Viewer displays each individual layer.

3 **When you are finished, click on the top layer's image thumbnail.**

Comparing Images

DFT can compare images using Side-by-Side, Vertical Split, Horizontal Split, A/B or Snapshot comparison modes. By default, the current filter and original image are selected for comparison.

The View/Compare icon in the Effect window changes which layers are used in the comparison.

1 **Apply a DFT filter and make sure it is affecting the image in some way.**

2 **Click on the Side-by-Side Comparison icon.**

Horizontal images are stacked vertically and vertical images are placed side by side.

3 Click the Vertical Split Comparison mode icon.

You can now compare the images using a vertical split.

4 **Move your cursor into the image area over the split line and when the cursor changes to a double-arrow, click and drag to move the split.**

Depending on the filter used, the split line may not be obvious, so triangular sashes on the outside of the image help you find it. If you drag the sash all the way around, it will swap directions.

5 **Enable the A/B Comparison icon and then click the Show Other View icon that appears to cycle the current filter with the original image.**

6 **When done, press the A/B Comparison icon to turn it off.**

7 **Press the Snapshot icon.**

Once clicked, a snapshot of the image in the Viewer is taken as well as the layer's mask, if there is one.

8 **Press the View Snapshot icon that appears.**

View Snapshot allows you to now use the various comparison modes to compare the snapshot to other layers or different filter settings.

9 **Turn off View Snapshot when done.**

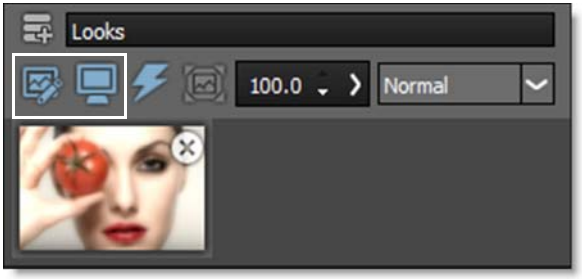
Editing Multiple Filters

When multiple filters have been applied, you have the choice of viewing and editing one layer at a time or viewing one layer while editing another.

By default, the Viewer and Parameters window display the image and controls for the top most layer. The layer displayed in the Viewer is controlled with the View/Compare icon

while the controls shown in the Parameters and Presets window are displayed with the Edit icon.

Both of these icons are located in the Effect window above each layer's thumbnail.



View and Edit One Layer at a Time

1 **Apply a couple of filters to your image and add them as layers.**

2 **To simultaneously view and edit a different layer, double-click on its image thumbnail.**

The View/Compare and Edit icons automatically activate for the new layer, while the Viewer, Parameters and Presets windows update to display the new layer's image and effect controls.

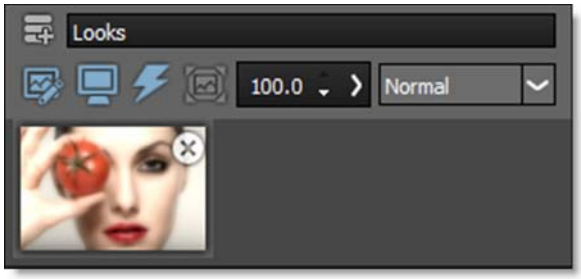
3 **Use the effect controls in the Parameters window to edit the new layer.**

View One Layer while Editing Another

There are many instances where it is very useful to view one layer while editing another.

1 **Double-click on the top most layer's image thumbnail.**

You are now viewing and editing the top layer. The layer that you are editing is considered the active layer and this is visually indicated by the layer's lighter gray background.



Change the active layer by clicking on a lower layer's Edit icon.

2 **Adjust the effect controls in the Parameters window or choose a new preset in the Presets window.**

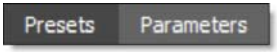
You are now Viewing the top layer while editing a layer below.

Creating Variations

Variations based on either one or two parameters can be created and are displayed as thumbnails in a window below the Parameters and Presets window.

1 **Apply a DFT filter.**

2 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

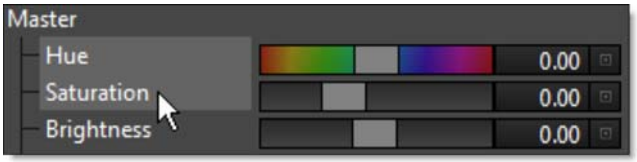


3 Click on a parameter name in the Parameters window.

Variable parameters are Ranges, Toggles, and Colors.

When you select a parameter, the Variations appear and you'll see the variations being generated on that parameter.

4 Click on a second parameter and it will generate variations between the two.



The first parameter you click on will be the dominant parameter - it'll go across the top of the Variations tab. So, you can get different results depending on the order you select the parameters.

5 Click on a selected parameter to toggle it back off again.

Note: You can only have one or two parameters selected at a time. If you click on a third parameter, the last parameter you clicked on will deselect itself. If you deselect both of the parameters or switch effects, the Variations window will disappear because the variations are no longer being generated.

Variations are generated based on the current effect parameters. So, you can pick some parameters for your variation, then go back to the Presets window and pick a different Preset, and the variations will regenerate.

See **Variations** for more information.

Applying a Gradient Mask to a Layer

Masks allow you to limit the effect of a filter by revealing it only in white areas of the mask. White is on, black is off and gray areas in between represent a level of transparency.

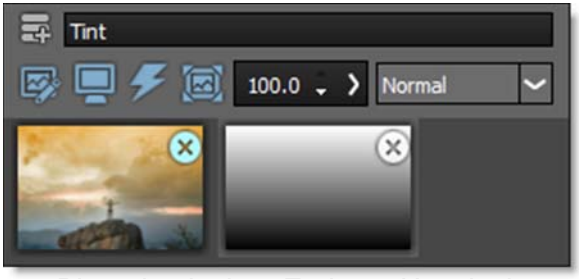
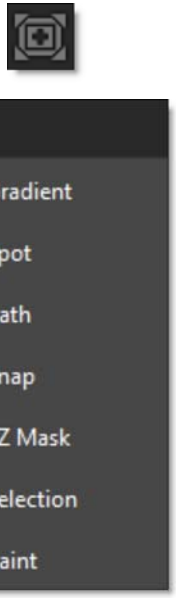


Photo by Joshua Earle on Unsplash

Masks are displayed to the right of the filter thumbnail in the Effect window.

The following mask types can be applied to a layer: Gradient, Spot, Path, Snap, EZ Mask, Selection and Paint by clicking the Add Mask icon in the Toolbar.



1 **Apply DFT to an image.**

Select a filter and preset that changes the image in an obvious way.

2 **For instance, select the Grads/Tints > Tint filter.**

3 Click the Add Mask icon in the Toolbar and choose Gradient.

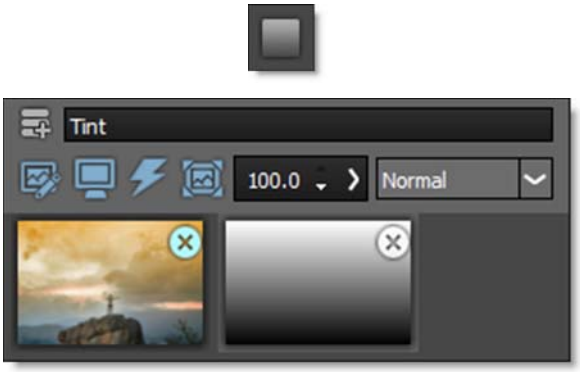


Photo by Joshua Earle on Unsplash

When the mask is applied to your layer, a couple of things happen. First, a mask thumbnail appears to the right of the image thumbnail. Second, the filter that was applied to the image is now limited to the white areas of the mask. Third, controls are added to the Toolbar as well as the Viewer depending upon the type of mask selected.

4 Click and drag the corner points in the Viewer to adjust the position of the Gradient mask.

The direction and size of the Gradient can also be adjusted using the controls in the Toolbar.

5 **Adjust the size of the gradient by first clicking the Gradient Size icon in the Toolbar and then dragging the slider that appears.**

See **Gradient Mask** for more information.

Applying a Selection Mask to a Layer

Selection masks can be used to manipulate, isolate and protect specific parts of an image when making adjustments or applying filters.

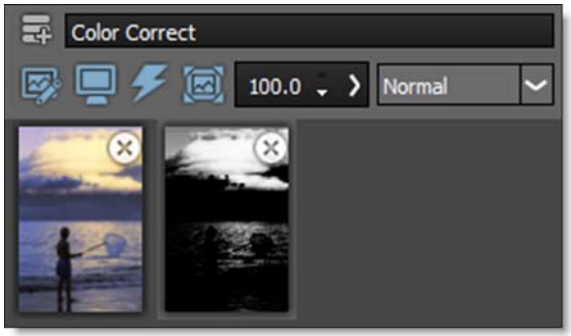


Photo © THINKSTOCK LLC--www.thinkstock.com

Using advanced image slicing algorithms, masks are created using luminance, hue, saturation, average, red, green, blue, cyan, magenta, and yellow values.

1 **Apply DFT to an image.**

2 **Select a filter and preset that changes the image in an obvious way.**

3 **Click the Add Mask icon in the Toolbar and choose Selection.**

A number of controls appear in the Toolbar above the Viewer. The first control is called Extract On which determines which image values are used to create the mask. The default mask type is luminance, meaning brightness.

4 **Press the M key or the Show Mask icon above the Viewer to display the mask.**

Position and Range Controls

The Position and Range parameters are key to isolating specific image values.

1 **Change the Position parameter if you want to select different values to be used for the mask. The parameter can be adjusted by first clicking the Position icon in the Toolbar and then dragging the slider that appears.**

Using the Luminance extraction method, a higher Position value shows more white values from the original image as white values in the mask. A lower Position value shows more black values from the original image as white values in the mask.

Position 0, Range 25 Original Position 100, Range 25

Once you've selected the "Position", you can then add or subtract the "Range" of values to be included in the mask.

2 **Adjust the Range parameter by clicking it's icon in the Toolbar and then dragging the slider that appears.**

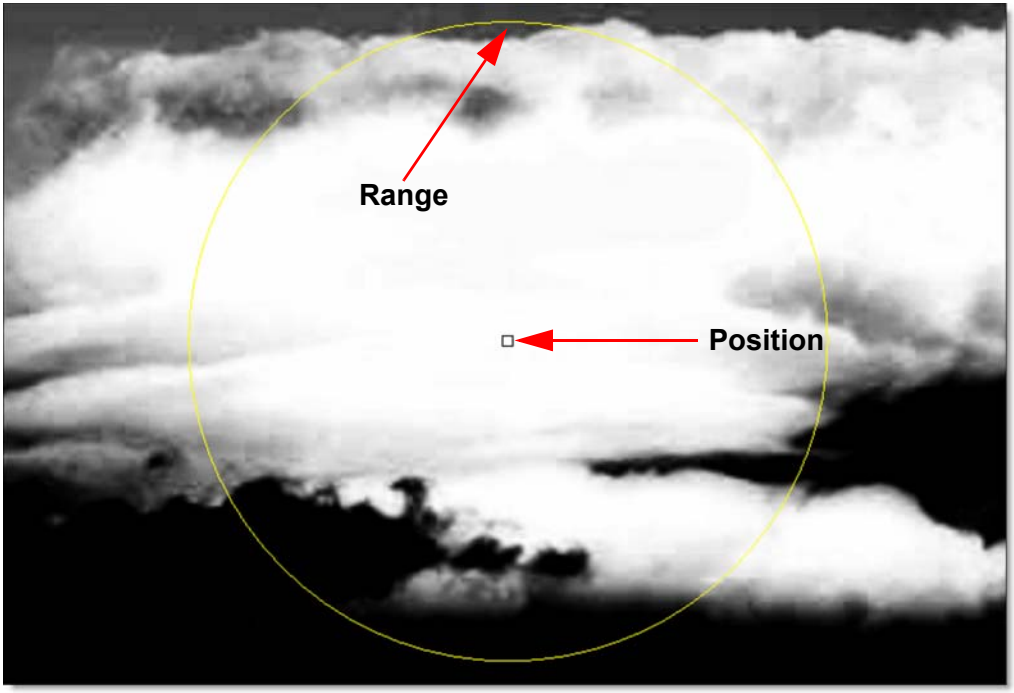
A higher Range value includes more white values in the mask while a lower Range value includes less values in the mask.

Position 100, Range 25

Original

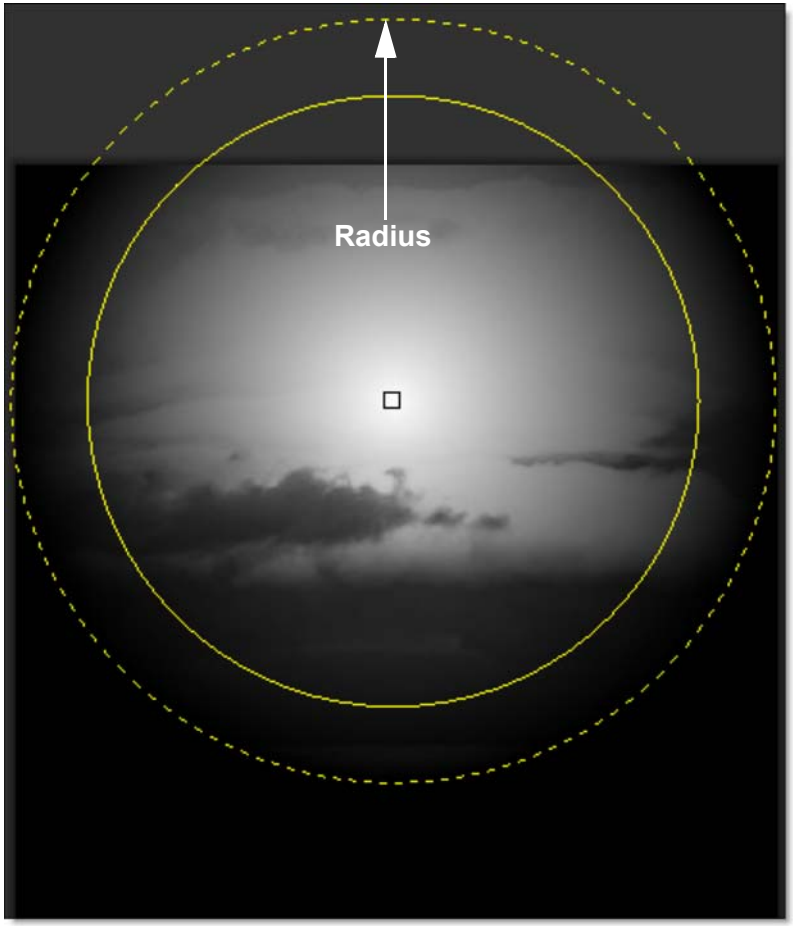
Position 100, Range 75

In addition to using the slider controls in the Toolbar, the Position, Range and Radius parameters can be set using on-screen controls. Click on the image to place the on-screen control which consists of a center point and a solid circle. The Position value is set by the location of the center point, while the Range is set by sizing the circle. The larger the circle, the larger the range.



3 **Adjust the Radius parameter by clicking it's icon in the Toolbar and then dragging the slider that appears.**

When the Radius control is increased, a soft, circular mask is created to limit the selection. If the on-screen controls are used, the Radius is represented as a dashed circle.



In this case, the Radius allows me to isolate the clouds from the water.

4 **You may want to adjust Black Clip to add more values to the black part of the mask and adjust White Clip to add more values to the white part of the mask.**

5 **If needed, Shrink/Grow can be used to make the mask smaller or larger and the Blur controls can soften the mask.**

6 **Press the M key to display the full color image in the Viewer.**

See **Selection Mask** for more information.

Applying a Path Mask to a Layer

A Path is an outline created by placing sequential points along an object. Think of it as connecting the dots if you will. Although paths can be open or closed, DFT only makes use of closed paths. Drawing a path is often a good solution for objects that can't be masked in any other way.

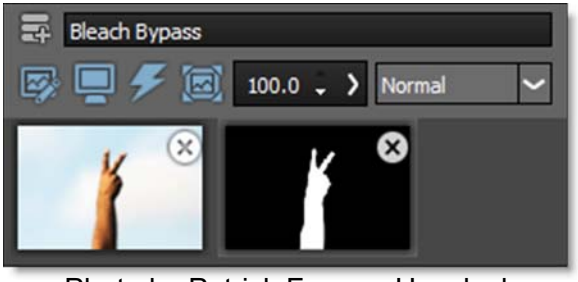


Photo by Patrick Fore on Unsplash

1. **Apply DFT to an image.**
2. **Select a filter and preset that changes the image in an obvious way.**
3. **Click the Add Mask icon in the Toolbar and select Path.**

Once Path is selected, the effect of the filter in the Viewer can no longer be seen until a mask is created.

4. **Click repeatedly in the Viewer to create a new shape.**

5 **When done, click on the first point that was added to close the path.**

The filter now appears only in the area contained within the path. To change the shape of the path, move the controls points.

6 **Click on one point to select it or click and drag a box around a group of points.**

7 **Click and drag on one of the selected points to move them.**

If needed, you can add new points by **Alt+clicking** on the path between two points. Points are deleted by selecting them and hitting the **Delete** key.

8 **Create as many paths as you'd like.**

When paths overlap, a hole in the mask occurs.

See **Path Mask** for more information.

Applying a Snap Mask to a Layer

The Snap masking tool provides instant visual feedback by snapping an editable curve to an object's boundary even if it has vague or low contrast edges. This is made possible by utilizing unique graph-cutting and segmentation algorithms.

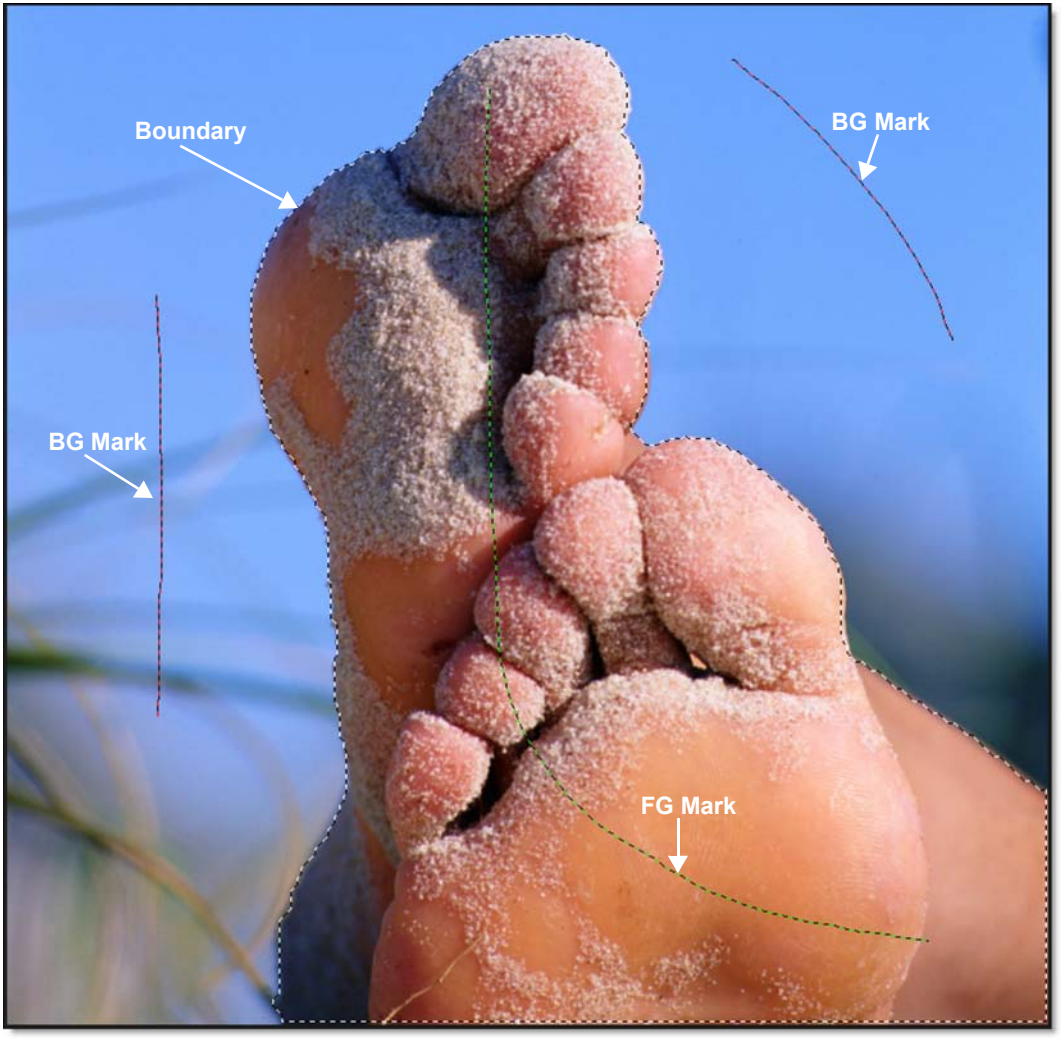


Photo © THINKSTOCK LLC--www.thinkstock.com

1 **Apply DFT to an image.**

2 **Select a filter and preset that changes the image in an obvious way.**

3 **Click the Add Mask icon in the Toolbar and select Snap.**

Once Snap is selected, the effect of the filter in the Viewer can no longer be seen until a mask is created.

4 **Define the area to be isolated by drawing a foreground line with the left mouse button.**

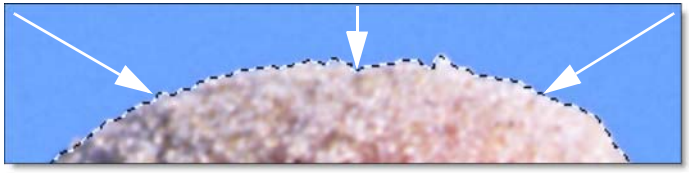
The Mark Foreground icon is selected by default when you apply a Snap mask and that is why you can just start drawing with the left mouse button.

5 **Define background areas by drawing lines with the right mouse button.**

or

6 Alternatively, you could select the Mark Background icon and draw with the left mouse button.

As soon as the first background line is drawn, Snap calculates a boundary curve that is displayed as a black and white dashed line around the object.

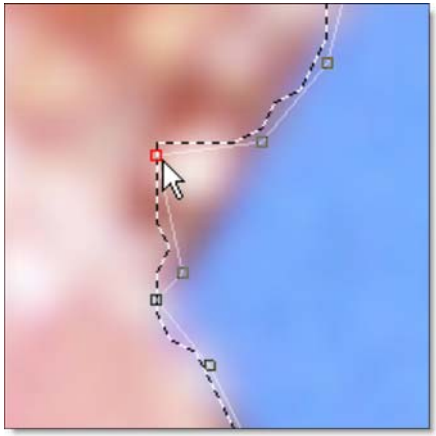


7 Draw additional foreground and background lines as needed until the object that you'd like to isolate is roughly surrounded by a boundary.

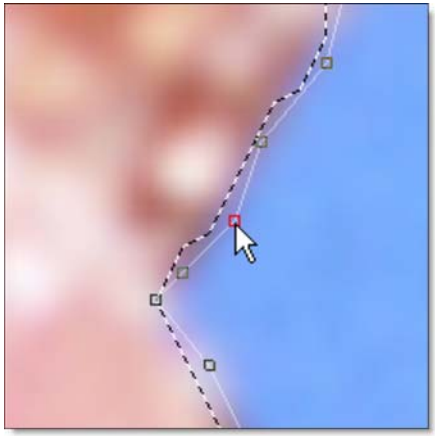
Where the boundary doesn't correctly follow the edge of your object, refine the boundary by using either the Edit Points or Override Edge icons in the Toolbar. When either of these tools is selected, the boundary created in the object marking step is converted into editable polygons and you will see a noticeable refinement in the boundary.

8 **Click the Edit Points icon in the Toolbar and drag a point to adjust the shape of the polygon.**

Before



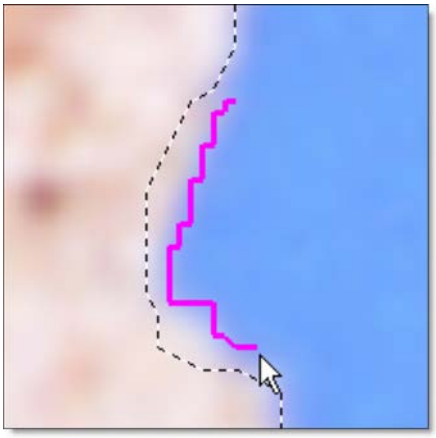
After



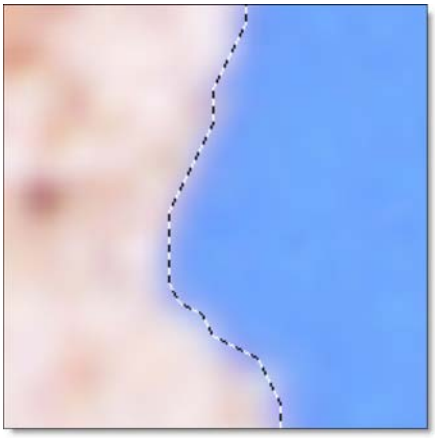
and / or

9 Click the Override Edge icon in the Toolbar and draw a mark along the edge of your object where the boundary doesn't correctly follow the edge.

Before



After



10 When happy with the boundary you have created, click the Convert Curve to a Path icon in the Toolbar to apply it to the layer and convert it to an editable path.

A slider pops up to control the amount of points to be included in the path.

11 Drag the slider to reduce the number of path points or just click it to accept the current setting.

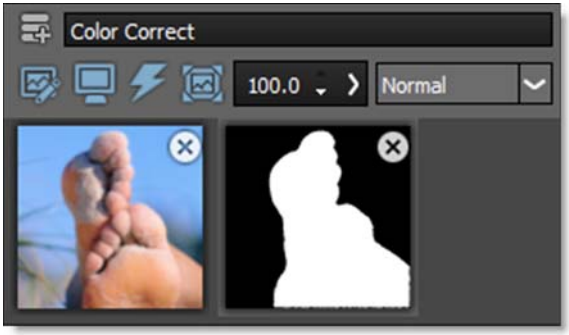


Photo © THINKSTOCK LLC--www.thinkstock.com

By default, Edit Points is selected after the path is created so that you can view and edit the points.

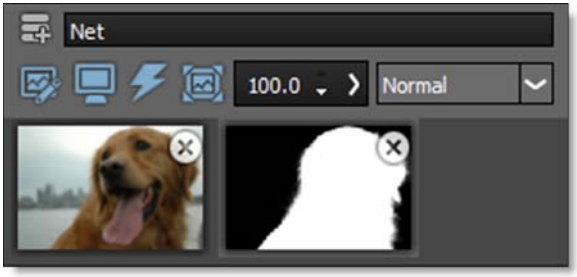
12 **To create a new boundary, select the Mark Foreground icon and repeat the above steps.**

When boundaries overlap, a hole in the mask is created.

See **Snap Mask** for more information.

Applying a EZ Mask to a Layer

EZ Mask is an easy to use interactive image masking tool capable of isolating almost any object in an image--even if you are dealing with fine hair detail, smoke, or reflections.



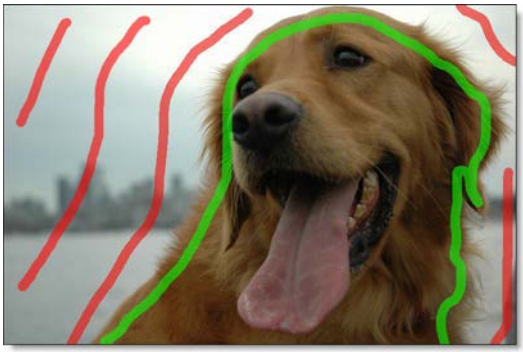
To work this magic, EZ Mask iteratively estimates the transparency value for every pixel in the image, based on a small sample of foreground (what you want to isolate) and background pixels marked by simple strokes on the image. Results show that compared with previous approaches, our method is more efficient and requires minimal effort to extract high quality masks for foregrounds with significant semi-transparent regions.

Stroke Trimap Tutorial

EZ Mask creates masks by using a trimap--a pre-segmented image consisting of three regions of foreground (what you want to isolate), background and unknown. Partial opacity values are then computed only for pixels inside the unknown region. Two trimap methods can be used: Stroke and Filled. This tutorial will use the Stroke method.

Our trimaps can be relatively sparse consisting of individual foreground and background brush strokes. All pixels left unmarked will be treated as unknown. After processing, if any fine foreground details are missing from the mask, the Unknown brush can be used in these areas to help recover lost detail.

User Input



Mask

1 **Apply DFT to an image.**

2 **Select a filter and preset that changes the image in an obvious way.**

3 **Click the Add Mask icon in the Toolbar and select EZ Mask.**

Note: Once EZ Mask is selected, the effect of the filter in the Viewer can no longer be seen until a mask is created.

A good stroke technique is to draw an inner outline around the object you are extracting using the Paint Foreground brush and an outer outline using the Paint Background brush.

4 **Define the area to be cutout by drawing foreground lines with the left mouse button. You can quickly draw straight lines if you click with the left mouse button, press Shift and then click in a different location. If you keep Shift depressed while clicking, you will create interconnected straight lines.**

The Paint Foreground brush is selected by default when you enter EZ Mask and that is why you can just start drawing with the left mouse button.

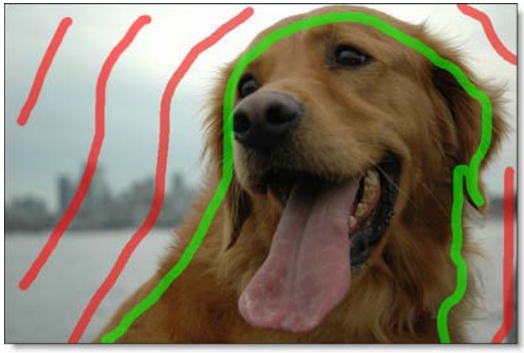
The strokes should be near the boundary of the foreground, but not right up against the edge. Strokes that are closer to the boundary will dominate the creation of the mask. Also, if the foreground has varying colors, the strokes should cover these colors.

Note: The general rule is don't put different stroke types too close together unless you need to.

5 **Define background areas by drawing with the right mouse button.**

or

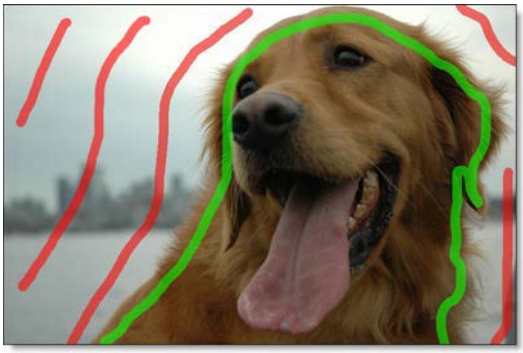
6 **Alternatively, you could select the Paint Background brush and draw with the left mouse button.**



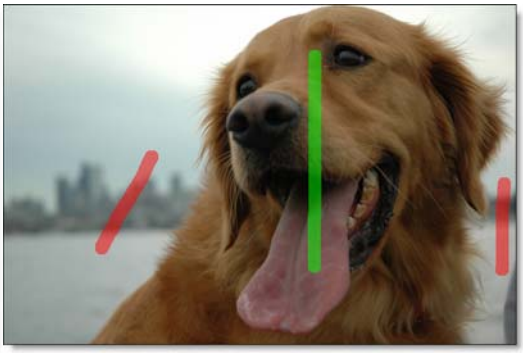
If the background has varying colors, the strokes should cover these colors.

Warning: If you only provide a few sparse strokes, a Stroke trimap will take longer to process than a filled trimap.

Good Stroke Example



Bad Stroke Example



7 Click the Generate Mask icon or press the Enter key.

Once EZ Mask is done processing, the mask will be shown in the mask thumbnail of the Effect window.

8 Press the M key to view the Mask in the Viewer.

In the Mask, white is foreground, black is background and any gray areas in between represent a level of transparency. If the mask is not acceptable after processing, add a few strokes near the region where the mask is not accurate.

Note: To quickly toggle off the display of your strokes, click on the layer's image thumbnail. Click the mask thumbnail to re-display the strokes.

9 **If you see gray areas in the foreground object that should be completely white, make additional foreground marks in those areas.**

10 **If you see gray areas in the background that should be completely black, make additional background marks.**

When drawing a stroke trimap, certain foreground details may be missing after the mask is generated. Using the Paint Missing brush in these areas can sometimes help recover lost detail.

11 **Press the M key again to view the full color image.**

12 **If any fine foreground details are missing from the mask, click on the Paint Missing brush and draw over them with the left mouse button as illustrated by the purple strokes in the dog's hair.**

The purple colored strokes represent the missing areas.

13 **Click the Generate Mask icon or the Enter key again to see how any new foreground, background and unknown strokes affect the mask.**

See **EZ Mask** for more information.

Filled Trimap Tutorial

EZ Mask creates masks by using a trimap--a pre-segmented image consisting of three regions of foreground (what you want to isolate), background and unknown. Partial opacity values are then computed only for pixels inside the unknown region. Two trimap methods can be used: Stroke and Filled. This tutorial will use the Filled method.

Foreground and background brush strokes are used to mark definite foreground and background pixels while the Unknown brush is used to mark unknown, or mixed regions. Using this method, the entire image is painted/filled with one of the three brushes.

Foreground

Filled Trimap

1. **Apply DFT to an image.**
2. **Select a filter and preset that changes the image in an obvious way.**
3. **Click the Add Mask icon in the Toolbar and select EZ Mask.**

Note: Once EZ Mask is selected, the effect of the filter in the Viewer can no longer be seen until a mask is created.

When drawing a filled trimap, the best method is to draw the unknown areas first. Unknown areas are typically areas where the foreground is transitioning to the background. In the image below, the hairy edges of the Alpaca would be considered unknown areas.

4 **Define unknown areas by selecting the Paint Unknown brush and drawing around the edges of the foreground with the left mouse button. You can quickly draw straight lines if you click with the left mouse button, press Shift and then click in a different location. If you keep Shift depressed while clicking, you will create interconnected straight lines.**

Include as little solid foreground areas as possible, but be sure to draw over all of the unknown regions. Ideally, the unknown region in the trimap should only cover transparent pixels whose actual values are not completely foreground or background. In other words, the unknown region in the trimap should be as thin as possible to achieve the best masking result.

5 **Define the area to be cutout by selecting the Paint Foreground brush and the Fill tool.**

Using the current brush, the Fill tool fills a region defined by a brush stroke or the edges of the screen.

6 **Click inside the area defined by the blue, unknown brush.**

The area inside of the blue, unknown boundary automatically fills in with the green foreground brush. Using the Fill tool is much easier than drawing the entire area by hand.

7 **Define background areas by using the Paint Background brush and the Fill tool. Since the Fill tool is already enabled, you don't need to select it again.**

8 **Click on the background outside of the area defined by the blue, unknown brush.**

The background area automatically fills in with the red background brush.

9 Click the Generate Mask icon or press the Enter key.

Once EZ Mask is done processing, the mask will be shown in the mask thumbnail.

10 Press the M key to view the Mask in the Viewer.

In the Mask, white is foreground, black is background and any gray areas in between represent a level of transparency.

Note: To quickly toggle off the display of your strokes, click on the layer's image thumbnail. Click the mask thumbnail to re-display the strokes.

11 If you see gray areas in the foreground object that should be completely white, make additional foreground marks in those areas.

12 If you see gray areas in the background that should be completely black, make additional background marks.

13 **If there are areas that should be marked as unknown, make additional marks with the Paint Unknown brush.**

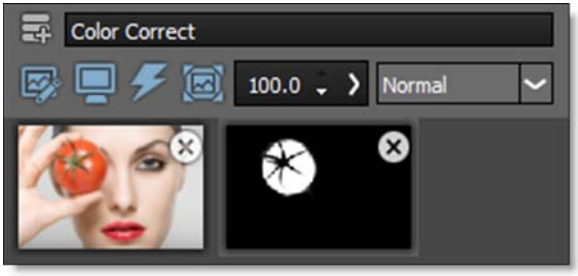
14 **Click the Generate Mask icon or Enter key again to see how any new foreground, background and unknown strokes affect the mask.**

15 **Press the M key again to view the full color image.**

See **EZ Mask** for more information.

Applying a Paint Mask to a Layer

Organic masks are created using a paint brush.



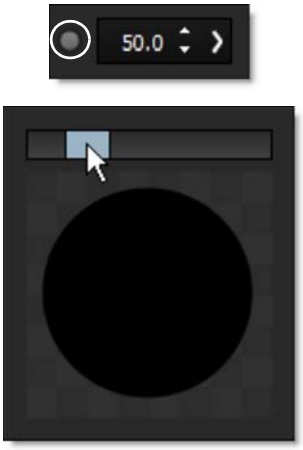
1 **Apply DFT to an image.**

2 **Select a filter and preset that changes the image in an obvious way.**

3 **Click the Add Mask icon in the Toolbar and select Paint.**

Once the Paint mask is selected, the effect of the filter in the Viewer can no longer be seen until a paint stroke is made.

4 **To set the brush size, click on the Brush Size icon in the Toolbar, and drag the slider that appears.**



or

5 **Resize the brush in the Viewer by holding Ctrl(Win)/Cmd(Mac) and dragging in or out.**

The Brush Softness and Opacity can also be adjusted by clicking their respective icons in the Toolbar.

6 **Using the left mouse button, click and drag a portion of the Viewer.**

The filter appears only in the area of the paint stroke.

7 **To quickly erase a portion of the painted mask, paint with the right mouse button. Alternatively, select a O Brush Opacity and paint with the left mouse button.**

Painting with a brush intensity that is a level of gray will apply the filter proportionate to that brush intensity. White areas in the mask apply the filter at full intensity while black areas show no filter.

See **Paint Mask** for more information.

Applying Multiple Masks to a Layer

More than one mask can be applied to a layer.

1 **Apply DFT to an image.**

2 **Select a filter and preset that changes the image in an obvious way.**

3 **Click the Add Mask icon in the Toolbar and choose Selection.**

Photo by Oscar Dejean on Unsplash

4 **Click the Add Mask icon again and select Spot.**

A Spot mask thumbnail appears to the right of the Selection mask and is automatically combined with it. View the Mask channel to see the results of the two masks.

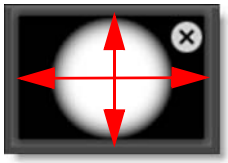
5 **Click the Show Mask icon above the Viewer so that you can see the combination of all your masks.**

To change how the active mask is combined with the previous mask, use the Blend modes in the Toolbar.

6 **Select the Multiply blend mode to see how it affects the way the masks are combined.**

7 **Click the M shortcut key to switch the Viewer to display the full color image.**

When you have multiple masks, the mask with the gray border around it is considered the active mask and it's controls are displayed in the Toolbar.



To change the active mask, simply click on the thumbnail of another mask.

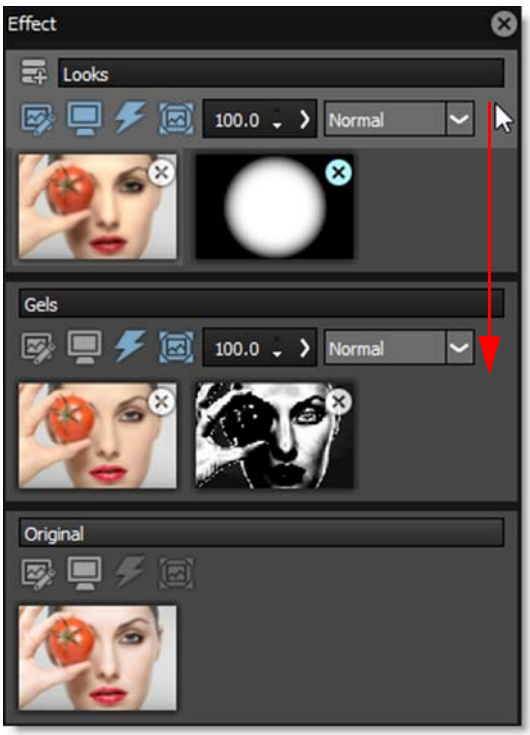
Drag and Drop Layers, Filters and Masks

Drag and Drop Layers

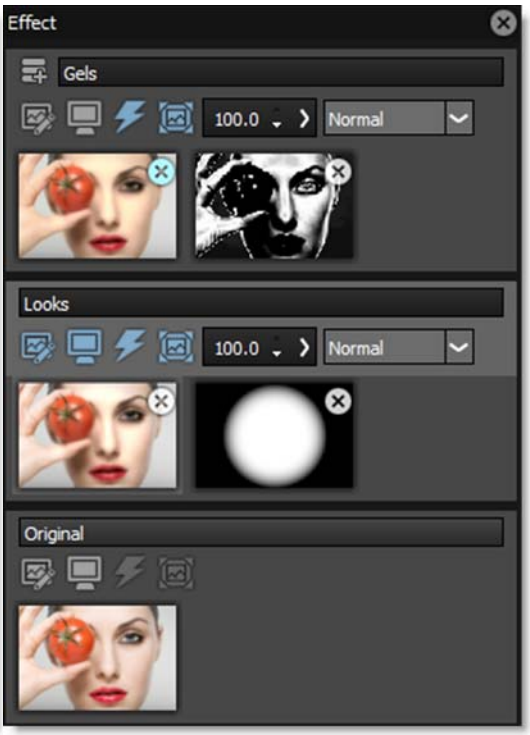
The ordering of layers in the Effect window can be changed by dragging and dropping them to a new location.

1. **Apply a filter and create a mask.**
2. **Click the Add Layer icon and a second filter and mask.**
3. **An entire layer can be moved to a new location by clicking and dragging on the layer's title bar to the right of the filter name and releasing the mouse in the new location.**

Before



After



When the mouse button is released, the layer is moved to the new location.

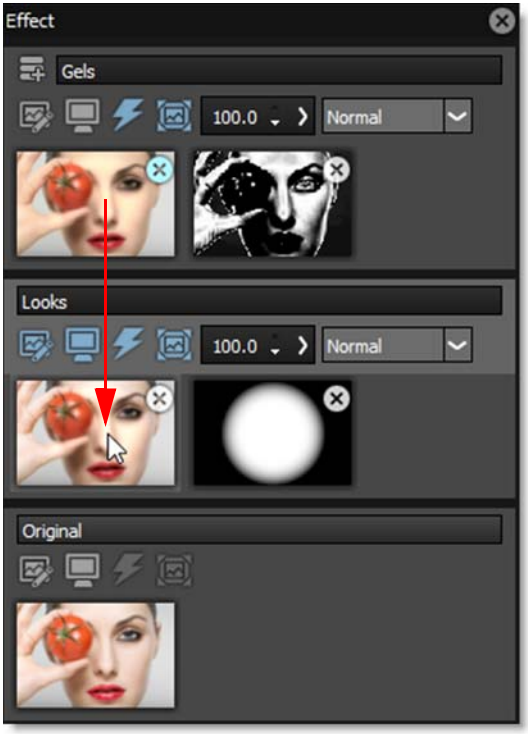
Drag and Drop Filters and Masks

Filters and masks from one layer can be copied to another layer using drag and drop.

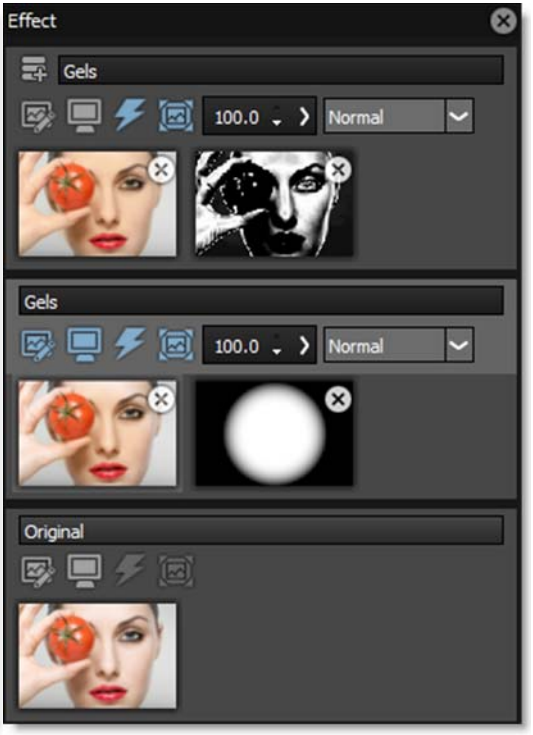
1. **Choose a layer that has a filter applied to it.**

2 **Click and drag on the layer's image thumbnail and release the mouse on the layer's thumbnail where you want to copy the filter. When the cursor hovers over the image thumbnail of another layer, the cursor changes to a + sign indicating that it is OK to release the mouse.**

Before



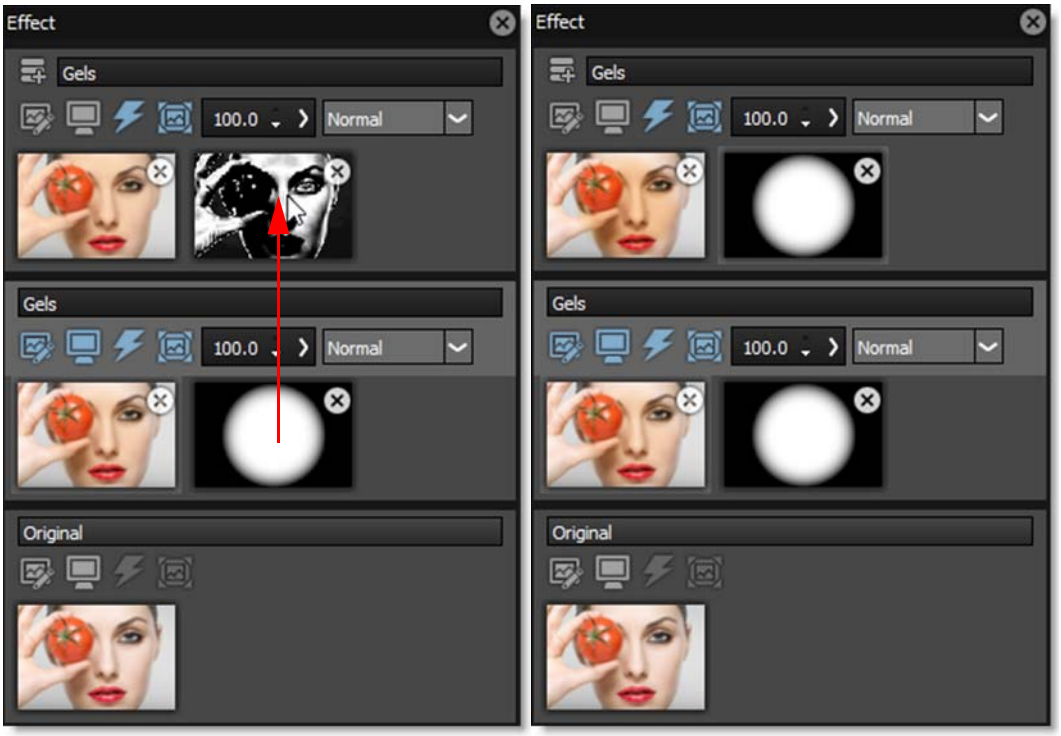
After



When the mouse button is released, the destination filter is replaced with the source filter.

3 **Click and drag on one of the layer's mask thumbnails and release the mouse on the layer's mask thumbnail where you want to copy the mask. When the cursor hovers over the mask thumbnail of another mask, the cursor changes to a + sign indicating that it is OK to release the mouse.**

Before After



When the mouse button is released, the destination mask is replaced with the source mask. If you release the mouse over a layer without a mask, the mask will be added to the layer.

Setups

A Setup takes a snapshot of the filters and parameter settings applied to your image. Setups can be saved and loaded and are independent of the image they were originally applied to.

1 **Apply a DFT filter.**

2 **Choose a preset and make some parameter adjustments.**

3 **Add additional filters if you like by clicking the Add Layer icon at the top of the Effect Window and then selecting another filter.**

4 **Select File > Save Setup.**

5 **When the file browser opens, enter a name and click Save.**

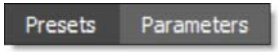
You can now apply this setup to a different image using File > Open Setup.

FILTER TUTORIALS

Ambient Light

Ambient creates light without a defined source and contributes to the overall brightness of a scene without casting shadows.

1. **Apply Ambient Light from the Light category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



4. **Adjust the Brightness to set the intensity of the ambient light.**
5. **To apply a custom light color to the image, click on the Color box and select a color.**
6. **To apply a colored gel to the light, select one from the Gels pop-up menu.**
7. **Click the Done icon to apply the filter to your image.**

See the **Ambient Light** filter for more information.

Auto Adjust

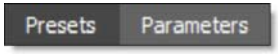
Automatically adjusts the image using Auto Color, Auto Contrast and Auto Levels processes.

1 **Apply Auto Adjust from the Color category.**

2 **Try out the presets.**

The only choices in Auto Adjust are Auto Color, Auto Contrast and Auto Levels.

3 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



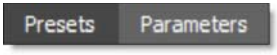
4 **Use the Opacity slider to set the amount of auto adjustment.**

See the **Auto Adjust** filter for more information.

Black and White

Black and White converts color images to black and white simulating the look of Black and White photographic filters.

1. **Apply Black and White from the Color category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



4. **From the Filter pop-up, select the type of black and white filter to be applied to your color image.**

   Your choice of filter can dramatically change the black and white result.

5. **Use the Brightness, Contrast and Gamma controls to further adjust the image.**
6. **Click the Done icon to apply the filter to your image.**

See the **Black and White** filter for more information.

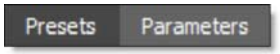
Bleach Bypass

Bleach Bypass is a film laboratory technique where, by skipping the bleach stage in the color processing sequence, silver is retained in the image along with the color dyes. The result is effectively a black and white image superimposed on a color image. Bleach Bypass images have increased contrast, reduced saturation, often giving a pastel effect.

1. **Apply Bleach Bypass from the Film Lab category.**
2. **Try out some of the presets.**

   At the top left of the Presets window, the presets are categorized into various groups located inside a pop-up menu.

3. **In the Presets window, choose a new preset group from the pop-up menu to see a different set of filter presets.**
4. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



5. **Use the Amount slider to control the strength of the Bleach Bypass filter.**
6. **Saturation, Contrast and Temperature sliders are provided for additional enhancement.**
7. **Click the Done icon to apply the filter to your image.**

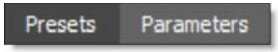
See the **Bleach Bypass** filter for more information.

Blur

Blurs the image with individual horizontal and vertical controls. It's fast, high quality and blurs outside the frame which removes the dark inward bleeding edges of most blurs.

1 **Apply Blur from the Lens category.**

2 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



3 **Adjust the Blur-Horizontal slider.**

Since Gang is activated by default, the Blur-Vertical amount will match the Horizontal value.

4 **Un-click the Gang and now the Horizontal and Vertical sliders can be moved independently.**

5 **Set the Position of the blur if you'd like.**

By default, the Position is set to Centered, where the image is equally blurred inward and outward. You can also set the Position to Inner or Outer. Inner and Outer are good for shrinking or growing mattes.

6 **Click the Done icon to apply the filter to your image.**

See the **Blur** filter for more information.

Borders

Select from a variety of different pre-made borders or create your own.

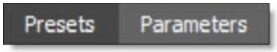
1 **Apply Borders from the Special Effects category.**

2 **Try out some of the presets.**

At the top left of the Presets window, the presets are categorized into various groups located inside a pop-up menu.

3 **In the Presets window, choose a new preset group from the pop-up menu to see a different set of filter presets.**

4 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



5 **If you selected one of the pre-made Border 1-11 presets, you can adjust the Orientation, Invert state, Softness, Roughness and Randomization of the edge.**

Variable colored, softened borders can also be created using Border > Type > Custom.

6 **Select Border > Type > Custom. You can then adjust the Size, Color, Softness, Roughness and Randomization of the edge.**

7 **To adjust the image within the border, click and drag the center image point to the desired location.**

8 **You can also use the Transform > Scale and Rotate controls to transform the image within the border.**

9 **Click the Done icon to apply the filter to your image.**

See the **Borders** filter for more information.

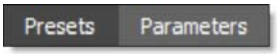
Cartoon

Converts the image into a cartoon.

1. **Apply Cartoon from the Special Effects category.**
2. **Select the Magnifier tool in the Viewer.**

When the Magnifier is selected, a portion of the image is displayed at a 1:1 pixel ratio in the Magnifier window and shows the actual pixels of the image with the Cartoon filter applied. The Magnifier will accurately represent what the Cartoon filter will look like when applied to the full size image.

3. **Try out some of the presets.**
4. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



5. **Adjust the Amount to the desired level.**
6. **Set the Detail. Increasing the value shows more detail while decreasing the value shows less detail.**
7. **Adjust the Line control to set the amount of outlining.**
8. **Click the Done icon to apply the filter to your image.**

See the **Cartoon** filter for more information.

Center Spot

Center Spot diffuses and blurs distracting backgrounds while keeping a center spot in focus. The center spot can be moved, sized and the amount of blur can be controlled. Warm Center Spot combines the benefits of Center Spot with a warming filter making it ideal for portraits and skintones.

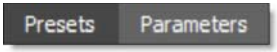
1 **Apply Center Spot from the Diffusion category.**

2 **Try out some of the presets.**

At the top left of the Presets window, the presets are categorized into various groups located inside a pop-up menu.

3 **In the Presets window, choose a new preset group from the pop-up menu to see a different set of filter presets.**

4 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



5 **Adjust the Spot > Position by clicking and dragging the center image point to the desired location.**

6 **Set the Radius, Falloff Radius and Falloff.**

The area covered by the spot will be in focus with all other areas blurred.

7 **If you are curious, you can see what the Spot looks like by changing your View to Spot. Change your View to Output when done.**

8 **Adjust the Horizontal and Vertical Blur to your liking.**

9 **If you applied a Warm Center Spot preset, adjust the Temperature > Color and Opacity sliders to your liking.**

10 **Click the Done icon to apply the filter to your image.**

See the **Center Spot / Warm Center Spot** filters for more information.

Chroma Bands

Creates rainbow diffraction patterns.

1. **Apply Chroma Bands from the Light category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

4. **Click and drag the point control to move the Chroma Bands and use Scale to change the size.**
5. **Change Spread to control the distribution of the bands and Taper to fade the edges.**
6. **Adjust Cycles to set the amount of bands and Density to control the amount of rays.**
7. **Set the Brightness and Chroma as desired.**
8. **Click the Done icon to apply the filter to your image.**

See the **Chroma Bands** filter for more information.

Chromatic Aberration

Chromatic aberration is caused by a lens having a different refractive index for different wavelengths of light and is seen as fringes of color around the edges of the image. This fringing is removed by un-distorting the individual color channels.

1 **Apply Chromatic Aberration from the Lens category.**

2 **Select the Magnifier tool in the Viewer.**

When the Magnifier is selected, a portion of the image is displayed at a 1:1 pixel ratio in the Magnifier window and shows the actual pixels of the image with the Chromatic Aberration filter applied. The Magnifier will accurately represent what the Chromatic Aberration filter will look like when applied to the full size image.

Note: The Magnifier zoom controls are disabled in Chromatic Aberration for performance reasons.

3 **Look at the edges of the image and determine if the chromatic aberration is red/cyan, green/magenta, or blue/yellow.**

4 **Start by adjusting the Distortion parameter for the particular color fringing that you are trying to remove. For instance, if you see red/cyan fringing, adjust the Distortion slider in the Red/Cyan group.**

If you are using anamorphic motion picture lenses or are experiencing non-radial, asymmetric fringing, you may need to adjust the Anamorphic Squeeze and Curvature X/Y parameters.

5 **Click the Done icon to apply the filter to your image.**

Note: Chromatic Aberration must be applied as the first layer (bottom of the layer stack) when multiple layers are used. Otherwise, all filters below will not be rendered.

See the **Chromatic Aberration** filter for more information.

Color Correctors

DFT includes a number of different color correctors that are handy for adjusting an image's color. They include: Color Correct, F-Stop, Printer Points, Telecine and Temperature. The Color Correct filter will be used in the following tutorial since it is similar to the other color correctors.

1. **Apply Color Correct from the Color category.**
2. **Try out some of the presets.**
3. **Adjust any of the sliders in the Master group.**

   The master settings affect the entire image. However, you can also use mattes in the shadow, midtone and highlight regions to adjust the color selectively in those areas.

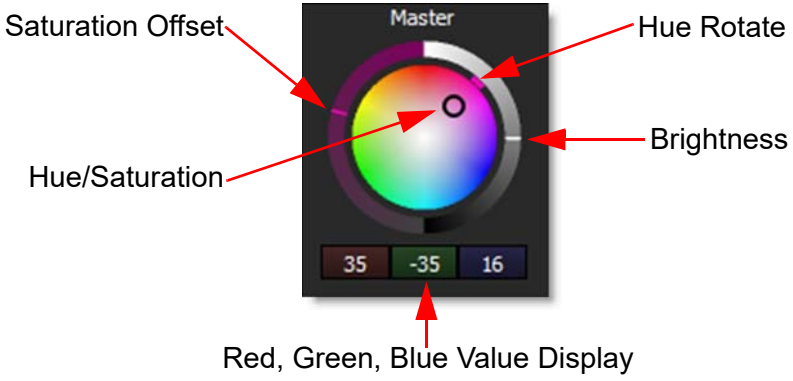
4. **Change your View to Shadows, Midtones or Highlights to see the matte values.**

   The areas that are white in the matte are the areas that will be adjusted by the color controls. The areas defined as shadows, midtones or highlights can be adjusted by modifying the Position and Range parameters.

5. **Use the Shadows, Midtones or Highlights Position parameters if you want to select different values for the adjustment.**
6. **Increase the Shadows, Midtones or Highlights Range controls to add more values to the adjustment. Decrease for less values.**
7. **Change your View to Output to see the image.**
8. **Adjust the sliders in the Shadows, Midtones or Highlights groups to see how it affects your image.**

An alternative to adjusting the sliders is to use the Color Wheels.

The color wheels have the following controls:



9 Move the center point on one of the Color Wheels to adjust the Hue and Saturation.

As the center point is moved, the Hue and Saturation adjustments are achieved by simultaneously changing the Red, Green and Blue parameters in the respective group: Master, Shadows, Midtones, or Highlights. The current Red, Green and Blue values are displayed below the Color Wheel.

10 Drag the colored dash on the outside of the Color Wheel to rotate the hue.

11 To increase or decrease the selected color's saturation, adjust the Saturation Offset by sliding the dash on the left circular slider.

12 Change the Brightness by dragging the dash on the right circular slider.

To reset a color wheel, you can right-click on any color wheel and select Reset > All, Shadows, Midtones, or Highlights.

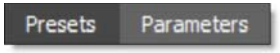
13 Click the Done icon to apply the filter to your image.

See **Color Correctors** for more information.

Color Gradient

Color Gradient colors and or darkens only a portion of the image giving you the ability to simulate any Color Gradient filter. Presets for your favorite color gradient filters are provided as well as the ability to create custom colors. There is a graduated transition for a smooth color blend between the colored/darkened portion and the original image.

1. **Apply Color Gradient from the Grads/Tints category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



4. **Adjust the Grad > Type, Corner Points, Size and Angle.**

   To adjust the Corner Points, just click and drag them to the desired location.

   Note: On some host programs, you must highlight the effect title in the Effect Controls window to see the on-screen controls.

   Go to the **Grad** section of Common Filter Controls to see how the Grad controls work.

5. **If you are curious, you can see what the gradient looks like by changing your View to Grad. Change your View to Output when done.**

   The white area of the gradient will be tinted.

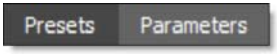
6. **If you want less coloring of the image, turn down the Filters > Opacity.**
7. **Image highlights can be retained by adjusting the Filters > Preserve Highlights control to a value of 100.**
8. **Click the Done icon to apply the filter to your image.**

See the **Color Gradient** filter for more information.

Color Infrared

Color Infrared simulates infrared filters used in conjunction with infrared sensitive film or sensors to produce very interesting false-color images with a dreamlike or sometimes lurid appearance.

1. **Apply Color Infrared from the Special Effects category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



4. **Adjust the Magenta and Blue sliders to your liking.**
5. **Changing the Hue will only adjust hue in non-blue areas.**

   Color Infrared images usually have high contrast.

6. **Lower the Contrast setting if it is too high for your image.**
7. **Click the Done icon to apply the filter to your image.**

See the **Color Infrared** filter for more information.

Color Shadow

Creates a high contrast image overlayed with a gradient.

1 **Apply Color Shadow from the Special Effects category.**

2 **Try out some of the presets.**

3 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

4 **Adjust the Threshold to obtain the desired amount of image detail.**

The color gradient can be adjusted to your specific image.

5 **Adjust the Grad > Direction, Corner Points and Size to position and adjust the grad.**

To adjust the Corner Points, just click and drag them to the desired location.

Go to the **Grad** section of Common Filter Controls to see how the Grad controls work.

6 **To change the background or gradient colors, click on the Background Color, Color 1 or Color 2 > Color boxes and select a color.**

Color 1 sets the top of the gradient and Color 2 sets the bottom of the gradient.

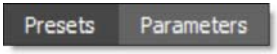
7 **Click the Done icon to apply the filter to your image.**

See the **Color Shadow** filter for more information.

Color Spot

Tints the image using presets for common photographic filters except for a center spot which retains normal color. The center spot can be moved, sized and the amount of blur can be controlled.

1. **Apply Color Spot from the Grads/Tints category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



4. **Adjust the Spot > Position by clicking and dragging the center image point to the desired location.**
5. **Set the Spot > Radius, Falloff Radius and Falloff.**
6. **If you are curious, you can see what the Spot looks like by changing your View to Spot. Change your View to Output when done.**

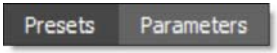
   The white area of the spot will be tinted.

7. **If you want less coloring of the image, turn down the Color > Opacity.**
8. **Image highlights can be retained by adjusting the Color > Preserve Highlights control to a value of 100.**
9. **Click the Done icon to apply the filter to your image.**

See the **Color Spot** filter for more information.

Colorize Gradient

1. **Apply Colorize Gradient from the Grads/Tints category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



4. **Choose your color by clicking on the Shadows, Midtones or Highlights > Color boxes and selecting a color.**
5. **Adjusting the Shadows, Midtones or Highlights > Position slider will set where the colors are applied to the image.**
6. **If you want less coloring of the image, turn down Opacity.**

   You can also use a gradient to control where the colorization is applied.
7. **To use a gradient, click on Grad > Enable.**
8. **Adjust the Grad > Type, Corner Points, Size and Angle.**

   To adjust the Corner Points, just click and drag them to the desired location.

   Note: On some host programs, you must highlight the effect title in the Effect Controls window to see the on-screen controls.

   Go to the **Grad** section of Common Filter Controls to see how the Grad controls work.
9. **If you are curious, you can see what the Grad looks like by changing your View to Grad. Change your View to Output when done.**

   Go to the **Colorize Gradient** filter for more information.

Cross Processing

Cross-processing is a photographic technique where print film (C41) is processed in the set of chemicals usually used to process slide film (E6) or vice versa. The final result yields images with oddly skewed colors and increased contrast and saturation. Different film stocks produce different results, so we have created what we feel is a representative look.

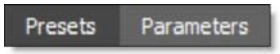
1 **Apply Cross Processing from the Film Lab category.**

2 **Try out some of the presets.**

At the top left of the Presets window, the presets are categorized into various groups located inside a pop-up menu.

3 **In the Presets window, choose a new preset group from the pop-up menu to see a different set of filter presets.**

4 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



5 **Use the Amount slider to control the strength of the Cross Processing filter.**

6 **Switch the Mode to Slide to Print.**

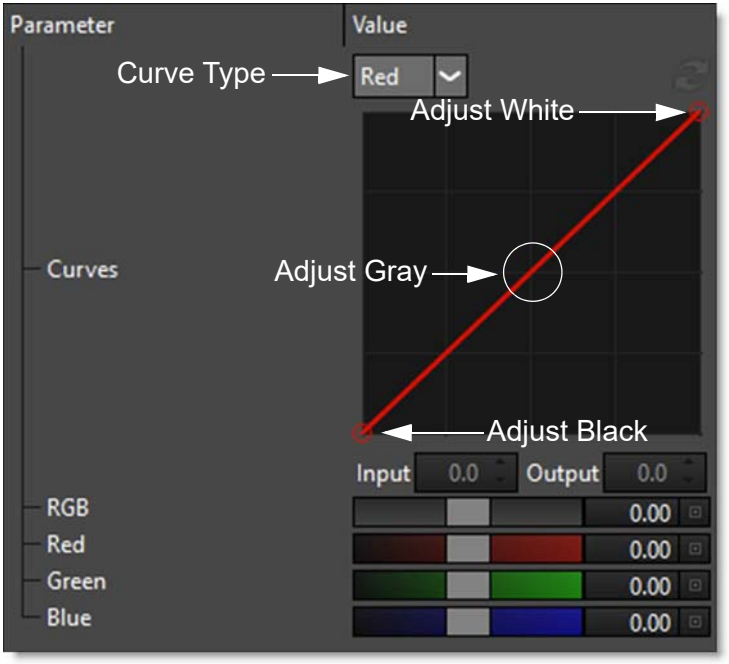
Both Print to Slide and Slide to Print modes are available.

7 **Click the Done icon to apply the filter to your image.**

See the **Cross Processing** filter for more information.

Curves

Curves adjusts the entire tonal range of an image by changing the shape of RGB, Red, Green or Blue curves. Curve points can be adjusted throughout the range of shadows to highlights.



1. **Apply Curves from the Color category.**
2. **Select RGB, Red, Green or Blue from the Curve Type pop-up menu. You can also click directly on an existing curve in the graph to select it.**

Adding and deleting points from the curve is quick and easy.

3. **Click directly on the curve to add a new point. Up to five points can be added.**
4. **Delete points by clicking and dragging them to the edge of the graph.**
5. **Move points by clicking and dragging them.**

Adjust curve points to achieve a specific result.

6 **Move a point in the top portion of the curve to adjust the shadows.**

7 **Move a point in the center of the curve to adjust the midtones.**

8 **Move a point in the top portion of the curve to adjust the highlights.**

9 **Move the curve upward or downward to lighten or darken the image. The steeper sections of the curve represent areas of higher contrast; flatter sections represent areas of lower contrast.**

10 **To darken highlights, move a point near the top of the curve downward. Moving a point either down or to the right maps the input value to a lower output value, and the image darkens.**

11 **To lighten the shadows, move a point near the bottom of the curve upward. Moving a point either up or to the left maps a lower input value to a higher output value, and the image lightens.**

12 **Use the RGB, Red, Green and Blue sliders to globally adjust the curves.**

13 **Click the Done icon to apply the filter to your image.**

See the **Curves** filter for more information.

Day for Night

Day for Night simulates a technique used for shooting exteriors in daylight made to look like they were photographed at night.

1 **Apply Day for Night from the Special Effects category.**

Day for Night uses a type of diffusion that grows darks areas into bright areas.

2 **Try out some of the presets.**

3 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

4 **Adjust the Diffusion > Blur and Opacity parameters to your liking.**

The Day for Night effect relies on a blue tint to simulate moonlight. You can modify the color of the tint as well as its intensity using the Moonlight controls.

5 **Use the Moonlight controls to adjust the tint applied to the image.**

Photographically the image is underexposed by two stops or so. We duplicate the underexposure by using a combination of color correction controls. Modify the color correct presets brighter or darker depending on your image.

6 **Change the Color Correct settings if necessary.**

7 **Click the Done icon to apply the filter to your image.**

See the **Day for Night** filter for more information.

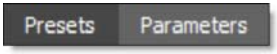
Defog

Using advanced deweathering algorithms, Defog restores clear day contrasts and colors of a scene taken in bad weather such as fog and mist. It is also successful in removing the effects of optical Fog and Diffusion filters.

1 **Apply Defog from the Special Effects category.**

2 **Try out some of the presets.**

3 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



4 **Click on the Defog > Color picker and click on an area of fog.**

This sets the color of the fog to be removed.

5 **Adjust the Defog > Defog parameter to remove more fog or mist.**

The fog is removed in a radial pattern emanating from the vanishing point. For instance, if your fog moves in the direction of top right to bottom left, set your vanishing point towards the top right corner and the fog removal will be more intense at the upper right and fall off at the bottom left. However, in most cases, the vanishing point can be left in the center of the screen and you will obtain acceptable results.

6 **If needed, move the Vanishing Point to a new location by clicking and dragging the on-screen control in the center of the screen.**

If the defogging operation causes the shadow areas to become too contrasty, adjust the Min Depth slider to a lower value. This will bring back some shadow detail.

7 **Lower the Min Depth value if you have lost to much detail in the shadow portions of the image.**

8 **Click the Done icon to apply the filter to your image.**

See the **Defog** filter for more information.

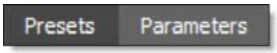
DeFringe

Purple or blue fringing around overexposed areas is a result of sensor overloading in video as well as digital still cameras. DeFringe isolates and removes the various types of color fringing.

1 **Apply DeFringe from the Lens category.**

Determine the color of the fringing that you would like to remove. Let's say that you have purple fringing in the highlight areas of your image.

2 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



3 **Go to the Magenta parameter group.**

4 **Move the Magenta slider to the right until the purple fringing is gone.**

5 **If the purple fringing is not being removed when the Magenta slider is adjusted, you may need to adjust the Position slider.**

6 **Change your View to Magenta to see the matte values.**

The areas that are white in the matte are the areas that will be defringed.

7 **Change your View back to Output.**

8 **Move the Position slider to the right or left until you see the fringing go away.**

This may be necessary if your purple fringing is not the same hue of what we consider to be magenta.

9 **If there is still some magenta left, you may want to increase the value of the Range slider to include more values considered as magenta.**

10 **Click the Done icon to apply the filter to your image.**

See the **DeFringe** filter for more information.

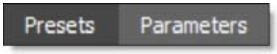
Depth of Field

Depth of Field can be added to a scene by isolating and blurring only a portion of the image. The amount of blurring is directly proportionate to the luminance of the depth source.

1 **Apply Depth of Field from the Lens category.**

2 **Try out some of the presets.**

3 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



4 **Set the Depth > Depth to Matte.**

5 **Adjust the Blur sliders to your liking.**

In some of the filters, a matte is generated to create the desired effect--in this case, depth of field.

6 **Change your View to Depth to see the matte values.**

The areas that are white in the matte are the areas where blur will be introduced. The location of the blur within the scene can be adjusted by modifying the Matte > Position and Range parameters.

7 **Change the Matte > Position parameter if you want to select different values to be used for the matte.**

8 **Increase the Matte > Range control to add more values to the matte. Decrease for less values.**

9 **Increase the Matte > Blur parameter to soften the transition areas of the matte.**

10 **Change your View to Output to see the filtered image.**

The Depth of Field filter can also use a grad or an image as the depth source instead of the matte.

11 **Set the Depth to Grad.**

12 **Adjust the Grad > Type, Corner Points, Size and Angle.**

To adjust the Corner Points, just click and drag them to the desired location.

Note: On some host programs, you must highlight the effect title in the Effect Controls window to see the on-screen controls.

Go to the **Grad** section of Common Filter Controls to see how the Grad controls work.

13 **To use an image as the depth source:**

- **Change Depth > Depth to Input.**
- **Click the Depth > Input > Browse button.**
- **Select a file.**

14 **Click the Done icon to apply the filter to your image.**

See the **Depth of Field** filter for more information.

Detail

Detail presents a new technique for performing selective sharpening, detail enhancement and edge aware smoothing.

1 **Apply Detail from the Image category.**

2 **Select the Magnifier tool in the Viewer.**

When the Magnifier is selected, a portion of the image is displayed at a 1:1 pixel ratio in the Magnifier window and shows the actual pixels of the image with the Detail filter applied. The Magnifier will accurately represent what the Detail filter will look like when applied to the full size image.

3 **Try out some of the presets.**

At the top left of the Presets window, the presets are categorized into various groups located inside a pop-up menu.

4 **In the Presets window, choose a new preset group from the pop-up menu to see a different set of filter presets.**

5 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

6 **To sharpen or enhance detail, increase the values of the Detail > Coarse, Medium and Fine controls. Increasing the values sharpens/enhances detail while decreasing the values smooths/decreases detail.**

7 **Enable Detail > Gang to move all sliders at once.**

If there are unwanted areas of the image that are being affected, you can optionally use a matte to isolate the effect.

8 **Activate Matte > Enable.**

9 **Change your View to Matte to see the matte values.**

The idea here is to generate a matte that isolates the areas of the image that will be affected. The white areas of the matte are the areas that will be modified by the Detail controls. The matte has been preset to a highlight luminance matte, but this can be easily changed.

10 **Select the appropriate Matte > Extract On option for your image.**

11 **If needed, change the Matte > Position parameter so that the image areas you are trying to smooth are as white as possible in the matte.**

12 **Adjust the Matte > Range value so that the white values of the matte are limited as much as possible to the image areas that you are trying to isolate.**

13 **Increase the Matte > Blur parameter if you want to soften the transition areas of the matte.**

14 **Change your View to Output to see the filtered image.**

15 **Click the Done icon to apply the filter to your image.**

See the **Detail** filter for more information.

Diffusion

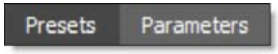
Diffusion creates atmosphere by reducing contrast while creating a glow around highlights or shadows using an extensive texture library.

1 **Apply Diffusion from the Diffusion category.**

2 **Try out some of the presets.**

Each preset uses a different texture to create the diffusion effect.

3 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



4 **Adjust the Diffusion > Brightness parameter to control the amount of diffusion added to the image.**

You can either use the texture by itself or combine it with a matte using one of the Texture > Blend modes. The areas that are white in the matte are the areas where diffusion will be introduced.

5 **Combine the texture with a matte by changing Texture > Blend from Texture Only to Multiply.**

I like the Multiply blend mode because it only adds the texture in the areas of the matte.

6 **Change your View to Matte to see the matte values.**

The areas that are white in the matte are the areas where diffusion will be introduced. The location of the diffusion within the scene can be adjusted by modifying the Matte > Position and Range parameters.

7 **Change the Matte > Position parameter if you want to add diffusion to different areas of the image.**

8 **Adjust the Matte > Range slider to increase or decrease the image areas affected by the diffusion.**

9 **Change your View to Output to see the filtered image.**

10 **Adjust the position of the texture by clicking and dragging the center image point to the desired location.**

11 **You can also use the Texture > Transform controls to transform the texture.**

12 **Adjust the Diffusion > Brightness, Blur and Color of the diffusion to your liking.**

13 Click the Done icon to apply the filter to your image.

See the **Diffusion** filter for more information.

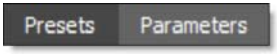
Double Fog

The Double Fog filter creates a soft, misty atmosphere over the image by first applying fog using a vanishing point along the direction of increasing distance in the image. Then, a second pass blooms image highlights.

1 **Apply Double Fog from the Diffusion category.**

2 **Try out some of the presets.**

3 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



4 **Click on the Fog > Color parameter to set the color of the fog.**

This sets the color of the fog to be added.

5 **Adjust the Fog > Fog parameter to control how much overall fog is added to the image.**

The fog is added in a radial pattern emanating from the vanishing point. For instance, if want your fog to move in the direction of top right to bottom left, set your vanishing point towards the top right corner and the fog will be more intense at the upper right and fall off at the bottom left. However, in most cases, the vanishing point can be left in the center of the screen and you will obtain acceptable results.

6 **If needed, move the Vanishing Point to a new location by clicking and dragging the on-screen control in the center of the screen.**

You can limit where the fog is added to your image by using the Min/Max Depth sliders. Min Depth controls how much fog is added in the darker areas of the image, while Max Depth controls how much fog is added in the brighter areas of the image.

7 **Change the Min/Max Depth values if you want to control how fog is added in the shadow and highlight areas of the image.**

Secondary fogging effects can be achieved using the Glow parameters. A portion of the screen is isolated with a matte, and based on this matte, additional fog and glow can be added.

8 **Adjust the Glow > Brightness, Blur and Color settings to your liking.**

In some of the filters, a matte is generated to create the desired effect--in this case, highlight glow.

9 **Change your View to Matte to see the matte values.**

The areas that are white in the matte are the areas where glow will be introduced. For instance, If you want to put glow around bright lights, make sure that the light sources appear as white in the matte. The location and amount of the additional glow within the scene can be adjusted by modifying the Matte > Position and Range parameters.

10 **Change the Matte > Position parameter if you want to select different luminance values to be used for the matte.**

11 **Increase the Matte > Range value to add more glow into the scene. Decrease for less glow.**

12 **Increase the Matte > Blur parameter to soften the transition areas of the matte.**

13 **Change your View to Output to see the filtered image.**

14 **To create Glow effects around highlights such as bright lights, change your Glow > Blend parameter to Add and make sure that your matte includes only the light sources.**

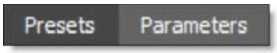
15 **Click the Done icon to apply the filter to your image.**

See the **Double Fog** filter for more information.

Dual Gradient

Dual Gradient applies two photographic filters to the image which are blended together with a gradient.

1. **Apply Dual Gradient from the Grads/Tints category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



The color gradient can be adjusted to your specific image.

4. **Adjust the Grad > Direction, Corner Points and Size to position and adjust the grad.**

   To adjust the Corner Points, just click and drag them to the desired location.

   Go to the **Grad** section of Common Filter Controls to see how the Grad controls work.

5. **To set the Dual Gradient colors, click on the Color 1 or Color 2 > Color boxes and select a color.**
6. **If you want less coloring of the image, turn down the Color 1 or Color 2 > Opacity.**
7. **Image highlights can be retained by adjusting the Preserve Highlights control to a value of 100.**
8. **Change your View to Grad to see the color gradient being applied to the image.**
9. **Change your View back to Output to see the filtered image.**
10. **Click the Done icon to apply the filter to your image.**

See the **Dual Gradient** filter for more information.

Enhancing

Selectively enhance any color to make it pop with little to no effect on other colors.

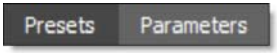
1 **Apply the Enhancing filter from the Color category.**

2 **Try out some of the presets.**

At the top left of the Presets window, the presets are categorized into various groups located inside a pop-up menu.

3 **In the Presets window, choose a new preset group from the pop-up menu to see a different set of filter presets.**

4 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



5 **Adjust the Enhancing slider to make the red, orange and brown values pop.**

In some of the filters, a matte is generated to create the desired effect--in this case, the enhancement effect. By default, the Matte > Hue is preset to red values.

6 **Change your View to Matte to see the matte values.**

The areas that are white in the matte are the red, orange and brown areas of the image that will be enhanced. The enhancement effect within the scene can be adjusted by modifying the Matte > Hue and Range parameters.

7 **Choose another Matte > Preset or change the Matte > Hue parameter if you want to add enhancement to different areas of the image.**

8 **Adjust the Matte > Range slider to increase or decrease the areas affected by the enhancement.**

9 **Change your View to Output to see the image.**

10 **Click the Done icon to apply the filter to your image.**

See the **Enhancing** filter for more information.

Eye Light

Creates a targeted light to be placed around a person's eyes.

1. **Apply Eye Light from the Light category.**
2. **Adjust the position of the eye light by clicking and dragging the center image point to the desired location.**
3. **You can also use the Transform controls to transform the eye light.**
4. **Select either the Light > Blend > Add or Screen Blend mode.**

   Add will burn out highlights while the Screen Mode will retain them.
5. **Adjust the Light > Brightness to set the intensity of the light.**

   Note: You can darken the entire image except for the eye light shape by adjusting the Shadow > Brightness.
6. **Use the Light > Blur sliders to control the softness of the light.**
7. **To apply a custom light color to the image, click on the Color box and select a color.**
8. **To apply a colored gel to the light, select one from the Gels pop-up menu.**
9. **Click the Done icon to apply the filter to your image.**

See the **Eye Light** filter for more information.

Fan Rays

Generates asymmetric fanned rays.

1. **Apply Fan Rays from the Light category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

4. **Click and drag the point control to move the Fan Rays and use Scale to change the size.**
5. **Adjust the Brightness and Color.**
6. **Use Element Count to set the amount of rays.**
7. **Change Randomize and Jitter to vary the look of the rays.**
8. **Click the Done icon to apply the filter to your image.**

See the **Fan Rays** filter for more information.

Film Stocks

Film Stocks is a unique filter that simulates 294 different color and black and white still photographic film stocks, motion picture films stocks and historical photographic processes.

1 **Apply Film Stocks from the Film Lab category.**

2 **Try out some of the presets.**

At the top left of the Presets window, the film stocks are categorized into various groups located inside a pop-up menu.

3 **In the Presets window, choose a new preset group from the pop-up menu to see a different set of film stock presets.**

4 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

Each preset sets a combination of the various parameters to achieve the desired effect, but only the parameters that are necessary. You can modify the existing settings including adjusting those controls that were not previously set.

5 **Use the Amount slider to set the amount of the selected preset. The Amount mixes between the full effect of the preset and the original image.**

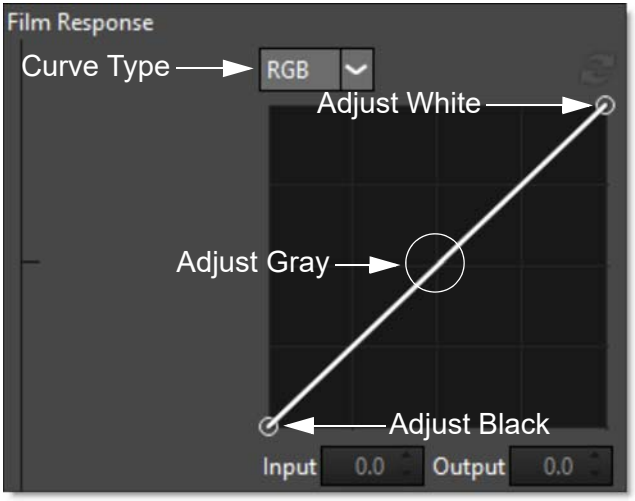
To mimic the characteristics of a particular film stock, a combination of settings for the RGB channels have been set to form a film response curve.

6 **Change the Film Response > RGB, R, G and B sliders. They will minimize or accentuate the pre-configured film response curve.**

Note: If you are using a black and white preset, the grayscale film response curve is adjusted using RGB.

7 **Adjust any of the Black and White, Color Correct, Filter, Sharpen, Diffusion, Vignette or Grain settings to your liking.**

In the DFT interface, you can use Film Response > Curves to adjust the entire tonal range of an image by changing the shape of the curve. The Curves adjustment lets you adjust points throughout the tonal range of an image (from shadows to highlights).



8 **Select RGB, Red, Green or Blue from the Curve Type pop-up menu. You can also click directly on an existing curve in the graph to select it.**

Adding and deleting points from the curve is quick and easy.

9 **Click directly on the curve to add a new point. Up to five points can be added.**

10 **Delete points by clicking and dragging them to the edge of the graph.**

11 **Move points by clicking and dragging them.**

Adjust curve points to achieve a specific result.

12 **Move a point in the top portion of the curve to adjust the shadows.**

13 **Move a point in the center of the curve to adjust the midtones.**

14 **Move a point in the top portion of the curve to adjust the highlights.**

15 **Move the curve upward or downward to lighten or darken the image. The steeper sections of the curve represent areas of higher contrast; flatter sections represent areas of lower contrast.**

16 **To darken highlights, move a point near the top of the curve downward. Moving a point either down or to the right maps the input value to a lower output value, and the image darkens.**

17 **To lighten the shadows, move a point near the bottom of the curve upward. Moving a point either up or to the left maps a lower input value to a higher output value, and the image lightens.**

18 **Click the Done icon to apply the filter to your image.**

See the **Film Stocks** filter for more information.

Flashing

Flashing allows you to use photographic filters to lower the contrast of your shadows or highlights. The motion picture lab can expose a small amount of light to the film at various stages of the developing and printing process. For example, Negative plus Dupe Negative flashing lifts blacks, while Print plus Master Positive flashing softens whites.

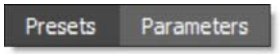
1 **Apply Flashing from the Film Lab category.**

2 **Try out some of the presets.**

At the top left of the Presets window, the presets are categorized into various groups located inside a pop-up menu.

3 **In the Presets window, choose a new preset group from the pop-up menu to see a different set of filter presets.**

4 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



5 **Adjust the Shadows > Brightness slider to brighten shadow areas.**

6 **Adjust the Highlights > Brightness slider to darken highlight areas.**

7 **To flash the Shadows or Highlights with a custom color, click on the Shadows or Highlights > Color box and select a color.**

8 **To choose one of the preset filters, select a filter from the Shadows or Highlights > Presets list.**

9 **Once colors have been chosen, adjust the Shadows or Highlights > Brightness sliders to set the amount of color added to either the Shadows or Highlights.**

10 **Change your View to Shadows or Highlights to see the matte values.**

In some of the filters, a matte is generated to create the desired effect--in this case, flashing. The areas that are white in the matte are the areas that will be adjusted by either the Shadows or Highlights sliders. The areas defined as Shadows or Highlights can be adjusted by modifying the Position and Range parameters.

11 **Use the Shadows or Highlights Position parameters if you want to select different values to be used for the matte.**

12 **Increase the Shadows or Highlights Range controls to add more values to the matte. Decrease for less values.**

13 **Change your View to Output to see the image.**

14 **Click the Done icon to apply the filter to your image.**

See the **Flashing** filter for more information.

Flag / Dot

Flags and Dots are rectangular and circular lighting control devices used to create shadow areas on a motion picture or photographic set. This concept has been extended to digital so that areas of the image can be selectively darkened.

1. **Apply Flag or Dot from the Light category.**
2. **Adjust the position of the flag or dot by clicking and dragging the center image point to the desired location.**
3. **You can also use the Transform controls to transform the flag or dot.**
4. **Adjust the Flag or Dot > Brightness to set the intensity.**
5. **Use the Flag or Dot > Blur sliders to control the softness.**
6. **Click the Done icon to apply the filter to your image.**

See the **Flag and Dot** filters for more information.

Fluorescent

Removes the green cast caused by fluorescent bulbs.

1. **Apply Fluorescent from the Color category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

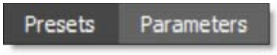
4. **Adjust the Temperature slider as needed.**
5. **Click the Done icon to apply the filter to your image.**

See the **Fluorescent** filter for more information.

Fog

The Fog filter creates a soft, misty atmosphere over the image and glows highlights.

1. **Apply Fog from the Diffusion category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



4. **Adjust the Fog > Brightness, Blur and Color settings to your liking.**

   In some of the filters, a matte is generated to create the desired effect--in this case, fog.

5. **Change your View to Matte to see the matte values.**

   The areas that are white in the matte are the areas where fog will be introduced. The location of the fog within the scene can be adjusted by modifying the Matte > Position and Range parameters.

6. **Change the Matte > Position parameter if you want to select different luminance values to be used for the matte.**
7. **Increase the Matte > Range value to add more fog into the scene. Decrease for less fog.**
8. **Change your View to Output to see the filtered image.**
9. **Increase the Matte > Blur parameter to soften the transition areas of the matte.**
10. **Click the Done icon to apply the filter to your image.**

See the **Fog** filter for more information.

Frost

Frost glows highlights and reduces contrast while softening facial blemishes and wrinkles.

Black Frost offers all the benefits of the Frost filter in a more subtle form. This filter subtly controls highlights, reduces contrast and provides a harder look than the Frost filter, while suppressing facial blemishes and wrinkles.

1 **Apply Frost from the Diffusion category.**

2 **Select the Magnifier tool in the Viewer.**

When the Magnifier is selected, a portion of the image is displayed at a 1:1 pixel ratio in the Magnifier window and shows the actual pixels of the image with the Frost filter applied. The Magnifier will accurately represent what the Frost filter will look like when applied to the full size image.

3 **Try out some of the presets.**

At the top left of the Presets window, the presets are categorized into various groups located inside a pop-up menu.

4 **In the Presets window, choose a new preset group from the pop-up menu to see a different set of filter presets.**

5 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

6 **Adjust Detail > Smoothing to smooth out fine detail.**

Smoothing uses an edge aware smoothing algorithm to minimize fine image detail so that areas with courser detail are unaffected.

7 **Adjust the Mist > Brightness, Blur and Color settings to your liking.**

In some of the filters, a matte is generated to create the desired effect--in this case, mist.

8 **Change your View to Matte to see the matte values.**

The areas that are white in the matte are the areas where mist will be introduced. The location of the mist within the scene can be adjusted by modifying the Matte > Position and Range parameters.

9 **Change the Matte > Position parameter if you want to select different values to be used for the matte.**

10 **Increase the Matte > Range control to add more values to the matte. Decrease for less values.**

11 **Increase the Matte > Blur parameter to soften the transition areas of the matte.**

12 **Change your View to Output to see the filtered image.**

13 **Click the Done button to apply the filter to your image.**

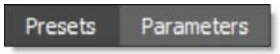
See the **Frost** filters for more information.

Gels

Photographers, cinematographers and lighting designers use colored filters or gels in front of lights. We have created digital equivalents of the lighting gels and these same exact colors can be applied to the entire image or inside a gradient. In cooperation with Gamproducts and Rosco, we have created digital versions of their popular gels.

1. **Apply Gels from the Grads/Tints category.**
2. **Try out some of the presets.**

   At the top left of the Presets window, the gels are categorized into various groups located inside a pop-up menu.
3. **In the Presets window, choose a new presets group from the pop-up menu to see a different set of gel presets.**
4. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



5. **Adjust the Color > Opacity, Preserve Highlights and Exposure Compensation sliders to your liking.**

   The selected gel can be applied through a gradient creating a graduated transition between the colored portion and the original image.
6. **Click on the Grad > Enable checkbox to activate the Grad.**
7. **Adjust the Grad > Type, Corner Points, Size and Angle.**

   To adjust the Corner Points, just click and drag them to the desired location.

   Go to the **Grad** section of Common Filter Controls to see how the Grad controls work.
8. **Click the Done icon to apply the filter to your image.**

See the **Gels** filter for more information.

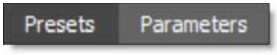
Glow

Glow creates glows around selected areas of the image based on a generated matte.

1 **Apply Glow from the Light category.**

2 **Try out some of the presets.**

3 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



4 **Select either the Glow > Blend > Add or Screen blend mode.**

Add will burn out highlights while the Screen Mode will retain them.

5 **Adjust the Glow > Brightness, Blur and Color settings to your liking.**

In some of the filters, a matte is generated to create the desired effect--in this case, glow.

6 **Change your View to Matte to see the matte values.**

The areas that are white in the matte are the areas where glow will be introduced. The location of the glow within the scene can be adjusted by modifying the Matte > Position and Range parameters.

7 **Change the Matte > Position parameter if you want to select different values to be used for the matte.**

8 **Increase the Matte > Range control to add more values to the matte. Decrease for less values.**

9 **Increase the Matte > Blur parameter to soften the transition areas of the matte.**

10 **Change your View to Output to see the filtered image.**

11 **Click the Done icon to apply the filter to your image.**

See the **Glow** filter for more information.

Glow Darks

Glows and grows the darks areas of the image

1 **Apply Glow Darks from the Light category.**

2 **Try out some of the presets.**

3 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

4 **Adjust the Glow > Amount and Blur settings to your liking.**

In some of the filters, a matte is generated to create the desired effect--in this case, glowing darks.

5 **Change your View to Matte to see the matte values.**

The areas that are white in the matte are the areas where glow will be introduced. The location of the glow within the scene can be adjusted by modifying the Matte > Position and Range parameters.

6 **Change the Matte > Position parameter if you want to select different values to be used for the matte.**

7 **Increase the Matte > Range control to add more values to the matte. Decrease for less values.**

8 **Increase the Matte > Blur parameter to soften the transition areas of the matte.**

9 **Change your View to Output to see the filtered image.**

10 **Click the Done icon to apply the filter to your image.**

See the **Glow Darks** filter for more information.

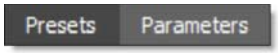
Glow Edges

Glow Edges isolates lines and edges in an image and then adds glow only to these areas resulting in a stylized look.

1 **Apply the Glow Edges filter from the Light category.**

2 **Try out some of the presets.**

3 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



4 **Select either the Add or Screen Blend mode. Add will burn out highlights while the Screen mode will retain them.**

5 **Adjust the Glow > Brightness, Blur and Color settings to your liking.**

In Glow Edges, an edge matte is generated to create the desired effect.

6 **Change your View to Edge to see the matte values.**

The areas that are white in the edge matte are the areas where glow will be introduced.

7 **Adjust the Edge > Brightness to make sure that you have sufficient white areas in the edge matte.**

8 **Set the Edge > Blur to smooth out the edge matte.**

9 **Change your View to Output to see the filtered image.**

10 **Click the Done icon to apply the filter to your image.**

See the **Glow Edges** filter for more information.

Grain

Grain simulates film grain with control of size, intensity and softness.

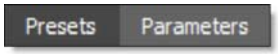
1 **Apply Grain from the Film Lab category.**

2 **Select the Magnifier tool in the Viewer.**

When the Magnifier is selected, a portion of the image is displayed at a 1:1 pixel ratio in the Magnifier window and shows the actual pixels of the image with the Grain filter applied. The Magnifier will accurately represent what the Grain filter will look like when applied to the full size image.

3 **Try out some of the presets.**

4 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



5 **Adjust the Size parameter.**

The larger the Size setting, the larger the grain will be.

6 **Manipulate the Red, Green and Blue Amount parameters.**

The Amount parameters set the red, green and blue intensities of the grain. Film stocks generally have varying amounts of red, green and blue intensities with the blue intensity generally higher than the rest. If you turn the red, green and blue amount sliders to a value of 0, the grain will disappear.

7 **Change the Softness parameter.**

The Softness parameter sets the softness of the grain. Normally, only minor softness adjustments are necessary, usually between a value of 0-1.

8 **Adjust the Response Position and Response Range to control where you will see grain in the image.**

In most cases, film grain is apparent over the entire image except the brightest whites with the black areas being the most affected. A low Response Position value places grain in the darkest image values, while a high Response Position

value places grain in the brightest areas. Response Range will increase or decrease the area where grain is added to the image based on the value of the slider.

9 **If you want, use Response Minimum to set the minimum level of grain that is always added to the image.**

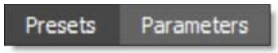
10 **Click the Done icon to apply the filter to your image.**

See the **Grain** filter for more information.

Grunge

Adds film dirt, hair, scratches, stains, splotches, vignetting and grain--all to make your pristine image look like damaged film.

1. **Apply Grunge from the Film Lab category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



4. **Use any combination of dirt, hair, scratches, stains, splotches, vignetting and grain by adjusting the respective element's Opacity slider.**
5. **Change the Randomize slider and you will have a new pattern of whatever element you are adding.**

   Each grunge element can either be black or white depending on whether Positive or Negative is selected in the Type pop-up menu. Positive films have black grunge elements and negative films have white elements.

6. **Choose either Positive or Negative in the Type pop-up menu for each grunge element.**
7. **Click the Done icon to apply the filter to your image.**

See the **Grunge** filter for more information.

Harris Shutter

The Harris Shutter filter uses separate images for the red, green and blue channels or offsets the individual channels of a sequence in time.

1. **Apply Harris Shutter from the Special Effects category.**
2. **Select the source for the Red, Green and Blue channels.**

   If an image is not assigned using the Source parameters, the original image's color channel will be used.
3. **Adjust the Red, Green and Blue > Amounts to the desired level.**
4. **Click the Done icon to apply the filter to your image.**

See the **Harris Shutter** filter for more information.

Haze / Sky

Haze

Reduces excessive blue by absorbing UV light and eliminates haze which tends to wash out color and image clarity.

Sky

Reduces UV light, haze and is pink tinted for added warmth and better colors. It is especially useful for images shot in outdoor open shade and on overcast days.

1 **Apply Haze or Sky from the Color category.**

2 **Try out some of the presets.**

3 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

4 **Set the amount of haze to be removed from the scene using the Haze control.**

5 **Adjust the Temperature and Cyan/Magenta parameters to your liking.**

Note: Cyan/Magenta is only included in the Sky filter.

6 **Click the Done icon to apply the filter to your image.**

See the **Haze and Sky** filters for more information.

High Contrast

Creates an extreme high contrast image.

1. **Apply High Contrast from the Color category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

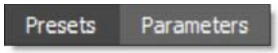
4. **Adjust the Contrast and Amount sliders until you achieve the desired amount of contrast.**
5. **Click the Done icon to apply the filter to your image.**

See the **High Contrast** filter for more information.

Hot Spot

Utilized in most lens flares, glow ball simulates the circular glow created when a light source interacts with a lens.

1. **Apply Hot Spot from the Light category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



4. **Click and drag the point control to move the Hot Spot and use Total Scale to change the size.**
5. **Adjust the Brightness, Inner Color and Outer Color.**
6. **Change the Ring controls to vary the look of the ring.**
7. **Click the Done icon to apply the filter to your image.**

See the **Hot Spot** filter for more information.

Ice Halos

Ice halos are created when small ice crystals in the atmosphere generate halos by reflecting and refracting light. Most notably, circles form around the sun or moon as well as rare occurrences when the entire sky is painted with a web of arcing halos.

1 **Apply Ice Halos from the Light category.**

2 **Try out some of the presets.**

3 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

4 **You can also choose different ice halos by adjusting the Halo > Sun Altitude slider.**

5 **Choose Light > Blend > Add or Screen blend mode.**

Add will burn out highlights while Screen will retain them.

6 **In the Light menu, adjust the Brightness as well as the Displacement and Blur of the ice halo if you'd like.**

7 **Adjust the position of the ice halo by clicking and dragging the center image point to the desired location.**

8 **You can also use the Halo > Scale control to transform the ice halo.**

9 **Combine the ice halo with a matte by changing Halo > Blend from Halo Only to Matte.**

Matte only adds the ice halo in the areas of the matte. If you are not seeing enough of the ice halo, your matte should be adjusted.

10 **Change your View selector to Matte to see the matte values.**

The default matte settings are preset to a highlight matte. The areas that are white in the matte are the areas where the ice halo will be added into the image. The location of the ice halo within the scene can be adjusted by changing the Matte > Position and Range parameters.

11 **Change the View selector from Matte to Output.**

12 **Change the Matte > Position parameter if you want to change where you see the ice halo.**

13 **Increase the Matte > Range value to add more of the ice halo to the scene. Decrease to see less of the ice halo.**

14 **Increase the Matte > Blur parameter to soften the matte.**

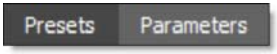
15 **Click the Done icon to apply the filter to your image.**

See the **Ice Halos** filter for more information.

Infrared

Infrared simulates infrared filters used in conjunction with infrared sensitive film or sensors to produce very interesting black and white images with glow in highlight areas.

1. **Apply Infrared from the Special Effects category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



4. **Choose the type of black and white filter to be applied to your color image from the Black and White pop-up menu.**

   The type of Black and White filter that you choose can dramatically change the look of your image.

5. **Set the Mist > Brightness and Blur to your liking.**
6. **If you want, you can use the Color Correct controls to modify the Brightness, Contrast and Gamma of the image.**

   In some of the filters, a matte is generated to create the desired effect--in this case, diffusion.

7. **Change your View to Matte to see the matte values.**

   The areas that are white in the matte are the areas where diffusion will be introduced. The location of the diffusion within the scene can be adjusted by modifying the Matte > Position and Range parameters.

8. **Change the Matte > Position parameter if you want to select different values to be used for the matte.**
9. **Increase the Matte > Range control to add more values to the matte. Decrease for less values.**
10. **Increase the Matte > Blur parameter to soften the transition areas of the matte.**
11. **Change your View to Output to see the filtered image.**
12. **Click the Done icon to apply the filter to your image.**

See the **Infrared** filter for more information.

Kelvin

Degrees Kelvin is the standard unit of measure for color temperature which is a way to characterize the spectral properties of a light source. Low color temperature implies warmer (redder) light, while high color temperature implies a colder (bluer) light.

1 **Apply Kelvin from the Color category.**

2 **Try out some of the presets.**

3 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

The Color Temperature of the image is determined by the difference of the Destination and Source Kelvin parameters.

4 **Adjust the Destination Kelvin slider.**

Presets for a number of different light sources and conditions are provided in degrees Kelvin, the standard unit of measure for color temperature.

5 **If you want less coloring of the image, turn down the Color Temperature > Opacity.**

6 **Image highlights can be retained by adjusting the Color Temperature > Preserve Highlights control to a value of 100.**

The temperature adjustment can be applied through a gradient creating a graduated transition between the colored portion and the original image.

7 **Click on the Grad > Enable checkbox to activate the Grad.**

8 **Adjust the Grad > Type, Corner Points, Size and Angle.**

To adjust the Corner Points, just click and drag them to the desired location.

Go to the **Grad** section of Common Filter Controls to see how the Grad controls work.

9 **If you are curious, you can see what the Grad looks like by changing your View to Grad. Change your View to Output when done.**

10 Click the Done icon to apply the filter to your image.

See the **Kelvin** filter for more information.

Key Light

Using Key Light, an image can be relit by with either a directional or point light.

1 **Apply Key Light from the Light category.**

Parallel is the default light source type and creates a directional light source.

2 **Select the Magnifier tool in the Viewer.**

When the Magnifier is selected, a portion of the image is displayed at a 1:1 pixel ratio in the Magnifier window and shows the actual pixels of the image with the Key Light filter applied. The Magnifier will accurately represent what the Key Light filter will look like when applied to the full size image.

3 **Adjust the Angle to change the direction of the light source.**

4 **Set the Strength slider for the desired light intensity.**

5 **Switch the Type to Point.**

A point light is used where the light either emanates from or fades into a vanishing point depending on the state of the Invert control.

6 **Move the point control in the center of the screen to change the Point light location.**

7 **Activate Invert and the light source will fade into a vanishing point.**

8 **Set the Strength slider.**

9 **Click the Done icon to apply the filter to your image.**

See the **Key Light** filter for more information.

Lens Distortion

Lens Distortion corrects for pin-cushioning and barrel distortion of camera lenses. It is also useful for creating the look of a wide angle lens.

1 **Apply Lens Distortion from the Lens category.**

2 **Start by adjusting the Distortion control to straighten out any curved lines that should be straight.**

Note: Positive Distortion parameters correct Pin-cushioning while negative values correct Barrel distortion.

Depending on the lens that was used, you may need to also adjust the Anamorphic Squeeze and Curvature X and Y parameters.

3 **Click the Done icon to apply the filter to your image.**

Note: Lens Distortion must be applied as the first layer (bottom of the layer stack) when multiple layers are used. Otherwise, all filters below will not be rendered.

See the **Lens Distortion** filter for more information.

Lens Flare

Lens flares are produced by the scattering or flaring of light within a lens when pointed into a bright light. Although an image aberration, lens flares can be added for dramatic effect.

1 **Apply Lens Flare from the Light category.**

2 **Try out some of the presets.**

At the top left of the Presets window, the lens flares are categorized into various groups located inside a pop-up menu.

3 **In the Presets window, choose a new preset group from the pop-up menu to see a different set of lens flare presets.**

4 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

5 **Click and drag the hot spot point control to move the origin of the lens flare. This is the Position control.**

6 **Click and drag the center point control to change the end position of the lens flare. This is the Pivot control.**

7 **Adjust the Color, Brightness, Scale and Angle as desired.**

If the lens flare is positioned towards the edge of the frame, you can use the Edge Flare controls to simulate the flaring of the light source as the flare enters or exists the frame.

8 **Change the Edge Flare > Amount and Size and then move the lens flare towards the edge of the screen to see the effect.**

9 **Noise can be added to all elements by enabling Noise > All Elements and then setting the noise controls.**

Note: To selectively add noise to a single element, you would enable the Lens Noise parameter within the Flare Editor for the desired element. See the next tutorial.

To edit lens flare elements, open the Flare Editor.

Editing A Lens Flare

1 **Click the Edit Flare button.**

The Flare Editor interface opens consisting of a Viewer, Parameters, Global, Flare (currently used flare elements) and Elements (all available elements).

Note: The controls shown in the Global tab affect all elements. These are the same as those shown in the DFT interface prior to opening the Flare Editor.

2 **Click on an element in the Flare window to select it.**

The controls for the selected element are displayed in the Parameters tab.

3 **Adjust the parameters to taste.**

When multiple elements are selected, the controls for all selected elements are displayed and grouped in the Parameters window.

4 **Add additional elements by either...**

- **Double-click an element in the Elements window and it is added to the end of the stack in the Flare window. If an element is selected in the Flare window prior to the double-click, the new element is added after the selection.**

or

- **Drag and drop from the Elements window to the Flare window or Viewer. Multiple selected elements can be dragged and dropped simultaneously.**

5 **To move an element to a new position in the stack, drag the element's icon to a new position. Multiple elements can be moved at once.**

6 **To rename an element, click in the element's text box and type to rename it.**

7 **To delete an element, select it and press the Delete key.**

8 **To delete all elements and start from scratch, press the Reset icon at the top left of the Viewer.**

9 **Click the Done icon to exit the Flare Editor.**

10 **Click the Done icon again to apply the filter to your image.**

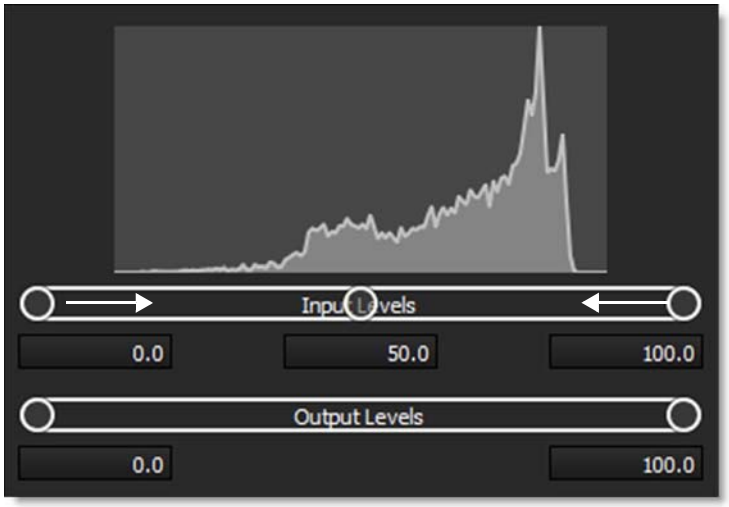
See the **Lens Flare** filter for more information.

Levels

Levels is an image adjustment tool which can move and stretch the brightness levels of an image histogram. It has the power to adjust brightness, contrast, and tonal range by specifying the location of complete black, complete white, and midtones in a histogram

1 **Apply Levels from the Color category.**

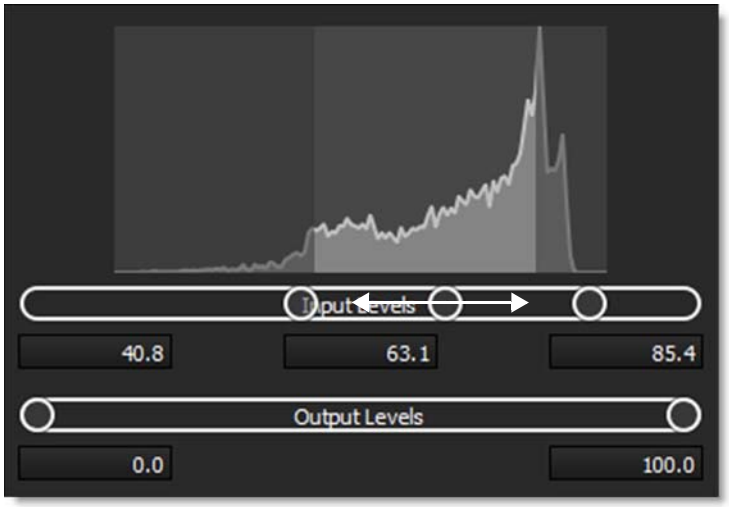
2 **To adjust the shadows and highlights, drag the black and white Input Levels sliders at either end of the histogram.**



For example, if you move the black point slider to the right at level 23.1, Photoshop maps all the pixels at level 23.1 and lower to black. Similarly, if you move the white point slider to the left at level 89.1, Photoshop maps all pixels at level 89.1 and higher to white. The mapping affects the darkest and lightest pixels in each channel. The corresponding pixels in the other channels are adjusted proportionately to avoid altering the color balance.

Note: You can also enter values directly into any of the numeric input fields.

3 **To adjust midtones, use the middle Input slider to make a gamma adjustment.**



Moving the middle Input slider to the left makes the overall image lighter. Moving the middle Input slider to the right has the opposite effect, making the image darker.

4 **To decrease the contrast of the image, use the Output Levels.**

You can view the adjusted histogram by either pressing the H key or by selecting View > Window > Histogram.

5 **Click the Done icon to apply the levels adjustment to your image.**

See the **Levels** filter for more information.

Light

Light can be added to a scene where none existed before just as if you were adding light at the time of shooting. Realistic lighting and shadow is introduced using digital versions of lighting gobos.

1 **Apply Light from the Light category.**

2 **Try out some of the presets.**

At the top left of the Presets window, the gobos are categorized into various groups located inside a pop-up menu.

3 **In the Presets window, choose a new gobo group from the pop-up menu to see a different set of gobo presets.**

4 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

5 **Choose Light > Blend > Add, Screen or Subtract for the blend mode.**

Add will burn out highlights while Screen will retain them. Subtract, on the other hand, will add shadow in place of light in the area of the gobo.

6 **In the Light menu, adjust the Brightness, Displacement, and Blur of the light.**

Adding blur to the light makes the light glow.

7 **Adjust the position of the gobo by clicking and dragging the center image point to the desired location.**

8 **You can also use the Gobo > Transform controls to transform the gobo.**

9 **To apply a custom light color to the image, click on the Light > Color box and select a color.**

10 **To apply a colored gel to the light, select one from the Light > Gels pop-up menus.**

11 **Combine the gobo with a matte by changing Gobo > Blend from Gobo Only to Multiply.**

I like the Multiply blend mode because it only adds the gobo in the areas of the matte.

12 **Change your View selector to Matte to see the matte values.**

The default matte settings are preset to a highlight matte to create the light effect. If you are not seeing sufficient light, your matte should be adjusted. The areas that are white in the matte are the areas where light will be added into the image. The location of the light within the scene can be adjusted by changing the Matte > Position and Range parameters.

13 **Change the Matte > Position parameter if you want to select different values to be used for the light.**

14 **Increase the Matte > Range value to add more light into the scene. Decrease for less light.**

15 **Increase the Matte > Blur parameter to soften the transition areas of the light.**

16 **Change the View selector from Matte to Output.**

17 **The softness of the light can also be adjusted using the Light > Blur setting.**

18 **To use your own image as a light source:**

- **Select Gobo > Gobo > Browse.**
- **When the file browser opens, navigate to your image and select it.**

19 **Click the Done icon to apply the filter to your image.**

See the **Light** filter for more information.

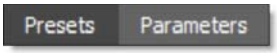
Low Contrast

Low Contrast spreads highlights into darker areas, lowers contrast and keeps bright areas bright.

1 **Apply Low Contrast from the Color category.**

2 **Try out some of the presets.**

3 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



4 **Adjust the Contrast > Light Brightness and Contrast > Light Spread to control the brightness and distance of the light being spread into the shadow areas.**

In some of the filters, a matte is generated to create the desired effect--in this case, low contrast.

5 **Change your View to Matte to see the matte values.**

The areas that are white in the matte will be the image areas used to spread light into the shadow areas. The location of the low contrast within the scene can be adjusted by modifying the Matte > Position and Range parameters.

6 **Change the Matte > Position parameter if you want to select different values to be used for the matte.**

7 **Increase the Matte > Range control to add more values to the matte. Decrease for less values.**

8 **Change your View to Spread to see the special matte used to create the low contrast effect.**

The Spread matte will change as the Contrast > Light Spread slider is adjusted.

9 **Move the Contrast > Light Spread slider to see how it affects the Spread matte. Leave it at a value of 200 when you are done.**

10 **Change your View to Output to see the filtered image.**

11 **Adjust the Contrast > Shadow Brightness if your shadows are still too dark.**

12 **Click the Done icon to apply the filter to your image.**

See the **Low Contrast** filter for more information.

Match

Matches the brightness and color from one image and applies it to another.

1. **Apply the Match filter from the Color category to a target image.**
2. **Select the source image to be matched using the Source selector.**

   The color and brightness of the source image are analyzed and applied to your target image.
3. **Adjust the Color and Brightness parameters to your liking.**
4. **Click the Done icon to apply the filter to your image.**

See the **Match** filter for more information.

Mist

Mist creates atmosphere by reducing contrast while creating a glow around highlights. A more subtle version of Mist, the Black Mist preset creates atmosphere by reducing contrast, but with minimal glow around highlights.The Warm Mist's add a warming filter while Cool Mist adds a cooling filter.

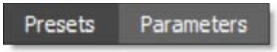
1 **Apply Mist from the Diffusion category.**

2 **Try out some of the presets.**

At the top left of the Presets window, the presets are categorized into various groups located inside a pop-up menu.

3 **In the Presets window, choose a new preset group from the pop-up menu to see a different set of filter presets.**

4 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



5 **Adjust the Mist > Brightness, Blur and Color settings to your liking.**

In some of the filters, a matte is generated to create the desired effect--in this case, mist.

6 **Change your View to Matte to see the matte values.**

The areas that are white in the matte are the areas where glow will be introduced. The location of the glow within the scene can be adjusted by modifying the Matte > Position and Range parameters.

7 **Change the Matte > Position parameter if you want to select different values to be used for the matte.**

8 **Increase the Matte > Range control to add more values to the matte. Decrease for less values.**

9 **Increase the Matte > Blur parameter to soften the transition areas of the matte.**

10 **Change your View to Output to see the filtered image.**

11 **If you applied one of the Warm or Cool Mist presets, adjust the Color Correct > Temperature slider to your liking.**

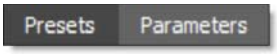
12 Click the Done icon to apply the filter to your image.

See the **Mist** filter for more information.

Multi-Star

User definable multi-point star patterns are generated on highlights in the image.

1. **Apply Multi-Star from the Light category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



4. **Adjust the Star > Brightness, Spokes, Size and Color settings to your liking.**

   In some of the filters, a matte is generated to create the desired effect--in this case, a star filter.

5. **Change your View to Matte to see the matte values.**

   The matte has been preset to a highlight matte to generate the stars. Different luminance values can be selected with the Matte > Position parameter and the range of matte values can be adjusted using Matte > Range.

6. **Change the Matte > Position parameter if you want to select different luminance values to be used for the matte.**

   Stars will be generated wherever there are white values in the matte.

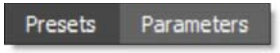
7. **Change your View to Stars to see the generated stars.**
8. **Increase the Matte > Range value to add more stars into the scene. Decrease for less stars.**
9. **Change your View to Output to see the filtered image.**
10. **Click the Done icon to apply the filter to your image.**

See the **Multi-Star** filter for more information.

ND Gradient

ND (Neutral Density) Gradient darkens only a portion of the image using a graduated transition between the darkened portion and the original image. It selectively adjusts brightness without affecting color balance. The most likely use for ND Gradient would be to balance the difference between the sky and ground in a landscape.

1. **Apply ND Gradient from the Grads/Tints category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



4. **Adjust the Exposure slider to vary the amount of neutral density being applied to the image.**
5. **Adjust the Grad > Type, Corner Points, Size and Angle.**

   To adjust the Corner Points, just click and drag them to the desired location.

   Go to the **Grad** section of Common Filter Controls to see how the Grad controls work.

6. **If you are curious, you can see what the Grad looks like by changing your View to Grad. Change your View to Output when done.**
7. **If you want less darkening of the image in the area of the Grad, adjust F-Stop > Exposure.**
8. **Click the Done icon to apply the filter to your image.**

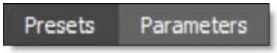
See the **ND Gradient** filter for more information.

Net

Softens and minimizes facial imperfections while retaining image clarity. Warm Net adds a warming filter.

1. **Apply Net from the Diffusion category.**
2. **Try out some of the presets.**

   At the top left of the Presets window, the presets are categorized into various groups located inside a pop-up menu.
3. **In the Presets window, choose a new preset group from the pop-up menu to see a different set of filter presets.**
4. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



5. **Adjust the Blur and Opacity parameters to your liking.**
6. **If using a Warm Net preset, adjust the Color Correct > Temperature control to your liking.**
7. **Click the Done icon to apply the filter to your image.**

See the **Net** filter for more information.

Night Vision

Night Vision creates the effect of a Night Vision lens by tinting the image green, blooming highlights and adding grain.

1 **Apply Night Vision from the Special Effects category.**

2 **Select the Magnifier tool in the Viewer.**

When the Magnifier is selected, a portion of the image is displayed at a 1:1 pixel ratio in the Magnifier window and shows the actual pixels of the image with the Night Vision filter applied. The Magnifier will accurately represent what the Night Vision filter will look like when applied to the full size image.

3 **Try out some of the presets.**

At the top left of the Presets window, the presets are categorized into various groups located inside a pop-up menu.

4 **In the Presets window, choose a new preset group from the pop-up menu to see a different set of filter presets.**

5 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

6 **Choose the type of black and white filter to be applied to your color image from the Black and White pop-up menu.**

The type of Black and White filter that you choose can dramatically change the look of your image.

7 **Adjust the Glow > Brightness and Blur as well as the Grain > Size and Amount settings to your liking.**

8 **If you want, you can use the Color Correct controls to modify the color of the image.**

In some of the filters, a matte is generated to create the desired effect--in this case, glow.

9 **Change your View to Matte to see the matte values.**

The areas that are white in the matte are the areas where glow will be introduced. The location of the glow within the scene can be adjusted by modifying the Matte > Position and Range parameters.

10 **Change the Matte > Position parameter if you want to select different values to be used for the matte.**

11 **Increase the Matte > Range control to add more values to the matte. Decrease for less values.**

12 **Increase the Matte > Blur parameter to soften the transition areas of the matte.**

13 **Change your View to Output to see the filtered image.**

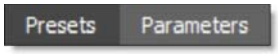
14 **Click the Done icon to apply the filter to your image.**

See the **Night Vision** filter for more information.

Overexpose

Overexpose simulates the overexposure that occurs when a film camera is stopped.

1. **Apply Overexpose from the Film Lab category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



4. **Adjust the Amount, Intensity and Blur controls to achieve the desired effect.**
5. **Click the Done icon to apply the filter to your image.**

See the **Overexpose** filter for more information.

Ozone

The Ozone filter allows you to manipulate the color of an image with incredible flexibility and accuracy. The spectrum of image values is divided into 11 discrete zones using proprietary image slicing algorithms. When using Luminance as the method for slicing up the image, the Position and Range sliders are preset so that each zone is twice as bright as the previous zone, proceeding from black towards white. The color values of each zone can then be independently adjusted until you've painted a new picture. Your adjustments occur on a zone by zone basis, but you view the result of all color corrections simultaneously.

1 **Apply Ozone from the Color category.**

2 **Look at Zones 0-10 by setting the View to Zone and clicking on the various zones in the Zone menu.**

Note: Once you click in the Zone selector, you can use the left and right arrow keys to cycle through the zones.

The selected zone is represented as a black and white image. The values shown as white in the selected zone are the portions of the image that will be modified when using the color adjustments. As the values drop-off to black, so does the strength of whatever adjustments you'll make. Although the zone's Position and Range parameters are preset according to the Digital Zone system, they can be changed if you want.

3 **If you'd like, change the Position and Range parameters for the selected zone.**

The Position value pinpoints the color values to be used in the selected zone. For instance, if the zones are created using Luminance, a high Position value shows the brightest image values as white values in the zone. A low Position value shows the darkest image values as white values in the zone. The Range value increases or decreases the range of values in the selected zone.

4 **Make sure that the View is set to Output.**

The Viewer now shows the full color image.

5 **To modify your image, adjust any combination of the Hue, Saturation, Brightness, Contrast, Gamma, Red, Green, Blue, Temperature, and Cyan/Magenta sliders for each zone.**

Your adjustments occur on a zone by zone basis, but you view the result of all color corrections simultaneously.

6 **Click the Done icon to apply the filter to your image.**

See the **Ozone** filter for more information.

Paint

Paints your image using Black/White, Blur, Clone, Color, Eraser, Mosaic, Red-Eye, Repair and Scatter brushes.

Color Brush

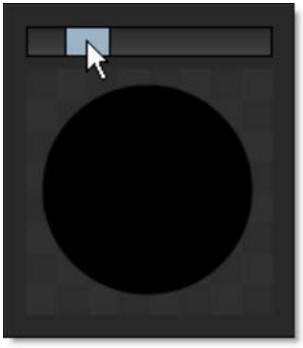
Paints the image with the current color.

1 **Apply Paint from the Image category.**

When Paint is selected in the Filter window, it's controls appear in the Toolbar.

2 **Select the Color brush from the Toolbar.**

3 **To set the brush size, click on the Brush Size icon in the Toolbar, and drag the slider that appears.**



or

4 **Resize the brush in the Viewer by holding Ctrl(Win)/Cmd(Mac) and dragging in or out.**

The Brush Softness and Opacity can also be adjusted by clicking their respective icons in the Toolbar.

5 **Choose a color to paint with by clicking the Color icon and picking a color.**

or

6 **Select the eyedropper icon and click on a color within the image.**

7 **Use your pen and tablet or mouse to paint with the Color brush.**

To erase previously painted brush strokes, use the Eraser brush.

8 **Pick the Eraser brush and erase any unwanted strokes.**

The Eraser brush can be accessed immediately using the right-mouse button or the equivalent button using a pen and tablet.

Clone Brush

Paints the image using another part of the image.

1 **Apply Paint from the Image category.**

When Paint is selected in the Filter window, it's controls appear in the Toolbar.

2 **Select the Clone brush from the Toolbar.**

3 **Press and hold down the Shift key.**

4 **Click, drag and release to set the clone offset.**

The first click sets the clone source and where you drag and release is the clone destination.

5 **Paint with the Clone brush.**

The Clone source can be nudged using the Arrow keys. One press of the Arrow key moves the Clone source 1 pixel. Using the Shift key in conjunction with the Arrow keys moves the Clone source 10 pixels.

6 **To quickly reset the clone offset, press Shift and without moving the cursor, click your mouse or tap your pen on the screen once.**

Red-Eye Brush

Removes red-eye.

1 **Apply Paint from the Image category.**

When Paint is selected in the Filter window, it's controls appear in the Toolbar.

2 **Select the Red-Eye brush from the Toolbar.**

3 **Use Ctrl(Win) or Cmd(Mac) and drag in or out to size the brush to roughly match the size of the red pupil.**

4 **Paint in the area of the red pupil being careful not to paint on any skin areas.**

Use the Eraser brush if you mistakenly paint on any skin areas.

See the **Paint** filter for more information.

Pastel

Converts the image into pastel artwork.

1. **Apply Pastel from the Special Effects category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

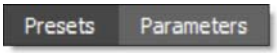
4. **Adjust the Amount to the desired level.**
5. **Set the Detail. Increasing the value shows more detail while decreasing the value shows less detail.**
6. **Click the Done icon to apply the filter to your image.**

See the **Pastel** filter for more information.

Pencil

Pencil converts your image to a pencil sketch.

1. **Apply Pencil from the Special Effects category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



4. **Vary your result by adjusting both the Amount and Color controls.**
5. **Click the Done icon to apply the filter to your image.**

See the **Pencil** filter for more information.

Photographic

The most complete line of Kodak® filters for photographic uses is available in the form of gelatin films and are known as Wratten® Gelatin Filters. Our Photographic filter is a digital equivalent of the Wratten set and were created using the spectral transmission curves for each optical filter. The Color Conversion, Light Balancing and Color Compensating preset groups are subsets of the Photographic filters.

1. **Apply Photographic from the Grads/Tints category.**
2. **Try out some of the presets.**

   At the top left of the Presets window, the presets are categorized into various groups located inside a pop-up menu.
3. **In the Presets window, choose a new preset group from the pop-up menu to see a different set of filter presets.**
4. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

5. **If you want less coloring of the image, turn down the Color > Opacity.**
6. **Image highlights can be retained by adjusting the Filters > Preserve Highlights control to a value of 100.**

   The selected filter can be applied through a gradient creating a graduated transition between the colored portion and the original image.
7. **Click on the Grad > Enable checkbox to activate the Grad.**
8. **Adjust the Grad > Type, Corner Points, Size and Angle.**

   To adjust the Corner Points, just click and drag them to the desired location.

   Go to the **Grad** section of Common Filter Controls to see how the Grad controls work.
9. **If you are curious, you can see what the Grad looks like by changing your View to Grad. Change your View to Output when done.**

10 Click the Done icon to apply the filter to your image.

See the **Photographic** filter for more information.

Polarizer

The Polarizer creates a darkened, deep blue sky. Through the use of a matte and a gradient, the color of the sky can be adjusted. Warm Polarizer adds a warming filter.

1. **Apply Polarizer or Warm Polarizer from the Color category.**
2. **Try out some of the presets.**

   At the top left of the Presets window, the presets are categorized into various groups located inside a pop-up menu.
3. **In the Presets window, choose a new preset group from the pop-up menu to see a different set of filter presets.**
4. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

5. **Change your View to Matte to see the matte values.**

   In some of the filters, a matte is generated to create the desired effect--in this case, polarization.
6. **Change the Matte > Hue parameter if you want to select different blue values to be used for the sky matte.**

   A matte is generated based on the blue values in the sky. Skies vary in their color of blue, so you can adjust the matte to accommodate your sky. The blue that is used to create the matte can be modified by using Matte > Hue to select the exact blue value and Matte > Range to select the amount of blue values to be used for the matte.
7. **Increase the Matte > Range control to add more values to the sky matte. Decrease for less values.**
8. **Increase the Matte > Blur parameter to soften the transition areas of the matte.**

   Remember, the areas that are white in the matte are the areas that will be polarized.
9. **Change your View to Output to see the filtered image.**
10. **Adjust the Sky color settings to make the sky look polarized--usually Brightness and Saturation.**

11 If the polarization is affecting areas other than they sky, enable the Grad and adjust it to limit the areas of polarization.

To adjust the Corner Points, just click and drag them to the desired location.

Go to the **Grad** section of Common Filter Controls to see how the Grad controls work.

12 If you applied Warm Polarizer, adjust the Warming > Color and Opacity sliders to your liking.

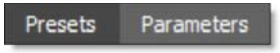
13 Click the Done icon to apply the filter to your image.

See the **Polarizer** filter for more information.

Rack Focus

Rack Focus replicates a true camera defocus by introducing lens Bokeh effects. Bokeh is the Japanese term that describes the quality of out-of-focus points of light. In defocused areas, each point of light becomes a shape--either a circle or a polygon. The shape grows in size as the amount of defocusing is increased.

1. **Apply Rack Focus from the Lens category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



4. **Adjust the Blur to your liking.**
5. **Set the Aperture > Brightness and Color settings.**
6. **Change the Aperture > Facets to control the polygon's shape and use Angle to rotate the Bokeh.**
7. **Set the Aperture > Curvature to 100 if you prefer the Bokeh to be circular in shape.**

   In some of the filters, a matte is generated to create the desired effect--in this case, Bokeh effects.

8. **Set your View to Matte to see the matte values.**

   The matte has been preset to a highlight matte to generate the Bokeh effect. The areas that are white in the matte are the areas where Bokeh will be introduced. The location of the Bokeh within the scene can be adjusted by modifying the Matte > Position and Range controls.

9. **Change the Matte > Position parameter if you want to select different luminance values to be used for the matte.**

   Bokeh will be generated wherever there are white values in the matte.

10. **Change your View to Aperture to see the Bokeh.**
11. **Increase the Matte > Range value to add more Bokeh into the scene. Decrease for less Bokeh.**
12. **Change your View to Output to see the filtered image.**

13 Click the Done icon to apply the filter to your image.

See the **Rack Focus** filter for more information.

Radial Exposure

Lightens and/or darkens the center or edges of an image to correct lens vignetting.

1. **Apply Radial Exposure from the Lens category.**
2. **Adjust the Exposure > Edges or Center parameters.**

   The radial gradient used to lighten or darken the edges or center of the image can be adjusted to suit your image.
3. **Adjust the Spot > Position, Radius, Falloff Radius and Falloff.**
4. **If you are curious, you can see what the Spot looks like by changing your View to Spot. Change your View to Output when done.**
5. **Click the Done icon to apply the filter to your image.**

See the **Radial Exposure** filter for more information.

Radial Streaks

Short radial streaks emanating from the center point.

1. **Apply Radial Streaks from the Light category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

4. **Click and drag the point control to move the Radial Streaks and use Scale to change the size.**
5. **Adjust the Brightness and Color.**
6. **Use Element Count to set the amount of rays.**
7. **Change Randomize to vary the look of the rays.**
8. **Click the Done icon to apply the filter to your image.**

See the **Radial Streaks** filter for more information.

Radial Tint

Tints the image using multi-color, radially graduated filters.

1 **Apply Radial Tint from the Grads/Tints category.**

2 **Try out some of the presets.**

3 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

4 **Adjust the Radial Grad > Position, Size, Rotation and Aspect.**

5 **To set your own radial gradient colors, click on the Color 1, 2, 3 or 4 > Color boxes and select colors.**

Color 1 is the top left quadrant of the image, Color 2 is the top right quadrant, Color 3 is the bottom right quadrant and Color 4 is the bottom left quadrant.

6 **If you want less coloring of the image, turn down Color 1, Color 2, Color 3 or Color 4 > Opacity.**

7 **Image highlights can be retained by adjusting the Preserve Highlights control to a value of 100.**

8 **Change your View to Gradient to see the color gradient being applied to the image.**

9 **Change your View back to Output to see the filtered image.**

You can also mask out a portion of the Radial Tint effect using a Spot mask.

10 **To use a Spot mask with the Radial Tint, click on Spot > Enable.**

11 **Set the Spot > Radius, Falloff Radius and Falloff.**

12 **Click the Done icon to apply the filter to your image.**

See the **Radial Tint** filter for more information.

Rainbow

Recreates arced rainbows of spectral colors, usually identified as red, orange, yellow, green, blue, indigo, and violet, that appear in the sky as a result of the refractive dispersion of sunlight in drops of rain or mist.

1. **Apply Rainbow from the Light category.**
2. **Choose Light > Blend > Add, Screen or Normal blend mode.**

   Add will burn out highlights while Screen will retain them. Normal uses a normal composite function to add the rainbow.
3. **In the Light menu, adjust the Brightness, and if you'd like, set the Displacement and Blur of the rainbow.**
4. **Set the base of the rainbow using Crop > Offset, Angle and Softness.**
5. **Adjust the position of the rainbow by clicking and dragging the center image point to the desired location.**
6. **Set the Rainbow > Radius, Aspect, and Thickness as desired.**
7. **Combine the rainbow with a matte by changing Rainbow > Blend from Rainbow Only to Matte.**

   Matte only adds the rainbow in the areas of the matte. If you are not seeing enough of the rainbow, your matte should be adjusted.
8. **Change your View selector to Matte to see the matte values.**

   The default matte settings are preset to a highlight matte. The areas that are white in the matte are the areas where the rainbow will be added into the image. The location of the rainbow within the scene can be adjusted by changing the Matte > Position and Range parameters.
9. **Change the View selector from Matte to Output.**
10. **Change the Matte > Position parameter if you want to change where you see the rainbow.**
11. **Increase the Matte > Range value to add more of the rainbow to the scene. Decrease to see less of the rainbow.**
12. **Increase the Matte > Blur parameter to soften the matte.**

13 Click the Done icon to apply the filter to your image.

See the **Rainbow** filter for more information.

Random Spikes

Generates asymmetric radial rays.

1. **Apply Random Spikes from the Light category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

4. **Click and drag the point control to move the Random Spikes and use Scale to change the size.**
5. **Adjust the Brightness and Color.**
6. **Use Element Count to set the amount of rays.**
7. **Change Randomize to vary the look of the rays.**
8. **Click the Done icon to apply the filter to your image.**

See the **Random Spikes** filter for more information.

Rays

Create stunning and realistic light ray effects quickly and easily.

1. **Apply Rays from the Light category.**
2. **Move the point control in the center of the screen to change the source point from which the rays will emanate.**
3. **Adjust the Rays > Length, Brightness, Color and Blur as desired.**
4. **To limit the amount of rays, increase the Rays > Threshold parameter.**

   Threshold controls the amount of rays based on a brightness threshold. Fewer rays with more definition are generated at higher threshold values.

5. **Use the Shimmer > Amount and Phase to randomize the rays.**

   If you are working with an image that lacks prominent highlight areas, you can use the Light Source parameters to generate rays.

6. **Adjust Light Source > Brightness and Size to add an additional light source to create rays.**
7. **Set the Texture controls to breakup the rays with a noise pattern.**
8. **Click the Done icon to apply the filter to your image.**

See the **Rays** filter for more information.

Reflector

Silver and gold reflectors allow you to add white or gold light into shadow areas.

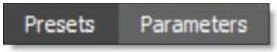
1 **Apply Reflector from the Light category.**

2 **Try out some of the presets.**

At the top left of the Presets window, the presets are categorized into various groups located inside a pop-up menu.

3 **In the Presets window, choose a new preset group from the pop-up menu to see a different set of filter presets.**

4 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



5 **Adjust the Brightness and Color settings to your liking.**

In some of the filters, a matte is generated to create the desired effect--in this case, light reflecting into the shadow areas.

6 **Change your View to Matte to see the matte values.**

The areas that are white in the matte are the areas where light will be introduced. The location of the light within the scene can be adjusted by modifying the Position and Range parameters.

7 **Change the Position parameter if you want to select different values to be used for the matte.**

8 **Increase the Range controls to add more values to the matte. Decrease for less values.**

9 **Change your View to Output to see the filtered image.**

10 **Click the Done icon to apply the filter to your image.**

See the **Reflector** filter for more information.

ReLight

Light can be added to a scene where none existed before. A complete set of light source controls allow you to adjust the light just as you would at the time of shooting.

1. **Apply Relight from the Light category.**
2. **Using the Light Source > Transform controls, you can transform the light source.**

   To adjust the light source position, drag the point control in the center of the Viewer and to adjust the Corner Points, just click and drag to the desired location.
3. **In the Light menu, adjust the Brightness, Displacement, and Blur of the light.**

   Adding blur to the light makes the light glow.
4. **To apply a custom light color to the image, click on the Light > Color box and select a color.**
5. **To choose one of the Gels, select one from the Light > Gels pop-up menu.**
6. **Combine the light source with a matte by changing Shape > Blend from Shape Only to Multiply.**

   I like the Multiply blend mode because it only adds the light source in the areas of the matte.
7. **Change your View selector to Matte to see the matte values.**

   The default Matte settings are preset to a highlight matte to create the light effect. If you are not seeing sufficient light, your matte should be adjusted. The areas that are white in the matte are the areas where light will be added into the image. The location of the light within the scene can be adjusted by changing the Matte > Position and Range parameters.
8. **Change the Matte > Position parameter if you want to select different values to be used for the matte.**
9. **Increase the Matte > Range control to add more values to the matte. Decrease for less values.**
10. **Change the View selector from Matte to Output.**
11. **Increase the Matte > Blur parameter to soften the transition areas of the matte.**

12 Click the Done icon to apply the filter to your image.

See the **ReLight** filter for more information.

Selective Color Correct

Colors can be selectively isolated through the use of a matte and adjusted using hue, saturation, brightness, gamma, contrast, temperature, cyan/magenta, red, green, and blue controls.

1. **Apply Selective Color Correct from the Color category.**
2. **Change your View to Matte to see the matte values.**

   In some of the filters, a matte is generated to create the desired effect--in this case, selective color correction.

3. **Adjust the matte controls so that the areas that you want to color correct are white in the matte.**

   Go to the **Matte** parameters to see how they work.

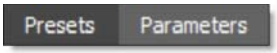
4. **Change your View to Output to see the image.**
5. **Adjust the color correct parameters to your liking.**
6. **Click the Done icon to apply the filter to your image.**

See the **Selective Color Correct** filter for more information.

Selective Saturation

The saturation of the image can be adjusted independently in the shadows, midtones and highlights.

1. **Apply Selective Saturation from the Color category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



4. **Adjust the Saturation in the Shadows, Midtones or Highlights.**

   In some of the filters, a matte is generated to create the desired effect--in this case, selective saturation. Shadow, midtone and highlight mattes have been preset for you to adjust the saturation selectively in those areas.

5. **Change your View to Shadows, Midtones or Highlights to see the matte values.**

   The areas that are white in the matte are the areas that will be adjusted by the Saturation sliders. The areas defined as shadows, midtones or highlights can be adjusted by modifying the Position and Range parameters.

6. **Use the Shadows, Midtones or Highlights Position parameters if you want to select different values to be used for the matte.**
7. **Increase the Shadows, Midtones or Highlights Range controls to add more values to the matte. Decrease for less values.**
8. **Change your View to Output to see the image.**
9. **Click the Done icon to apply the filter to your image.**

See the **Selective Saturation** filter for more information.

Sepia

Sepia creates a warm brown tone for a nostalgic feeling.

1. **Apply Sepia from the Grads/Tints category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

4. **Adjust the Color > Amount, Opacity, Preserve Highlights and Exposure Compensation sliders to your liking.**

   Sepia can be applied through a gradient creating a graduated transition between the colored portion and the original image.

5. **Click on the Grad > Enable checkbox to activate the Grad.**
6. **Adjust the Grad > Type, Corner Points, Size and Angle.**

   To adjust the Corner Points, just click and drag them to the desired location.

   Go to the **Grad** section of Common Filter Controls to see how the Grad controls work.

7. **Click the Done icon to apply the filter to your image.**

See the **Sepia** filters for more information.

Shadows/Highlights

Shadows/Highlights lowers contrast evenly throughout the image by brightening shadow areas and darkening highlights. It is useful for correcting dark foreground subjects due to strong backlighting as well as highlights that are slightly washed out.

1. **Apply Shadows/Highlights from the Color category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

4. **Adjust the Shadows > Shadows slider to brighten shadow areas.**
5. **Adjust the Highlights > Highlights slider to darken highlight areas.**

   In some of the filters, a matte is generated to create the desired effect--in this case, lowering contrast.

6. **Change your View to Shadows or Highlights to see the matte values.**

   The areas that are white in the matte are the areas that will be adjusted by either the Shadows or Highlights sliders. The areas defined as Shadows or Highlights can be adjusted by modifying the Position and Range parameters.

7. **Use the Shadows or Highlights > Position parameters if you want to select different values to be used for the matte.**
8. **Increase the Shadows or Highlights > Range controls to add more values to the matte. Decrease for less values.**
9. **Change your View to Output to see the image.**
10. **Click the Done icon to apply the filter to your image.**

See the **Shadows/Highlights** filter for more information.

Sharpen

Enhances the sharpness or focus by selectively increasing the contrast between adjacent pixels along edges in an image.

1 **Apply Sharpen from the Image category.**

2 **Select the Magnifier tool in the Viewer.**

When the Magnifier is selected, a portion of the image is displayed at a 1:1 pixel ratio in the Magnifier window and shows the actual pixels of the image with the Sharpen filter applied. The Magnifier will accurately represent what the Sharpen filter will look like when applied to the full size image.

3 **Try out some of the presets.**

4 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

Note: If you are applying multiple filters, it is best to apply the Sharpen filter first.

5 **Adjust the Radius to determine the size of the edges you wish to sharpen.**

6 **Drag the Amount slider to control how much contrast is added at the edges.**

The Threshold control determines how different the sharpened pixels must be from surrounding areas before they are considered edge pixels and sharpened.

7 **Move the Threshold slider if necessary.**

Low values sharpen more image areas while higher threshold values sharpen less.

See the **Sharpen** filter for more information.

Silk

Black Silk softens wrinkles, blemishes and fine detail to produce smooth skin textures while retaining detail in coarse features such as the eyes, nose and mouth. Warm Silk offers all the benefits of the Black Silk filter while adding a diffuse warm tint to the shadows.

1 **Apply Silk from the Diffusion category.**

2 **Select the Magnifier tool in the Viewer.**

When the Magnifier is selected, a portion of the image is displayed at a 1:1 pixel ratio in the Magnifier window and shows the actual pixels of the image with the Silk filter applied. The Magnifier will accurately represent what the Silk filter will look like when applied to the full size image.

3 **Try out some of the presets.**

At the top left of the Presets window, the presets are categorized into various groups located inside a pop-up menu.

4 **In the Presets window, choose a new preset group from the pop-up menu to see a different set of filter presets.**

5 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

6 **Adjust Detail > Smoothing to smooth out fine detail.**

Smoothing uses an edge aware smoothing algorithm to minimize fine image detail so that areas with courser detail are unaffected. However, if there are unwanted areas of the image that are being affected, you can optionally use a matte to isolate the effect.

7 **Activate Matte > Enable.**

8 **Change your View to Matte to see the matte values.**

The idea here is to generate a matte that isolates the areas of the image that need to be smoothed. For instance, you might be trying to isolate and smooth the skin on a person's face. The white areas of the matte are the areas that will be smoothed. The matte has been preset to a highlight luminance matte, but this can be easily changed.

9 **Select the appropriate Matte > Extract On option for your image.**

10 **If needed, change the Matte > Position parameter so that the image areas you are trying to smooth are as white as possible in the matte.**

11 **Adjust the Matte > Range value so that the white values of the matte are limited as much as possible to the image areas that you are trying to isolate.**

12 **Increase the Matte > Blur parameter if you want to soften the transition areas of the matte.**

13 **Change your View to Output to see the filtered image.**

14 **If using a Warm Silk preset, adjust the Color Correct > Temperature control to your liking.**

15 **Click the Done icon to apply the filter to your image.**

See the **Silk** filter for more information.

Skin Tone

A set of colorization filters to enhance skin tones.

1. **Apply Skin Tone from the Grads/Tints category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

4. **Adjust the Color > Opacity, Preserve Highlights and Exposure Compensation sliders to your liking.**

   The selected color can be applied through a gradient creating a graduated transition between the colored portion and the original image.

5. **Click on the Grad > Enable checkbox to activate the Grad.**
6. **Adjust the Grad > Type, Corner Points, Size and Angle.**

   To adjust the Corner Points, just click and drag them to the desired location.

   Go to the **Grad** section of Common Filter Controls to see how the Grad controls work.

7. **Click the Done icon to apply the filter to your image.**

See the **Skin Tone** filter for more information.

Soft Light

Provides soft, digitally diffused and virtually shadowless light.

1. **Apply Soft Light from the Light category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

4. **Select either the Blend > Add or Screen Blend mode.**

   Add will burn out highlights while the Screen Mode will retain them.

5. **Adjust the Brightness to set the intensity of the light.**
6. **Use the Blur sliders to control the softness of the light.**
7. **To apply a custom light color to the image, click on the Color box and select a color.**
8. **To apply a colored gel to the light, select one from the Gels pop-up menu.**
9. **Click the Done icon to apply the filter to your image.**

See the **Soft Light** filter for more information.

Spikes

Long radial rays emanating from the center point.

1. **Apply Spikes from the Light category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

4. **Click and drag the point control to move the Spikes and use Scale to change the size.**
5. **Adjust the Brightness and Color.**
6. **Use Element Count to set the amount of rays.**
7. **Change Randomize to vary the look of the rays.**
8. **Click the Done icon to apply the filter to your image.**

See the **Spikes** filter for more information.

Spiral Rays

Creates spiral rays.

1. **Apply Spiral Rays from the Light category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

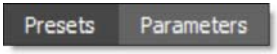
4. **Click and drag the point control to move the Spiral Rays and use Scale to change the size.**
5. **Adjust the Brightness and Color.**
6. **Use Element Count to set the amount of rays.**
7. **Change Randomize to vary the look of the rays.**
8. **Click the Done icon to apply the filter to your image.**

See the **Spiral Rays** filter for more information.

Split Field

Split Field splits the image with a line that can be positioned, rotated and blurred. On one side of the line, the image is blurred and on the other, it is in focus.

1. **Apply Split Field from the Lens category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



4. **Adjust the Blur controls.**
5. **Position, Rotate and Blur the split line using the Split controls.**
6. **Click the Done icon to apply the filter to your image.**

See the **Split Field** filter for more information.

Split Tone

Shadows, midtones and highlights can be individually tinted with the Split tone filter.

1. **Apply Split Tone from the Grads/Tints category.**
2. **Turn up the Opacity slider in the Shadows, Midtones or Highlights.**
3. **Change the Split Tone colors by clicking on the Color boxes.**

   In some of the filters, a matte is generated to create the desired effect--in this case, split toning.

4. **Change your View to Shadows, Midtones or Highlights to see the matte values.**

   The areas that are white in the matte are the areas that will be tinted by the selected tint color. The areas defined as Shadows, Midtones or Highlights can be adjusted by modifying the Position and Range parameters.

5. **Adjust the Shadows, Midtones or Highlights > Position and Range controls to change what is considered to be Shadows, Midtones or Highlights.**
6. **Change your View to Output to see the image.**
7. **Click the Done icon to apply the filter to your image.**

See the **Split Tone** filter for more information.

Star

A star pattern similar to those created by lens flares.

1. **Apply Star from the Light category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

4. **Click and drag the point control to move the Star and use Scale to change the size.**
5. **Adjust the Brightness and Color.**
6. **Use Element Count to set the amount of spikes.**
7. **Create a more organic random star with Noise and Noise Density.**
8. **Change Randomize to vary the brightness within the star.**
9. **Click the Done icon to apply the filter to your image.**

See the **Star** filter for more information.

Streaks

The Streaks filter creates horizontal or vertical streaks around highlights in the image.

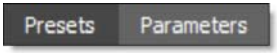
1 **Apply Streaks from the Light category.**

2 **Try out some of the presets.**

At the top left of the Presets window, the presets are categorized into various groups located inside a pop-up menu.

3 **In the Presets window, choose a new preset group from the pop-up menu to see a different set of filter presets.**

4 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



5 **Adjust either the Vertical or Horizontal Streaks controls.**

Note: If you adjust both the Vertical and Horizontal Streak controls at the same time, the Streak effect will be lost.

6 **Select either the Add or Screen Blend mode. Add will burn out highlights while the Screen mode will retain them.**

7 **Adjust the Streak > Brightness and Color settings to your liking.**

In some of the filters, a matte is generated to create the desired effect--in this case, streaks.

8 **Change your View to Matte to see the matte values.**

The areas that are white in the matte are the areas where streaks will be introduced. The location of the streaks within the scene can be adjusted by modifying the Matte > Position and Range parameters.

9 **Change the Matte > Position parameter if you want to select different values to be used for the matte.**

10 **Increase the Matte > Range control to add more values to the matte. Decrease for less values.**

11 **Change your View to Output to see the filtered image.**

12 Click the Done icon to apply the filter to your image.

See the **Streaks** filter for more information.

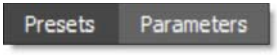
Sunset

Sunset applies three photographic filters to the image which are blended together with a gradient.

1 **Apply Sunset from the Grads/Tints category.**

2 **Try out some of the presets.**

3 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



4 **Adjust the Grad > Type, Corner Points, Size and Angle.**

To adjust the Corner Points, just click and drag them to the desired location.

Go to the **Grad** section of Common Filter Controls to see how the Grad controls work.

5 **To change the Sunset colors, click on the Color 1, 2 or 3 > Color box and select a color.**

6 **If you want less coloring of the image, turn down Color 1, Color 2 or Color 3 > Opacity.**

7 **Image highlights can be retained by adjusting the Preserve Highlights control to a value of 100.**

8 **Change your View to Grad to see the color gradient being applied to the image.**

9 **Change your View back to Output to see the filtered image.**

10 **Click the Done icon to apply the filter to your image.**

See the **Sunset** filter for more information.

Texture

Applies textures to an image for a stylized look.

1. **Apply Texture from the Special Effects category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

4. **Adjust the Amount slider to control how much texture is applied to the image.**
5. **Increase the Complexity to generate a more detailed, repetitive texture.**
6. **Use Randomize to change the look of the texture.**
7. **Adjust the position of the texture by clicking and dragging the center image point to the desired location.**
8. **You can also use the Transform controls to transform the texture.**
9. **Click the Done icon to apply the filter to your image.**

See the **Texture** filter for more information.

Three Strip / Two Strip

Three Strip

Known and celebrated for it ultra-realistic, saturated levels of color, the Technicolor® Three Strip process was commonly used for musicals, costume pictures and animated films. It was created by photographing three black and white strips of film each passing through red, green and blue filters on the camera lens and then recombining them in the printing process. Our Three Strip filter was created under the direction of Academy Award Winning Visual Effects Supervisor Rob Legato.

Two Strip

The Technicolor® Two Strip process was the first stab at producing color motion pictures and consisted of simultaneously photographing two black and white images using red and green filters. This look creates an odd but pleasing hand-painted look where faces appear normal and green takes on a blue-green quality, while the sky and all things blue appear cyan. Our Two Strip filter was created under the direction of Academy Award Winning Visual Effects Supervisor Rob Legato.

1. **Apply Three Strip or Two Strip from the Film Lab category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

4. **Change your View to Red, Green or Blue to see the matte values.**

   In some of the filters, a matte is generated to create the desired effect--in this case, modifying the intensity of the red, green and blue values.

   Normally, the areas that are white in the matte are the areas that will be adjusted by a particular filter or control. The Red, Green and Blue Intensities, on the other hand, make adjustments where you see black in the matte.

5. **Adjust the Intensity of whatever color channel you are viewing and you will see that certain values become darker. These are the values that will be intensified in the color image.**

6 **Change your View to Output to see the color image.**

7 **Adjust the Red, Green and Blue Intensities until you have the desired levels of red, green and blue in the image.**

Note: When using the Two Strip filter, adjusting the Blue Intensity will darken image areas that were blue in the source image.

8 **You may need to use the Red, Green and Blue Smooth controls to smooth out any noise that may have appeared if the intensities were turned up to high values.**

The Smooth controls are set to a low value by default.

9 **Set the Opacity to a lower level if the strength of the effect looks too strong.**

Color Correct controls are also provided for additional control.

10 **Click the Done icon to apply the filter to your image.**

See the **Three Strip / Two Strip** filters for more information.

Tint

Tints the entire image with a selected color using a variety of colorization modes.

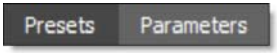
1 **Apply Tint from the Grads/Tints category.**

2 **Try out some of the presets.**

At the top left of the Presets window, the tints are categorized into various groups located inside a pop-up menu.

3 **In the Presets window, choose a new preset group from the pop-up menu to see a different set of tint presets.**

4 **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



5 **To apply a different color to the image, click on the Tint > Color box and select a new color.**

6 **Try out the different colorization methods in the Color > Color Mode pop-up menu.**

7 **If you want less tinting of the image, turn down the Tint > Opacity.**

If you want, the image can be converted to black and white before the tint is applied.

8 **From the Black and White > Filter pop-up menu, select the type of black and white filter to be applied to your color image.**

Your choice of filter can dramatically change the black and white result.

Use the Brightness, Contrast and Gamma controls to further adjust the image.

You can also use a gradient in combination with the Tint.

9 **To use a gradient with the Tint, click on Grad > Enable.**

10 **Adjust the Grad > Type, Corner Points, Size and Angle.**

To adjust the Corner Points, just click and drag them to the desired location.

Go to the **Grad** section of Common Filter Controls to see how the Grad controls work.

11 **If you are curious, you can see what the Grad looks like by changing your View to Grad. Change your View to Output when done.**

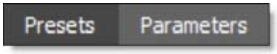
12 **Click the Done icon to apply the filter to your image.**

See the **Tint** filter for more information.

Tone Adjust

Tone Adjust approximates the appearance of high dynamic range images by adjusting the tonal values. Specifically, detail is recovered from the darker portions of the images and can optionally be denoised.

1. **Apply Tone Adjust from the Color category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



4. **Adjust the Amount slider to brighten shadow areas.**
5. **If image noise becomes more prominent as a result of the Amount adjustment, use the DeNoise slider to minimize the noise in those areas.**

   In some of the filters, a matte is generated to create the desired effect--in this case, brightening shadow areas.

6. **Change your View to Matte to see the matte values.**

   The areas that are white in the matte are the areas that will be adjusted. The shadow areas to be brightened can be adjusted by modifying the Position and Range parameters.

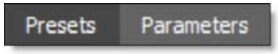
7. **Use the Position parameter if you want to select different values to be used for the matte.**
8. **Increase the Range control to add more values to the matte. Decrease for less values.**
9. **Change your View to Output to see the image.**
10. **Click the Done icon to apply the filter to your image.**

See the **Tone Adjust** filter for more information.

Vignette

A vignette, or soft fade, is a popular photographic effect where the photo gradually fades into the background, usually in a circular or rectangular shape. The vignette can be any color as well as thrown out of focus.

1. **Apply Vignette from the Lens category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



4. **Adjust the Shape > Roundness to make the vignette either circular or rectangular and use Shape > Softness to control the softness of the vignette's edge.**
5. **To give the vignette's edge a random shape, use the Distortion, Distortion Size and Randomize controls.**
6. **Set the Vignette > Color and Opacity.**

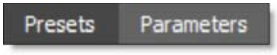
   The vignette can be either colored or defocused or a combination of the two.
7. **Turn down the Vignette > Opacity if you would like to see only a blurred vignette.**
8. **Turn up the Vignette > Horizontal and Vertical Blur to your liking.**
9. **Click the Done icon to apply the filter to your image.**

See the **Vignette** filter for more information.

Water Droplets

Simulates the circular, rainbow colored optical effects produced by tiny water droplets in clouds, mist and fog.

1. **Apply Water Droplets from the Light category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**



4. **Choose Light > Blend > Add or Screen blend mode.**

   Add will burn out highlights while Screen will retain them.

5. **In the Light menu, adjust the Brightness as well as the Displacement and Blur of the rainbow if you'd like.**
6. **Adjust the position of the rainbow by clicking and dragging the center image point to the desired location.**
7. **You can also use the Rainbow > Scale control to transform the rainbow.**
8. **Combine the rainbow with a matte by changing Rainbow > Blend from Rainbow Only to Matte.**

   Matte only adds the rainbow in the areas of the matte. If you are not seeing enough of the rainbow, your matte should be adjusted.

9. **Change your View selector to Matte to see the matte values.**

   The default matte settings are preset to a highlight matte. The areas that are white in the matte are the areas where the rainbow will be added into the image. The location of the rainbow within the scene can be adjusted by changing the Matte > Position and Range parameters.

10. **Change the View selector from Matte to Output.**
11. **Change the Matte > Position parameter if you want to change where you see the rainbow.**
12. **Increase the Matte > Range value to add more of the rainbow to the scene. Decrease to see less of the rainbow.**
13. **Increase the Matte > Blur parameter to soften the matte.**

14 Click the Done icon to apply the filter to your image.

See the **Water Droplets** filter for more information.

Wide Angle Lens

Simulates the effect of a wide angle lens.

1. **Apply Wide Angle Lens from the Lens category.**
2. **Start by adjusting the Distortion control to add the desired wide angle look.**

   You may need to also adjust the X and Y Correction parameters which compensate for the deformation introduced with the Distortion parameter.
3. **Click the Done icon to apply the filter to your image.**

Note: Wide Angle Lens must be applied as the first layer (bottom of the layer stack) when multiple layers are used. Otherwise, all filters below will not be rendered.

See the **Wide Angle Lens** filter for more information.

X-Ray

Simulates the look of X-Ray images.

1. **Apply X-Ray from the Special Effects category.**
2. **Try out some of the presets.**
3. **If the Parameters window is not showing, click the Parameters tab at the bottom of the Presets window.**

4. **From the Black and White > Filter pop-up menu, select the type of black and white filter to be applied to your color image.**

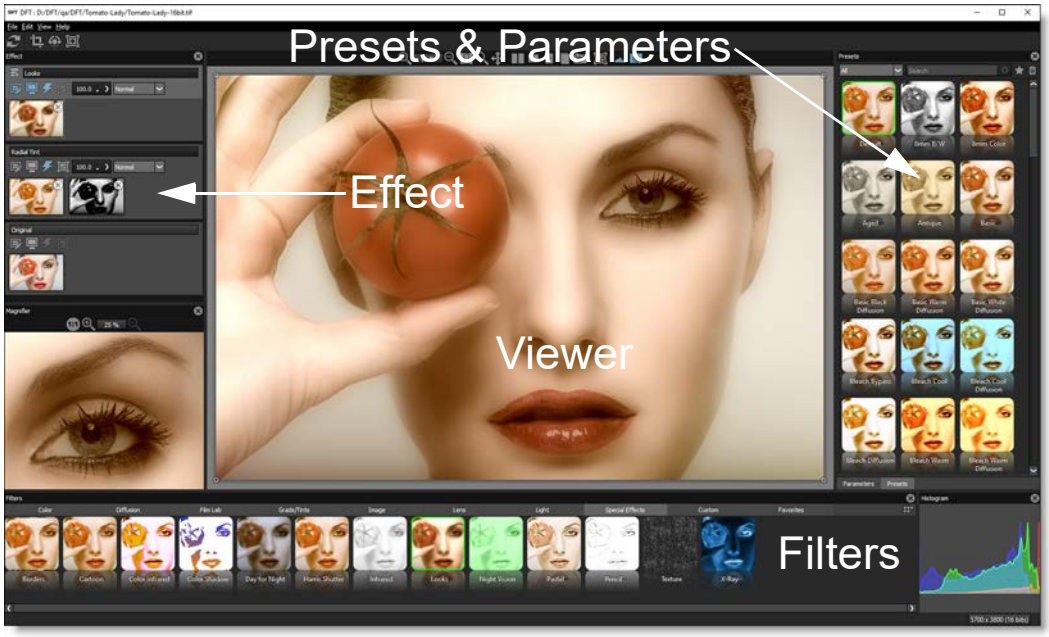
   Your choice of filter can dramatically change the black and white result.

5. **Use the Brightness, Contrast and Gamma controls to further adjust the image.**
6. **Adjust the Color if you would like to tint the image to something other than blue.**
7. **Click the Done icon to apply the filter to your image.**

See the **X-Ray** filter for more information.

DFT USER INTERFACE

DFT is comprised of 4 main components: Viewer, Filters, Presets/Parameters, and Effect.



Viewer

The Viewer is where images are viewed, edited and manipulated.

Filters

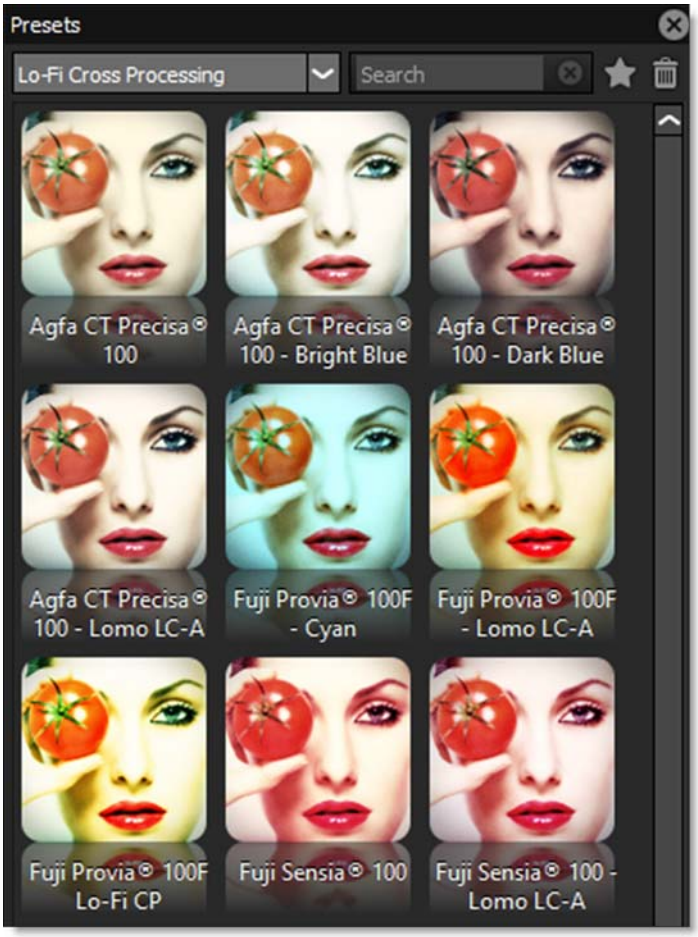
The Filters window at the bottom of the screen is categorized by filter function and displays a thumbnail for each filter.

Presets and Parameters

Presets and Parameters share the same window space on the right side of the screen.

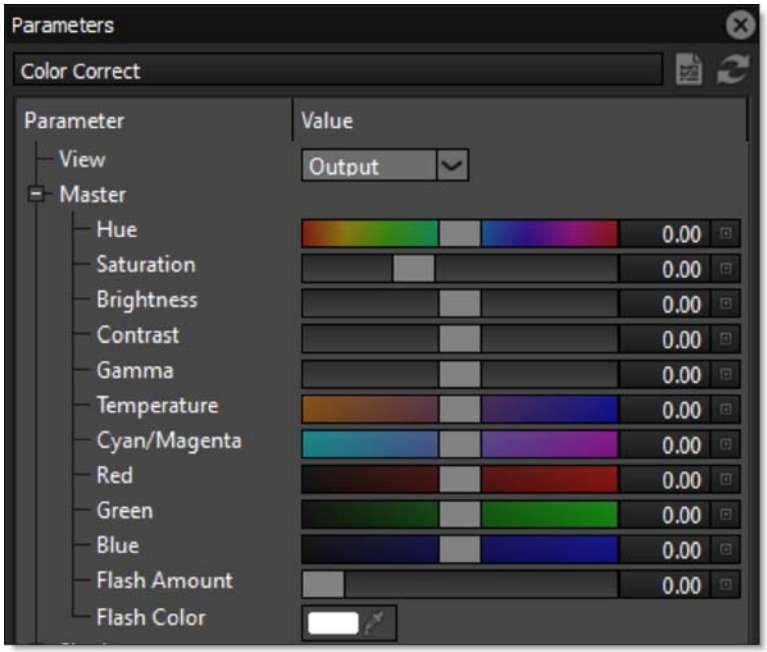
Presets

The Presets window allows you to select from existing filter presets.



Parameters

The Parameters window displays the current filter's parameters. Adjusting the parameters will update and change the image in the Viewer.

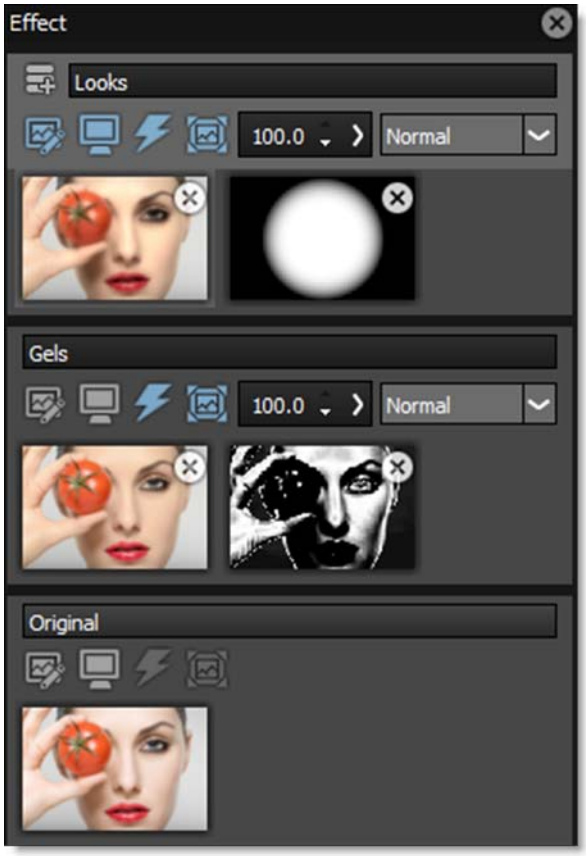


Variations

The Variations window allows you to create your own filter variations and becomes visible when a parameter name is selected in the Parameters window.

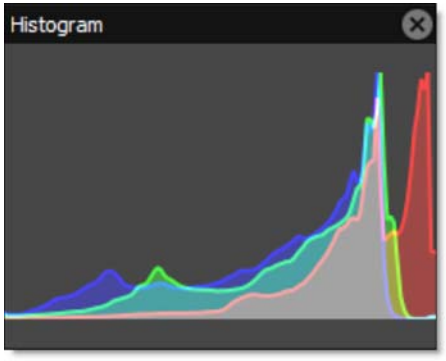
Effect

The Effect window shows all filters that have been applied to your image.



Histogram

A histogram is a specialized graph that plots the number of pixels at each color intensity level. It is very useful in seeing how an image's pixels are distributed.



Magnifier

When the Magnifier is selected, a portion of the image is displayed at a 1:1 pixel ratio in the Magnifier window and shows the actual pixels of the image with the current filter applied.

Toolbar

The Toolbar contains various tools to manipulate your image.

Windows and Adjustments

The DFT interface contains multiple windows. Windows can be closed, torn off to be a floating window, or moved to a new location.

Opening and Closing1 Windows:

- Double-click on a window's title bar to make it a floating window.
- A floating window can be re-docked by double-clicking it's title bar.
- Click the Close (X) icon to close a window.
- Once a window has been closed, it can be reopened by selecting it from the View > Window pull-down menu.

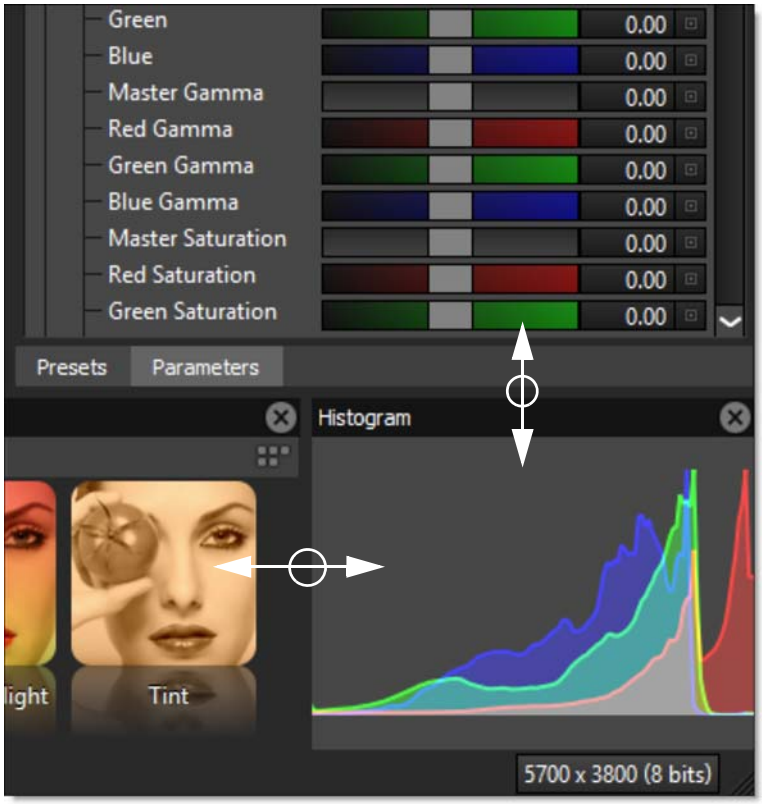
Moving Windows:

- Click and drag a docked window's title bar and place it in a new location in the user interface. Note how the interface adjusts to accommodate the moved window.

- Click and drag a floating window's title bar and place it in a new location.
- If you drop the window in the center of an existing window, a tab will be created so that both windows will share the same space.

Sashes

By clicking and dragging the sashes, dividing lines between areas of the screen, you can customize the DFT interface.

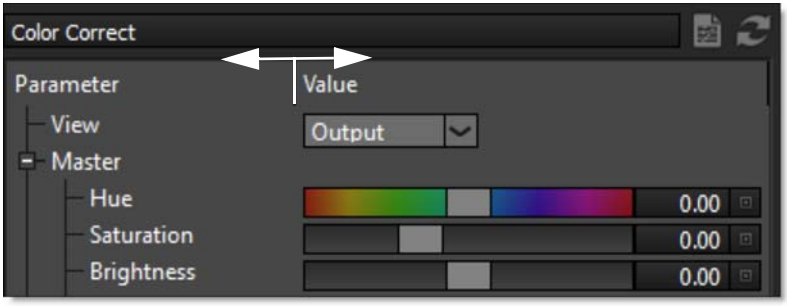


Tool Tips

Hovering the cursor over an icon will pop up a tool tip that displays its function.

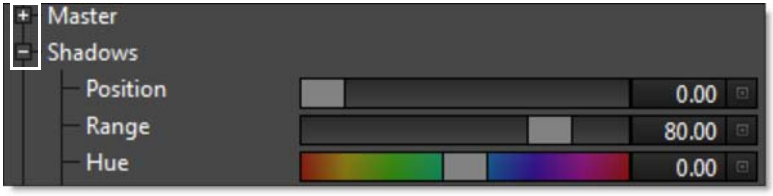
Value Field Length

You can resize the Value field by clicking and dragging the dividing line between Parameter and Value at the top of the Parameters window. This is useful if the Parameter names are getting cut off.



Parameter Groups

Parameter groups in the Parameters window can be expanded and collapsed using the plus and minus icons located to the left of the group.

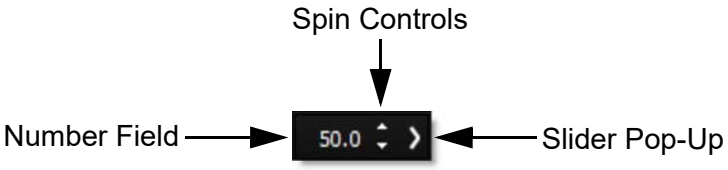


Slider Precision

You can adjust any slider with finer precision by pressing **Ctrl(Win)/Cmd(Mac)** while dragging the slider.

Combo Box Adjustment

Combo boxes allow you to adjust a parameter in various ways.



Number Field

Highlight the numbers, type in a new number and hit **Enter**.

Spin Controls

Click on the up and down triangles of the Spin controls to adjust the value.

Slider Pop-Up

The slider is hidden but can be accessed by clicking either the parameter icon or on the greater than character “**>**” to the right of the Spin controls.

Image Info

Located at the bottom-right of the DFT interface, the Image Info displays the image size and bit depth.

PULL-DOWN MENUS

File

Setups

A Setup takes a snapshot of the filters and masks applied to your image in the Effect window. Setups can be saved and loaded and are independent of the image they were originally applied to.

Open Setup

Opens a previously saved Setup.

Save Setup

Takes a snapshot of all filters and masks applied to your image in the Effect window and saves it as a Setup file. This Setup file can later be loaded to the same or a different image.

Recent Setups

The last five recently opened or saved Setups can be selected and opened here.

Preferences

Preferences allow you to customize default settings.

Thumbnail Size

You can select whether the DFT interface uses either a small or large thumbnail size. Medium thumbnails are the default.

Small

Small thumbnails are used in the DFT interface.

Medium

Medium thumbnails are used in the DFT interface.

Large

Large thumbnails are used in the DFT interface.

Preview Size

DFT works at a maximum resolution as defined by the Preview Size--the default being 2048 by 2048 pixels. Never fear, when your image is saved, DFT always processes at the resolution of the original image.

1024

DFT works at a maximum resolution of 1024 x 1024 pixels.

2048

DFT works at a maximum resolution of 2048 x 2048 pixels.

4096

DFT works at a maximum resolution of 4096 x 4096 pixels.

Downsampling

At large preview sizes, interaction may slow down when adjusting filter parameters. To maintain fast processing during adjustments, you can enable Downsampling.

Adaptive

Automatically downsamples the image if required.

2:1

Automatically downsamples the image by a factor of 2.

4:1

Automatically downsamples the image by a factor of 4.

8:1

Automatically downsamples the image by a factor of 8.

Preview Scaling

Point

Uses a lower quality scaling method when displaying the image in the Viewer. Point is more accurate when applying filters such as grain and sharpen, but when zooming in, the image will display “chunky” artifacts.

Bicubic

Uses a smooth scaling method when displaying the image in the Viewer. Bicubic can mask the effect of grain and sharpen filters because of its inherent smoothing, but doesn't suffer from the Point methods chunkiness when zooming in.

GPU Rendering

Enables or disables GPU rendering.

Save Setup With Image

Lightroom

Lightroom can now retrieve your DFT setup information consisting of filters, layers and masks. To do this, you need to use "Edit Copy with Lightroom Adjustments" and render the result. If you then apply DFT to the newly rendered version and use "Edit Original", your previous DFT setup will be shown and can be modified.

Photoshop

By default, Photoshop remembers your previous DFT setup consisting of filters, layers and masks will all be displayed when you reapply DFT and they can all be modified.

Edit

Undo/Redo

Undo or redo operations.

Undo/Redo History

Undo/Redo has a history, so you can jump to any item in the history by picking it from the menu.

Delete

Deletes the selected filter.

View

Window

The DFT user interface is broken up into individual windows which can be opened or closed by selecting or deselecting them from the View menu. The following windows can be opened or closed:

Color Wheels

Open or closes the Color Correct Wheels window.

Console

Displays diagnostic information.

Copy to Clipboard

Copies the contents of the Console to the Clipboard.

Options

OpenGL
Displays the OpenGL version information.

Rendering Statistics
Displays rendering times.

Effect

Opens or closes the Effect window. See **Effect** for more information.

Filters

Opens or closes the Filters window. See **Filters** for more information.

Histogram

Opens or closes the Histogram window. See **Histogram** for more information.

Magnifier

Opens or closes the Magnifier window. See **Magnifier** for more information.

Parameters

Opens or closes the Parameters window. See **Parameters** for more information.

Presets

Opens or closes the Presets window. See **Presets** for more information.

Variations

Opens or closes the Variations window. See **Variations** for more information.

Reset

Resets the window layout the next time DFT is started. This is useful if you have tweaked your windows beyond recognition.

Zoom In

Zooms the image in.

Zoom Out

Zooms the image out.

Fit Image to Window

Fits the image to the window.

Layouts

There are 4 preset layouts that automatically arrange the interface windows into different configurations.

Default Layout

The interface is configured with the default DFT layout where all windows are shown.

Edit Layout

The Edit Layout shows the Viewer, Presets and Parameters windows.

View Layout

The View Layout shows only the Viewer.

Dual Monitor Layout

The Dual Monitor Layout shows the Viewer on the left monitor and all other windows on the right monitor.

Layout Shortcuts

Shortcut	Action
F2	Selects the Default Layout
F3	Selects the Edit Layout
F4	Selects the View Layout
F5	Selects the Dual Monitor Layout

Help

User Guide

Opens the DFT User Guide.

Help Shortcuts

Shortcut	Action
F1	Opens the DFT User Guide

About

Shows the DFT version.

License

Opens the Deactivation Options window which has two choices: Internet Deactivate (Recommended) and Advanced Options.

VIEWER

The Viewer is where images are viewed, edited and manipulated.

Zoom and Pan

Zoom In

Zooms the image in.

Zoom Level

Displays the zoom level as a percentage.

Zoom Out

Zooms the image out.

Zoom to Fit

Fits the entire image inside the Viewer.

Zoom

Select the Zoom Region icon and drag select a square region in the Viewer to zoom in on that area.

Pan

Pans the image left, right, up and down.

See the **Viewer Keyboard Shortcuts** for more zooming and panning options.

Compare

Compares images using Side-by-Side, Vertical Split, Horizontal Split, A/B or Snapshot comparison modes. By default, the current filter and original image are selected for comparison. Choose one of the comparison modes using the icons above the Viewer.

The View/Compare icon in the Effect window determines which layers are used in the comparison.

Side-by-Side Comparison

Compares images side by side in the Viewer.

Vertical Split Comparison

Compares images using a vertical split. Move your cursor into the image area over the split line and when the cursor changes to a double-arrow, click and drag to move the split. Depending on the filter used, the split line may not be obvious, so triangular sashes on the outside of the image help you find it. If you drag the sash all the way around, it will swap directions.

Horizontal Split Comparison

Compares images using a horizontal split. Move your cursor into the image area over the split line and when the cursor changes to a double-arrow, click and drag to move the split. Depending on the filter used, the split line may not be obvious, so triangular sashes on the outside of the image help you find it. If you drag the sash all the way around, it will swap directions.

A/B Comparison

When the A/B Comparison button is selected,

a Show Other View icon appears. Clicking it cycles through the images.

Snapshot

When the Snapshot icon is enabled, a snapshot of the image in the Viewer is taken as well as the layer's mask, if there is one.

A View Snapshot icon then appears and allows the use of the various comparison modes to compare the snapshot to the other layers or different filter settings.

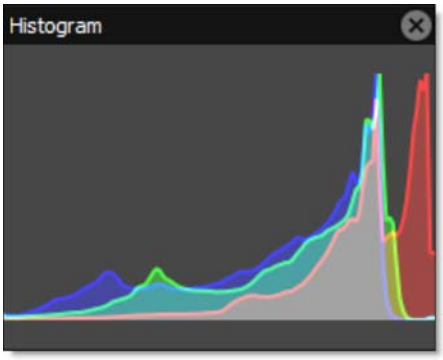
Viewer Options

Show Mask

Cycles the display between the full color image and the Mask channel.

Histogram

A histogram is a specialized graph that plots the number of pixels at each color intensity level. It is very useful in seeing how an image's pixels are distributed.

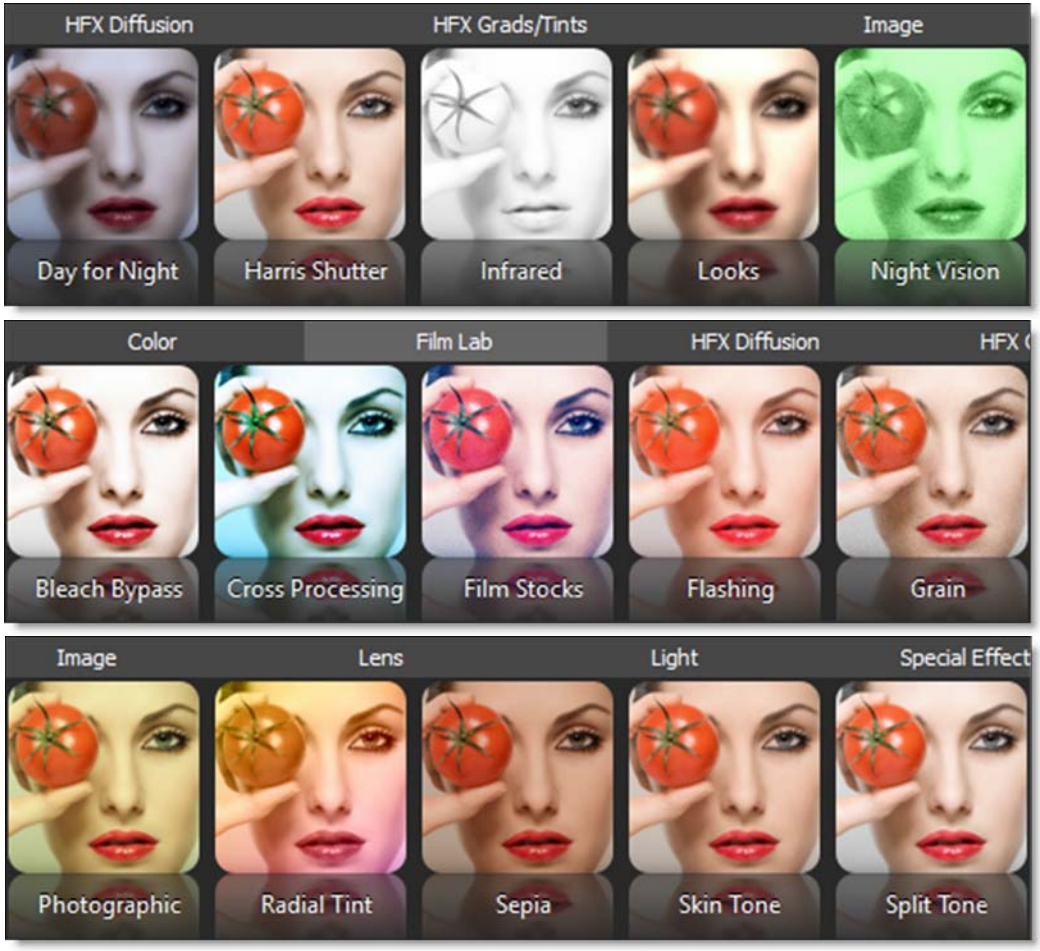


Viewer Keyboard Shortcuts

Shortcut	Action
Middle-mouse drag	Pans the image
Space Bar+drag	Pans the image
I Key	Zooms the image in
O Key	Zooms the image out
Zoom icon+Drag a square	Zooms into the defined area
Scroll wheel over image	Zooms the image in and out
Middle-mouse double click	Fits the image to the window
Ctrl(Win)/**Cmd**(Mac)+click A/B Comparison	Turns off A/B Comparison mode, if enabled,
F	Fits the image to the window
M	Cycles the display between the full color image and the Mask channel
H	Opens the Histogram window
1	Opens the Magnifier window

FILTERS

The Filters window at the bottom of the screen is categorized by filter function and displays a thumbnail for each filter. The following filter categories are listed: Color, Diffusion, Film Lab, Grads/Tints, Image, Lens, Light and Special Effects.



You can find detailed information on each filter later in this guide.

Wrap Filters

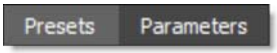
Certain filter categories have a lot of filters and depending on the size of the window, there may be a horizontal scroll bar so that you can navigate to any filter not currently shown on the screen. To change to a vertical scroll bar, click the Wrap Filters icon at the far right of the Filters window.

PRESETS AND PARAMETERS

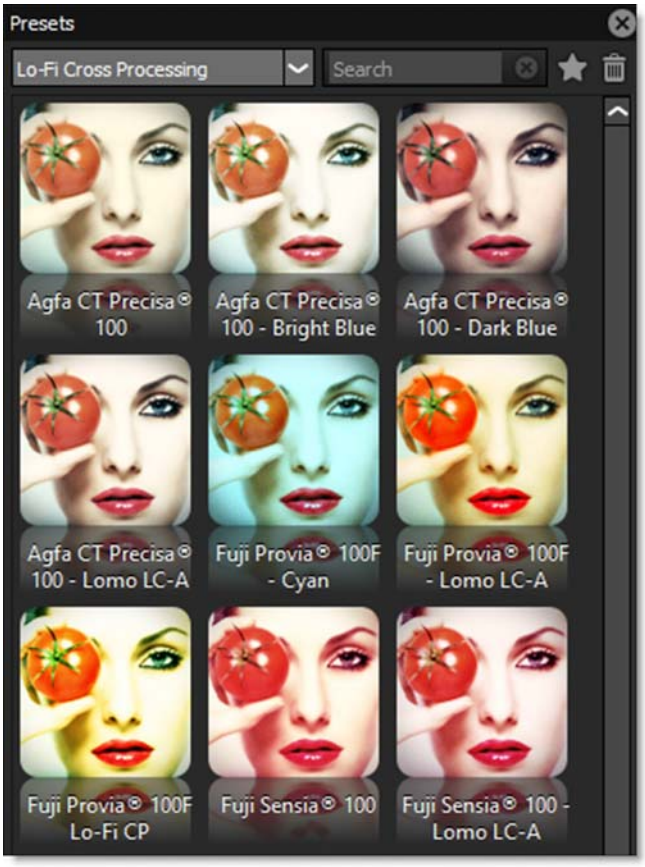
Presets and Parameters share the same window space on the right side of the screen, with Presets shown as the default. Either Presets or Parameters is selectable in a tab at the bottom of the window.

Presets

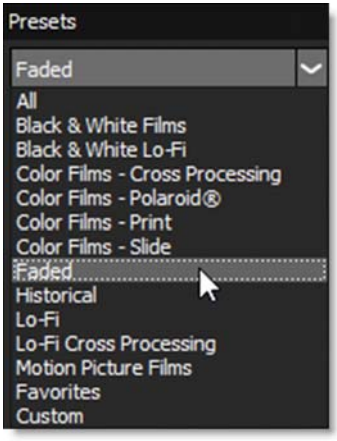
The Presets window allows you to select from a set of pre-defined presets. When the Presets tab is selected at the bottom of the Presets and Parameters window (the default), the Presets window is visible and displays the current filter's available presets.



Presets for most filters have been created so that you can easily click through the various choices.



Most filters contain multiple preset groups which are selectable at the top of the window.



Clicking once on a preset modifies the image in the Viewer. As you click on different presets, the image in the Viewer will update. This allows you to quickly try out several different presets.

Once you have found a preset that you like, click on the Add Layer icon at the top left of the Effect window to add the filter as a layer. Additional filters can then be added.

Note: Double-clicking on a thumbnail in the Presets window automatically adds the filter to the image in the Viewer as well as a layer in the Effect window.

Preset Searching

Presets can be searched for by entering text in the search field located at the top of the Presets window. The pattern remains in effect when you switch filters, but it will clear automatically when you switch layers in the Effect window or apply a preset. Clear the search text to return the Presets window to it's normal state.

To search for a preset:

1 **Select a filter, for instance Grads/Tints > Gels.**

2 **In the Presets window search field, type *red.***

All presets with red in the name are shown.

3 **In the search field, type *sun|blue.***

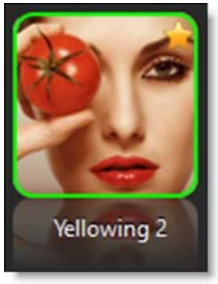
Any preset with sun or blue in the name is shown.

Favorites

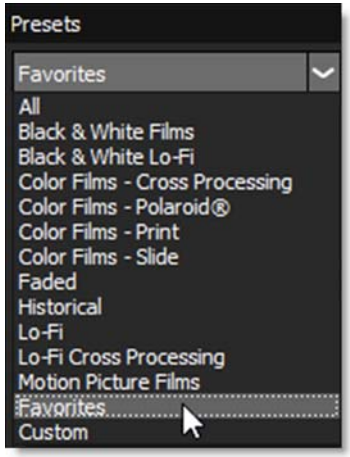
Presets can be tagged as a Favorite allowing them to be sorted separately in the Presets window as well as in the Favorites tab of the Filters window.

You can tag a preset as a Favorite by selecting the preset and pressing the Toggle Favorite icon located at the top right of the Presets window.

Presets tagged as a favorite display a yellow star at the top right of the preset.



To sort the Presets window by Favorites, select Favorites in the Presets pop-up menu.



Presets Right-Click Menu

Right-click over a preset to open Preset options.

Rename

Right-click on a preset, select Rename and type in the new name.

Delete

Right-click on a preset and select Delete.

Make Default

Right-click on a preset and select Make Default. The default preset is the one that is applied to the image when a filter is selected and the one shown in the Filter window. Changing the default will take effect the next time you start DFT.

Restore

Default Presets

Restores the Default preset for each filter. The restore happens the next time you select the filter.

Deleted Presets

Restores deleted presets.

Renamed Presets

Restores renamed presets. The restore happens the next time you select the filter.

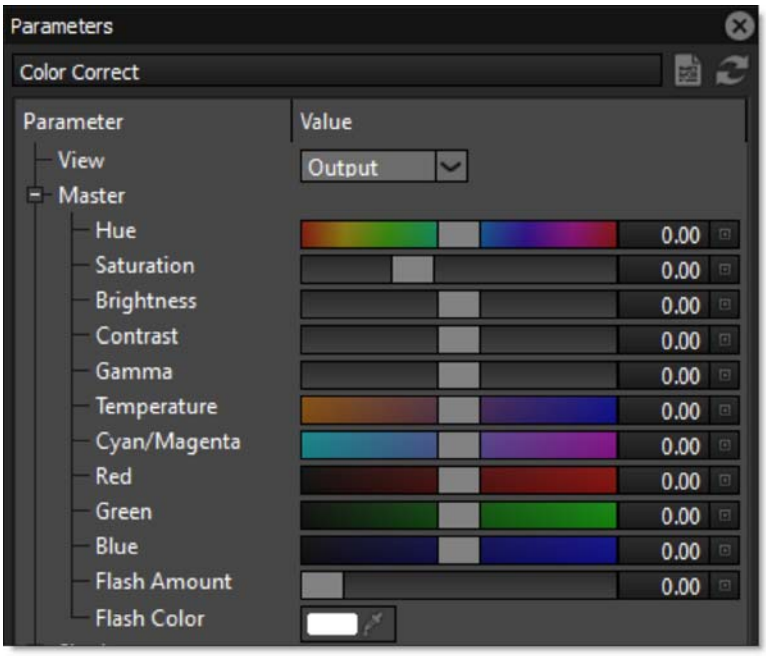
To Factory Default

Restores all presets to the default factory settings.

Parameters

When the Parameters tab is selected at the bottom of the Presets and Parameters window, the Parameters window is visible and displays the current filter's parameters.

Adjusting the parameters will update and change the image in the Viewer.



Slider controls can be adjusted in the following ways:

- **Clicking and dragging the slider.**
- **You can adjust with finer precision by pressing Ctrl(Win)/Cmd(Mac) while dragging the slider.**
- **Clicking on the number to the right of the slider, typing in the desired value and hitting Enter.**
- **Hover the cursor over a slider and use the mouse scroll wheel to make the adjustment. Scrolling up raises the value while scrolling down lowers it.**

Pop-up menus can be adjusted in the following ways:

- **Click on the pop-up menu and make a selection.**
- **Hover the cursor over a pop-up menu and use the mouse scroll wheel to change the selection.**

Create Custom Preset

Creates a custom preset in the Presets window based on the current parameter settings. You must name the preset prior to creating it by using the name field to the left of the Add Preset icon.

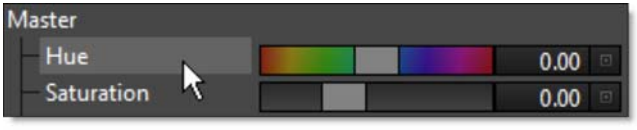
Reset to Defaults

Resets all of the parameters for the currently selected preset to the built-in defaults.

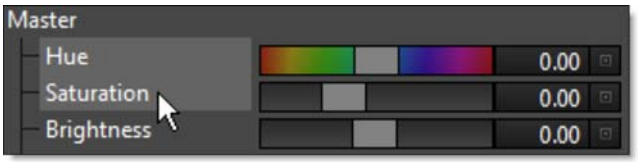
VARIATIONS

Variations based on either one or two parameters can be created and are displayed as thumbnails in a window below the Parameters and Presets window.

To display the Variations window and create variations, pick a filter and click on a parameter name in the Parameters window.



Ranges, Toggles, and Color parameters are available for creating variations. When you select a parameter, the Variations window appears and you'll see the variations being generated on that parameter. Click on a second parameter and it will generate variations between the two.



The first parameter you click on will be the dominant parameter - it'll go across the top of the Variations tab. So, you can get different results depending on the order you select the parameters. Click on a selected parameter to toggle it back off again.

Note: You can only have one or two parameters selected at a time. If you click on a third parameter, the last parameter you clicked on will deselect itself. If you deselect both of the parameters or switch effects, the Variations window will disappear because the variations are no longer being generated.

Variations are generated based on the current effect parameters. So, you can pick some parameters for your variation, then go back to the Presets window and pick a different Preset, and the variations will regenerate.

Variation Controls

Maximum Number of Variations

Sets the number of variations.

Parameter Value Spread

Determines the difference from one variation to another.

Auto Generate

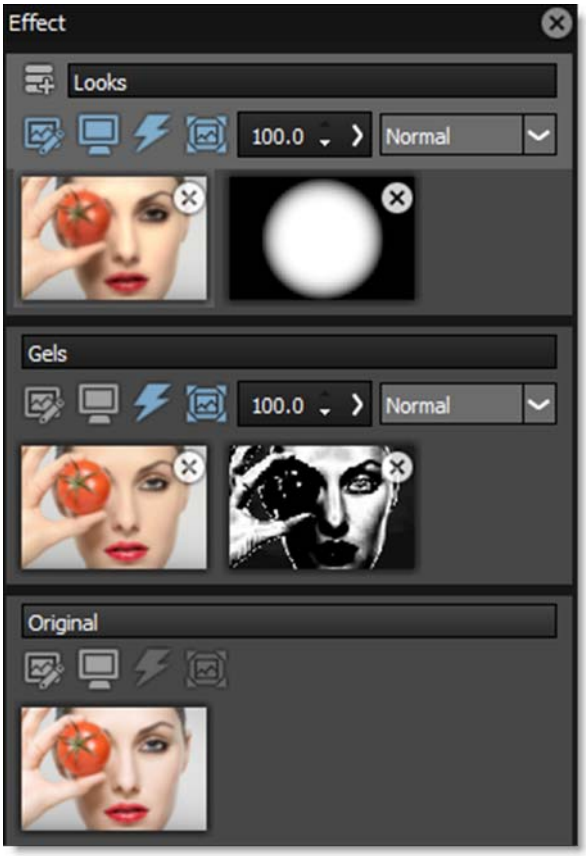
Variations are constantly being generated every time you select a parameter or click on a variation thumbnail.

Generate

When Auto Generate is off, you must click the Generate icon to update the variations after new parameters are selected.

EFFECT

The Effect window shows all filters that have been applied to your image. The most recently applied filter is at the top of the stack, while the earlier applications are at the bottom. When you click on a thumbnail, the Viewer displays that layer.



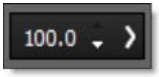
Layer Controls

Layer Name

Displays the Layer name. Just type in this field to rename the layer.

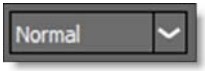
Layer Opacity

Sets the Layer's opacity.



Layer Blend Mode

Layers can be combined with the layer below using a variety of Blend modes.



The following layer blend modes are available: Normal, Darken, Multiply, Color Burn, Linear Burn, Darker Color, Lighten, Screen, Color Dodge, Linear Dodge (Add), Lighter Color, Overlay, Soft Light, Hard Light, Vivid Light, Linear Light, Pin Light, Difference, Exclusion, Subtract, Hue, Saturation, and Color.

Go to **Blend Modes** for explanations of the various modes.

Add Layer

When a filter has been selected, pressing Add Layer applies the current filter to the image and creates a new layer.

Add Layer can also be used even if no filter is applied. This way Layer Blend Modes can be used to create effects between layers.

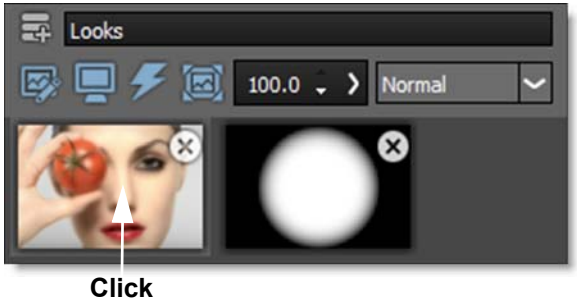
Edit

Clicking the Edit icon for a particular layer makes it active. Once active, you can adjust the filter settings or replace the current filter with a different one.

View/Compare

The View/Compare icon indicates which layer is shown in the Viewer and when enabled for multiple layers, the Viewer's Side-by-Side, Vertical Split, Horizontal Split or A/B Comparison viewing modes become active. See the Compare section of the **Viewer** for more information.

Clicking on the image thumbnail in the Effect window automatically activates the View/Compare icon only for that layer and displays it in the Viewer.



Enable Filter

Deactivate the filter by clicking the Enable Filter icon.

Enable Mask

Enables masks attached to the layer. Masks can be used to limit where a filter is applied to an image and are displayed to the right of the filter thumbnail.

See **Masks** for more information.

Using Layers, Filters and Masks

Adding Filters

There are two ways to add layers.

1 **Click the Add Layer icon at the top left of the Effect window.**

2 **Double-click on a thumbnail in the Presets window.**

Replacing Effects

Double-click on an image thumbnail to make it the active layer or click the Edit icon. Once active, you can replace the current filter with a different one.

Note: You can tell visually which layer is active by the active layer's lighter gray background.

Deleting Filters

There are a number of ways to delete a filter.

1 **Double-click an image thumbnail in the Effect window and hit the Delete key.**

2 **Click on the X at the top right of an image thumbnail.**

3 **Right-click on an image thumbnail and select Delete Filter.**

Deleting Masks

There are a number of ways to delete a mask.

1 **Double-click a mask thumbnail in the Effect window and hit the Delete key.**

2 **Click on the X at the top right of a mask thumbnail.**

3 **Right-click on a mask thumbnail and select Delete Mask.**

4 **Right-click on an image thumbnail and select Delete Masks to delete all masks for the selected layer.**

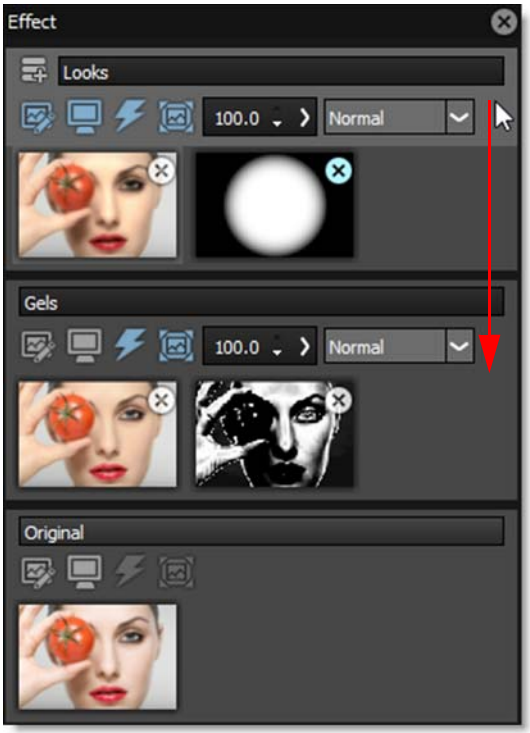
Deleting Layers

Right-click on an image thumbnail and select Delete Layer. Delete Layer is only available when a layer has been added in the Effect window.

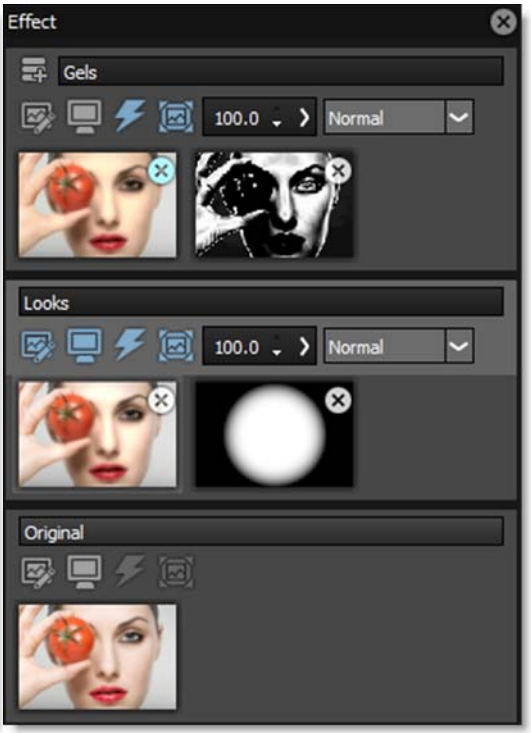
Drag and Drop Layers

The ordering of layers in the Effect window can be changed by dragging and dropping them to a new location. To do so, click and drag on the layer's title bar to the right of the filter name and release in the new location.

Before



After



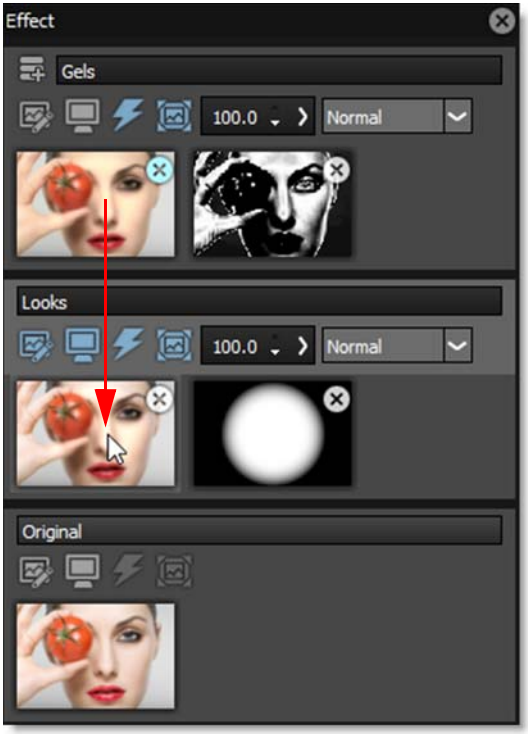
When the mouse button is released, the layer is moved to the new location.

Drag and Drop Filters and Masks

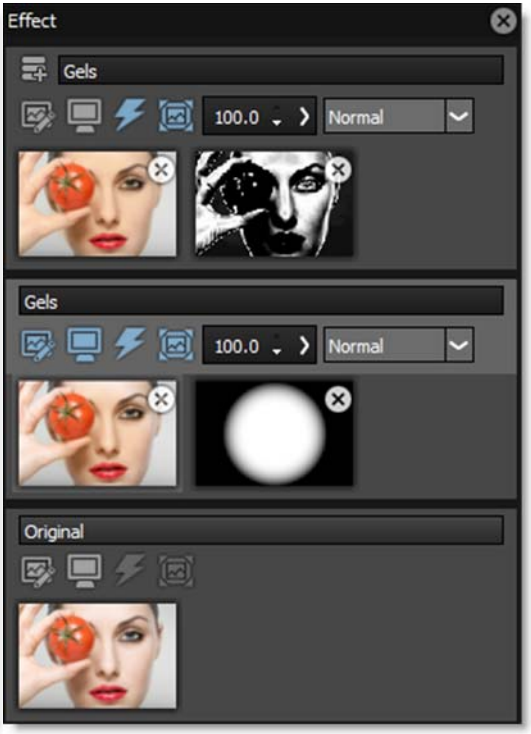
Drag and Drop Filters

Filters from one layer can be copied to another layer using drag and drop. Click and drag on the layer's image thumbnail and release the mouse on the layer's image thumbnail where you want to copy the filter. When the cursor hovers over the image thumbnail of another layer, the cursor changes to a + sign indicating that it is OK to release the mouse.

Before



After

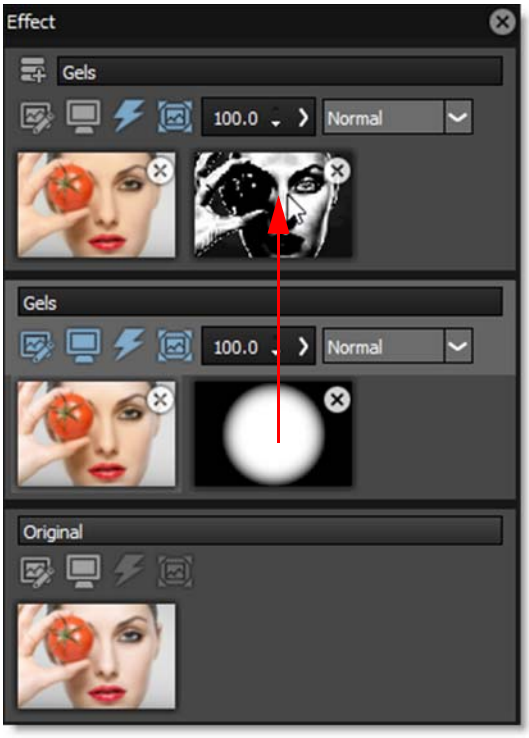


When the mouse button is released, the destination filter is replaced with the source filter.

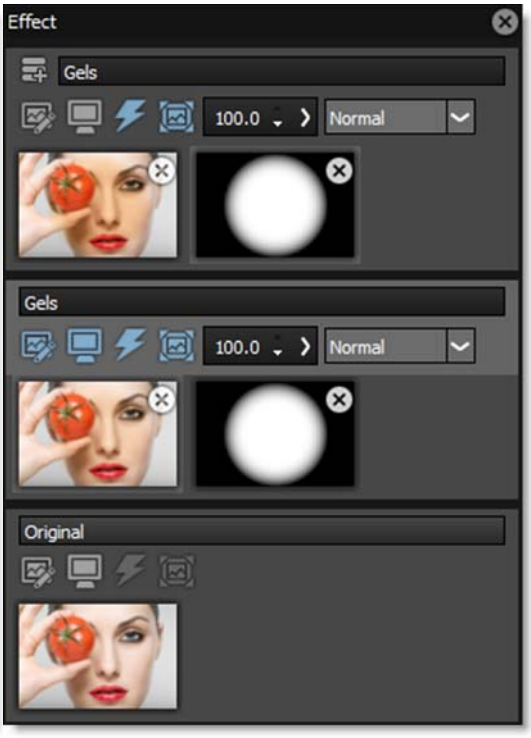
Drag and Drop Masks

Masks can be copied using drag and drop. Click and drag on one of the layer's mask thumbnails and release the mouse on the layer's mask thumbnail where you want to copy the mask. When the cursor hovers over the mask thumbnail of another mask, the cursor changes to a + sign indicating that it is OK to release the mouse.

Before



After



When the mouse button is released, the destination mask is replaced with the source mask. If you release the mouse over a layer without a mask, the mask will be added to the layer.

TOOLBAR

The Toolbar contains Done, Cancel, Reset and Add Mask buttons. When Add Mask is clicked on and a mask type is chosen, it's controls also appear in the Toolbar.

Done

The values of the parameter adjustments in the DFT user interface are transferred to your host application.

Cancel

Closes without making any changes.

Reset All

Resets DFT back to the original image with nothing applied to it.

Add Mask

Adds a Mask to the current layer. Masks can be used to limit where a filter is applied to an image and are displayed to the right of the filter thumbnail.

See **Add Mask** in the Masks section for more information.

Adjusting Toolbar Controls

When certain tools are selected, for instance the masking tools, their controls appear in the Toolbar. Adjusting the controls is pretty straightforward except in the case of tools with numeric values where the slider is hidden, but can be accessed by clicking either the parameter icon or on the greater than character "**>**" to the right of the Spin controls.

As with the numeric controls in the Parameters window, you can also click directly on the numbers, type in a new number and hit **Enter**.

MASKS

Masks allow you to limit the effect of a filter by revealing it only in white areas of the mask. White is on, black is off and gray areas in between represent a level of transparency.

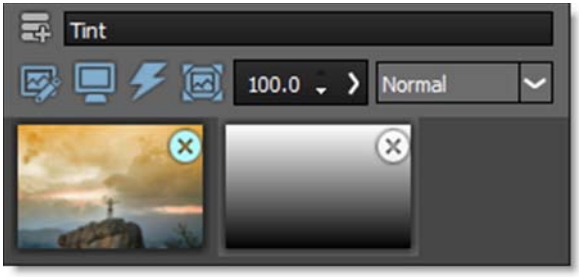


Photo by Joshua Earle on Unsplash

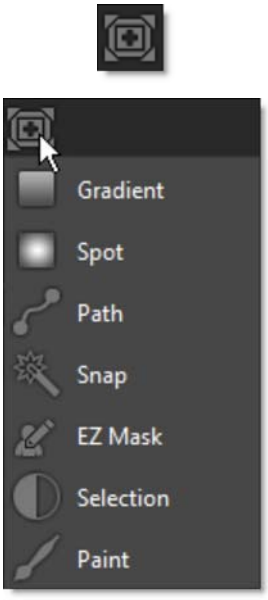
Masks are displayed to the right of the image thumbnail in the Effect window.

General Mask Controls

The various mask types consist of a combination of on-screen and toolbar controls.

Add Mask

Using the Add Mask icon in the Toolbar, one of seven mask types can be applied to a layer: Gradient, Spot, Path, Snap, EZ Mask, Selection and Paint. Masks can be used to limit where a filter is applied to an image and are displayed to the right of the layer's image thumbnail in the Effect window.



Mask Blend Mode

The Blend mode controls how the current mask is combined with the previous mask and is only active when more than one mask has been applied.

Normal

Normal blends masks based on each mask's transparency.

Subtract

The pixels of one mask are subtracted from another mask.

Multiply

Produces a result where there is a union of pixels from two masks.

Invert Mask

Inverts the current mask.

Mask Opacity

Sets the opacity of the current mask.

Mask Blur

Sets the blur level of the EZ Mask, Path, Selection and Snap masks.

Inner Blur

The mask is blurred inward from the edge of the mask.

Centered Blur

The blur is centered on the edge of the mask, equally blurring inward and outward.

Outer Blur

The mask is blurred outward from the edge of the mask.

Gradient Mask

Creates a linear top to bottom or left to right gradient and is adjusted using the four points around the corners of the image as well as controls in the Toolbar.

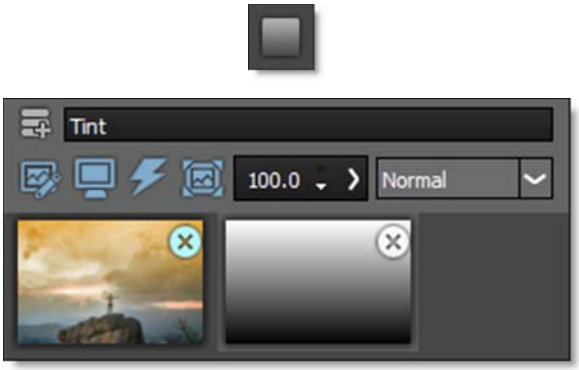


Photo by Joshua Earle on Unsplash

Go to the **Gradient Mask Tutorial** to see how it works.

The Gradient Mask consists of a combination of on-screen and toolbar controls.

On-Screen Controls

Corner Points

There are four points around the four corners of the image. By clicking and dragging any of the four points, the Gradient mask can be adjusted.

Toolbar Controls

Top-to-bottom

The direction of the Gradient mask is from top to bottom.

Bottom-to-top

The direction of the Gradient mask is from bottom to top.

Left-to-right

The direction of the Gradient mask is from left to right.

Right-to-left

The direction of the Gradient mask is from right to left.

Gradient Size

The size of the Gradient mask.

Spot Mask

Creates a circular spot mask and is adjusted using the two circular on-screen controls as well as parameters in the Toolbar.

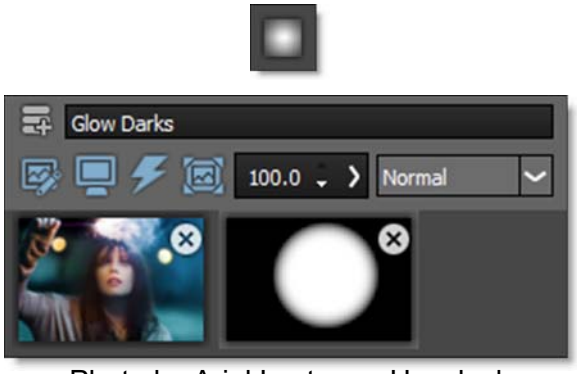
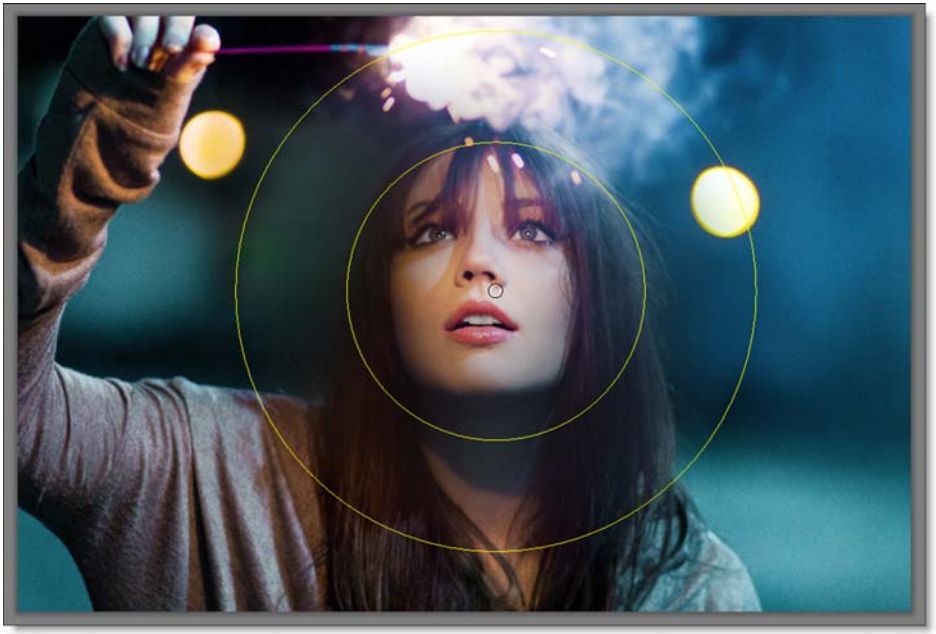


Photo by Ariel Lustre on Unsplash



Spot Mask consists of a combination of on-screen and toolbar controls.

On-Screen Controls

Radius

The un-blurred radius of the spot is controlled using the inner on-screen circle.

Falloff Radius

The blurred edge radius is controlled using the outer on-screen circle.

Toolbar Controls

Aspect Ratio

The aspect ratio of the spot.

Falloff

Moves the falloff towards the spot centerpoint.

Path Mask

A Path is an outline created by placing sequential points along an object. Think of it as connecting the dots if you will. Although paths can be open or closed, DFT only makes use of closed paths. Drawing a path is often a good solution for objects that can't be masked in any other way.

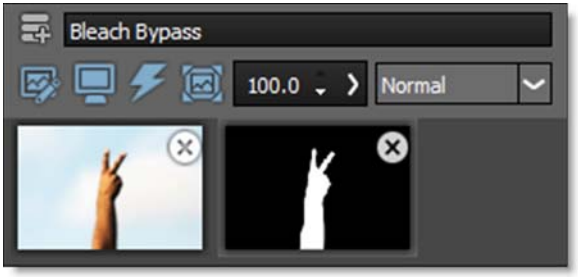


Photo by Patrick Fore on Unsplash

Go to the **Path Mask Tutorial** to see how it works.

Create a Path

Create a path by clicking on the image in the Viewer. With each click of the mouse, a point is created. When done, click on the first point that was added to close the shape.

Note: If shapes overlap, a hole in the path is created.

Closing Open Paths

If you neglect to close a path and would later like to close it, select one of the end points and then select the other end point. The path will then close.

Selecting Points

Individual or multiple points can be selected. Once selected, various point editing operations are available.

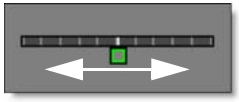
Point Selecting Shortcuts

Shortcut	Action
Click a point	Selects one point
Click and drag over multiple points	Selects multiple points
Ctrl+click on a point	Toggles the selection on or off
Shift+click a point	Adds the point to the current selection

Point Editing

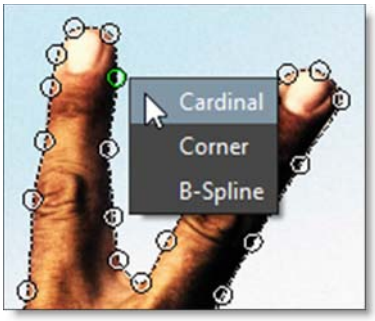
Significant modification to the path is made possible by point editing controls available through pop-up menus or keyboard shortcuts.

Point Editing Shortcuts

Shortcut	Action
Alt+click on a path	Inserts a new point along the path
Delete key	Delete all selected points
Click and drag selected points	All selected points move
Click and drag an unselected point	Moves one point
Alt+click+drag on a point 	Opens a slider to adjust the point's tension. Left of center forces the path to curve through the point (Cardinal spline). The center position creates a corner point while the right position moves the curve towards the center of the path (B-Spline). If multiple points have been selected, they will all be set to the same tension.
Alt+click+drag+**Shift** on a point	Snaps the point tension to Cardinal, Corner or B-Spline positions

Point Editing Pop-up Menu

Right-click over a path point or set of path points to open the Point pop-up menu.



Menu Option	Action
Cardinal	Creates a path that passes smoothly through each point
Corner	Creates a corner point
B-Spline	Creates a path that is determined by the surrounding points

Show Control Points

It is sometimes helpful to turn off the display of path points to see the accuracy of your path. When turned off, you can still adjust the hidden points by click+dragging on the path and the nearest point will be adjusted.

Snap Mask

Snap is an easy to use interactive image masking tool. Snap provides instant visual feedback by snapping an editable curve to an object's boundary even if it has vague or low contrast edges.

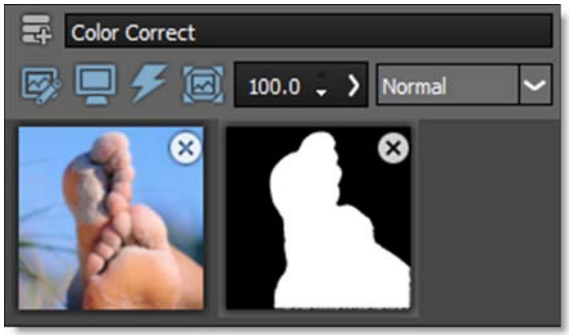


Photo © THINKSTOCK LLC--www.thinkstock.com

Go to the **Snap Mask Tutorial** to see how it works.

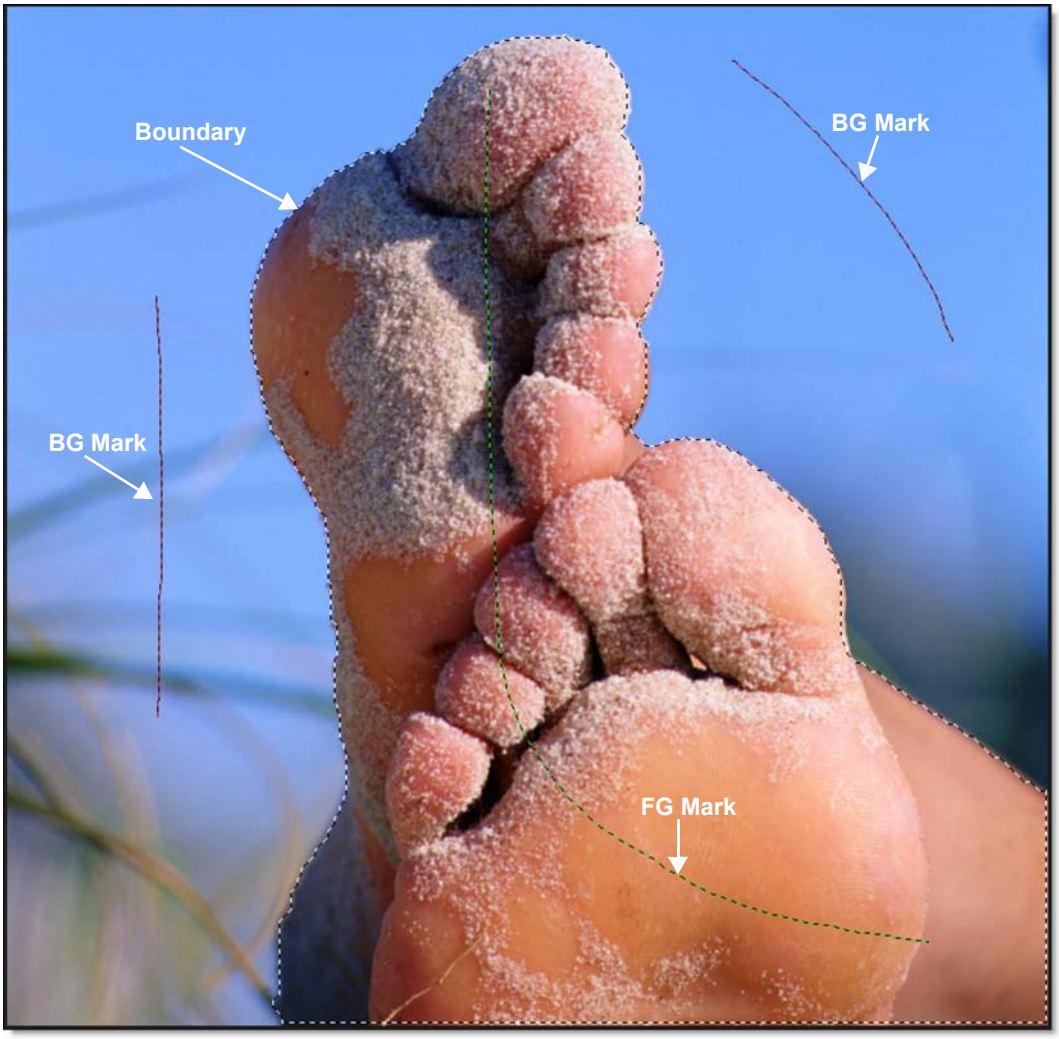
Snap consists of a combination of on-screen and toolbar controls.

Workflow

Using a coarse to fine editing approach, an area of the image is selected by first marking the object and then refining the boundary. Object marking occurs at a coarse level, which roughly defines an object by marking a few lines. Next, boundary editing works at a finer scale by either clicking and dragging polygon points to edit the object boundary or drawing a stroke along the object's edge.

Object Marking

Instead of tracing the boundary of an object, Snap uses lines and curves to define the object.



Mark Foreground

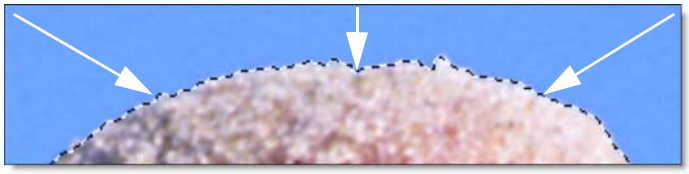
Click the Mark Foreground icon and draw lines to mark the foreground area--the region to be isolated. With each click and drag of the mouse, a green line is drawn.

Mark Background

Click the Mark Background icon and draw lines to mark the background area. With each click and drag of the mouse, a red line is drawn.

Note: You can automatically draw background lines by clicking the right mouse button and dragging.

As soon as the first background line is drawn, Snap calculates a boundary curve that is displayed as a black and white dashed line around the object.



Add additional FG and BG lines as needed so that your object is surrounded by the boundary. Don't be concerned at this point if the boundary is not exactly following your object. The curve can be refined further using the boundary editing tools.

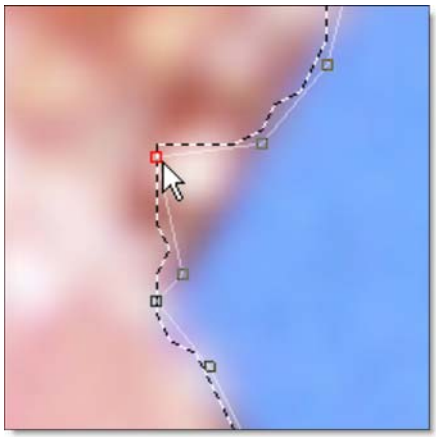
Boundary Editing

Even though object marking does a pretty good job of creating an accurate boundary, there can still be some errors, especially around vague or low contrast edges. To remedy these errors, there are simple polygon point editing tools to refine the object's boundary. Two tools are provided for polygon editing: Edit Points and Override Edge. When either of these tools is selected, the boundary created in the object marking step is converted into editable polygons and you will see a noticeable refinement in the boundary.

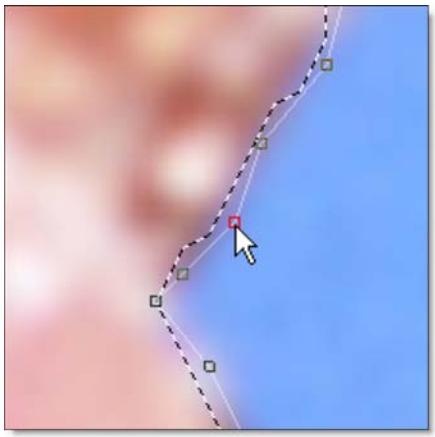
Edit Points

Click the Edit Points icon and drag points to adjust the shape of the polygon.

Before



After



Compared with a simple polygon where you need to modify many points, Snap uses far fewer points to define the object shape. You should see variation in the boundary even though there are no points directly over the variations.

Note: The Edit Points icon can also be used to display and edit control points after the boundary is converted to a path.

Point Editing Shortcuts

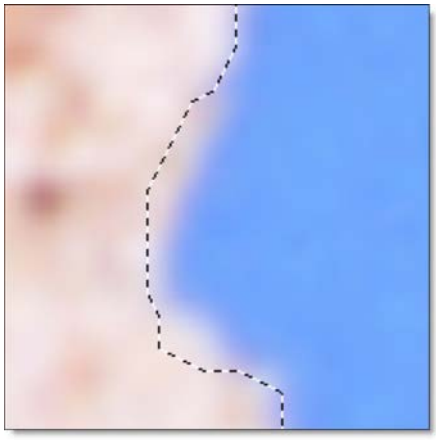
Shortcut	Action
Alt+click between two points	Add points
Hover over point + **Delete** Key	Delete points
Alt+drag a point	Uses magnetism to snap a point to an object's boundary

Override Edge

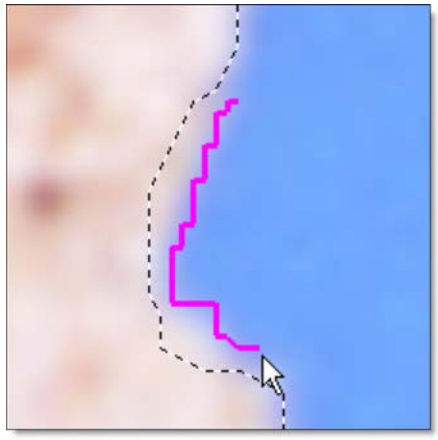
Click the Override Edge icon and draw a stroke along the edge of your object where the boundary doesn't correctly follow the edge.

Once a stroke has been drawn, Snap optimizes the object boundary. The optimized boundary automatically snaps to the object boundary even though the polygon points may not be on it.

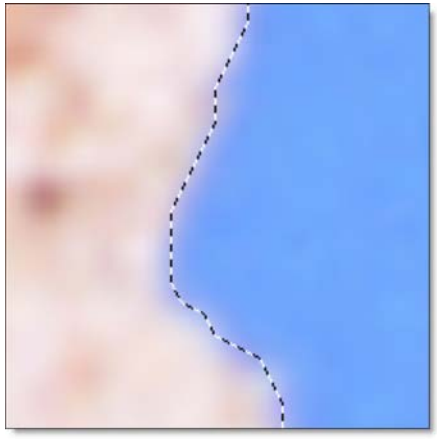
Before



Mark



After



An entire segment of the polygon is replaced by drawing a single stroke and is much easier than dragging individual points.

Clear Foreground / Background Marks

Clears all foreground ad background marks.

Convert Curve to a Path

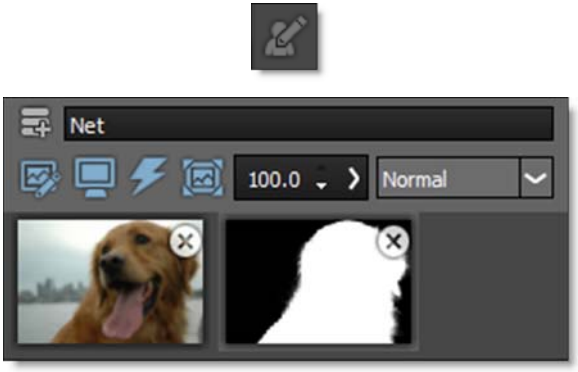
When happy with the boundary you have created, click the Convert Curve to a Path icon to apply it to the layer and convert it to an editable path. Additional boundaries can be created and applied to the layer. When boundaries overlap, a hole in the mask is created.

Show Control Points

It is sometimes helpful to turn off the display of path points to see the accuracy of your path. When turned off, you can still adjust the hidden points by click+dragging on the path and the nearest point will be adjusted.

EZ Mask

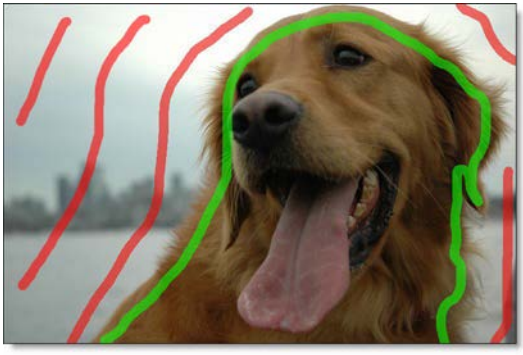
EZ Mask is an easy to use interactive image masking tool capable of isolating almost any object in an image--even if you are dealing with fine hair detail, smoke, or reflections.



To work this magic, EZ Mask iteratively estimates the transparency value for every pixel in the image, based on a small sample of foreground (what you want to isolate) and background pixels marked by simple strokes on the image.

Results show that compared with previous approaches, our method is more efficient and requires minimal effort to extract high quality masks for foregrounds with significant semi-transparent regions.

User Input



Mask

Go to the **EZ Mask Tutorial** to see how it works.

EZ Mask consists of a combination of on-screen and toolbar controls.

Mask Creation

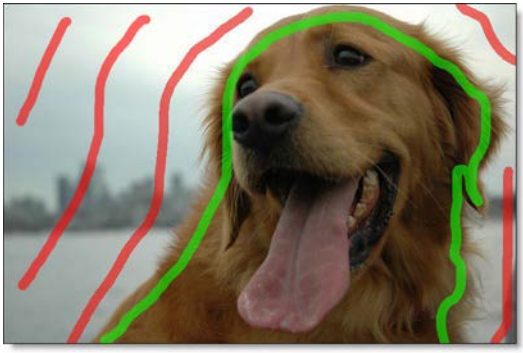
Trimaps

EZ Mask creates masks by using a trimap--a pre-segmented image consisting of three regions of foreground (what you want to isolate), background and unknown. Partial opacity values are then computed only for pixels inside the unknown region. Two trimap methods can be used: Stroke and Filled. When creating masks, start with the Stroke method and move on to the Filled method if the results are not satisfying.

Stroke

Unlike previous approaches, our trimaps can be relatively sparse consisting of individual foreground and background brush strokes. All pixels left unmarked will be treated as unknown. After processing, if any fine foreground details are missing from the mask, the Unknown brush can be used in these areas to help recover lost detail.

Strokes



Mask

Stroke trimaps require little user input, but when color ambiguity exists between the foreground and background, a Filled trimap may create a more accurate mask. In addition, Stroke trimaps will also take longer to render as they require an extra calculation step.

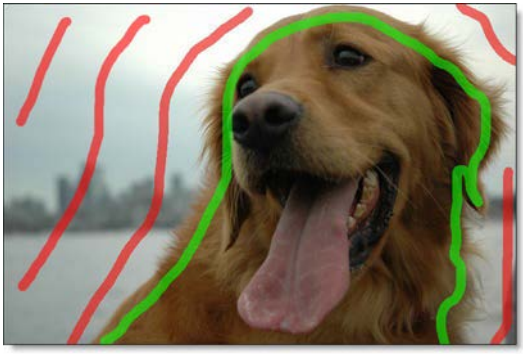
Stroke Trimap Creation Tips & Tricks

- **Make sure you place enough foreground and background strokes. A good stroke technique is to draw an inner outline around the object you are extracting using the Paint Foreground brush and an outer outline using the Paint Background brush.**

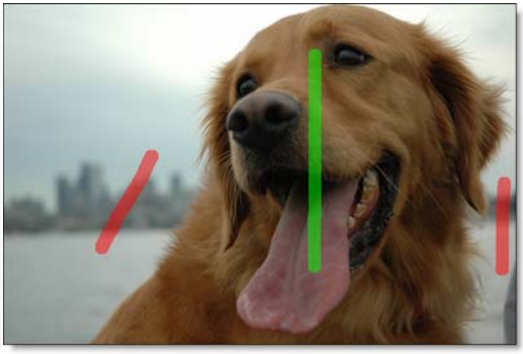
- **The strokes should be near the boundary of the object, but not right up against the edge.**
- **Strokes that are closer to the boundary will dominate the creation of the mask.**
- **If the foreground or background has varying colors, the strokes should cover these colors.**
- **After processing the mask, if you see gray areas in the foreground object that should be completely white, make additional foreground marks in those areas.**
- **If you see gray mask areas in the background that should be completely black, make additional background marks.**
- **If any fine foreground details are missing from the mask, click on the Unknown brush and draw over them with the left mouse button. This instructs EZ Mask to pay special attention to these areas and will help recover lost detail.**
- **The general rule is don't put different stroke types too close together unless you need to.**

Warning: If you only provide a few sparse strokes, a Stroke trimap will take longer to process than a filled trimap.

Good Stroke Example



Bad Stroke Example



Filled

Foreground and background brush strokes are used to mark definite foreground and background pixels while the Unknown brush is used to mark unknown, or mixed regions. Using this method, the entire image is painted/filled with one of the three brushes.

Filled

Mask

Filled trimaps process faster than Stroke trimaps and can result in extracting a more accurate mask, most notably when color ambiguity exists between the foreground and background. However, they can be tedious to create and tend to fail for images with large portions of semi-transparent foreground where the trimap is difficult to create manually.

Filled Trimap Creation Tips & Tricks

- **First, define unknown areas by selecting the Paint Unknown brush and drawing around the edges of the foreground (what you want to isolate) with the left mouse button. Include as little solid foreground areas as possible.**
- **Ideally, the unknown region in the trimap should only cover transparent pixels whose actual values are not completely foreground or background. In other words, the unknown region in the trimap should be as thin as possible to achieve the best masking result.**
- **Next, fill in the solid foreground area by selecting the Paint Foreground brush and the Fill tool. Click inside the area defined by the blue, Unknown brush. The foreground area automatically fills in with the green foreground color.**
- **Last, mark background areas by using the Paint Background brush and the Fill tool. Since the Fill tool is already enabled, you don't need to select it again. Click outside of the area defined by the blue, Unknown brush. The background area automatically fills in with the red background color.**

Note: Large foreground objects take longer to process than small ones.

Brushes

Paint Foreground

Click the Paint Foreground icon and draw to mark the foreground area--the region to be isolated. With each click and drag of the mouse, a green line is drawn.

Note: If you click with the left mouse button, press Shift and then click in a different location, a straight line is drawn. This will work with any brush type. If you keep Shift depressed while clicking, you will create interconnected straight lines. This is very useful when using a mouse.

Paint Background

Click the Paint Background icon and draw to mark the background area. With each click and drag of the mouse, a red line is drawn.

Note: You can quickly create background strokes without selecting the Paint Background brush by painting with the right-mouse button. This temporarily draws with the Paint Background brush and when the right-mouse button is released, the previously selected brush becomes active.

Paint Unknown

Click the Paint Unknown icon and draw to mark the unknown area. With each click and drag of the mouse, a blue line is drawn.

When drawing a stroke trimap, certain foreground details may be missing after the mask is generated. Using the Paint Unknown brush in these areas can sometimes help recover lost detail.

Paint Missing

The Paint Missing brush is used to mark missing foreground areas--fine details such as strands of hair that may be missing after the mask is generated. Using the Paint Missing brush in these areas can sometimes help recover lost detail. With each click and drag of the mouse, a purple line is drawn.

Note: The Paint Missing brush has a Sensitivity parameter located in Settings (Wrench icon) > Process Options. It's preset value will work for most images. However, the higher the value, the more details are brought out.

Eraser

Erases existing brush strokes.

Fill

Using the current brush, the Fill tool fills a region defined by a brush stroke or the edges of the screen.

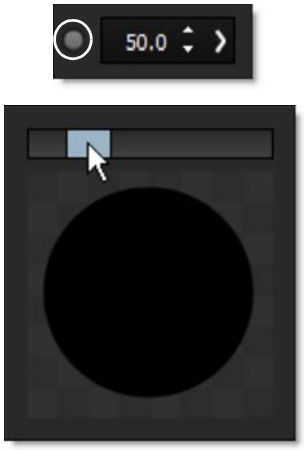
Brush Parameters

Size

Sets the size of the brush.

To set the brush size:

1 **Click on the Brush Size icon, and drag the slider that appears.**



or

2 **Enter a value in the number field next to the Brush Size icon and hit Enter.**

or

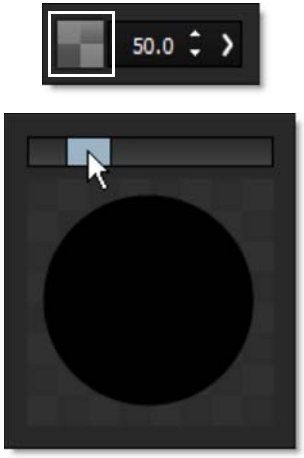
3 **Resize the brush in the Viewer by holding Ctrl(Win)/Cmd(Mac) and dragging in or out.**

Paint Overlay Opacity

Sets the opacity of the foreground, background and unknown brush strokes.

To set the paint overlay opacity:

1 **Click on the Paint Overlay Opacity icon, and drag the slider that appears.**



or

2 **Enter a value in the number field next to the Paint Overlay Opacity icon and hit Enter.**

Settings

Various EZ Mask preferences can be set by clicking the Settings icon.

Foreground Color

Sets the color of the Paint Foreground brush.

Background Color

Sets the color of the Paint Background brush.

Unknown Color

Sets the color of the Paint Unknown brush.

Missing Color

Sets the color of the Paint Missing brush.

Process Options

Deartifact

Blurry artifacts can be generated while attempting to extract objects that have drop shadows, similar colors to the background or out of focus edges. Deartifact can be used to limit these artifacts.

Deartifact

Turns deartifact on or off.

Amount

Sets the amount of deartifacting.

Missing Brush

Sensitivity

Sets the sensitivity of the Missing Brush. The higher the value, the more details are brought out.

Reset

Clears all brush strokes.

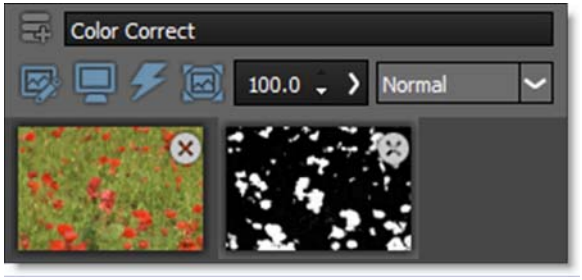
Mask Processing (Enter)

Generate Mask

Generates the mask. Click this after creating either foreground and background strokes or a filled trimap. You can use the Enter key to trigger the mask processing.

Selection Mask

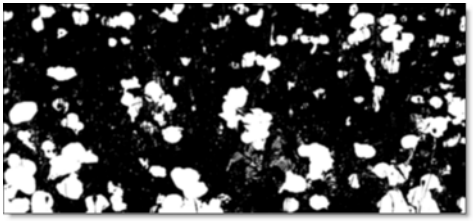
Selection masks, also known as mattes, can be used to manipulate, isolate and protect specific parts of an image when making adjustments or applying filters.



Using advanced image slicing algorithms, masks are created using luminance, hue, saturation, average, red, green, blue, cyan, magenta, and yellow values.

Original

Mask

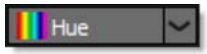


Go to the **Selection Mask Tutorial** to see how it works.

The Selection Mask consists of a combination of on-screen and toolbar controls.

Extract On

Extract On selects the type of mask. Select whichever type isolates the desired values.



Hue Mask

A mask is created based on one of the following:

Luminance

A mask is created based on the luminance of the image.

Hue

A mask is created based on the hue of the image. When adjusting the Position parameter, you are selecting different hues.

Saturation

A mask is created based on the saturation of the image.

Average

A mask is created based on the average of the image's RGB values.

Red

A mask is created based on the image's red values.

Green

A mask is created based on the image's green values.

Blue

A mask is created based on the image's blue values.

Cyan

A mask is created based on the image's cyan values.

Magenta

A mask is created based on the image's magenta values.

Yellow

A mask is created based on the image's yellow values.

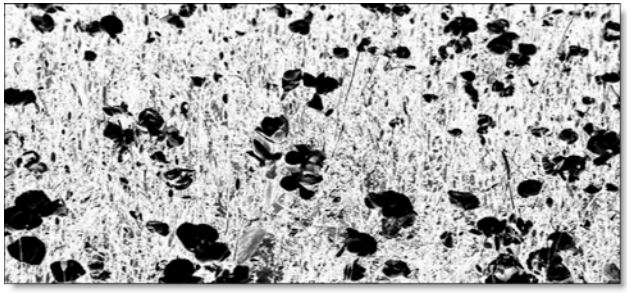
Position

The Position value pinpoints the color values to be used in the mask. For a luminance mask, a Position value of 100 would make a white mask of the highlights and a value of 0 would make a white mask of the shadows. In our flower image, look at how the mask varies for different Position values in a red extraction. When the Position is at a value of 100, the red flowers are shown as white in the mask.

Position=100, Range=25

When the Position is moved to 50, the red flowers turn black.

Position=50, Range=25



Range

Increases or decreases the range of values in the mask. A low Range value indicates a narrow range of values. A high Range value indicates a large range of values included in the mask.

Position=100, Range=50

Radius

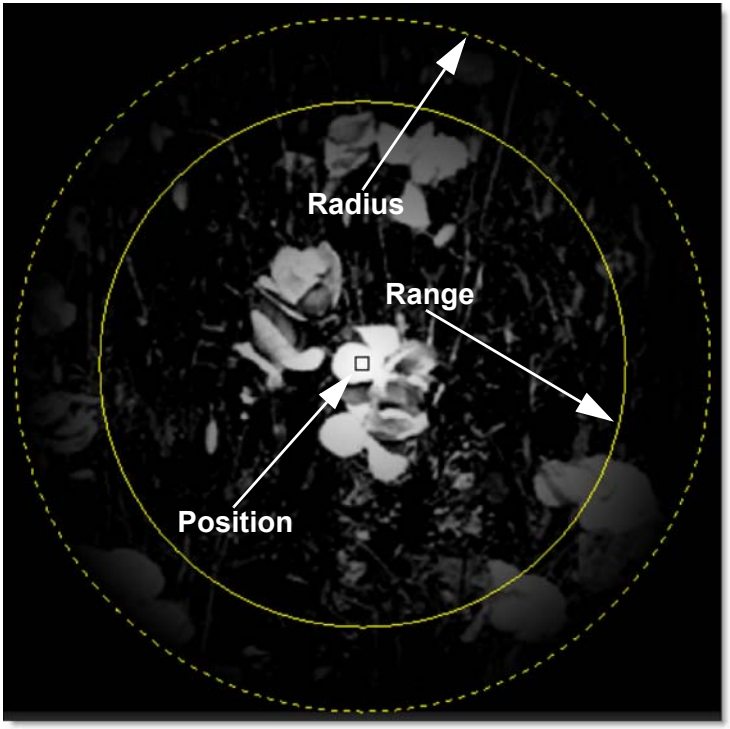
When the Radius control is increased, a soft, circular mask is created to limit the mask.

Radius=50

On-Screen Controls

When using the Selection Mask, the Position, Range and Radius parameters can be set using on-screen controls. Click on the image to place the on-screen control which consists of a center point and a solid circle. The Position value is

set by the location of the center point, while the Range is set by sizing the circle. The larger the circle, the larger the range. If Radius is used, a dashed circle will also appear.

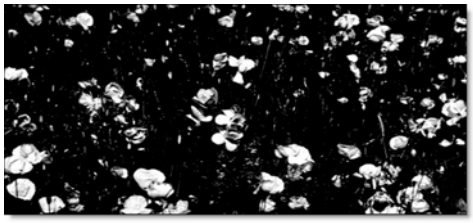


Black Clip

Blacks in the mask are made blacker by increasing this value. As the value increases, more values are clipped to black. This is helpful for getting rid of unwanted gray areas in what should be the black part of the mask.

Mask with No Black Clip

Black Clip=50



White Clip

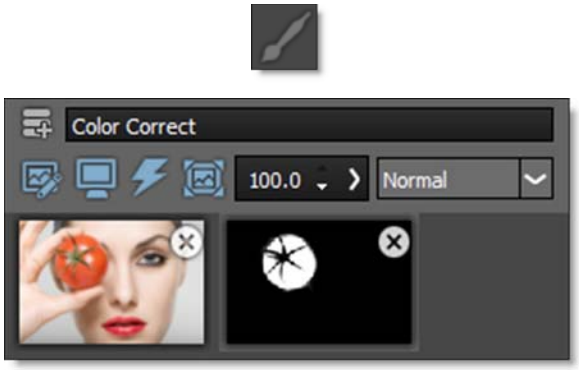
Whites in the mask are made whiter by increasing this value. As the value increases, more values are clipped to white. This is helpful for getting rid of unwanted gray areas in what should be the white part of the mask.

Mask with No White Clip

White Clip=50

Paint Mask

Organic masks are created using a paint brush and the filter appears only in the area of the paint stroke.



Go to the **Paint Mask Tutorial** to see how it works.

Paint Mask consists of a combination of on-screen brushes and toolbar controls.

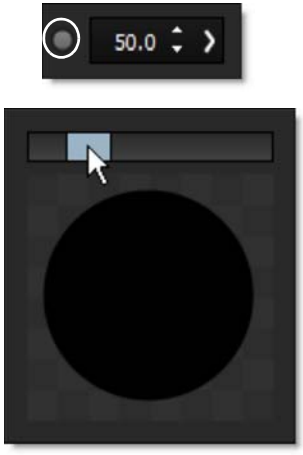
Note: If you have a large area that needs to be masked out, it may be more efficient to first use the Path Mask since Paint's brush size does not exceed 500 pixels.

Brush Size

Sets the size of the brush.

To set the brush size:

1 **Click on the Brush Size icon in the Toolbar, and drag the slider that appears.**



or

2 **Enter a value in the number field next to the Brush Size icon and hit Enter.**

or

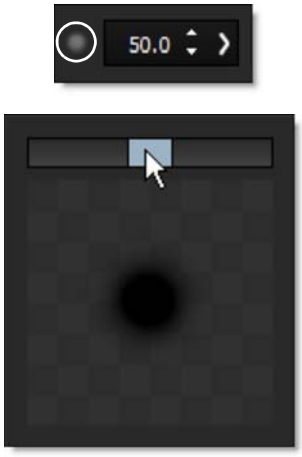
3 **Resize the brush in the Viewer by holding Ctrl(Win)/Cmd(Mac) and dragging in or out.**

Brush Softness

Sets the brush softness.

To set the brush softness:

1 **Click on the Brush Softness icon in the Toolbar, and drag the slider that appears.**



or

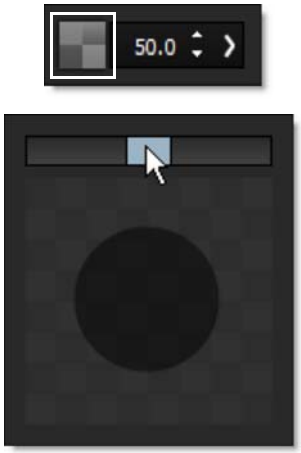
2 **Enter a value in the number field next to the Brush Softness icon and hit Enter.**

Brush Opacity

Sets the brush opacity. Painting with the right-mouse button automatically paints with O opacity or black.

To set the brush opacity:

1 **Click on the Brush Opacity icon in the Toolbar, and drag the slider that appears.**



or

2 **Enter a value in the number field next to the Brush Opacity icon and hit Enter.**

COMMON FILTER CONTROLS

There are a number of common filter controls that appear in DFT. For simplicity they are listed here.

Blur

Horizontal

The image is blurred by a quality blur along the X-axis.

Vertical

The image is blurred by a quality blur along the Y-axis.

Gang

The horizontal and vertical slider values can be ganged together. When ganged, moving the slider affects both values.

Black and White

Selects the type of black and white filter to be applied to your color image.

Normal

Converts the color image to a monochrome image.

Red

Simulates a red filter in black and white photography.

Green

Simulates a green filter in black and white photography.

Blue

Simulates a blue filter in black and white photography.

Yellow

Simulates a yellow filter in black and white photography.

Orange

Simulates an orange filter in black and white photography.

Grad

Grad is the gradient transition area between the filtered image and the original. Its direction, corners, size and angle can be adjusted.

Enable

Turns the grad on and off.

ND Brightness

Darkens the colored portion of the grad.

Type

Controls the direction of the grad.

Top-to-bottom

The direction of the grad is from top to bottom.

Bottom-to-top

The direction of the grad is from bottom to top.

Left-to-right

The direction of the grad is from left to right.

Right-to-left

The direction of the grad is from right to left.

Horizontal Strip

Horizontal strip grad.

Vertical Strip

Vertical strip grad.

Size

The size of the grad.

Angle

The angle of the grad.

Corner Pin

There are four points around the four corners of the image. By clicking and dragging any of the four points, the Grad can be adjusted.

Photo © THINKSTOCK LLC--www.thinkstock.com

Matte

In some of the filters, a matte is generated to create the desired effect. The Matte controls consist of Position, Range and Blur parameters, and they work the same in all of the filters. The white areas of the matte are the areas that will be affected by the filter, while the black areas remain unaffected. The matte is extracted based on luminance, in most cases, and is created using the Position and Range parameters.

Position

Selects the values to be included in the matte. A higher Position value shows more white values from the original image as white values in the matte. A lower Position value shows more black values from the original image as white values in the matte.

Position 0, Range 25 | Original | Position 100, Range 25

Photo © THINKSTOCK LLC--www.thinkstock.com

Range

Controls the range of values to be used for the matte. Once you've selected the "Position", you can then add or subtract the "Range" of values to be included in the matte. A higher Range value includes more white values in the matte while a lower Range value includes less values in the matte.

Position 100, Range 25 | Original | Position 100, Range 75

Blur

The matte is blurred by a quality blur.

Spot

A spot in the form of a radial gradient is used to limit the effect of the filter.

Position

There is an on-screen control in the center of the image. By clicking and dragging the on-screen control, the position of the spot can be adjusted.

Aspect

The aspect ratio of the spot.

Radius

The un-blurred radius of the spot.

Falloff Radius

The blurred edge radius.

Falloff

Moves the falloff towards the spot center point.

Invert

Inverts the spot.

Temperature

Color

Sets the color through the use of a standard color picker.

Opacity

Sets the opacity of the warming or cooling.

Preserve Highlights

Preserves the white areas of the image.

Exposure Compensation

Exposure Compensation adds back the brightness loss as a result of the warming or cooling.

Transform

Transform your image using Position, Scale, Rotation, Corner-Pin, Shear and Crop controls.

Crop

Top

Crops the image from the top down.

Bottom

Crops the image from the bottom up.

Left

Crops the image from left to right.

Right

Crops the image from right to left.

Corner Pin

There are four points around the four corners of the image. By clicking and dragging any of the four points, the image can be adjusted.

Position

Position can be adjusted by clicking and dragging an on-screen control in the center of the image.

Scale

Scale X

The horizontal scale.

Scale Y

The vertical scale.

Gang Scale

The Scale X and Scale Y slider values can be ganged together.

Rotate

In addition to the standard position and scale controls, you can rotate. Positive values rotate clockwise and negative values rotate counter-clockwise.

Shear

Shear X

Skews left and right.

Shear Y

Skews up and down.

Anchor

Anchor X

Defines the point on the X axis around which position, rotation, scaling or shearing takes place.

Anchor Y

Defines the point on the Y axis around which position, rotation, scaling or shearing takes place.

Filter

Chooses the filtering method when transforming the image. Mitchell is the default.

Triangle

The Triangle filter is not the highest quality, but fine for scaled images.

Quadratic

Quadratic is like triangle, but more blur with fewer artifacts. It offers a good compromise between speed and quality.

Cubic

Cubic is the default filter in Photoshop. It produces better results with continuous tone images, but is slower than Quadratic. If the image contains fine details, the result may be blurrier than desired.

Catmull-Rom

This produces good results with continuous tone images which are scaled down, producing sharp results with fine detailed images.

Gaussian

Gaussian lacks in sharpness, but is good with ringing and aliasing.

Mitchell

A good balance between sharpness and ringing, Mitchell is a good choice when scaling up.

Sinc

Keeps small details when scaling down with good aliasing.

View

Chooses what to view. The choices in this menu will change depending on the filter.

AMBIENT LIGHT

Description

Ambient creates light without a defined source and contributes to the overall brightness of a scene without casting shadows.

Before

After

Photo by Ryan Lum on Unsplash

Go to the **Ambient Light Tutorial** to see how the filter works.

Category

Light.

Controls

Presets

To select a preset, pick one from the Presets window.

Brightness

Sets the intensity of the light.

Gels

Photographers, cinematographers and lighting designers use colored filters or gels in front of lights. Whatever mood you wish to create, we have the colors needed to achieve the effect. Select one of the Gels presets from the pop-up menu.

Color

Sets the color of the light through the use of a standard color picker.

AUTO ADJUST

Description

Automatically adjusts the image using Auto Color, Auto Contrast and Auto Levels processes.

Before

After

Photo by Tadas Mikuckis on Unsplash

Go to the **Auto Adjust Tutorial** to see how the filter works.

Category

Color.

Controls

Presets

To select a preset, pick one from the Presets window.

Type

Selects from one of the three automatic adjustment processes.

Auto Color

Auto Color adjusts the contrast and color of an image and is good for neutralizing color casts.

Auto Contrast

Auto Contrast automatically adjusts image contrast.

Auto Levels

Auto Levels automatically adjusts the white point and black point in an image. Since each color channel is adjusted individually, it may remove or introduce color casts.

Opacity

Sets the amount of auto adjustment.

BLACK AND WHITE

Description

Black and White converts color images to black and white simulating the look of Black and White photographic filters.

Before

After

Photo by Anthony Delanoix on Unsplash

Go to the **Black and White Tutorial** to see how the filter works.

Category

Color.

Controls

Presets

To select a preset, pick one from the Presets window.

Filter

The Filter pop-up selects the type of black and white filter to be applied to your color image. Go to the **Black and White** section of Common Filter Controls to see how the Black and White controls work.

Brightness

Adjusts the brightness of the image. Positive values brighten, negative values darken.

Contrast

Adjusts the contrast of the image. Positive values increase contrast, negative values decrease contrast.

Gamma

Adjusts the gamma of the image. The gamma adjustment leaves the white and black points the same and only modifies the values in-between. Positive values lighten the midtones, negative values darken the midtones.

BLEACH BYPASS

Description

Bleach Bypass is a film laboratory technique where, by skipping the bleach stage in the color processing sequence, silver is retained in the image along with the color dyes. The result is effectively a black and white image superimposed on a color image. Bleach Bypass images have increased contrast, reduced saturation, often giving a pastel effect.

Before

After

Photo by Chris Barbalis on Unsplash

Go to the **Bleach Bypass Tutorial** to see how the filter works.

Category

Film Lab.

Controls

Presets

To select a preset, pick one from the Presets window.

Amount

Sets the intensity of the bleach effect.

Saturation

Adjusts the saturation of the image. Positive values saturate, negative values desaturate.

Contrast

Adjusts the contrast of the image. Positive values increase contrast, negative values decrease contrast.

Temperature

Sets the color temperature of the image. Dragging the slider to the right makes the image cooler (bluer) and dragging the slider to the left makes the image warmer (redder).

BLUR

Description

Blurs the image with individual horizontal and vertical controls. It's fast, high quality and blurs outside the frame which removes the dark inward bleeding edges of most blurs.

Before

After

Photo by Michal Grosicki on Unsplash

Go to the **Blur Tutorial** to see how the filter works.

Category

Lens.

Controls

Blur

Horizontal

The image is blurred by a fast, quality blur along the X-axis.

Vertical

The image is blurred by a fast, quality blur along the Y-axis.

Gang

The horizontal and vertical slider values can be ganged together. When ganged, moving the slider affects both values.

BORDERS

Description

Select from a variety of different pre-made borders or create your own.

Before

After

Photo by Tradd Harter on Unsplash

Go to the **Borders Tutorial** to see how the filter works.

Category

Special Effects.

Controls

Presets

To select a preset, pick one from the Presets window.

Border

Type

Choose from 11 different borders or Custom to create variable colored, softened borders.

Orientation

The orientation of border.

O degrees

The default orientation of the border.

90 degrees

Rotates the border 90 degrees.

180 degrees

Rotates the border 180 degrees.

270 degrees

Rotates the border 270 degrees.

Invert

Inverts the color of the border.

Note: Orientation and Invert are only used for the pre-made Border's 1-11.

Size

The size of the border.

Color

The border color.

Softness

The softness of the border.

Roughness

The roughness of the border.

Randomize

Randomizes the roughness of the border.

Transform

Transform the border using Scale and Rotate controls. Go to the **Transform** section of Common Filter Controls to see how the Transform Controls work.

CARTOON

Description

Converts the image into a cartoon.

Before

After

Photo by Ilya Yakover on Unsplash

Go to the **Cartoon Tutorial** to see how the filter works.

Category

Special Effects.

Controls

Amount

Adjusts the amount of the cartoon effect.

Detail

Adjusts the detail. If the slider is increased, you will see more detail while decreasing the slider will have an overall smoothing effect.

Line

Adjusts the size of the cartoon's outline.

Note: It is important to view the line strength in the Magnifier as there will be a difference in what you see in the Viewer. What you see in the Magnifier is what will be rendered.

CENTER SPOT

Description

Center Spot

Diffuses and blurs distracting backgrounds while keeping a center spot in focus. The center spot can be moved, sized and the amount of blur can be controlled.

Before

After

Photo by Samuel Scrimshaw on Unsplash

Warm Center Spot

Combines the benefits of Center Spot with a warming filter making it ideal for portraits and skintones.

Before

After

Photo by Samuel Scrimshaw on Unsplash

Go to the **Center Spot Tutorial** to see how the filter works.

Category

Diffusion.

Controls

Presets

To select a preset, pick one from the Presets window. If you would like to view presets from a different category, use the pop-up menu at the top left of the Presets window.

Blur

Sets how much the image is blurred.

Spot

A spot in the form of a radial gradient is used to control where blur is added to the image. Go to the **Spot** section of Common Filter Controls to see how the Spot controls work.

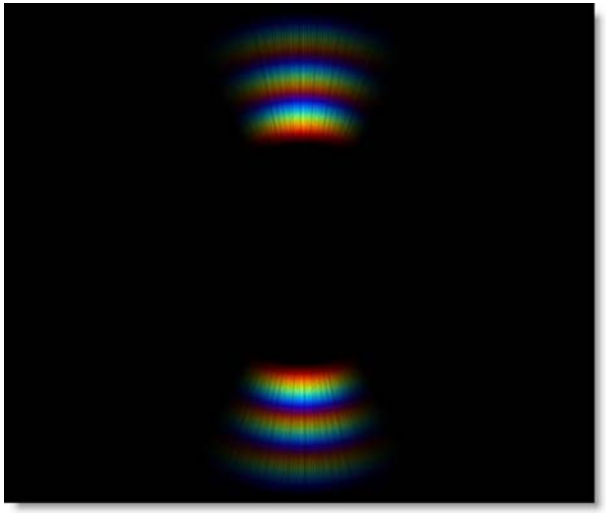
Temperature

Applies a warming filter to the image. Go to the **Temperature** section of Common Filter Controls to see how the Temperature controls work.

CHROMA BANDS

Description

Creates rainbow diffraction patterns.



Go to the **Chroma Bands Tutorial** to see how the filter works.

Category

Light.

Controls

Blend

Determines the blend mode used to create the rainbow effect.

Add

The rainbow is added to your image.

Screen

The rainbow is combined with the image using a Screen blend mode. This looks kind of like the Add blend mode, but highlights are retained.

Brightness

Adjusts the brightness.

Color

Sets the color.

Scale

Changes the size.

Aspect

Sets the aspect ratio.

Softness

Blurs the bands.

Chroma

Controls the saturation.

Angle

Changes the angle.

Cycles

Sets the number of bands.

Density

Determines the amount of rays.

Taper

Tapers the band’s edges.

Spread

Changes the distribution of the bands.

Offset

Determines the band’s inner diameter.

Noise

Controls the amount of noise in the bands.

CHROMATIC ABERRATION

Description

Chromatic aberration is caused by a lens having a different refractive index for different wavelengths of light and is seen as fringes of color around the edges of the image. This fringing is removed by un-distorting the individual color channels.

Before After

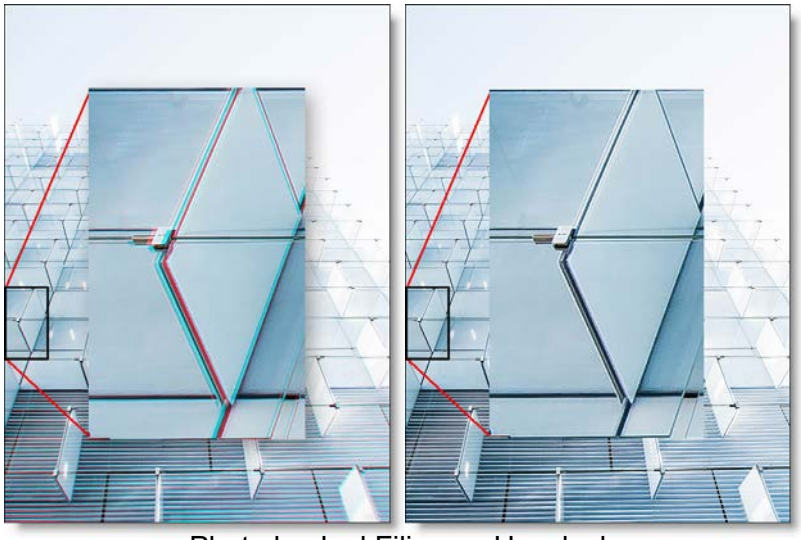


Photo by Joel Filipe on Unsplash

Go to the **Chromatic Aberration Tutorial** to see how the filter works.

There are some new types of color fringes that are not chromatic aberration. These effects might be visible as purple or blue fringes and are visible around overexposed areas in most cases. If the following conditions apply, your image most likely has true chromatic aberration as opposed to color fringing caused by sensor overloading:

- **Corners should show most color fringes whereas the center should show none.**
- **Color fringes should be not only at the edges of overexposed areas but at lower contrast edges, too.**
- **Color fringes should be of complementary color (red-cyan, green/magenta, and blue-yellow) on opposite sides of a dark or bright area.**

- **Color fringes should be in all corners with the same direction and pointing out from the center.**

Note: Chromatic Aberration must be applied as the first layer (bottom of the layer stack) when multiple layers are used. Otherwise, all filters below will not be rendered.

Category

Lens.

Controls

Red/Cyan, Green/Magenta, Blue/Yellow

Use the appropriate color group to remove the chromatic aberration. For instance, if you see red/cyan fringing, use the Red/Cyan group. Start by adjusting the Distortion parameter.

Warning: The Viewer does not show an accurate representation of what the filter will look like when rendered. To visualize the final render, you must use the Magnifier at a 1:1 pixel ratio.

Distortion

Pulls the corners of the image in or out. Negative values pull the corners of the image inward while positive values pull the corners of the image outward.

Anamorphic Squeeze

Anamorphic Squeeze corrects for the squeeze found in anamorphic motion picture lenses.

Curvature X and Y

Curvature X and Y correct for non-radial, asymmetric distortions found in anamorphic motion picture lenses.

Note: Anamorphic Squeeze and Curvature X and Y only work once the Distortion parameter has been adjusted.

Center X and Y

Determines the center point for the distortion.

COLOR

Description

Generates a solid field of color.

Category

Color.

Controls

Color

The color can be set through the use of a standard color picker.

COLOR CORRECTORS

Description

DFT includes a number of different color correctors that are handy for adjusting an image's color. They include: Color Correct, F-Stop, Printer Points, Telecine and Temperature.

Before

After

Photo by Sean Afnan on Unsplash

Color Correct

Color Correct manipulates hue, saturation, brightness, contrast, gamma, temperature, cyan/magenta, red, green and blue values of the overall image and separately in user definable shadow, midtone and highlight areas. In addition to traditional slider controls, a visual Color Wheels interface can be used to make adjustments.

F-Stop

F-Stop manipulates red, green and blue values of the overall image and separately in user definable shadow, midtone and highlight areas using F-Stops as the unit of measure. In camera terminology, F-Stops measure the size of the lens opening, otherwise known as aperture. Each F-Stop is twice as bright as the next.

Printer Points

Printer Points manipulate the red, green and blue values of the overall image and separately in user definable shadow, midtone and highlight areas using motion picture laboratory printer points as the unit of measure. When creating color prints for motion pictures, a contact printer performs scene-to-scene color corrections. The most popular printing method is additive printing that uses three separate colored sources - red, green, and blue which are combined to form the light source that exposes the film. The red, green, and blue light valves in the printer are adjusted in values of 1, 2, 3... up to 60 for each primary color and are called printer points or printer lights.

Telecine

Telecine emulates the method of color correction done in a telecine film to tape transfer suite. Hue, saturation, brightness, contrast, gamma and pedestal values of the overall image can be adjusted as well as separately in user definable shadow, midtone and highlight areas.

Temperature

Temperature manipulates the temperature, cyan/magenta and brightness values of the overall image and separately in user definable shadow, midtone and highlight areas.

Go to the **Color Correctors Tutorial** to see how the filters work.

Category

Color.

Master, Shadows, Midtones, Highlights

All of the color correctors can adjust an image by using it's master, shadows, midtones and highlight groups. The Telecine filter uses the following terminology: Lift (shadows), Gamma (midtones) and Gain (highlights). The master settings affect the entire image while adjusting parameters within the shadows, midtones and highlights will only affect those specific areas.

If you are unsure about what values are included in the shadows, midtones and highlights, you can use the View pop-up menu. It will allow you to view the shadows, midtones and highlights as a black and white matte. The white areas are the areas that will be adjusted by that particular group. For instance, if you see white areas while viewing the midtones, then midtone color adjustments will affect only those white areas. If you want to change the default areas defined by the shadows, midtones and highlights, you would use the Position and Range sliders.

Original Shadows Midtones Highlights

Position

The Position slider pinpoints the values to be considered as shadows, midtones, or highlights. A low Position value uses the darkest image values, while a high Position value uses the brightest.

Range

Increases or decreases the range of values considered as shadows, midtones or highlights. A low Range value indicates a narrow range of values, while a high Range value indicates a large range of values.

Go to the **Matte** section of Common Filter Controls to see how the Position and Range controls work.

Color Correct

Presets

To select a preset, pick one from the Presets window.

Hue

Rotates the hue of the image.

Saturation

Adjusts the saturation of the image. Positive values saturate, negative values desaturate.

Brightness

Adjusts the brightness of the image. Positive values brighten, negative values darken.

Contrast

Adjusts the contrast of the image. Positive values increase contrast, negative values decrease contrast.

Gamma

Adjusts the gamma of the image. The gamma adjustment leaves the white and black points the same and only modifies the values in-between. Positive values lighten the midtones, negative values darken the midtones.

Temperature

Sets the color of the image to be either warmer or cooler. Dragging the slider to the right makes the image cooler (bluer) and dragging the slider to the left makes the image warmer (redder).

Cyan/Magenta

Adds either Cyan or Magenta to the image. Dragging the slider to the right makes the image more magenta and dragging the slider to the left makes the image more cyan.

Red

Adds or subtracts red from the image.

Green

Adds or subtracts green from the image.

Blue

Adds or subtracts blue from the image.

Flashing

The Flash parameters mix a color into the image through the use of a standard color picker. The default color is white. What in the world is this for? It is a great way to add atmosphere to an element. Flash comes from the film term “flashing”, which describes the optical process of lowering the contrast of an image by flashing it with light.

Flash Amount

Sets the opacity of the Flash Color.

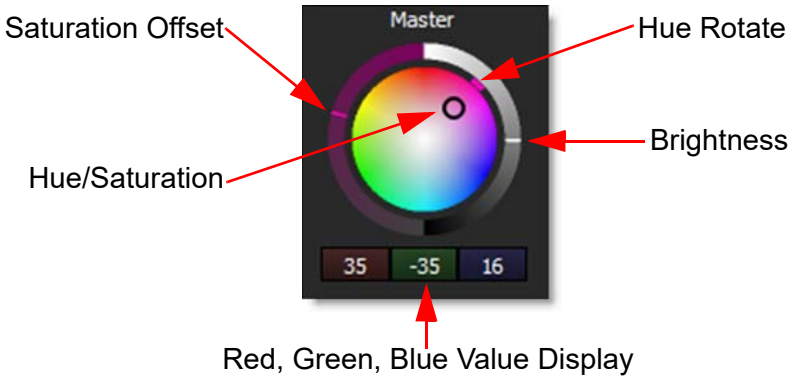
Flash Color

The Flash Color can be set through the use of a standard color picker.

Color Wheels

The Color Wheel window allows you to adjust the color of the brightness, hue and saturation of the master, shadows, midtones and highlights.

The color wheels have the following controls:



Hue/Saturation (Center Point)

As the center point is moved, both Hue and Saturation are adjusted.

Hue Rotate

Dragging the colored dash on the outside of the wheel rotates the hue.

Saturation

Increases or decreases the selected color's saturation.

Brightness

Adjusts the brightness.

Note: The Hue and Saturation adjustments are achieved by simultaneously changing the Red, Green and Blue parameters in the respective group: Master, Shadows, Midtones, or Highlights. The current Red, Green and Blue values are displayed below the Color Wheel.

Reset

Right-clicking on any color wheel will open a context menu that contains Reset > All, Shadows, Midtones, and Highlights options.

F-Stop

Input is Linear

Enable this if your image is in true linear color space. Gamma corrected images should have this parameter disabled.

Red Exposure

Adds or subtracts red from the image.

Green Exposure

Adds or subtracts green from the image.

Blue Exposure

Adds or subtracts blue from the image.

Gang

The Red, Blue and Green Exposure slider values can be ganged together. When ganged, drag any exposure slider to affect all three values.

Printer Points

The Red, Green and Blue Exposure are set to a value of 25 which represent no adjustment. Printer “lights” or points set to 25, 25, 25 are considered to be the normal or standard printer setup at most motion picture labs.

Input is Linear

Enable this if your image is in true linear color space. Gamma corrected images should have this parameter disabled by default.

Red Exposure

Adds or subtracts red from the image. As in motion picture printing, higher values subtract and lower values add.

Green Exposure

Adds or subtracts green from the image. As in motion picture printing, higher values subtract and lower values add.

Blue Exposure

Adds or subtracts blue from the image. As in motion picture printing, higher values subtract and lower values add.

Gang

The Red, Blue and Green Exposure slider values can be ganged together. When ganged, drag any Exposure slider to affect all three values.

Telecine

Hue

Rotates the hue of the image.

Saturation

Adjusts the saturation of the image. Positive values saturate, negative values desaturate.

Brightness

Adjusts the brightness of the image. Positive values brighten, negative values darken.

Contrast

Adjusts the contrast of the image. Positive values increase contrast, negative values decrease contrast.

Gamma

Adjusts the gamma of the image. The gamma adjustment leaves the white and black points the same and only modifies the values in-between. Positive values lighten the midtones, negative values darken the midtones.

Pedestal

Adjusts the black level of the image.

Temperature

Presets

To select a preset, pick one from the Presets window.

Temperature

Sets the color of the image to be either warmer or cooler. Dragging the slider to the right makes the image cooler (bluer) and dragging the slider to the left makes the image warmer (redder).

Cyan/Magenta

Adds either Cyan or Magenta to the image. Dragging the slider to the right makes the image more magenta and dragging the slider to the left makes the image more cyan.

Brightness

Adjusts the brightness of the image.

COLOR GRADIENT

Description

Color Gradient colors and or darkens only a portion of the image giving you the ability to simulate any Color Gradient filter. Presets for your favorite color gradient filters are provided as well as the ability to create custom colors. There is a graduated transition for a smooth color blend between the colored/darkened portion and the original image. Color Gradient is especially useful for changing and enhancing the color of the sky.

Before | After

Photo by Joshua Earle on Unsplash

Go to the **Color Gradient Tutorial** to see how the filter works.

Category

Grads/Tints.

Filters

Presets

To select a preset, pick one from the Presets window.

Color

The Color parameter sets the color of the grad through the use of a standard color picker.

Opacity

Sets the opacity of the color filter.

Preserve Highlights

Preserves the white areas of the image.

Exposure Compensation

Exposure Compensation adds back the brightness loss as a result of the filter application.

Grad

Grad is the transition area that goes from the tinted image to the original image. Its direction, corners and size can be adjusted. Go to the **Grad** section of Common Filter Controls to see how the Grad controls work.

COLOR INFRARED

Description

Color Infrared simulates infrared filters used in conjunction with infrared sensitive film or sensors to produce very interesting false-color images with a dreamlike or sometimes lurid appearance.

Before

After

Photo by Karsten Wurth on Unsplash

Go to the **Color Infrared Tutorial** to see how the filter works.

Category

Special Effects.

Controls

Presets

To select a preset, pick one from the Presets window.

Magenta

Adjusts the amount of magenta.

Blue

Adjusts the amount of blue.

Hue

Adjusts the hue in any non-blue areas.

Contrast

Adjusts the contrast of the image.

COLOR SHADOW

Description

Creates a high contrast image overlayed with a gradient.

Before | After

Photo by Emre Karatas on Unsplash

Go to the **Color Shadow Tutorial** to see how the filter works.

Category

Special Effects

Controls

Presets

To select a preset, pick one from the Presets window.

Threshold

Sets the amount of image detail.

Invert

Changes whether the gradient is in the background or foreground.

Background Color

Sets the color of the background. Select the desired color using the color picker.

Color 1

Sets the color for the top half of the image. Select the desired color using the color picker.

Color 2

Sets the color for the bottom half of the image. Select the desired color using the color picker.

Grad

Grad is the transition area between the two colors. Its direction, corners and size can be adjusted. Go to the **Grad** section of Common Filter Controls to see how the Grad controls work.

COLOR SPOT

Description

Tints the image using presets for common photographic filters except for a center spot which retains normal color. The center spot can be moved, sized and the amount of blur can be controlled.

Before

After

Photo by Bill Williams on Unsplash

Go to the **Color Spot Tutorial** to see how the filter works.

Category

Grads/Tints.

Controls

Presets

To select a preset, pick one from the Presets window.

Color

Color

The Color parameter sets the color through the use of a standard color picker.

Opacity

Sets the opacity of the color filter.

Preserve Highlights

Preserves the white areas of the image.

Exposure Compensation

Exposure Compensation adds back the brightness loss as a result of the filter application.

Spot

A spot in the form of a radial gradient is used to control where color is added to the image. Go to the **Spot** section of Common Filter Controls to see how the Spot controls work.

COLORIZE GRADIENT

Description

Using multiple colors, Colorize Gradient colorizes the image according to the image's brightness values.

Before

After

Photo by David Marcu on Unsplash

Go to the **Colorize Gradient Tutorial** to see how the filter works.

Category

Grads/Tints.

Controls

Presets

To select a preset, pick one from the Presets window.

Opacity

Sets the overall opacity of the colorization.

Shadows

Enable

Determines whether or not the color contributes to the gradient.

Color

Picks the color that the image will be colorized with. Select the desired color using the color picker.

Position

Determines where the colorization is applied to the image. By default, Shadows are set to 0, which is the shadow areas. A value of 50 would be the midtones, while 100 would be highlights.

Midtones

The Midtones controls are the same as the controls for the Shadows, except by default, the colorization is applied to the midtones of the image.

Highlights

The Highlights controls are the same as the controls for the Shadows, except by default, the colorization is applied to the highlights of the image.

Grad

You can optionally use a gradient that limits where the filter is applied. Grad is the transition area that goes from the colorized image to the original image. Its direction, corners and size can be adjusted. Go to the **Grad** section of Common Filter Controls to see how the Grad controls work.

CROSS PROCESSING

Description

Cross-processing is a photographic technique where print film (C41) is processed in the set of chemicals usually used to process slide film (E6) or vice versa. The final result yields images with oddly skewed colors and increased contrast and saturation. Different film stocks produce different results, so we have created what we feel is a representative look.

Before

After

Photo by Jesse Collins on Unsplash

Go to the **Cross Processing Tutorial** to see how the filter works.

Category

Film Lab.

Controls

Presets

To select a preset, pick one from the Presets window.

Amount

Sets the intensity of the cross process effect.

Mode

Print to Slide

Simulates the effect of print film (C41) being processed in slide (E6) chemicals.

Slide to Print

Simulates the effect of slide film (E6) being processed in print (C41) chemicals.

CURVES

Description

Curves adjusts the entire tonal range of an image by changing the shape of RGB, Red, Green or Blue curves. Curve points can be adjusted throughout the range of shadows to highlights.

Before After

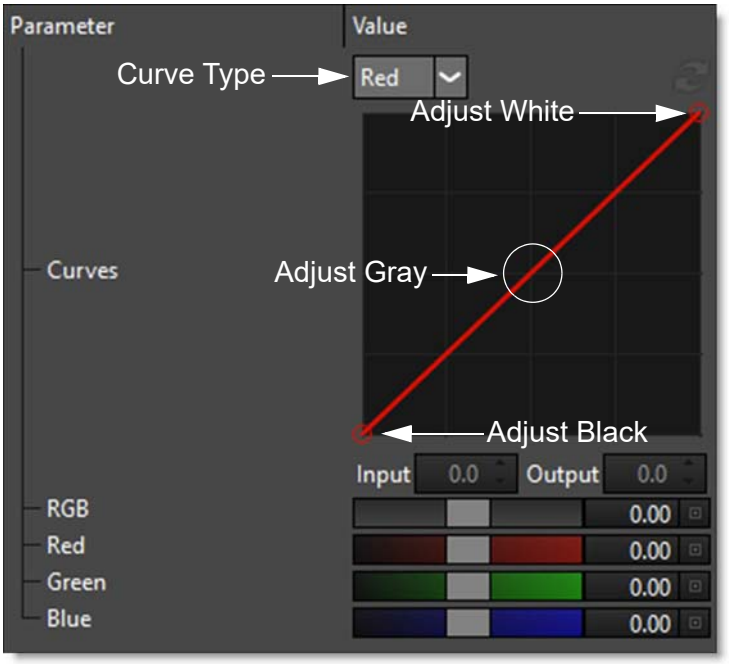
Photo by Annie Spratt on Unsplash

Category

Color.

Go to the **Curves Tutorial** to see how the filter works.

Controls



Curves

RGB

Adjusts the RGB values and has the effect of brightening or darkening the image.

Red

Adjusts the red values in the image.

Green

Adjusts the green values in the image.

Blue

Adjusts the blue values in the image.

Selecting Curves

- **Select RGB, Red, Green or Blue from the Curve Type pop-up menu.**

- **Click directly on an existing curve in the graph to select it.**

Adding and Deleting Points:

- **Click directly on the curve to add a new point. Up to five points can be added.**
- **Points can be deleted by clicking and dragging a point to the edge of the graph.**

Adjusting Points:

- **Moving a point in the top portion of the curve adjusts the shadows.**
- **Moving a point in the center of the curve adjusts the midtones.**
- **Moving a point in the top portion of the curve adjusts the highlights.**
- **Moving the curve upward or downward lightens or darkens the image. The steeper sections of the curve represent areas of higher contrast; flatter sections represent areas of lower contrast.**
- **To darken highlights, move a point near the top of the curve downward. Moving a point either down or to the right maps the input value to a lower output value, and the image darkens.**
- **To lighten the shadows, move a point near the bottom of the curve upward. Moving a point either up or to the left maps a lower input value to a higher output value, and the image lightens.**

Sliders

RGB

Globally adjusts the RGB curve.

Red

Globally adjusts the Red curve.

Green

Globally adjusts the Green curve.

Blue

Globally adjusts the Blue curve.

DAY FOR NIGHT

Description

Day for Night simulates a technique used for shooting exteriors in daylight made to look like they were photographed at night. Typically, it involves underexposing by two to two-and-a-half stops and using a filter to provide a tint, that is often a lavender-blue, as it mimics twilight and appears to emulate the mood of moonlight.

Before

After

Photo by Daniel Bowman on Unsplash

Go to the **Day for Night Tutorial** to see how the filter works.

Category

Special Effects.

Controls

Presets

To select a preset, pick one from the Presets window.

Diffusion

Blur

Sets how much the image is diffused.

Opacity

Sets the amount of diffusion mixed into the original image. The higher the setting, the more the image is blurred.

Moonlight

Color

The Color parameter sets the color of the moonlight through the use of a standard color picker. The default color is blue.

Opacity

Sets the opacity of the moonlight color.

Preserve Highlights

Preserves the white areas of the image.

Exposure Compensation

Exposure Compensation adds back the brightness loss as a result of the color application.

Color Correct

Go to the **Color Correct** filter to see how the Color Correct controls work.

DEBAND

Description

DeBand removes banding artifacts from an image by smoothing pixels in banded areas while retaining detail.

Before

After

Photo by Frantzou Fleurine on Unsplash

Category

Image.

Controls

Presets

To select a preset, pick one from the Presets window.

Amount

Sets the amount of debanding.

DEBLOCK

Description

Blocking artifacts created as a result of high compression factors can be removed with the DeBlock filter.

Before

After

Photo by Nolan Issac on Unsplash

Category

Image.

Controls

There are no controls for the DeBlock filter since it automatically finds blocks and removes them.

DEFOG

Description

Using advanced deweathering algorithms, Defog restores clear day contrasts and colors of a scene taken in bad weather such as fog and mist. It is also successful in removing the effects of optical Fog and Diffusion filters.

Before

After

Photo by Matt Hoffman on Unsplash

Go to the **Defog Tutorial** to see how the filter works.

Category

Special Effects.

Controls

Presets

To select a preset, pick one from the Presets window.

Defog

Color

The Color parameter sets the color of the fog to be removed through the use of a standard color picker. The default color is white.

Vanishing Point

A vanishing point along the direction of increasing distance in the image is used to remove fog. By default, the vanishing point is set to the center of the screen. Essentially, the fog is removed in a radial pattern emanating from the vanishing point. So at the default center position, fog is removed in a circular pattern with a greater amount of fog being removed from the center while falling off at the edges. For instance, if your fog moves in the direction of top right to bottom left, set your vanishing point towards the top right corner and the fog removal will be more intense at the upper right and fall off at the bottom left. However, in most cases, the vanishing point can be left in the center of the screen and you will obtain acceptable results.

There is an on-screen control in the center of the image. By clicking and dragging the on-screen control, the position of the vanishing point can be adjusted.

Defog

Sets the amount of fog to be removed from the scene.

Min Depth

Controls how much fog is removed from the darker areas of the image.

Max Depth

Controls how much fog is removed from the brighter areas of the image.

Color Correct

Go to the **Color Correct** filter to see how the Color Correct controls work.

DEFRINGE

Description

Purple or blue fringing around overexposed areas is a result of sensor overloading in video as well as digital still cameras. DeFringe isolates and removes the various types of color fringing.

Before

After

Go to the **DeFringe Tutorial** to see how the filter works.

Category

Lens.

Controls

Presets

To select a preset, pick one from the Presets window.

Red

Red

Adjusts the saturation of red values in areas defined by the Position and Range controls. Positive values saturate, negative values desaturate.

Position

A matte is generated to isolate red fringing. The areas that are white in the red matte are the areas that will be defringed. Moving the Position slider will change the hue that is used for the red matte.

Range

Increases or decreases the range of values considered as red fringing. A low Range value indicates a narrow range of values, while a high Range value indicates a large range of values.

Go to the **Matte** section of Common Filter Controls to see how the Position and Range controls work.

Green, Blue, Cyan, Magenta, and Yellow

The Green, Blue, Cyan, Magenta and Yellow groups work in a similar fashion to the Red group.

DENOISE

Description

Removes film grain and noise.

Before

After

Photo by Brady Bellini on Unsplash

Category

Image.

Controls

Presets

To select a preset, pick one from the Presets window.

Amount

Sets the amount of denoising.

Warning: You may not see an accurate representation of the grain and noise removal in the Viewer unless you use the Magnifier with this filter.

DEPTH OF FIELD

Description

Depth of Field can be added to a scene by isolating and blurring only a portion of the image. The amount of blurring is directly proportionate to the luminance of the matte settings, a gradient or an input image.

Before

After

Photo by Ethan Robertson on Unsplash

Go to the **Depth of Field Tutorial** to see how the filter works.

Category

Lens.

Controls

Presets

To select a preset, pick one from the Presets window.

Depth

Selects the source for the selective blur effect.

Matte

Use a matte for the depth source.

Grad

Use a gradient for the depth source.

Input

Use an image as the depth source. This is useful for 3D programs which render out depth mattes.

To use an image as the depth source:

- **Change Depth > Depth to Input.**
- **Click the Depth > Input > Browse button.**
- **Select a file.**

Blur

Sets how much the image is blurred.

Grad

Depth of Field can optionally use a gradient that limits where the filter is applied. Grad is the transition area that goes from the blurred portion to the original image. Its direction, corners and size can be adjusted. Go to the **Grad** section of Common Filter Controls to see how the Grad controls work.

Matte

A matte can be used to create the depth of field effect. Go to the **Matte** section of Common Filter Controls to see how the Matte controls work.

DETAIL

Description

Detail presents a new technique for performing selective sharpening, detail enhancement and edge aware smoothing. Our approach decomposes the image into three detail layers: Coarse, medium and fine. Each of the detail layers can be manipulated separately in various ways, for instance, sharpening or smoothing. Add to that sophisticated, but easy to use masking and you have quick isolation of image features for selective filtering.

Before

Smooth

Sharpen

Photo by Chris Lawton on Unsplash

Go to the **Detail Tutorial** to see how the filter works.

Category

Image.

Controls

Coarse

Adjusts the Coarse detail layer. Increasing the value sharpens while decreasing the value smooths.

Medium

Adjusts the medium detail layer. Increasing the value sharpens while decreasing the value smooths.

Fine

Adjusts the fine detail layer. Increasing the value sharpens while decreasing the value smooths.

Gang

The Coarse, Medium and Fine slider values can be ganged together so that they all move simultaneously. This will generate an overall sharpening effect if the sliders are increased and an overall smoothing effect if decreased.

Note: Since Detail works at a proxy resolution, you will need to view the result of Detail at a 1:1 pixel ratio using the Magnifier window to determine what the final output will look like.

Matte

A matte can be used to limit the detail effect. Wherever there is white in the matte is where the detail adjustment will occur. Go to the **Matte** parameters to see how they work.

DEVELOP

Description

Provides useful developing controls for globally adjusting the color and tonal scale of your images.

Before

After

Photo by Mahir Uysal on Unsplash

Category

Color.

Controls

Auto-Equalize

Auto-Equalize uses the calculated white point for camera RAW images. This is disabled when Develop is applied to non camera RAW images, since adjusting the white point does nothing in this case.

Temperature

Sets the color of the image to be either warmer or cooler. Dragging the slider to the right makes the image cooler (bluer) and dragging the slider to the left makes image warmer (redder).

Tint

Adds either Green or Magenta to the image. Dragging the slider to the right makes the image more magenta and dragging the slider to the left makes the image more green.

Exposure

Sets the overall image brightness, with a greater effect in the high values. Adjust the slider until the image looks good and the whites are at the right level. Use Recovery to bring highlight values down. Exposure values are in increments equivalent to f-stops. An adjustment of +1.00 is similar to increasing the aperture 1 stop. Similarly, an adjustment of –1.00 is similar to reducing the aperture 1 stop.

Recovery

Reduces the tones of extreme highlights and attempts to recover highlight detail lost because of overexposure.

Fill Light

Lightens shadows to reveal more detail while maintaining blacks. Take care not to over apply the setting and reveal image noise.

Blacks

Specifies which image values map to black. Moving the slider to the right increases the areas that become black, sometimes creating the impression of increased image contrast. The greatest effect is in the shadows, with much less change in the midtones and highlights.

Brightness

Adjusts image brightness, mainly affecting midtones. Set the overall tonal scale by setting Exposure, Recovery, and Blacks. Then set the overall image brightness. Large brightness adjustments can affect shadow or highlight clipping, so you may want to readjust the Exposure, Recovery, or Blacks slider after adjusting brightness.

Contrast

Increases or decreases image contrast, mainly affecting midtones. When you increase contrast, the middle-to-dark image areas become darker, and the middle-to-light image areas become lighter. The image tones are inversely affected as you decrease contrast.

Vibrance

Adjusts the saturation so that clipping is minimized as colors approach full saturation, changing the saturation of all lower-saturated colors with less effect on the higher-saturated colors. Vibrance also prevents skin tones from becoming over saturated.

Saturation

Adjusts the saturation of all image colors equally.

DIFFUSION

Description

Diffusion creates atmosphere by reducing contrast while creating a glow around highlights or shadows using an extensive texture library.

Before

After

Photo by Marina Vitale on Unsplash

Go to the **Diffusion Tutorial** to see how the filter works.

Category

Diffusion.

Controls

Presets

To select a preset, pick one from the Presets window.

Diffusion

Blend

Determines the blend mode to be used to create the diffusion effect.

Add

The diffusion is added to your image.

Screen

The diffusion is combined with the image using a Screen blend mode. This looks kind of like the Add blend mode, but highlights are retained.

Brightness

Sets the intensity of the diffusion.

Blur

Sets the softness of the diffusion.

Color

The Color parameter sets the color of the diffusion through the use of a standard color picker. The default color is white.

Color Correct

Go to the **Color Correct** filter to see how the Color Correct controls work.

Texture

Texture

Selects the texture which will be used to add diffusion to the image.

Blend

Textures can be used as the source of the diffusion as well as combined with a matte using a variety of Blend modes. Go to **Blend Modes** for explanations of the various modes.

I like the Multiply blend mode for combining textures with the matte because it only puts the texture within the areas of the generated matte.

Transform

Transform the texture using Position, Scale, Rotate, Corner-Pin, Shear and Crop controls. Go to the **Transform** section of Common Filter Controls to see how the Transform Controls work.

Matte

A matte can be used to create the diffusion effect. Go to the **Matte** section of Common Filter Controls to see how the Matte controls work.

DOUBLE FOG

Description

The Double Fog filter creates a soft, misty atmosphere over the image by first applying fog using a vanishing point along the direction of increasing distance in the image. Then, a second pass blooms image highlights.

Before

After

Photo by Martin Knize on Unsplash

Go to the **Double Fog Tutorial** to see how the filter works.

Category

Diffusion.

Controls

Presets

To select a preset, pick one from the Presets window.

Fog

Color

The Color parameter sets the color of the fog to be added through the use of a standard color picker. The default color is white.

Vanishing Point

A vanishing point along the direction of increasing distance in the image is used to add fog. By default, the vanishing point is set to the center of the screen. Essentially, the fog is added in a radial pattern emanating from the vanishing point. So at the default center position, fog is added in a circular pattern with a greater amount of fog being added in the center while falling off at the edges. For instance, if you would like your fog to move in the direction of top right to bottom left, set your vanishing point towards the top right corner and the fog will be more intense at the upper right and fall off at the bottom left. However, in most cases, the vanishing point can be left in the center of the screen and you will obtain acceptable results.

There is an on-screen control in the center of the image. By clicking and dragging the on-screen control, the position of the vanishing point can be adjusted.

Fog

Sets the amount of fog to be added to the scene.

Min Depth

Controls how much fog is added in the darker areas of the image.

Max Depth

Controls how much fog is added in the brighter areas of the image.

Glow

The Glow controls are used to add additional atmosphere and are useful in adding glow to highlights. By default, a wide matte of highlights are glowed in the image and blended with the Screen blend mode. This works well for adding additional fog. To add glow around highlights such as light sources, it is best to set the Blend mode to Add and lower the Matte > Range parameter to limit the areas of glow to only include the light sources.

Blend

Determines the blend mode to be used to create the glow effect.

Add

The glow is added to your image.

Screen

The glow is combined with the image using a Screen blend mode. This looks kind of like the Add blend mode, but highlights are retained.

Brightness

Sets the intensity of the glow.

Blur

Sets the softness of the glow.

Color

The Color parameter sets the color of the glow through the use of a standard color picker. The default color is white.

Matte

A matte is used to create the glow effect. Go to the **Matte** section of Common Filter Controls to see how the Matte controls work.

DUAL GRADIENT

Description

Dual Gradient applies two photographic filters to the image which are blended together with a gradient. Presets for your favorite Color Gradient filters are provided as well as the ability to create custom colors.

Before

After

Photo by Heather Emond on Unsplash

Go to the **Dual Gradient Tutorial** to see how the filter works.

Category

Grads/Tints.

Controls

Presets

To select a preset, pick one from the Presets window.

Color 1

Sets the color for the top half of the image. Select the desired color using the color picker or choose a filter preset.

Presets

Select one of the filters from the pop-up menu.

Color

The Color parameter sets the color of the grad through the use of a standard color picker.

Opacity

Sets the opacity of the color filter.

Color 2

The Color 2 controls are the same as the controls for Color 1 except it is applied to the bottom half of the image.

Preserve Highlights

Preserves the white areas of the image.

Exposure Compensation

Exposure Compensation adds back the brightness loss as a result of the filter application.

Grad

Grad is the transition area between the two tints. Its direction, corners and size can be adjusted. Go to the **Grad** section of Common Filter Controls to see how the Grad controls work.

ENHANCING

Description

Selectively enhance any color to make it pop with little to no effect on other colors.

Before

After

Photo by Phil Coffman on Unsplash

Go to the **Enhancing Tutorial** to see how the filter works.

Category

Color.

Controls

Presets

To select a preset, pick one from the Presets window.

Enhancing

Adjusts the saturation of red, green or blue hues.

Matte

Presets

A matte is created based on the hue of the image to create the enhancement effect. Select from Red, Green or Blue preset hue mattes from the pop-up menu or use the Hue eyedropper to pick a color off of the screen.

Hue

When adjusting the Hue parameter, you are selecting the hue of the image which will be enhanced.

Range

Increases or decreases the range of values in the hue matte. A low Range value indicates a narrow range of values. A high Range value indicates a large range of values included in the matte.

Blur

Sets the softness of the matte by using a fast, quality blur.

Go to the **Matte** parameters to see how they work.

EYE LIGHT

Description

Creates a targeted light to be placed around a person's eyes.

Before

After

Photo by Sebastian Unrau on Unsplash

Go to the **Eye Light Tutorial** to see how the filter works.

Category

Light.

Controls

Light

Blend

Determines the blend mode to be used to add the light.

Add

The light is added to your image.

Screen

The light is combined with the image using a Screen blend mode. This looks kind of like the Add blend mode, but highlights are retained.

Brightness

Sets the intensity of the light.

Blur

Sets the softness of the light.

Gels

Photographers, cinematographers and lighting designers use colored filters or gels in front of lights. Whatever mood you wish to create, we have the colors needed to achieve the effect. Select one of the Gels presets from the pop-up menu.

Color

Sets the color of the light through the use of a standard color picker.

Shadow

Brightness

Sets the intensity of the shadows. The Brightness parameter will darken only those areas that are not being brightened by the Light settings.

Transform

Transform the eye light pattern using Scale and Rotate controls. Go to the **Transform** section of Common Filter Controls to see how the Transform Controls work.

FAN RAYS

Description

Generates asymmetric fanned rays.

Go to the **Fan Rays Tutorial** to see how the filter works.

Category

Light.

Controls

Blend

Determines the blend mode used to create the rays effect.

Add

The rays are added to your image.

Screen

The rays are combined with the image using a Screen blend mode. This looks kind of like the Add blend mode, but highlights are retained.

Brightness

Controls the brightness.

Color

Sets the color.

Scale

Changes the size.

Aspect

Sets the aspect ratio.

Angle

Sets the angle.

Element Count

Determines the number of rays.

Softness

Blurs the rays.

Randomize

Randomizes the size and position.

Jitter

Randomizes the angle.

FILM STOCKS

Description

Film Stocks is a unique filter that simulates 294 different color and black and white still photographic film stocks, motion picture films stocks and historical photographic processes.

Before

After

Photo by Teresa Kluge on Unsplash

Go to the **Film Stocks Tutorial** to see how the filter works.

Category

Film Lab.

Controls

Presets

To select a preset, pick one from the Presets window. If you would like to view presets from a different category, use the pop-up menu at the top left of the Presets window.

Amount

Sets the amount of the selected preset.

Black and White

Red, Green and Blue controls allow you to determine the contribution of each color channel in the black and white conversion.

Enable

Enables the Black and White conversion.

Red

Sets the amount of the red channel that contributes to the black and white conversion.

Green

Sets the amount of the green channel that contributes to the black and white conversion.

Blue

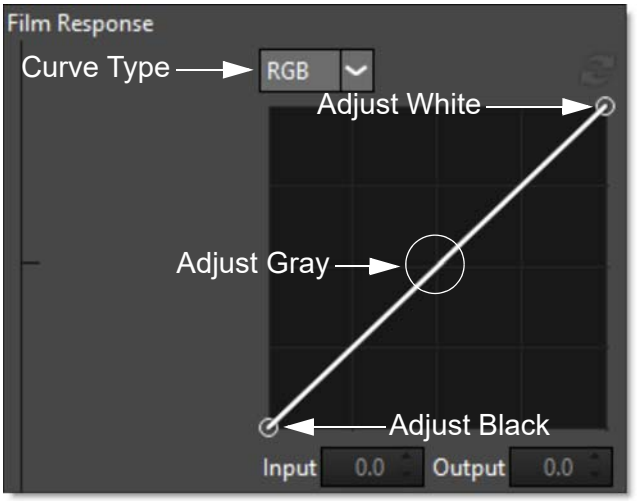
Sets the amount of the blue channel that contributes to the black and white conversion.

Film Response

To mimic the characteristics of a particular film stock, a combination of settings for the RGB channels have been set.

Curves

You can use Curves to adjust the entire tonal range of an image by changing the shape of the curve in the Curves adjustment. The Curves adjustment lets you adjust points throughout the tonal range of an image (from shadows to highlights).



Note: Curves are only available in the DFT interface.

Selecting Curves

- **Select RGB, Red, Green or Blue from the Curve Type pop-up menu.**

- **Click directly on an existing curve in the graph to select it.**

Adding and Deleting Points:

- **Click directly on the curve to add a new point. Up to five points can be added.**
- **Points can be deleted by clicking and dragging a point to the edge of the graph.**

Adjusting Points:

- **Moving a point in the top portion of the curve adjusts the shadows.**
- **Moving a point in the center of the curve adjusts the midtones.**

- **Moving a point in the top portion of the curve adjusts the highlights.**
- **Moving the curve upward or downward lightens or darkens the image. The steeper sections of the curve represent areas of higher contrast; flatter sections represent areas of lower contrast.**
- **To darken highlights, move a point near the top of the curve downward. Moving a point either down or to the right maps the input value to a lower output value, and the image darkens.**
- **To lighten the shadows, move a point near the bottom of the curve upward. Moving a point either up or to the left maps a lower input value to a higher output value, and the image lightens.**

RGB

Controls the RGB film response curve. If you are using a black and white preset, the grayscale film response curve will be adjusted.

Red

Controls the Red film response curve.

Green

Controls the Green film response curve.

Blue

Controls the Blue film response curve.

Color Correct

Color Correct manipulates the Temperature, Cyan/Magenta, Brightness, Contrast, Shadow, Midtone, Highlight, and Saturation values of the image. Go to the **Color Corrector** filters to see how it works.

Filter

Adds a color filter to the image.

Presets

Select one of the filters from the pop-up menu.

Color

Sets the color through the use of a standard color picker.

Opacity

Sets the opacity of the color filter.

Highlights

Preserves the white areas of the image.

Sharpen

Amount

Determines how much contrast is added at the edges.

Radius

Controls the size of the edges you wish to sharpen.

Threshold

The threshold setting is used to sharpen more pronounced edges, while leaving more subtle edges untouched. Low values sharpen more image areas while higher threshold values sharpen less.

Diffusion

Blend

Determines the blend mode to be used to create the diffusion/glow effect.

Add

The diffusion/glow is added to your image.

Normal

The diffusion is mixed with the original image. In this mode, the Amount slider only shows changes up to a value of 100.

Screen

The diffusion/glow is combined with the image using a Screen blend mode. This looks kind of like the Add blend mode, but highlights are retained.

Amount

Sets the amount of diffusion.

Blur

Sets the softness of the image.

Color

The Color parameter sets the color of the diffusion/glow through the use of a standard color picker or eyedropper. The default color is white.

Position

When using the Add and Screen blend modes, Position selects the values used to create the glow effect. A higher Position value uses the brightest image values to create the glow. A lower Position value uses the darkest image values to create the glow.

Range

When using the Add and Screen blend modes, Range controls the range of values to be used for the glow. Once you've selected the "Position", you can then add or subtract the "Range" of values to be used in the glow source. A higher Range value includes more values in the glow source while a lower Range value includes less values.

Vignette

A vignette is a popular photographic effect where the photo gradually fades into a color. Go to the **Vignette** filter to see how it works.

Grain

Grain simulates film grain with control of the size, softness and intensity. In addition, a Film Response parameter controls where you will see grain in the image. Go to the **Grain** filter to see how it works.

Warning: You may not see the grain size change in the Viewer unless you use the Magnifier with this filter.

FLAG / DOT

Description

Flags and Dots are rectangular and circular lighting control devices used to create shadow areas on a motion picture or photographic set. This concept has been extended to digital so that areas of the image can be selectively darkened.

Before

After

Photo by Marcelo Matarazzo on Unsplash

Go to the **Flag / Dot Tutorial** to see how the filters work.

Category

Light.

Controls

Flag / Dot

Brightness

Sets the intensity of the flag or dot.

Blur

Sets the softness of the flag or dot.

Transform

Transform the flag or dot shape using Scale and Rotate controls. Go to the **Transform** section of Common Filter Controls to see how the Transform Controls work.

FLASHING

Description

Flashing allows you to use photographic filters to lower the contrast of your shadows or highlights. The motion picture lab can expose a small amount of light to the film at various stages of the developing and printing process. For example, Negative plus Dupe Negative flashing lifts blacks, while Print plus Master Positive flashing softens whites.

Before

After

Photo by Stainless Images on Unsplash

Go to the **Flashing Tutorial** to see how the filter works.

Category

Film Lab.

Controls

Presets

To select a preset, pick one from the Presets window.

Shadows

Brightness

Raises the brightness of the shadows using either the Shadow > Color or Shadow > Presets.

Presets

Select one of the filters from the pop-up menu.

Color

The Color parameter sets the color of the flashing through the use of a standard color picker.

Position

Selects the shadow values to be adjusted.

Range

Controls the range of values to be used for the shadows. A higher Range value considers more values as shadows.

Highlights

Brightness

Lowers the brightness of the highlights using either the Highlights > Color or Highlights > Presets.

Presets

Select one of the filters from the pop-up menu.

Color

The Color parameter sets the color of the flashing through the use of a standard color picker.

Position

Selects the highlight values to be adjusted.

Range

Controls the range of values to be used for the highlights. A higher Range value considers more values as highlights.

Go to the **Matte** section of Common Filter Controls to see how the Position and Range controls work.

FLUORESCENT

Description

Removes the green cast caused by fluorescent bulbs.

Before

After

Photo by Jens Lindner on Unsplash

Go to the **Fluorescent Tutorial** to see how the filter works.

Category

Color.

Controls

Presets

To select a preset, pick one from the Presets window.

Temperature

Removes the greenish tone caused by photographing under fluorescent lights.

Fog

Description

The Fog filter creates a soft, misty atmosphere over the image and glows highlights.

Before

After

Photo by Alex Klopcic on Unsplash

Go to the **Fog Tutorial** to see how the filter works.

Category

Diffusion.

Controls

Presets

To select a preset, pick one from the Presets window.

Fog

Blend

Determines the blend mode to be used to create the fog effect.

Add

The fog is added to your image.

Screen

The fog is combined with the image using a Screen blend mode. This looks kind of like the Add blend mode, but highlights are retained.

Brightness

Sets the intensity of the fog.

Blur

Sets the softness of the fog.

Color

The Color parameter sets the color of the fog through the use of a standard color picker. The default color is white.

Matte

A matte is used to create the fog effect. Go to the **Matte** section of Common Filter Controls to see how the Matte controls work.

FROST

Description

Frost

Frost glows highlights and reduces contrast while softening facial blemishes and wrinkles.

Before

After

Photo by Alexandru Zdrobau on Unsplash

Black Frost

Black Frost offers all the benefits of the Frost filter in a more subtle form. This filter subtly controls highlights, reduces contrast and provides a harder look than the Frost filter, while suppressing facial blemishes and wrinkles.

Before

After

Photo by Alexandru Zdrobau on Unsplash

Go to the **Frost Tutorial** to see how the filters work.

Category

Diffusion.

Controls

Presets

To select a preset, pick one from the Presets window. If you would like to view presets from a different category, use the pop-up menu at the top left of the Presets window.

Detail

Smoothing

Fine image details, such as facial wrinkles and blemishes, are minimized using edge aware smoothing.

Mist

The Mist controls add a mild glow to image highlights.

Blend

Determines the blend mode to be used to create the mist effect.

Add

The mist is added to your image.

Screen

The mist is combined with the image using a Screen blend mode. This looks kind of like the Add blend mode, but highlights are retained.

Brightness

Sets the intensity of the mist.

Blur

Sets the softness of the mist.

Color

Sets the color of the mist.

Color Correct

Go to the **Color Correct** filter to see how the Color Correct controls work.

Matte

A matte is used to create the mist effect. Go to the **Matte** section of Common Filter Controls to see how the Matte controls work.

GELS

Description

Photographers, cinematographers and lighting designers use colored filters or gels in front of lights. Whatever mood you wish to create, we have the colors needed to achieve the effect.

Before

After

Photo by Jacob Sapp on Unsplash

Go to the **Gels Tutorial** to see how the filter works.

Category

Grads/Tints.

Controls

Presets

To select a gel, pick one from the Presets window. If you would like to view presets from a different category, use the pop-up menu at the top left of the Presets window.

Color

Color

The Color parameter sets the color through the use of a standard color picker.

Opacity

Sets the opacity of the color filter.

Preserve Highlights

Preserves the white areas of the image.

Exposure Compensation

Exposure Compensation adds back the brightness loss as a result of the gel application.

Grad

Gels can optionally use a gradient that limits where the filter is applied. Grad is the transition area between the colored portion and the original image. Its direction, corners and size can be adjusted. Go to the **Grad** section of Common Filter Controls to see how the Grad controls work.

GLOW

Description

The Glow filter creates glows around selected areas of the image.

Before

After

Photo by Pascal Muller on Unsplash

Go to the **Glow Tutorial** to see how the filter works.

Category

Light.

Controls

Presets

To select a preset, pick one from the Presets window.

Glow

Blend

Determines the blend mode to be used to create the glow effect.

Add

The glow is added to your image.

Screen

The glow is combined with the image using a Screen blend mode. This looks kind of like the Add blend mode, but highlights are retained.

Brightness

Sets the intensity of the glow.

Blur

Sets the softness of the glow.

Color

The Color parameter sets the color of the glow through the use of a standard color picker. The default color is white.

Color Correct

Go to the **Color Correct** filter to see how the Color Correct controls work.

Matte

A matte is used to create the glow effect. Go to the **Matte** section of Common Filter Controls to see how the Matte controls work.

GLOW DARKS

Description

Glows and grows the darks areas of the image.

Before

After

Photo by Ariel Lustre on Unsplash

Go to the **Glow Darks Tutorial** to see how the filter works.

Category

Light.

Controls

Presets

To select a preset, pick one from the Presets window.

Glow

Amount

Sets the intensity of the glow.

Blur

Sets the softness of the glow.

Color Correct

Go to the **Color Correct** filter to see how the Color Correct controls work.

Matte

A matte is used to create the glow effect. Go to the **Matte** section of Common Filter Controls to see how the Matte controls work.

GLOW EDGES

Description

Glow Edges isolates lines and edges in an image and then adds glow only to these areas resulting in a stylized look.

Before

After

Photo by Jan Senderek on Unsplash

Go to the **Glow Edges Tutorial** to see how the filter works.

Category

Light.

Controls

Presets

To select a preset, pick one from the Presets window.

Glow

Blend

Determines the blend mode to be used to create the edge glow effect.

Add

The edge glow is added to your image.

Screen

The edge glow is combined with the image using a Screen blend mode. This looks kind of like the Add blend mode, but highlights are retained.

Brightness

Sets the intensity of the edge glow.

Blur

Sets the softness of the edge glow.

Color

The Color parameter sets the color of the edge glow through the use of a standard color picker. The default color is white.

Edge

An edge matte is created to produce the edge glow effect.

Brightness

Determines the brightness of the edge matte.

Blur

Blurs the edge matte.

GRAIN

Description

Grain simulates film grain with control of size, intensity and softness. In addition, a Film Response parameter controls where you will see grain in the image. Popular film stock presets are provided as a starting point to adding grain.

Before After

Photo by Jorge Gonzalez on Unsplash

Go to the **Grain Tutorial** to see how the filter works.

Category

Film Lab.

Controls

Presets

To select a preset, pick one from the Presets window.

Monochrome

When checked, the grain is monochrome. In this mode, only the Red Size, Red Amount and Red Softness sliders are active. Since the grain is monochrome, only one slider is needed.

Size

The Size parameter controls the size of the grain. The larger the Size setting, the larger the grain will be.

Warning: You may not see the grain size change in the Viewer unless you use the Magnifier with this filter.

Amount

The Amount parameters set the red, green and blue intensities of the grain. Film stocks generally have varying amounts of red, green and blue intensities with the blue intensity generally higher than the rest. If you turn the red, green and blue amount sliders to a value of 0, the grain will disappear.

Red Amount

Controls the intensity of the red grain.

Green Amount

Controls the intensity of the green grain.

Blue Amount

Controls the intensity of the blue grain.

Softness

The Softness parameter controls the softness of the grain. Normally, only minor softness adjustments are necessary, usually between a value of 0-1.

Film Response

The Film Response parameter allows the adjustment of where you will see grain in the image. In most cases, film grain is apparent over the entire image except the brightest whites with the black areas being the most affected.

Position

The Position slider defines the portions of the image where grain will be added. A low Position value places grain in the darkest image values, while a high Position value places grain in the brightest areas.

Range

Increases or decreases the area where grain is added to the image based on the value of the Position slider. A low Range value indicates a narrow range of values, while a high Range value indicates a large range of values.

Minimum

Sets the minimum level of grain that is always added to the image.

Note: A Position value of 0 and a Range of 80 is typical of standard film, with grain applied to the entire range except the brightest whites with black being the most affected.

GRUNGE

Description

Adds film dirt, hair, scratches, stains, splotches, vignetting and grain--all to make your pristine image look like damaged film.

Before

After

Photo by Oskar Wimmerman on Unsplash

Go to the **Grunge Tutorial** to see how the filter works.

Category

Film Lab.

Controls

Presets

To select a preset, pick one from the Presets window.

Randomize

Randomizes the applied elements.

Dirt

Opacity

The opacity of the dirt.

Amount

The number of pieces of dirt.

Size

The size of the dirt.

Type

Positive

The dirt is black as it is in positive film.

Negative

The dirt is white as it is in negative film.

Hair

Opacity

The opacity of the hair.

Amount

The number of hairs.

Size

The size of the hairs.

Type

Positive

The hair is black as it is in positive film.

Negative

The hair is white as it is in negative film.

Scratches

Opacity

The opacity of the scratches.

Amount

The number of scratches.

Width

The width of the scratches.

Length

Randomly changes the length of the scratches.

Roughness

The roughness of the scratches.

Type

Positive

The scratches are black as they are in positive film.

Negative

The scratches are white as they are in negative film.

Stains

Opacity

The opacity of the stains.

Amount

The number of stains.

Size

The size of the stains.

Type

Positive

The stains are black as they are in positive film.

Negative

The stains are white as they are in negative film.

Splotches

Opacity

The opacity of the splotches.

Amount

The number of splotches.

Size

The size of the splotches.

Type

Positive

The splotches are black as they are in positive film.

Negative

The splotches are white as they are in negative film.

Vignette

A vignette is a popular photographic effect where the photo gradually fades into a color. Go to the **Vignette** filter to see how it works.

Grain

Grain simulates film grain with control of the size, softness and intensity. In addition, a Film Response parameter controls where you will see grain in the image. Go to the **Grain** filter to see how it works.

Warning: You may not see the grain size change in the Viewer unless you use the Magnifier with this filter.

HARRIS SHUTTER

Description

Invented by Robert S. “Bob” Harris of Kodak, the Harris Shutter was originally a strip device with three color filters used for making color photographs with the different primary color layers exposed in separate time intervals in succession. The same frame of film was re-exposed through red, green and blue filters in turn, while keeping the camera steady.

Our digital version of the Harris Shutter can use separate images for the red, green and blue channels or offset the individual channels of a sequence in time. Offsetting the channels creates a rainbow of color around any object that moves within the frame. Some good candidates for subjects include waterfalls, clouds blowing over a landscape or people walking across a busy street.

Before

After

Go to the **Harris Shutter Tutorial** to see how the filter works.

Category

Special Effects.

Controls

Red / Green / Blue

Source

Sets the source image to be used as the Red, Green and Blue channels. If an image is not assigned using Source, the original image's color channel will be used.

Note: Only JPG, PNG and TIFF files can be loaded.

Amount

Controls how much of the Red, Green or Blue image is contributed to the composite image.

HAZE / SKY

Description

Haze

Reduces excessive blue by absorbing UV light and eliminates haze which tends to wash out color and image clarity.

Before

After

Photo by Thomas Kelley on Unsplash

Sky

Reduces UV light, haze and is pink tinted for added warmth and better colors. It is especially useful for images shot in outdoor open shade and on overcast days

Before

After

Photo by Thomas Kelley on Unsplash

Go to the **Haze / Sky Tutorial** to see how the filter works.

Category

Color.

Controls

Presets

To select a preset, pick one from the Presets window.

Haze

Sets the amount of haze to be removed from the scene.

Temperature

Sets the color of the image to be either warmer or cooler. Dragging the slider to the right makes the image cooler (bluer) and dragging the slider to the left makes the image warmer (redder).

Cyan/Magenta

Adds either Cyan or Magenta to the image. Dragging the slider to the right makes the image more magenta and dragging the slider to the left makes the image more cyan.

Note: Cyan/Magenta is only included in the Sky filter.

HIGH CONTRAST

Description

Creates an extreme high contrast image.

Before

After

Photo by Alex Ronsdorf on Unsplash

Go to the **High Contrast Tutorial** to see how the filter works.

Category

Color.

Controls

Presets

To select a preset, pick one from the Presets window.

Contrast

Sets the amount of contrast to be applied to the scene.

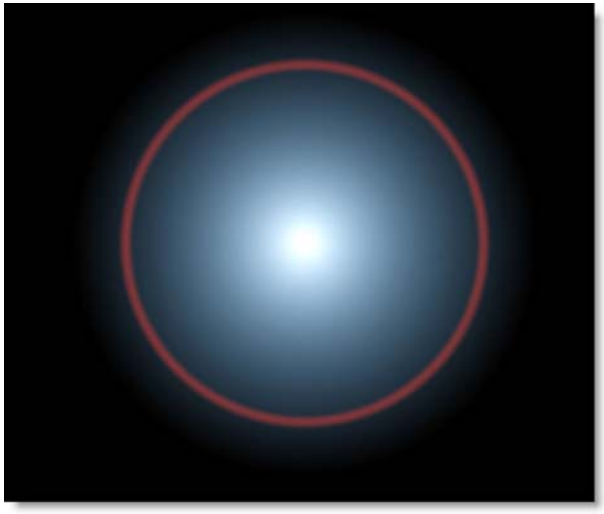
Amount

Sets the mix amount between the original and filtered version.

Hot Spot

Description

Utilized in most lens flares, Hot Spot simulates the circular glow created when a light source interacts with a lens.



Go to the **Hot Spot Tutorial** to see how the filter works.

Category

Light.

Controls

Blend

Determines the blend mode used to create the hot spot effect.

Add

The hot spot is added to your image.

Screen

The hot spot is combined with the image using a Screen blend mode. This looks kind of like the Add blend mode, but highlights are retained.

Brightness

Controls the brightness.

Inner Color

Sets the inner color.

Outer Color

Sets the outer color.

Total Scale

Adjusts the size of all elements.

Aspect

Sets the aspect ratio.

Ramp Scale

Changes the Hot Spot's size.

Ramp Gamma

Determines the Hot Spot's black point.

Ring Brightness

Sets the brightness of the ring.

Ring Softness

Softens the ring.

Ring Size

Changes the size of the ring.

ICE HALOS

Description

Ice halos are created when small ice crystals in the atmosphere generate halos by reflecting and refracting light. Most notably, circles form around the sun or moon as well as rare occurrences when the entire sky is painted with a web of arcing halos.

Before

After

Photo by Ales Krivec on Unsplash

Go to the **Ice Halos Tutorial** to see how the filter works.

Category

Light.

Controls

Presets

To select a preset, pick one from the Presets window.

Light

Blend

Determines the blend mode to be used to add the ice halo.

Add

The ice halo is added to your image.

Screen

The ice halo is combined with the image using a Screen blend mode. This looks kind of like the Add blend mode, but highlights are retained.

Brightness

Sets the intensity of the ice halo.

Displacement

Displaces the ice halo by the luminance values of the image. This “fakes” the effect of the ice halo wrapping over objects in the image.

Blur

Sets the softness of the ice halo.

Halo

Blend

The ice halo can be added to the entire image or limited to a matte.

Halo Only

The ice halo is added to the entire image.

Matte

The ice halo is added only in areas of the matte.

Sun Altitude

Selects the appropriate ice halo pattern based on the sun’s altitude.

Position

The ice halo position can be adjusted by clicking and dragging an on-screen control in the center of the image.

Scale

Scale X

The horizontal scale of the ice halo.

Scale Y

The vertical scale of the ice halo.

Gang Scale

The Scale X and Scale Y slider values can be ganged together.

Matte

A matte can be used to limit where the ice halo will be placed. Wherever there is white in the matte is where the ice halo will be added. Go to the **Matte** parameters to see how they work.

Note: To use a matte to limit where the ice halo will be added, Halo > Blend must be set to Matte.

INFRARED

Description

Infrared simulates infrared filters used in conjunction with infrared sensitive film or sensors to produce very interesting black and white images with glow in highlight areas.

Before

After

Photo by Fab Lentz on Unsplash

Go to the **Infrared Tutorial** to see how the filter works.

Category

Special Effects.

Controls

Presets

To select a preset, pick one from the Presets window.

Black and White

Selects the type of black and white filter to be applied to your color image. Go to the **Black and White** section of Common Filter Controls to see how the Black and White controls work.

Mist

Blend

Determines the blend mode to be used to create the glow effect.

Add

The glow is added to your image.

Screen

The glow is combined with the image using a Screen blend mode. This looks kind of like the Add blend mode, but highlights are retained.

Brightness

Sets the intensity of the glow.

Blur

Sets the softness of the glow.

Color Correct

Go to the **Color Correct** filter to see how the Color Correct controls work.

Matte

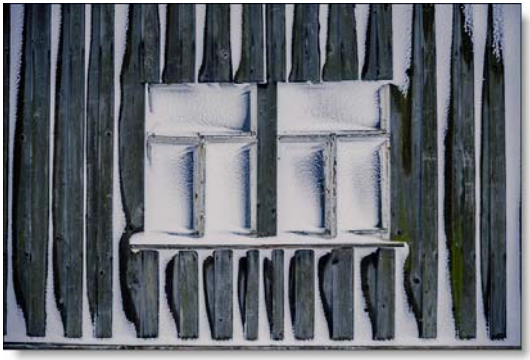
A matte is used to create the glow effect. Go to the **Matte** section of Common Filter Controls to see how the Matte controls work.

KELVIN

Description

Degrees Kelvin is the standard unit of measure for color temperature which is a way to characterize the spectral properties of a light source. Low color temperature implies warmer (redder) light, while high color temperature implies a colder (bluer) light. Presets for a number of different light sources and conditions are provided in degrees Kelvin.

Before



After

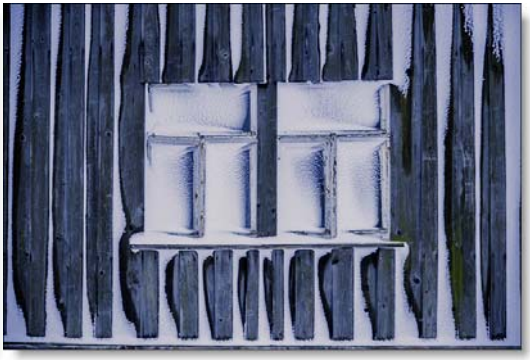


Photo by Christiane Nuetzel on Unsplash

Go to the **Kelvin Tutorial** to see how the filter works.

Category

Color.

Controls

Presets

To select a preset, pick one from the Presets window.

Color Temperature

The Color Temperature of the image is determined by the difference of the Destination and Source Kelvin parameters. For instance, if your Source Kelvin is 3200 degrees Kelvin and you adjust the Destination Kelvin to 6500 degrees,

your image would turn blue. This is the same as using tungsten indoor film meant to be used with lighting balanced for 3200 degrees Kelvin outside in daylight which is 6500 degrees Kelvin.

Destination Kelvin

Sets the destination color temperature of the image in degrees Kelvin.

Source Kelvin

Sets the source color temperature of the image in degrees Kelvin.

Opacity

Sets the opacity of the color temperature adjustment.

Preserve Highlights

Preserves the white areas of the image.

Exposure Compensation

Exposure Compensation adds back the brightness loss as a result of the color temperature application.

Grad

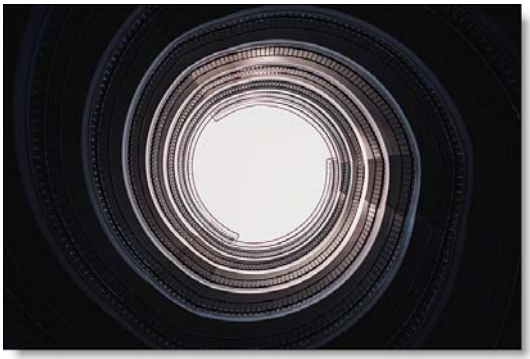
Kelvin can optionally use a gradient that limits where the filter is applied. Grad is the transition area between the colored portion and the original image. Its direction, corners and size can be adjusted. Go to the **Grad** section of Common Filter Controls to see how the Grad controls work.

KEY LIGHT

Description

Using Key Light, an image can be relit by with either a directional or point light. The result looks natural even though the relighting is done without computing any scene geometry.

Before



After

Photo by Samuel Zeller on Unsplash

Go to the **Key Light Tutorial** to see how the filter works.

Category

Light.

Controls

Type

Parallel

A directional light source.

Point

A point light where the light either emanates from or fades into a vanishing point. Move the point control in the center of the screen to change the Point light location.

Strength

Sets the strength of the light.

Angle

Used in conjunction with Parallel, Angle sets the direction of the light source.

Invert

Used in conjunction with Point, Invert determines whether the light source emanates from or fades into a vanishing point.

Note: Since Key Light works at a proxy resolution, you will need to view the result of Key Light at a 1:1 pixel ratio using the Magnifier window to determine what the final output will look like.

LENS DISTORTION

Description

Lens Distortion corrects for pin-cushioning and barrel distortion of camera lenses. It is also useful for creating the look of a wide angle lens.

Before

After

Photo by Vincent Guth on Unsplash

Go to the **Lens Distortion Tutorial** to see how the filter works.

Category

Lens.

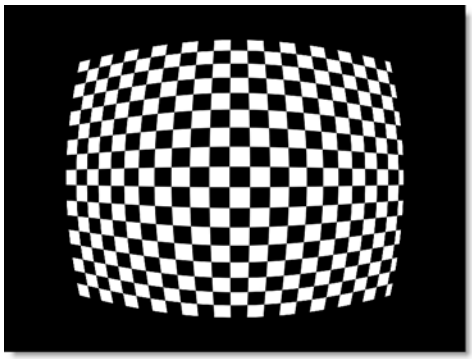
Note: Lens Distortion must be applied as the first layer (bottom of the layer stack) when multiple layers are used. Otherwise, all filters below will not be rendered.

Controls

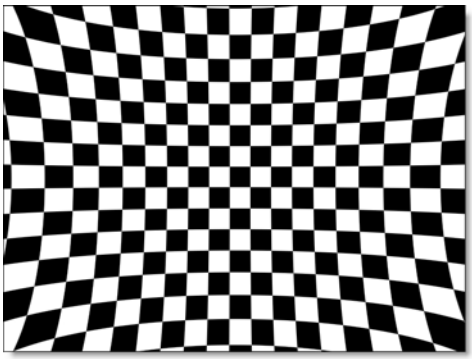
Distortion

Pulls the corners of the image in or out. Negative values pull the corners of the image outward while positive values pull the corners of the image inward.

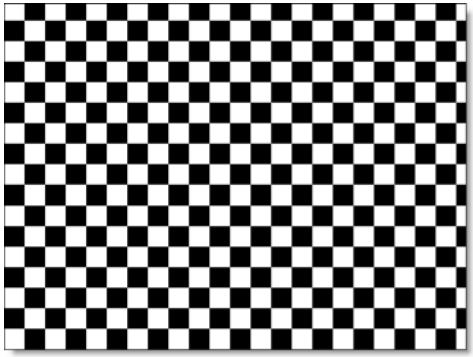
Barrel Distortion



Pin Cushion Distortion



Original



Anamorphic Squeeze

Anamorphic Squeeze corrects for the squeeze found in anamorphic motion picture lenses.

Curvature X and Y

Curvature X and Y correct for non-radial, asymmetric distortions found in anamorphic motion picture lenses.

Note: Anamorphic Squeeze and Curvature X and Y only work once the Distortion parameter has been moved.

Center

Determines the center point for the distortion. There is an on-screen control in the center of the image. By clicking and dragging the on-screen control, the Center can be adjusted.

LENS FLARE

Description

Lens flares are produced by the scattering or flaring of light within a lens when pointed into a bright light. Although an image aberration, lens flares can be added for dramatic effect and are created by combing the following elements: Caustic, Chroma Bands, Chroma Ring, Circle, Circles, Disc, Edge Streak, Ellipse, Fan Rays, Hot Spot, Polygon, Polygons, Radial Streaks, Random Spikes, Ring, Spikes, Spiral Rays, Star, Star Caustic, and Stripe.

Go to the **Lens Flare Tutorial** to see how the filter works.

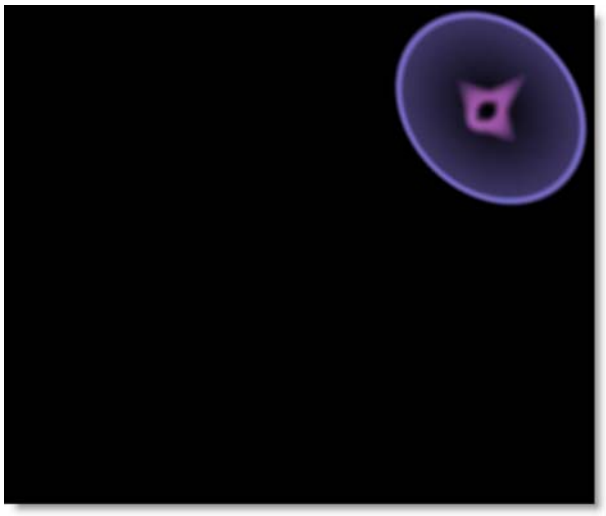
Category

Light.

Elements

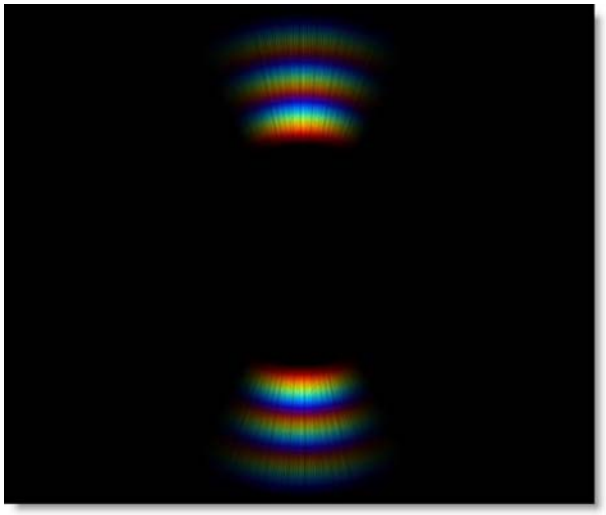
Caustic

Simulates an optical distortion created by the envelope of light rays reflected or refracted by a curved surface.



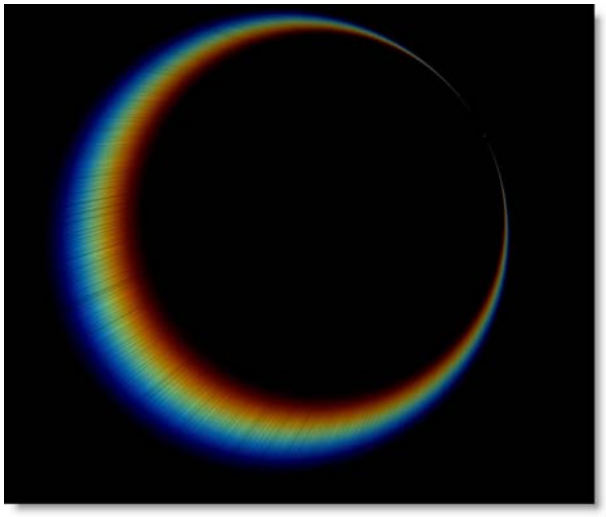
Chroma Bands

Creates rainbow diffraction patterns.



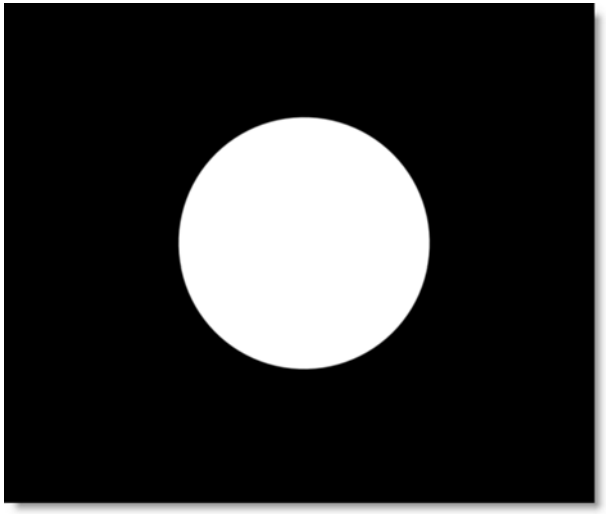
Chroma Ring

Rainbow lines that emanate from the center of the light source.



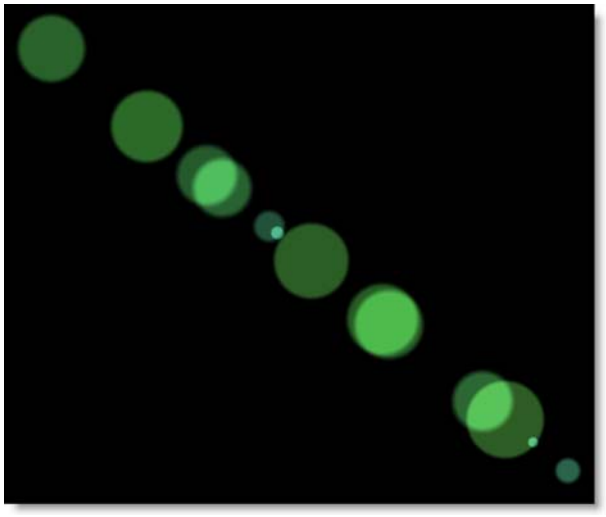
Circle

An individual circle.



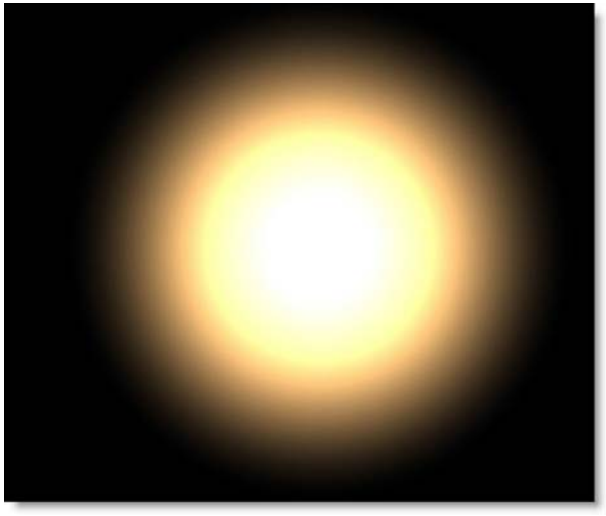
Circles

Creates a specified number of random circles often seen in lens flares.



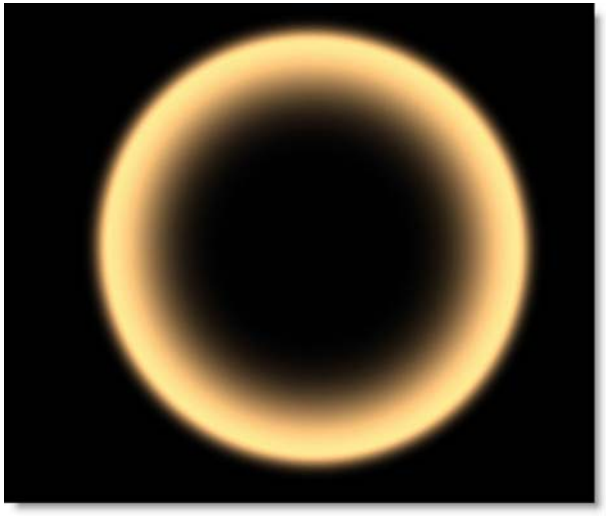
Disc

Generates a circular ramp with individual control of the inner, middle and outer areas.



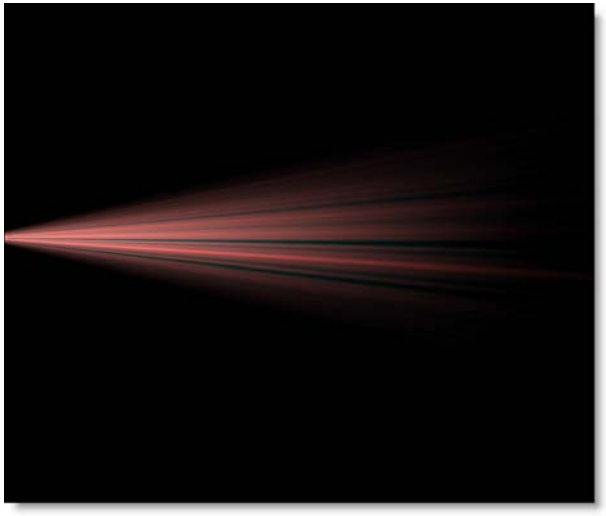
Ellipse

Ellipse is similar to Disc, but elliptical in shape.



Edge Streak

Caused by a light source at the edge of the frame reflecting off of the shiny lens aperture. It only appears when the light source is positioned outside of the frame.

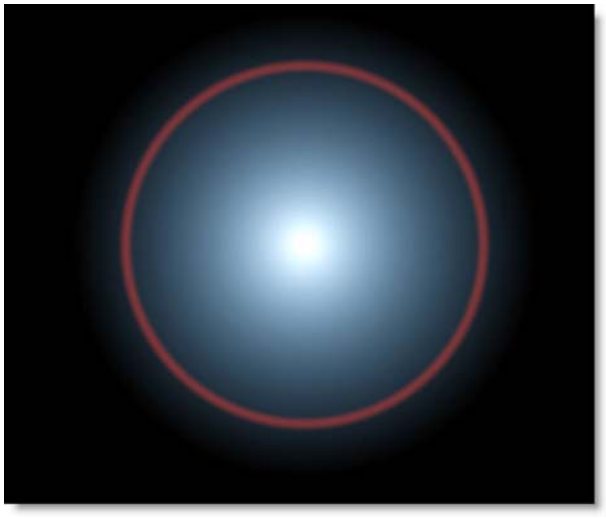


Fan Rays

Generates asymmetric fanned rays.

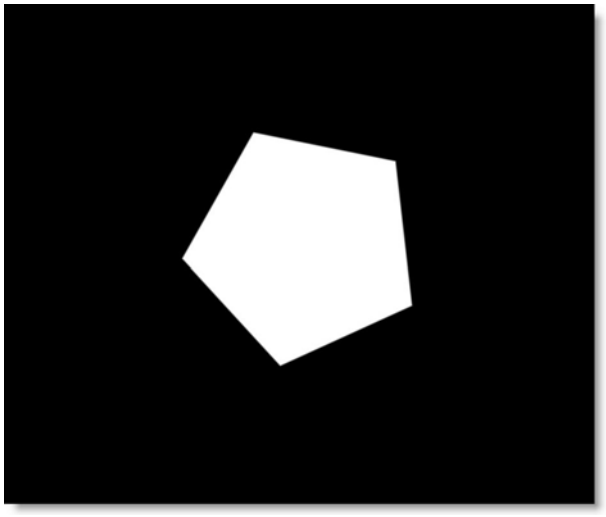
Hot Spot

Utilized in most lens flares, glow ball simulates the circular glow created when a light source interacts with a lens.



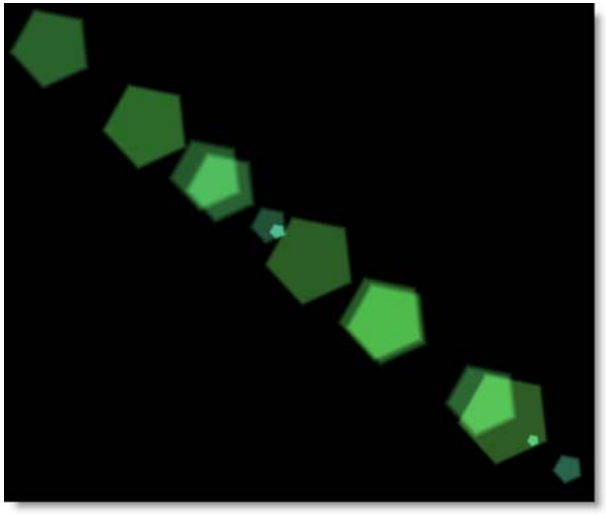
Polygon

An individual polygon.



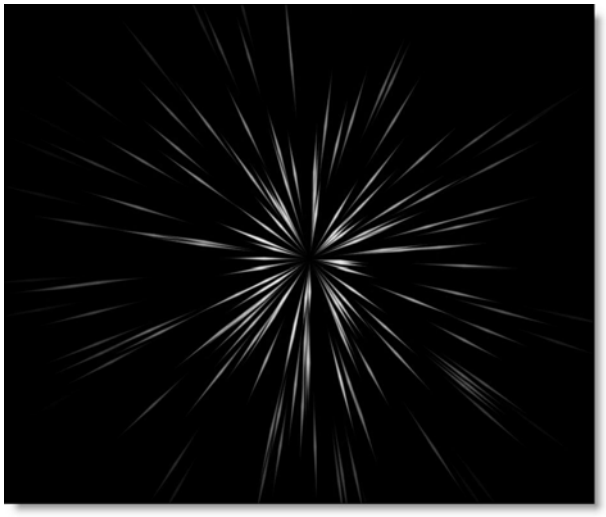
Polygons

Creates a specified number of random polygons. These are reflections caused by light interacting with the lens's polygonal bladed aperture.



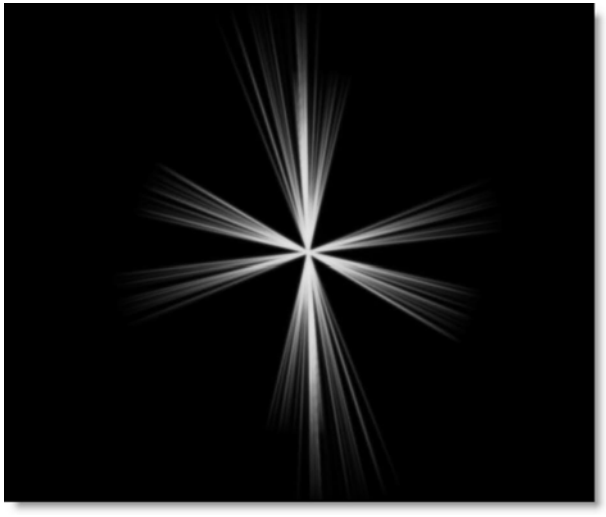
Radial Streaks

Short radial streaks emanating from the center point.



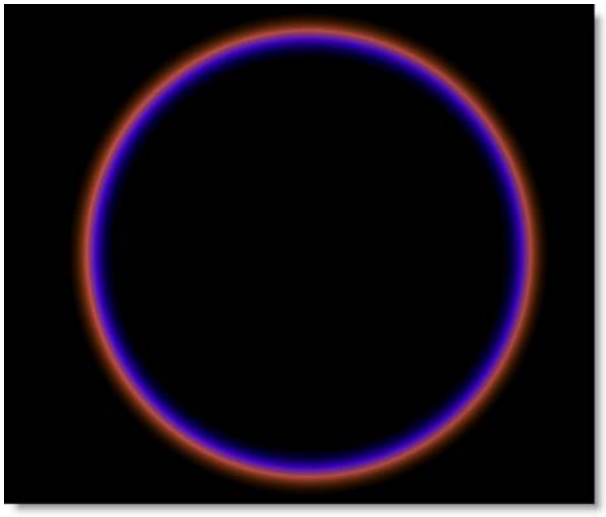
Random Spikes

Generates asymmetric radial rays.



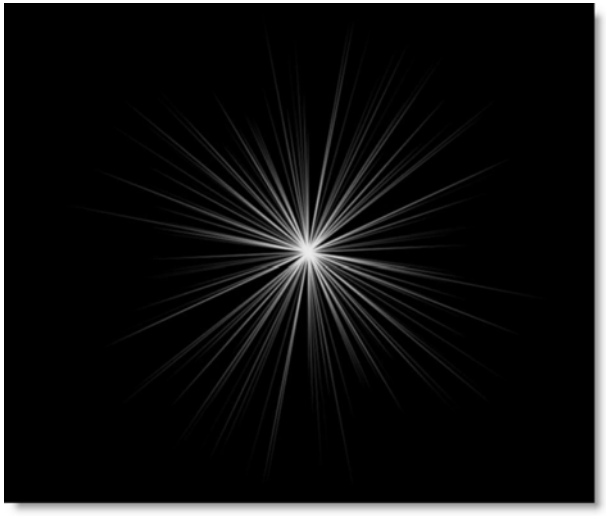
Ring

A rainbow ring that fades as it is moved to the edges of the screen.



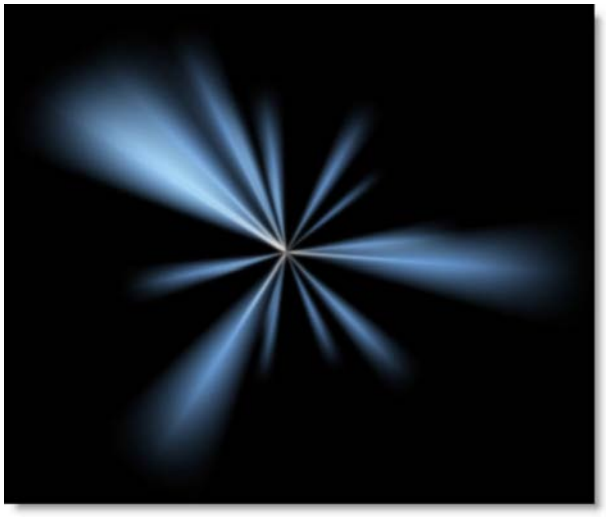
Spikes

Long radial rays emanating from the center point.



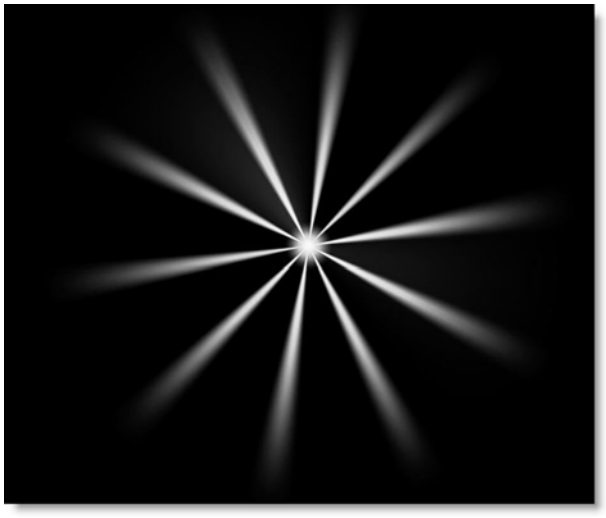
Spiral Rays

Creates spiral rays.



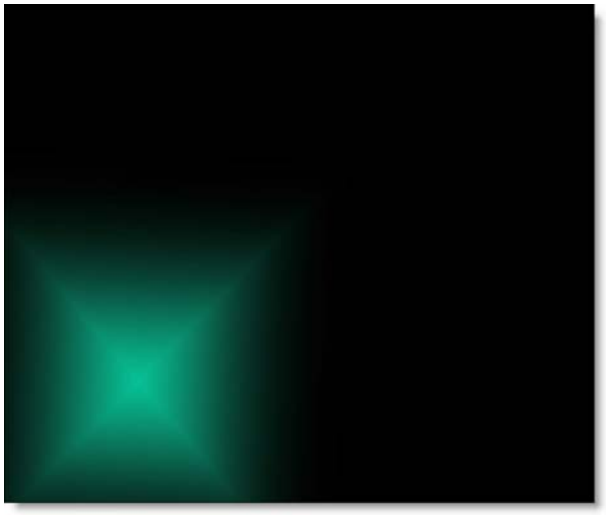
Star

A star pattern is created when light reflects off the intersection of the lens's aperture blades.



Star Caustic

A star shaped caustic created by the envelope of light rays reflected or refracted by a lens's reflective coatings.



Stripe

A tapered stripe that simulates anamorphic lens flares.

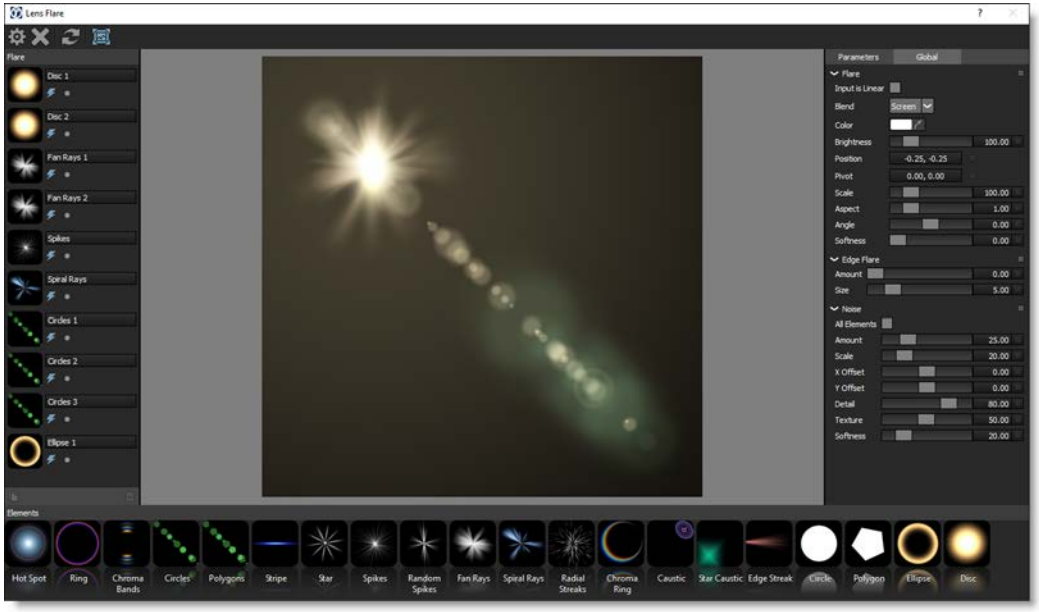
Controls - Global

Presets

To select a preset, pick one from the Presets window.

Edit Flare

Click the Edit Flare button to edit the current preset or to create a custom lens flare. The Flare Editor interface consists of a Viewer, Parameters, Global, Flare (currently used flare elements) and Elements (all available elements).



User Interface

Toolbar

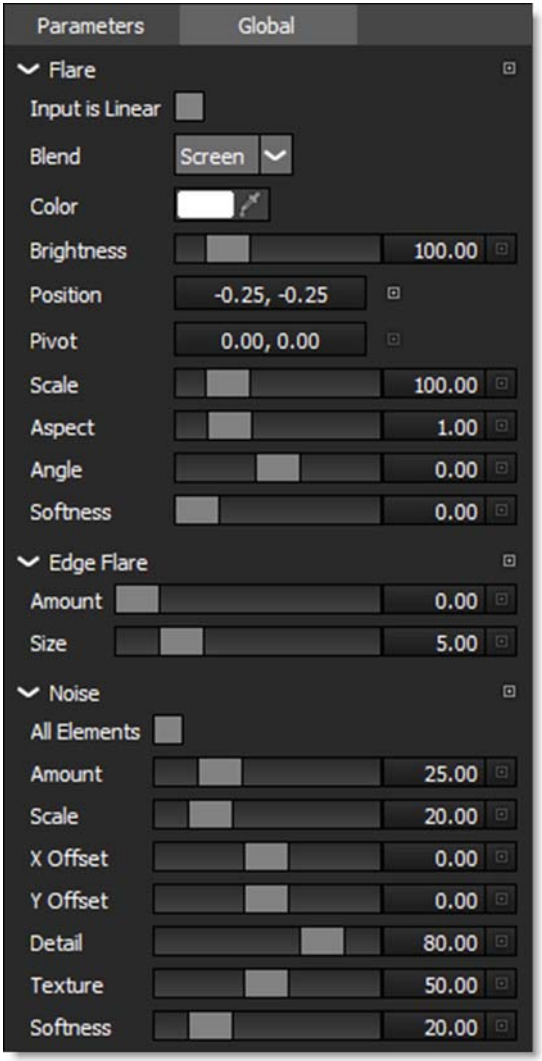
The Toolbar contains Done, Cancel, Reset, and Show Image icons.

Viewer

The Viewer displays the composite of all added flare elements.

Parameters and Global

Parameters and Global share the same window space on the right side of the screen, with Global shown as the default. Either Parameters or Global are selectable in a tab at the top of the window.



Elements

The Elements window displays lens flare building blocks to be used in the creation of a flare.

Flare

The Flare window displays all elements that make up the current lens flare.

Enable (E)

Enables and disables the element.

Solo (S)

Displays only the soloed element.

Working With Elements

Select Elements

Select elements using the Shift or Ctrl(Win)/Cmd(Mac) keys.

Add Elements

- **Double-click an element in the Elements window and it is added to the end of the stack in the Flare window. If an element is selected in the Flare window prior to the double-click, the new element is added after the selection.**
- **Drag and drop from the Elements window to the Flare window or Viewer. Multiple selected elements can be dragged and dropped simultaneously.**

Delete Elements

Delete selected elements.

- **Press the Delete key.**

or

- **Click the Delete Element icon at the bottom of the Flare window.**

Duplicate Elements

Duplicate selected elements using the Duplicate Element icon at the bottom of the Flare window.

Edit Elements

- **Select an element in the Flare window and it's controls are displayed in the Parameters window.**
- **When multiple elements are selected, the controls for all selected elements are displayed in the Parameters window.**
- **Click and drag the point controls in the viewer to move the flare around.**
- **Ctrl(Win)/Cmd(Mac)-click and drag in the viewer to move the selected elements along the flare line.**

Moving Elements In The Flare Window

Drag the icon of an element to a new position in the stack. Multiple elements can be moved at once.

Rename Elements

Click in the element text box and type to rename it.

Flare

Input is Linear

Enable this if your image is in true linear color space. Gamma corrected images should have this parameter disabled.

Blend

Determines the blend mode used to composite the lens flare.

Add

The lens flare is added to your image.

Screen

The lens flare is combined with the image using a Screen blend mode. This looks kind of like the Add blend mode, but highlights are retained.

Color

Sets the color.

Brightness

Controls the brightness.

Position

Adjusts the origin of the lens flare.

Pivot

Changes the end position of the lens flare.

Scale

Determines the size.

Aspect

Sets the aspect ratio.

Angle

Sets the angle.

Softness

Blurs the lens flare.

Edge Flare

Flares the frame as the lens flare enters or exists the frame.

Amount

Controls the amount of the edge flare.

Size

Sets the size of the edge flare.

Noise

Adds noise to the lens flare elements. Noise can selectively be added to elements based on whether an element's Lens Noise parameter is enabled. Alternatively, you can apply noise to all elements using the parameter below.

All Elements

Applies the noise pattern to all lens flare elements.

Amount

Sets the amount of the noise.

Scale

Determines the size of the noise.

X Offset

Moves the noise horizontally.

Y Offset

Moves the noise vertically.

Detail

Sets the detail of the noise.

Texture

Controls the complexity of the noise.

Randomize

Randomizes the size and position of the noise.

Controls - Elements

Each flare element uses a subset of the parameters below.

Angle

Sets the angle.

Aspect

Sets the aspect ratio.

Blur

Blurs the element.

Brightness

Controls the brightness.

Brightness Variance

Randomizes the brightness between multiple elements.

Center

Determines the center of the Chroma Ring along the flare.

Center Brightness

Sets the brightness of the stripe’s center.

Center Offset

Pushes all the Disc edges outwards.

Chroma

Changes the saturation of the Chroma Ring.

Color

Sets the color.

Color Variance

Randomizes the color between multiple elements.

Cycles

Determines the number of Chroma Bands.

Density

Sets the amount of rays.

Edge Fade

Fades the element as it moves towards the edge of the screen.

Element Count

Sets the number of elements.

Hotspot

Sets the size of the Star's center hotspot.

Inside Width

Changes the size of the inner ramp.

Jitter

Randomizes the angle.

Length

Sets the length of the stripe.

Lens Noise

Determines whether the Lens Noise controls affect the enabled element.

Lock To

X Axis

Locks the element to the X axis so it will only move vertically.

Y Axis

Locks the element to the Y axis so it will only move horizontally.

Match Flare Angle

Matches the Circle and Polygon element's angle to the flare angle. This is especially useful when the Aspect parameter has been adjusted.

Middle Width

Adjusts the size of the middle ramp.

Noise

Controls the amount of noise in an element.

Noise Density

The strength of the noise.

Offset

For most elements, Offset determines the element's inner diameter. For Circles and Polygons, it shifts the shapes along the flare axis.

Outside Width

Sets the size of the outer ramp.

Position

Sets the position of the element along the flare.

Position Variance

Randomizes the position between multiple elements along the flare.

Ramp Gamma

Sets the Hot Spot's black point.

Ramp Scale

Changes the Hot Spot's size.

Randomize

Randomizes size and position.

Ring Brightness

Sets the brightness of the Hot Spot's ring.

Ring Size

Changes the size of the Hot Spot's ring.

Ring Softness

Softens the Hot Spot's ring.

Scale

Sets the size.

Sides

Determines the number of sides.

Size Variance

Randomizes the size between multiple elements.

Softness

Blurs the element.

Softness Variance

Randomizes the softness between multiple elements.

Spread

Determines the distribution of an element.

Taper

Tapers the Chroma Band's edges.

Total Scale

Sets the size of all elements.

Vertical Variance

Randomizes the vertical position between multiple elements.

Weight

Polygons and Circles can be weighted to either the beginning or end of the lens flare.

Warp

Enables the warping of the Ellipse and Ring elements as they exit the frame.

Width

Adjusts the width.

X Offset

Offsets the element horizontally.

Y Offset

Offsets the element vertically.

LEVELS

Description

Levels is an image adjustment tool which can move and stretch the brightness levels of an image histogram. It has the power to adjust brightness, contrast, and tonal range by specifying the location of complete black, complete white, and midtones in a histogram.

Before

After

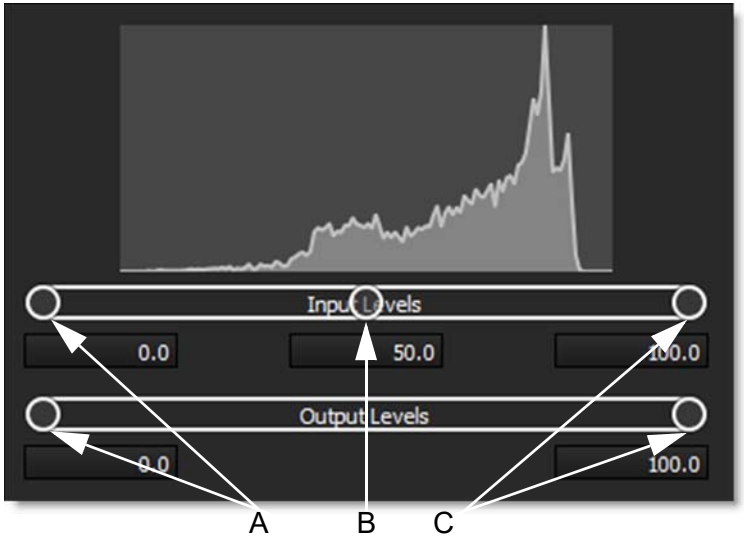
Photo by Mohamed Nohassi on Unsplash

Category

Color.

Go to the **Levels Tutorial** to see how the filter works.

Since every photo's histogram is unique, there is no single way to adjust the levels for all your photos. A proper understanding of how to adjust the levels of an image histogram will help you better represent tones in the final image.



A. Shadows B. Midtones C. Highlights

Input Levels

The outer two Input Levels sliders map the black point and white point to the settings of the Output sliders. By default, the Output sliders are at level 0, where the pixels are black, and level 100, where the pixels are white. With the Output sliders in the default positions, moving the black Input slider maps the pixel value to level 0 and moving the white Input slider maps the pixel value to level 100. The remaining levels are redistributed between levels 0 and 100. This redistribution increases the tonal range of the image, in effect increasing the overall contrast of the image.

Note: When shadows are clipped, the pixels are black, with no detail. When highlights are clipped, the pixels are white, with no detail.

The middle Input slider adjusts the gamma in the image. It moves the midtone and changes the intensity values of the middle range of gray tones without dramatically altering the highlights and shadows.

Output Levels

The Output Levels decrease the contrast of the image.

LIGHT

Description

Light can be added to a scene where none existed before just as if you were adding light at the time of shooting. Realistic lighting and shadow is introduced using digital versions of lighting gobos.

Before After

Photo by Julia Komarova on Unsplash

Gobos (patterns) are widely used by designers in theatre, film, photography and television to create atmosphere, project scenery, and generally enhance the visual impact of their lighting. Normally used in front of lights during photography, these same exact gobos can be applied digitally to the entire image or inside a matte.

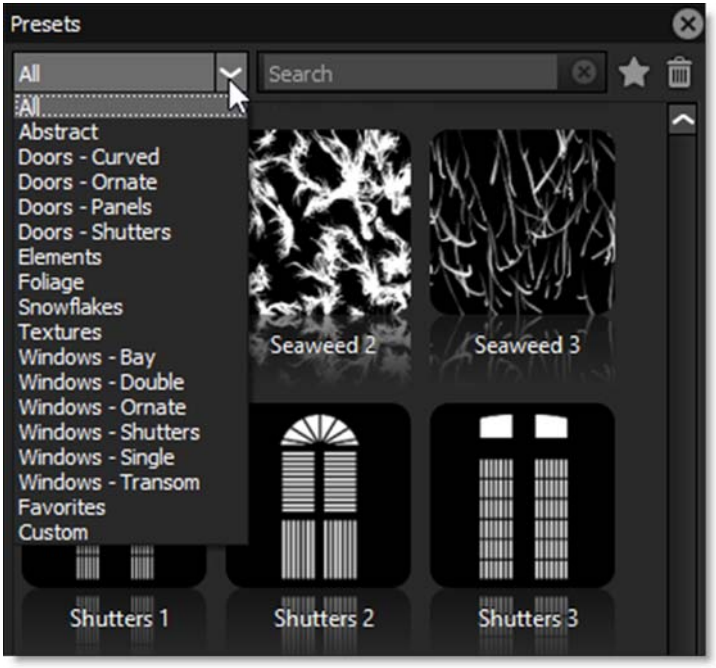
Go to the **Light Tutorial** to see how the filter works.

Category

Light.

Presets

To select a gobo, pick one from the Presets window. If you would like to view gobos from a different category, use the pop-up menu at the top left of the Presets window.



Light

Blend

Determines the blend mode to be used to add the light.

Add

The light is added to your image.

Screen

The light is combined with the image using a Screen blend mode. This looks kind of like the Add blend mode, but highlights are retained.

Subtract

The light is subtracted from your image creating shadow instead of light.

Brightness

Sets the intensity of the light.

Displacement

Displaces the gobo by the luminance values of the image. This “fakes” the effect of light wrapping over objects in the image.

Displaced Gobo

Blur

Sets the softness of the light.

Gels

Photographers, cinematographers and lighting designers use colored filters or gels in front of lights. Whatever mood you wish to create, we have the colors needed to achieve the effect. Select one of the Gels presets from the pop-up menu.

Color

Sets the color of the light through the use of a standard color picker.

Shadow

Brightness

Sets the intensity of the shadows. The Brightness parameter will darken only those areas that are not being affected by the Light settings.

Gobos

The gobos are organized into various categories including: Abstract, Doors, Elements, Foliage, Snowflakes, Textures and Windows groups.

Gobo

Clicking the Gobo > Browse button allows you to load your own image as the light source.

To use your own image as a light source:

- **Select Gobo > Gobo > Browse.**
- **When the file browser opens, navigate to your image and select it.**

Blend

The gobo can be added to a matte using a variety of Blend modes. Go to **Blend Modes** for explanations of the various modes.

I like the Multiply blend mode for combining gobos with the matte because it only puts the gobo within the areas of the matte.

Multiply | Matte | Gobo

Opacity

Sets the opacity of the gobo.

Blur

Sets the softness of the gobo.

Transform

Transform your gobo using Position, Scale, Rotate, Corner-Pin, Shear and Crop controls. Go to the **Transform** section of Common Filter Controls to see how the Transform Controls work.

Matte

A matte can be used to create areas of light or limit where gobos will be added. Wherever there is white in the matte is where the light will be added. When using the Light and Gobo filters, it is usually helpful to blur the matte. Go to the **Matte** parameters to see how they work.

Matte

Note: To use a matte to create light, Gobo > Blend must be set to something other than Gobo Only for the Matte controls to be active.

Looks

Description

Looks is a unique filter meant to simulate a variety of color and black and white photographic/film looks, diffusion and color grad camera filters, lighting gels, film stocks and optical lab processes. By selecting from the available presets, parameters in the various modules are automatically set to achieve a variety of different effects.

Before

After

Photo by Mickey O'neil on Unsplash

Category

Special Effects.

Controls

The Looks filters are made up of Color Correct, Diffusion, Color Gradient, Gels, Lab, Grain and Post Color Correct groups. Together, they simulate a variety of photographic and film looks. By selecting from the available presets, parameters in the various groups are automatically set to achieve a variety of different effects.

Presets

To select a preset, pick one from the Presets window. If you would like to view presets from a different category, use the pop-up menu at the top left of the Presets window.

Color Correct

Color Correct manipulates the Black and White, Hue, Saturation, Brightness, Contrast, Gamma, Red, Green and Blue values of the image. Go to the **Color Correct** filter to see how it works.

Diffusion

Diffusion creates atmosphere by reducing contrast while creating a glow around highlights or shadows. It simulates diffusion and fog filters as well as glows. Go to the Diffusion section of the **Film Stocks** filter to see how it works.

Color Gradient

Color Gradient colors and or darkens only a portion of the image giving you the ability to simulate any Color Gradient filter. Presets for your favorite color gradient filters are provided as well as the ability to create custom colors. There is a graduated transition for a smooth color blend between the colored/darkened portion and the original image. Color Gradient is especially useful for changing and enhancing the color of the sky. Go to the **Color Gradient** filter to see how it works.

Gels

Photographers, cinematographers and lighting designers use colored filters or gels in front of lights. Whatever mood you wish to create, we have the colors needed to achieve the effect. Go to the **Gels** filter to see how it works.

Lab

The Lab group simulates a variety of different optical lab processes including Bleach Bypass, Cross Processing, Flashing and Overexposure. Go to the **Bleach Bypass** filter, **Cross Processing** filter, **Flashing** and the **Overexpose** filter to see how they work.

Grain

Grain simulates film grain with individual control of red, green, and blue grain size, softness and intensity. In addition, a Film Response parameter controls where you will see grain in the image. Go to the **Grain** filter to see how it works.

Warning: You may not see an accurate representation of the grain in the Viewer unless you use the Magnifier with this filter.

Post Color Correct

Post Color Correct gives you further color correction after all other operations have been processed. This is often helpful as some of the operations affect the brightness, contrast and color of the image. In addition, Temperature controls allow you to make the scene warmer or cooler, and cyan or magenta. Go to the **Color Correct** filter to see how it works.

LOW CONTRAST

Description

Low Contrast spreads highlights into darker areas, lowers contrast and keeps bright areas bright.

Before

After

Photo by Len Dela Cruz on Unsplash

Go to the **Low Contrast Tutorial** to see how the filter works.

Category

Color.

Controls

Presets

To select a preset, pick one from the Presets window.

Contrast

Light Brightness

Sets the intensity of the light that is spread into darker areas.

Light Spread

Sets how far light is spread from bright areas to darker areas.

Shadow Brightness

Adjusts the brightness of the shadow areas.

Matte

A matte is used to create the light spread effect. Go to the **Matte** section of Common Filter Controls to see how the Matte controls work.

MATCH

Description

Matches the brightness and color from one image and applies it to another.

Source/After: Photo by Paula Borowska on Unsplash
Target: Photo by Saud Sarosh on Unsplash

Go to the **Match Tutorial** to see how the filter works.

Category

Color.

Controls

Source

Selects a source image to be matched. Click the Browse button to select an image.

Brightness

Sets the amount of the brightness match.

Color

Sets the amount of the color match.

Matching Clips:

1 **Apply the Match filter to a target image.**

2 **Select the source image to be matched with the Source selector.**

The color and brightness of the source image are analyzed and applied to your target image.

3 **Adjust the Color and Brightness parameters to your liking.**

MIST

Description

Mist

Creates atmosphere by reducing contrast while creating a glow around highlights.

Before

After

Photo by Christopher Campbell on Unsplash

Warm Mist

Same as Mist but combined with a warming filter.

Before

After

Photo by Christopher Campbell on Unsplash

Cool Mist

Same as Mist but combined with a cooling filter.

Before

After

Photo by Christopher Campbell on Unsplash

Black Mist

A more subtle version of Mist, the Black Mist filter creates atmosphere by reducing contrast, but with minimal glow around highlights.

Before

After

Photo by Christopher Campbell on Unsplash

Warm Black Mist

Same as Black Mist but combined with a warming filter.

Before

After

Photo by Christopher Campbell on Unsplash

Go to the **Mist Tutorial** to see how the filter works.

Category

Diffusion.

Controls

Presets

To select a preset, pick one from the Presets window.

Mist

The Mist controls add a mild glow to image highlights.

Blend

Determines the blend mode to be used to create the glow effect.

Add

The glow is added to your image.

Screen

The glow is combined with the image using a Screen blend mode. This looks kind of like the Add blend mode, but highlights are retained.

Brightness

Sets the intensity of the glow.

Blur

Sets the softness of the glow.

Color

Sets the color of the glow.

Color Correct

Go to the **Color Correct** filter to see how the Color Correct controls work.

Matte

A matte is used to create the mist effect. Go to the **Matte** section of Common Filter Controls to see how the Matte controls work.

MULTI-STAR

Description

User definable multi-point star patterns are generated on highlights in the image.

Before

After

Photo by Pawel Bukowski on Unsplash

Go to the **Multi-Star Tutorial** to see how the filter works.

Category

Light.

Controls

Presets

To select a preset, pick one from the Presets window.

Star

The Star settings control the various qualities of the generated star patterns.

Blend

Determines the blend mode to be used when adding the stars.

Add

The stars are added to your image.

Screen

The stars are combined with the image using a Screen blend mode. This looks kind of like the Add blend mode, but highlights are retained.

Brightness

Determines the brightness of the stars.

Spokes

Controls the number of star spokes.

Size

Sets the star size.

Angle

Rotates the stars.

Color

Sets the star color.

Matte

A matte is used to create the star effect. Go to the **Matte** section of Common Filter Controls to see how the Matte controls work.

ND GRADIENT

Description

ND (Neutral Density) Gradient darkens only a portion of the image using a graduated transition between the darkened portion and the original image. It selectively adjusts brightness without affecting color balance. The most likely use for ND Gradient would be to balance the difference between the sky and ground in a landscape.

Before

After

Photo by Sam Ferrara on Unsplash

Go to the **ND Gradient Tutorial** to see how the filter works.

Category

Grads/Tints.

Controls

Presets

To select a preset, pick one from the Presets window.

F-Stop

Presets

Select one of the ND Gradient presets from the pop-up menu.

Exposure

Darkens the image using F-Stops as the unit of measure.

Preserve Highlights

Preserves the white areas of the image.

Grad

Grad is the transition area between the darkened portion and the original image. Its direction, corners and size can be adjusted. Go to the **Grad** section of Common Filter Controls to see how the Grad controls work.

NET

Description

Net

Softens and minimizes facial imperfections while retaining image clarity. Great for portraits and people photography.

Before

After

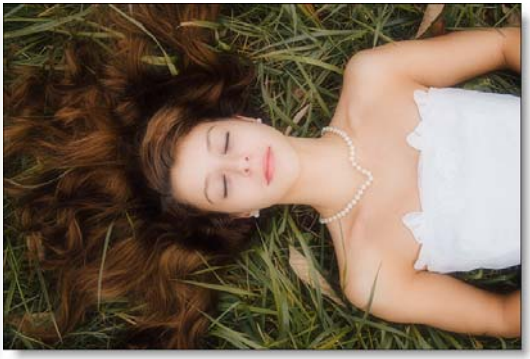


Photo by Rachael Crowe on Unsplash

Warm Net

Combines all of the benefits of Net with a warming filter.

Before

After

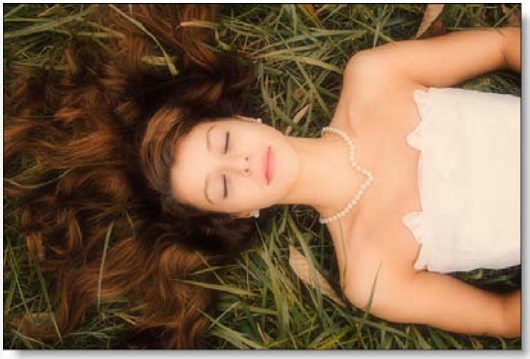


Photo by Rachael Crowe on Unsplash

Go to the **Net Tutorial** to see how the filter works.

Category

Diffusion.

Presets

To select a preset, pick one from the Presets window. If you would like to view presets from a different category, use the pop-up menu at the top left of the Presets window.

Blur

Sets the softness of the image.

Opacity

Sets the amount of diffusion mixed into the original image. The higher the setting, the more the image is blurred.

Color Correct

Go to the **Color Correct** filter to see how the Color Correct controls work.

NIGHT VISION

Description

The Night Vision filter creates the effect of a Night Vision lens--that green, glowy, grainy look.

Before

After

Photo by Thomas Shellberg on Unsplash

Go to the **Night Vision Tutorial** to see how the filter works.

Category

Special Effects.

Controls

Presets

To select a preset, pick one from the Presets window.

Black and White

Selects the type of black and white filter to be applied to your color image. Go to the **Black and White** section of Common Filter Controls to see how the Black and White controls work.

Tint

Color

Sets the color that the image will be tinted with. The color is preset to a night vision green, but feel free change it by using the color picker.

Opacity

Sets the opacity of the tint color.

Glow

Blend

Determines the blend mode to be used to create the glow effect.

Add

The glow is added to your image.

Screen

The glow is combined with the image using a Screen blend mode. This looks kind of like the Add blend mode, but highlights are retained.

Brightness

Sets the intensity of the glow.

Blur

Sets the softness of the glow.

Additional Controls

Grain

Grain Size

Controls the size of the grain.

Warning: You may not see the grain size change in the Viewer unless you use the Magnifier with this filter.

Grain Amount

Controls the intensity of the grain.

Color Correct

Go to the **Color Correct** filter to see how the Color Correct controls work.

Matte

A matte is used to create the glow effect. Go to the **Matte** section of Common Filter Controls to see how the Matte controls work.

OVEREXPOSE

Description

Overexpose simulates the overexposure that occurs when a film camera is stopped.

Before

After

Photo by Mads Schmidt on Unsplash

Go to the **Overexpose Tutorial** to see how the filter works.

Category

Film Lab.

Controls

Presets

To select a preset, pick one from the Presets window.

Amount

Controls the amount of overexposure.

Intensity

Sets the intensity of the overexposure.

Blur

Sets the softness of the overexposure.

OZONE

Description

Ozone allows you to manipulate the color of an image with incredible flexibility and accuracy.

Before

After

Photo by Annie Spratt on Unsplash

Inspired by Ansel Adams' Zone System for still photography, we have created "The Digital Zone System". Just what is the Digital Zone System? The world around us contains an infinite palette of colors, tones and brightness. To reproduce this vast range of brightness, the Digital Zone System takes the spectrum of image values and divides them into 11 discrete zones using proprietary image slicing algorithms.

Zone 0 Zone 1 Zone 2 Zone 3 Zone 4 Zone 5 Zone 6 Zone 7 Zone 8 Zone 9 Zone 10

Zones can be created using luminance, hue, saturation, average, red, green, blue, cyan, magenta, and yellow values. Look at how the image below is divided into hue zones.

With Ozone, the color values of each zone can be independently adjusted until you've painted a new picture. Your adjustments occur on a zone by zone basis, but you view the result of all color corrections simultaneously.

Go to the **Ozone Tutorial** to see how the filter works.

Category

Color.

Controls

Zone

Selects one of the 11 zones. Once you click in the Zone selector, you can use the left and right arrow keys to cycle through the zones.

Extract On

The Extract On pop-up menu allows you to specify the image values to be used for dividing the image into the 11 individual zones.

Luminance

Zones are created using the image's luminance values.

Hue

Zones are created using the image's hue. When adjusting the Position parameter, you are selecting different hues.

Saturation

Zones are created using the image's saturation values.

Average

Zones are created based on the average of the image's RGB values.

Red

Zones are created using the image's red values.

Green

Zones are created using the image's green values.

Blue

Zones are created using the image's blue values.

Cyan

Zones are created using the image's cyan values.

Magenta

Zones are created using the image's magenta values.

Yellow

Zones are created using the image's yellow values.

Zone Controls

When using Luminance as the method for slicing up the image, the Position and Range sliders are preset so that each zone is twice as bright as the previous zone, proceeding from black towards white.

Pure black is defined as Zone 0, Zone 5 as middle gray and pure white as Zone 10. By using the View menu, you can look at the zone which is helpful in determining the portions of the image you are going to adjust. The values shown as white in the selected zone are the areas of the image that will be modified by the color adjustments. Alternatively, at the bottom of the Parameter window is a small image thumbnail of the selected zone.

Position

The Position value pinpoints the color values to be used in the selected zone. This value has been preset according to the Digital Zone System, but can be changed if you choose. If the zones are created using Luminance, a high Position value shows the brightest image values as white values in the zone. A low Position value shows the darkest image values as white values in the zone.

Range

The Range value increases or decreases the range of values in the selected zone. This value has been preset according to the Digital Zone System, but can be changed if you want.

Go to the **Matte** section of Common Filter Controls to see how the Position and Range controls work.

Hue

Rotates the hue of the zone.

Saturation

Adjusts the saturation of the zone. Positive values saturate, negative values desaturate.

Brightness

Adjusts the brightness of the zone. Positive values brighten, negative values darken.

Contrast

Adjusts the contrast of the zone. Positive values increase contrast, negative values decrease contrast.

Gamma

Adjusts the gamma of the zone. The gamma adjustment leaves the white and black points the same and only modifies the values in-between. Positive values lighten the midtones, negative values darken the midtones.

Red

Adds or subtracts red from the zone.

Green

Adds or subtracts green from the zone.

Blue

Adds or subtracts blue from the zone.

Temperature

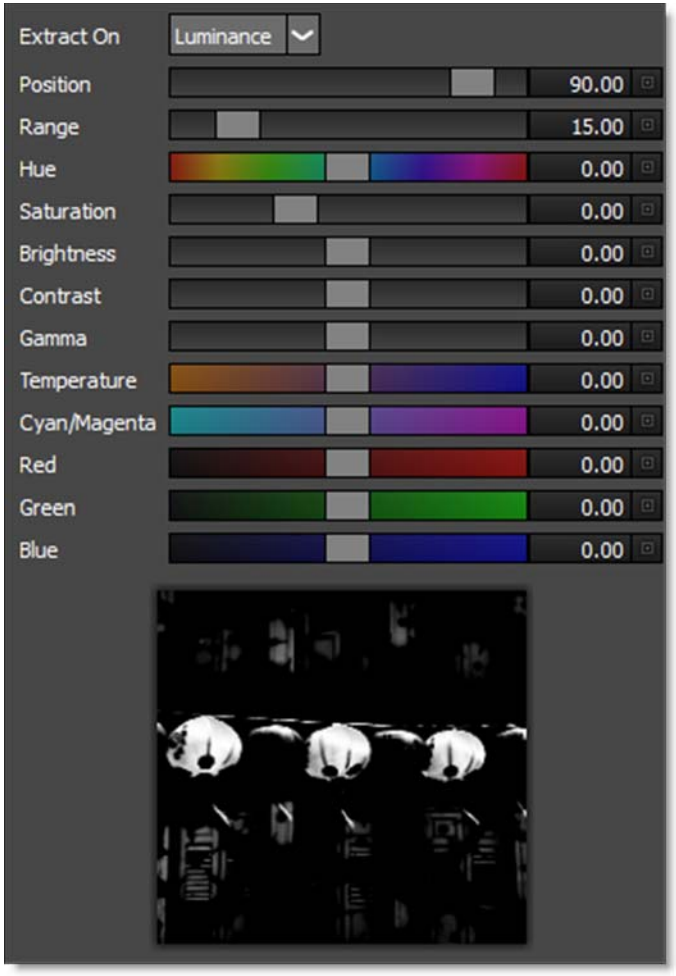
Sets the color temperature of the zone. Dragging the slider to the right makes the image cooler (bluer) and dragging the slider to the left makes the image warmer (redder).

Cyan/Magenta

Adds either Cyan or Magenta to the zone. Dragging the slider to the right makes the image more magenta and dragging the slider to the left makes the image more cyan.

Zone Thumbnail

At the bottom of the Parameter window is a thumbnail of the selected zone to help you see which areas of the image will be adjusted.



PAINT

Description

Paints your image using Black/White, Blur, Clone, Color, Eraser, Mosaic, Red-Eye, Repair and Scatter brushes.

Before

After

Photo by Katie Hetland on Unsplash

Go to the **Paint Tutorial** to see how the filter works.

Category

Image.

Brushes

When Paint is selected in the Filter window, it's controls appear in the Toolbar.

Black/White (B)

The Black/White brush converts color images to black and white simulating the look of Black and White photographic filters.

Mode

Selects the method by which the color image is converted to a monochrome image.

Luminance

Creates a monochrome image using the brightness of the image.

Average

Creates a monochrome image using the average of the red, green and blue channels.

Red

Simulates a red filter in black and white photography.

Green

Simulates a green filter in black and white photography.

Blue

Simulates a blue filter in black and white photography.

Yellow

Simulates a yellow filter in black and white photography.

Orange

Simulates a orange filter in black and white photography.

Blur (Shift+B)

Blurs the image.

Amount

Sets the amount of blur to be applied.

Clone (C)

Paints the image using another part of the image.

Using the Clone brush:

1. **Select the Clone brush in the Toolbar.**
2. **Press and hold down the Shift key.**

3 **Click, drag and release to set the clone offset.**

The first click sets the clone source and where you drag and release is the clone destination.

4 **Use your pen and tablet or mouse to paint with the Clone brush.**

To quickly reset the clone offset:

- **Press shift and without moving the cursor, click your mouse or tap your pen on the screen once.**

The clone offset is quickly reset.

Nudging the Clone Source

The Clone source can be nudged using the **Arrow** keys. One press of the **Arrow** key moves the Clone source 1 pixel. Using the **Shift** key in conjunction with the **Arrow** keys moves the Clone source 10 pixels.

Color (Shift+C)

Paints the image with the current color.

Color

Displays the currently selected color. Clicking on the Color icon opens a standard color picker.

Eyedropper

Colors can be picked off of the screen using the eyedropper icon.

Mode

Selects how color is applied to the image.

Normal

The current color is added to the image.

Tint

The current color is used to tint the image by replacing hue and saturation.

Hue

The current color is used to tint the image by only replacing hue.

Lighten

Pixels darker than the paint color are replaced, and pixels lighter than the paint color do not change.

Darken

Pixels lighter than the paint color are replaced, and pixels darker than the paint color do not change.

Eraser (E)

Erases previously painted brush strokes.

Painting with the right-mouse button automatically paints with the Eraser brush.

Mosaic (Shift+M)

Divides the picture up into square tiles.

Size

Controls the size of the square tiles. A small size value will create many square tiles.

Red-Eye (R)

Removes red-eye.

To remove red-eye:

1 **Select the Red-Eye brush in the Toolbar.**

2 **Use Ctrl(Win) or Cmd(Mac) and drag in or out to size the brush to roughly match the size of the red pupil.**

3 **Paint in the area of the red pupil being careful not to paint on any skin areas.**

Repair (Shift+R)

Paints the image with the color level sampled at the beginning of each stroke.

Scatter (S)

Scatters pixels in a random fashion.

Radius

Sets the amount of scattering.

Brush Settings

Customize your brush using the following settings:

Profile

The profile setting controls the shape of the brush.

Circle

The brush profile is set to a circular shape.

Square

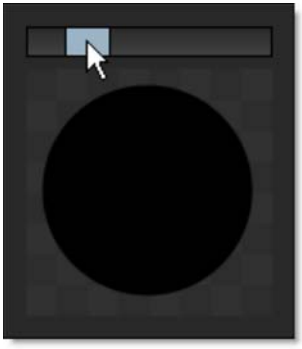
The brush profile is set to a square shape.

Size

Sets the size of the brush.

To set the brush size:

1 **Click on the Brush Size icon, and drag the slider that appears.**



or

2 **Enter a value in the number field next to the Brush Size icon and hit Enter.**

or

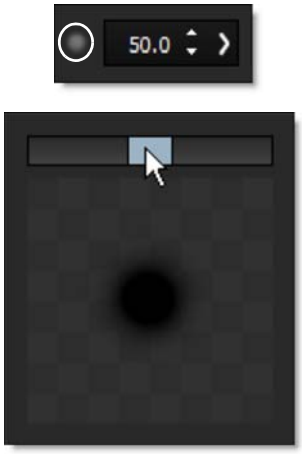
3 **Resize the brush in the Viewer by holding Ctrl(Win)/Cmd(Mac) and dragging in or out.**

Softness

Sets the brush softness.

To set the brush softness:

1 **Click on the Brush Softness icon, and drag the slider that appears.**



or

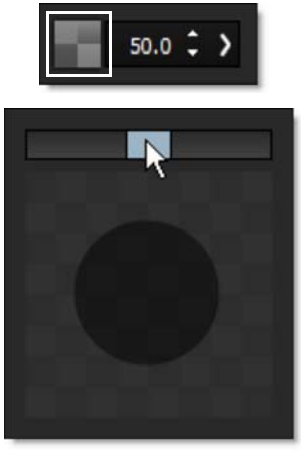
2 **Enter a value in the number field next to the Brush Softness icon and hit Enter.**

Opacity

Sets the brush opacity.

To set the brush opacity:

1 **Click on the Brush Opacity icon, and drag the slider that appears.**



or

2 **Enter a value in the number field next to the Brush Opacity icon and hit Enter.**

Paint Keyboard Shortcuts

Shortcut	Action
B	Selects the Black/White brush
Shift+B	Selects the Blur brush
C	Selects the Clone brush
Shift+C	Selects the Color brush
E	Selects the Eraser brush
Shift+M	Selects the Mosaic brush
R	Selects the Red-Eye brush
Shift+R	Selects the Repair brush
S	Selects the Scatter brush
Ctrl(Win)/Cmd(Mac)+drag	Sizes the brush
[ ]	Sizes the brush
Shift with clone brush	Sets the clone offset
Shift+click or tap	Resets the clone offset
Arrow keys	Moves the Clone source by 1 pixel
Shift+Arrow keys	Moves the Clone source by 10 pixels
Hold down **Arrow** keys	Moves the Clone source continuously
Right-mouse drag	Paints with the Eraser brush

PASTEL

Description

Converts the image into pastel artwork.

Before

After

Photo by Boris Smokrovic on Unsplash

Go to the **Pastel Tutorial** to see how the filter works.

Category

Special Effects.

Controls

Amount

Adjusts the amount of the pastel effect.

Detail

Adjusts the detail. If the slider is increased, you will see more detail while decreasing the slider will have an overall smoothing effect.

PENCIL

Description

Pencil converts your image to a pencil sketch.

Before

After

Photo by Ludde Lorentz on Unsplash

Go to the **Pencil Tutorial** to see how the filter works.

Category

Special Effects.

Controls

Presets

To select a preset, pick one from the Presets window.

Amount

Sets the intensity of the pencil effect.

Color

The Color parameter sets the color of the pencil effect through the use of a standard color picker.

Background

Mixes in the original image.

PHOTOGRAPHIC

Description

The most complete line of Kodak® filters for photographic uses is available in the form of gelatin films and are known as Wratten® Gelatin Filters. Our Photographic filter is a digital equivalent of the Wratten set and were created using the spectral transmission curves for each optical filter. The Color Conversion, Light Balancing and Color Compensating preset groups are subsets of the Photographic filters.

Before

After

Photo by Paul Morris on Unsplash

Go to the **Photographic Tutorial** to see how the filter works.

Photographic

Digital versions of the complete line of Kodak® Wratten® Gelatin Filters.

Color Conversion

Color Conversion filters correct for significant differences in color temperature between your light source and recording media.

Light Balancing

Light Balancing filters correct for minor differences in color temperature between your light source and recording media.

Color Compensating

Color Compensating filters control color by attenuating specific parts of the spectrum. They can be used to make changes in color balance or compensate for deficiencies in the image's spectral quality.

Category

Grads/Tints.

Controls

Presets

To select a preset, pick one from the Presets window. If you would like to view presets from a different category, use the pop-up menu at the top left of the Presets window.

Color

Color

The Color parameter sets the color of the filter through the use of a standard color picker.

Opacity

Sets the opacity of the color filter.

Preserve Highlights

Preserves the white areas of the image.

Exposure Compensation

Exposure Compensation adds back the brightness loss as a result of the filter application.

Grad

These filters can optionally use a gradient that limits where the filter is applied. Grad is the transition area between the colored portion and the original image. Its direction, corners and size can be adjusted. Go to the **Grad** section of Common Filter Controls to see how the Grad controls work.

POLARIZER

Description

Polarizer

The greatest use of polarizing filters is to achieve a darkened, deep blue sky. Our digital version of the Polarizer is designed to do just that. Through the use of a matte and an adjustable gradient, the color of the sky can be adjusted.

Before

After

Photo by Takahiro Sakamoto on Unsplash

Warm Polarizer

Combines the benefits of the Polarizer with a warming filter making it ideal for portraits and scenics.

Before

After

Photo by Takahiro Sakamoto on Unsplash

Go to the **Polarizer Tutorial** to see how the filter works.

Category

Color.

Controls

Presets

To select a preset, pick one from the Presets window. If you would like to view presets from a different category, use the pop-up menu at the top left of the Presets window.

Sky

Color Correct controls are provided to adjust the sky.

Hue

Rotates the hue of the sky.

Saturation

Adjusts the saturation of the sky. Positive values saturate, negative values desaturate.

Brightness

Adjusts the brightness of the sky. Positive values brighten, negative values darken.

Contrast

Adjusts the contrast of the sky. Positive values increase contrast, negative values decrease contrast.

Gamma

Adjusts the gamma of the sky. The gamma adjustment leaves the white and black points the same and only modifies the values in-between. Positive values lighten the midtones, negative values darken the midtones.

Red

Adds or subtracts red from the sky.

Green

Adds or subtracts green from the sky.

Blue

Adds or subtracts blue from the sky.

Temperature

Sets the color temperature of the sky. Dragging the slider to the right makes the sky cooler (bluer) and dragging the slider to the left makes the sky warmer (redder).

Temperature

Applies a warming filter to the image. Go to the **Temperature** section of Common Filter Controls to see how the Temperature controls work.

Grad

The Polarizer can optionally use a gradient that limits where the filter is applied. For instance, if the polarization is affecting areas other than the sky, enable the Grad and adjust it to limit the areas of polarization. Go to the **Grad** section of Common Filter Controls to see how the Grad controls work.

Matte

Hue

The Polarizer isolates the sky using a matte based on a blue hue. Use the Hue eyedropper to select the exact color of the sky if you are not seeing enough polarization.

Range

Increases or decreases the range of values in the hue matte. A low Range value indicates a narrow range of values. A high Range value indicates a large range of values included in the matte.

Blur

Sets the softness of the matte by using a quality blur.

Go to the **Matte** parameters to see how they work.

Rack Focus

Description

Rack Focus replicates a true camera defocus by introducing lens Bokeh effects. Bokeh is the Japanese term that describes the quality of out-of-focus points of light. In defocused areas, each point of light becomes a shape--either a circle or a polygon. The shape grows in size as the amount of defocusing is increased.

Before

After

Photo by Steven Hung on Unsplash

Go to the **Rack Focus Tutorial** to see how the filter works.

Category

Lens.

Controls

Presets

To select a preset, pick one from the Presets window.

Blur

The image is blurred by using a quality blur.

Aperture

Blend

Determines the blend mode to be used when adding Bokeh.

Add

Bokeh's are added to your image.

Screen

The Bokeh are combined with the image using a Screen blend mode. This looks kind of like the Add blend mode, but highlights are retained.

Brightness

Brightens the Bokeh.

Facets

Set the number of Bokeh facets when the Curvature parameter is set to 0.

Curvature

Controls the curvature of the Bokeh. When set to 100, the Bokeh are completely round. Set to a value of 0 to see a polygonal shape.

Angle

Rotates the Bokeh.

Color

Sets the Bokeh color.

Blur

Sets the softness of the Bokeh. This can be useful when using high threshold values.

Matte

A matte is used to create the Bokeh effect. Go to the **Matte** section of Common Filter Controls to see how the Matte controls work.

Radial Exposure

Description

Lightens and/or darkens the center or edges of an image to correct lens vignetting.

Before

After

Photo by Joshua Earle on Unsplash

Go to the **Radial Exposure Tutorial** to see how the filter works.

Category

Lens.

Controls

Exposure

Edges

Lightens or darkens the edges of the image.

Center

Lightens or darkens the center of the image.

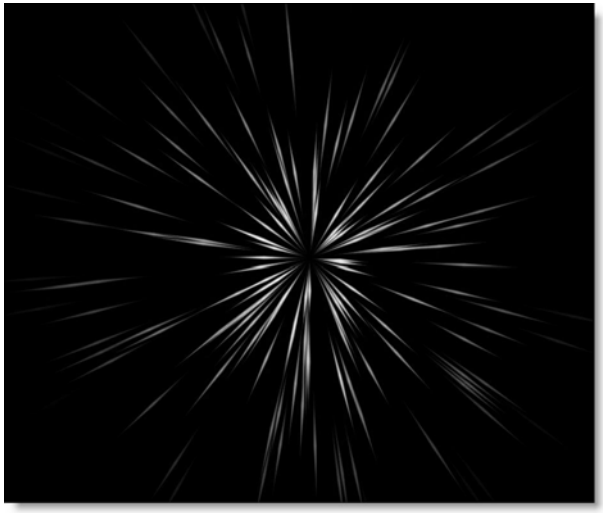
Spot

A radial gradient is used to lighten or darken the edges or center of the image. Go to the **Spot** section of Common Filter Controls to see how the Spot controls work.

RADIAL STREAKS

Description

Short radial streaks emanating from the center point.



Go to the **Radial Streaks Tutorial** to see how the filter works.

Category

Light.

Controls

Blend

Determines the blend mode used to create the streaks effect.

Add

The streaks are added to your image.

Screen

The streaks are combined with the image using a Screen blend mode. This looks kind of like the Add blend mode, but highlights are retained.

Brightness

Controls the brightness.

Color

Sets the color.

Scale

Changes the size.

Aspect

Sets the aspect ratio.

Angle

Sets the angle.

Element Count

Determines the number of streaks.

Randomize

Randomizes the size and position.

Jitter

Randomizes the angle.

RADIAL TINT

Description

Tints the image using multi-color, radially graduated filters.

Before

After

Photo by Jason Wong on Unsplash

Go to the **Radial Tint Tutorial** to see how the filter works.

Category

Grads/Tints.

Controls

Presets

To select a preset, pick one from the Presets window.

Tint Mode

Selects how color is applied to the image.

Normal

Tints the image while retaining highlights.

Tint

The image is tinted by replacing hue and saturation.

Hue

The image is tinted by only replacing hue.

Lighten

Pixels darker than the color are replaced, and pixels lighter than the color do not change.

Darken

Pixels lighter than the color are replaced, and pixels darker than the color do not change.

Color 1

Sets the color for the top left quadrant of the image.

Color

Sets the color through the use of a standard color picker.

Opacity

Sets the opacity of the color.

Color 2

The Color 2 controls are the same as the controls for Color 1 except it is applied to the top right quadrant of the image.

Color 3

The Color 3 controls are the same as the controls for Color 1 except it is applied to the bottom right quadrant of the image.

Color 4

The Color 4controls are the same as the controls for Color 1 except it is applied to the bottom left quadrant of the image.

Radial Grad

Sets the position, rotation and aspect ratio of the radial gradient.

Position

There is an on-screen control in the center of the image. By clicking and dragging the on-screen control, the position of the grad can be adjusted.

Size

The size of the grad.

Rotation

The rotation of the grad.

Aspect

The aspect ratio of the grad.

Highlights

Preserve Highlights

Preserves the white areas of the image.

Exposure Compensation

Exposure Compensation adds back the brightness loss as a result of the filter application.

Spot

A spot in the form of a radial gradient can optionally be used to control where color is added to the image. Go to the **Spot** section of Common Filter Controls to see how the Spot controls work.

RAINBOW

Description

Recreates arced rainbows of spectral colors, usually identified as red, orange, yellow, green, blue, indigo, and violet, that appear in the sky as a result of the refractive dispersion of sunlight in drops of rain or mist.

Before

After

Photo by Jeremy Bishop on Unsplash

Go to the **Rainbow Tutorial** to see how the filter works.

Category

Light.

Controls

Light

Blend

Determines the blend mode to be used to add the rainbow.

Add

The rainbow is combined with the image using an Add blend mode.

Screen

The rainbow is combined with the image using a Screen blend mode. This looks kind of like the Add blend mode, but highlights are retained.

Normal

The rainbow is added to the image using a normal composite function.

Amount

Sets the intensity of the rainbow.

Displacement

Displaces the rainbow by the luminance values of the image. This “fakes” the effect of the rainbow wrapping over objects in the image.

Blur

Sets the softness of the rainbow.

Rainbow

Blend

The rainbow can be added to the entire image or limited to a matte.

Rainbow Only

The rainbow is added to the entire image.

Matte

The rainbow is added only in areas of the matte.

Position

The rainbow position can be adjusted by clicking and dragging an on-screen control in the center of the image.

Radius

The size of the rainbow.

Aspect

Sets the aspect ratio of the rainbow. Positive values stretch the rainbow horizontally and negative values stretch it vertically.

Thickness

Sets the thickness of the rainbow’s bands.

Crop

Offset

The rainbow is cropped based on the Offset value. The higher the value, the more rainbow you see. A value of -100 shows no rainbow at all while 100 displays a complete 360 degree rainbow.

Angle

Sets the angle of the crop.

Softness

Sets the softness of the crop's edge.

Matte

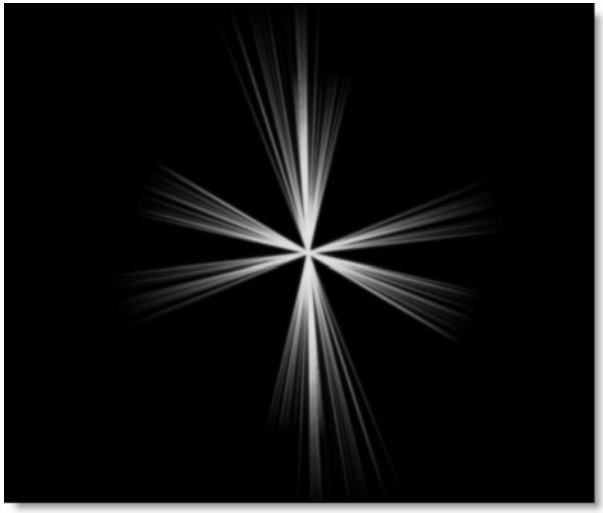
A matte can be used to limit where the rainbow will be placed. Wherever there is white in the matte is where the rainbow will be added. Go to the **Matte** parameters to see how they work.

Note: To use a matte to limit where the rainbow will be added, Rainbow > Blend must be set to Matte.

RANDOM SPIKES

Description

Generates asymmetric radial rays.



Go to the **Random Spikes Tutorial** to see how the filter works.

Category

Light.

Controls

Blend

Determines the blend mode used to create the spikes effect.

Add

The spikes are added to your image.

Screen

The spikes are combined with the image using a Screen blend mode. This looks kind of like the Add blend mode, but highlights are retained.

Brightness

Controls the brightness.

Color

Sets the color.

Scale

Changes the size.

Aspect

Sets the aspect ratio.

Angle

Sets the angle.

Element Count

Determines the number of rays.

Softness

Blurs the rays.

Randomize

Randomizes the size and position.

RAYS

Description

Create stunning and realistic light ray effects quickly and easily. Known as volumetric lighting in computer graphics or crepuscular rays in atmospheric optics, this dramatic effect adds polish and style. Since the rays are only added to highlight areas, they have the effect of passing through objects and add a third dimensional quality. Add shafts of light streaming through clouds, rays filtering through a forest canopy, beams of light on a foggy night or rays shooting out from text. Rays adds a striking and dramatic quality to any image.

Before

After

Photo by Filipe Dos Santos Mendes on Unsplash

Go to the **Rays Tutorial** to see how the filter works.

Note: The Magnifier controls are disabled for performance reasons when using Rays.

Category

Light.

Controls

Rays

Position

Move the point control in the center of the screen to change the source point from which the rays will emanate.

Length

Sets the ray length.

Brightness

Sets the brightness of the rays.

Color

Sets the color of the rays.

Blur

Blurs the rays.

Threshold

Controls the amount of rays based on a brightness threshold. Fewer rays with more definition are generated at higher threshold values.

Light Source

A circular light source can be used to enhance the generation of the light rays. It is particularly useful when the image does not have strong highlights.

Brightness

Sets the brightness of the light source.

Size

Sets the size of the light source.

Texture

Adds texture to the rays.

Amount

Sets the amount of texture.

Size

Sets the size of the texture.

Phase

Sets the randomness of the texture.

Shimmer

Randomizes the rays.

Amount

Sets the amount of shimmering.

Phase

Sets the randomness of the shimmering.

Opacity

Rays

Sets the opacity of the rays.

Source

Sets the opacity of your image.

REFLECTOR

Description

One of the oldest and still most popular means of lighting an exterior set is by taking a reflective surface and redirecting sunlight or artificial light exactly where it is needed. Unfortunately, it is nearly impossible for actors to keep their eyes open when looking into a reflector, resulting in squinting eyes. Our silver and gold reflectors allow you to add white or gold light into shadow areas without the squinting.

Before

After

Photo by Alexandre Chambon on Unsplash

Go to the **Reflector Tutorial** to see how the filter works.

Category

Light.

Controls

Presets

To select a preset, pick one from the Presets window. If you would like to view presets from a different category, use the pop-up menu at the top left of the Presets window.

Brightness

Sets the intensity of the reflector.

Color

The Color parameter sets the color of the reflector through the use of a standard color picker. The default color is gold for Gold Reflector and white for Silver Reflector.

Position

Selects the shadow values that will be adjusted with the Brightness slider.

Range

Controls the range of shadow values that will be adjusted with the Brightness slider.

Go to the **Matte** section of Common Filter Controls to see how the Position and Range controls work.

RELIGHT

Description

Light can be added to a scene where none existed before. A complete set of light source controls allow you to adjust the light just as you would at the time of shooting.

Before

After

Photo by Blake Lisk on Unsplash

Go to the **ReLight Tutorial** to see how the filter works.

Category

Light.

Light

Blend

Determines the blend mode to be used to add the light.

Add

The light is added to your image.

Screen

The light is combined with the image using a Screen blend mode. This looks kind of like the Add blend mode, but highlights are retained.

Brightness

Sets the intensity of the light.

Displacement

Displaces the light source by the luminance values of the image. This “fakes” the effect of light wrapping over objects in the image.

Blur

Sets the softness of the light.

Gels

Photographers, cinematographers and lighting designers use colored filters or gels in front of lights. Whatever mood you wish to create, we have the colors needed to achieve the effect. Select one of the Gels presets from the pop-up menu.

Color

Sets the color of the light through the use of a standard color picker.

Light Source

Blend

The light source can be added to the matte using a variety of Blend modes. Go to **Blend Modes** for explanations of the various modes.

I like the Multiply blend mode for combining the light source with the matte because it only puts the light source within the areas of the matte.

Opacity

Sets the opacity of the light source.

Aspect

The aspect ratio of the light source.

Radius

The un-blurred radius of the light source.

Falloff Radius

The blurred edge radius.

Falloff

Moves the falloff towards the light centerpoint.

Invert

Inverts the light source.

Transform

Transform your light pattern using Position, Scale, Rotate, Corner-Pin, Shear and Crop controls. Go to the **Transform** section of Common Filter Controls to see how the Transform Controls work.

Matte

A matte can be used to limit the area of added light. Wherever there is white in the matte is where the light will be added. When using ReLight, it is usually helpful to blur the matte. Go to the **Matte** parameters to see how they work.

Note: Light Source > Blend must be set to something other than Shape Only for the Matte controls to be active.

SELECTIVE COLOR CORRECT

Description

Colors can be selectively isolated through the use of a matte and adjusted using hue, saturation, brightness, gamma, contrast, temperature, cyan/magenta, red, green, and blue controls.

Before

After

Photo by Pietro De Grandi on Unsplash

Go to the **Selective Color Correct Tutorial** to see how the filter works.

Category

Color.

Color Correct

Certain parts of the image are isolated by the creation of a matte. Whatever is shown as white in the matte can be adjusted by the color controls below.

Hue

Rotates the hue of the image.

Saturation

Adjusts the saturation of the image. Positive values saturate, negative values desaturate.

Brightness

Adjusts the brightness of the image. Positive values brighten, negative values darken.

Contrast

Adjusts the contrast of the image. Positive values increase contrast, negative values decrease contrast.

Gamma

Adjusts the gamma of the image. The gamma adjustment leaves the white and black points the same and only modifies the values in-between. Positive values lighten the midtones, negative values darken the midtones.

Temperature

Sets the color of the image to be either warmer or cooler. Dragging the slider to the right makes the image cooler (bluer) and dragging the slider to the left makes the image warmer (redder).

Cyan/Magenta

Adds either Cyan or Magenta to the image. Dragging the slider to the right makes the image more magenta and dragging the slider to the left makes the image more cyan.

Red

Adds or subtracts red from the image.

Green

Adds or subtracts green from the image.

Blue

Adds or subtracts blue from the image.

Temperature

Sets the color temperature of the image. Dragging the slider to the right makes the image cooler (bluer) and dragging the slider to the left makes the image warmer (redder).

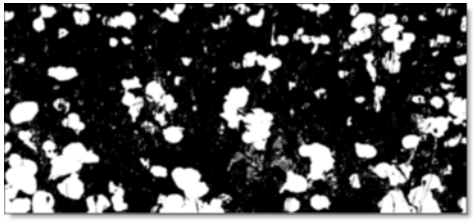
Matte

A matte is created to isolate areas to be color corrected. Using advanced image slicing algorithms, mattes are created using luminance, hue, saturation, average, red, green, blue, cyan, magenta, and yellow values.

Before

After

Matte



Extract On

Extract On selects the type of matte. Select whichever type isolates the desired values.

Hue Matte

A matte is created based on one of the following:

Luminance

A matte is created based on the luminance of the image.

Hue

A matte is created based on the hue of the image. When adjusting the Position parameter, you are selecting different hues.

Saturation

A matte is created based on the saturation of the image.

Average

A matte is created based on the average of the image's RGB values.

Red

A matte is created based on the image's red values.

Green

A matte is created based on the image's green values.

Blue

A matte is created based on the image's blue values.

Cyan

A matte is created based on the image's cyan values.

Magenta

A matte is created based on the image's magenta values.

Yellow

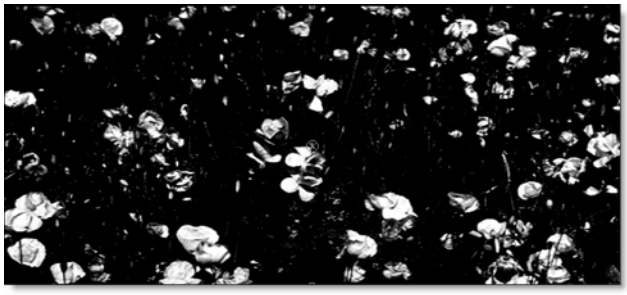
A matte is created based on the image's yellow values.

Position

The Position value pinpoints the color values to be used in the matte. For a luminance matte, a Position value of 100 would make a white matte of the highlights and a value of 0 would make a white matte of the shadows. In the

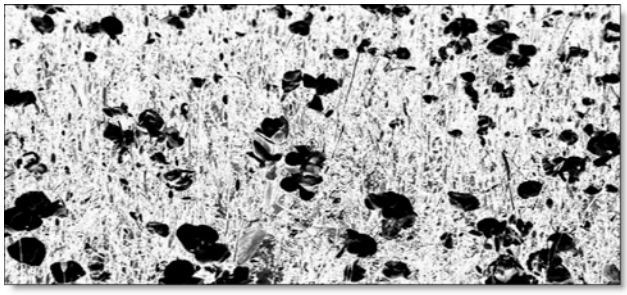
flower image below, look at how the matte varies for different Position values in a red extraction. When the Position is at a value of 100, the red flowers are shown as white in the matte.

Position=100, Range=25



When the Position is moved to 50, the red flowers turn black.

Position=50, Range=25



Range

Increases or decreases the range of values in the matte. A low Range value indicates a narrow range of values. A high Range value indicates a large range of values included in the matte.

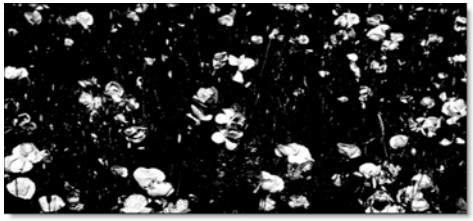
Position=100, Range=50

Black Clip

Blacks in the matte are made blacker by increasing the value of the slider. As the slider value increases, more values are clipped to black. This is helpful for getting rid of unwanted gray areas in what should be the black part of the matte.

Matte with No Black Clip

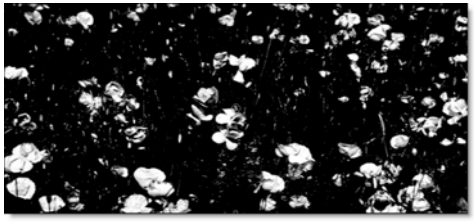
Black Clip=50



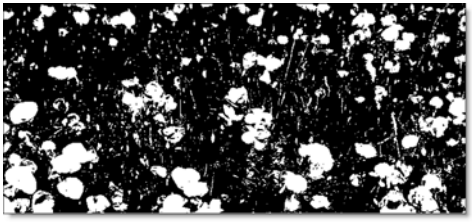
White Clip

Whites in the matte are made whiter by increasing the value of the slider. As the slider value increases, more values are clipped to white. This is helpful for getting rid of unwanted gray areas in what should be the white part of the matte.

Matte with No White Clip



White Clip=50

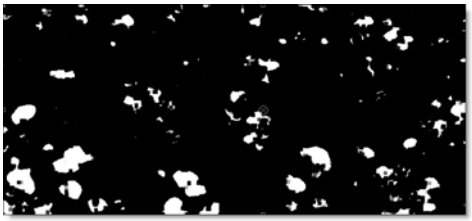


Shrink/Grow

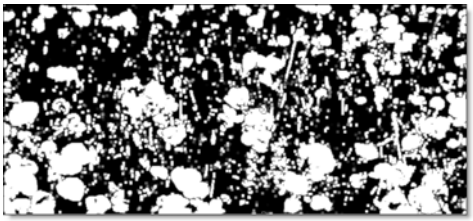
Shrinks or grows the matte. Negative values shrink and positive values grow the matte.

Original

Shrink=-2



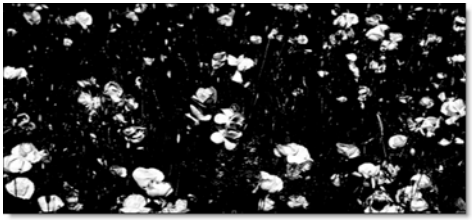
Grow=1.5



Blur

Blurs the matte.

No Blur



Blur=10

Invert

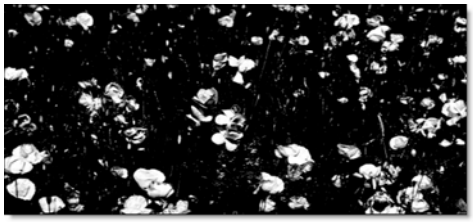
- **Off**

Does nothing to the matte.

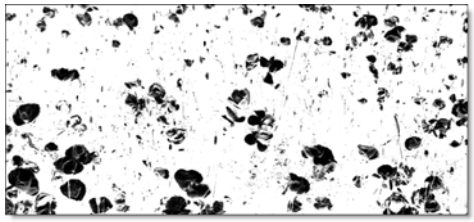
- **On**

Inverts the luminance values of the matte.

Invert Off



Invert On



SELECTIVE SATURATION

Description

The saturation of the image can be adjusted independently in the shadows, midtones and highlights.

Before

After

Photo by Oswaldo Martinez on Unsplash

Go to the **Selective Saturation Tutorial** to see how the filter works.

Category

Color.

Controls

Presets

To select a preset, pick one from the Presets window.

Shadows

Saturation

Adjusts the saturation of the image in the shadows. Positive values saturate, negative values desaturate.

Position

Selects the shadow values to be adjusted.

Range

Controls the range of values to be used for the shadows. A higher Range value considers more values as shadows.

Midtones

Saturation

Adjusts the saturation of the image in the midtones. Positive values saturate, negative values desaturate.

Position

Selects the midtones values to be adjusted.

Range

Controls the range of values to be used for the midtones. A higher Range value considers more values as midtones.

Highlights

Saturation

Adjusts the saturation of the image in the highlights. Positive values saturate, negative values desaturate.

Position

Selects the highlight values to be adjusted.

Range

Controls the range of values to be used for the highlights. A higher Range value considers more values as highlights.

Go to the **Matte** section of Common Filter Controls to see how the Position and Range controls work.

SEPIA

Description

Sepia

Creates a warm brown tone for that nostalgic feeling.

Before

After

Photo by Andrew Neel on Unsplash

Go to the **Sepia Tutorial** to see how the filter works.

Category

Grads/Tints.

Controls

Presets

To select a preset, pick one from the Presets window.

Color

Amount

Determines the intensity of the color added to the image.

Opacity

Sets the opacity of the filter.

Preserve Highlights

Preserves the white areas of the image.

Exposure Compensation

Exposure Compensation adds back the brightness loss as a result of the filter application.

Grad

Sepia can optionally use a gradient that limits where the filter is applied. Grad is the transition area between the colored portion and the original image. Its direction, corners and size can be adjusted. Go to the **Grad** section of Common Filter Controls to see how the Grad controls work.

SHADOWS/HIGHLIGHTS

Description

Shadows/Highlights lowers contrast evenly throughout the image by brightening shadow areas and darkening highlights. It is useful for correcting dark foreground subjects due to strong backlighting as well as highlights that are slightly washed out.

Before

After

Photo by Jonatan Pie on Unsplash

Go to the **Shadows/Highlights Tutorial** to see how the filter works.

Category

Color.

Controls

Presets

To select a preset, pick one from the Presets window.

Shadows

Shadows

Raises the brightness of the shadows.

Position

Selects the shadow values to be adjusted.

Range

Controls the range of values to be used for the shadows. A higher Range value considers more values as shadows.

Highlights

Highlights

Lowers the brightness of the highlights.

Position

Selects the highlight values to be adjusted.

Range

Controls the range of values to be used for the highlights. A higher Range value considers more values as highlights.

Go to the **Matte** section of Common Filter Controls to see how the Position and Range controls work.

SHARPEN

Description

Enhances the sharpness or focus by selectively increasing the contrast between adjacent pixels along edges in an image.

Before

After

Photo by Corentin Marzin on Unsplash

Go to the **Sharpen Tutorial** to see how the filter works.

Category

Image.

Controls

Presets

To select a preset, pick one from the Presets window.

Amount

Determines how much contrast is added at the edges.

Radius

Controls the size of the edges you wish to sharpen.

Threshold

The threshold setting is used to sharpen more pronounced edges, while leaving more subtle edges untouched. Low values sharpen more image areas while higher threshold values sharpen less.

SILK

Description

Silk

Silk softens wrinkles, blemishes and fine detail to produce smooth skin textures while retaining detail in coarse features such as the eyes, nose and mouth.

Before

After

Photo by Joe Gardner on Unsplash

Warm Silk

Warm Silk offers all the benefits of the Silk filter while adding a diffuse warm tint to the shadows.

Before

After

Photo by Joe Gardner on Unsplash

Go to the **Silk Tutorial** to see how the filter works.

Category

Diffusion.

Controls

Presets

To select a preset, pick one from the Presets window. If you would like to view presets from a different category, use the pop-up menu at the top left of the Presets window.

Detail

Smoothing

Fine image details, such as facial wrinkles and blemishes, are minimized using edge aware smoothing.

Color Correct

Go to the **Color Correct** filter to see how the Color Correct controls work.

Matte

A matte can be used to limit the smoothing effect. Wherever there is white in the matte is where the smoothing will occur. Go to the **Matte** parameters to see how they work.

SKIN TONE

Description

A set of colorization filters to enhance skin tones.

Before | After

Photo by Roksolana Zasiadko on Unsplash

Go to the **Skin Tone Tutorial** to see how the filter works.

Category

Grads/Tints.

Controls

Presets

To select a preset, pick one from the Presets window.

Color

Color

The Color parameter sets the color through the use of a standard color picker.

Opacity

Sets the opacity of the color filter.

Preserve Highlights

Preserves the white areas of the image.

Exposure Compensation

Exposure Compensation adds back the brightness loss as a result of the filter application.

Grad

The Skin Tone filters can optionally use a gradient that limits where the filter is applied. Grad is the transition area between the colored portion and the original image. Its direction, corners and size can be adjusted. Go to the **Grad** section of Common Filter Controls to see how the Grad controls work.

Soft Light

Description

Provides soft, digitally diffused and virtually shadowless light.

Before

After

Photo by Chris Abney on Unsplash

Go to the **Soft Light Tutorial** to see how the filter works.

Category

Light.

Controls

Presets

To select a preset, pick one from the Presets window.

Blend

Determines the blend mode to be used to add the light.

Add

The light is added to your image.

Screen

The light is combined with the image using a Screen blend mode. This looks kind of like the Add blend mode, but highlights are retained.

Brightness

Sets the intensity of the light.

Blur

Sets the softness of the light.

Gels

Photographers, cinematographers and lighting designers use colored filters or gels in front of lights. Whatever mood you wish to create, we have the colors needed to achieve the effect. Select one of the Gels presets from the pop-up menu.

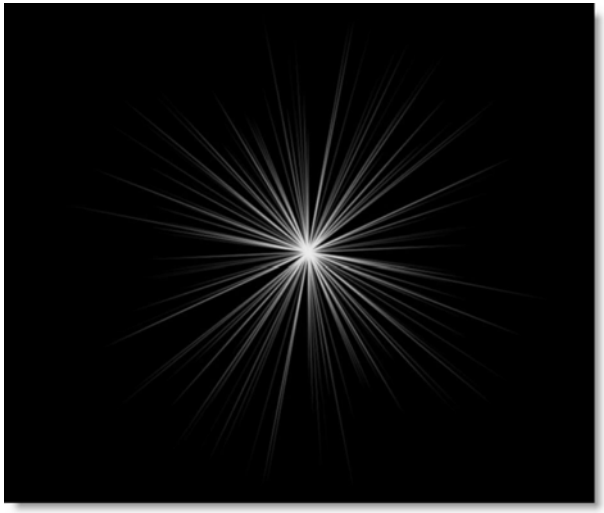
Color

Sets the color of the light through the use of a standard color picker.

SPIKES

Description

Long radial rays emanating from the center point.



Go to the **Spikes Tutorial** to see how the filter works.

Category

Light.

Controls

Blend

Determines the blend mode used to create the spikes effect.

Add

The spikes are added to your image.

Screen

The spikes are combined with the image using a Screen blend mode. This looks kind of like the Add blend mode, but highlights are retained.

Brightness

Controls the brightness.

Color

Sets the color.

Scale

Changes the size.

Aspect

Sets the aspect ratio.

Angle

Sets the angle.

Element Count

Determines the number of rays.

Softness

Blurs the rays.

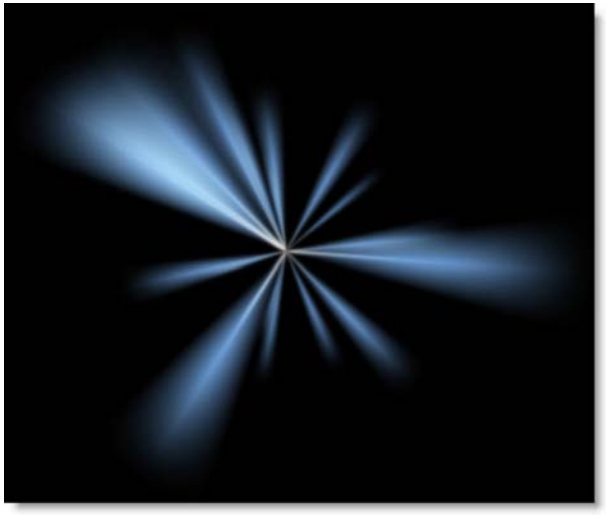
Randomize

Randomizes the size and position.

SPIRAL RAYS

Description

Creates spiral rays.



Go to the **Spiral Rays Tutorial** to see how the filter works.

Category

Light.

Controls

Blend

Determines the blend mode used to create the rays effect.

Add

The rays are added to your image.

Screen

The rays are combined with the image using a Screen blend mode. This looks kind of like the Add blend mode, but highlights are retained.

Brightness

Controls the brightness.

Color

Sets the color.

Scale

Changes the size.

Aspect

Sets the aspect ratio.

Angle

Sets the angle.

Element Count

Determines the number of rays.

Softness

Blurs the rays.

Randomize

Randomizes the size and position.

SPLIT FIELD

Description

Split Field splits the image with a line that can be positioned, rotated and blurred. On one side of the line, the image is blurred and on the other, it is in focus.

Before

After

Photo by Anthony Cantin on Unsplash

Go to the **Split Field Tutorial** to see how the filter works.

Category

Lens.

Controls

Presets

To select a preset, pick one from the Presets window.

Blur

Sets the softness of the split portion of the image.

Split

The Split controls manipulate the position, rotation and blur of the split line.

Position

There is an on-screen control in the center of the image. By clicking and dragging the on-screen control, the position of the split line can be adjusted.

Rotate

Rotates the split line.

Blur

Blurs the split line using a quality blur.

SPLIT TONE

Description

Shadows, midtones and highlights can be individually tinted with the Split tone filter.

Before

After

Photo by Aaron Burden on Unsplash

Go to the **Split Tone Tutorial** to see how the filter works.

Category

Grads/Tints.

Controls

Shadows

Opacity

Set the opacity of the tint color.

Color

The Color parameter sets the color of the shadow tint through the use of a standard color picker.

Position

Selects the shadow values to be adjusted.

Range

Controls the range of values to be used for the shadows. A higher Range value considers more values as shadows.

Midtones

Opacity

Set the opacity of the tint color.

Color

The Color parameter sets the color of the midtone tint through the use of a standard color picker.

Position

Selects the midtone values to be adjusted.

Range

Controls the range of values to be used for the midtones. A higher Range value considers more values as midtones.

Highlights

Opacity

Set the opacity of the tint color.

Color

The Color parameter sets the color of the highlight tint through the use of a standard color picker.

Position

Selects the highlight values to be adjusted.

Range

Controls the range of values to be used for the highlights. A higher Range value considers more values as highlights.

Go to the **Matte** section of Common Filter Controls to see how the Position and Range controls work.

Preserve Highlights

Preserves the white areas of the image.

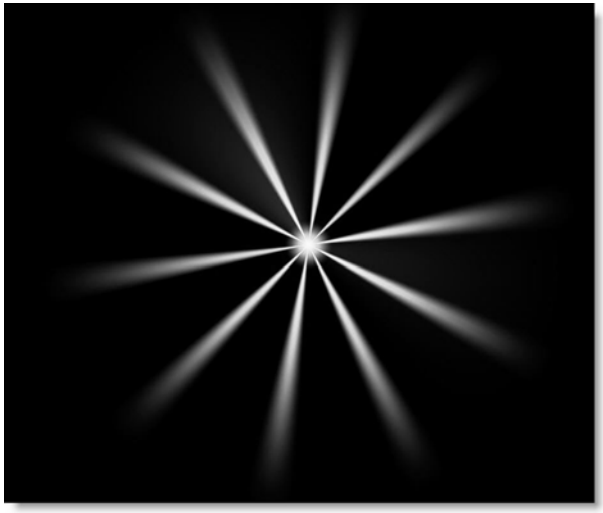
Exposure Compensation

Exposure Compensation adds back the brightness loss as a result of the tinting.

STAR

Description

A star pattern similar to those created by lens flares.



Go to the **Star Tutorial** to see how the filter works.

Category

Light.

Controls

Blend

Determines the blend mode used to create the star effect.

Add

The star is added to your image.

Screen

The star is combined with the image using a Screen blend mode. This looks kind of like the Add blend mode, but highlights are retained.

Brightness

Sets the brightness.

Color

Changes the color.

Element Count

Determines the number of spikes.

Hotspot

Adjusts the size of the center hotspot.

Offset

Sets the inner diameter.

Scale

Changes the size.

Aspect

Sets the aspect ratio.

Width

Determines the width.

Angle

Adjusts the angle.

Spread

Sets the spike distribution.

Noise

Controls the amount of noise applied to the spikes.

Noise Density

Changes the strength of the noise.

Randomize

Randomizes the size and position.

Softness

Blurs the star.

STREAKS

Description

The Streaks filter creates horizontal or vertical streaks around highlights in the image.

Before

After

Photo by Allef Vinicius on Unsplash

Go to the **Streaks Tutorial** to see how the filter works.

Category

Light.

Controls

Presets

To select a preset, pick one from the Presets window.

Streaks

Blend

Determines the blend mode to be used to create the streak effect.

Add

The streaks are added to your image.

Screen

The streaks are combined with the image using a Screen blend mode. This looks kind of like the Add blend mode, but highlights are retained.

Brightness

Sets the intensity of the streaks.

Streaks

Horizontal Streaks

Creates horizontal streaks.

Vertical Streaks

Creates vertical streaks.

Color

The Color parameter sets the color of the streaks through the use of a standard color picker. The default color is white.

Matte

A matte is used to create the streak effect. Go to the **Matte** section of Common Filter Controls to see how the Matte controls work.

SUNSET

Description

Sunset applies three photographic filters to the image which are blended together with a gradient. Presets for your favorite Color Gradient filters are provided as well as the ability to create custom colors.

Before

After

Photo by Mark Harpur on Unsplash

Go to the **Sunset Tutorial** to see how the filter works.

Category

Grads/Tints.

Controls

Presets

To select a preset, pick one from the Presets window.

Color 1

Sets the color for the top third of the image. Select the desired color using the color picker or choose a filter preset.

Presets

Select one of the filters from the pop-up menu.

Color

The Color parameter sets the color of the grad through the use of a standard color picker.

Opacity

Sets the opacity of the color filter.

Color 2

The Color 2 controls are the same as the controls for Color 1 except it is applied to the middle third of the image.

Color 3

The Color 3 controls are the same as the controls for Color 1 except it is applied to the bottom third of the image.

Highlights

Preserve Highlights

Preserves the white areas of the image.

Exposure Compensation

Exposure Compensation adds back the brightness loss as a result of the filter application.

Grad

Grad is the combination of the three blended tints. Its direction, corners and size can be adjusted.Go to the **Grad** section of Common Filter Controls to see how the Grad controls work.

TEXTURE

Description

Applies textures to an image for a stylized look.

Before After

Photo by Luke Braswell on Unsplash

Go to the **Texture Tutorial** to see how the filter works.

Category

Special Effects.

Controls

Presets

To select a preset, pick one from the Presets window.

Amount

Sets the amount of texture applied to the image.

Complexity

Generates a more detailed, repetitive texture.

Randomize

Randomizes the texture.

Transform

Transform the texture using Position, Scale, Rotate, Corner-Pin, Shear and Crop controls. Go to the **Transform** section of Common Filter Controls to see how the Transform Controls work.

Three Strip / Two Strip

Three Strip

Known and celebrated for it ultra-realistic, saturated levels of color, the Technicolor® Three Strip process was commonly used for musicals, costume pictures and animated films. It was created by photographing three black and white strips of film each passing through red, green and blue filters on the camera lens and then recombining them in the printing process.

Before

After

Photo by Rob Jaudon on Unsplash

Two Strip

The Technicolor® Two Strip process was the first stab at producing color motion pictures and consisted of simultaneously photographing two black and white images using red and green filters. This look creates an odd but pleasing hand-painted look where faces appear normal and green takes on a blue-green quality, while the sky and all things blue appear cyan.

Before

After

Photo by Rob Jaudon on Unsplash

Our Three Strip and Two Strip filters were created under the direction of Academy Award Winning Visual Effects Supervisor Rob Legato.

Go to the **Three Strip / Two Strip Tutorial** to see how the filters work.

Category

Film Lab.

Controls

Presets

To select a preset, pick one from the Presets window.

Opacity

Sets the intensity of the of the effect.

Strips

Red Intensity

Intensifies red values in the image.

Red Smooth

Blurs the red matte that is used to isolate the red values. Use this control to smooth out any noise that may appear if the Red Intensity is turned up to a high value.

Green Intensity

Intensifies green values in the image.

Green Smooth

Blurs the green matte that is used to isolate the green values. Use this control to smooth out any noise that may appear if the Green Intensity is turned up to a high value.

Blue Intensity

Intensifies blue values in the image when using the Three Strip filter, but darkens image areas that were blue in the source image when using the Two Strip filter.

Blue Smooth

Blurs the blue matte that is used to isolate the blue values. Use this control to smooth out any noise that may appear if the Blue Intensity is turned up to a high value.

Color Correct

Go to the **Color Correct** filter to see how the Color Correct controls work.

TINT

Description

Tints the entire image with a selected color using a variety of colorization modes.

Before

After

Photo by Joshua Medway on Unsplash

Go to the **Tint Tutorial** to see how the filter works.

Category

Grads/Tints.

Controls

Presets

To select a preset, pick one from the Presets window. If you would like to view presets from a different category, use the pop-up menu at the top left of the Presets window.

Black and White

Enable

Converts the image to Black and White.

Filter

The Filter pop-up selects the type of black and white filter to be applied to your color image. Go to the **Black and White** section of Common Filter Controls to see how the Black and White controls work.

Brightness

Adjusts the brightness of the image. Positive values brighten, negative values darken.

Contrast

Adjusts the contrast of the image. Positive values increase contrast, negative values decrease contrast.

Gamma

Adjusts the gamma of the image. The gamma adjustment leaves the white and black points the same and only modifies the values in-between. Positive values lighten the midtones, negative values darken the midtones.

Tint

Color

Sets the color that the image will be colorized with. Select the desired color using the color picker.

Opacity

Sets the opacity of the color.

Mode

Selects how color is applied to the image.

Normal

Tints the image while retaining highlights.

Tint

The image is tinted by replacing hue and saturation.

Hue

The image is tinted by only replacing hue.

Lighten

Pixels darker than the color are replaced, and pixels lighter than the color do not change.

Darken

Pixels lighter than the color are replaced, and pixels darker than the color do not change.

Grad

Tint can optionally use a gradient that limits where the filter is applied. Grad is the transition area that goes from the tinted image to the original image. Its direction, corners and size can be adjusted. Go to the **Grad** section of Common Filter Controls to see how the Grad controls work.

TONE ADJUST

Description

Tone Adjust approximates the appearance of high dynamic range images by adjusting the tonal values. Specifically, detail is recovered from the darker portions of the images and can optionally be denoised.

Before After

Photo by Brand X Design

Go to the **Tone Adjust Tutorial** to see how the filter works.

Category

Color

Controls

Amount

Lightens shadows to reveal more detail. Take care not to over apply this setting and reveal image noise.

DeNoise

Removes film grain and noise in the shadow areas.

Position

Selects the shadow values to be adjusted.

Range

Controls the range of values to be used for the shadows. A higher Range value considers more values as shadows.

VIGNETTE

Description

A vignette, or soft fade, is a popular photographic effect where the photo gradually fades into the background, usually in a circular or rectangular shape. The vignette can be any color as well as thrown out of focus.

Before

After

Photo by Srikanta H. U. on Unsplash

Go to the **Vignette Tutorial** to see how the filter works.

Category

Lens.

Controls

Presets

To select a preset, pick one from the Presets window.

Vignette

Color

The Color parameter sets the color of the vignette through the use of a standard color picker. The default color is black.

Opacity

Sets the opacity of the colored vignette. For defocused vignettes, you may want to turn down the Opacity so you can see the defocused effect.

Blur

Sets the softness of the image in the area of the vignette.

Shape

Roundness

Sets the roundness of the vignette. The vignette can either be circular or square or anywhere in between.

Size

Sets the size of the vignette.

Aspect Ratio

Changes the aspect ratio of the vignette. A value of -100 would be wider, and 100 would be taller.

Rotation

Rotates the vignette.

Distortion

Distorts the edge of the vignette.

Distortion Size

Sets the size of the distortion.

Randomize

Randomizes the distortion.

Softness

The Softness parameters control the softness of the vignette edge.

WATER DROPLETS

Description

Simulates the circular, rainbow colored optical effects produced by tiny water droplets in clouds, mist and fog.

Before | After

Photo by Peter Hershey on Unsplash

Go to the **Water Droplets Tutorial** to see how the filter works.

Category

Light.

Controls

Presets

To select a preset, pick one from the Presets window.

Light

Blend

Determines the blend mode to be used to add the rainbow.

Add

The rainbow is added to your image.

Screen

The rainbow is combined with the image using a Screen blend mode. This looks kind of like the Add blend mode, but highlights are retained.

Brightness

Sets the intensity of the rainbow.

Displacement

Displaces the rainbow by the luminance values of the image. This “fakes” the effect of the rainbow wrapping over objects in the image.

Blur

Sets the softness of the rainbow.

Rainbow

Blend

The rainbow can be added to the entire image or limited to a matte.

Rainbow Only

The rainbow is added to the entire image.

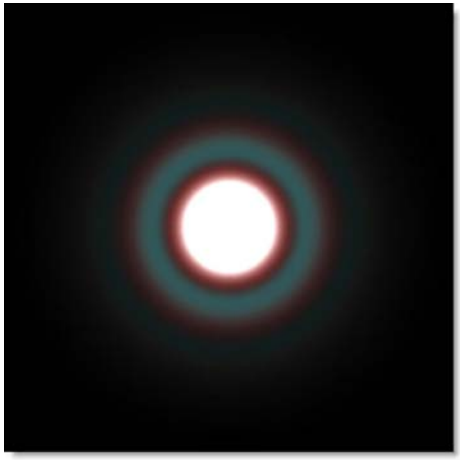
Matte

The rainbow is added only in areas of the matte.

Type

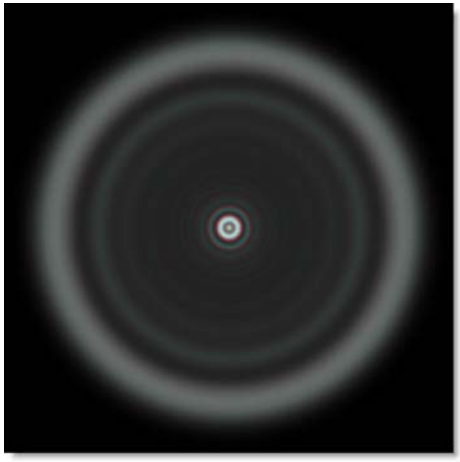
Corona

A corona has a bright center and is surrounded by a number of concentric colored rings.



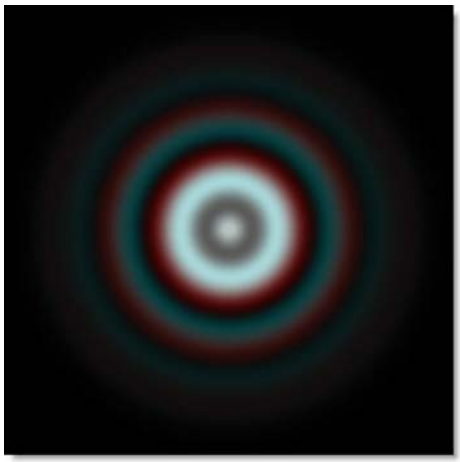
Fogbow

A fogbow is similar to a rainbow, but because of the very small size of water droplets that cause fog, the fogbow has little color and appears white.



Glory

Formed when light is scattered backwards by water droplets, glories have multiple colored rings with a bright center, but not as bright as a corona's. In addition, the rings dissipate much slower than those of the corona.



Position

The rainbow position can be adjusted by clicking and dragging an on-screen control in the center of the image.

Scale

Scale X

The horizontal scale of the rainbow.

Scale Y

The vertical scale of the rainbow.

Gang Scale

The Scale X and Scale Y slider values can be ganged together.

Matte

A matte can be used to limit where the rainbow will be placed. Wherever there is white in the matte is where the rainbow will be added. Go to the **Matte** parameters to see how they work.

Note: To use a matte to limit where the rainbow will be added, Rainbow > Blend must be set to Matte.1

WIDE ANGLE LENS

Description

Simulates the effect of a wide angle lens.

Before

After

Photo by Dawid Zawila on Unsplash

Go to the **Wide Angle Lens Tutorial** to see how the filter works.

Category

Lens.

Note: Wide Angle Lens must be applied as the first layer (bottom of the layer stack) when multiple layers are used. Otherwise, all filters below will not be rendered.

Distortion

Pulls the corners of the image outward.

X and Y Correction

X and Y Correction compensate for the deformation introduced with the Distortion parameter.

X-RAY

Description

Simulates the look of X-Ray images.

Before

After

Photo by Clem Onojeghuo on Unsplash

Go to the **X-Ray Tutorial** to see how the filter works.

Category

Special Effects.

Controls

Presets

To select a preset, pick one from the Presets window.

Black and White

Filter

The Filter pop-up selects the type of black and white filter to be applied to your color image. Go to the **Black and White** section of Common Filter Controls to see how the Black and White controls work.

Brightness

Adjusts the brightness of the image. Positive values brighten, negative values darken.

Contrast

Adjusts the contrast of the image. Positive values increase contrast, negative values decrease contrast.

Gamma

Adjusts the gamma of the image. The gamma adjustment leaves the white and black points the same and only modifies the values in-between. Positive values lighten the midtones, negative values darken the midtones.

Color

Opacity

Sets the opacity of the color.

Color

The Color parameter sets the color of the x-ray through the use of a standard color picker and defaults to blue.

Blend Modes

Blend modes are used to combine images in a variety of different ways.

Normal

Edits each pixel to make it the result color. This is the default mode. Changing the opacity results in a mix between two layers.

Darken

Looks at the color information in each channel and selects the base or blend color—whichever is darker—as the result color. Pixels lighter than the blend color are replaced, and pixels darker than the blend color do not change.

Multiply

Looks at the color information in each channel and multiplies the base color by the blend color. The result color is always a darker color. Multiplying any color with black produces black. Multiplying any color with white leaves the color unchanged.

Color Burn

Looks at the color information in each channel and darkens the base color to reflect the blend color by increasing the contrast between the two. Blending with white produces no change.

Linear Burn

Looks at the color information in each channel and darkens the base color to reflect the blend color by decreasing the brightness. Blending with white produces no change.

Darker Color

Compares the total of all channel values for the blend and base color and displays the lower value color. Darker Color does not produce a third color, which can result from the Darken blend, because it chooses the lowest channel values from both the base and the blend color to create the result color.

Lighten

Looks at the color information in each channel and selects the base or blend color—whichever is lighter—as the result color. Pixels darker than the blend color are replaced, and pixels lighter than the blend color do not change.

Add

The pixels of one image are added to another image

Screen

Looks at each images color information and multiplies the inverse of the two images. This looks kind of like the Add blend mode, but highlights are retained.

Color Dodge

Looks at the color information in each channel and brightens the base color to reflect the blend color by decreasing contrast between the two. Blending with black produces no change.

Linear Dodge (Add)

Looks at the color information in each channel and brightens the base color to reflect the blend color by increasing the brightness. Blending with black produces no change.

Lighter Color

Compares the total of all channel values for the blend and base color and displays the higher value color. Lighter Color does not produce a third color, which can result from the Lighten blend, because it chooses the highest channel values from both the base and blend color to create the result color.

Overlay

Multiplies or screens the colors, depending on the base color. Patterns or colors overlay the existing pixels while preserving the highlights and shadows of the base color. The base color is not replaced, but mixed with the blend color to reflect the lightness or darkness of the original color.

Soft Light

Darkens or lightens the colors, depending on the blend color. The effect is similar to shining a diffused spotlight on the image. If the blend color (light source) is lighter than 50% gray, the image is lightened as if it were dodged. If the blend color is darker than 50% gray, the image is darkened as if it were burned in.

Hard Light

Multiplies or screens the colors, depending on the blend color. The effect is similar to shining a harsh spotlight on the image. If the blend color (light source) is lighter than 50% gray, the image is lightened, as if it were screened. This is useful for adding highlights to an image. If the blend color is darker than 50% gray, the image is darkened, as if it were multiplied. This is useful for adding shadows to an image.

Vivid Light

Burns or dodges the colors by increasing or decreasing the contrast, depending on the blend color. If the blend color (light source) is lighter than 50% gray, the image is lightened by decreasing the contrast. If the blend color is darker than 50% gray, the image is darkened by increasing the contrast.

Linear Light

Burns or dodges the colors by decreasing or increasing the brightness, depending on the blend color. If the blend color (light source) is lighter than 50% gray, the image is lightened by increasing the brightness. If the blend color is darker than 50% gray, the image is darkened by decreasing the brightness.

Pin Light

Replaces the colors, depending on the blend color. If the blend color (light source) is lighter than 50% gray, pixels darker than the blend color are replaced, and pixels lighter than the blend color do not change. If the blend color is darker than 50% gray, pixels lighter than the blend color are replaced, and pixels darker than the blend color do not change. This is useful for adding special effects to an image.

Difference

Looks at the color information in each channel and subtracts either the blend color from the base color or the base color from the blend color, depending on which has the greater brightness value. Blending with white inverts the base color values; blending with black produces no change.

Exclusion

Creates an effect similar to but lower in contrast than the Difference mode. Blending with white inverts the base color values. Blending with black produces no change.

Subtract

Looks at the color information in each channel and subtracts the blend color from the base color. In 8 and 16-bit images, any resulting negative values are clipped to zero.

Hue

Creates a result color with the luminance and saturation of the base color and the hue of the blend color.

Saturation

Creates a result color with the luminance and hue of the base color and the saturation of the blend color.

Color

Creates a result color with the luminance of the base color and the hue and saturation of the blend color. This preserves the gray levels in the image and is useful for coloring monochrome images and for tinting color images.

KEYBOARD SHORTCUTS

Crop Shortcuts

Shortcut	Action
Drag on one of the vertical boundaries	Crops horizontally
Drag on one of the horizontal boundaries	Crops vertically
Drag bounding box corner	Scales the Crop
Drag inside the bounding box	Moves the Crop

EZ Mask Shortcuts

Shortcut	Action
Enter	Processes the mask

Help Shortcuts

Shortcut	Action
F1	Opens the DFT User Guide

Layout Shortcuts

Shortcut	Action
F2	Selects the Default Layout
F3	Selects the Edit Layout
F4	Selects the View Layout
F5	Selects the Dual Monitor Layout

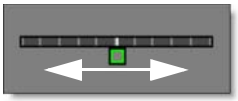
Paint Keyboard Shortcuts

Shortcut	Action
B	Selects the Black/White brush
Shift+B	Selects the Blur brush
C	Selects the Clone brush
Shift+C	Selects the Color brush
E	Selects the Eraser brush
Shift+M	Selects the Mosaic brush
R	Selects the Red-Eye brush
Shift+R	Selects the Repair brush
S	Selects the Scatter brush
Ctrl(Win)/Cmd(Mac)+drag	Sizes the brush
[ ]	Sizes the brush
Shift with clone brush	Sets the clone offset
Shift+click or tap	Resets the clone offset
Arrow keys	Moves the Clone source by 1 pixel
Shift+Arrow keys	Moves the Clone source by 10 pixels
Hold down **Arrow** keys	Moves the Clone source continuously
Right-mouse drag	Paints with the Eraser brush

Path Mask Point Selecting Shortcuts

Shortcut	Action
Click a point	Selects one point
Click and drag over multiple points	Selects multiple points
Ctrl+click on a point	Toggles the matte on or off
Shift+click a point	Adds the point to the current matte

Path Mask Point Editing Shortcuts

Shortcut	Action
Alt+click on a path	Inserts a new point along the path
Delete key	Delete all selected points
Click and drag selected points	All selected points move
Click and drag an unselected point	Moves one point
Alt+click+drag on a point 	Opens a slider to adjust the point's tension. Left of center forces the path to curve through the point (Cardinal spline). The center position creates a corner point while the right position moves the curve towards the center of the path (B-Spline). If multiple points have been selected, they will all be set to the same tension.
Alt+click+drag+**Shift** on a point	Snaps the point tension to Cardinal, Corner or B-Spline positions

Path Mask Point Editing Pop-up Menu

Menu Option	Action
Cardinal	Creates a path that passes smoothly through each point
Corner	Creates a corner point
B-Spline	Creates a path that is determined by the surrounding points

Snap Mask Point Editing Shortcuts

Shortcut	Action
Alt+click between two points	Add points
Hover over point + **Delete** Key	Delete points
Alt+drag a point	Uses magnetism to snap a point to an object's boundary

Viewer Keyboard Shortcuts

Shortcut	Action
Middle-mouse drag	Pans the image
Space Bar+drag	Pans the image
I Key	Zooms the image in
O Key	Zooms the image out
Zoom icon+Drag a square	Zooms into the defined area
Scroll wheel over image	Zooms the image in and out
Middle-mouse double click	Fits the image to the window
Ctrl(Win)/**Cmd**(Mac)+click A/B Comparison	Turns off A/B Comparison mode, if enabled,
F	Fits the image to the window
M	Cycles the display between the full color image and the Mask channel
H	Opens the Histogram window
1	Opens the Magnifier window