

## 10.1.12 Editors - Compositor Editor - Header - Add Menu - Filter

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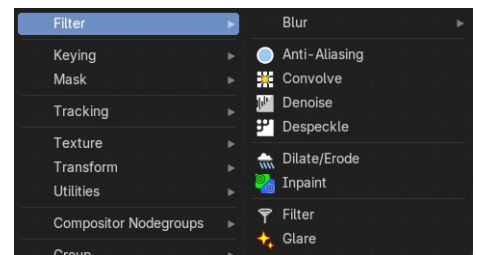
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## Add menu - Filter

The Filter add menu contains multiple filters you can use on image data, including blurs and other lens effects.



## Anti-Aliasing

Adds antialiasing to edges in an image.

### Inputs

#### *Image*

Standard image input.

#### *Threshold*

Threshold to detect edges.

#### *Contrast Limit*

How much to eliminate suspicious edges to avoid artifacts.

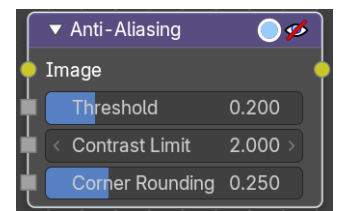
#### *Corner Rounding*

How much sharp corners will be rounded.

### Outputs

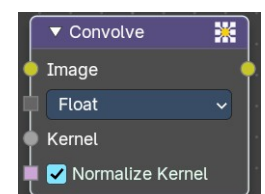
#### *Image*

Standard image output.



## Convolve

Applies a **custom convolution kernel** to an image, enabling advanced filtering effects like blurring, sharpening, edge detection, embossing, and more. This node gives artists direct control over pixel-level transformations.



## Inputs

### **Image**

The source image to be processed. Accepts any RGBA input.

### **Kernel Data Type**

Which data type input to use.

### **Kernel**

A matrix of values that defines the convolution operation. Can be manually defined or procedurally generated. Operates per-channel (R, G, B, A) unless separated beforehand.

### **Normalize Kernel**

When enabled, the kernel values are normalized to prevent brightness shifts.

## Outputs

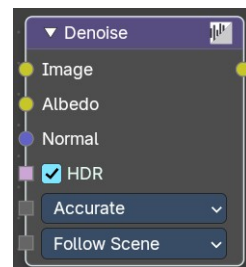
### **Image**

The result of the convolution operation as an image.

## Denoise

The Denoise node is used to denoise renders from Cycles and other ray tracing renderers. This helps to significantly reduce render time by rendering with fewer samples.

It uses Open Image Denoise, which transforms noisy images into clean images with machine learning.



## Inputs

### **Image**

Noise image input.

### **Albedo**

Optional Albedo render pass to better preserve detail. For Cycles, it is recommended to use the Denoising Albedo render pass, which is available when enabling the Denoising Data passes.

### **Normal**

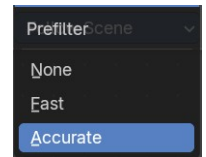
Optional normal render pass to better preserve detail. For Cycles, it is recommended to use the Denoising Normal render pass, which is available when enabling the Denoising Data passes.

### **HDR**

Preserve colors outside the 0 to 1 range.

## ***Prefilter***

Allows users to apply a prefiltering step before denoising, which can improve the denoising result.



### **None**

No prefiltering applied.

### **Fast**

Applies a quick prefiltering step to improve denoising with minimal processing time.

### **Accurate**

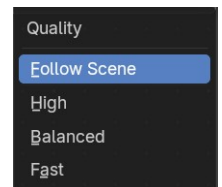
Applies a detailed prefiltering step for the best denoising result, but takes more processing time.

## ***Quality***

Defines the quality level of the denoising process:

### **Follow Scene**

Uses the quality set in the scene settings, allowing quick switching between different quality modes for all nodes.



### **High**

Highest quality, but longest processing time.

### **Balanced**

Slightly lower quality, but halves processing time compared to High.

### **Fast**

Further reduced quality for a small increase in speed over Balanced.

## **Outputs**

### ***Image***

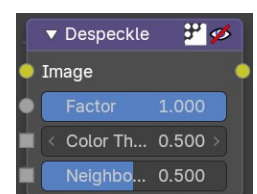
Denoised image output.

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## **Despeckle**

The Despeckle node is used to smooth areas of an image in which noise is noticeable, while leaving complex areas untouched.

This works by the standard deviation of each pixel and its neighbors is calculated to determine if the area is one of high complexity or low complexity. If the complexity is lower than the threshold then the area is smoothed using a simple mean filter.



## Inputs

### *Image*

Standard image input.

### *Factor*

Controls the amount the filter effects the image.

### *Color Threshold*

The threshold to control high/low complexity.

### *Neighbor Threshold*

The threshold to control the number of pixels that must match.

## Outputs

### *Image*

Standard image output.

## Dilate/Erode

The Dilate/Erode node provides a morphology (mathematical shape analysis) filter.

## Inputs

### *Mask*

Single color channel (or a black-and-white image) input.

### *Size*

The filter radius. A positive value of Distance dilates (expands) the influence of a pixel on its surrounding pixels. A negative value erodes (shrinks) its influence.

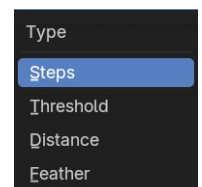
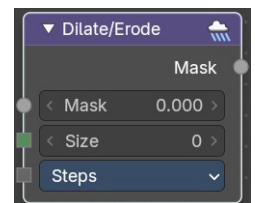
### *Type*

There are four different dilate / erode modes. Step, Threshold, Distance and Feather.

## Outputs

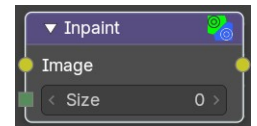
### *Mask*

The filtered mask output.



## Inpaint

The Inpaint node is used to extend borders of an image into transparent or masked regions. This can be useful to solve problems like “wire removal” and holes created during chroma keying.



### Inputs

#### *Image*

Standard image input.

#### *Size*

The size of the inpaint in pixels.

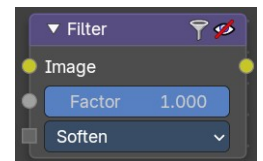
### Outputs

#### *Image*

Standard image output.

## Filter

The Filter node implements various common image enhancement filters.



### Inputs

#### *Image*

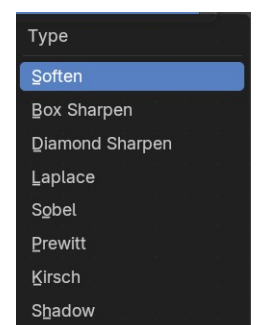
Standard image input.

#### *Factor*

Controls the amount of influence the node exerts on the output image.

#### *Type*

The available filter types. Soften, Laplace, Sobel, Prewitt and Kirsch all perform edge detection (in slightly different ways) based on vector calculus and set theory equations.



#### *Soften*

Slightly blurs the image.

#### *Box Sharpen*

Increases the contrast, especially at edges.

## Diamond Sharpen

A moderate sharpening filter

## Laplace

Softens around edges.

## Sobel

Creates a negative image that highlights edges.

## Prewitt

Tries to do Sobel one better.

## Kirsch

Giving a better blending than Sobel or Prewitt, when approaching an edge.

## Shadow

Performs a relief, emboss effect, darkening outside edges.

## Outputs

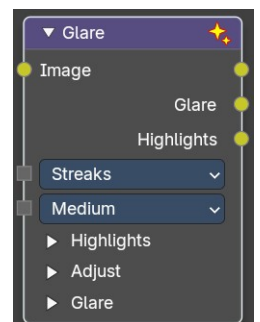
### *Image*

Standard image output.

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## Glare

The Glare node is used to add bloom, lens flares, fog, glows around exposed parts of an image and much more.



## Type

The glare type

### *Bloom*

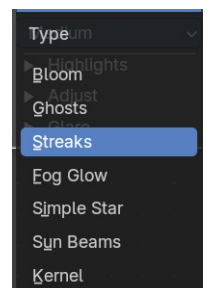
Creates a bloom effect.

### *Ghosts*

Creates a haze over the image.

### *Streaks*

Creates bright streaks used to simulate lens flares.



## ***Fog Glow***

Looks similar to Ghost. However, it is much smaller in size and gives more of an atmospheric haze or “glow” around the image.

## ***Simple Star***

Works similar to Streaks but gives a simpler shape looking like a star.

## ***Sun Beams***

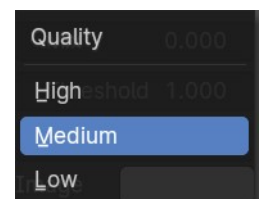
Creates sun beams.

## ***Kernel***

A custom kernel convolution mode. It allows you for example to generate the glare aura of a candle flame.

## ***Quality***

If not set to something other the High, then the glare effect will only be applied to a low resolution copy of the image. This can be helpful to save render times while only doing preview renders.



## ***Inputs***

### ***Image***

Standard image input.

## ***Highlights subpanel***

### **Threshold**

Pixels brighter than this value will be affected by the glare filter.

### **Smooth**

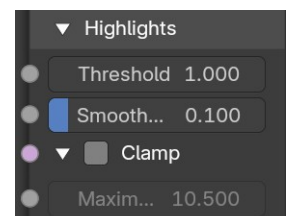
The smoothness of the extracted highlight.

### **Clamp**

Clamp the values between 0 and a maximum value.

### **Maximum Value**

The maximum clamp value.



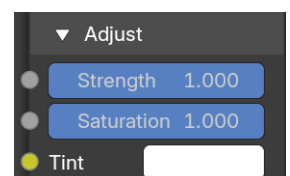
## ***Adjust subpanel***

### **Strength**

Soft range of [0, 1], can be boosted beyond 1. Serves the same function as a Mix option but offers better control.

### **Saturation**

Adjusts the intensity of the colors in the glare effect. A higher value results in more vivid colors, while a lower



value will desaturate the colors, making them appear more muted.

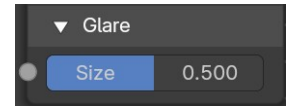
### **Tint**

Applies a color tint to the glare effect. This allows you to add a specific hue to the glare, giving you creative control over the color balance and overall mood of the effect.

### **Glare subpanel with glare type Bloom**

#### **Size**

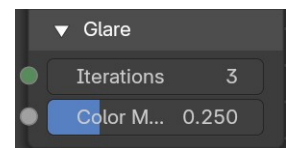
Scale of the glow relative to the size of the original bright pixels.



### **Glare subpanel with glare type Ghosts**

#### **Size**

Scale of the glow relative to the size of the original bright pixels.



#### **Iterations**

The number of times to run through the filter algorithm. Higher values will give more accurate results but will take longer to compute. Note that, this is not available for Fog Glow as it does not use an iterative-based algorithm.

#### **Color Modulation**

Used for Streaks and Ghosts to create a special dispersion effect.

Johannes Itten describes this effect, Color Modulation, as subtle variations in tones and chroma.

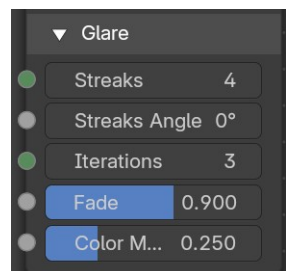
### **Glare subpanel with glare type Streaks**

#### **Streaks**

Creates bright streaks used to simulate lens flares.

#### **Streak Angle**

The angle of the streaks.



#### **Iterations**

The number of times to run through the filter algorithm. Higher values will give more accurate results but will take longer to compute. Note that, this is not available for Fog Glow as it does not use an iterative-based algorithm.

#### **Fade**

Controls the gradual reduction of the streaks effect's intensity. A higher fade value means the effect will dissipate more smoothly and subtly over a larger area, whereas a lower fade value will keep the glare more concentrated and abrupt.

#### **Color Modulation**

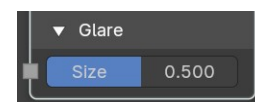
Used for Streaks and Ghosts to create a special dispersion effect.

Johannes Itten describes this effect, Color Modulation, as subtle variations in tones and chroma.

### ***Glare subpanel with glare type Fog Glow***

#### **Size**

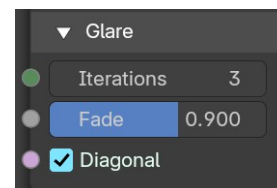
The size of the glare relative of the image



### ***Glare subpanel with glare type Simple Star***

#### **Iterations**

The number of times to run through the filter algorithm. Higher values will give more accurate results but will take longer to compute. Note that, this is not available for Fog Glow as it does not use an iterative-based algorithm..



#### **Fade**

Controls the gradual reduction of the streaks effect's intensity. A higher fade value means the effect will dissipate more smoothly and subtly over a larger area, whereas a lower fade value will keep the glare more concentrated and abrupt.

#### **Diagonal**

Align the star diagonally.

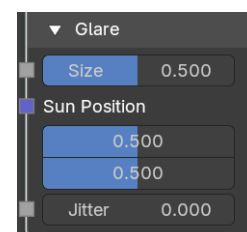
### ***Glare subpanel with glare type Sunbeams***

#### **Size**

Scale of the glow relative to the size of the original bright pixels.

#### **Sun position**

The position of the source of the rays in normalized coordinates. 0 means lower left corner. 1 means upper right corner.



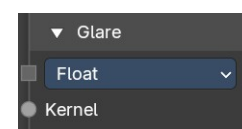
#### **Jitter**

The amount of jitter when computing rays.

### ***Glare subpanel with glare type Kernel***

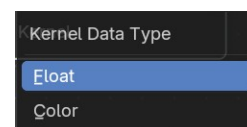
#### **Kernel Data Type**

What data to compute for the kernel. Float or color.



#### **Kernel**

The kernel input.



## **Outputs**

### ***Image***

Output with the generated glare result.

### ***Glare***

The generated glare only.

### ***Highlights***

The highlights from the generated glare.