

12.1.36 Editors - Geometry Nodes Editor - Header - Add Menu - Utilities - Color

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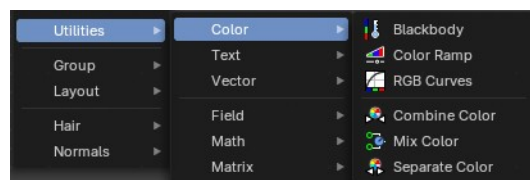
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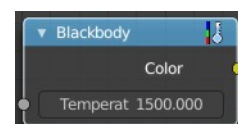
Add menu - Utilities - Color

Here you find mainly nodes to convert color values.



Blackbody

The Blackbody node converts a blackbody temperature to RGB value. This can be useful for materials that emit light at natural occurring frequencies.



Inputs

Temperature

The temperature in Kelvin.

Outputs

Color

RGB color output.

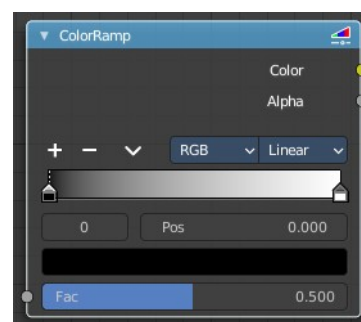
Color Ramp

The Color Ramp Node is used for mapping values to colors with the use of a gradient.

Inputs

Factor

The Factor input is used as an index for the color ramp.



Properties

Color Ramp

Color Ramps enables the user to specify a range of colors based on color stops. The color between the color stops gets interpolated.

Controls

+

Add a stop to your color ramp. The stop will be added after the selected one, in the middle to the next one.

-

Deletes the selected color stop from the list.

Tools menu

Flip Color Ramp

Flips the gradient, inverting the values of the color ramp.

Distribute Stops from Left

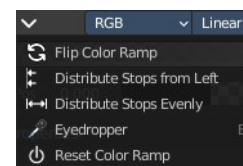
Rearrange the stops so that every step has the same space to the right.

Distribute Stops Evenly

Space between all neighboring stops becomes equal.

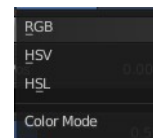
Eyedropper (pipette icon) E

An Eyedropper to sample a color or gradient from the interface to be used in the color ramp.



Reset Color Ramp

Resets the color ramp to its default state.



Color Mode

RGB

Blends color by mixing each color channel and combining.

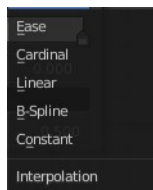
HSV/HSL

Blends colors by first converting to HSV or HSL, mixing, then combining again. This has the advantage of maintaining saturation between different hues, where RGB would de-saturate, this allows for a richer gradient.

Interpolation

Ease

Uses an Ease Interpolation for the color stops.



Cardinal

Uses a Cardinal Interpolation for the color stops.

Linear

Uses a Linear Interpolation for the color stops.

B-Spline

Uses a B-Spline Interpolation for the color stops.

Constant

Uses a Constant Interpolation for the color stops.

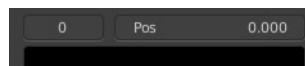
Color Ramp

The color band. A click at one of the color stops makes it the active one. You can move the color stops by clicking at them and dragging them around.



Active Color Stop elements

Adjust the active color stop.



Choose active color stop

Choose the color stop by index.

Pos

The position of the active color stop. The range goes from 0.000 to 1.000

Outputs

Image

Standard image output.

Alpha

Standard Alpha Output.

RGB Curves

Adjust the RGB channels by curves.

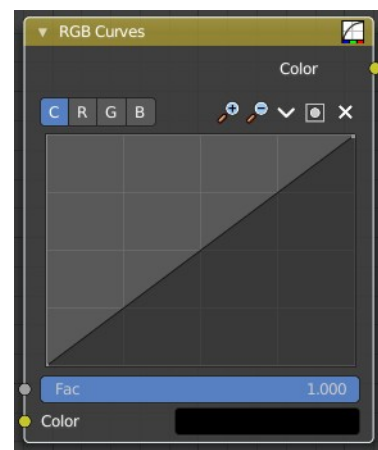
Input

Factor

The blend factor.

Color

The input color.



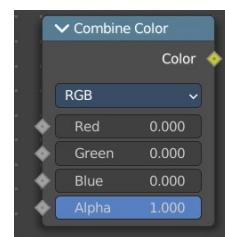
Combine Color

Combine the single RGBA channels into a single image.

Input

Mode

- **RGB** colour processing
- **HSV** colour processing
- **HSL** colour processing



Input – RGB mode

R, G and B

The red, green and blue channels of an image.

Input – HSV mode

H, S and V

The Hue, Saturation and Value channels of an image.

Input – HSL mode

H, S and L

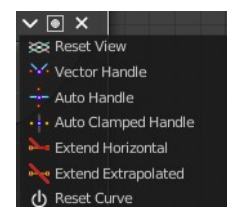
The Hue, Saturation and Luminescence channels of an image.

Tools

Tools is a menu where you can find some curve related tools.

Reset View

Resets the curve windows zoom.



Vector Handle

Set handle type to Vector.

Auto Handle

Set handle type to Auto.

Auto Clamped Handle

Set handle type to Auto Clamped.

Extend horizontal

Extends the curve before the first curve point and behind the last curve point horizontally.

Extend extrapolated

Extends the curve before the first curve point and behind the last curve point extrapolated.

Reset Curve

Resets the curve to the initial shape.

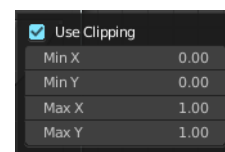
Output

Color

Color output.

Use Clipping

Clipping options. Set up clipping for the stroke.



Delete Points

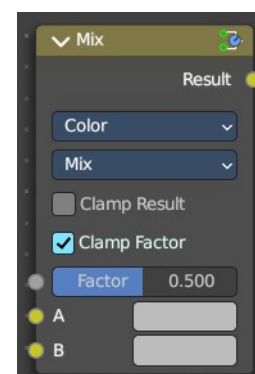
Deletes selected curve points.

Mix Color

The mix Color node is in real the Mix node in Color mode. It is shared across editors.

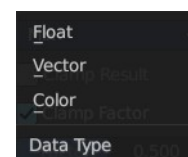
The Mix node is meant to mix values. This can be colors, or also a vector or a single value.

Note that the Mix Color node does not start in Color mode when you insert it from the sidebar due a technical limitation in the Blender Python api. Here you have to manually switch to the color mode.



Data Type

The mode in which the node works.



Color

The Mix Node in color mode mixes images by working on the individual and corresponding pixels of the two input images. Called “MixRGB” in the shader and texture context.

Inputs

Factor

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

Color 1

Usually the background image. The image size and resolution sets the dimensions of the output image.

Color 2

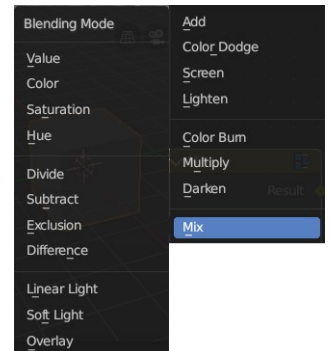
Usually the foreground image.

Properties

Mix

Choose the different blending modes.

Add, Subtract, Multiply, Screen, Divide, Difference, Darken, Lighten, Overlay, Color Dodge, Color Burn, Hue, Saturation, Value, Color, Soft Light, Linear Light.



Clamp Result

Clamp the result to 0, 1 range.

Clamp Factor

Clamp the factor to 0, 1 range.

Outputs

Result

Standard output.

Vector

The vector mode allows you to mix vectors.

Inputs

Factor

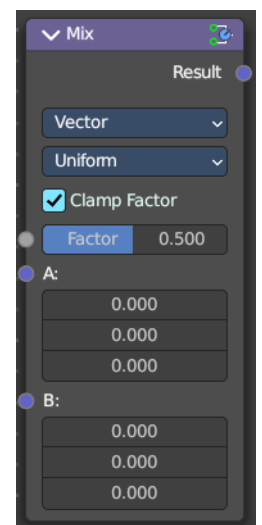
Controls the amount of influence.

A

The input vector.

B

The output vector.



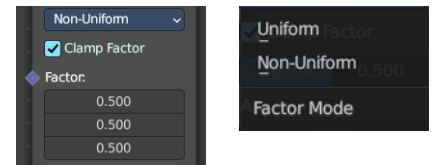
Properties

Factor Mode

Use a single factor for all values, or a factor per value.

Clamp Factor

Clamp the factor to 0, 1 range.



Outputs

Result

Standard output.

Float

The vector mode allows you to mix vectors.

Inputs

Factor

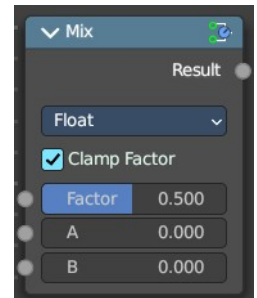
Controls the amount of influence.

A

The input value.

B

The output value.



Properties

Clamp Factor

Clamp the factor to 0, 1 range.

Outputs

Result

Standard output.

Properties

Curve Field

Channel buttons

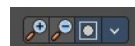
Clicking on one of the channels displays the curve for each.

C (Combined RGB), R (Red), G (Green), B (Blue).



Navigation elements

They are described from left to right.

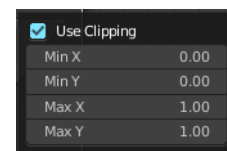


Zoom in and out

The two buttons with the magnifying glass at it zooms in and out in the curve window.

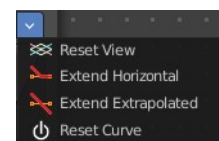
Use Clipping

Clipping options. Set up clipping for the stroke.



Tools

Tools is a menu where you can find some curve related tools.



Reset View

Resets the curve windows zoom.

Extend horizontal

Extends the curve before the first curve point and behind the last curve point horizontally.

Extend extrapolated

Extends the curve before the first curve point and behind the last curve point extrapolated.

Reset Curve

Resets the curve to the initial shape.

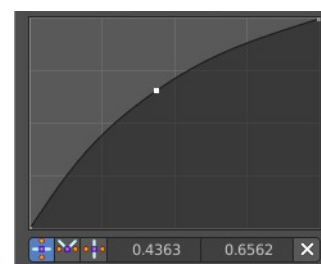
Curve edit field

Create and tweak a Bezier curve that varies the input levels (X axis) to produce an output level (Y axis).

Selecting Points

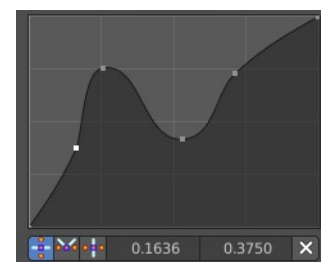
You can select curve points. This reveals two edit boxes for the x and y coordinate of this point.

Selected points can be moved around. Left click at them, hold the mouse button down and move them to a new location.



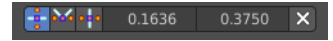
Adding Points

You can add new curve points by simply left clicking at the curve. Move the mouse to position them where you need it.



Curve point settings

When you have a point selected then you will reveal further settings at the bottom.



Vector Handle

Set handle type to Vector.

Auto Handle

Set handle type to Auto.

Auto Clamped Handle

Set handle type to Auto Clamped.

Output

Color

The color output.

Separate Color

Combine the single RGBA channels into a single image.

Input

Mode

- **RGB** colour processing
- **HSV** colour processing
- **HSL** colour processing



Image

The image input.

Output

Red, Green, Blue and Alpha

The red, green, blue and alpha channels of an image.