

## 12.1.35 Editors - Geometry Nodes Editor - Header - Add Menu - Utilities - Color

### Table of content

Detailed table of content.....	1
Add menu - Utilities - Color.....	3
Color Ramp.....	3
RGB Curves.....	5
Combine Color.....	5
Mix Color.....	7
Separate Color.....	10

### Detailed table of content

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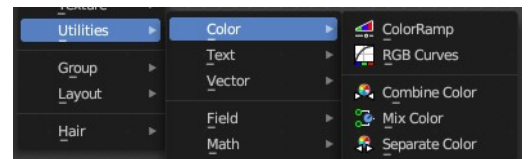
Detailed table of content.....	1
Add menu - Utilities - Color.....	3
Color Ramp.....	3
Inputs.....	3
Factor.....	3
Properties.....	4
Color Ramp.....	4
Controls.....	4
+.....	4
-.....	4
Tools menu.....	4
Flip Color Ramp.....	4
Distribute Stops from Left.....	4
Distribute Stops Evenly.....	4
Eyedropper (pipette icon) E.....	4
Reset Color Ramp.....	4
Color Mode.....	4
RGB.....	4
HSV/HSL.....	4
Interpolation.....	4
Ease.....	4
Cardinal.....	4
Linear.....	4
B-Spline.....	4
Constant.....	5
Color Ramp.....	5
Active Color Stop elements.....	5
Choose active color stop.....	5
Pos.....	5
Outputs.....	5
Image.....	5
Alpha.....	5
RGB Curves.....	5

Input.....	5
Factor.....	5
Color.....	5
Combine Color.....	5
Input.....	5
Mode.....	5
Input – RGB mode.....	6
R, G and B.....	6
Input – HSV mode.....	6
H , S and V.....	6
Input – HSL mode.....	6
H , S and L.....	6
Tools.....	6
Reset View.....	6
Vector Handle.....	6
Auto Handle.....	6
Auto Clamped Handle.....	6
Extend horizontal.....	6
Extend extrapolated.....	6
Reset Curve.....	6
Output.....	6
Color.....	6
Use Clipping.....	7
Delete Points.....	7
Mix Color.....	7
Data Type.....	7
Color.....	7
Inputs.....	7
Factor.....	7
Color 1.....	7
Color 2.....	7
Properties.....	7
Mix.....	7
Clamp Result.....	8
Clamp Factor.....	8
Outputs.....	8
Result.....	8
Vector.....	8
Inputs.....	8
Factor.....	8
A.....	8
B.....	8
Properties.....	8
Factor Mode.....	8
Clamp Factor.....	8
Outputs.....	8
Result.....	8
Float.....	8
Inputs.....	8
Factor.....	8
A.....	8
B.....	8
Properties.....	9

- Clamp Factor.....9
- Outputs.....9
  - Result.....9
- Properties.....9
  - Curve Field.....9
  - Channel buttons.....9
  - Navigation elements.....9
    - Zoom in and out.....9
    - Use Clipping.....9
  - Tools.....9
    - Reset View.....9
    - Extend horizontal.....9
    - Extend extrapolated.....9
    - Reset Curve.....9
  - Curve edit field.....10
    - Selecting Points.....10
    - Adding Points.....10
    - Curve point settings.....10
      - Vector Handle.....10
      - Auto Handle.....10
      - Auto Clamped Handle.....10
- Output.....10
  - Color.....10
- Separate Color.....10
- Input.....11
  - Mode.....11
  - Image.....11
- Output.....11
  - Red, Green, Blue and Alpha.....11

## Add menu - Utilities - Color

Here you find mainly nodes to convert color values.



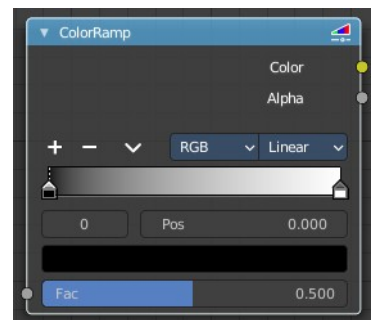
### Color Ramp

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.

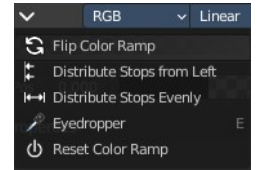
-

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

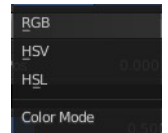
Space between all neighboring stops becomes equal.

#### 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

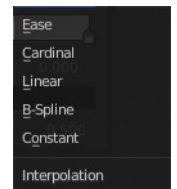
Uses a Cardinal Interpolation for the color stops.

#### 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.

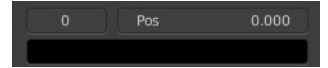
## Color Ramp

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.



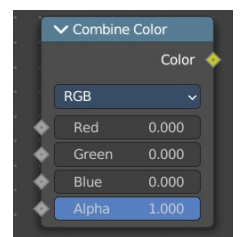
## Combine Color

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.

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## 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***

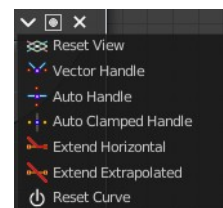
Extends the curve before the first curve point and behind the last curve point horizontally.

### ***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

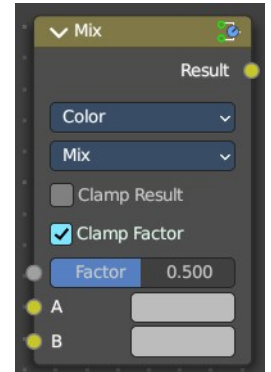
Deletes selected curve points.

## Mix Color

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

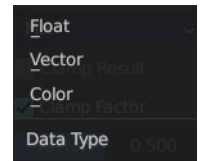
The Mix node is meant to mix values. This can be colors, or also a vector or a single value.

Note that the Mix Color node does not start in Color mode when you insert it from the sidebar due a techical 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

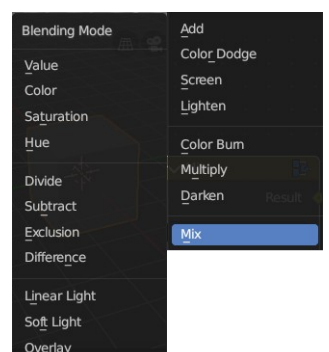
Usually he foreground image.

## 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**

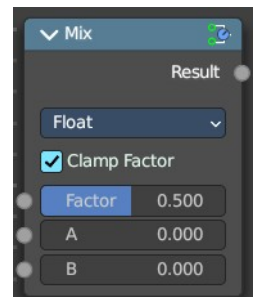
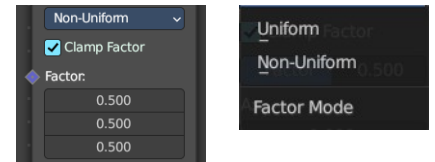
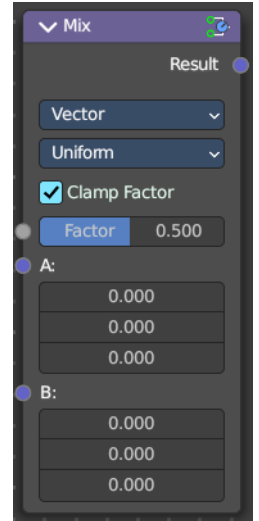
Controls the amount of influence.

#### **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).

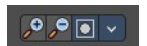


#### **Navigation elements**

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**

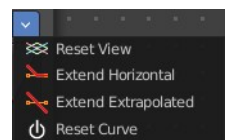
Extends the curve before the first curve point and behind the last curve point horizontally.

### **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.



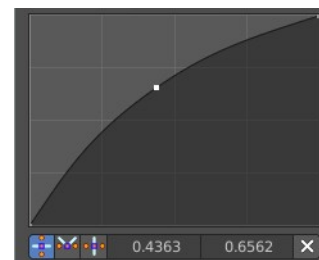
## Curve edit field

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

### Selecting Points

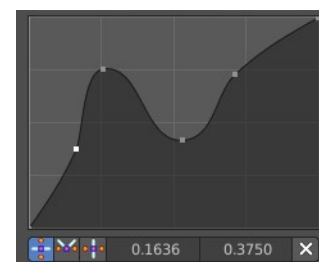
You can select curve points. This reveals two edit boxes for the x and y coordinate of this point.

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



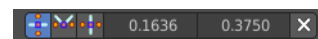
### Adding Points

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.