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Fresh Curves for After Effects v1.1 manual

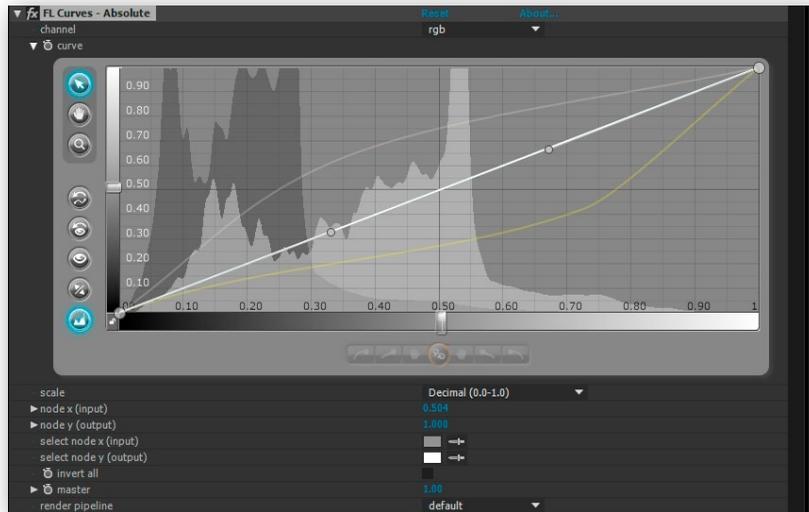
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Introduction

Fresh Curves are an implementation of the well known curves tool found in most photo and video editing systems. It offers more control and precision than the very basic version that comes with After Effects. The Relative Curves plugin offers an extension to the original idea. It lets you change attributes based on others. For example it's possible to desaturate selected colors by changing saturation based on hue.

Absolute Curves



Absolute Curves remaps an images input colors to custom output colors. The horizontal axis represents input values and the vertical axis the corresponding outputs. The freely adjustable output curve gives you more control over value distribution than other methods.

Traditionally Curves can change Red, Green, Blue and a combined RGB Channel. Sometimes also Alpha. Fresh Curves also offers Brightness, Saturation and Hue Channels.

The curves are being applied in the following order:

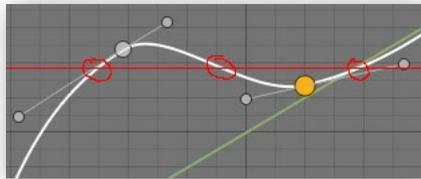
- Alpha
- Blue
- Green
- Red
- RGB
- Hue
- Saturation
- Brightness

Invert

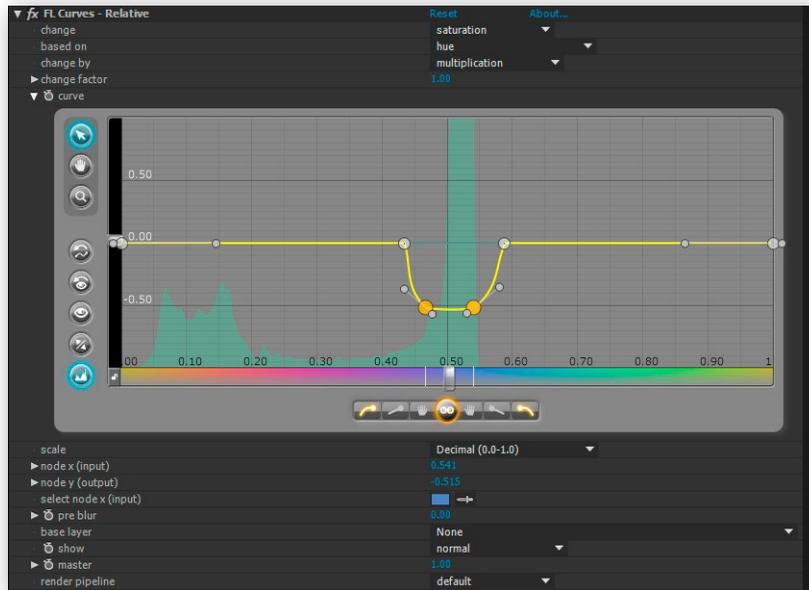
The purpose of this parameter is to enable the user to work in a custom color profile. Apply a curve, apply effects and then apply the same curve again. But inverted. The way the invert check box works is that internally it will reverse the order in which the curves are applied.

Also each curve is being inverted as when using the invert button from the interface.

IMPORTANT — Please realize that not every curve can be inverted. A curve may not cross any horizontal more than once. Else there would be more than one output value after inversion. If such a curve is inverted the results will look broken. You can test for this using the invert button in the curve interface.



Relative Curves



Unlike Absolute Curves this plugin maps a value not directly to a new absolute value. Instead it changes the attribute of a pixel based on another one. In the above picture for example the blue colors are being desaturated while the others are left untouched.

Just as in Absolute Curves there are 8 attributes that Relative Curves can change at once:

- Brightness
- Saturation
- Hue
- Red
- Green
- Blue
- Alpha
- Post Blur

The first parameter selects the curve for a given attribute. The Interface will show that selected curve. For each curve you can determine what other attribute it will be based on, by what method it will be changed and a factor. So when you change to another curve those 3 values will display the settings of that particular curve.

If change is set to multiplication the attribute will be multiplied by 1 + the curves value. If set to addition the curves values is just added.

The curve is multiplied by the change factor before being applied. This way you can use a curve to select what you want to alter and use the factor to say how much it should change. Take for example the introduction image. We select the red parts of the image but we don't know in advance exactly how much to desaturate them. Thus we would use the factor to scale down in that example.

pre blur

The size of a blur that is applied to the input image before applying the curves. The “based on” values will be blurred.

base layer

If you want to base the changes on another layer. The “based on” value will be from this layer if set.

show

If used the plugin only shows what changed in the image instead of the actual result. Can be used to generate mattes.

The Interface

The main GUI and some parameters are the same for the absolute and relative version. What they do is described here. Mostly it's straight forward. But reading this will give you one or another non obvious information.



Selection Tool

The default tool for selecting and moving around one or more nodes.



Hand Tool

Drag the Canvas so you can move around in the view. This is only important if you zoomed into the image or when you work in 32 Bit Color mode and want reach values that are outside of the standard 0-1 range.



Zoom Tool

Click and Drag on any position to zoom in or out.



Reset Curve

Resets only the currently selected curve. The others will be untouched.



Reset View

If you zoomed in or panned around press this button to get back to the default 0-1 range view.



Show All

Will adjust the view so that all the nodes in this curve will be visible.



Invert

Inverts the current curve.



Histogram

Press it once for the regular histogram. In Absolute Curves the regular histogram will consist of the darker input histogram and a brighter output version. Press a second time for an RGB histogram. It will show the red, green and blue output histogram over each other.

The effect needs to be active to get a correct histogram because the histogram table is build during rendering. If the effect is turned off the last histogram will be shown.



Zoom Slider

Can be used instead of the zoom tool. Will zoom in to the currently selected node or center if none is selected.

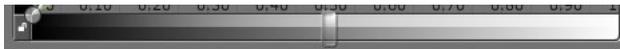


Zoom Lock

When locked x and y dimensions can only be altered together

Gradients

A visual feedback to help identify tonal ranges. In Absolute Curves the bottom gradient is split in after (top) and before (bottom).



Nodes and Node Controls

Nodes are the heart of the curve tool for they define the shape of your curve. Nodes can have three states that you can define using the node controls at the bottom of the interface. The nodes handles will reflect it's state.



Automatic

Nodes in automatic state will have grayed out handles as they are automatically positioned to achieve a smooth curve. If you alter them they will become manual.



Linear

In linear state the nodes handles will not be shown. But underneath the handles will point directly towards it's neighbors node. If both nodes are linear this will result in a straight line.



Manual

Handles in manual mode will be orange. Manual nodes will maintain their length and angle no matter the nodes positions.



Node Lock

This center button is pressed by default so each node will have only one state. If unlinked however there will be a left and a right hand status. This is useful when changing isolated areas.

HINT — Double clicking on a state button will change all the nodes in a curve to that state. If you add a new node the plugin tries not to change the curve. In order to do so it sets the new and the neighbor nodes to manual and adjusts the handles accordingly. Sometimes however you just want all nodes to be automatic. In that case use the double click after you added all the needed nodes.

node x (input) / node y (output)

If a Node is selected these parameters represent it's values and you can alter them here.

select node x (input) / select node y (output)

If a Node is selected you can use the these color pickers to alter it's values based on the picked colors attribute.

scale

If you prefer to work in a different bit range this parameter will adjust the curves caption and the nodes x/y parameters. It will not change the internal precision. Just the display range.

master

[\(new in v1.1\)](#) This can be used to dial the effect up and down. It's a simple interpolation between the input image and image resulting after all curves have been applied. It's possible to set it to values higher than 1 and thus achieve some overshoot.

In Relative Curves pre and post blur and not being affected by this. The reason for this is that the blurs are used as spatial modifiers. They select or do something at certain parts of the image. And it's unlikely that the user wants those areas changed depending on how stark the color change is.

pipeline

[\(new in v1.1\)](#) Determines which implementation is being used. At the moment only CPU and Cuda implementations are available. If 'default' is selected the plugin will run Cuda if available. Else CPU.

This parameter is not available in Premiere because Premiere has a dedicated GPU pipeline and handles these things itself. This parameter will probably vanish if/when After Effects catches up and offers the same.

Modifier Keys

While pressing **SHIFT**:

- dragging a node will result only in a vertical or horizontal movement
- newly created nodes will be placed on the default line. In Absolute Curves on the diagonal and in Relative Curves on the horizontal.

While pressing **ALT**:

- clicking on a node will delete that node
- clicking and dragging inside the control will select a zoom region

Pressing **CTRL**:

- will temporarily select the hand tool
- clicking on nodes will add or remove them from selection

Resizing

The curves Interface can be changed in size. Horizontally resizing can be done by scaling the effect window as you would normally do. Vertical resizing is available since **v1.1** in After Effects CC 2014 and up. Premiere does not offer this feature yet. Resizing is done similar to horizontal resizing. Just hover with the mouse over the bottom divider line of the interface until you see a scaling cursor. Then click and drag.

Render Pipeline Notes

With version 1.1 Cuda implementations were added to the existing CPU version. In future OpenCL or others might be added.

Which device is being used

After Effects: In case multiple Cuda devices are present the ones with the most hardware threads will be used. At the moment there is no way to explicitly select a specific device. Future versions may have that option if requested. Please contact support if you need this.

Premiere has a dedicated GPU pipeline and has mechanisms for selecting the device itself.

Cuda Notes

Cuda Capability Versions supported are 2.0 - 5.0 (Fermi, Kepler, Maxwell)
For the next Cuda generations new releases will be made available.

Speed Considerations

Premiere: Since it has a native GPU pipeline Cuda usage offers the biggest benefits here.

After Effects: Does not offer a native GPU pipeline yet. So in order to use the GPU the images have to be transferred to the device and back for every time the effect is applied. This takes time and is the reason the GPU implementation can actually be slower. Until After Effects implements a native GPU pipeline speed gains are really only seen in 32 bit color with multiple curves used.

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