



## **Chromagic FX Plug & Chromagic Ipad App**

*Use your Ipad for 'eyes-free' color correction in Final Cut Pro 7!*

Chromagic is an FX-Plug for Final Cut Pro 7 for color correcting your clips. Chromagic enables your Ipad to act like a three trackball color correction console, by using gestures, so you can modify your clips, without taking your eyes off the screen!

The Chromagic FXPlug provides three-way primary color correction, plus secondary and mask controls. Chromagic FXPlug will work with or without the Chromagic Ipad App. Even without the Chromagic Ipad App, Chromagic FXPlug enables you to balance the color and exposure of your shots. It allows you to match multiple shots within a scene for a smooth, consistent feel. And it empowers you with the creative and dramatic control to grade your footage, evoking the desired mood and perception of your scenes.

There are two components: the Chromagic FX-Plug that gets installed in Final Cut Pro 7; and the free download, Chromagic Ipad App that connects your Ipad to Final Cut Pro.

### **Installation**

#### Chromagic FXPlug

Launch the Package Maker Installation and follow the prompts to install the Chromagic FX-Plug software on your Mac. Restart Final Cut Pro 7. The first time you use Chromagic, you will need to input your 16 digit activation code to turn off the "Nattress" watermark.

#### Chromagic Ipad App

Click on the Ipad software link ([chromagic.ipa](#)) to connect to the Apple App store and begin downloading the free Chromagic Ipad App Software to Itunes for synching with your Ipad.

If you wish to use the Ipad gestures to control the Chromagic FXPlug (highly recommended), it is important to turn "Multitasking Gestures" to Off in the General Settings of your Ipad Settings.

### **Getting Started!**

The Chromagic FXPlug is located in the Final Cut Pro Effects Tab, under Filters.

Effects		
Name	Type	Effect Class
Chromagic	Bin	
Chromagic	Video Filter	FxPlug

Drag and drop the Chromagic plugin onto the clip you wish to affect. You can apply the plugin multiple times to build up complex color corrections.

Chromagic FXPlug can be adjusted within Final Cut Pro using the effects tab controls, or using your Ipad with the free Chromagic Ipad App download. The Ipad can be controlled using eyes-free gestures in "Gesture" mode, or via the touch screen controls while in "Literal" mode.

The Final Cut Pro interface:

The screenshot displays the Chromagic effect controls in Final Cut Pro, organized into several sections:

- Chromagic Overview:** Name: highlights; Version: 1.0 (demo); Activate button.
- Lift:** Hue, Radius, Magnitude.
- Gamma:** Hue, Radius, Magnitude.
- Gain:** Hue, Radius, Magnitude, Saturation.
- Limit Effect:**
  - Limit on Chroma:
  - Chroma Center: Knob
  - Chroma Width: Slider
  - Chroma Softness: Slider
  - Limit on Saturation:
  - Saturation Minimum: Slider
  - Saturation Width: Slider
  - Saturation Softness: Slider
  - Limit on Luma:
  - Luma Minimum: Slider
  - Luma Width: Slider
  - Luma Softness: Slider
  - Invert Limit:
  - Pre-Blur: Slider
  - Thin/Spread: Slider
  - Softness: Slider
  - Show Limit Mask Region:
- Mask:**
  - Mask Type: None
  - Import Mask: Button
  - Mask Image: Image area
  - X Position: Slider (0)
  - Y Position: Slider (0)
  - Angle: Knob (0)
  - X Scale: Slider (160)
  - Y Scale: Slider (100)
  - Mask Blur: Slider (0)
  - Invert Mask:
  - Show Masked Region:
  - Copyright: ©2011 Nattress Productions Inc.
  - Mix: Slider (100)

## The Ipad Controller

### Primary Room



### Limit Effect Room



### Mask Drawing Room



### Mask Transform Room



## **Overview of Controls**

### Name

Chromagic FXPlug will give each instance of the applied plugin a randomly generated name (for communicating with the Ipad when multiple instances of the plugin are applied). Type any name you like, e.g. Highlight control, Red shift, Green Mask, etc. This name will appear on the Ipad to enable the choice of which Chromagic FXPlug instance to adjust. This is useful if

you have applied more than one color correction to the clip. The same Name can be used multiple times.

### **Primary Adjustments: Lift, Gamma, Gain & Saturation**

Lift adjusts the overall luma levels.



'Lift Hue' is the angle around the color wheel in degrees and affects what color hue is applied to the image.



'Lift Radius' is the distance from center and affects the saturation of the applied hue. "Radius" can be considered the amount of the adjustment. A smaller 'Lift Radius' makes the hue appear only in the darker shadows, while a larger lift radius spreads the color correction throughout the shadows and into the whites.


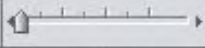


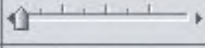


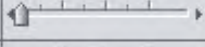




'Lift Magnitude' adjusts the contrast by increasing or decreasing the overall luma levels.

Gamma adjusts the mid-tones. Black and White points are not adjusted. All luma levels in between are stretched to the adjustment.

'Gamma Hue' is the angle around the color wheel in degrees and affects what color hue is applied to the mid-tones.

'Gamma Radius' is the distance from center and affects the saturation of the applied hue. "Radius" can be considered the amount of the adjustment. A smaller 'Gamma Radius' makes the hue appear only in a narrow range of mid-tones, while a larger 'Gamma Radius' results in a larger saturation which spreads the color correction over a larger region, up to the White and Black points.

	▼ Lift
Hue	 0
Radius	 0
Magnitude	 0
	▼ Gamma
Hue	 0
Radius	 0
Magnitude	 1
	▼ Gain
Hue	 0
Radius	 0
Magnitude	 1
Saturation	 1

'Gamma Magnitude' adjusts the contrast by curving the luma levels higher or lower, without adjusting the Black and White points.

Gain adjusts the White levels. The Black Point is not adjusted.

'Gain Hue' is the angle around the color wheel in degrees and affects what color hue is applied to the bright luma levels.

'Gain Radius' is the distance from center and affects the saturation of the applied hue that is applied to the bright luma levels.

'Gain Magnitude' adjusts the contrast by shifting the White point higher or lower, while keeping the Black Point locked.



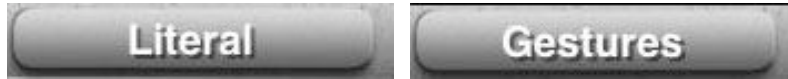
### Saturation

This control is used to raise or lower the overall saturation level of the image.

### The Ipad Primary Room



The Ipad has the following additional primary room controls:

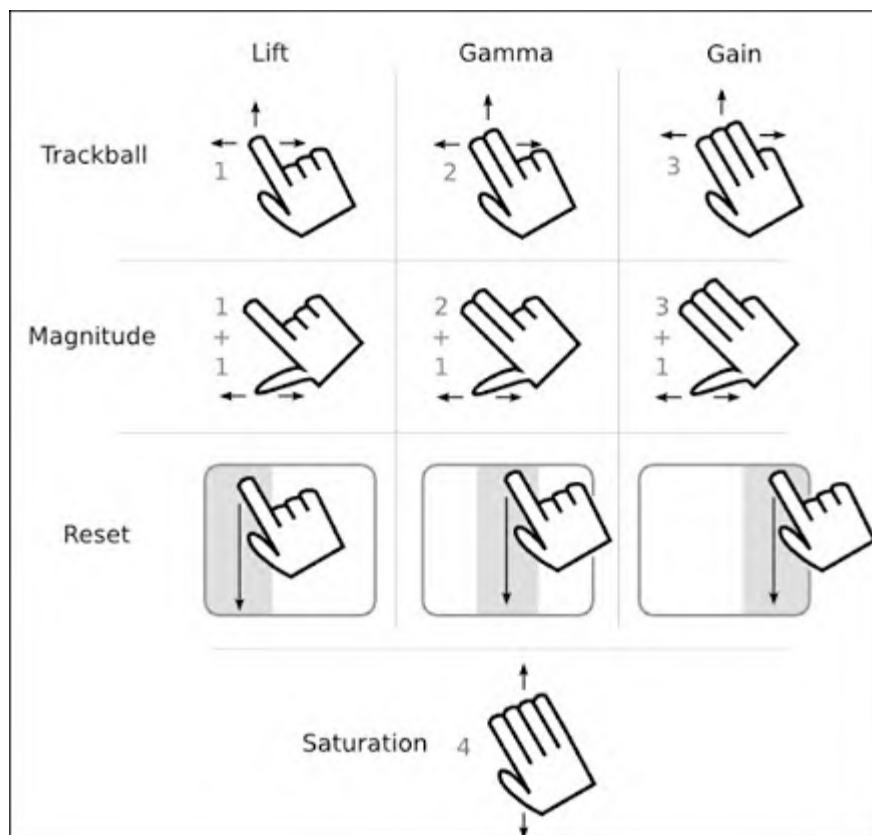


Literal/Gestures (toggle) Button

Literal: touch to switch to “Literal” mode. In Literal Mode, input is made via the touch screen sliders and trackballs. If the “Literal” button is showing, it indicates you are in “Gesture” Mode.

Gestures: touch to switch to “Gesture” mode. In Gesture Mode input is made via gestures and the on screen trackball and slider controls are locked out. If the “Gesture” button is showing, it indicates you are in “Literal” Mode.

The available gestures are:



Settings

This brings up a window where you can adjust the sensitivity of the Color, Magnitude and Saturation controls. The higher the slider, the larger the incremental jump will be when using gestures.



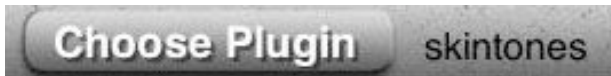
### ? (Help)

This brings up a quick visual reference of the available gestures.



### Back

This takes you back to the launch screen, where you choose which computer you want to control.



### Choose Plugin

This brings up a list of available instances of the Chromagic FXPlug on the current clip. The name of the Chromagic FXPlug instance being adjusted is listed on the right ("Skintones" in the above example). The current clip is the clip in the Viewer window. This is not necessarily the same as the clip under the playhead that appears in the Canvas window. If you try to adjust a clip that is different from that which is displayed in the canvas, you will get the following warning:

"You must open the viewer to the filters tab for the clip  
you are editing in order to view your changes in real-time."



### Show Original

This button turns off and on the Chromagic FXPlug instance that you are adjusting (the effects of other filters and instances of Chromagic will still be shown).



### Left and Right Arrows

These take you to Limit Effect Room, Mask Drawing Room and Mask Transform Room and back to the Primary Room.

## Secondary Adjustments: Limits & Masks

### Limit Effect

The Limit Effect controls enable you to restrict the color grade to a specific range of Hue, Saturation, and Luma values from the image. Using a Mask Shape in addition to the Limit Effect, will restrict the Limit Effect to within the region defined by the Shape Mask (sometimes called a Power Window).

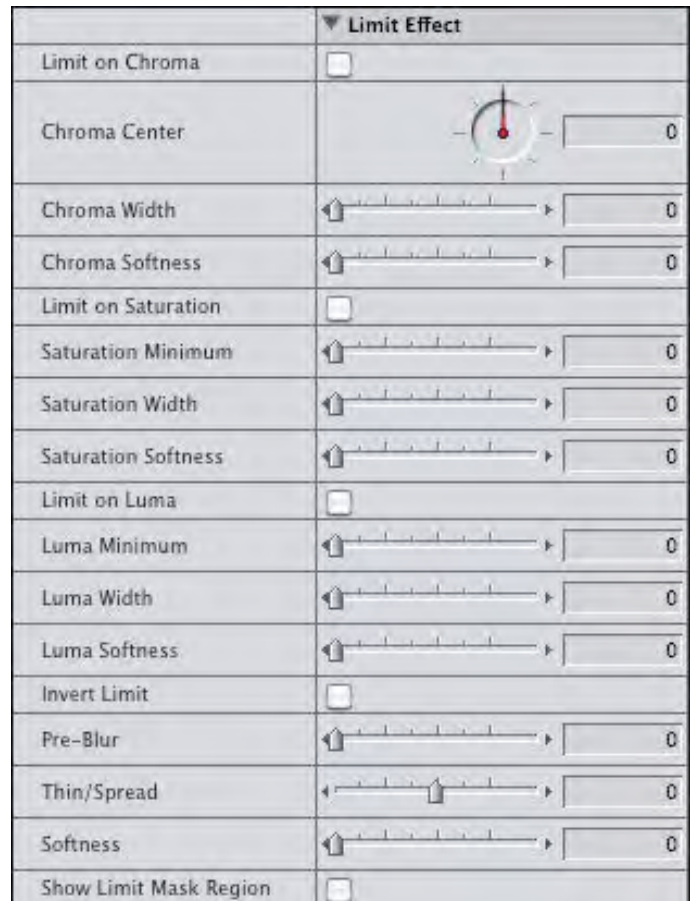
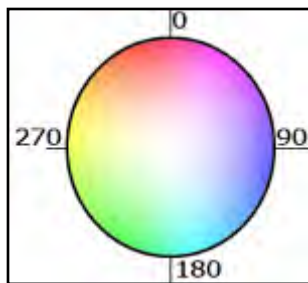
### Limit on Chroma

This controls whether a Limit based on Chroma is applied or not.



### Chroma Center

Using the 360 degree Hue spectrum, this control selects the middle point for the chroma range.



### Chroma Width

This controls how large the selected range of chroma is. A large range includes more colors.



### Chroma Softness

This controls the tolerance or fall-off range of the Chroma Limit Mask. A larger Chroma Softness includes more Chroma values, but at increased transparency.

### Limit on Saturation

This turns on or off the Saturation Limit control.



### Saturation Minimum

This selects the lowest Saturation level to be included in the range.

### Saturation Width

This selects the range of Saturation levels to include, starting from the Saturation Minimum and including more saturated values as the Saturation Width is increased.

### Saturation Softness

Increasing this control, boosts the fall-off, creating a grey-zone on the edge of the Limit Mask.

### Limit on Luma

This activates or deactivates the Limit on Luma Control.

### Luma Minimum

The selects the lowest Luma level to be included in the range.



### Luma Width

This sets the size of the the Luma Range. A larger Luma Width includes more luma values, starting with the Luma Minimum and including brighter and brighter values.

### Luma Softness

Increasing this control softens the edge of the Luma Limit Mask by partially including a larger range of pixels, through increasing mask transparency.

### Invert Limit

This swaps the masked and unmasked regions.

### Pre-Blur

This control applies a blur to the image data that is used for creating the Chroma/Saturation/Luma limit mask. It is especially useful when working with DV footage with compressed chroma. A small pre-blur can create a much cleaner chroma mask.

### Thin/Spread

This control affects the edges of the mask by reducing the spread of the fall-off, either in favor of the mask (Spread) or at its expense (Thin). If there is no softness to the mask, Thin/Spread will have no affect. The larger the Mask Softness, the greater the thinning or spreading effect.

### Softness (Post Blur)

This control applies a blur to the edges of the final mask. The creates a softer transition between masked and unmasked regions.

### Show Limit Mask Region

This displays a grey-scale image in the Canvas viewer showing the masked regions (white) and unmasked regions (black) and the fall-off region (grey).

## Mix

This controls how much of the effect is applied to the original footage. This allows you to back off the overall effect.

## Ipad Limit Effect Room

The Ipad Limit Effect Room is very useful for displaying the Chroma, Saturation and Luma values you wish to select. Selections can be made using Gestures or Literal mode.











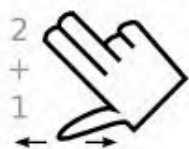
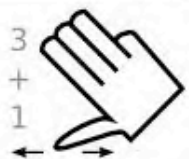


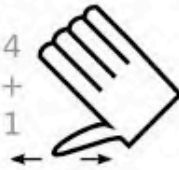



## Literal/Gestures (toggle) Button

Literal: touch to switch to "Literal" mode. In Literal Mode, input is made via the touch screen sliders and trackballs. If the "Literal" button is showing, it indicates you are in "Gesture" Mode.

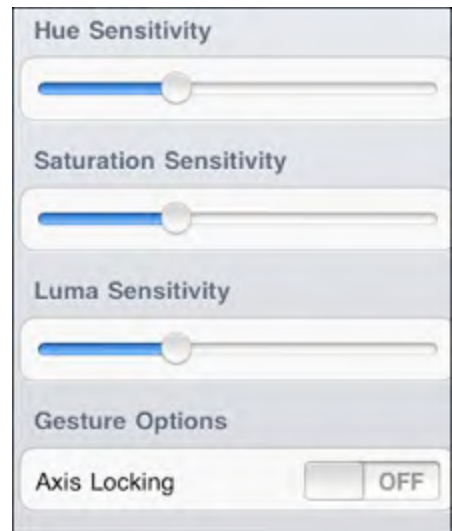
Gestures: touch to switch to "Gesture" mode. In Gesture Mode input is made via gestures and the on screen trackball and slider controls are locked out. If the "Gesture" button is showing, it indicates you are in "Literal" Mode.

The available gestures for the Limit Room are:

	Chroma	Saturation	Luma
Toggle On/Off	1,1 	2,2 	3,3 
Centre/Minimum	1 	2 	3 
Width	1 	2 	3 
Softness	1 + 1 	2 + 1 	3 + 1 
Pre-Blur	4 		
Post-Blur		4 	
Edge Thin/Spread		4 + 1 	
Invert			4,4 

### Settings Button

This brings up a window where you can adjust the sensitivity of the Hue, Saturation and Luma controls. The higher the slider, the larger the incremental jump will be when using gestures. As well, you can lock the axis so that only horizontal or vertical inputs can be made at one time. This prevents accidentally switching from a Width adjustment on a vertical movement into a Center adjustment (horizontal gesture) if your gesture is not perfectly perpendicular.



### Invert Button

This inverts the mask.

### Show Mask Button

This control toggle tells FCP to display the Mask instead of the video, or the video instead of the Mask, if the Mask is displayed.

### ? (Help)

This brings up a quick visual reference of the available gestures.

## Transform Mask

The Transform Mask controls enable you to limit the color grade using a mask or shape. Your video clip image appears on the Ipad controller in the Mask Drawing Room and the Mask Transform Room to facilitate Mask creation and adjustment. This enables you to draw a freehand mask directly onto your video image.

### Mask Type

There are four choices for Mask: None; Rectangle; Oval; Draw.

None is no mask applied.

Rectangle applies a box mask that can be transformed using the transform controls (position, angle and scale).

Oval applies an oval mask that can be adjusted using the transform controls.

Draw applies the picture that you have imported (Import Mask) if any, and allows for free hand drawing using the Ipad controller. You can import a mask and then add or subtract to it using the drawing controls, or use the drawing controls to create a new mask.

### Import Mask

This brings up a browser window to import a picture file to use as a mask. To clear the imported Mask, click the button on the right of "Import Mask".

### X-Position

This controls the horizontal position of the mask. Positive numbers position the mask to the right. Negative numbers move the mask to the left.

### Y-Position

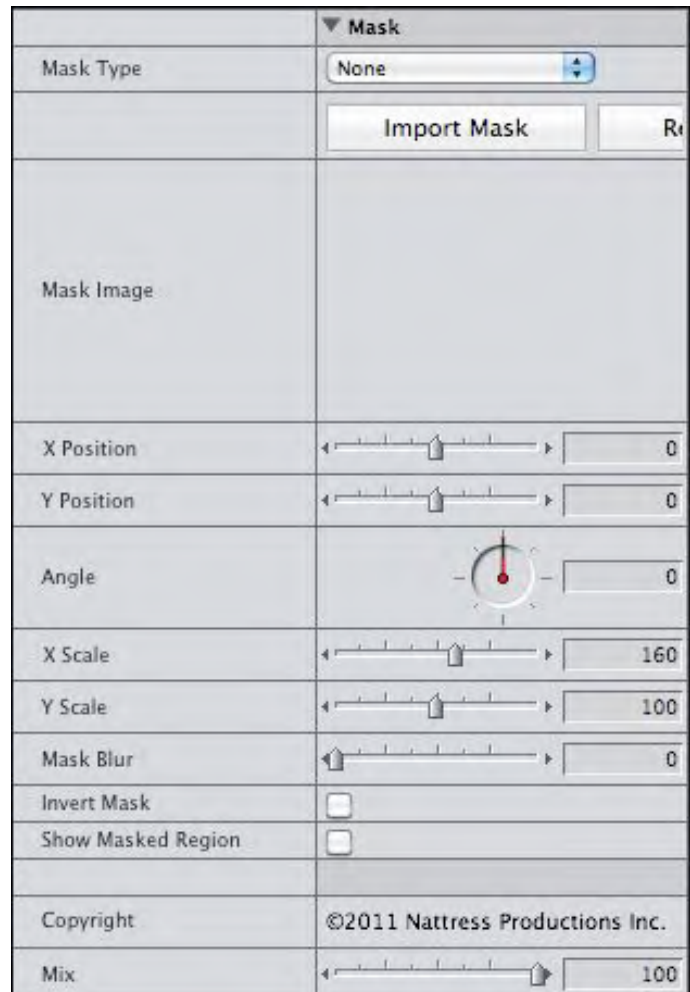
The controls the vertical position of the mask. Positive numbers move the mask down. Negative numbers move the mask up.

### Angle

This sets the rotation of the mask.

### X-Scale

This sets the horizontal size or stretching of the mask.



### Y-Scale

This sets the vertical size or stretching of the mask.

### Mask Blur

This softens the edges of the mask, smoothing the transition between masked and non-masked regions.

### Invert Mask

This swaps the light, masked regions, with the dark, unmasked regions.

### Show Masked Region

This control displays the mask instead of the video clip in the FCP Canvas window.

## Ipad Mask Drawing Room



This screen on the Ipad enables you to draw a mask directly onto your video image. There are the same navigation and plugin selection controls as found in the Ipad Primary Room. The only gesture used in this room is a single finger to draw/erase. Be aware that the Mask Drawing Room always displays the imported/drawn mask, even if this type of mask is not applied (this is set in the Mask Transform Room under "Type"). The mask is shown without any transformations (if any) applied. When you go to the Mask Transform Room, you will see the chosen type of Mask (Oval, Rectangle, Draw, None) displayed with any applicable transformations.

### Erase/Brush Toggle Button

This sets which mode is current. If "Erase" is displayed, you are currently in Brush drawing mode. When in "Erase" Mode, the button will display "Brush"

Brush enables you to draw a white mask onto the screen.

Erase removes the white mask, revealing the video image underneath.

Sometimes it is easier to draw where you don't want the mask, as the unmasked regions of your video remain visible and then invert to get the desired masked region.

### Clear Button

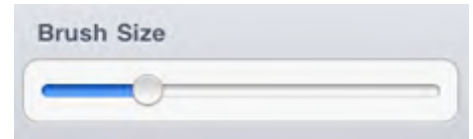
This clears the Mask.

Invert Button

This inverts the mask.

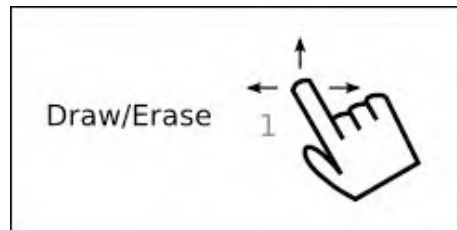
Settings Button

This brings up a control for setting the size of the Brush.



? (Help)

This brings up a quick visual reference of the available gestures for this room.



Ipad Mask Transform Room



This screen is where you position and adjust your mask.

### Type Button

This brings up a list to select what type of mask, if any, is applied. There are four choices for Mask: None; Rectangle; Oval; Draw.

None is no mask applied.

Rectangle applies a box mask that can be adjusted using the transform controls.

Oval applies an oval mask that can be adjusted using the transform controls.

Draw applies the picture that you have imported (Import Mask using FCP interface) if any, and allows for free hand drawing using the Ipad controller. You can import a mask and then add or subtract to it using the drawing controls or use the drawing controls in isolation to create a new mask. Draw slowly for the smoothest results.

### Settings Button

This brings up a window where you can adjust the Mask Softness and invert the Mask.



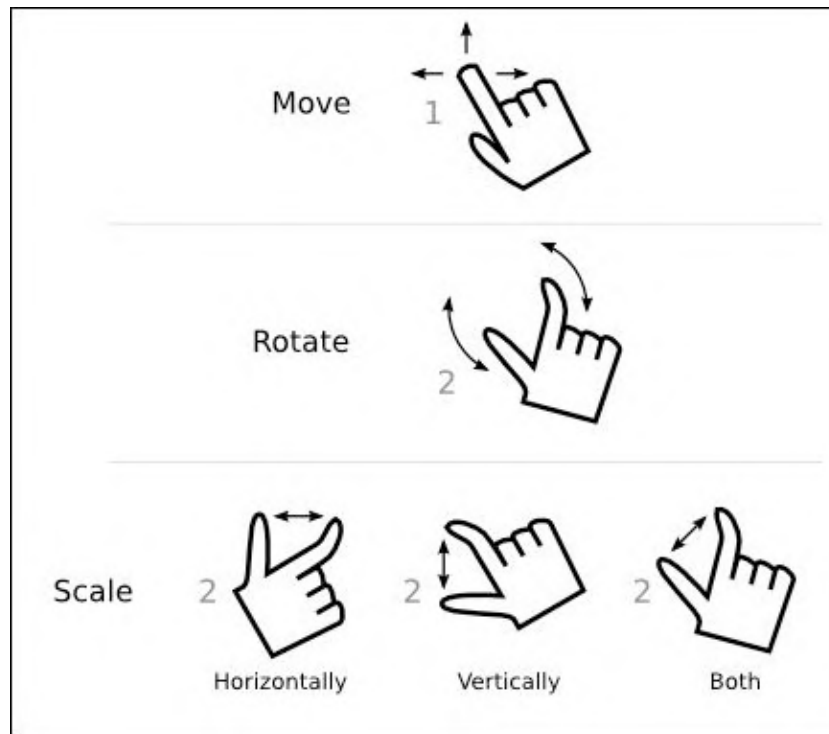
### Show Mask Button

This control toggle tells FCP to display the Mask instead of the video, or the video instead of the Mask, if the Mask is displayed.

### ? (Help)

This brings up a quick visual reference of the available gestures.

The available gestures are:



## Trouble Shooting

If the Ipad loses synch with FCP (doesn't see your computer on the launch screen under "Available Plugins"), you will need to restart the Chromagic Ipad App.

Shut down the Chromagic Ipad App by double clicking the Ipad button to bring up the current software applications. Touch and hold the Chromagic Ipad App icon until the "-" appears. Click on the "-" to close Chromagic. Click the Ipad button to return, and re-launch Chromagic Ipad App.

